AGENDA

CITY COUNCIL
REGULAR MEETING

October 9, 2018
4:00 PM
Conference and Training Center
One Civic Center Plaza
Irvine, CA 92606

Donald P. Wagner
Mayor

Christina Shea
Mayor Pro Tempore

Melissa Fox
Councilmember

Jeffrey Lalloway
Councilmember

Lynn Schott
Councilmember

Speaker's Card/Request to Speak: If you would like to address the City Council on a scheduled agenda item – including a Consent Calendar item, a Regular Council Business item, a Public Hearing item, or Public Comments – please complete the Request to Speak Form. The card is at the table at the entrance to the City Council Chamber. Please identify on the card your name and the item on which you would like to speak and return to the City Clerk. The Request to Speak Form assists the Mayor in ensuring that all persons wishing to address the City Council are recognized. It also ensures the accurate identification of meeting participants in the City Council minutes. Your name will be called at the time the matter is heard by the City Council. City policy is to limit public testimony to up to three minutes per speaker depending on relevant circumstances (unless the time limit is extended by the Mayor), which includes the presentation of electronic or audio visual information. Speakers may not yield their time to other persons.

Please take notice that the order of scheduled agenda items below and/or the time they are actually heard, considered and decided may be modified by the Mayor or the City Council during the course of the meeting, so please stay alert.

CALL TO ORDER

ROLL CALL

Scan this QR code for an electronic copy of the City Council Agenda and staff reports.

1. CLOSED SESSION

1.1 CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION: Initiation of litigation pursuant to Government Code Section 54956.9(d)(4): one potential case

1.2 CONFERENCE WITH REAL PROPERTY NEGOTIATORS: (Gov Code § 54956.8); Property: Approximately 4.61 acre property at 17352 Derian Ave; Agency Negotiators: Marianna Marysheva, Assistant City Manager; Laurie Hoffman, Director of Community Services; Pete Carmichael, Director of Community Development/Interim Director, Orange County Great Park; and Darlene Nicandro, Project Development Administrator; Negotiating Parties: City of Irvine and MDD Derian 2 LP; Under Negotiation: Price and Terms of Payment

RECONVENE TO THE CITY COUNCIL MEETING

PLEDGE OF ALLEGIANCE

INVOCATION

2. PRESENTATIONS

2.1 Proclaim October 22-26, 2018 as Irvine Prevention Coalition's "Red Ribbon Week"

2.2 Proclaim October 18, 2018 as "Irvine Public Schools Foundation Giving Day"

2.3 Employee Recognition: 30 Years of Service

CITY MANAGER'S REPORT

ANNOUNCEMENTS/COMMITTEE REPORTS/COUNCIL REPORTS

Announcements, Committee Reports and Council Comments are for the purpose of presenting brief comments or reports, are subject to California Government Code Section 54954.2 of the Brown Act and are limited to 15 minutes per meeting.

ADDITIONS AND DELETIONS

Additions to the agenda are limited by California Government Code Section 54954.2 of the Brown Act and for those items that arise after the posting of the Agenda and must be acted upon prior to the next City Council meeting.

3. CONSENT CALENDAR

All matters listed under Consent Calendar are considered by the City Manager to be routine and enacted by one roll call vote. There will be no discussion of these items unless members of the City Council request specific items to be removed from the Consent Calendar for separate discussion. Any member of the public may address the Council on items on the Consent Calendar. See information for Speaker's Card/Request to Speak on first page.

3.1 MINUTES

ACTION:
Approve the minutes of a regular meeting of the Irvine City Council held on September 12, 2018.

3.2 PROCLAMATIONS

ACTION:
Proclaim October 7-13, 2018 as Orange County Fire Authority's "Fire Prevention Week."

3.3 WARRANT AND WIRE TRANSFER RESOLUTION

ACTION:
Adopt - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, ALLOWING CERTAIN CLAIMS AND DEMANDS AND SPECIFYING THE FUNDS OUT OF WHICH THE SAME ARE TO BE PAID

3.4 TREASURER'S REPORT FOR THE FISCAL YEAR ENDED JUNE 30, 2018

ACTION:
Receive and file the Treasurer's Report for the fiscal year ended June 30, 2018.

3.5 CITY OF IRVINE INVESTMENT POLICY FOR CALENDAR YEAR 2019

ACTION:
Adopt - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, ADOPTING THE CITY'S ANNUAL INVESTMENT POLICY FOR CALENDAR YEAR 2019

3.6 ACCEPTANCE OF MARUCHAN, INC. DONATION

ACTION:

1) Accept a $100,000 donation from Maruchan, Inc.
2) Approve a budget adjustment appropriating $100,000, reflecting an increase in revenues and appropriations.

3.7 ACCEPTANCE OF FEDERAL EMERGENCY MANAGEMENT AGENCY LOCAL HAZARD MITIGATION GRANT

ACTION:

1) Authorize the Director of Public Safety to approve and accept a $106,466 Local Hazard Mitigation Grant award from the Federal Emergency Management Agency (FEMA).
2) Approve a budget adjustment appropriating $106,466 for a comprehensive update to the City's Local Hazard Mitigation Plan.

3.8 APPROVAL OF PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS FOR SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS

ACTION:

1) Approve the construction plans, specifications, and contract documents for the Sweet Shade Community Center Tenant Improvements, Capital Improvement Project 361803.
2) Approve the Engineer's Estimate, Construction Contingency, and Project Funding Summary.
3) Authorize staff to solicit competitive bids and award the construction contract to the lowest responsive and responsible bidder, in accordance with the City's purchasing policies and procedures, within the approved project budget.

3.9 MEASURE M2 COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM GRANT APPLICATIONS

ACTION:

1) Authorize staff to prepare and submit grant funding applications for the Comprehensive Transportation Funding Program for four recommended projects.
2) Adopt - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, APPROVING THE SUBMITTAL OF GRANT APPLICATIONS TO THE ORANGE COUNTY TRANSPORTATION AUTHORITY FOR FUNDING UNDER THE COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM

PUBLIC COMMENTS - Public comments will be heard at approximately 6:30 p.m. or prior to adjournment, whichever occurs earlier.

Any member of the public may address the City Council on items within the City Council's subject matter jurisdiction but which are not listed on this agenda during Public Comments; however, no action may be taken on matters that are not part of the posted agenda. See information for Speaker's Card/Request to Speak on the first page.

ADJOURNMENT

NOTICE TO THE PUBLIC

LIVE BROADCASTING AND REBROADCASTING

Regular City Council meetings are broadcast live every 2nd and 4th Tuesday of the month at 4 p.m. and are replayed on Tuesdays at 4 p.m. (in weeks in which there is not a live City Council meeting), Sundays at 11 a.m., Wednesdays at 7 p.m., and Thursdays at 10 a.m. until the next City Council meeting. All broadcasts can be viewed on Cox Communications Local Access Channel 30 and U-Verse Channel 99. City Council meetings are also available via live webcast and at any time for replaying through the City's ICTV webpage at cityofirvine.org/ictv. For more information, please contact the City Clerk's office at (949) 724-6205.

ADJOURNMENT

At 11:00 p.m., the City Council will determine which of the remaining agenda items can be considered and acted upon prior to 12:00 midnight and will continue all other items on which additional time is required until a future City Council meeting. All meetings are scheduled to terminate at 12:00 midnight.

STAFF REPORTS

As a general rule, staff reports or other written documentation have been prepared or organized with respect to each item of business listed on the agenda. Copies of these materials are on file with the City Clerk and are available for public inspection and copying once the agenda is publicly posted, (at least 72 hours prior to a regular City Council meeting). Staff reports can also be downloaded from the City's website at *cityofirvine.org* beginning the Friday prior to the scheduled City Council meeting on Tuesday.

In addition, meetings can be viewed live at the time posted on the agenda and related staff reports can be opened and viewed simultaneously along with the streaming of the meeting. To view the meeting, go to *cityofirvine.org/ictv*.

If you have any questions regarding any item of business on the agenda for this meeting, or any of the staff reports or other documentation relating to any agenda item, please contact City Clerk staff at (949)724-6205.

SUPPLEMENTAL MATERIAL RECEIVED AFTER THE POSTING OF THE AGENDA

Any supplemental writings or documents distributed to a majority of the City Council regarding any item on this agenda after the posting of the agenda will be available for public review in the City Clerk's Office, One Civic Center Plaza, Irvine, California, during normal business hours. In addition, such writings or documents will be made available for public review at the respective public meeting.

If you have any questions regarding any item of business on the agenda for this meeting, or any of the staff reports or other documentation relating to any agenda item, please contact City Clerk staff at (949)724-6205.

SUBMITTAL OF INFORMATION BY MEMBERS OF THE PUBLIC FOR DISSEMINATION OR PRESENTATION AT PUBLIC MEETINGS

Media Types and Guidelines

1. Written Materials/Handouts:

   Any member of the public who desires to submit documentation in hard copy form may do so prior to the meeting or at the time he/she addresses the City Council. Please provide 15 copies of the information to be submitted and file with the City Clerk at the time of arrival to the meeting. This information will be disseminated to the City Council at the time testimony is given.

2. Large Displays/Maps/Renderings:

   Any member of the public who desires to display freestanding large displays or renderings in conjunction with their public testimony is asked to notify the City Clerk's Office at (949)724-6205 no later than 12:00 noon on the day of the scheduled meeting so that an easel can be made available, if necessary.

3. Electronic Documents/Audio-Visuals:

   Any member of the public who desires to display information electronically in conjunction with their public testimony is asked to submit the information to the Public Information Office (PIO) no later than 12:00 noon on the day of the scheduled meeting. To facilitate your request contact the PIO Office at (949)724-6253 or the City Clerk's Office at (949)724-6205.

   Information must be provided on CD, DVD, or VHS; or, emailed by 12:00 noon on the day of the scheduled meeting to pio@ci.irvine.ca.us. Members of the public will be asked to provide their name, identify the meeting and the agenda item to be addressed, and a day time phone number.

   The PIO office will notify the person submitting the information as soon as possible prior to the meeting if the information cannot be accessed or if the version provided is incompatible with the City's system. Every effort will be made by City staff to facilitate the presentation.

CITY SERVICES TO FACILITATE ACCESS TO PUBLIC MEETINGS

It is the intention of the City of Irvine to comply with the Americans With Disabilities Act (ADA) in all respects. If, as an attendee or a participant at this meeting, you will need special assistance beyond what is normally provided, the City of Irvine will attempt to accommodate you in every reasonable manner. Please contact the City Clerk's Office at (949)724-6205.

Assisted listening devices are available at the meeting for individuals with hearing impairments. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting. (28 CFR 35. 102-35. 104 ADA Title II)

CHALLENGING CITY DECISIONS

The time limit within which to commence any lawsuit or legal challenge to any quasi-adjudicative decision made by the City is governed by Section 1094.6 of the Code of Civil Procedure, unless a shorter limitations period is specified by any other provision. Under Section 1094.6, any lawsuit or legal challenge to any quasi-adjudicative decision made by the City must be filed no later than the 90th day following the date on which such decision becomes final. Any lawsuit or legal challenge that is not filed within this 90-day period will be barred.

If a person wishes to challenge the nature of the above actions in court, they may be limited to raising only those issues they or someone else raised at the meeting described in this notice, or in written correspondence delivered to the City of Irvine, at or prior to the meeting. In addition, judicial challenge may be limited or barred where the interested party has not sought and exhausted all available administrative remedies.

COMMUNICATION AND ELECTRONIC DEVICES

To minimize distractions, please be sure all personal communication and electronic devices are turned off or on silent mode.

MEETING SCHEDULE

Regular meetings of the City Council are held on the second and fourth Tuesdays of each month at 4:00 p.m. Study Sessions and/or Closed Sessions are periodically held prior to the start of the regular meeting. Agendas are available at the following locations:

- City Clerk's Office
- Police Department
- Front Entrance of City Hall
- University Park Center (Culver/Michelson)
- Walnut Village Center (Culver/Walnut)
- Northwood Town Center (Irvine Blvd./Yale)
- City's web page at www.ci.irvine.ca.us

I hereby certify that the agenda for the Regular City Council meeting was posted in accordance with law in the posting book located in the Public Safety Lobby and at the entrance of City Hall, One Civic Center Plaza, Irvine, California on September 27, 2018 by 7:45 pm as well as on the City's web page.

Molly McLaughlin, MPA
City Clerk

CLOSED SESSION

1.1-1.2

PRESENTATIONS

2.1-2.3

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: PRESENTATIONS

City Clerk

RECOMMENDED ACTION:

1. Proclaim October 22-26, 2018 as Irvine Prevention Coalition's "Red Ribbon Week"
2. Proclaim October 18, 2018 as "Irvine Public Schools Foundation Giving Day"
3. Employee Recognition: 30 Years of Service

CITY OF IRVINE

Proclamation

RED RIBBON WEEK
OCTOBER 22-26, 2018

WHEREAS, alcohol, tobacco, other drug abuse, and violence cause serious health and social issues throughout the United States; and

WHEREAS, community members must unite to develop and support the implementation of programs and activities that nurture and strengthen programs that focus on the health and well-being of our youth; and prevent them from using alcohol, tobacco, or other drugs or from being a victim of violence; and

WHEREAS, the partners of the Irvine Prevention Coalition, including Irvine Community Drug Prevention, City of Irvine Community Services and Police Departments, Irvine Unified School District, Orange County Fire Authority, University of California, Irvine, and Ruby's Diner of Woodbridge coordinate the Red Ribbon Week Celebration with the theme "Life is a Journey, Travel Safely," so that the residents of Irvine have an opportunity to demonstrate their commitment to school and community-based prevention efforts; and

WHEREAS, through the efforts of families, local and federal law enforcement officers, healthcare professionals, teachers, dedicated community groups, and the general public, continued efforts will be made to promote effective, research-based prevention strategies; and

WHEREAS, the City of Irvine further commits resources to ensure the success of the RED RIBBON WEEK CELEBRATION and our community's year-round commitment to the health and wellness of our youth; and the prevention of alcohol, tobacco, and drug abuse, as well as violence intervention.

NOW, THEREFORE, the City Council of the City of Irvine **DOES HEREBY PROCLAIM OCTOBER 22-26, 2018 as RED RIBBON WEEK** and encourages all members of the community to commit to the health and wellness of the youth of our community and to participate in Red Ribbon Week prevention activities.

DONALD P. WAGNER
MAYOR OF THE CITY OF IRVINE
OCTOBER 9, 2018

CITY OF IRVINE 1971

CITY OF IRVINE

Proclamation

IRVINE PUBLIC SCHOOLS FOUNDATION GIVING DAY OCTOBER 18, 2018

WHEREAS, on October 18, 1996, the Irvine Public Schools Foundation was founded by a group of parents and community leaders to ensure that changes in state funding would not impact the quality of education that we value as a community; and

WHEREAS, the mission of the Irvine Public Schools Foundation is to enrich the educational experience of each child in every school, which is achieved by providing programs, raising funds, and uniting the community in support of educational excellence; and

WHEREAS, the Irvine Public Schools Foundation sustains and enhances the educational experience of more than 35,000 students with assistance from the City of Irvine, Irvine Unified School District, PTA, parents, teachers, and local businesses; and

WHEREAS, Irvine Public Schools Foundation, through assistance from the entire community, is able to preserve crucial programs in Irvine's 40 schools, including music instruction for all students, STEAM initiatives, afterschool and summer programs, grants for innovative teaching methods, and funding for athletic trainers and mental health resources; and

WHEREAS, gifts to the Educational Excellence Fund on Irvine Public Schools Foundation Giving Day will serve to continue the legacy of countless parents who have generously donated and all donations on October 18, 2018 will be matched by the City of Irvine up to the challenge match grant funds.

NOW, THEREFORE, the City Council of the City of Irvine **DOES HEREBY PROCLAIM OCTOBER 18, 2018 as IRVINE PUBLIC SCHOOLS FOUNDATION GIVING DAY** in recognition of its work and commitment to helping ensure a world-class education for each child in every school in Irvine.

DONALD P. WAGNER
MAYOR OF THE CITY OF IRVINE
OCTOBER 9, 2018

CITY OF IRVINE 1971

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CITY OF IRVINE

Commendation

ALANA S. KALEIKINI
THIRTY YEARS OF SERVICE

WHEREAS, ALANA KALEIKINI has served the Irvine community as a City employee for thirty years since November 1988; and

WHEREAS, ALANA KALEIKNI has made significant contributions to the Community Services department in her positions as Community Services Leader I & II, Community Services Senior Leader, Community Services Program Coordinator, and Community Services Supervisor.

NOW, THEREFORE, the City Council of the City of Irvine **DOES HEREBY COMMEND ALANA KALEIKNI** for her outstanding commitment to the Irvine community for thirty years.

CITY MANAGER
JOHN A. RUSSO
October 9, 2018

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3.1

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: MINUTES

City Clerk

RECOMMENDED ACTION:

Approve the minutes of a regular meeting of the Irvine City Council held on September 12, 2018.

MINUTES

CITY COUNCIL
REGULAR MEETING

September 12, 2018
Conference and Training Center
One Civic Center Plaza
Irvine, CA 92606

CALL TO ORDER

The regular meeting of the Irvine City Council was called to order at 5:05 p.m. on September 22, 2018 in the Conference and Training Center, Irvine Civic Center, One Civic Center Plaza, Irvine, California; Mayor Wagner presiding.

ROLL CALL

Present:	3	Councilmember:	Lynn Schott
		Mayor Pro Tempore:	Christina Shea
		Mayor:	Donald P. Wagner
Absent:	2	Councilmember:	Jeffrey Lalloway
		Councilmember:	Melissa Fox

Mayor Wagner noted that Councilmember Fox was attending the 2018 League of California Cities Annual Conference and would not be attending the City Council meeting.

1. CLOSED SESSION

City Attorney Melching announced the following Closed Session items:

1.1 CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION – Pursuant to Government Code Section 54956.9(d)(1) -- City of Irvine vs. Unity Church, et al., Orange County Superior Court Case No. 30-2018-00988207

1.2 CONFERENCE WITH REAL PROPERTY NEGOTIATORS: (Gov Code § 54956.8); Property: Approximately 4.61 acre property at 17352 Derian Ave; Agency Negotiators: Marianna Marysheva, Assistant City Manager; Laurie Hoffman, Director of Community Services; Pete Carmichael, Director of Community Development; and Darlene Nicandro, Project Development Administrator; Negotiating Parties: City of Irvine and MDD Derian 2 LP; Under Negotiation: Price and Terms of Payment

RECESS

Mayor Wagner convened the regular City Council meeting to Closed Session at 4:04 p.m.

RECONVENE TO THE CITY COUNCIL MEETING

Mayor Wagner reconvened the regular City Council meeting at 4:45 p.m. City Attorney Melching, on behalf of the City Council, announced that no reportable action was taken in Closed Session.

PLEDGE OF ALLEGIANCE

Prior to the Pledge of Allegiance, Mayor Wagner noted the upcoming ratification of a proclamation for City Council consideration recognizing “Constitution Day and Citizenship Day,” as well as September 17-23, 2018 as “Constitution Week”; and in light of the recognition, the Irvine Police Color Guard, joined by Irvine student Seth Miclea, would be leading the Pledge of Allegiance.

Police Chief Hamel introduced the Irvine Police Color Guard, and Irvine student Seth Miclea led the Pledge of Allegiance.

INVOCATION

Pastor Jake Fouquier from Free Chapel Church in Irvine provided the invocation.

Following the invocation, Councilmember Schott said a few words and provided a short video highlighting “Constitution Day and Citizenship Day” and “Constitution Week,” following which Irvine student Seth Miclea recited the preamble to the Constitution of the United States.

2. PRESENTATIONS

2.1 OC Human Relations Council Annual Report

Mayor Wagner introduced Dr. Gurpreet Ahuga, who presented Orange County Human Relations Council's annual report and review of activities in the City of Irvine over the past year.

2.2 Proclaim September 2018 as Alzheimer's Orange County's "World Alzheimer's Awareness Month"

Mayor Wagner introduced Kristen Maahs from Alzheimer's Orange County, and presented a proclamation recognizing September 2018 as "World Alzheimer's Awareness Month."

CITY MANAGER'S REPORT

- **Status Report on County-owned 100-acre parcel adjacent to the Orange County Great Park***

* See Announcements / Committee Reports / Council Reports.

Assistant City Manager Marysheva introduced Police Chief Hamel, who provided a brief report and video on the Irvine Police Department's Mandarin Community Emergency Response Team (CERT) Program, which earned the California Emergency Services Association's "Silver Award", which recognizes organizations or individuals in the public sector who have demonstrated exceptional efforts in the field of emergency services or emergency response.

ANNOUNCEMENTS/COMMITTEE REPORTS/COUNCIL REPORTS

Councilmember Schott expressed her appreciation to the Irvine Police Color Guard for attending the meeting in recognition of "Constitution Day and Citizenship Day" and "Constitution Week"; provided an update on the Barclay Theatre's air conditioning overhaul and electrical repairs; and invited members of the community to attend the first show of the season, "Voodoo Daddy" on Saturday, September 22 in the Bren Events Center. For tickets and show times, visit *thebarclay.org.*

Mayor Wagner made the following announcements:

- The City of Irvine was named the second best place in America to raise a family, compiled by personal finance website WalletHub. The ranking compared more than 180 U.S. cities based on five key factors, which included: family fun, health and safety, education and childcare, affordability, and socioeconomics. Irvine received exceptionally high marks in the areas of health and safety, education and childcare, and socioeconomics, reflecting the City's commitment to public safety, schools, parks and open space, and services for children and family.

- The community is invited for a free, special event on Sunday, September 16 at 1 p.m. for the official opening of the new baseball stadium at the Orange County Great Park. The opening of the baseball stadium will give the Mayor and City Council the opportunity to promote the "Play Ball" initiative, now in its fourth year and supported by the U.S. Conference of Mayors and Major League Baseball to promote the sport and encourage youth to play baseball. Earlier in the day, FivePoint Communities will host a community fun-fact walk in the Great Park with kiosks and giveaways beginning at 8:30 a.m. in the Soccer Stadium; and will activate the baseball fields and Softball Stadium with several games in the late morning. For information, visit *cityofirvine.org*.

- The third annual "Comedy Unleashed" fundraiser will take place on Tuesday, September 18 at the Irvine Improv, located in the Irvine Spectrum Center. The $35 admission fee includes dinner and a show featuring comedians Gary Cannon, Patrick Keane, and Taylor Tomlinson. Nearly half the proceeds will go toward the Irvine Animal Care Center, which provides shelter, care, and enrichment for homeless, neglected, abused, or unwanted animals. Doors open at 5:30 p.m., and the show begins at 7 p.m. for information, visit *irvineanimals.org.*

- The 17th Annual Irvine Global Village Festival, the City's signature event and one of Orange County's most highly attended multicultural festivals, will take place on Saturday, September 22 at the Orange County Great Park. The event features international cuisine, live entertainment, a Kids Village with crafts and activities, cultural and religious exhibits, and an international marketplace. Festival admission and parking are free. For information, visit *irvinefestival.org.*

- The City Council is aware of complaints related to noise from the FivePoint Amphitheatre. While the City Council is able to keep live music in Irvine, equally important is maintaining a high quality of life, including quiet neighborhoods. City staff monitors the sound levels at every concert. Despite what was mistakenly said in a public comment at the last City Council meeting, the enforcement of noise complains has not been turned over to anyone else. The City has full enforcement rights, and to date, there has not been a violation of the City's Noise Ordinance. City staff is working with Live Nation to resolve the problem. Mayor Wagner has met with Live Nation and its representatives to emphasize the importance of the matter and to help find solutions, and Live Nation has agreed to take significant steps toward reducing sound levels. For disruptive noise concerns, contact Public Safety Dispatch at 949-724-7200.

Following announcements, Mayor Wagner provided a brief status report on the County-owned 100-acre parcel adjacent to the Orange County Great Park.

Jane Olinger, Irvine resident, expressed concern about the County's development on its 100-acre parcel adjacent to the Orange County Great Park and its impacts on Great Park development and traffic in and around the area.

ADDITIONS AND DELETIONS

There were no additions or deletions to the agenda.

3. CONSENT CALENDAR

ACTION: Moved by Mayor Pro Tempore Shea, seconded by Councilmember Schott, and unanimously carried to by those members present (Councilmembers Fox and Lalloway absent), to approve City Council Consent Calendar Item Nos. 3.1 through 3.9, with the exception of Item Nos. 3.5 and 3.10, which were removed for separate discussion.

3.1 PROCLAMATIONS

ACTION:

1) Proclaimed September as Kids Cancer Connection, Inc.'s "Childhood Cancer Awareness Month."
2) Proclaimed September as Second Harvest Food Bank's "Hunger Action Month."
3) Ratified and Proclaimed September 17, 2018 as Daughters of the American Revolution's "Constitution Day and Citizenship Day"; and September 17-23, 2018 as "Constitution Week."

3.2 WARRANT AND WIRE TRANSFER RESOLUTION

ACTION:
Adopted RESOLUTION NO. 18-65 - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, ALLOWING CERTAIN CLAIMS AND DEMANDS AND SPECIFYING THE FUNDS OUT OF WHICH THE SAME ARE TO BE PAID

3.3 EXTENSION OF INFORMATION SERVICES AGREEMENT

ACTION:
Approved the Eleventh Amendment to the Information Services Agreement with Conduent Enterprise Solutions, LLC, extending the current term for as-needed services on a time and materials basis for an initial six months from October 1, 2018 through April 30, 2019 with a not-to-exceed value of $250,000; of which, services for the Orange County Great Park shall not exceed $100,000, and allow the City Manager discretion to approve an additional six months with a not-to-exceed value of $250,000 **(Contract No. 4900K)**.

3.4 ACCEPTANCE OF AWARD FROM THE DEPARTMENT OF FINANCE OF THE STATE OF CALIFORNIA

ACTION:

1) Approved and accepted a $100,000 award from the Department of Finance of the State of California.
2) Approved a budget adjustment allocating the $100,000 award funds to Fund 149.

3.5 CITY OF IRVINE SENIOR CITIZENS COUNCIL PROPOSED BYLAW AMENDMENTS

This item was removed for separate discussion at the request of Mayor Pro Tempore Shea, who expressed concern about the proposed changes to the bylaws with respect to the absence policy.

Sheila Driscoll, Community Services Manager, responded to questions.

City Council discussion included: expressing concern regarding the lack of flexibility over absences; suggested that Councilmembers should be consulted when absences of their respective appointed Boardmembers becomes a concern; noted that the absence policy should take health and family illnesses into consideration; inquired about the discussion and vote of the proposed bylaw revisions by the Senior Citizens Council; questioned whether a distinction was made between excused and unexcused absences; and suggested that the bylaws go back to the Senior Citizens Council for review to consider concerns raised by the City Council.

No action was taken.

3.6 ACCEPTANCE OF AGREEMENT FOR TRANSFER OR PURCHASE OF EQUIPMENT/SERVICES OR FOR REIMBURSEMENT OF TRAINING COSTS FOR FISCAL YEAR 2017 URBAN AREAS SECURITY INITIATIVE GRANT

ACTION:

1) Authorized the Director of Public Safety to accept the Agreement for Transfer or Purchase of Equipment/Supplies or for Reimbursement of Training Costs for Fiscal Year 2017 Urban Areas Security Initiative Grant **(Contract No. 10377)**.
2) Authorized the Director of Public Safety to accept equipment, technology, services or supplies purchased by the City of Santa Ana and transferred to the City of Irvine to enhance countywide emergency preparedness.

3) Approved a budget adjustment request in the amount of $50,000 in grant revenues and appropriations for training costs and necessary personnel; as well as equipment, supplies, or services.
4) Authorized the Director of Public Safety to submit for reimbursement up to $25,000 in training and personnel costs, and $25,000 in approved equipment, supplies, or services through the Fiscal Year 2017 Urban Areas Security Initiative Grant.

3.7 ACCEPTANCE OF CALIFORNIA OFFICE OF TRAFFIC SAFETY SELECTIVE TRAFFIC ENFORCEMENT PROGRAM GRANT

ACTION:

1) Authorized a $460,000 Selective Traffic Enforcement Program grant award from the State of California, Office of Traffic Safety **(Contract No. 10384)**.
2) Approved a budget adjustment appropriating $460,000 for the California Office of Traffic Safety Selective Traffic Enforcement Program grant.

3.8 NOTICE OF REVIEW AND PENDING APPROVAL FOR TRACT MAPS IN GREAT PARK NEIGHBORHOODS (HERITAGE FIELDS EL TORO, LLC)

ACTION:

Received and filed.

3.9 COMMUNITY PARTNERSHIP FUND GRANT NOMINATIONS

ACTION:

1) Approved Mayor Pro Tempore Shea's requests for Community Partnership Fund Grant nominations to the following organizations in support of program costs unless otherwise noted:

   a. Crime Survivors in support of A Heart for Healing Donor Wall ($1,000) **(Contract No. 10378)**
   b. Second Chance Orange County ($500) **(Contract No. 10379)**
   c. Tender Touch Ministries ($1,000) **(Contract No. 10380)**

2) Authorized the City Manager to prepare and sign the funding agreements listed in Action 1.

3.10 CITY COUNCIL RESOLUTION AFFIRMING EXISTING GENERAL PLAN AND ZONING CODE LAND USE DESIGNATIONS FOR RANCHO SAN JOAQUIN GOLF COURSE PROPERTY

This item was removed for separate discussion by the following individuals, who expressed their support and appreciation to the City Council for its affirmation of the existing General Plan and Zoning Code Land Use designations for the Rancho San Joaquin Golf Course property:

Gloria, Irvine resident
Mari Fujii, Irvine resident
Guy Doran, Irvine Resident
Richard Denzer, Irvine resident

City Council discussion included: noting that the proposed resolution would provide additional security for Rancho San Joaquin residents; and reiterated the importance of working collaboratively with the community.

ACTION: Moved by Mayor Pro Tempore Shea, seconded by Councilmember Schott, and unanimously carried by those members present (Councilmembers Fox and Lalloway absent), to:

Adopt RESOLUTION NO. 18-66 - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, AFFIRMING EXISTING GENERAL PLAN AND ZONING CODE LAND USE DESIGNATIONS FOR RANCHO SAN JOAQUIN GOLF COURSE PROPERTY

Following approval of the Consent Calendar, Mayor Wagner noted that Council Business Item No. 5.1 would be considered by the City Council prior to Public Hearing Item Nos. 4.1 and 4.2.

4. PUBLIC HEARINGS

4.1 ANNUAL COMMUNITY DEVELOPMENT BLOCK GRANT AND HOME INVESTMENT PARTNERSHIPS GRANT END-OF-YEAR PROGRESS REPORT TO THE UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

This item was considered after Council Business Item No. 5.1.

Steve Holtz, Manager of Neighborhood Services, and Charles Kovac, Housing Administrator, presented the staff report and responded to questions.

Mayor Wagner opened the public hearing at 5:53 p.m. There were no requests to speak.

ACTION: By consensus of those members present (Councilmembers Fox and Lalloway absent), Mayor Wagner closed the public hearing at 5:54 p.m.

City Council discussion included: noting the efforts by the Community Services Commission to review and propose annual recipient allocations; and highlighted the services and programs available that receive community development block grant funding.

ACTION: Moved by Councilmember Schott, seconded by Mayor Pro Tempore Shea, and unanimously carried by those members present (Councilmembers Fox and Lalloway absent), to:

Receive and file the Consolidated Annual Performance and Evaluation Report and authorize submission to the United States Department of Housing and Urban Development.

4.2 GENERAL PLAN AMENDMENT, ZONE CHANGE AND APPEAL OF PLANNING COMMISSION ACTION DENYING MEDICAL OFFICE MASTER PLAN FOR 2 OSBORN IN PLANNING AREA 15 (WOODBRIDGE)

Stacy Tran, Senior Planner, and Joel Belding, Principal Planner, presented the staff report and responded to questions.

Mayor Wagner opened the public hearing at 6:01 p.m.

Jeremy Hart, representing LPA on behalf of the applicant, provided a brief summary of the project, and spoke in opposition to denying the appeal.

The following individuals spoke in opposition to the proposed General Plan Amendment and Zone Change, and in support of denying the appeal:

Wayne Call, Irvine resident
Russell Taitz, Irvine resident
Sandra Rush, Irvine resident
Linda Freshwater, Irvine resident
Ann Adams, Irvine resident
Barry Katz, Irvine resident and on behalf of Woodbridge Village Association
Dale Cheema, Irvine resident and on behalf of Woodbridge Village Association
Gil Nelsen, Irvine resident
Hillary Willett, Irvine resident
Elliot Wooten, Irvine resident

Linda Wooten, Irvine resident
Jackie Malec, Irvine resident
Carrie O'Malley, Irvine resident
Anthony Kuo, Irvine resident

ACTION: By consensus of those members present (Councilmembers Fox and Lalloway absent), Mayor Wagner closed the public hearing at 6:46 p.m.

City Council discussion included: reiterating that community members, staff, and all City Commissions were in opposition to the project as proposed; noted that the project did not fit within the nature of the community, and would change the character of the neighborhood; expressed concern about additional traffic; inquired about the percentage of those in support or against the project; noted concerns raised by members of the community regarding the possible replacement of the Woodbridge Village Shopping Center with high density housing prior to its recent renovation; stated the difference between the General Plan and Master Plan; noted the importance of neighborhood preservation; and suggested medical building expansions be limited to major corridors.

ACTION: Moved by Councilmember Schott, seconded by Mayor Wagner, and unanimously carried by those members present (Councilmembers Fox and Lalloway absent), to:

1) Adopt RESOLUTION NO. 18-67 - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, DENYING GENERAL PLAN AMENDMENT 00600172-PGA TO INCREASE GENERAL PLAN INTENSITY CAPS TO ACCOMMODATE THE DEVELOPMENT OF A 46,800-SQUARE-FOOT MEDICAL OFFICE BUILDING LOCATED AT 2 OSBORN IN PLANNING AREA 15 (WOODBRIDGE), FILED BY STERLING AMERICA INVESTMENTS, INC.
2) Adopt RESOLUTION NO. 18-68 – A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, DENYING ZONE CHANGE 00600175-PZC TO INCREASE ZONING ORDINANCE INTENSITY CAPS TO ACCOMMODATE THE DEVELOPMENT OF A 46,800-SQUARE-FOOT MEDICAL OFFICE BUILDING LOCATED AT 2 OSBORN IN PLANNING AREA 15 (WOODBRIDGE), FILED BY STERLING AMERICA INVESTMENTS, INC.

3) Adopt RESOLUTION NO. 18-69 – A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, DENYING AN APPEAL THEREBY UPHOLDING THE PLANNING COMMISSION'S DECISION TO DENY MASTER PLAN 00645299-PMP FOR DEVELOPMENT OF A 46,800-SQUARE-FOOT MEDICAL OFFICE BUILDING LOCATED AT 2 OSBORN IN PLANNING AREA 15 (WOODBRIDGE), FILED BY STERLING AMERICA INVESTMENTS, INC.

RECESS

Mayor Wagner recessed the City Council meeting at 6:58 p.m.

RECONVENE

Mayor Wagner reconvened the City Council meeting at 7:04 p.m.

5. COUNCIL BUSINESS

5.1 MUNICIPAL CODE AMENDMENT TO MODIFY ZONING ADMINISTRATOR APPOINTMENT PROCEDURE

This item was considered by the City Council prior to Public Hearing Item Nos. 4.1 and 4.2.

Joel Belding, Principal Planner, presented the staff report and responded to questions.

There was no City Council discussion.

ACTION: Moved by Mayor Pro Tempore Shea, seconded by Councilmember Schott, and unanimously carried by those members present (Councilmembers Fox and Lalloway absent), to:

Introduce for first reading and read by title only ORDINANCE NO. 18-09 – AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, APPROVING AMENDMENTS TO THE CITY'S MUNICIPAL CODE RELATED TO ASSOCIATE ZONING ADMINISTRATOR APPOINTMENT PROCEDURES; FILED BY THE CITY OF IRVINE COMMUNITY DEVELOPMENT DEPARTMENT

PUBLIC COMMENT

Andrew Pollard, Irvine Ranch Water District candidate, provided a brief biography on his qualifications for office.

Jane Olinger, Irvine resident, spoke about traffic studies related to the two potential sites for a Veterans Cemetery near the Orange County Great Park, and traffic bottlenecks that occur at intersections throughout the City.

Ilya and Robert Tseglin reiterated a domestic issue related to an autistic family member.

Judith Gass, Irvine resident, invited the City Council and community members to attend an upcoming candidate forum.

Brigitte spoke on behalf of the Tseglin family and a domestic issue related to their autistic family member.

ADJOURNMENT

Moved by Mayor Pro Tempore Shea, seconded by Councilmember Schott, and unanimously carried by those members present (Councilmembers Fox and Lalloway absent), to adjourn the regular City Council meeting at 7:20 p.m.

_____
MAYOR OF THE CITY OF IRVINE

_____ October 9, 2018
CITY CLERK OF THE CITY OF IRVINE

3.2

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: PROCLAMATIONS

City Clerk

RECOMMENDED ACTION:

Proclaim October 7-13, 2018 as Orange County Fire Authority's "Fire Prevention Week."

CITY OF IRVINE

Proclamation

FIRE PREVENTION WEEK
OCTOBER 7-13, 2018

WHEREAS, fire is a serious public safety concern both locally and nationally, and homes are the locations where people are at greatest risk from fire; and

WHEREAS, home fires in the United States result in an average of 2,510 civilian deaths per year, with working smoke alarms reducing the risk of deaths in reported home fires by 50 percent; and

WHEREAS, Orange County residents are responsive to public education and outreach measures and can take personal steps to increase their safety from fires in their homes; and

WHEREAS, the 2018 Fire Prevention Week theme, "Look. Listen. Learn. Be aware. Fire can happen anywhere." effectively serves to educate the public about three basic steps to reduce the likelihood of fire and how to safely escape a fire.

NOW, THEREFORE, the City Council of the City of Irvine **DOES HEREBY PROCLAIM OCTOBER 7-13, 2018, AS "FIRE PREVENTION WEEK"** and urges Irvine residents to develop a home fire escape plan with all members of the household and practice it twice a year, and to participate in the many public safety activities and efforts of Orange County Fire Authority's fire and emergency services during Fire Prevention Week 2018.

DONALD P. WAGNER
MAYOR OF THE CITY OF IRVINE
OCTOBER 9, 2018

CITY OF IRVINE 1971

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3.3

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: WARRANT AND WIRE TRANSFER RESOLUTION

Director of Administrative Services

City Manager

RECOMMENDED ACTION

Adopt - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, ALLOWING CERTAIN CLAIMS AND DEMANDS AND SPECIFYING THE FUNDS OUT OF WHICH THE SAME ARE TO BE PAID

EXECUTIVE SUMMARY

A detailed register of claims, the Register of Warrants and Wire Transfers, are submitted to the City Council for review and authorization on a weekly basis. Approval of the attached resolution ratifies the disbursement of funds for the period of September 12, 2018 through September 25, 2018 in accordance with Section 2-7-211 of the Irvine Municipal Code.

ATTACHMENT Warrant and Wire Transfer Resolution

CITY COUNCIL RESOLUTION NO. 18-___

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, ALLOWING CERTAIN CLAIMS AND DEMANDS AND SPECIFYING THE FUNDS OUT OF WHICH THE SAME ARE TO BE PAID

(SEE ATTACHED)

PASSED AND ADOPTED by the City Council of the City of Irvine at a regular meeting held on the 9th day of October 2018.

_____
MAYOR OF THE CITY OF IRVINE

ATTEST:

_____
CITY CLERK OF THE CITY OF IRVINE

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF IRVINE)

I, MOLLY MCLAUGHLIN, City Clerk of the City of Irvine, HEREBY DO CERTIFY that the foregoing resolution was duly adopted at a regular meeting of the City Council of the City of Irvine, held on the 9th day of October 2018.

AYES:	COUNCILMEMBERS:
NOES:	COUNCILMEMBERS:
ABSENT:	COUNCILMEMBERS:
ABSTAIN:	COUNCILMEMBERS:

_____
CITY CLERK OF THE CITY OF IRVINE

ATTACHMENT

9/12/2018 through 9/18/2018

REGISTER OF DEMANDS AND WARRANTS

Fund	Fund Description	Amount
001	GENERAL FUND	799,267.47
004	PAYROLL CLEARING FUND	39,677.03
005	DEVELOPMENT SERVICES FUND	38,452.50
009	REVENUE CLEARING FUND	15,698.86
024	BUILDING & SAFETY FUND	119,370.57
027	DEVELOPMENT ENGINEERING FUND	39,354.25
111	GAS TAX FUND	2,407.06
119	LIGHTING, LANDSCAPE & PARK MNT	283,466.43
125	COMM DEVELOP BLOCK GRANT FUND	13,253.75
128	OFFICE ON AGING PROGRAMS FUND	8,069.32
136	PS SPECIAL SERVICES FUND	528.39
149	SPECIAL PROGRAM GRANTS	67,014.28
180	ORANGE COUNTY GREAT PARK	209,458.62
204	CFD 2013-3 GREAT PARK	11,024.00
250	CAPITAL IMPROV PROJ FUND - CIR	89,063.77
260	CAPITAL IMPROV PROJ-NON CIRC	63,208.24
270	NORTH IRVINE TRANSP MITIGATION	853.00
286	GREAT PARK DEVELOPMENT FUND	12,290.15
501	INVENTORY	7,629.83
570	INSURANCE FUND	60,350.99
574	FLEET SERVICES FUND	39,774.07
578	MAIL & PRINT INTERNAL SERVICES	69.17
580	CIVIC CTR MAINT & OPERATIONS	62,518.74
714	REASSESSMENT 12-1 FIXED RATE	21.43
716	RAD 13-1 FIXED RATE	21.42
717	RAD 04-20 PORTOLA SPR VAR RT A	21.43
718	RAD 05-21 ORCHARD HLS VAR RT	21.43
719	REASSESSMENT 85-7A VARIABLE RT	21.43
743	RAD 05-21 G4 FIXED RATE	6,750.00
744	CFD 2013-3 GREAT PARK	7,500.00
745	CFD 2005-2R COLUMBUS GROVE SP	21.43
772	RAD 15-1 FIXED RATE	21.43
	GRAND TOTAL	**1,997,200.49**

9/19/2018 through 9/25/2018

REGISTER OF DEMANDS AND WARRANTS

Fund	Fund Description	Amount
001	GENERAL FUND	1,083,695.93
004	PAYROLL CLEARING FUND	2,400,263.88
005	DEVELOPMENT SERVICES FUND	154,526.89
009	REVENUE CLEARING FUND	1,183.63
024	BUILDING & SAFETY FUND	269,002.81
027	DEVELOPMENT ENGINEERING FUND	48,629.00
114	HOME GRANT	450.00
119	LIGHTING, LANDSCAPE & PARK MNT	279,778.03
125	COMM DEVELOP BLOCK GRANT FUND	14,397.20
126	SENIOR SERVICES FUND	253.38
128	OFFICE ON AGING PROGRAMS FUND	1,592.07
132	SLURRY SEAL SUR CHG FUND	2,839.00
149	SPECIAL PROGRAM GRANTS	10,125.90
154	RENEWED MEASURE M2 FAIR SHARE	10,840.00
180	ORANGE COUNTY GREAT PARK	298,010.30
204	CFD 2013-3 GREAT PARK	22,000.00
221	AD 07-22 STONEGATE	6,000.00
224	AD 11-24 CYPRESS VILLAGE	500.00
250	CAPITAL IMPROV PROJ FUND - CIR	46,133.76
260	CAPITAL IMPROV PROJ-NON CIRC	271,780.83
270	NORTH IRVINE TRANSP MITIGATION	3,700.00
271	IRVINE BUSINESS COMPLEX	20,600.00
286	GREAT PARK DEVELOPMENT FUND	215,914.65
501	INVENTORY	5,645.00
570	INSURANCE FUND	55,477.07
574	FLEET SERVICES FUND	29,757.52
578	MAIL & PRINT INTERNAL SERVICES	2,026.34
579	STRATEGIC TECHNOLOGY PLAN FUND	64,683.72
580	CIVIC CTR MAINT & OPERATIONS	8,884.25
744	CFD 2013-3 GREAT PARK	6,185.05
	GRAND TOTAL	**5,334,876.21**

3.4

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: TREASURER'S REPORT FOR THE FISCAL YEAR ENDED JUNE 30, 2018

Director of Administrative Services

City Manager

RECOMMENDED ACTION

Receive and file the Treasurer's Report for the fiscal year ended June 30, 2018.

EXECUTIVE SUMMARY

This report provides a synopsis of investment activity for the City's three investment portfolios for the fiscal year ended June 30, 2018. The portfolios, managed by United American Capital Corporation (UACC) under the direction of the City Treasurer, include the Irvine Pooled Investment Portfolio, Bond Proceeds Fund Portfolio, and Special District Funds Portfolio. The total market value for all three portfolios was $963.78 million as of June 30, 2018.

This report provides information on assets, allocations, average maturities, yields, and valuations for each of the three portfolios. A discussion of market conditions is included to give additional perspective to these measurements.

COMMISSION/BOARD/COMMITTEE RECOMMENDATION

At its regular meeting of September 17, 2018, the Finance Commission recommended that the City Council receive and file the Treasurer's Report for fiscal year ended June 30, 2018 by a 4-0-1 vote (Chair Stein, Vice Chair Dressler, Commissioners Reyno and Sievers approving; Commissioner Shute absent).

ANALYSIS

The Treasurer's office is responsible for the investment of the City's three fixed income portfolios in conformance with the Investment Policy adopted annually by the City Council. In accordance with the Investment Policy, management of the Irvine Pooled Investment Portfolio, Bonds Proceeds Fund Portfolio and Special District Funds Portfolio are delegated to an investment advisory firm, UACC, with full authority to execute investment transactions on behalf of the City. The Investment Policy is updated annually in

accordance with the California State Government Code. Treasurer's reports are provided at quarter end and fiscal year end to the Investment Advisory Committee, Finance Commission, and City Council. The report includes investment activity and performance for each of the City's portfolios. The primary objectives of investing public funds, in the order of importance, are safety of principle, liquidity of funds, and return on investment. All securities owned by the City are held in safekeeping by a third party custodial bank acting as the agent for the City instead of being held by a securities dealer or investment management firm. Any trade executed with a broker/dealer is required to settle with the City's safekeeping agent on a delivery versus payment basis, where the delivery of a security to the appropriate party is made only after the funds have been sent in full as payment for the security.

Irvine Pooled Investment Portfolio

The Irvine Pooled Investment Portfolio contains funds invested for the daily operational requirements of the City and funds reserved for economic uncertainties, future rehabilitation and maintenance needs. The portfolio is a combination of various operating funds, including the City's Asset Management Plan and funds earmarked for the development of the Orange County Great Park. A summary of the Irvine Pooled Investment Portfolio by Fund is presented at the end of this report (Attachment 1).

As of June 30, 2018, the book value (purchase price of securities as recorded on the City's books) of the portfolio was $707.10 million and the average weighted yield to maturity was 1.60 percent. Fiscal year-to-date investment revenue (interest payments and capital gains) generated by the portfolio as of June 30, 2018 was $7.98 million. The following chart compares the portfolio's statistics over a rolling 12-month period.

Irvine Pooled Investment Portfolio
Rolling 12-Month Quarterly Comparison

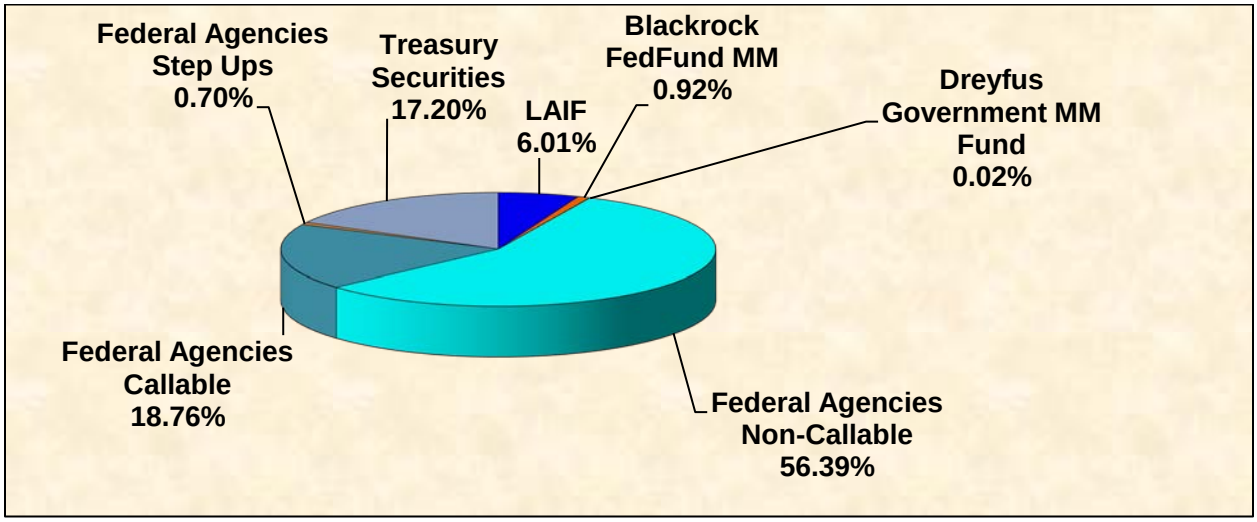
	June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017
Book Value	$707,103,573	$661,611,807	$634,945,838	$633,592,161
Market Value	$698,234,684	$653,215,825	$629,344,603	$631,069,975
Unrealized Gain/(Loss)	($8,868,889)	($8,395,982)	($5,61,235)	($2,522,186)
Unrealized Gain/(Loss) as % of Book Value	(1.25%)	(1.27%)	(0.88%)	(0.40%)
Average Yield To Maturity	1.60%	1.45%	1.36%	1.30%
Liquidity 0–6 Months	21.71%	17.40%	12.97%	13.41%
Average Years To Maturity	1.85	1.90	1.97	2.01
Modified Duration (Years)	1.78	1.83	1.91	1.95
Fiscal Year to Date Income	$7,976,739	$5,897,774	$3,872,132	$1,819,383

The Irvine Pooled Investment Portfolio's book value increased by $45.49 million from the previous quarter due to the receipts of property taxes, one-time development fees, and the Recognized Obligation Payment Schedule (ROPS) payment. Portfolio yield to maturity increased for the quarter ended June 30, 2018 by 15 basis points to 1.60 percent. This was directly attributed to the increasing rate environment as maturing investments were reinvested into longer term and higher rate securities. With market rates increasing, the portfolio ended the quarter with an unrealized loss of $8.87 million as compared to an unrealized loss of $8.40 million on March 31, 2018. This is a normal result of the portfolio's modified duration of 1.78 years, and its price-sensitivity to changes in market interest rates.

To ensure the safety of the portfolio, investments that hold the highest credit quality are selected. The Irvine Pooled Investment Portfolio is comprised primarily of Federal Government sponsored entity debt, otherwise known as federal agency securities. Although federal agency securities were downgraded by Standard & Poor's to AA+ in August 2011, they continue to be regarded as among the safest securities in the global market. Two of the government sponsored agencies, Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac), remain under conservatorship and carry an implicit guarantee by the Federal Government. In addition, both are carefully monitored by the City's investment manager and Treasurer to ensure the continued safety of the City's funds.

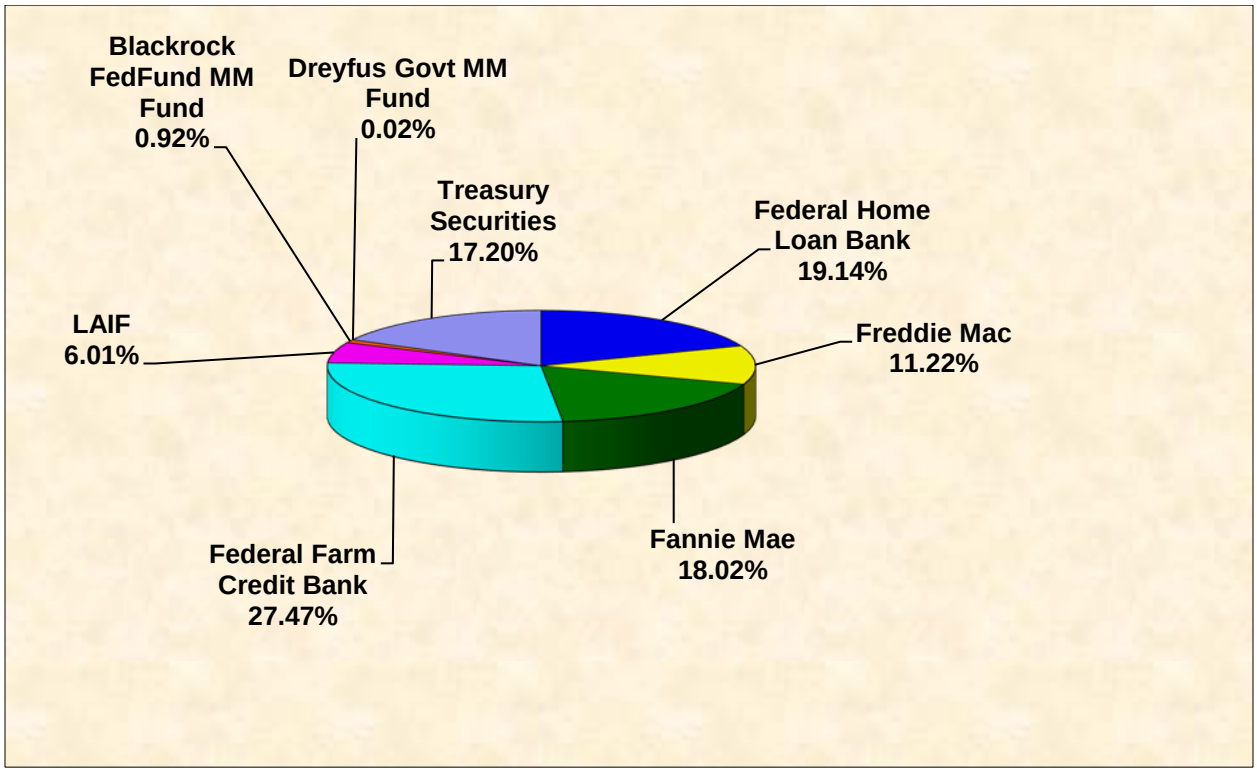
To manage liquidity, the Irvine Pooled Investment Portfolio is invested in Local Agency Investment Funds (LAIF), Dreyfus Government money market fund, and the Blackrock FedFund money market fund. Chart 1 shows the asset allocation of the portfolio.

Irvine Pooled Investment Portfolio
Chart 1 - Asset Allocation
As of June 30, 2018



To diversify, the City purchases United States Treasury notes and securities from several different federal agencies. The four Federal Government sponsored entities the City owns are: Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac), Federal Home Loan Bank (Home Loan), and Federal Farm Credit Bank (Farm Credit). Chart 2 identifies portfolio holdings by issuer name.

Irvine Pooled Investment Portfolio
Chart 2 - Holdings by Issuer Name
As of June 30, 2018



Another key component in portfolio management is to ensure that the City has enough funds on hand to meet current expenses. As of June 30, 2018, the overnight to 6-month liquidity level for the Irvine Pooled Investment Portfolio was at 21.71 percent as the city prepares to prepay the 2018-19 CalPERS pension liability in July. Chart 3, on the following page, is an aging of investment maturities up to 5 years (the maximum maturity allowable by policy and state code) of the Irvine Pooled Investment Portfolio.

Irvine Pooled Investment Portfolio
Chart 3 - Aging of Maturing Investments (Maturity Value)
As of June 30, 2018

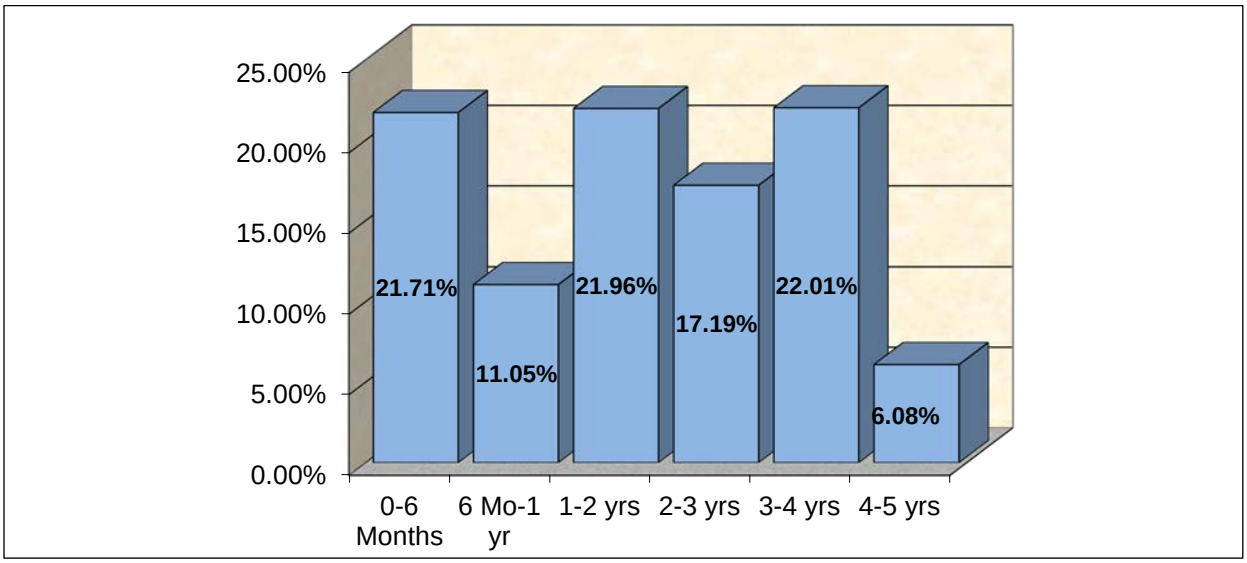
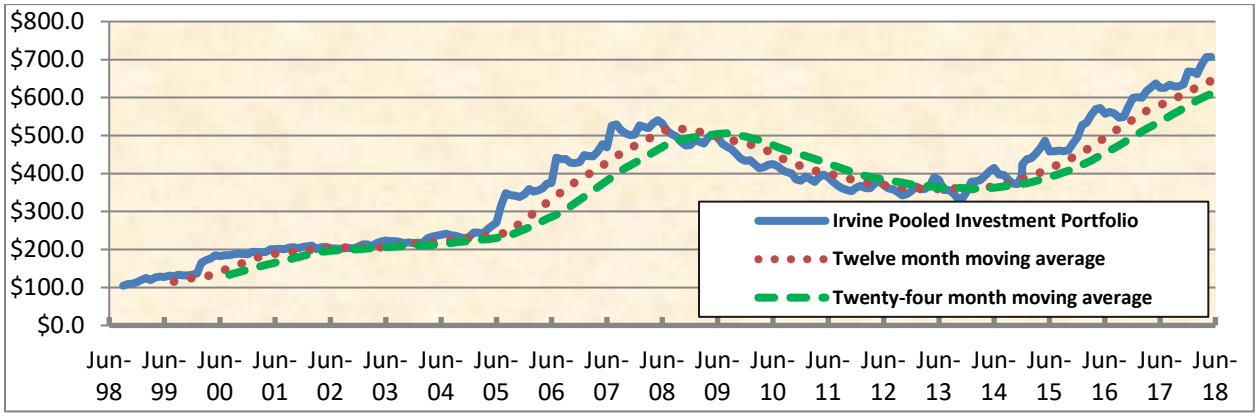
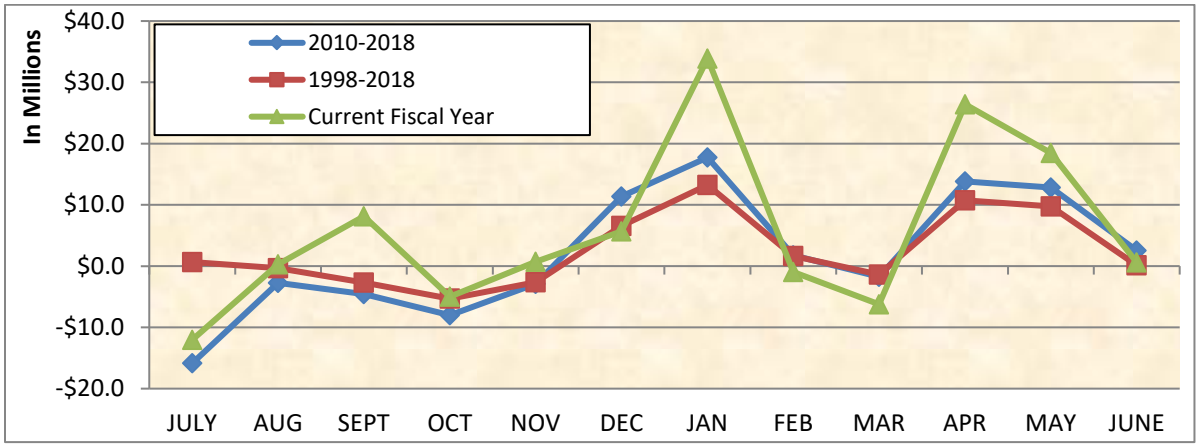


Chart 4 and Chart 5 show the volatility and cyclicality of the Irvine Pooled Investment Portfolio fund balance and cash flows between 1998 and 2018. As noted in chart 5, the portfolio experienced above-average increases in September 2017, January 2018 and April 2018. These increases were attributed to one-time development related payments, sale of Fire Station 20 parcel, and higher property tax receipts from property owners paying both 2017-18 property tax installments in 2017 due to the recent tax law changes.

Irvine Pooled Investment Portfolio
Chart 4 - Portfolio Balance
June 30, 1998 through June 30, 2018

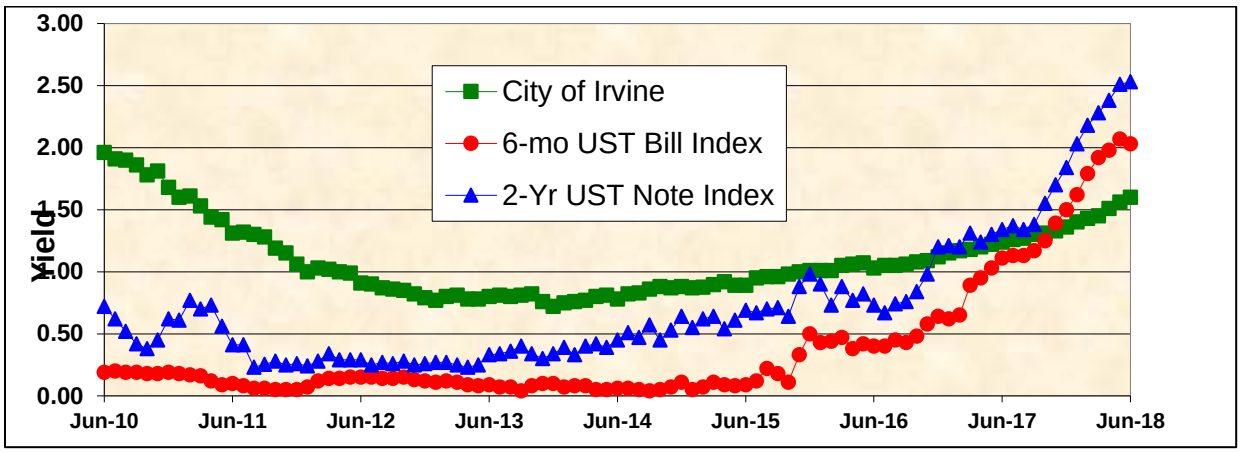


Irvine Pooled Investment Portfolio
Chart 5 – Balance Change Month by Month (Average)



To gauge performance, the City compares the Irvine Pooled Investment Portfolio's yield to maturity against two reference notes set in the City's Annual Investment Policy: the 6-month United States Treasury (UST) Bill Index and 2-year UST Note Index. The reference notes are used as a measure of the portfolio against market movement. Chart 6 compares the average yield to maturity of the portfolio to these reference notes, and shows the spread (difference between the index and the yield to maturity) for the past eight years. With the recent Federal Reserve rate hikes, the portfolio's book yield is less than the 6-month UST by 0.43 percent and the 2-year UST by 0.93 percent. However, over a period of 24 months, the average yield on the 2-year Treasury note is 1.49 percent, versus 1.60 percent for the Irvine Pooled Investment Portfolio.

Irvine Pooled Investment Portfolio
Chart 6 - Yield to Maturity Compared to Assigned Indices
June 30, 2010 through June 30, 2018



Bond Proceeds Fund Portfolio

The Bond Proceeds Fund Portfolio contains special district construction and administration funds that are not held by a trustee. These include older bond issues, and funds on hand to finance the City's special district administration. Investment strategy in the Bond Proceeds Fund Portfolio differs from the Irvine Pooled Investment Portfolio due to the different cash needs between the two. The Bond Proceeds Fund Portfolio requires greater liquidity to meet debt related payments. The account balance in the Bond Proceeds Fund Portfolio fluctuates from quarter to quarter due to the timing of property tax and assessment collections from the County of Orange and subsequent distributions. Several times a year, the portfolio receives special assessments and tax levies collected by the County. The special assessments and tax levies contain three major components:

(1) The collections from the various Assessment Districts (AD), Reassessment Districts (RAD) and Community Facilities Districts (CFD). Upon receipt, the City transfers these funds to the Districts' bond trustees.
(2) The collections for the guaranteed maintenance amount of the Great Park CFD. Upon receipt, the City transfers this amount to the Orange County Great Park Fund.
(3) The collections for the Districts' construction and administration funds held and managed by the City. This portion remains in the Bond Proceeds Fund Portfolio.

Fiscal year-to-date investment revenue (interest payments and capital gains) generated by the Bond Proceeds Fund Portfolio as of June 30, 2018 was $65,370.

Bond Proceeds Fund Portfolio
Rolling 12-Month Quarterly Comparison

	June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017
Book Value	$6,902,000	$6,056,000	$5,381,000	$4,294,000
Market Value	$6,885,007	$6,044,454	$5,375,845	$4,289,887
Unrealized Gain/(Loss)	($16,993)	($11,546)	($5,155)	($4,113)
Unrealized Gain/(Loss) as % of Book Value	(0.25%)	(0.19%)	(0.10%)	(0.10%)
Average Yield To Maturity	1.76%	1.52%	1.24%	1.11%
Liquidity 0–6 Months	100.00%	100.00%	100.00%	100.00%
Average Days To Maturity	1	1	1	1
Modified Duration in Days	1	1	1	1
Fiscal Year to Date Income	$65,370	$43,787	$28,053	$16,078

Special District Funds Portfolio

The Special District Funds Portfolio contains project and reserve funds for 28 AD and RAD bond issues and four CFD bond issues. Investments in this portfolio are made in accordance with each bond's indenture and the strategy is based on the cash flow needs of each district. The Special District Funds Portfolio must also remain highly liquid to provide project funds, when needed, as well as meet debt service payment requirements. Fiscal year-to-date investment revenue (interest payments and capital gains) generated by the Special District Funds Portfolio as of June 30, 2018 was $2,908,722.

Special District Funds Portfolio
Rolling 12-Month Quarterly Comparison

	June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017
Book Value	$258,697,808	$265,277,405	$294,084,302	$279,378,670
Market Value	$258,660,961	$265,185,789	$294,001,956	$279,354,335
Unrealized Gain/(Loss)	($36,847)	($91,616)	($82,347)	($24,336)
Unrealized Gain/(Loss) as % of Book Value	(0.01%)	(0.03%)	(0.03%)	(0.01%)
Average Yield To Maturity	2.09%	1.74%	1.41%	1.06%
Average Days To Maturity	56	70	73	60
Fiscal Year to Date Income	$2,908,722	$1,969,221	$863,441	$37,750

Market Conditions

During the fourth quarter of FY 2017-18, interest rates increased moderately across the yield curve. As expected, the Federal Reserve increased the federal funds rate range by 25 basis points for the third time in the past 12 months at the June 13, 2018 Federal Open Market Committee (FOMC) meeting. The current federal funds rate range is 1.75 to 2.00 percent. During the past fiscal year, the yields of the 6-month Treasury notes increased 98.90 basis points to 2.10 percent, the two-year notes increased 111.1 basis points to 2.52 percent, and the five-year notes increased 90.40 basis points to 2.72 percent. The Local Agency Investment Fund (LAIF) daily rate increased from 0.97 percent to 1.75 percent during the past fiscal year. The net effect to the Pooled Investment Portfolio was an increase in the unrealized market value loss which was in direct proportion to the stated duration of the portfolio. As holdings mature, proceeds are reinvested into higher yielding government bonds which increase the average rate of return.

Financial market continued to focus on economic releases, including labor and wage data, global trade, protectionism, and Federal Reserve Fund policy. As of June 30, 2018, the unemployment rate declined to 4.00 percent. The under-employment rate improved to 7.80 percent from 8.00 percent last quarter. Labor force participation rate reached 62.90 percent, a level not seen since 1978. The yearly percentage change of the average

hourly earnings has steadily risen since the financial crisis ended, and remains at the high end of the relatively narrow range of 1.50 percent to 2.80 percent signifying that labor cost growth is lagging behind employment growth. The Federal Reserve remains focused on maximum employment, stable prices, and moderate long term interest rates. The probability of a 25 basis points Federal Funds rate increase at the September 26, 2018 FOMC meeting remains high.

Recent comments by Federal Reserve Chair Jerome Powell regarding labor and inflation, "let's be guided by what's going on and what the real economy's telling us," indicates that the FOMC is more data-dependent with future strategy, which may require nimbleness and potential sharp changes in policy direction. Officials raised rates on June 13 and have signaled two more rate increases this year. With unemployment near 4.00 percent, wage growth at 2.70 percent and continue to rise modestly, the FOMC will remain focused on the historical inverse relationship between rates of unemployment and corresponding rates of inflation. Some Federal Reserve officials also worry that a long period of low interest rates amid scarce resources, including a smaller pool of available workers, could generate overly-inflated asset valuations. The number one complaint from small business hiring managers, as measured by the National Federation of Independent Business small business index, is their difficulty in finding qualified employees.

The long run impact of a trade war could negatively impact economic growth, inflation, and profit margins. The economy advanced at a moderate pace during the quarter with current projections predicting an increase above the 2.00 percent pace in the prior quarters' GDP index. As reported by the Institute for Supply Management's semi-annual forecast, capital spending should increase by 10.10 percent in 2018. The Atlanta Federal Reserve GDPNow Forecast is currently 3.83 percent as of June 29, 2018, and may continue to move higher during the remainder of the calendar year. Inflation remains slightly below the Federal Reserve's 2.00 percent target with the Personal Consumption Expenditure Core Price index at 1.95 percent as of May 31, 2018.

In conclusion, the moderately expanding economy coupled with current benign but slowly accelerating inflation data will keep the Federal Reserve policy of interest rate normalization on a cautious path. The Federal Reserve began quantitative tightening during the final months of the calendar year 2017 and will gradually accelerate the drawdown of its balance sheet from $10 billion per month to $50 billion per month. Fiscal policies with regard to federal government spending and taxation, trade issues, as well as the transition from easy to neutral monetary policy, would suggest increased volatility in the next quarter.

ALTERNATIVES CONSIDERED

None. The Treasurer's Report is intended to provide historical information about the City's investment portfolios with a forecast based on current market condition. Pursuant to the City's Investment Policy, the Treasurer is required to submit quarterly Treasurer's reports to the City Council.

FINANCIAL IMPACT

Fiscal year-to-date investment income for the Irvine Pooled Investment Portfolio, Bond Proceeds Fund Portfolio, and Special District Funds Portfolio totaled $10.95 million with investments structured for security and liquidity.

REPORT PREPARED BY Don Collins, City Treasurer

Attachment 1: Summary of Pooled Investment Portfolio Book Value by Fund

City of Irvine
Summary of Pooled Investment Portfolio Book Value by Fund *
As of June 30, 2018

General Reserve Funds	**$**	**134,785,664**
Capital Projects Funds:		
Capital Improvement Projects		**32,760,366**
Irvine Business Complex		**91,871,508**
North Irvine Transportation Mitigation		**81,548,576**
Orange County Great Park Development		**5,207,120**
Park Development		**17,507,704**
Total		**228,895,274**
Special Revenue Funds:		
Air Quality Improvement		**396,855**
County Sales Tax Measure M		**940,524**
Fees and Exactions		**19,458,609**
Gas Tax		**12,214,645**
Grants		**3,760,397**
I Shuttle		**843,483**
Local Park Fees		**118,277,594**
Maintenance District		**2,116,457**
Major Special Events		**(125,644)**
Orange County Great Park		**111,835,492**
Road Maintenance and Rehab Account		**1,000,748**
Slurry Seal Fees		**1,020,739**
System Development		**29,435,080**
Total		**301,174,979**
Internal Service Funds:		
Equipment & Services		**17,848,649**
Inventory		**81,914**
Self-Insurance		**18,560,090**
Total		**36,490,653**
Permanent Fund:		
Senior Services		**328,074**
Senior Services Endowments		**495,406**
Total		**823,480**
Fiduciary Fund:		
Successor Agency		**4,933,523**
Total		**4,933,523**
Total Pooled Investments at June 30, 2018	**$**	**707,103,573**

Note:
Funds are as presented in the City's Comprehensive Annual Financial Report (CAFR).
* Balances are subject to changes due to fiscal year end reconciliations.

ATTACHMENT 1

3.5

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: CITY OF IRVINE INVESTMENT POLICY FOR CALENDAR YEAR 2019

Director of Administrative Services

City Manager

RECOMMENDED ACTION

Adopt - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, ADOPTING THE CITY'S ANNUAL INVESTMENT POLICY FOR CALENDAR YEAR 2019

EXECUTIVE SUMMARY

The City of Irvine Annual Investment Policy (Policy) provides specific criteria for the prudent investment of the City's funds. The policy applies to the following portfolios that are held by the City: the City's Pooled Investment Portfolio, Bond Proceeds Portfolio, and Special District Funds Portfolio. In accordance with the Policy, the City Council is to review and adopt the Policy annually. There were no changes to the local agency investment codes during the 2017 legislative session, therefore, the City's Policy conforms to the current investment statues. The 2019 Policy update contains editorial changes only.

COMMISSION/BOARD/COMMITTEE RECOMMENDATION

At its regular meeting of September 17, 2018, the Finance Commission recommended that the City Council adopt the City of Irvine Investment Policy for Calendar Year 2019 by a 4-0-1 vote (Chair Stein, Vice Chair Dressler, Commissioners Reyno and Sievers approving; Commissioner Shute absent). No further discussion was conducted.

At its regular meeting of August 8, 2018, the Investment Advisory Committee recommended that the City Council receive and file the City of Irvine Investment Policy for Calendar Year 2019 by a 3-0-1 vote (Committee Members Carney, Judd and Shen approving; Committee Member Graham absent).

ANALYSIS

The City Treasurer, investment manager, and staff evaluate the Annual Investment Policy (Attachment 1) and recommend changes based on various factors including legislative

changes, investment management practices, market and economy, and national and state investment policy standards.

The Policy is based on State of California Government Code Sections 53600 through 53609 and 53630 through 53686. These laws, as well as guidelines set forth by the Association of Public Treasurers of the United States and Canada, the California Municipal Treasurers Association, and the Government Finance Officers Association, have aided City staff in policy development. The State laws and established guidelines encompass a broad array of allowable investments and investment standards to suit the different needs of California's local agencies. The City's Policy is more conservative than what is allowed by State law as it further restricts the percentage of allowable credit investments.

The Policy applies to the City's Pooled Investment Portfolio, Bond Proceeds Portfolio, and Special District Funds Portfolio. These portfolios encompass all funds under the oversight of the City Treasurer including the General Fund, Reserve Funds, Special Revenue Funds, Capital Project Funds, Permanent Fund, Debt Service Funds, Proprietary Funds, Trust and Agency Funds, and other funds that may be created as needed.

There were no changes to the local agency investment codes during the 2017 legislative session. Updates to certain language used in the Policy, most of which are for clarification, except for Section 14, Collateralization. Subsection 14.1 specifying the eligible collateral for repurchase agreements has been removed, since the specification is also included in Section 17, Authorized and Suitable Investment, under subsection E.

ALTERNATIVES CONSIDERED

The recommended changes to the City's Investment Policy are not mandatory and the Policy could be approved with no changes. However, the proposed changes clarify Policy language, and ensure the Policy's intent is consistently applied.

FINANCIAL IMPACT

None.

REPORT PREPARED BY Don Collins, City Treasurer
Patricia Song, Manager of Fiscal Services

ATTACHMENTS:

1. Annual Investment Policy (redlined)
2. Annual Investment Policy (clean)
3. Resolution

City of Irvine

Annual Investment Policy
Calendar Year 2019~~8~~

Don Collins
City Treasurer

ATTACHMENT 1

City of Irvine
Annual Investment Policy
Calendar Year 2019~~98~~

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Bylaws of the Investment Advisory Committee A-1

CITY OF IRVINE
ANNUAL INVESTMENT POLICY
FOR CALENDAR YEAR 2019~~8~~

1. INTRODUCTION

This statement of Investment Policy is intended to provide specific criteria for the prudent investment of City funds. The ultimate investment goal is to enhance the economic status of the City while protecting funds under management and meeting the daily cash flow demands of the City. This investment policy has been prepared in conformance with all pertinent existing laws of the State of California including California Government Code Sections 53600, et seq.

2. SCOPE

This investment policy applies to the City's Irvine Pooled Investment Portfolio, Bond Proceeds Portfolio~~ held by the City~~, and Special District Funds Portfolio. These portfolios encompass all monies under the direct oversight of the Treasurer and include the General Fund, Reserve Funds, Special Revenue Funds, Debt Service Funds, Capital Project Funds, Permanent Fund, Proprietary Funds, Trust and Agency Funds, including the Successor Agency to the Dissolved Irvine Redevelopment Agency, and any other funds that may be created. These funds are accounted for in the City of Irvine's Comprehensive Annual Financial Report.

3. DELEGATION OF AUTHORITY

Authority to manage the City of Irvine's investment program is derived from the Charter of the City of Irvine, Section 2-2-101(B). The authority of the City Council to invest or reinvest monies of the City has been delegated by the City Council to the City Treasurer for one year or until such time the delegation is revoked. The City Treasurer shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the activities of subordinate officials, and their procedures in the absence of the City Treasurer. The City Treasurer may delegate daily investment activity, such as carrying out the Treasurer's investment instructions, confirming treasury transactions, and other routine activities.

The City Treasurer shall establish written investment policy procedures for the operation of the investment program consistent with this policy. The procedures should include reference to: safekeeping, master repurchase agreements, wire transfer agreements, banking service contracts and collateral/depository agreements. Such procedures shall include explicit delegation of authority to persons responsible for investment transactions.

No person may engage in an investment transaction except as provided under the terms of this policy and the procedures established by the City Treasurer.

The Treasurer is responsible for the investment of bond proceeds and special district funds, whether held by the City, a fiscal agent, or trustee. The Bond Proceeds and Special District Funds Portfolios shall be segregated from the Irvine Pooled Investment Portfolio ~~of the City~~ and will be structured with maturities (or maintain an average maturity) sufficient to meet construction drawdowns, debt service payments and other short-term liabilities. For purposes of efficiency, the Treasurer may instruct each fiscal agent or trustee to purchase certain securities regarding the investment of bond proceeds and special district funds in conformance with the permitted investment criteria documented in each bond indenture or guiding resolution. Where present, bond indenture and guiding resolution documentation for investment of bond proceeds and special district funds will supersede the City of Irvine Investment Policy guidelines. The Investment Advisory Committee will be advised of any investments made outside of the Investment Policy, pursuant to bond indentures, and/or guiding resolutions.

Currently, management of the Irvine Pooled Investment Portfolio, Bond Proceeds Portfolio, and Special District Funds Portfolio has been delegated to an ~~contract management~~investment advisory firm that has full authority to execute investment transactions on behalf of the City. In the event the contract management firm is not able to execute investment transactions, the City Treasurer and Deputy City Treasurer have the authority to execute investment transactions.

4. ETHICS AND CONFLICTS OF INTEREST

Officers and employees involved in the investment process shall refrain from personal business activity that conflicts with proper execution of the investment program or that impairs their ability to make impartial investment decisions. Employees and investment officials shall disclose any material financial interests that could be related to the performance of the City's investment policy annually with the California Fair Political Practices Commission or as necessary under the Political Reform Act and Government Code Section 1090 et seq.

5. PRUDENCE/PRUDENT INVESTOR STANDARD

The Treasurer operates the City's pooled ~~cash~~ investment program under the Prudent Investor Standard, Government Code Section 53600.3, and applicable State laws. When investing, reinvesting, purchasing, acquiring, exchanging, selling, and managing public funds, the Treasurer shall act with care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the City, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the City. Within the limitations of this section and considering individual investments as part of an overall strategy, investments may be acquired and sold as authorized by law. This affords a broad spectrum of investment opportunities so long as the investment is deemed prudent and permissible by the State of California, various bond indentures and this policy. The Treasurer strives to invest 100 percent of idle funds.

6. INTERNAL CONTROLS

The Treasurer and Manager of Fiscal Services shall establish procedures that separate the internal responsibility for management and accounting of the investment portfolios. An analysis by an external independent auditor shall be conducted annually to review internal controls, account activity and compliance with policies and procedures.

7. INVESTMENT OBJECTIVES

The City's cash management system is designed to accurately monitor and forecast revenues and expenditures, thus enabling the Treasurer to invest funds to the fullest extent possible. The Treasurer maintains a diversified portfolio to accomplish the primary objectives in the order of safety, liquidity, and yield.

Safety: The safety/risk associated with an investment refers to the potential loss of principal, accrued interest or a combination of these. The Treasurer seeks to mitigate credit risk by monitoring financial institutions with which he/she will do business, and by careful scrutiny of the credit worthiness of the investment instruments as well as the institutions. Such resources as a nationally recognized statistical-rating organization (NRSRO) services are utilized for this review. The Treasurer seeks to mitigate interest rate risk through diversification of instruments as well as maturities.

Liquidity: The portfolio will be structured with sufficient liquidity to allow the Treasurer to meet anticipated cash requirements. This will be accomplished through the purchase of a diversity of instruments to include those with active secondary markets, those that can match maturities to expected cash needs, and the State Local Agency Investment Fund (LAIF) with immediate withdrawal provisions.

Yield: A competitive market rate of return is the third objective of the investment program after the fundamental requirements of safety and liquidity have been met. The portfolio shall be managed to consistently attain a market rate of return throughout budgetary and economic cycles. Whenever possible, and consistent with risk limitations and prudent investment management, the City will seek to augment returns above the market average rate of return through the implementation of active portfolio management strategies.

8. PERFORMANCE EVALUATION

Investment performance is continually monitored and evaluated by the City Treasurer. Investment portfolio reports are generated on a monthly and quarterly basis and submitted to the City Council, City Manager, and Investment Advisory Committee. A quarterly Treasurer's report is also presented to the City Council, Finance Commission, and Investment Advisory Committee during respective regularly scheduled meetings.

The investment portfolio reports are to be submitted within 30 days of the end of the reporting period. The monthly average yield of the Irvine Pooled Investment Portfolio will be compared to the monthly average 6-month CMT (Constant Maturity Treasury) as calculated by the Federal Reserve Bank of New York. As an added reference, the monthly average yield of the Irvine Pooled Investment Portfolio will be compared to the monthly average 2-year CMT as calculated by the Federal Reserve Bank of New York.

9. DIVERSIFICATION

The City will diversify use of investment instruments to avoid unreasonable risks inherent in over-investing in specific instruments, individual financial institutions, or maturities.

Market price volatility shall be controlled through maturity diversification, as well as ensuring adequate liquidity is available to meet cash flow requirements, thereby precluding the need to sell instruments at a market loss.

Risk of default will be controlled by acquiring instruments such as Government Securities, or by diversifying the portfolio within the constraints and parameters of Section 17 of this Policy, Authorized and Suitable Investments.

10. PORTFOLIO SEGREGATION

Within the overall funds managed by the Treasurer, bond proceeds and special district funds shall be segregated from the general City pool into their own pool and be invested in conformance with the permitted investment criteria documented in each bond indenture or guiding resolution. Furthermore, bond proceeds held by fiscal agents or trustees shall also be segregated and invested in accordance with each indenture.

The primary purpose of any separately managed bond proceeds and special district funds portfolios is to structure investment maturities to meet current and future liabilities. The preservation of principal and the maintenance of liquidity are the most important factors regarding the investment of bond proceeds and special district funds. Portfolio yield is not a primary factor since the portfolio structure, eligible investment assets and maturity restrictions are governed by draws and expenditure schedules of the issues. Performance will be based upon maximizing permitted positive arbitrage within the context of principal preservation as a first priority (pre-1986 Tax Reform Act issuances) or minimizing or eliminating negative arbitrage (yield-restricted issues).

11. BOND ISSUANCE ARBITRAGE REBATE

The U.S. Tax Reform Act of 1986 requires the City to perform annual arbitrage calculations and rebate excess earnings to the U.S. Treasury for investment returns that exceed the allowable interest earnings limit of each bond issue. The arbitrage calculation process must be conducted for the investment of proceeds of bond issues sold after the effective date of this law. This arbitrage calculation will be contracted out to provide the necessary technical expertise to comply with this regulation. The City's investment

position relative to the interest rate arbitrage restrictions is to have safety and the highest permitted return the law allows as the highest priority while ensuring the preservation of principal and liquidity.

12. QUALIFIED DEALERS

The Treasurer shall transact business only with Registered Investment Advisors, national or state-chartered banks, savings and loans, and broker dealers. The dealers should be primary dealers regularly reporting to the New York Federal Reserve Bank, or approved regional or secondary market dealers that qualify under the Securities and Exchange Commission Rule 15C3-1 (uniform net capital rule).

The Treasurer may direct a fiscal agent or trustee to execute investment transactions on behalf of the City for funds held by that fiscal agent or trustee.

The City may purchase "prime" quality rated commercial paper from its direct issuer if it presents a higher return than in the secondary market.

The Treasurer will monitor broker/dealers and their firms, to ensure they are in good standing with the appropriate regulatory agencies. The Treasurer will review financials and report back to the Investment Advisory Committee.

13. SAFEKEEPING OF SECURITIES

To protect against losses caused by the collapse of individual securities dealers, all securities owned by the City, including collateral for repurchase agreements, shall be held in safekeeping by a third party bank trust department acting as agent for the City under the terms of a custody agreement or, in the case of funds held by the fiscal agent or trustee, the fiscal agent or trustee shall segregate and report securities held on the City's behalf. Any trade executed by a dealer is required to settle on a delivery versus payment basis with the City's safekeeping agent.

Fiscal agents or trustees in receipt of City of Irvine bond proceeds will settle security transactions on a delivery versus payment method based upon instructions provided by the Treasurer or the City's investment advisor. The fiscal agents or trustees will issue monthly custodian statements evidencing securities held in safekeeping, including the receipt of interest and maturity

proceeds, the disbursement of funds for the purchase of securities, and the receipt of any sale proceeds.

14. COLLATERALIZATION

All demand deposits, time deposits and repurchase agreements are to be fully collateralized with securities authorized by the California Government Code and the City.

~~1. The eligible collateral for repurchase agreements must be those investments authorized by Section 53651 of the California Government Code. The Treasurer may specify the type of eligible collateral for use in repurchase agreements. Eligible collateral must be in book entry form. Collateral is valued at current market plus accrued interest through the date of valuation.~~

1. The cost value (book value) of collateral pledged for demand deposits must at all time be equal to or greater than the amount on deposit, plus accrued interest, in accordance with the following ratio:

U.S. Treasury Securities	110%

2. The cost value (book value) of collateral pledged for repurchase agreements must at all time be equal to or greater than the par amount, plus accrued interest, with the following ratios:

U.S. Treasury Securities	102%
U.S. Government Agencies	102%

~~2.~~3. It is the policy of the City to require reports at least on a quarterly basis from institutions with which the Treasurer has pledged security interest. The Treasurer shall monitor the adequacy of collateralization to ensure that balances are collateralized in accordance with the ratios approved herein.

~~3.~~4. With regard to repurchase agreements, it is the policy of the City to initiate a margin call in the event pledged collateral falls below the appropriate ratio.

~~4.~~5. Collateralized investments and deposits often require substitution of collateral. Any broker or financial institution requesting substitution must contact the City for approval in the event the counterparty to the transaction is not authorized under agreement with the City to make substitutions.

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15. MAXIMUM MATURITIES

1. Pooled Investment Portfolio

In accordance to California Government Code Section 53601, The City will not invest in any securities maturing more than five (5) years from the settlement date of purchase. If the Treasurer desires to make investments longer than five years, express authority to make those investments, either specifically or as part of an investment program, must be approved by the City Council no less than three months prior to the investment. In no event will securities with maximum maturities beyond four years exceed 40 percent of the portfolio's total carrying cost at the time of purchase.

2. Bond Proceeds Portfolio/Special District Funds Portfolio

The Bond Proceeds and Special District Funds Portfolios held by the City, fiscal agents or trustees will be structured with maturities sufficient to meet current and future disbursements and other liabilities consistent with the purpose of each bond issue. The Treasurer may match maturities to defined future liabilities or may structure the portfolio in such a manner as to maintain an average maturity and a defined liquidity percentage necessary to meet estimated liabilities. In no event will securities be purchased with final maturities that exceed a specifically defined future liquidity requirement (such as bond reserve fund availability requirement) or liability.

16. INVESTMENT POOLS/MONEY MARKET MUTUAL FUNDS

A thorough investigation of any government sponsored pool and/or mutual fund is required prior to investing and on a continual basis. There shall be a questionnaire completed which will provide the following information:

- A description of eligible investment securities, and a written statement of investment policy and objectives.
- A description of interest calculations and how it is distributed, and how gains and losses are treated.
- A description of how the securities are safeguarded (including

the settlement processes), and how often the securities are priced and the program audited.

- A description of who may invest in the program, how often, and what size of deposits and withdrawals are allowed.
- A schedule for receiving statements and portfolio listings.
- A description of how the pool/fund utilizes reserves, retained earnings, etc.
- A fee schedule, including when and how fees are assessed.
- The eligibility of the pool/fund to invest in bond proceeds and special district funds, and a description of its practices.

17. AUTHORIZED AND SUITABLE INVESTMENTS

The City is governed by the California Government Code, Sections 53600 et seq. Within the context of these limitations and based on the cost at the time of purchase, the following investments are authorized as further limited herein:

Authorized Investment Summary Matrix

Category		Percent
A.	US Treasuries	no limit
B.	US Agencies	no limit
C.	Bankers' Acceptances	25%
D.	Commercial Paper	15%
E.	Repurchase Agreements	25%
F.	Reverse Repurchase Agreements	15%
G.	Local Agency Investment Fund (LAIF)	25%
H.	Municipal Bonds	25%
I.	Corporate Medium Term Notes	15%
J.	Money Market Mutual Funds	20%
K.	Supranationals	10%

A. United States Treasury Bills, Bonds, and Notes, or those for which the full faith and credit of the United States are pledged for payment of principal and interest. There is no limitation as to the percentage of the portfolio that can be invested in this category.

B. Obligations issued by United States Federal agencies or government-sponsored enterprise obligations, or other instruments, including those issued by or fully guaranteed as to principal and interest by federal

agencies or United States government-sponsored enterprises. Although there is no percentage limitation on these issues, the "prudent investor" standard shall apply to investments from a single agency.

C. Bills of exchange or time drafts drawn on and accepted by a commercial bank, otherwise known as Bankers' Acceptances. Bankers' Acceptances purchased may not exceed 180 days to maturity or 25 percent of the cost (book) value of the portfolio. No more than $5 million may be invested in Bankers' Acceptances issued by any one bank. Prior to the purchase of any Banker's Acceptance, the portfolio manager shall review the rating of the issuing bank. Bankers' Acceptances of issuing financial institutions shall have both a short and long term rating in the highest category by at least one nationally recognized rating agency at the time of purchase.

D. Commercial paper ranked of "prime" quality of the highest ranking or of the highest letter and number rating as provided for by NRSRO and issued by a domestic corporation having assets in excess of $500 million. The commercial paper must also have an "A" or better rating for the issuer's debt, other than commercial paper, if any, as provided by a NRSRO. Purchase of commercial paper from corporations on negative credit watch by a major rating agency shall be prohibited. Purchases of eligible commercial paper may not exceed 270 days to maturity. Excluding the Special District Funds Portfolio, purchases of commercial paper may not exceed 15 percent of the cost value of the portfolio at time of purchase, and no more than 3 percent of the cost value of the portfolio may be invested in commercial paper issued by any one corporation. Corporate medium term note and bankers' acceptance holdings shall be considered when calculating the maximum dollar amount in any issuer name.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below "investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

E. Repurchase agreements. The City may invest in repurchase agreements with banks and primary dealers with whom the City has entered into a master repurchase agreement that specifies terms and

conditions of repurchase agreements. No more than 25 percent of the cost value of the portfolio may be invested in repurchase agreements at any time. The maturity of repurchase agreements shall not exceed 75 days.

The cost value of securities used as collateral for repurchase agreements shall be monitored daily by the Treasurer and will not be allowed to fall below the margin ratios specified in Section 14 (2~~1~~)~~(b)~~ of this policy. In order to conform with provisions of the Federal Bankruptcy Code which provides for the liquidation of securities held as collateral for repurchase agreements, the only securities acceptable as collateral shall be securities that are direct obligations of, or that are fully guaranteed as to principal and interest by, the United States Government such as Treasury bills, Treasury notes or Treasury bonds with less than a five year maturity.

F. Reverse repurchase agreements. The City may invest in reverse repurchase agreements only with those banks and primary dealers with whom the City has entered into a master repurchase agreement outlining terms and conditions of repurchase and reverse repurchase agreements. The City may only invest in reverse repurchase agreements for the following purpose:

1. The City may enter into reverse repurchase agreements when funds obtained through the reverse can be reinvested in a higher yielding security to obtain additional interest income for the City at a spread deemed to be acceptable by the Treasurer under then prevailing market conditions. Reverse repurchase agreements entered into in accordance with this paragraph may not exceed 75 days to maturity and must be matched as to maturity and dollars invested with its corresponding reinvestment. No more than 15 percent of the cost value (book value) of the portfolio may be invested in reverse repurchase agreements.

2. Reverse repurchase agreements may be used for liquidity purposes when it is determined that the portfolio has sufficient additional collateral coming due within the term of the reverse repurchase agreement equal to or exceeding the amount of the reverse repurchase agreement.

G. The City may invest in the LAIF established by the State Treasurer for

the benefit of local agencies up to the maximum permitted by State law, but not to exceed 25 percent of the cost value (book value) of the total portfolio excluding the Bond Proceeds Portfolio.

H. Bonds issued by local agencies of the United States, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by the local agency or by a department, board, agency, or authority of the local agency rated "AA" or better by a NRSRO. "AA" rated bonds shall be limited to 36 months maximum maturity and "AAA" rated bonds shall be limited to 60 months maximum maturity. No more than 25 percent of the cost value (book value) of the portfolio may be invested in municipal bonds.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below "investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

I. Corporate medium term notes issued by a domestic corporation having assets in excess of $500 million and having an "AA" or better rating criteria at time of purchase on its long-term debentures as provided by a NRSRO. Purchase of corporate medium term notes from corporations on negative credit watch by a major rating agency shall be prohibited. "AA" rated medium term notes shall be limited to 36 months maximum maturity and "AAA" rated medium term notes shall be limited to 60 months maximum maturity. The aggregate total of all purchased medium term notes may not exceed 15 percent of the cost value of the portfolio. No more than 3 percent of the cost value of the portfolio may be invested in corporate medium term notes issued by any one corporation. Commercial paper and bankers' acceptance holdings shall be considered when calculating the maximum percentage in any issuer name.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below "investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

J. Money market mutual funds having a rating of "AAA" or an equivalent by no less than two NRSRO with no load and maintained at $1 par value. No more than 20 percent of the cost value of portfolio value at time of purchase, excluding the Special District Funds Portfolio, should be invested in this category, and the City's investment in any specific mutual fund will not exceed 2 percent of that mutual fund's total assets.

K. Supranational securities of United States dollar denominated senior unsecured unsubordinated obligations issued or unconditionally guaranteed by the International Bank for Reconstruction and Development, International Finance Corporation, or Inter-American Development Bank, with a maximum remaining maturity of five years or less, and eligible for purchase and sale within the United States. Investments under this subdivision shall be rated "AAA" or better by an NRSRO and shall not exceed 10 percent of the agency's moneys that may be invested pursuant to this section.

18. INELIGIBLE INVESTMENTS

Investments not described herein including, but not limited to, equity securities such as common stocks, preferred stocks, convertibles, inverse floaters, range notes and interest-only strips that are derived from a pool of mortgages are prohibited from use in this portfolio. The City is prohibited from entering into a margin agreement and/or borrowing on margin.

19. INVESTMENT ADVISORY COMMITTEE

The City has created a five-member Investment Advisory Committee as a standing Committee to advise the City on matters relating to the City's Investment Policy and the investment of City funds. The Committee meets at least quarterly with the Treasurer and City staff and reports directly to the City Council. Each Councilmember appoints one person to the Committee. The Committee member's term is concurrent with the term of the appointing Councilmember. The Committee will be governed by a set of Bylaws (Exhibit A) to be reviewed and approved annually.

20. PORTFOLIO REPORTING

In accordance with California Government Code, Sections 53607 and 53646(b), the Treasurer shall provide on a monthly and quarterly basis (or as otherwise requested by the City Manager) an investment portfolio report to the City Council. The report shall include a listing of each of the City's investments (a description that adequately describes the security), the purchase date, maturity date, cost basis, current cost value (book value), interest rate, weighted average maturity, current unrealized loss or gain and a listing of investment transactions that includes purchase/deposit and sale/withdrawal activity. Various investment types will be categorized and grouped in the same structure as the qualified investment categories identified in this policy. The portfolio report shall include a statement certifying the ability of the City to meet its expenditure requirements for the next six months, or provide an explanation as to why sufficient money shall, or may, not be available. The report will also include comments on the fixed income markets and economic conditions, and the effect, if any, on the portfolio structure and investment strategy. The report shall also detail all repurchase and reverse repurchase positions and associated liabilities.

The investment portfolio report shall include market value information for all investments. A monthly market value will be obtained for each security owned by the City. For purposes of reporting, the market value of each security may be obtained from the City's custodian bank or other pricing source(s) utilized by the City's designated investment management firm (registered investment advisor).

The City shall record interest revenue on a modified accrual basis of accounting that is typical for reporting and recording of interest earnings. Securities held by a fiscal agent or trustee shall also be recorded on a modified accrual basis of accounting. The Treasurer will report year-end investments in conformance with Governmental Accounting Standards Board Statement Nos. 31, 40, and 72.

The Treasurer will provide a monthly reconciliation of all funds included in the investment portfolios. The reconciliation shall utilize all available information including the City's books, the Demand Deposit Bank account, the custodian's statement, and the fiscal agent and trustee's statement.

21. REVIEW OF INVESTMENT PORTFOLIO

The securities held by the City must be in compliance with Section 17,

Authorized and Suitable Investments, at the time of purchase. The Treasurer shall review the portfolios quarterly to identify any securities that are no longer in compliance. The Treasurer shall report any major and critical incidences of noncompliance in the quarterly treasurer's report to the City Council and Investment Advisory Committee.

22. INVESTMENT POLICY ADOPTION

The City Council shall review and adopt this Investment Policy by resolution annually.

GLOSSARY

AGENCIES – Agencies of the Federal government set up to supply credit to various classes of institutions (e.g., S&L's, small business firms, students, farmers, housing agencies, etc.) Examples include Federal Home Loan Mortgage Corporation (FHLMC), Federal National Mortgage Association (FNMA), Federal Home Loan Bank (FHLB), and Federal Farm Credit Bank (FFCB).

ASK/OFFER – The price at which securities are offered. (The price at which a firm will sell a security to an investor)

BANKERS' ACCEPTANCE (BA) – A draft or bill of exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill as well as the issuer.

BASIS POINT – One one-hundredth of a percent (i.e., 0.01 percent)

BEAR MARKET – A period of generally pessimistic attitudes and declining market prices.

BID PRICE – The price at which a broker/dealer will buy securities from an investor.

BOND EQUIVALENT YIELD – The basis on which yields on notes and bonds are quoted.

BOOK VALUE (COST VALUE) – The purchase price of the security as recorded on the City's books.

BROKER – An individual or firm acting as intermediary by purchasing and selling securities for others.

BULL MARKET – A period of generally optimistic attitudes and increasing market prices.

CALLABLES – Securities that the issuer has the right to redeem prior to maturity.

CERTIFICATE OF DEPOSIT (CD) - A time deposit with a specific maturity evidenced by a certificate. Large denomination CD's are typically negotiable.

CMT – Constant Maturity Treasury – An index of the average yield on United States Treasury securities adjusted to a constant maturity.

COLLATERAL – Securities, evidence of deposit or other property which a borrower pledges to secure repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public monies.

COMPREHENSIVE ANNUAL FINANCIAL REPORT (CAFR) - The official annual financial report of the City. It includes combined statements for each individual fund and account group prepared in conformity with Generally Accepted Accounting Principles (GAAP). It also includes supporting schedules necessary to demonstrate compliance with finance-related legal and contractual provisions, extensive introductory material, and a detailed Statistical Section.

CORPORATE MEDIUM TERM NOTE – A security issued by a corporation doing business in the U.S. with a maturity not to exceed five years.

COST VALUE (BOOK VALUE) – The purchase price of the security as recorded on the City's books.

COUPON – a) The annual rate of interest that a bond's issuer promises to pay the bondholder on the bond's face value; b) a certificate attached to a bond evidencing interest due on a payment date.

DEALER – An individual or firm acting as principal in a security transaction.

DEBENTURE - A bond secured only by the general credit of the issuer.

DELIVERY VS PAYMENT - Delivery of securities with a simultaneous exchange of money.

DEMAND ACCOUNT – An account with a commercial bank from which check withdrawals may be made at any time.

DERIVATIVES – Financial products that are dependent for their value on (or derived from) an underlying financial instrument, a commodity, or an index representing values of groups of such instruments or assets.

DISCOUNT – The difference between the cost price of a security and its par

value when the cost is lower than par. A security selling below original offering price shortly after sale also is considered to be at a discount.

DIVERSIFICATION – Dividing investment funds among a variety of securities offering independent returns.

FEDERAL FUNDS RATE – Interest rate charged by one institution lending federal funds to another.

FEDERAL OPEN MARKET COMMITTEE (FOMC) – Consists of seven members of the Federal Reserve Board and five of the twelve Federal Reserve Bank Presidents. The President of the New York Federal Reserve Bank is a permanent member, while the other presidents serve on a rotating basis. The Committee periodically meets to set Federal Reserve guidelines regarding purchases and sales of Government Securities in the open market as a means of influencing the volume of bank credit and money.

FINANCIAL ADVISOR – A firm or bank that acts in a financial advisory capacity with respect to a new issue of municipal securities pursuant to a written contract.

FISCAL AGENT – A financial institution which performs payment of principal and interest to bondholders, and certain administrative duties on the bond issuer's behalf.

GOVERNMENTAL ACCOUNTING STANDARDS BOARD – The independent organization that establishes and improves standards of accounting and financial reporting for U.S. state and local governments.

INTERNAL RATE OF RETURN – Rate of return over the life of a security on variables.

LOCAL AGENCY INVESTMENT FUND (LAIF) – The aggregate of all funds from political subdivisions that are placed in the custody of the State Treasurer for investment and reinvestment.

MARKET VALUE – The price at which a security is trading, usually the liquidation value.

MASTER REPURCHASE AGREEEMENT – A written contract covering all future transactions between the parties to repurchase-reverse repurchase agreements that establishes each party's rights in the transactions. A master

agreement will often specify, among other things, the right of the buyer-lender to liquidate the underlying securities in the event of default by the seller borrower.

MONEY MARKET MUTUAL FUNDS – Open-ended mutual fund that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid and safe securities, and pays money market rates of interest. The fund's net asset value remains a constant $1 a share, with the interest rate increasing or decreasing.

NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION (NRSRO) – A rating organization designated by the SEC as being nationally recognized.

OFFER PRICE – The price at which a broker/dealer will offer securities to an investor.

OPEN MARKET OPERATIONS – Federal Reserve activity. Under the Federal Reserve Act, the Fed uses purchases and sales of Government and Federal Agency securities to add to or subtract from commercial bank reserves. Goals are to sustain economic growth, high employment and reasonable price stability.

PAPER GAIN OR LOSS – Term used for unrealized gain or loss on securities being held in a portfolio based on comparison of current market quotes and their original cost. This situation exists as long as the security is held while there is a difference between cost value (book value) and the market value.

PORTFOLIO – Collection of securities held by an investor.

PREMIUM – The difference between the cost price of a security and its par value, when the cost is higher than par.

PRIMARY DEALER – A group of government securities dealers that serve as trading counterparties of the New York Fed in its implementation of monetary policy. This role includes the obligations to: (i) participate consistently in open market operations to carry out U.S. monetary policy pursuant to the direction of the Federal Open Market Committee (FOMC); and (ii) provide the New York Fed's trading desk with market information and analysis helpful in the formulation and implementation of monetary policy. Primary dealers are also required to participate in all auctions of U.S. government debt and to make reasonable markets for the New York Fed when it transacts on behalf of its

foreign official account-holders.

RATE OF RETURN – The yield obtainable on a security based on its purchase price or its current market price. This may be the amortized yield to maturity; on a bond, the current income return.

REPURCHASE AGREEMENT (REPO) – A holder of securities sells these securities to an investor with an agreement to repurchase them at a fixed price on a fixed date. The security "buyer" in effect lends the "seller" money for the period of the agreement, and the terms of the agreement are structured to compensate them for this.

REVERSE REPURCHASE AGREEMENT (REVERSE REPO) – A reverse-repurchase agreement (reverse repo) involves an investor borrowing cash from a financial institution in exchange for securities. The investor agrees to repurchase the securities at a specific date for the same cash value plus an agreed upon interest rate. Although the transaction is similar to repo, the purpose of entering into a reverse repo is quite different. While a repo is a straightforward investment of public funds, the reverse repo is a borrowing.

SAFEKEEPING – The service provided by banks and trust companies for clients when the bank or trust company stores the securities, takes in coupon payments, and redeems issues at maturity.

SECURITIES & EXCHANGE COMMISSION (SEC) - Agency created by Congress to protect investors in securities transactions by administering securities legislation.

SEC RULE 15(C) 3-1 – See Uniform Net Capital Rule.

SPREAD – a) The yield or price difference between the bid and offer on an issue; b) the yield or price difference between different issues.

SUPRANATIONALS – International institutions formed by two or more governments that transcend boundaries to pursue mutually beneficial economic or social goals. There are three supranational institutions that issue obligations that are eligible investments for California local agencies: the International Bank for Reconstruction and Development (IBRD), International Finance Corporation (IFC), and Inter-American Development Bank (IADB).

SWAP – The sale of one issue and the simultaneous purchase of another for some perceived advantage.

TREASURY BILLS – A non-interest bearing discount security issued by the U.S. Treasury to finance the national debt. Most bills are issued to mature in three months, six months or one year.

TREASURY BONDS – U.S. Treasury securities that have initial maturities of more than 10 years.

TREASURY NOTES – Intermediate-term coupon bearing U.S. Treasury securities having initial maturities from one year to ten years.

TRUSTEE – A financial institution with trust powers that acts in a fiduciary capacity for the benefit of the bondholders in enforcing the terms of the bond contract.

UNIFORM NET CAPITAL RULE – Securities and Exchange Commission requirement that member firms as well as nonmember broker-dealers in securities maintain a maximum ratio of indebtedness to liquid capital of 15 to 1; also called net capital rule and net capital ratio. Indebtedness covers all money owed to a firm, including margin loans and commitments to purchase securities. Liquid capital includes cash and assets easily converted into cash.

WHEN ISSUED BASIS (WI) – A term applied to securities that are traded before they are actually issued with the stipulation that transactions are null and void if securities are not issued.

YIELD CURVE – Yield calculations of various maturities at a given time to observe spread difference.

YIELD TO MATURITY – The current coupon yield minus any premium above par, or plus any discount from par in the purchase price with the adjustment spread over the period from date of purchase to maturity.

Exhibit

BYLAWS OF THE INVESTMENT ADVISORY COMMITTEE OF THE CITY OF IRVINE

ARTICLE I - PURPOSE

The purpose of the Investment Advisory Committee is to oversee the management of the investment portfolio through regular quarterly meetings. The Committee will review investment transactions, discuss economic conditions and strategies regarding the management of the portfolio, and report to individual Councilmembers on the meetings.

ARTICLE II - STRUCTURE

The Committee shall be comprised of five members. Each Councilmember shall be responsible for appointing one member to the Committee with the term of the member running concurrent with the term of the Councilmember making the appointment.

The Chairperson and Vice Chairperson of the Committee shall be elected by a majority vote of the members and shall hold the seat for a one-year term. These positions may be elected for two consecutive terms. At the end of the second consecutive term, the members shall elect a new Chairperson and Vice Chairperson.

ARTICLE III - MEETINGS

The meetings shall be held at least quarterly at Irvine City Hall. Each meeting shall be held prior to the presentation of the quarterly report to Council on the status of the portfolio. Three members of the Committee must be present to constitute a quorum.

ARTICLE IV - PARLIAMENTARY PROCEDURE

The rules contained in the current edition of Robert's Rules of Order, newly revised, shall govern the Committee in all cases to which they are applicable and where they are not inconsistent with these Bylaws.

ARTICLE V - AMENDMENT OF BYLAWS

These Bylaws may be amended by a majority vote of the Committee.

City of Irvine

Annual Investment Policy
Calendar Year 2019

Don Collins
City Treasurer

ATTACHMENT 2

City of Irvine
Annual Investment Policy
Calendar Year 2019

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Bylaws of the Investment Advisory Committee A-1

CITY OF IRVINE
ANNUAL INVESTMENT POLICY
FOR CALENDAR YEAR 2019

1. INTRODUCTION

This statement of Investment Policy is intended to provide specific criteria for the prudent investment of City funds. The ultimate investment goal is to enhance the economic status of the City while protecting funds under management and meeting the daily cash flow demands of the City. This investment policy has been prepared in conformance with all pertinent existing laws of the State of California including California Government Code Sections 53600, et seq.

2. SCOPE

This investment policy applies to the City's Irvine Pooled Investment Portfolio, Bond Proceeds Portfolio, and Special District Funds Portfolio. These portfolios encompass all monies under the direct oversight of the Treasurer and include the General Fund, Reserve Funds, Special Revenue Funds, Debt Service Funds, Capital Project Funds, Permanent Fund, Proprietary Funds, Trust and Agency Funds, including the Successor Agency to the Dissolved Irvine Redevelopment Agency, and any other funds that may be created. These funds are accounted for in the City of Irvine's Comprehensive Annual Financial Report.

3. DELEGATION OF AUTHORITY

Authority to manage the City of Irvine's investment program is derived from the Charter of the City of Irvine, Section 2-2-101(B). The authority of the City Council to invest or reinvest monies of the City has been delegated by the City Council to the City Treasurer for one year or until such time the delegation is revoked. The City Treasurer shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the activities of subordinate officials, and their procedures in the absence of the City Treasurer. The City Treasurer may delegate daily investment activity, such as carrying out the Treasurer's investment instructions, confirming treasury transactions, and other routine activities.

The City Treasurer shall establish written investment policy procedures for the operation of the investment program consistent with this policy. The procedures should include reference to: safekeeping, master repurchase agreements, wire transfer agreements, banking service contracts and collateral/depository agreements. Such procedures shall include explicit delegation of authority to persons responsible for investment transactions. No person may engage in an investment transaction except as provided under the terms of this policy and the procedures established by the City

Treasurer.

The Treasurer is responsible for the investment of bond proceeds and special district funds, whether held by the City, a fiscal agent, or trustee. The Bond Proceeds and Special District Funds Portfolios shall be segregated from the Irvine Pooled Investment Portfolio and will be structured with maturities (or maintain an average maturity) sufficient to meet construction drawdowns, debt service payments and other short-term liabilities. For purposes of efficiency, the Treasurer may instruct each fiscal agent or trustee to purchase certain securities regarding the investment of bond proceeds and special district funds in conformance with the permitted investment criteria documented in each bond indenture or guiding resolution. Where present, bond indenture and guiding resolution documentation for investment of bond proceeds and special district funds will supersede the City of Irvine Investment Policy guidelines. The Investment Advisory Committee will be advised of any investments made outside of the Investment Policy, pursuant to bond indentures, and/or guiding resolutions.

Currently, management of the Irvine Pooled Investment Portfolio, Bond Proceeds Portfolio, and Special District Funds Portfolio has been delegated to an investment advisory firm that has full authority to execute investment transactions on behalf of the City. In the event the contract management firm is not able to execute investment transactions, the City Treasurer and Deputy City Treasurer have the authority to execute investment transactions.

4. ETHICS AND CONFLICTS OF INTEREST

Officers and employees involved in the investment process shall refrain from personal business activity that conflicts with proper execution of the investment program or that impairs their ability to make impartial investment decisions. Employees and investment officials shall disclose any material financial interests that could be related to the performance of the City's investment policy annually with the California Fair Political Practices Commission or as necessary under the Political Reform Act and Government Code Section 1090 et seq.

5. PRUDENCE/PRUDENT INVESTOR STANDARD

The Treasurer operates the City's pooled investment program under the Prudent Investor Standard, Government Code Section 53600.3, and applicable State laws. When investing, reinvesting, purchasing, acquiring, exchanging, selling, and managing public funds, the Treasurer shall act with

care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the City, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the City. Within the limitations of this section and considering individual investments as part of an overall strategy, investments may be acquired and sold as authorized by law. This affords a broad spectrum of investment opportunities so long as the investment is deemed prudent and permissible by the State of California, various bond indentures and this policy. The Treasurer strives to invest 100 percent of idle funds.

6. INTERNAL CONTROLS

The Treasurer and Manager of Fiscal Services shall establish procedures that separate the internal responsibility for management and accounting of the investment portfolios. An analysis by an external independent auditor shall be conducted annually to review internal controls, account activity and compliance with policies and procedures.

7. INVESTMENT OBJECTIVES

The City's cash management system is designed to accurately monitor and forecast revenues and expenditures, thus enabling the Treasurer to invest funds to the fullest extent possible. The Treasurer maintains a diversified portfolio to accomplish the primary objectives in the order of safety, liquidity, and yield.

Safety: The safety/risk associated with an investment refers to the potential loss of principal, accrued interest or a combination of these. The Treasurer seeks to mitigate credit risk by monitoring financial institutions with which he/she will do business, and by careful scrutiny of the credit worthiness of the investment instruments as well as the institutions. Such resources as a nationally recognized statistical-rating organization (NRSRO) services are utilized for this review. The Treasurer seeks to mitigate interest rate risk through diversification of instruments as well as maturities.

Liquidity: The portfolio will be structured with sufficient liquidity to allow the Treasurer to meet anticipated cash requirements. This will be accomplished through the purchase of a diversity of instruments to include those with active secondary markets, those that can match maturities to expected cash needs, and the State Local Agency Investment Fund (LAIF) with immediate

withdrawal provisions.

Yield: A competitive market rate of return is the third objective of the investment program after the fundamental requirements of safety and liquidity have been met. The portfolio shall be managed to consistently attain a market rate of return throughout budgetary and economic cycles. Whenever possible, and consistent with risk limitations and prudent investment management, the City will seek to augment returns above the market average rate of return through the implementation of active portfolio management strategies.

8. PERFORMANCE EVALUATION

Investment performance is continually monitored and evaluated by the City Treasurer. Investment portfolio reports are generated on a monthly and quarterly basis and submitted to the City Council, City Manager, and Investment Advisory Committee. A quarterly Treasurer's report is also presented to the City Council, Finance Commission, and Investment Advisory Committee during respective regularly scheduled meetings.

The investment portfolio reports are to be submitted within 30 days of the end of the reporting period. The monthly average yield of the Irvine Pooled Investment Portfolio will be compared to the monthly average 6-month CMT (Constant Maturity Treasury) as calculated by the Federal Reserve Bank of New York. As an added reference, the monthly average yield of the Irvine Pooled Investment Portfolio will be compared to the monthly average 2-year CMT as calculated by the Federal Reserve Bank of New York.

9. DIVERSIFICATION

The City will diversify use of investment instruments to avoid unreasonable risks inherent in over-investing in specific instruments, individual financial institutions, or maturities.

Market price volatility shall be controlled through maturity diversification, as well as ensuring adequate liquidity is available to meet cash flow requirements, thereby precluding the need to sell instruments at a market loss.

Risk of default will be controlled by acquiring instruments such as Government Securities, or by diversifying the portfolio within the constraints and parameters of Section 17 of this Policy, Authorized and Suitable

Investments.

10. PORTFOLIO SEGREGATION

Within the overall funds managed by the Treasurer, bond proceeds and special district funds shall be segregated from the general City pool into their own pool and be invested in conformance with the permitted investment criteria documented in each bond indenture or guiding resolution. Furthermore, bond proceeds held by fiscal agents or trustees shall also be segregated and invested in accordance with each indenture.

The primary purpose of any separately managed bond proceeds and special district funds portfolios is to structure investment maturities to meet current and future liabilities. The preservation of principal and the maintenance of liquidity are the most important factors regarding the investment of bond proceeds and special district funds. Portfolio yield is not a primary factor since the portfolio structure, eligible investment assets and maturity restrictions are governed by draws and expenditure schedules of the issues. Performance will be based upon maximizing permitted positive arbitrage within the context of principal preservation as a first priority (pre-1986 Tax Reform Act issuances) or minimizing or eliminating negative arbitrage (yield-restricted issues).

11. BOND ISSUANCE ARBITRAGE REBATE

The U.S. Tax Reform Act of 1986 requires the City to perform annual arbitrage calculations and rebate excess earnings to the U.S. Treasury for investment returns that exceed the allowable interest earnings limit of each bond issue. The arbitrage calculation process must be conducted for the investment of proceeds of bond issues sold after the effective date of this law. This arbitrage calculation will be contracted out to provide the necessary technical expertise to comply with this regulation. The City's investment position relative to the interest rate arbitrage restrictions is to have safety and the highest permitted return the law allows as the highest priority while ensuring the preservation of principal and liquidity.

12. QUALIFIED DEALERS

The Treasurer shall transact business only with Registered Investment Advisors, national or state-chartered banks, savings and loans, and broker dealers. The dealers should be primary dealers regularly reporting to the New York Federal Reserve Bank, or approved regional or secondary market dealers

that qualify under the Securities and Exchange Commission Rule 15C3-1 (uniform net capital rule).

The Treasurer may direct a fiscal agent or trustee to execute investment transactions on behalf of the City for funds held by that fiscal agent or trustee.

The City may purchase "prime" quality rated commercial paper from its direct issuer if it presents a higher return than in the secondary market.

The Treasurer will monitor broker/dealers and their firms, to ensure they are in good standing with the appropriate regulatory agencies. The Treasurer will review financials and report back to the Investment Advisory Committee.

13. SAFEKEEPING OF SECURITIES

To protect against losses caused by the collapse of individual securities dealers, all securities owned by the City, including collateral for repurchase agreements, shall be held in safekeeping by a third party bank trust department acting as agent for the City under the terms of a custody agreement or, in the case of funds held by the fiscal agent or trustee, the fiscal agent or trustee shall segregate and report securities held on the City's behalf. Any trade executed by a dealer is required to settle on a delivery versus payment basis with the City's safekeeping agent.

Fiscal agents or trustees in receipt of City of Irvine bond proceeds will settle security transactions on a delivery versus payment method based upon instructions provided by the Treasurer or the City's investment advisor. The fiscal agents or trustees will issue monthly custodian statements evidencing securities held in safekeeping, including the receipt of interest and maturity proceeds, the disbursement of funds for the purchase of securities, and the receipt of any sale proceeds.

14. COLLATERALIZATION

All demand deposits, time deposits and repurchase agreements are to be fully collateralized with securities authorized by the California Government Code and the City.

- The cost value (book value) of collateral pledged for demand deposits must at all time be equal to or greater than the amount on deposit, plus accrued interest, in accordance with the following ratio:

U.S. Treasury Securities	110%

- The cost value (book value) of collateral pledged for repurchase agreements must at all time be equal to or greater than the par amount, plus accrued interest, with the following ratios:

U.S. Treasury Securities	102%
U.S. Government Agencies	102%

- It is the policy of the City to require reports at least on a quarterly basis from institutions with which the Treasurer has pledged security interest. The Treasurer shall monitor the adequacy of collateralization to ensure that balances are collateralized in accordance with the ratios approved herein.

- With regard to repurchase agreements, it is the policy of the City to initiate a margin call in the event pledged collateral falls below the appropriate ratio.

- Collateralized investments and deposits often require substitution of collateral. Any broker or financial institution requesting substitution must contact the City for approval in the event the counterparty to the transaction is not authorized under agreement with the City to make substitutions.

15. MAXIMUM MATURITIES

- Pooled Investment Portfolio

  In accordance to California Government Code Section 53601, The City will not invest in any securities maturing more than five (5) years from the settlement date of purchase. If the Treasurer desires to make investments longer than five years, express authority to make those investments, either specifically or as part of an investment program, must be approved by the City Council no less than three months prior to the investment. In no event will securities with maximum maturities beyond four years exceed 40 percent of the portfolio's total carrying cost at the time of purchase.

- Bond Proceeds Portfolio/Special District Funds Portfolio

  The Bond Proceeds and Special District Funds Portfolios held by the City, fiscal agents or trustees will be structured with maturities sufficient

to meet current and future disbursements and other liabilities consistent with the purpose of each bond issue. The Treasurer may match maturities to defined future liabilities or may structure the portfolio in such a manner as to maintain an average maturity and a defined liquidity percentage necessary to meet estimated liabilities. In no event will securities be purchased with final maturities that exceed a specifically defined future liquidity requirement (such as bond reserve fund availability requirement) or liability.

16. INVESTMENT POOLS/MONEY MARKET MUTUAL FUNDS

A thorough investigation of any government sponsored pool and/or mutual fund is required prior to investing and on a continual basis. There shall be a questionnaire completed which will provide the following information:

- A description of eligible investment securities, and a written statement of investment policy and objectives.
- A description of interest calculations and how it is distributed, and how gains and losses are treated.
- A description of how the securities are safeguarded (including the settlement processes), and how often the securities are priced and the program audited.
- A description of who may invest in the program, how often, and what size of deposits and withdrawals are allowed.
- A schedule for receiving statements and portfolio listings.
- A description of how the pool/fund utilizes reserves, retained earnings, etc.
- A fee schedule, including when and how fees are assessed.
- The eligibility of the pool/fund to invest in bond proceeds and special district funds, and a description of its practices.

17. AUTHORIZED AND SUITABLE INVESTMENTS

The City is governed by the California Government Code, Sections 53600 et seq. Within the context of these limitations and based on the cost at the time of purchase, the following investments are authorized as further limited herein:

Authorized Investment Summary Matrix

Category		Percent
A.	US Treasuries	no limit
B.	US Agencies	no limit
C.	Bankers' Acceptances	25%
D.	Commercial Paper	15%
E.	Repurchase Agreements	25%
F.	Reverse Repurchase Agreements	15%
G.	Local Agency Investment Fund (LAIF)	25%
H.	Municipal Bonds	25%
I.	Corporate Medium Term Notes	15%
J.	Money Market Mutual Funds	20%
K.	Supranationals	10%

A. United States Treasury Bills, Bonds, and Notes, or those for which the full faith and credit of the United States are pledged for payment of principal and interest. There is no limitation as to the percentage of the portfolio that can be invested in this category.

B. Obligations issued by United States Federal agencies or government-sponsored enterprise obligations, or other instruments, including those issued by or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises. Although there is no percentage limitation on these issues, the "prudent investor" standard shall apply to investments from a single agency.

C. Bills of exchange or time drafts drawn on and accepted by a commercial bank, otherwise known as Bankers' Acceptances. Bankers' Acceptances purchased may not exceed 180 days to maturity or 25 percent of the cost (book) value of the portfolio. No more than $5 million may be invested in Bankers' Acceptances issued by any one bank. Prior to the purchase of any Banker's Acceptance, the portfolio manager shall review the rating of the issuing bank. Bankers' Acceptances of issuing financial institutions shall have both a short and long term rating in the highest category by at least one nationally recognized rating agency at the time of purchase.

D. Commercial paper ranked of "prime" quality of the highest ranking or of the highest letter and number rating as provided for by NRSRO and

issued by a domestic corporation having assets in excess of $500 million. The commercial paper must also have an "A" or better rating for the issuer's debt, other than commercial paper, if any, as provided by a NRSRO. Purchase of commercial paper from corporations on negative credit watch by a major rating agency shall be prohibited. Purchases of eligible commercial paper may not exceed 270 days to maturity. Excluding the Special District Funds Portfolio, purchases of commercial paper may not exceed 15 percent of the cost value of the portfolio at time of purchase, and no more than 3 percent of the cost value of the portfolio may be invested in commercial paper issued by any one corporation. Corporate medium term note and bankers' acceptance holdings shall be considered when calculating the maximum dollar amount in any issuer name.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below "investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

E. Repurchase agreements. The City may invest in repurchase agreements with banks and primary dealers with whom the City has entered into a master repurchase agreement that specifies terms and conditions of repurchase agreements. No more than 25 percent of the cost value of the portfolio may be invested in repurchase agreements at any time. The maturity of repurchase agreements shall not exceed 75 days.

The cost value of securities used as collateral for repurchase agreements shall be monitored daily by the Treasurer and will not be allowed to fall below the margin ratios specified in Section 14 (2) of this policy. In order to conform with provisions of the Federal Bankruptcy Code which provides for the liquidation of securities held as collateral for repurchase agreements, the only securities acceptable as collateral shall be securities that are direct obligations of, or that are fully guaranteed as to principal and interest by, the United States Government such as Treasury bills, Treasury notes or Treasury bonds with less than a five year maturity.

F. Reverse repurchase agreements. The City may invest in reverse repurchase agreements only with those banks and primary dealers

with whom the City has entered into a master repurchase agreement outlining terms and conditions of repurchase and reverse repurchase agreements. The City may only invest in reverse repurchase agreements for the following purpose:

1. The City may enter into reverse repurchase agreements when funds obtained through the reverse can be reinvested in a higher yielding security to obtain additional interest income for the City at a spread deemed to be acceptable by the Treasurer under then prevailing market conditions. Reverse repurchase agreements entered into in accordance with this paragraph may not exceed 75 days to maturity and must be matched as to maturity and dollars invested with its corresponding reinvestment. No more than 15 percent of the cost value (book value) of the portfolio may be invested in reverse repurchase agreements.

2. Reverse repurchase agreements may be used for liquidity purposes when it is determined that the portfolio has sufficient additional collateral coming due within the term of the reverse repurchase agreement equal to or exceeding the amount of the reverse repurchase agreement.

G. The City may invest in the LAIF established by the State Treasurer for the benefit of local agencies up to the maximum permitted by State law, but not to exceed 25 percent of the cost value (book value) of the total portfolio excluding the Bond Proceeds Portfolio.

H. Bonds issued by local agencies of the United States, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by the local agency or by a department, board, agency, or authority of the local agency rated “AA” or better by a NRSRO. "AA" rated bonds shall be limited to 36 months maximum maturity and "AAA" rated bonds shall be limited to 60 months maximum maturity. No more than 25 percent of the cost value (book value) of the portfolio may be invested in municipal bonds.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below

"investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

I. Corporate medium term notes issued by a domestic corporation having assets in excess of $500 million and having an "AA" or better rating criteria at time of purchase on its long-term debentures as provided by a NRSRO. Purchase of corporate medium term notes from corporations on negative credit watch by a major rating agency shall be prohibited. "AA" rated medium term notes shall be limited to 36 months maximum maturity and "AAA" rated medium term notes shall be limited to 60 months maximum maturity. The aggregate total of all purchased medium term notes may not exceed 15 percent of the cost value of the portfolio. No more than 3 percent of the cost value of the portfolio may be invested in corporate medium term notes issued by any one corporation. Commercial paper and bankers' acceptance holdings shall be considered when calculating the maximum percentage in any issuer name.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below "investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

J. Money market mutual funds having a rating of "AAA" or an equivalent by no less than two NRSRO with no load and maintained at $1 par value. No more than 20 percent of the cost value of portfolio value at time of purchase, excluding the Special District Funds Portfolio, should be invested in this category, and the City's investment in any specific mutual fund will not exceed 2 percent of that mutual fund's total assets.

K. Supranational securities of United States dollar denominated senior unsecured unsubordinated obligations issued or unconditionally guaranteed by the International Bank for Reconstruction and Development, International Finance Corporation, or Inter-American Development Bank, with a maximum remaining maturity of five years or less, and eligible for purchase and sale within the United States. Investments under this subdivision shall be rated "AAA" or better by an NRSRO and shall not exceed 10 percent of the agency's moneys that may be invested pursuant to this section.

18. INELIGIBLE INVESTMENTS

Investments not described herein including, but not limited to, equity securities such as common stocks, preferred stocks, convertibles, inverse floaters, range notes and interest-only strips that are derived from a pool of mortgages are prohibited from use in this portfolio. The City is prohibited from entering into a margin agreement and/or borrowing on margin.

19. INVESTMENT ADVISORY COMMITTEE

The City has created a five-member Investment Advisory Committee as a standing Committee to advise the City on matters relating to the City's Investment Policy and the investment of City funds. The Committee meets at least quarterly with the Treasurer and City staff and reports directly to the City Council. Each Councilmember appoints one person to the Committee. The Committee member's term is concurrent with the term of the appointing Councilmember. The Committee will be governed by a set of Bylaws (Exhibit A) to be reviewed and approved annually.

20. PORTFOLIO REPORTING

In accordance with California Government Code, Sections 53607 and 53646(b), the Treasurer shall provide on a monthly and quarterly basis (or as otherwise requested by the City Manager) an investment portfolio report to the City Council. The report shall include a listing of each of the City's investments (a description that adequately describes the security), the purchase date, maturity date, cost basis, current cost value (book value), interest rate, weighted average maturity, current unrealized loss or gain and a listing of investment transactions that includes purchase/deposit and sale/withdrawal activity. Various investment types will be categorized and grouped in the same structure as the qualified investment categories identified in this policy. The portfolio report shall include a statement certifying the ability of the City to meet its expenditure requirements for the next six months, or provide an explanation as to why sufficient money shall, or may, not be available. The report will also include comments on the fixed income markets and economic conditions, and the effect, if any, on the portfolio structure and investment strategy. The report shall also detail all repurchase and reverse repurchase positions and associated liabilities.

The investment portfolio report shall include market value information for all investments. A monthly market value will be obtained for each security owned by the City. For purposes of reporting, the market value of each

security may be obtained from the City's custodian bank or other pricing source(s) utilized by the City's designated investment management firm (registered investment advisor).

The City shall record interest revenue on a modified accrual basis of accounting that is typical for reporting and recording of interest earnings. Securities held by a fiscal agent or trustee shall also be recorded on a modified accrual basis of accounting. The Treasurer will report year-end investments in conformance with Governmental Accounting Standards Board Statement Nos. 31, 40, and 72.

The Treasurer will provide a monthly reconciliation of all funds included in the investment portfolios. The reconciliation shall utilize all available information including the City's books, the Demand Deposit Bank account, the custodian's statement, and the fiscal agent and trustee's statement.

21. REVIEW OF INVESTMENT PORTFOLIO

The securities held by the City must be in compliance with Section 17, Authorized and Suitable Investments, at the time of purchase. The Treasurer shall review the portfolios quarterly to identify any securities that are no longer in compliance. The Treasurer shall report any major and critical incidences of noncompliance in the quarterly treasurer's report to the City Council and Investment Advisory Committee.

22. INVESTMENT POLICY ADOPTION

The City Council shall review and adopt this Investment Policy by resolution annually.

GLOSSARY

AGENCIES – Agencies of the Federal government set up to supply credit to various classes of institutions (e.g., S&L's, small business firms, students, farmers, housing agencies, etc.) Examples include Federal Home Loan Mortgage Corporation (FHLMC), Federal National Mortgage Association (FNMA), Federal Home Loan Bank (FHLB), and Federal Farm Credit Bank (FFCB).

ASK/OFFER – The price at which securities are offered. (The price at which a firm will sell a security to an investor)

BANKERS' ACCEPTANCE (BA) – A draft or bill of exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill as well as the issuer.

BASIS POINT – One one-hundredth of a percent (i.e., 0.01 percent)

BEAR MARKET – A period of generally pessimistic attitudes and declining market prices.

BID PRICE – The price at which a broker/dealer will buy securities from an investor.

BOND EQUIVALENT YIELD – The basis on which yields on notes and bonds are quoted.

BOOK VALUE (COST VALUE) – The purchase price of the security as recorded on the City's books.

BROKER – An individual or firm acting as intermediary by purchasing and selling securities for others.

BULL MARKET – A period of generally optimistic attitudes and increasing market prices.

CALLABLES – Securities that the issuer has the right to redeem prior to maturity.

CERTIFICATE OF DEPOSIT (CD) - A time deposit with a specific maturity evidenced by a certificate. Large denomination CD's are typically negotiable.

CMT – Constant Maturity Treasury – An index of the average yield on United States Treasury securities adjusted to a constant maturity.

COLLATERAL – Securities, evidence of deposit or other property which a borrower pledges to secure repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public monies.

COMPREHENSIVE ANNUAL FINANCIAL REPORT (CAFR) - The official annual financial report of the City. It includes combined statements for each individual fund and account group prepared in conformity with Generally Accepted Accounting Principles (GAAP). It also includes supporting schedules necessary to demonstrate compliance with finance-related legal and contractual provisions, extensive introductory material, and a detailed Statistical Section.

CORPORATE MEDIUM TERM NOTE – A security issued by a corporation doing business in the U.S. with a maturity not to exceed five years.

COST VALUE (BOOK VALUE) – The purchase price of the security as recorded on the City's books.

COUPON – a) The annual rate of interest that a bond's issuer promises to pay the bondholder on the bond's face value; b) a certificate attached to a bond evidencing interest due on a payment date.

DEALER – An individual or firm acting as principal in a security transaction.

DEBENTURE - A bond secured only by the general credit of the issuer.

DELIVERY VS PAYMENT - Delivery of securities with a simultaneous exchange of money.

DEMAND ACCOUNT – An account with a commercial bank from which check withdrawals may be made at any time.

DERIVATIVES – Financial products that are dependent for their value on (or derived from) an underlying financial instrument, a commodity, or an index representing values of groups of such instruments or assets.

DISCOUNT – The difference between the cost price of a security and its par value when the cost is lower than par. A security selling below original offering price shortly after sale also is considered to be at a discount.

DIVERSIFICATION – Dividing investment funds among a variety of securities offering independent returns.

FEDERAL FUNDS RATE – Interest rate charged by one institution lending federal funds to another.

FEDERAL OPEN MARKET COMMITTEE (FOMC) – Consists of seven members of the Federal Reserve Board and five of the twelve Federal Reserve Bank Presidents. The President of the New York Federal Reserve Bank is a permanent member, while the other presidents serve on a rotating basis. The Committee periodically meets to set Federal Reserve guidelines regarding purchases and sales of Government Securities in the open market as a means of influencing the volume of bank credit and money.

FINANCIAL ADVISOR – A firm or bank that acts in a financial advisory capacity with respect to a new issue of municipal securities pursuant to a written contract.

FISCAL AGENT – A financial institution which performs payment of principal and interest to bondholders, and certain administrative duties on the bond issuer's behalf.

GOVERNMENTAL ACCOUNTING STANDARDS BOARD – The independent organization that establishes and improves standards of accounting and financial reporting for U.S. state and local governments.

INTERNAL RATE OF RETURN – Rate of return over the life of a security on variables.

LOCAL AGENCY INVESTMENT FUND (LAIF) – The aggregate of all funds from political subdivisions that are placed in the custody of the State Treasurer for investment and reinvestment.

MARKET VALUE – The price at which a security is trading, usually the liquidation value.

MASTER REPURCHASE AGREEEMENT – A written contract covering all future transactions between the parties to repurchase-reverse repurchase agreements that establishes each party's rights in the transactions. A master agreement will often specify, among other things, the right of the buyer-lender to liquidate the underlying securities in the event of default by the seller borrower.

MONEY MARKET MUTUAL FUNDS – Open-ended mutual fund that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid and safe securities, and pays money market rates of interest. The fund's net asset value remains a constant $1 a share, with the interest rate increasing or decreasing.

NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION (NRSRO) – A rating organization designated by the SEC as being nationally recognized.

OFFER PRICE – The price at which a broker/dealer will offer securities to an investor.

OPEN MARKET OPERATIONS – Federal Reserve activity. Under the Federal Reserve Act, the Fed uses purchases and sales of Government and Federal Agency securities to add to or subtract from commercial bank reserves. Goals are to sustain economic growth, high employment and reasonable price stability.

PAPER GAIN OR LOSS – Term used for unrealized gain or loss on securities being held in a portfolio based on comparison of current market quotes and their original cost. This situation exists as long as the security is held while there is a difference between cost value (book value) and the market value.

PORTFOLIO – Collection of securities held by an investor.

PREMIUM – The difference between the cost price of a security and its par value, when the cost is higher than par.

PRIMARY DEALER – A group of government securities dealers that serve as trading counterparties of the New York Fed in its implementation of monetary policy. This role includes the obligations to: (i) participate consistently in open market operations to carry out U.S. monetary policy pursuant to the direction of the Federal Open Market Committee (FOMC); and (ii) provide the New York Fed's trading desk with market information and analysis helpful in the formulation and implementation of monetary policy. Primary dealers are also required to participate in all auctions of U.S. government debt and to make reasonable markets for the New York Fed when it transacts on behalf of its foreign official account-holders.

RATE OF RETURN – The yield obtainable on a security based on its purchase price or its current market price. This may be the amortized yield to maturity; on a bond, the current income return.

REPURCHASE AGREEMENT (REPO) – A holder of securities sells these securities to an investor with an agreement to repurchase them at a fixed price on a fixed date. The security "buyer" in effect lends the "seller" money for the period of the agreement, and the terms of the agreement are structured to compensate them for this.

REVERSE REPURCHASE AGREEMENT (REVERSE REPO) – A reverse-repurchase agreement (reverse repo) involves an investor borrowing cash from a financial institution in exchange for securities. The investor agrees to repurchase the securities at a specific date for the same cash value plus an agreed upon interest rate. Although the transaction is similar to repo, the purpose of entering into a reverse repo is quite different. While a repo is a straightforward investment of public funds, the reverse repo is a borrowing.

SAFEKEEPING – The service provided by banks and trust companies for clients when the bank or trust company stores the securities, takes in coupon payments, and redeems issues at maturity.

SECURITIES & EXCHANGE COMMISSION (SEC) - Agency created by Congress to protect investors in securities transactions by administering securities legislation.

SEC RULE 15(C) 3-1 – See Uniform Net Capital Rule.

SPREAD – a) The yield or price difference between the bid and offer on an issue; b) the yield or price difference between different issues.

SUPRANATIONALS – International institutions formed by two or more governments that transcend boundaries to pursue mutually beneficial economic or social goals. There are three supranational institutions that issue obligations that are eligible investments for California local agencies: the International Bank for Reconstruction and Development (IBRD), International Finance Corporation (IFC), and Inter-American Development Bank (IADB).

SWAP – The sale of one issue and the simultaneous purchase of another for some perceived advantage.

TREASURY BILLS – A non-interest bearing discount security issued by the U.S. Treasury to finance the national debt. Most bills are issued to mature in three months, six months or one year.

TREASURY BONDS – U.S. Treasury securities that have initial maturities of more than 10 years.

TREASURY NOTES – Intermediate-term coupon bearing U.S. Treasury securities having initial maturities from one year to ten years.

TRUSTEE – A financial institution with trust powers that acts in a fiduciary capacity for the benefit of the bondholders in enforcing the terms of the bond contract.

UNIFORM NET CAPITAL RULE – Securities and Exchange Commission requirement that member firms as well as nonmember broker-dealers in securities maintain a maximum ratio of indebtedness to liquid capital of 15 to 1; also called net capital rule and net capital ratio. Indebtedness covers all money owed to a firm, including margin loans and commitments to purchase securities. Liquid capital includes cash and assets easily converted into cash.

WHEN ISSUED BASIS (WI) – A term applied to securities that are traded before they are actually issued with the stipulation that transactions are null and void if securities are not issued.

YIELD CURVE – Yield calculations of various maturities at a given time to observe spread difference.

YIELD TO MATURITY – The current coupon yield minus any premium above par, or plus any discount from par in the purchase price with the adjustment spread over the period from date of purchase to maturity.

Exhibit

BYLAWS OF THE INVESTMENT ADVISORY COMMITTEE OF THE CITY OF IRVINE

ARTICLE I - PURPOSE

The purpose of the Investment Advisory Committee is to oversee the management of the investment portfolio through regular quarterly meetings. The Committee will review investment transactions, discuss economic conditions and strategies regarding the management of the portfolio, and report to individual Councilmembers on the meetings.

ARTICLE II - STRUCTURE

The Committee shall be comprised of five members. Each Councilmember shall be responsible for appointing one member to the Committee with the term of the member running concurrent with the term of the Councilmember making the appointment.

The Chairperson and Vice Chairperson of the Committee shall be elected by a majority vote of the members and shall hold the seat for a one-year term. These positions may be elected for two consecutive terms. At the end of the second consecutive term, the members shall elect a new Chairperson and Vice Chairperson.

ARTICLE III - MEETINGS

The meetings shall be held at least quarterly at Irvine City Hall. Each meeting shall be held prior to the presentation of the quarterly report to Council on the status of the portfolio. Three members of the Committee must be present to constitute a quorum.

ARTICLE IV - PARLIAMENTARY PROCEDURE

The rules contained in the current edition of Robert's Rules of Order, newly revised, shall govern the Committee in all cases to which they are applicable and where they are not inconsistent with these Bylaws.

ARTICLE V - AMENDMENT OF BYLAWS

These Bylaws may be amended by a majority vote of the Committee.

CITY COUNCIL RESOLUTION NO. 18-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, ADOPTING THE CITY'S ANNUAL INVESTMENT POLICY FOR CALENDAR YEAR 2019

WHEREAS, the City Council of the City of Irvine recognizes the importance of economic and financial affairs with regard to the proper functioning of City Government and the wellbeing of the citizens of Irvine; and

WHEREAS, the California Government Code requires that the City Council annually review the City's investment policy; and

WHEREAS, the City Council recognizes the need for the Treasurer of the City of Irvine to conduct the investment of City monies under certain parameters on a day-to-day basis; and

WHEREAS, Section 2-2-101(B) of the City of Irvine Charter authorizes the City Council of the City of Irvine to delegate authority to its City Treasurer to invest, reinvest, sell or exchange securities until such time as this delegation of authority is revoked; and

WHEREAS, the City Council has appointed an Investment Advisory Committee who have recommended that the City Council approve the Annual Investment Policy as submitted.

NOW, THEREFORE, the City Council of the City of Irvine DOES HEREBY RESOLVE as follows:

SECTION 1. The preceding recitals are all true and correct.

SECTION 2. That the City Council of the City of Irvine hereby delegates the authority to reinvest funds of the City of Irvine pursuant to all applicable laws, statutes, and regulations of the State of California as set forth in this Resolution.

SECTION 3. The City Council of the City of Irvine hereby adopts the attached Annual Investment Policy for Calendar Year 2019 (Exhibit A).

SECTION 4. This resolution shall take effect immediately upon its adoption.

ATTACHMENT 3

PASSED AND ADOPTED by the City Council of the City of Irvine at a regular meeting held on the 9th day of October 2018.

_____
MAYOR OF THE CITY OF IRVINE

ATTEST:

_____
CITY CLERK OF THE CITY OF IRVINE

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF IRVINE)

I, MOLLY MCLAUGHLIN, City Clerk of the City of Irvine, HEREBY DO CERTIFY that the foregoing resolution was duly adopted at a regular meeting of the City Council of the City of Irvine, held on the 9th day of October 2018.

AYES:	COUNCILMEMBERS:
NOES:	COUNCILMEMBERS:
ABSENT:	COUNCILMEMBERS:
ABSTAIN:	COUNCILMEMBERS:

_____
CITY CLERK OF THE CITY OF IRVINE

City of Irvine

Annual Investment Policy
Calendar Year 2019

Don Collins
City Treasurer

EXHIBIT A

City of Irvine
Annual Investment Policy
Calendar Year 2019

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CITY OF IRVINE
ANNUAL INVESTMENT POLICY
FOR CALENDAR YEAR 2019

1. INTRODUCTION

This statement of Investment Policy is intended to provide specific criteria for the prudent investment of City funds. The ultimate investment goal is to enhance the economic status of the City while protecting funds under management and meeting the daily cash flow demands of the City. This investment policy has been prepared in conformance with all pertinent existing laws of the State of California including California Government Code Sections 53600, et seq.

2. SCOPE

This investment policy applies to the City's Irvine Pooled Investment Portfolio, Bond Proceeds Portfolio, and Special District Funds Portfolio. These portfolios encompass all monies under the direct oversight of the Treasurer and include the General Fund, Reserve Funds, Special Revenue Funds, Debt Service Funds, Capital Project Funds, Permanent Fund, Proprietary Funds, Trust and Agency Funds, including the Successor Agency to the Dissolved Irvine Redevelopment Agency, and any other funds that may be created. These funds are accounted for in the City of Irvine's Comprehensive Annual Financial Report.

3. DELEGATION OF AUTHORITY

Authority to manage the City of Irvine's investment program is derived from the Charter of the City of Irvine, Section 2-2-101(B). The authority of the City Council to invest or reinvest monies of the City has been delegated by the City Council to the City Treasurer for one year or until such time the delegation is revoked. The City Treasurer shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the activities of subordinate officials, and their procedures in the absence of the City Treasurer. The City Treasurer may delegate daily investment activity, such as carrying out the Treasurer's investment instructions, confirming treasury transactions, and other routine activities.

The City Treasurer shall establish written investment policy procedures for the operation of the investment program consistent with this policy. The procedures should include reference to: safekeeping, master repurchase agreements, wire transfer agreements, banking service contracts and collateral/depository agreements. Such procedures shall include explicit delegation of authority to persons responsible for investment transactions. No person may engage in an investment transaction except as provided under the terms of this policy and the procedures established by the City

Treasurer.

The Treasurer is responsible for the investment of bond proceeds and special district funds, whether held by the City, a fiscal agent, or trustee. The Bond Proceeds and Special District Funds Portfolios shall be segregated from the Irvine Pooled Investment Portfolio and will be structured with maturities (or maintain an average maturity) sufficient to meet construction drawdowns, debt service payments and other short-term liabilities. For purposes of efficiency, the Treasurer may instruct each fiscal agent or trustee to purchase certain securities regarding the investment of bond proceeds and special district funds in conformance with the permitted investment criteria documented in each bond indenture or guiding resolution. Where present, bond indenture and guiding resolution documentation for investment of bond proceeds and special district funds will supersede the City of Irvine Investment Policy guidelines. The Investment Advisory Committee will be advised of any investments made outside of the Investment Policy, pursuant to bond indentures, and/or guiding resolutions.

Currently, management of the Irvine Pooled Investment Portfolio, Bond Proceeds Portfolio, and Special District Funds Portfolio has been delegated to an investment advisory firm that has full authority to execute investment transactions on behalf of the City. In the event the contract management firm is not able to execute investment transactions, the City Treasurer and Deputy City Treasurer have the authority to execute investment transactions.

4. ETHICS AND CONFLICTS OF INTEREST

Officers and employees involved in the investment process shall refrain from personal business activity that conflicts with proper execution of the investment program or that impairs their ability to make impartial investment decisions. Employees and investment officials shall disclose any material financial interests that could be related to the performance of the City's investment policy annually with the California Fair Political Practices Commission or as necessary under the Political Reform Act and Government Code Section 1090 et seq.

5. PRUDENCE/PRUDENT INVESTOR STANDARD

The Treasurer operates the City's pooled investment program under the Prudent Investor Standard, Government Code Section 53600.3, and applicable State laws. When investing, reinvesting, purchasing, acquiring, exchanging, selling, and managing public funds, the Treasurer shall act with

care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the City, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the City. Within the limitations of this section and considering individual investments as part of an overall strategy, investments may be acquired and sold as authorized by law. This affords a broad spectrum of investment opportunities so long as the investment is deemed prudent and permissible by the State of California, various bond indentures and this policy. The Treasurer strives to invest 100 percent of idle funds.

6. INTERNAL CONTROLS

The Treasurer and Manager of Fiscal Services shall establish procedures that separate the internal responsibility for management and accounting of the investment portfolios. An analysis by an external independent auditor shall be conducted annually to review internal controls, account activity and compliance with policies and procedures.

7. INVESTMENT OBJECTIVES

The City's cash management system is designed to accurately monitor and forecast revenues and expenditures, thus enabling the Treasurer to invest funds to the fullest extent possible. The Treasurer maintains a diversified portfolio to accomplish the primary objectives in the order of safety, liquidity, and yield.

Safety: The safety/risk associated with an investment refers to the potential loss of principal, accrued interest or a combination of these. The Treasurer seeks to mitigate credit risk by monitoring financial institutions with which he/she will do business, and by careful scrutiny of the credit worthiness of the investment instruments as well as the institutions. Such resources as a nationally recognized statistical-rating organization (NRSRO) services are utilized for this review. The Treasurer seeks to mitigate interest rate risk through diversification of instruments as well as maturities.

Liquidity: The portfolio will be structured with sufficient liquidity to allow the Treasurer to meet anticipated cash requirements. This will be accomplished through the purchase of a diversity of instruments to include those with active secondary markets, those that can match maturities to expected cash needs, and the State Local Agency Investment Fund (LAIF) with immediate

withdrawal provisions.

Yield: A competitive market rate of return is the third objective of the investment program after the fundamental requirements of safety and liquidity have been met. The portfolio shall be managed to consistently attain a market rate of return throughout budgetary and economic cycles. Whenever possible, and consistent with risk limitations and prudent investment management, the City will seek to augment returns above the market average rate of return through the implementation of active portfolio management strategies.

8. PERFORMANCE EVALUATION

Investment performance is continually monitored and evaluated by the City Treasurer. Investment portfolio reports are generated on a monthly and quarterly basis and submitted to the City Council, City Manager, and Investment Advisory Committee. A quarterly Treasurer's report is also presented to the City Council, Finance Commission, and Investment Advisory Committee during respective regularly scheduled meetings.

The investment portfolio reports are to be submitted within 30 days of the end of the reporting period. The monthly average yield of the Irvine Pooled Investment Portfolio will be compared to the monthly average 6-month CMT (Constant Maturity Treasury) as calculated by the Federal Reserve Bank of New York. As an added reference, the monthly average yield of the Irvine Pooled Investment Portfolio will be compared to the monthly average 2-year CMT as calculated by the Federal Reserve Bank of New York.

9. DIVERSIFICATION

The City will diversify use of investment instruments to avoid unreasonable risks inherent in over-investing in specific instruments, individual financial institutions, or maturities.

Market price volatility shall be controlled through maturity diversification, as well as ensuring adequate liquidity is available to meet cash flow requirements, thereby precluding the need to sell instruments at a market loss.

Risk of default will be controlled by acquiring instruments such as Government Securities, or by diversifying the portfolio within the constraints and parameters of Section 17 of this Policy, Authorized and Suitable

Investments.

10. PORTFOLIO SEGREGATION

Within the overall funds managed by the Treasurer, bond proceeds and special district funds shall be segregated from the general City pool into their own pool and be invested in conformance with the permitted investment criteria documented in each bond indenture or guiding resolution. Furthermore, bond proceeds held by fiscal agents or trustees shall also be segregated and invested in accordance with each indenture.

The primary purpose of any separately managed bond proceeds and special district funds portfolios is to structure investment maturities to meet current and future liabilities. The preservation of principal and the maintenance of liquidity are the most important factors regarding the investment of bond proceeds and special district funds. Portfolio yield is not a primary factor since the portfolio structure, eligible investment assets and maturity restrictions are governed by draws and expenditure schedules of the issues. Performance will be based upon maximizing permitted positive arbitrage within the context of principal preservation as a first priority (pre-1986 Tax Reform Act issuances) or minimizing or eliminating negative arbitrage (yield-restricted issues).

11. BOND ISSUANCE ARBITRAGE REBATE

The U.S. Tax Reform Act of 1986 requires the City to perform annual arbitrage calculations and rebate excess earnings to the U.S. Treasury for investment returns that exceed the allowable interest earnings limit of each bond issue. The arbitrage calculation process must be conducted for the investment of proceeds of bond issues sold after the effective date of this law. This arbitrage calculation will be contracted out to provide the necessary technical expertise to comply with this regulation. The City's investment position relative to the interest rate arbitrage restrictions is to have safety and the highest permitted return the law allows as the highest priority while ensuring the preservation of principal and liquidity.

12. QUALIFIED DEALERS

The Treasurer shall transact business only with Registered Investment Advisors, national or state-chartered banks, savings and loans, and broker dealers. The dealers should be primary dealers regularly reporting to the New York Federal Reserve Bank, or approved regional or secondary market dealers

that qualify under the Securities and Exchange Commission Rule 15C3-1 (uniform net capital rule).

The Treasurer may direct a fiscal agent or trustee to execute investment transactions on behalf of the City for funds held by that fiscal agent or trustee.

The City may purchase "prime" quality rated commercial paper from its direct issuer if it presents a higher return than in the secondary market.

The Treasurer will monitor broker/dealers and their firms, to ensure they are in good standing with the appropriate regulatory agencies. The Treasurer will review financials and report back to the Investment Advisory Committee.

13. SAFEKEEPING OF SECURITIES

To protect against losses caused by the collapse of individual securities dealers, all securities owned by the City, including collateral for repurchase agreements, shall be held in safekeeping by a third party bank trust department acting as agent for the City under the terms of a custody agreement or, in the case of funds held by the fiscal agent or trustee, the fiscal agent or trustee shall segregate and report securities held on the City's behalf. Any trade executed by a dealer is required to settle on a delivery versus payment basis with the City's safekeeping agent.

Fiscal agents or trustees in receipt of City of Irvine bond proceeds will settle security transactions on a delivery versus payment method based upon instructions provided by the Treasurer or the City's investment advisor. The fiscal agents or trustees will issue monthly custodian statements evidencing securities held in safekeeping, including the receipt of interest and maturity proceeds, the disbursement of funds for the purchase of securities, and the receipt of any sale proceeds.

14. COLLATERALIZATION

All demand deposits, time deposits and repurchase agreements are to be fully collateralized with securities authorized by the California Government Code and the City.

- The cost value (book value) of collateral pledged for demand deposits must at all time be equal to or greater than the amount on deposit, plus accrued interest, in accordance with the following ratio:

U.S. Treasury Securities	110%

- The cost value (book value) of collateral pledged for repurchase agreements must at all time be equal to or greater than the par amount, plus accrued interest, with the following ratios:

U.S. Treasury Securities	102%
U.S. Government Agencies	102%

- It is the policy of the City to require reports at least on a quarterly basis from institutions with which the Treasurer has pledged security interest. The Treasurer shall monitor the adequacy of collateralization to ensure that balances are collateralized in accordance with the ratios approved herein.

- With regard to repurchase agreements, it is the policy of the City to initiate a margin call in the event pledged collateral falls below the appropriate ratio.

- Collateralized investments and deposits often require substitution of collateral. Any broker or financial institution requesting substitution must contact the City for approval in the event the counterparty to the transaction is not authorized under agreement with the City to make substitutions.

15. MAXIMUM MATURITIES

- Pooled Investment Portfolio

  In accordance to California Government Code Section 53601, The City will not invest in any securities maturing more than five (5) years from the settlement date of purchase. If the Treasurer desires to make investments longer than five years, express authority to make those investments, either specifically or as part of an investment program, must be approved by the City Council no less than three months prior to the investment. In no event will securities with maximum maturities beyond four years exceed 40 percent of the portfolio's total carrying cost at the time of purchase.

- Bond Proceeds Portfolio/Special District Funds Portfolio

  The Bond Proceeds and Special District Funds Portfolios held by the City, fiscal agents or trustees will be structured with maturities sufficient

to meet current and future disbursements and other liabilities consistent with the purpose of each bond issue. The Treasurer may match maturities to defined future liabilities or may structure the portfolio in such a manner as to maintain an average maturity and a defined liquidity percentage necessary to meet estimated liabilities. In no event will securities be purchased with final maturities that exceed a specifically defined future liquidity requirement (such as bond reserve fund availability requirement) or liability.

16. INVESTMENT POOLS/MONEY MARKET MUTUAL FUNDS

A thorough investigation of any government sponsored pool and/or mutual fund is required prior to investing and on a continual basis. There shall be a questionnaire completed which will provide the following information:

- A description of eligible investment securities, and a written statement of investment policy and objectives.
- A description of interest calculations and how it is distributed, and how gains and losses are treated.
- A description of how the securities are safeguarded (including the settlement processes), and how often the securities are priced and the program audited.
- A description of who may invest in the program, how often, and what size of deposits and withdrawals are allowed.
- A schedule for receiving statements and portfolio listings.
- A description of how the pool/fund utilizes reserves, retained earnings, etc.
- A fee schedule, including when and how fees are assessed.
- The eligibility of the pool/fund to invest in bond proceeds and special district funds, and a description of its practices.

17. AUTHORIZED AND SUITABLE INVESTMENTS

The City is governed by the California Government Code, Sections 53600 et seq. Within the context of these limitations and based on the cost at the time of purchase, the following investments are authorized as further limited herein:

Authorized Investment Summary Matrix

Category		Percent
A.	US Treasuries	no limit
B.	US Agencies	no limit
C.	Bankers' Acceptances	25%
D.	Commercial Paper	15%
E.	Repurchase Agreements	25%
F.	Reverse Repurchase Agreements	15%
G.	Local Agency Investment Fund (LAIF)	25%
H.	Municipal Bonds	25%
I.	Corporate Medium Term Notes	15%
J.	Money Market Mutual Funds	20%
K.	Supranationals	10%

A. United States Treasury Bills, Bonds, and Notes, or those for which the full faith and credit of the United States are pledged for payment of principal and interest. There is no limitation as to the percentage of the portfolio that can be invested in this category.

B. Obligations issued by United States Federal agencies or government-sponsored enterprise obligations, or other instruments, including those issued by or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises. Although there is no percentage limitation on these issues, the "prudent investor" standard shall apply to investments from a single agency.

C. Bills of exchange or time drafts drawn on and accepted by a commercial bank, otherwise known as Bankers' Acceptances. Bankers' Acceptances purchased may not exceed 180 days to maturity or 25 percent of the cost (book) value of the portfolio. No more than $5 million may be invested in Bankers' Acceptances issued by any one bank. Prior to the purchase of any Banker's Acceptance, the portfolio manager shall review the rating of the issuing bank. Bankers' Acceptances of issuing financial institutions shall have both a short and long term rating in the highest category by at least one nationally recognized rating agency at the time of purchase.

D. Commercial paper ranked of "prime" quality of the highest ranking or of the highest letter and number rating as provided for by NRSRO and

issued by a domestic corporation having assets in excess of $500 million. The commercial paper must also have an "A" or better rating for the issuer's debt, other than commercial paper, if any, as provided by a NRSRO. Purchase of commercial paper from corporations on negative credit watch by a major rating agency shall be prohibited. Purchases of eligible commercial paper may not exceed 270 days to maturity. Excluding the Special District Funds Portfolio, purchases of commercial paper may not exceed 15 percent of the cost value of the portfolio at time of purchase, and no more than 3 percent of the cost value of the portfolio may be invested in commercial paper issued by any one corporation. Corporate medium term note and bankers' acceptance holdings shall be considered when calculating the maximum dollar amount in any issuer name.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below "investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

E. Repurchase agreements. The City may invest in repurchase agreements with banks and primary dealers with whom the City has entered into a master repurchase agreement that specifies terms and conditions of repurchase agreements. No more than 25 percent of the cost value of the portfolio may be invested in repurchase agreements at any time. The maturity of repurchase agreements shall not exceed 75 days.

The cost value of securities used as collateral for repurchase agreements shall be monitored daily by the Treasurer and will not be allowed to fall below the margin ratios specified in Section 14 (2) of this policy. In order to conform with provisions of the Federal Bankruptcy Code which provides for the liquidation of securities held as collateral for repurchase agreements, the only securities acceptable as collateral shall be securities that are direct obligations of, or that are fully guaranteed as to principal and interest by, the United States Government such as Treasury bills, Treasury notes or Treasury bonds with less than a five year maturity.

F. Reverse repurchase agreements. The City may invest in reverse repurchase agreements only with those banks and primary dealers

with whom the City has entered into a master repurchase agreement outlining terms and conditions of repurchase and reverse repurchase agreements. The City may only invest in reverse repurchase agreements for the following purpose:

1. The City may enter into reverse repurchase agreements when funds obtained through the reverse can be reinvested in a higher yielding security to obtain additional interest income for the City at a spread deemed to be acceptable by the Treasurer under then prevailing market conditions. Reverse repurchase agreements entered into in accordance with this paragraph may not exceed 75 days to maturity and must be matched as to maturity and dollars invested with its corresponding reinvestment. No more than 15 percent of the cost value (book value) of the portfolio may be invested in reverse repurchase agreements.

2. Reverse repurchase agreements may be used for liquidity purposes when it is determined that the portfolio has sufficient additional collateral coming due within the term of the reverse repurchase agreement equal to or exceeding the amount of the reverse repurchase agreement.

G. The City may invest in the LAIF established by the State Treasurer for the benefit of local agencies up to the maximum permitted by State law, but not to exceed 25 percent of the cost value (book value) of the total portfolio excluding the Bond Proceeds Portfolio.

H. Bonds issued by local agencies of the United States, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by the local agency or by a department, board, agency, or authority of the local agency rated “AA” or better by a NRSRO. "AA" rated bonds shall be limited to 36 months maximum maturity and "AAA" rated bonds shall be limited to 60 months maximum maturity. No more than 25 percent of the cost value (book value) of the portfolio may be invested in municipal bonds.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below

"investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

I. Corporate medium term notes issued by a domestic corporation having assets in excess of $500 million and having an "AA" or better rating criteria at time of purchase on its long-term debentures as provided by a NRSRO. Purchase of corporate medium term notes from corporations on negative credit watch by a major rating agency shall be prohibited. "AA" rated medium term notes shall be limited to 36 months maximum maturity and "AAA" rated medium term notes shall be limited to 60 months maximum maturity. The aggregate total of all purchased medium term notes may not exceed 15 percent of the cost value of the portfolio. No more than 3 percent of the cost value of the portfolio may be invested in corporate medium term notes issued by any one corporation. Commercial paper and bankers' acceptance holdings shall be considered when calculating the maximum percentage in any issuer name.

Upon any announcement of negative credit watch or downgrade by a major rating agency of any issue within the portfolio, the investment manager should contact the City Treasurer/City Manager and recommend a course of action. If at any time a security falls below "investment grade," the investment manager should obtain the best bid and take the necessary steps toward liquidation.

J. Money market mutual funds having a rating of "AAA" or an equivalent by no less than two NRSRO with no load and maintained at $1 par value. No more than 20 percent of the cost value of portfolio value at time of purchase, excluding the Special District Funds Portfolio, should be invested in this category, and the City's investment in any specific mutual fund will not exceed 2 percent of that mutual fund's total assets.

K. Supranational securities of United States dollar denominated senior unsecured unsubordinated obligations issued or unconditionally guaranteed by the International Bank for Reconstruction and Development, International Finance Corporation, or Inter-American Development Bank, with a maximum remaining maturity of five years or less, and eligible for purchase and sale within the United States. Investments under this subdivision shall be rated "AAA" or better by an NRSRO and shall not exceed 10 percent of the agency's moneys that may be invested pursuant to this section.

18. INELIGIBLE INVESTMENTS

Investments not described herein including, but not limited to, equity securities such as common stocks, preferred stocks, convertibles, inverse floaters, range notes and interest-only strips that are derived from a pool of mortgages are prohibited from use in this portfolio. The City is prohibited from entering into a margin agreement and/or borrowing on margin.

19. INVESTMENT ADVISORY COMMITTEE

The City has created a five-member Investment Advisory Committee as a standing Committee to advise the City on matters relating to the City's Investment Policy and the investment of City funds. The Committee meets at least quarterly with the Treasurer and City staff and reports directly to the City Council. Each Councilmember appoints one person to the Committee. The Committee member's term is concurrent with the term of the appointing Councilmember. The Committee will be governed by a set of Bylaws (Exhibit A) to be reviewed and approved annually.

20. PORTFOLIO REPORTING

In accordance with California Government Code, Sections 53607 and 53646(b), the Treasurer shall provide on a monthly and quarterly basis (or as otherwise requested by the City Manager) an investment portfolio report to the City Council. The report shall include a listing of each of the City's investments (a description that adequately describes the security), the purchase date, maturity date, cost basis, current cost value (book value), interest rate, weighted average maturity, current unrealized loss or gain and a listing of investment transactions that includes purchase/deposit and sale/withdrawal activity. Various investment types will be categorized and grouped in the same structure as the qualified investment categories identified in this policy. The portfolio report shall include a statement certifying the ability of the City to meet its expenditure requirements for the next six months, or provide an explanation as to why sufficient money shall, or may, not be available. The report will also include comments on the fixed income markets and economic conditions, and the effect, if any, on the portfolio structure and investment strategy. The report shall also detail all repurchase and reverse repurchase positions and associated liabilities.

The investment portfolio report shall include market value information for all investments. A monthly market value will be obtained for each security owned by the City. For purposes of reporting, the market value of each

security may be obtained from the City's custodian bank or other pricing source(s) utilized by the City's designated investment management firm (registered investment advisor).

The City shall record interest revenue on a modified accrual basis of accounting that is typical for reporting and recording of interest earnings. Securities held by a fiscal agent or trustee shall also be recorded on a modified accrual basis of accounting. The Treasurer will report year-end investments in conformance with Governmental Accounting Standards Board Statement Nos. 31, 40, and 72.

The Treasurer will provide a monthly reconciliation of all funds included in the investment portfolios. The reconciliation shall utilize all available information including the City's books, the Demand Deposit Bank account, the custodian's statement, and the fiscal agent and trustee's statement.

21. REVIEW OF INVESTMENT PORTFOLIO

The securities held by the City must be in compliance with Section 17, Authorized and Suitable Investments, at the time of purchase. The Treasurer shall review the portfolios quarterly to identify any securities that are no longer in compliance. The Treasurer shall report any major and critical incidences of noncompliance in the quarterly treasurer's report to the City Council and Investment Advisory Committee.

22. INVESTMENT POLICY ADOPTION

The City Council shall review and adopt this Investment Policy by resolution annually.

GLOSSARY

AGENCIES – Agencies of the Federal government set up to supply credit to various classes of institutions (e.g., S&L's, small business firms, students, farmers, housing agencies, etc.) Examples include Federal Home Loan Mortgage Corporation (FHLMC), Federal National Mortgage Association (FNMA), Federal Home Loan Bank (FHLB), and Federal Farm Credit Bank (FFCB).

ASK/OFFER – The price at which securities are offered. (The price at which a firm will sell a security to an investor)

BANKERS' ACCEPTANCE (BA) – A draft or bill of exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill as well as the issuer.

BASIS POINT – One one-hundredth of a percent (i.e., 0.01 percent)

BEAR MARKET – A period of generally pessimistic attitudes and declining market prices.

BID PRICE – The price at which a broker/dealer will buy securities from an investor.

BOND EQUIVALENT YIELD – The basis on which yields on notes and bonds are quoted.

BOOK VALUE (COST VALUE) – The purchase price of the security as recorded on the City's books.

BROKER – An individual or firm acting as intermediary by purchasing and selling securities for others.

BULL MARKET – A period of generally optimistic attitudes and increasing market prices.

CALLABLES – Securities that the issuer has the right to redeem prior to maturity.

CERTIFICATE OF DEPOSIT (CD) - A time deposit with a specific maturity evidenced by a certificate. Large denomination CD's are typically negotiable.

CMT – Constant Maturity Treasury – An index of the average yield on United States Treasury securities adjusted to a constant maturity.

COLLATERAL – Securities, evidence of deposit or other property which a borrower pledges to secure repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public monies.

COMPREHENSIVE ANNUAL FINANCIAL REPORT (CAFR) - The official annual financial report of the City. It includes combined statements for each individual fund and account group prepared in conformity with Generally Accepted Accounting Principles (GAAP). It also includes supporting schedules necessary to demonstrate compliance with finance-related legal and contractual provisions, extensive introductory material, and a detailed Statistical Section.

CORPORATE MEDIUM TERM NOTE – A security issued by a corporation doing business in the U.S. with a maturity not to exceed five years.

COST VALUE (BOOK VALUE) – The purchase price of the security as recorded on the City's books.

COUPON – a) The annual rate of interest that a bond's issuer promises to pay the bondholder on the bond's face value; b) a certificate attached to a bond evidencing interest due on a payment date.

DEALER – An individual or firm acting as principal in a security transaction.

DEBENTURE - A bond secured only by the general credit of the issuer.

DELIVERY VS PAYMENT - Delivery of securities with a simultaneous exchange of money.

DEMAND ACCOUNT – An account with a commercial bank from which check withdrawals may be made at any time.

DERIVATIVES – Financial products that are dependent for their value on (or derived from) an underlying financial instrument, a commodity, or an index representing values of groups of such instruments or assets.

DISCOUNT – The difference between the cost price of a security and its par value when the cost is lower than par. A security selling below original offering price shortly after sale also is considered to be at a discount.

DIVERSIFICATION – Dividing investment funds among a variety of securities offering independent returns.

FEDERAL FUNDS RATE – Interest rate charged by one institution lending federal funds to another.

FEDERAL OPEN MARKET COMMITTEE (FOMC) – Consists of seven members of the Federal Reserve Board and five of the twelve Federal Reserve Bank Presidents. The President of the New York Federal Reserve Bank is a permanent member, while the other presidents serve on a rotating basis. The Committee periodically meets to set Federal Reserve guidelines regarding purchases and sales of Government Securities in the open market as a means of influencing the volume of bank credit and money.

FINANCIAL ADVISOR – A firm or bank that acts in a financial advisory capacity with respect to a new issue of municipal securities pursuant to a written contract.

FISCAL AGENT – A financial institution which performs payment of principal and interest to bondholders, and certain administrative duties on the bond issuer's behalf.

GOVERNMENTAL ACCOUNTING STANDARDS BOARD – The independent organization that establishes and improves standards of accounting and financial reporting for U.S. state and local governments.

INTERNAL RATE OF RETURN – Rate of return over the life of a security on variables.

LOCAL AGENCY INVESTMENT FUND (LAIF) – The aggregate of all funds from political subdivisions that are placed in the custody of the State Treasurer for investment and reinvestment.

MARKET VALUE – The price at which a security is trading, usually the liquidation value.

MASTER REPURCHASE AGREEEMENT – A written contract covering all future transactions between the parties to repurchase-reverse repurchase agreements that establishes each party's rights in the transactions. A master agreement will often specify, among other things, the right of the buyer-lender to liquidate the underlying securities in the event of default by the seller borrower.

MONEY MARKET MUTUAL FUNDS – Open-ended mutual fund that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid and safe securities, and pays money market rates of interest. The fund's net asset value remains a constant $1 a share, with the interest rate increasing or decreasing.

NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION (NRSRO) – A rating organization designated by the SEC as being nationally recognized.

OFFER PRICE – The price at which a broker/dealer will offer securities to an investor.

OPEN MARKET OPERATIONS – Federal Reserve activity. Under the Federal Reserve Act, the Fed uses purchases and sales of Government and Federal Agency securities to add to or subtract from commercial bank reserves. Goals are to sustain economic growth, high employment and reasonable price stability.

PAPER GAIN OR LOSS – Term used for unrealized gain or loss on securities being held in a portfolio based on comparison of current market quotes and their original cost. This situation exists as long as the security is held while there is a difference between cost value (book value) and the market value.

PORTFOLIO – Collection of securities held by an investor.

PREMIUM – The difference between the cost price of a security and its par value, when the cost is higher than par.

PRIMARY DEALER – A group of government securities dealers that serve as trading counterparties of the New York Fed in its implementation of monetary policy. This role includes the obligations to: (i) participate consistently in open market operations to carry out U.S. monetary policy pursuant to the direction of the Federal Open Market Committee (FOMC); and (ii) provide the New York Fed's trading desk with market information and analysis helpful in the formulation and implementation of monetary policy. Primary dealers are also required to participate in all auctions of U.S. government debt and to make reasonable markets for the New York Fed when it transacts on behalf of its foreign official account-holders.

RATE OF RETURN – The yield obtainable on a security based on its purchase price or its current market price. This may be the amortized yield to maturity; on a bond, the current income return.

REPURCHASE AGREEMENT (REPO) – A holder of securities sells these securities to an investor with an agreement to repurchase them at a fixed price on a fixed date. The security "buyer" in effect lends the "seller" money for the period of the agreement, and the terms of the agreement are structured to compensate them for this.

REVERSE REPURCHASE AGREEMENT (REVERSE REPO) – A reverse-repurchase agreement (reverse repo) involves an investor borrowing cash from a financial institution in exchange for securities. The investor agrees to repurchase the securities at a specific date for the same cash value plus an agreed upon interest rate. Although the transaction is similar to repo, the purpose of entering into a reverse repo is quite different. While a repo is a straightforward investment of public funds, the reverse repo is a borrowing.

SAFEKEEPING – The service provided by banks and trust companies for clients when the bank or trust company stores the securities, takes in coupon payments, and redeems issues at maturity.

SECURITIES & EXCHANGE COMMISSION (SEC) - Agency created by Congress to protect investors in securities transactions by administering securities legislation.

SEC RULE 15(C) 3-1 – See Uniform Net Capital Rule.

SPREAD – a) The yield or price difference between the bid and offer on an issue; b) the yield or price difference between different issues.

SUPRANATIONALS – International institutions formed by two or more governments that transcend boundaries to pursue mutually beneficial economic or social goals. There are three supranational institutions that issue obligations that are eligible investments for California local agencies: the International Bank for Reconstruction and Development (IBRD), International Finance Corporation (IFC), and Inter-American Development Bank (IADB).

SWAP – The sale of one issue and the simultaneous purchase of another for some perceived advantage.

TREASURY BILLS – A non-interest bearing discount security issued by the U.S. Treasury to finance the national debt. Most bills are issued to mature in three months, six months or one year.

TREASURY BONDS – U.S. Treasury securities that have initial maturities of more than 10 years.

TREASURY NOTES – Intermediate-term coupon bearing U.S. Treasury securities having initial maturities from one year to ten years.

TRUSTEE – A financial institution with trust powers that acts in a fiduciary capacity for the benefit of the bondholders in enforcing the terms of the bond contract.

UNIFORM NET CAPITAL RULE – Securities and Exchange Commission requirement that member firms as well as nonmember broker-dealers in securities maintain a maximum ratio of indebtedness to liquid capital of 15 to 1; also called net capital rule and net capital ratio. Indebtedness covers all money owed to a firm, including margin loans and commitments to purchase securities. Liquid capital includes cash and assets easily converted into cash.

WHEN ISSUED BASIS (WI) – A term applied to securities that are traded before they are actually issued with the stipulation that transactions are null and void if securities are not issued.

YIELD CURVE – Yield calculations of various maturities at a given time to observe spread difference.

YIELD TO MATURITY – The current coupon yield minus any premium above par, or plus any discount from par in the purchase price with the adjustment spread over the period from date of purchase to maturity.

Exhibit

BYLAWS OF THE INVESTMENT ADVISORY COMMITTEE OF THE CITY OF IRVINE

ARTICLE I - PURPOSE

The purpose of the Investment Advisory Committee is to oversee the management of the investment portfolio through regular quarterly meetings. The Committee will review investment transactions, discuss economic conditions and strategies regarding the management of the portfolio, and report to individual Councilmembers on the meetings.

ARTICLE II - STRUCTURE

The Committee shall be comprised of five members. Each Councilmember shall be responsible for appointing one member to the Committee with the term of the member running concurrent with the term of the Councilmember making the appointment.

The Chairperson and Vice Chairperson of the Committee shall be elected by a majority vote of the members and shall hold the seat for a one-year term. These positions may be elected for two consecutive terms. At the end of the second consecutive term, the members shall elect a new Chairperson and Vice Chairperson.

ARTICLE III - MEETINGS

The meetings shall be held at least quarterly at Irvine City Hall. Each meeting shall be held prior to the presentation of the quarterly report to Council on the status of the portfolio. Three members of the Committee must be present to constitute a quorum.

ARTICLE IV - PARLIAMENTARY PROCEDURE

The rules contained in the current edition of Robert's Rules of Order, newly revised, shall govern the Committee in all cases to which they are applicable and where they are not inconsistent with these Bylaws.

ARTICLE V - AMENDMENT OF BYLAWS

These Bylaws may be amended by a majority vote of the Committee.

3.6

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: ACCEPTANCE OF MARUCHAN, INC. DONATION

Director of Public Safety

City Manager

RECOMMENDED ACTION

1. Accept a $100,000 donation from Maruchan, Inc.
2. Approve a budget adjustment appropriating $100,000, reflecting an increase in revenues and appropriations.

EXECUTIVE SUMMARY

An Irvine-based company, Maruchan, Inc. (Maruchan), has offered a donation of $100,000 to the Department of Public Safety. The Department of Public Safety proposes that the donated funds be accepted by the City of Irvine to advance department technology, equipment, and training.

COMMISSION/BOARD/COMMITTEE RECOMMENDATION

At its regular meeting on September 17, 2018, the Finance Commission approved the recommended actions on consent by a vote of 4-0-1. (Commissioner Shute was absent.) There was no discussion.

ANALYSIS

Founded in 1972, Maruchan is an Irvine-based firm that manufactures noodle soups and related products. For more than 10 years, Maruchan has donated funds to the Department of Public Safety. In the past, these funds have been used for several worthwhile projects including the purchase of audiovisual systems, technology systems, the Naloxone (Narcan) program, and forensics software.

In April 2018, Maruchan sent a $100,000 donation to the Department of Public Safety. Staff recommends the donation be accepted and used for advancing department technology, equipment, and training.

ALTERNATIVES CONSIDERED

The City Council may choose to return the donation to Maruchan, in which case the Department of Public Safety would seek an alternative funding source for key projects and initiatives.

FINANCIAL IMPACT

The funds have been deposited into Special Fund 143. The planned expenditures will be fully paid for with the donated funds, with no impact to the General Fund.

REPORT PREPARED BY Peter Hong, Senior Management Analyst

ATTACHMENT

1. Budget Adjustment Request Form

CITY OF IRVINE
BUDGET ADJUSTMENT REQUEST FORM

Department: Public Safety

Requestor: Peter Hong

Finance Comm. Date: September 17, 2018

City Council Date: October 9, 2018

Approval Exception (A - O): D
(see Financial Policies - Budget Adjustment)

Finance Use Only *- Batch Record Number*

GL

JL

Posting Date

Posted by /date

Reason Code: 0003 New Program or Project

Explanation for Request:

Appropriate revenue and expenditures for a $100,000 donation from Maruchan, Incorporated.

Approvals: 9-6-18

Department Approval Date

Budget Office Approval Date

Fiscal Services Approval Date

City Manager Approval Date

REVENUES AND TRANSFERS-IN

Fund #	Account Number				Amount
	GL		JL		
	Org Key	Object Code	Job Key	Object Code	Increase or (Decrease)
143	3840100479	3494			100,000
				Subtotal	100,000

EXPENDITURES AND TRANSFERS-OUT

Fund #	Account Number				Amount
	GL		JL		
	Org Key	Object Code	Job Key	Object Code	Increase or (Decrease)
143	3840100479	4110			100,000
				Subtotal	100,000

CHANGE TO FUND BALANCE

Fund #	Account Number				Amount
	GL		JL		
	Org Key	Object Code	Job Key	Object Code	Increase or (Decrease)
				Subtotal	0

No Change In Fund Balance

ATTACHMENT 1

3.7

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: ACCEPTANCE OF FEDERAL EMERGENCY MANAGEMENT AGENCY LOCAL HAZARD MITIGATION GRANT

Director of Public Safety

City Manager

RECOMMENDED ACTION

1. Authorize the Director of Public Safety to approve and accept a $106,466 Local Hazard Mitigation Grant award from the Federal Emergency Management Agency (FEMA).

2. Approve a budget adjustment appropriating $106,466 for a comprehensive update to the City's Local Hazard Mitigation Plan.

EXECUTIVE SUMMARY

Local Hazard Mitigation planning is the process of assessing vulnerabilities, measuring risk, identifying strategies for risk reduction, and assigning responsible parties to carry out appropriate action. This multi-disciplinary initiative involves a comprehensive study of all hazards that could impact a given municipality including natural, human-caused, and technological. The planning process requires an array of subject matter experts coming together in a collaborative effort to attain a common objective of managing disaster-related risk. A number of stakeholders, including members of the public, contribute to this process.

A Local Hazard Mitigation Plan (LHMP) is the output of this planning process and serves as a local municipality's long-term roadmap for community resiliency. Research on recent disasters has shown that every $1 spent on mitigation activities can save $6 in future disaster-related costs. FEMA recognizes the importance of mitigation planning and provides federal funding to local municipalities to develop or update an LHMP after qualifying, presidentially declared disasters. The County of Orange, along with most of California, received a Presidential Disaster Declaration for the January Storms of 2017 and, as a result, FEMA made mitigation awards available on a competitive basis.

COMMISSION/BOARD/COMMITTEE RECOMMENDATION

At its regular meeting on September 17, 2018, the Finance Commission approved the recommended actions on consent by a vote of 4-0-1. (Commissioner Shute was absent.) There was no discussion.

ANALYSIS

In December 2017, the Irvine Police Department Office of Emergency Management submitted a sub-application through the California Governor's Office of Emergency Services (Cal OES) for a FEMA grant to update the City of Irvine's LHMP. The tremendous growth of the City, coupled with the need to include climate change adaptation strategies as a new requirement to the General Plan, has driven the need for an update to the City's LHMP.

Recently, the Office of Emergency Management received notification from Cal OES that FEMA has awarded the City of Irvine a Local Hazard Mitigation Planning Grant for $106,466. These funds are anticipated to cover the total cost of external consultants, use of hazard identification and mapping technology, and any other cost associated with the update to the LHMP. If the City Council decides to accept the FEMA award, the City is required to commit to a "soft match" using staff hourly wages not to exceed $35,488.

The availability of federal funding to support an update to the City's LHMP comes at an opportune time for a number of reasons:

- The Office of Emergency Management has been revising and updating the City's Emergency Operations Plan (EOP), of which hazard exposure and preparedness is a key element;
- Community Development has been working on an update to the City's General Plan, of which there are new requirements within the Safety Element that directly tie in to the City's LHMP; and
- Enhanced efforts to mitigate wildfire risk are a current discussion within the City, and an LHMP will help further identify needs and strategies to safeguard at-risk communities located near open space.

ALTERNATIVES CONSIDERED

The City Council may choose to decline the grant funding, in which case the City would seek an alternative funding source to update the LHMP.

FINANCIAL IMPACT

Accepting the Local Hazard Mitigation Grant will provide funding to reimburse the City of Irvine for costs associated with updating the City's LHMP. There is an in-kind requirement using the fully burdened cost of regular staff hourly wages not to exceed $35,488. This time will be tracked by the Office of Emergency Management and includes staff participation in meetings, individual assignments of working group members, and other related tasks.

REPORT PREPARED BY Robert Simmons, Emergency Management Administrator

ATTACHMENTS

1. Notification of Sub-application Approval Letter
2. Budget Adjustment Request

EDMUND G. BROWN JR.
GOVERNOR

MARK S. GHILARDUCCI
DIRECTOR

June 13, 2018

Mike Hamel
Police Chief
Irvine, City of
1 Civic Center Plaza
Irvine, CA 92606

Subject: **Notification of Subapplication Approval**
Hazard Mitigation Grant Program
FEMA-**4301**-DR-CA, Project #**PL0211**, FIPS #**059-36770**

Dear Chief Hamel:

The California Governor's Office of Emergency Services (Cal OES) received notification that the Federal Emergency Management Agency (FEMA) has fully approved your organization's subaward application in the amount of **$106,466**. A copy of the FEMA award package is enclosed for your records.

In order to receive payment, all subrecipients must have a current (within the last 3 years), valid Governing Body Resolution* and updated Grant Assurances on file with our office (sample copies enclosed). These forms may be downloaded in an electronic format at www.caloes.ca.gov following the links: *Cal OES Divisions*; *Recovery*; *Disaster Mitigation & Technical Support*; *404 Hazard Mitigation Grant Program*; *HM Post Obligation Documents*. An active DUNS Number is also required for obtaining payment. For your convenience, information regarding obtaining and renewing a DUNS Number is included in this package. Please complete the electronic forms as well as the enclosed Supplemental Grant Subaward Information sheet and return them to the address below within 30 days. Payments will be made on a reimbursement basis using the Hazard Mitigation Reimbursement Request form. A ten percent (10%) retention will be withheld from all reimbursement payments and will be released as part of the subaward closeout process.

Reimbursements can be made only for items listed on the approved subaward application; expenditures for any other work should be separately maintained and are the sole responsibility of the subrecipient. Any funds received in excess of current needs or approved amounts, or those found owed as a result of a final inspection or audit, must be refunded to the State within 30 days of receipt of an invoice from Cal OES.

Please read all enclosed documents prior to initiating the approved project. For further assistance, please contact the Grants Processing Unit at (916) 845-8110.

Grants Processing Unit

Enclosures

c: Applicant's File

*Cal OES has on file a Public Assistance universal resolution (Resolution No 18-41) that the City passed on May 22, 2018 With your permission, the resolution can be applied to this Hazard Mitigation grant

3650 SCHRIEVER AVENUE • MATHER, CA 95655
GRANTS PROCESSING UNIT
(916) 845-8110 • (916) 636-3880 FAX

ATTACHMENT 1

CITY OF IRVINE

BUDGET ADJUSTMENT REQUEST FORM

Department: Public Safety

Requestor: Peter Hong

Finance Comm. Date: September 17, 2018

City Council Date: October 9, 2018

Approval Exception (A - O): D
(see Financial Policies - Budget Adjustment)

Finance Use Only - Batch Record Number	
GL	
JL	
Posting Date	
Posted by	/date

Reason Code: 0003 New Program or Project

Explanation for Request:

Appropriate revenue and expenditures for a $106,466 FEMA Local Hazard Mitigation Grant.

Approvals:

Department Approval	9-5-18 Date	Budget Office Approval	Date
Fiscal Services Approval	Date	City Manager Approval	Date

REVENUES AND TRANSFERS-IN

Fund #	Account Number GL Org Key	GL Object Code	JL Job Key	JL Object Code	Amount Increase or (Decrease)
143	3840140762	3210			106,466
				Subtotal	106,466

EXPENDITURES AND TRANSFERS-OUT

Fund #	Account Number GL Org Key	GL Object Code	JL Job Key	JL Object Code	Amount Increase or (Decrease)
143	3840140762	4310			106,466
				Subtotal	106,466

CHANGE TO FUND BALANCE

Fund #	Account Number GL Org Key	GL Object Code	JL Job Key	JL Object Code	Amount Increase or (Decrease)
				Subtotal	0

No Change In Fund Balance

ATTACHMENT 2

3.8

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: APPROVAL OF PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS FOR SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS

Acting Director of Public Works

City Manager

RECOMMENDED ACTION

1. Approve the construction plans, specifications, and contract documents for the Sweet Shade Community Center Tenant Improvements, Capital Improvement Project 361803.

2. Approve the Engineer's Estimate, Construction Contingency, and Project Funding Summary.

3. Authorize staff to solicit competitive bids and award the construction contract to the lowest responsive and responsible bidder, in accordance with the City's purchasing policies and procedures, within the approved project budget.

EXECUTIVE SUMMARY

Construction plans, specifications, and contract documents for the Sweet Shade Community Center Tenant Improvements are complete and ready for City Council approval. The proposed project will relocate the City's Disability Services division from the second floor of the Civic Center to the Sweet Shade Community Center. Tenant improvements are proposed for a portion of the Sweet Shade Community Center to facilitate the relocation. The proposed improvements include a public waiting area, two office spaces, a conference room, and a staff work area for up to six Disability Services staff members. Additionally, automatic doors will be installed at the main entry and at the restrooms.

Approval of the recommended actions will allow staff to proceed with solicitation of competitive bids for construction and award of a contract to the lowest responsive and responsible bidder in accordance with the City's purchasing policies and procedures within the approved project budget.

COMMISSION/BOARD/COMMITTEE RECOMMENDATION

On August 7, 2018, the Irvine Residents with Disabilities Advisory Board reviewed the proposed tenant improvements and voted 7-0-6 (Board members Chockalingam, Constantin, Drayer, Gibbons, Harvey, McLaughlin, and Stern voting in favor; Board members Choi, Felix, Gustin, Money, Niggl, and Robert absent) to recommend that the City Council approve the proposed tenant improvements at Sweet Shade Community Center.

ANALYSIS

As a part of the Civic Center Space Study Project, staff is proposing the relocation of the Disability Services division from the second floor of the the Civic Center to the Sweet Shade Community Center near Harvard Avenue and Barranca Parkway. The vacated space at the Civic Center will be used by the Public Safety department to accommodate current and long-term resource needs for Public Safety operations.

The tenant improvements proposed at the Sweet Shade Community Center will convert an existing office and storage room to provide appropriate workspace for Disability Services staff including:

- Two private offices
- Conference room
- Work area for up to six employees
- Reception window
- Waiting area with a children play station
- Automatic doors at the main entry and restrooms

The construction contract cost estimate prepared by the consultant design engineer for the project is $335,000. A budget allowance of $40,000 for construction engineering (inspection and material testing services) and $34,000 for construction contingency are recommended, as shown in the Project Funding Summary (Attachment 2). The City's construction contracting policies and procedures limit the award of the construction contract by staff to a maximum of 10 percent over the engineer's estimate. These policies also restrict the use of the construction contingency for unforeseen circumstances that may arise and are necessary to complete the work within the approved project scope and budget.

Staff is seeking City Council approval to proceed with soliciting competitive bids for construction. A copy of the Notice Inviting Bids, Construction Contract, Plans, Specifications, and the proposed Schedule of Work listing the individual bid items for this project is included as Attachment 3. If the recommended actions are approved by the City Council, construction is anticipated to begin in December 2018 with completion by April 2019. The Community Center will be closed for programming during construction. The remainder of the park, including the public restrooms will remain open during construction.

ENVIRONMENTAL REVIEW

Pursuant to Section 4 of the City of Irvine California Environmental Quality Act (CEQA) Manual and Article 19 of the State of California CEQA Guidelines, the proposed project is categorically exempt from the requirements of CEQA, under State Guideline Section 15301, Class 1(d), and Existing Facilities.

ALTERNATIVES CONSIDERED

The City Council could direct staff to defer the proposed tenant improvement project to a future date or direct staff to modify any of the elements of the project scope. The City Council may also approve the construction plans and related documents, authorize staff to solicit competitive bids, and direct staff to bring back the results of the competitive bid process to the City Council for its review and consideration prior to award of the contract.

FINANCIAL IMPACT

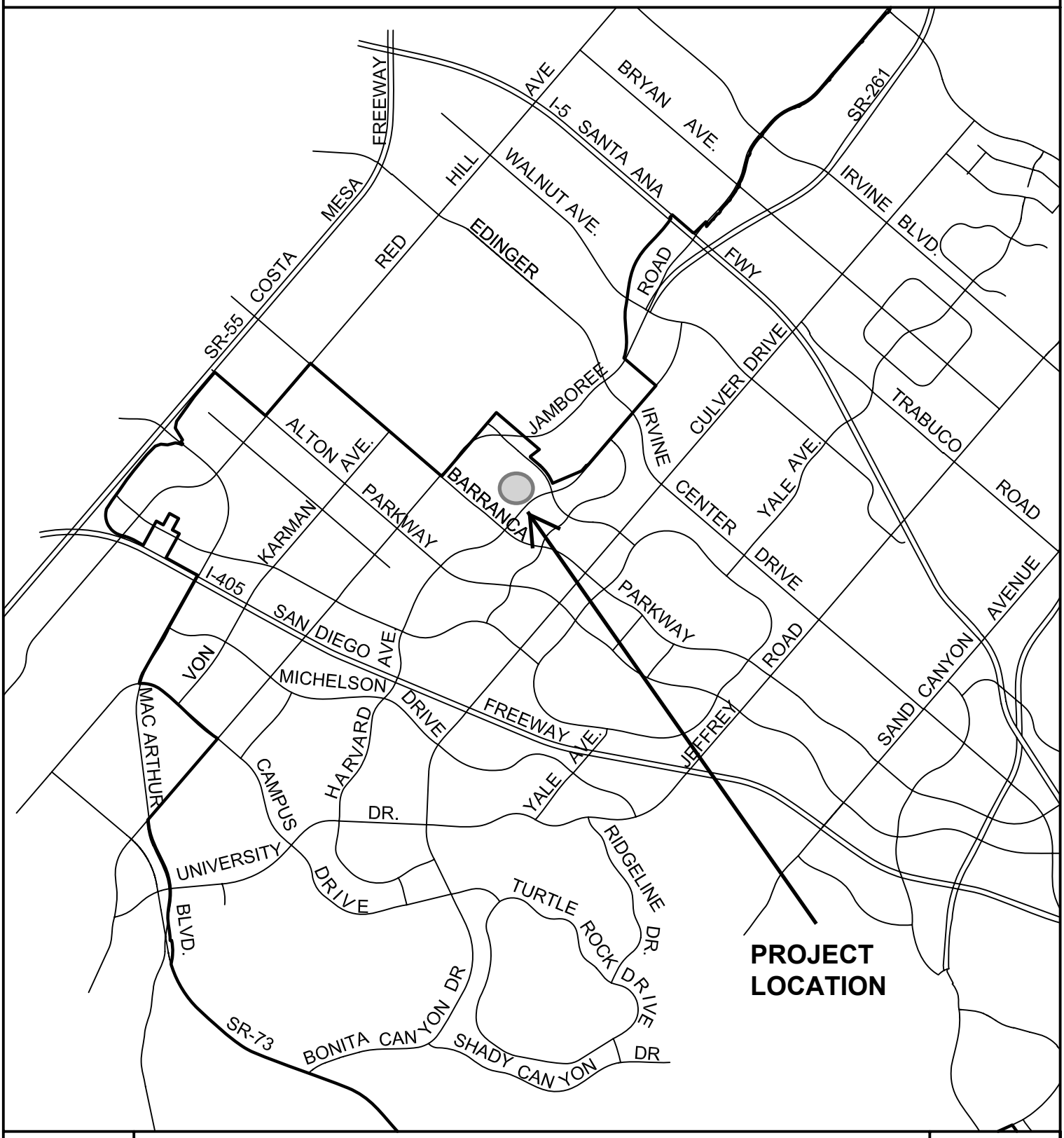
Project expenditures to date for the preparation of construction plans, specifications, and contract documents total $22,850. The construction contract estimate prepared by the consultant design engineer is $335,000. The recommended budget allowance of $40,000 for construction engineering and $34,000 for construction contingency brings the total estimated project cost for the construction phase to $409,000. Funding is available in the City Council approved CIP 361803 from Systems Development funds. A complete Project Funding Summary for this project is provided in Attachment 2.

REPORT PREPARED BY Jim Houlihan, Manager of Engineering

ATTACHMENTS

1. Vicinity Map
2. Project Funding Summary
3. Notice Inviting Bids, Construction Contract, Plans, Specifications, and Proposed Schedule of Work

SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS



VICINITY MAP

ATTACHMENT 1

Project Funding Summary

Sweet Shade Community Center Tenant Improvement

CIP 361803

October 9, 2018

Project Expenditures	
Design Engineering	$ 22,850
Construction (Engineer's Estimate)	$ 335,000
Construction Engineering	$ 40,000
Construction Contingency	$ 34,000
Total Estimated Project Cost	**$ 431,850**

Project Funding	
CIP 361803 Civic Center Space Study Improvements	$ 431,850
Total Funding Available	**$ 431,850**

ATTACHMENT 2

CITY OF IRVINE

ORANGE COUNTY, CALIFORNIA

NOTICE INVITING BIDS, PROPOSAL, CONTRACT AND SPECIAL PROVISIONS FOR

SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

CITY OF IRVINE
1 CIVIC CENTER PLAZA
P.O. BOX 19575
IRVINE, CALIFORNIA 92623-9575

PREPARED BY:
IDS GROUP
1 Peters Canyon Road, Suite 130
Irvine, CA 92606

September 2018

ATTACHMENT 3

SECTION 00 01 05 – CERTIFICATION

SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS

CIP 361803

THE SPECIFICATIONS CONTAINED HEREIN HAVE BEEN PREPARED BY OR UNDER THE DIRECTION OF:

John Silber, AIA
IDS Group
License No. C15573

August 20, 2018
Date

APPROVED BY:

James Houlihan, P.E.
City Engineer
R.C.E. No. 51568

9/11/18
Date

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END OF SECTION

NOTICE INVITING BIDS
CITY OF IRVINE, CALIFORNIA

BID NO. 19-1459

NOTICE IS HEREBY GIVEN that sealed bids with online bid price submittal will be received by the Purchasing Agent of the City of Irvine, California, for furnishing all labor services, materials, tools, equipment, supplies, transportation, utilities and all other items and facilities necessary therefore, as provided in the contract documents for **Sweet Shade Community Center Tenant Improvements** together with appurtenances thereto, in strict accordance with the specifications on file at the Department of Public Works, 6427 Oak Canyon, Bldg. 1, Irvine, California 92618-5202.

DATE OF OPENING BIDS: Bid prices for each line item of the Schedule of Work must be entered and all other required documents for the bid proposal packet (pages 18, 22 through 35) must be uploaded to the BidsOnline system in accordance with the instructions beginning on page 00 41 00-3 no later than XX:XX:XX a.m. on Month Date, 2018 at which time bids will be publicly read aloud at 1 Civic Center Plaza, Irvine, California, 92606-5207. No late bids will be accepted. No other method of bid submittal will be accepted.

LOCATION OF THE WORK: The work to be performed hereunder is located in the City of Irvine, County of Orange, at **Sweet Shade Community Center, 15 Sweet Shade, Irvine, CA 92606.**

MANDATORY PRE-BID MEETING: There will be a **mandatory** pre-bid meeting on **Day of Week, Month Day, 20XX, at XX:XX p.m. at the Sweet Shade Community Center, 15 Sweet Shade, Irvine, CA 92606.** Failure to attend will result in your bid being declared non-responsive.

DESCRIPTION OF WORK: The work to be performed shall include, but not be limited to:

Interior partitions, ceilings, flooring, doors, windows, millwork, HVAC, electrical and other items not mentioned here, but are required by the plans and Special Provisions. The Engineer's construction cost estimate for the project is above $260,000.

LICENSE REQUIREMENT: **Prime Contractor must possess a valid Class B license.** At the time of submitting the bid, the Bidder shall be licensed as a contractor in accordance with the provisions of California Business and Professions Code Chapter 9, Division 3.

DEBARRED CONTRACTORS: The City of Irvine Municipal Code Section 2-12-101 *et seq.* sets forth procedures to debar Contractors from bidding or performing work on City of Irvine contracts at any tier, whether prime, subcontractor, etc. Accordingly, certain Contractors have been debarred and are listed on the City's website at www.cityofirvine.org/purchasing. Click on the link which states: "For a list of Debarred Contractors, please click here."

COMPLETION OF WORK AND LIQUIDATED DAMAGES: All work shall be completed in a total of **Ninety (90) Working Days** from the date specified in the Notice to Proceed. Liquidated damages shall be **One Thousand Dollars ($1,000)** per Calendar Day, for each and every Calendar Days delay in finishing the work in excess of the number of Working Days prescribed above.

AWARD OF CONTRACT: The award of the Contract, if it is awarded, will be to the lowest responsive and responsible Bidder whose bid complies with all the requirements prescribed. The City reserves the right, after opening bids, to reject any or all bids, to waive any informality in a bid, to make awards in the interest of the City, and to reject all other bids.

PROPOSAL GUARANTEE AND BONDS: Each bid shall be accompanied by a scanned copy of a certified or cashier's check or corporate surety bond issued by a surety company, admitted to do

business in the State of California, on the form furnished by the City as guarantee that bidder will, if an award is made to him in accordance with the terms of his bid, promptly secure Workers' Compensation insurance, and liability insurance, execute a contract in the required form, and furnish satisfactory bonds for the faithful performance of the contract ("Performance Bond") and for the payment of claims of materialmen and laborers thereunder ("Payment Bond"). Said check or bidder's bond shall be in an amount of not less than ten percent (10%) of the amount of the bid. **Bidders with the apparent three lowest responsive bids shall deliver an original hard copy of the certified check, cashier's check or surety bond to the Receptionist for the Purchasing Agent at 1 Civic Center Plaza, Irvine, CA, 92606 within two business days of the bid opening date. Failure to submit the original check or bidder's bond shall result in the bid being declared non-responsive.** The Performance and Payment Bonds shall be not less than one hundred percent (100%) of the total amount of the bid price named in the contract. Only bonds issued by companies admitted to do business in the State of California will be accepted in accordance with the Code of Civil Procedure Section 995.311. Failure to submit acceptable Payment and Performance Bonds as required shall result in a rejection of the bid and a forfeiture of the proposal guarantee.

PREVAILING RATES OF WAGES: **Prevailing wage requirements apply to public works projects with a value exceeding $1,000.00. The definition of "public works" is found at Labor Code Section 1720, *et seq.***

The CITY is subject to the provisions of law relating to public contracts in the State of California. It is agreed that all provisions of law applicable to public contracts are a part of this Agreement to the same extent as though set forth herein, and will be complied with by CONTRACTOR. CONTRACTOR shall abide by all applicable Sections of the California Labor Codes including Sections 1770 -1781, *et seq*. In accordance with the provisions of Section 1773 of the California Labor Code, the general prevailing rates of per diem wages and holiday and overtime work in the locality in which the Work is to be performed shall be in accordance with the rates posted on the Department of Industrial Relations website, found at http://www.dir.ca.gov/dirdatabases.html. The CONTRACTOR, and any subcontractor under him, shall pay not less than the specified prevailing rates of wages to all workers employed in the execution of this Agreement.

The CITY reminds all contractors and subcontractors of the adoption of **SB 854** and encourages them to understand and comply with the requirements as set forth on the Department of Industrial Relations (DIR) website at http://www.dir.ca.gov/Public-Works/PublicWorks.html. All contractors and subcontractors who plan to bid on a public works project when the project is for construction, alteration, demolition, installation, or repair with a value exceeding $25,000.00 must first be registered and pay an annual fee with the DIR. Additionally, all contractors and subcontractors who plan to bid on public works projects involving maintenance work with a value exceeding $15,000.00 must first be registered and pay an annual fee with the DIR. The CITY requires all contractors and subcontractors to be registered with the DIR prior to submitting a bid meeting these parameters. Subject to the exceptions set forth in Labor Code Section 1725.5, bids from contractors that are not currently registered will be deemed nonresponsive. Further, the CITY will not award a contract to and no contractor or subcontractor will be allowed to work on a CITY public works project meeting these parameters unless they are registered with the DIR pursuant to Labor Code Section 1725.5. Please visit the DIR website for further information.

A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

LABOR REGULATIONS: The Contractor shall comply with all applicable requirements of the California Labor Code and the City of Irvine Municipal Code.

PLANS AND SPECIFICATIONS: A full set of bid documents consisting of Notice Inviting Bids, Proposal, Contract, Special Provisions and Contract Plans are available for inspection without charge at the Department of Public Works, Project Management Division, City of Irvine Operations Support Facility, 6427 Oak Canyon, Building 1, Irvine, California 92618-5202.

To obtain a copy of the bid documents, please visit the City of Irvine's website at www.cityofirvine.org/purchasing. Click on the "Supplier Registration and Bid Opportunities" link, and review the information about our online system. Next, click on the "BidsOnline" link. If you are not currently registered with the City of Irvine, please click on the "New Vendor Registration" button and then complete the electronic supplier registration process, including selecting Category Code(s) describing the goods and/or services you provide, as well as entering your Contractors State License information. After registering your firm, click on the "Bid Opportunities" button to view and download the Bid Documents. Interested firms must be registered on the City's website and download the Bid Documents in order to submit a bid. Firms must also check the website periodically for addenda information as failure to download any and all addenda will result in bid disqualification.

SECURITY FOR COMPLETION OF WORK: The Contract Documents establish a provision for monthly progress payments based upon the percentage of work completed as determined by the Engineer. The City will retain a portion of each progress payment as security for completion of the balance of the work. At the request and expense of the successful bidder, the City will pay the amount so retained upon compliance with the requirements of California Public Contract Code § 22300 and the provisions of the Contract Documents, Special Provisions Subsection 9-3.2.2 pertaining to "Substitution of Securities."

PROJECT ADMINISTRATION: All questions relative to this project prior to opening bids shall be prepared in writing and transmitted to the attention of Chris Brown, Senior Project Manager, by email to chbrown@cityofirvine.org with a copy to Mr. Brian E. Brown, Senior Buyer, bbrown@cityofirvine.org. No inquiries will be accepted later than five (5) business days prior to the bid opening date as this would not allow time to respond to all plan holders. No phone inquiries will be accepted.

CITY OF IRVINE

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Publication Date:	xx xx, 2018
	xx xx, 2018

END OF SECTION

SECTION 00 21 13 - INSTRUCTION TO BIDDERS, PROPOSAL REQUIREMENTS AND CONDITIONS

1.01 CONTRACT DOCUMENTS: The Contract Documents shall consist of:

A. Permits and Agreements

B. Contract

C. Addenda

D. Instructions to Bidders, Proposal Requirements and Conditions

E. Special Provisions

F. Contract Plans

G. Reference Specifications

H. City of Irvine Park/Public Facility Standards dated May 20, 2015,

all of which are on file at the City of Irvine in the Public Works Department, Project Management Division, Operations Support Facility, 6427 Oak Canyon, Bldg. 1, Irvine, California, and are hereby referred to and made a part hereof.

1.02 BID PROPOSALS: To be considered, bids shall be made in accordance with the following instructions:

A. For the convenience of bidders, the “SCHEDULE OF WORK” has been posted on the City’s BidsOnline system. Bidders must enter their unit price information online in accordance with the INSTRUCTIONS FOR ENTERING ELECTRONIC BIDS included herein. Unit prices must be entered online and then the extended prices and total bid price will be automatically calculated.

B. Bids shall be submitted only on bid items stated in the Bid Documents; bids on other bases will not be considered. Bids that are not submitted on the prescribed forms and in accordance with the INSTRUCTIONS FOR ENTERING ELECTRONIC BIDS may be rejected.

C. Unless called for, additive bids will not be considered.

D. Pursuant to the provisions of Public Contract Code § 4101 to 4108, inclusive, every Bidder shall set forth in its bid:

1. The Bidder shall list the name, license number and location of the place of business of each subcontractor performing work in an amount in excess of one-half of one percent (1/2%) of the prime contractor's total bid.

2. The bid item numbers and the percentage of the bid item subcontracted.

E. In the event additive bids are called for and the Bidder intends to use different or additional subcontractors on the additive(s), the Bidder shall fill out additional forms of the list of subcontractors and shall identify such forms with relation to whether they apply to the base or additive bids.

F. If the Bidder fails to specify a subcontractor for any portion of the work to be performed under the contract in excess of one-half of one percent (1/2%) of the Bidder's total bid, the Bidder agrees to perform that portion of work himself. The successful Bidder shall not, without the consent of the City, either:

1. Substitute any person, firm or corporation as subcontractor in place of the subcontractor designated in the original bid, or

2. Permit any subcontract to be assigned or transferred or allow the work to be performed by anyone other than the original subcontractor listed in the bid.

G. If required in the Notice Inviting Bids, bids shall be accompanied by a certified or cashier's check or an acceptable corporate bid bond on the form furnished by the City for an amount not less than ten percent (10%) of the bid, made payable to the order of the City of Irvine. The check or bid bond shall be a guarantee that the Bidder will enter into a contract and provide all required insurance and bonds if awarded the work; and in case of refusal or failure to enter into the contract, the check or bid bond shall be forfeited. The City will return Bidder's check if the project is not awarded to Bidder.

   Only bonds issued by companies admitted to do business in the State of California will be accepted, in accordance with Code of Civil Procedure § 995.311 and Insurance Code § 12090.

H. Before submitting a bid, bidders shall carefully examine the work site, the Contract Documents and the form of Contract and shall fully inform themselves about all existing conditions and limitations. Bidders shall include in their bids a sum to cover the cost of all work included in the Contract.

I. Bid prices must be entered and the bid proposal packet must be uploaded to the BidsOnline System on or before the day and hour set for the bid opening in the Notice Inviting Bids. No other method of bid submittal will be accepted. Bidders with the three apparent lowest responsive bids shall deliver an original hard copy of the certified check, cashier's check or surety bond to the Receptionist for the Purchasing Agent at 1 Civic Center Plaza, Irvine, CA, 92606 within two business days of the bid opening date.

J. A bid may be considered non-responsive if it does not comply with the requirements set forth in these bid documents. A responsive bid is one that complies with the solicitation in all acceptability and material respects and contains no material defects.

1.03 WITHDRAWAL OF BIDS:

Bids may be withdrawn at any time before the bid deadline, by going back into the BidsOnline system and selecting "Withdraw."

1.04 INTERPRETATION OF DRAWINGS AND DOCUMENTS; REQUESTS FOR CLARIFICATION:

If any person contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the plans and specifications, or other proposed Contract Documents, or finds discrepancies in, or omissions from, the drawings or specifications, he shall submit to the Purchasing Agent a written request for all interpretations or corrections thereof via email to the project manager and purchasing staff prior to the deadline for submitting questions, as set forth in the Notice Inviting Bids section herein. Any clarification or correction of the proposed documents will be made only by Addendum duly issued, with notice provided to all firms who downloaded the bid documents from the City's website. The City is not responsible for any other explanations or interpretations of the proposed documents.

1.05 ADDENDA TO THE CONTRACT DOCUMENTS:

A. Any addenda issued during the time of bidding, or forming a part of the Contract Documents after the Bidder has downloaded the bid documents from the City's website, shall be taken into account in the bid and shall be made a part of the Contract.

B. Addenda may be issued by the City of Irvine for any reason, including but not limited to, clarifying or correcting the Notice Inviting Bids, Special Provisions, Plans, or Bid.

C. Bidders will be notified of such Addenda during the period of advertising, either by email or posting on the City's website, provided however, each Bidder shall be solely responsible for obtaining any such Addenda.

D. The Bidder shall acknowledge the receipt of Addenda on the City's BidsOnline system.

1.06 BIDDER RESPONSIVENESS:

Failure of the Bidder to provide requested information in a complete and accurate manner may be considered non-responsive resulting in rejection of the bid. The use of "N/A" or "n/a" in response to any request for information without an explanation as to why that abbreviation is being used may render the bid non-responsive.

1.07 BIDDER RESPONSIBILITY:

Bidders are hereby notified that, in accordance with the City of Irvine Municipal Code § 2-12, the City may make a determination that the Contractor is non-responsible if the hearing officer finds evidentiary support that the Bidder has committed any of the following: (1) violated a term of a contract, present or past, with the City or other entity; (2) committed an act or omission which negatively reflects on the Contractor's quality, fitness, or capacity to perform a contract with the City or any other entity or engaged in a pattern or practice which negatively reflects on the same; (3) committed an act or omission which evidences a lack of business integrity or business honesty; (4) made or submitted a false claim against the City or any other entity; or (5) received a fine or citation for performing work in an unsafe manner; or (6) violated a condition, rule, regulation, permit, or standard applicable to a contract with the City or any other entity. In arriving at his or her determination, the hearing officer may consider Bidder's past conduct on City projects or on any other public or private projects upon which Bidder performed work.

1.08 BIDDER DEBARMENT:

Bidders are hereby notified that, in accordance with the City of Irvine Municipal Code § 2-12, the City may make a determination that the Bidder shall be debarred if the hearing officer finds evidentiary support that the Bidder has committed any of the following: (1) violated a term of a contract, present or past, with the City or other entity; (2) committed an act or omission which negatively reflects on the Contractor's quality, fitness, or capacity to perform a contract with the City or any entity or engaged in a pattern or practice which negatively reflects on the same; (3) committed an act or omission which evidences a lack of business integrity or business honesty; (4) made or submitted a false claim against the City or any other entity; (5) received a fine or citation for performing work in an unsafe manner; or (6) violated a condition, rule, regulation, permit, or standard applicable to a contract with the City or any other entity. In arriving at his or her determination, the hearing officer may consider past conduct of the Contractor on City projects or on any other public or private projects which Contractor performed work.

1.09 OPENING BIDS:

Bids will be publicly opened and read at the time and place set in the Notice Inviting Bids.

1.10 BID PROTEST PROCEDURES:

A. BASIS FOR PROTEST:

It is the policy of the City to ensure that free and open competition takes place in all procurement activities. If, in the course of a procurement action, an interested party has reason to believe that these conditions do not exist, the interested party may file a protest in accordance with the provisions of these procedures with the City of Irvine Purchasing Agent requesting a review of the claim and a timely resolution of the issue. Any bidder on a project for which it submitted a timely bid may protest the contract

award for that project; however, subcontractors, suppliers or other third parties may not protest contract awards. Moreover, complaints about alleged ambiguity of the bid documents and/or estimates are not appropriate subject matters for bid protests.

B. BID PROTEST CONTENTS:

The bid protest shall be submitted in writing via email to the attention of the Purchasing Agent. The written protest shall include:

1. The solicitation number and project description.
2. The name, address, phone number, and email address of the protesting party.
3. A detailed statement of all the legal and factual grounds for the protest and all relevant, supporting documentation (including all written documentation). The grounds for protest must be fully supported.
4. Statement of the form of relief requested from the City.
5. Signature of an authorized representative of the protesting party.

C. DEADLINE TO SUBMIT BID PROTESTS:

Bid protests must be filed within five (5) business days after the deadline for receiving bids.

D. WHERE TO FILE:

All protests are to be directed to the City of Irvine Purchasing Agent. Protests must be submitted in writing via email to: purchasing@cityofirvine.org. A copy of the email must also be sent to the project manager whose email address is set forth in the bid documents. (A document is considered filed on a particular calendar day when it is received via email by the City of Irvine Purchasing Agent by 5:00 p.m., Pacific Standard Time, on that calendar day.) Although not required, in addition to submitting a protest via email, an original protest letter may be sent via United States Postal Service to: Attn: Purchasing Agent, City of Irvine, P.O. Box 19575, Irvine, CA 92623-9575.

E. BID PROTEST REVIEW:

Upon receipt, the Purchasing Agent shall consider the protest and may give notice of the protest and its basis to other persons including bidders involved in or affected by the protest. A protest shall be dismissed for failure to comply with any of the requirements set forth in the “Bid Protest Contents” section above. The Purchasing Agent shall review all material submitted with the protest. No additional material will be accepted for consideration from the protesting party unless specifically requested by the Purchasing Agent. If additional material is requested, it must be submitted by the requested date. The Purchasing Agent shall respond to the protesting party via email within ten (10) business days after receipt of the protest. Final determinations shall be binding, except as otherwise provided below.

F. RECONSIDERATION OF PROTEST DECISION:

A protesting party may request the Purchasing Agent’s reconsideration of a decision prior to contract award only if one or both of the following conditions are met:

1. New information becomes available that was not previously known, or could not have been reasonably known, at the time of the original protest; and/or
2. The Purchasing Agent’s decision contains an error of law.

Any request for reconsideration of a protest decision must be submitted in writing via email to the Purchasing Agent within three (3) business days from the date of issuance of the initial decision. The request must include a detailed explanation of the basis for

reconsideration as set forth above. The Purchasing Agent shall respond to the request for reconsideration within seven (7) business days from receipt of the request.

G. CONTRACT AWARD:

At its discretion, the City may delay the execution of any proposed agreement pending the resolution of a protest unless one or both of the following conditions are present:

1. The project or service being procured is urgently required; and/or
2. Failure to make prompt award will otherwise cause undue harm to the City.

H. REMEDIES:

There shall be no limitation on remedies selected by the City. Nothing contained herein shall be considered to either act as a limitation on the City's choice of remedies or confer any right upon any interested party to a remedy. In determining the appropriate remedy, the City shall consider all the circumstances surrounding the solicitation, the contract selection, and/or the contract award, including, but not limited to: the seriousness of any deficiency found to exist in the contracting process; the effect of the action of the competitive process; any urgency surrounding the contract requirement; and the effect that implementing the remedy will have on the City's overall ability to accomplish its mission. If the City determines that the award or proposed award was not made in accordance with the applicable City statutes, regulations, policies, and procedures, the City may, in its sole discretion, grant any of the following or any other remedy it deems appropriate: If pre-award, reject all bids and issue a new solicitation, make a new contractor selection or award a contract consistent with applicable statutes, regulations, policies, and procedures; or if post-award, refrain from extending the term of the contract or awarding task orders under an existing task order agreement; or at its sole discretion, take no further action.

1.11 AWARD OR REJECTION OF BIDS AND EXECUTION OF CONTRACT:

A. The award of the Contract will be as of the date specified in the Notice of Award issued by the City. The award of the Contract shall not constitute a binding obligation on City until the Contract has been lawfully executed by all parties and the Contractor has submitted all required insurance certificates and bonds to the City.

B. The Contractor shall not commence work in advance of the execution of the Contract, the delivery of the bonds and insurance certificates, as specified above and purchase order issuance.

C. The award of the Contract, if it is awarded, will be to the responsive and responsible Bidder who submitted the lowest Bid complying with these Proposal Requirements and Conditions and with the Notice Inviting Bids. The lowest bid shall be the lowest bid price on the base contract without consideration of the Additive Bid Items. Such award, if made, will be made within ninety (90) Calendar Days after the opening of the proposals. The ninety (90) Calendar Days period shall be subject to extension for such further period as may be agreed upon in writing between the City and the Bidder(s) concerned. All bids will be compiled on the basis of the estimated quantities of work to be done as shown in SECTION 00 41 00 - BIDDER PROPOSAL. However until an award is made, the City of Irvine reserves the right to reject any and all bids or to waive any informality in bids received, if doing so is deemed to best serve the interest of the City.

1.12 CONTRACT AND BONDS:

A. The Contract, which the successful Bidder, as Contractor, will be required to execute, is included in the SECTION 00 50 00 – CONSTRUCTION CONTRACT and should be carefully examined by the Bidder.

B. The successful Bidder, simultaneously with his execution of the Contract will be required to furnish a Payment Bond and a Performance Bond. Said bonds shall be in the form of the two (2) sample bonds included in SECTION 00 50 01 - PERFORMANCE BOND and SECTION 00 50 02 - PAYMENT BOND and based upon conditions specified in Article 1-4 of SECTION 00 72 00 - GENERAL CONDITIONS.

C. Only bonds issued by companies admitted to do business in the State of California will be accepted, in accordance with Code of Civil Procedure § 995.311 and Insurance Code § 12090. Failure to submit acceptable Payment and Performance Bonds as required shall result in rejection of bid and forfeiture of the proposal guarantee.

D. All alterations, extensions of time, extra and additional work, and other changes authorized by the Contract Documents will be made without securing the consent of the surety or sureties on the Contract bonds.

E. The Contract shall be signed by the successful Bidder, and delivered to the City together with the Contract bonds within ten (10) days of the date specified in the Notice of Award issued by the City, not including Saturdays, Sundays and legal holidays. The Contractor shall submit insurance certificates electronically in accordance with Article 6-3 of SECTION 00 72 00 - GENERAL CONDITIONS. The executed Contract, together with the required bonds, will be filed with the Clerk of the City of Irvine.

F. Failure of the lowest responsive and responsible Bidder to execute the Contract and file acceptable insurance certificates and bonds as provided herein within ten (10) days of award of the Contract, not including Saturdays, Sundays and legal holidays, shall be just cause for the forfeiture of the bid bond. The successful Bidder may file with the City a written notice, signed by the Bidder or his authorized representative, specifying that the Bidder will refuse to execute the Contract if presented to him. The filing of such notice shall have the same force and effect as the failure of the Bidder to execute the Contract and furnish acceptable certificates of insurance and bonds within the time herein before prescribed.

1.13 SPECIAL NOTICE:

Bidders are required to inform themselves fully of the conditions relating to construction and labor under which the Work will be performed, and the Contractor must employ, so far as possible, such methods and means in the carrying out of this work as will not cause any interruption or interference with any other contractor.

1.14 BIDDERS INTERESTED IN MORE THAN ONE BID:

No person, firm or corporation shall be allowed to make or file or be interested in more than one bid as prime contractor for the same work.

1.15 BIDS TO BE LEFT ON DEPOSIT:

No Bidder may withdraw its bid for a period of ninety (90) Calendar Days after the time set for opening thereof. However, the City will return all certified checks within fifteen (15) days, not including Saturdays, Sundays and legal holidays, after the award of the Contract or rejection of the bids, as the case may be, to respective Bidders whose bids are not accepted.

1.16 NON-COLLUSION DECLARATION:

All Bidders shall submit with their bids an executed non-collusion declaration on the form provided in the bidding documents. Failure to provide completed form shall result in the bid being deemed non-responsive.

The U.S. Department of Transportation (DOT) provides a toll-free hotline to report bid rigging activities. Use the hotline to report bid rigging, bidder collusion, and other fraudulent activities. The hotline number is 800-424-9071. The service is available 24 hours 7 days a week and is confidential and anonymous. The hotline is part of the DOT's effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General.

1.17 SUBSTITUTIONS:

Where the Specifications or drawings specify any material, product, thing, or service by one or more brand names, whether or not "or equal" is added, and a Bidder wishes to propose the use of another item as being equal, he shall request approval therefor as set forth in SECTION 00 72 00 - GENERAL CONDITIONS.

1.18 REPORTING SUSPECTED IMPROPRIETY, GROSS WASTE, FRAUD AND OTHER ACTS:

Any City and/or Great Park official, employee, and/or contractor who suspects any type of impropriety relating to purchasing or contracting activities, or gross waste, fraud, or abuse of City and/or Great Park funds or resources, a gross abuse of authority, a specified and substantial danger to public health or safety due to any act or omission of any City and/or Great Park official, employee, or contractor, or the use of a City and/or Great Park office or position or of City and/or Great Park resources for personal gain, should report the act by calling the City's Integrity Line at 866-428-1509. All such reports shall remain anonymous if desired by the reporting party. Suspected fraudulent activities include bid rigging, product substitution, theft, overcharging, false certifications and representations, and the like. Any allegations of bribery, kickbacks, gratuities, and conflicts of interest involving City employees should also be reported.

1.19 ASSIGNMENT OF CONTRACT:

No assignment by the Contractor of any Contract to be entered into hereunder or of any part thereof, or of funds to be received thereunder by the Contractor, will be recognized by the City unless such assignment has had the prior written approval of the City and the surety has been given due notice of such assignment in writing.

1.20 OTHER REQUIREMENTS:

A. Before entering into a Contract, the Bidder to whom the Contract has been awarded shall satisfy all insurance requirements per SECTION 00 72 00 - GENERAL CONDITIONS and such insurance shall be maintained in full force and effect at its own expense during the life of this Contract.

B. Upon request, the successful Bidder shall furnish to the City a statement of its financial condition and previous construction experience or such other evidence of his qualifications.

1.21 LABOR CODE:

<u>PUBLIC WORKS CONTRACTOR REGISTRATION PROGRAM</u>

A. All contractors and subcontractors who plan to bid on a public works project (the definition of "public works" is found at Labor Code Section 1720, *et seq.*) when the project is for construction, alteration, demolition, installation, or repair work with a value exceeding $25,000.00 must first be registered and pay an annual fee with the DIR. Additionally, all contractors and subcontractors who plan to bid on public works projects involving

maintenance work with a value exceeding $15,000.00 must first be registered and pay an annual fee with the DIR. The CITY requires all contractors and subcontractors to be registered with the DIR prior to submitting a bid meeting these parameters. By submitting a bid for City of Irvine Public Works project, the contractor acknowledges the above requirements and agrees to maintain a valid Department of Industrial Relations (DIR) Public Works Contractor registration during the term of this project.

1. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

2. Pursuant to Labor Code Section 1771.4, all bidders are hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

B. **In addition to the requirement** for submittal of certified payroll records **to the City**, contractors and subcontractors shall furnish electronic certified payroll records to the Labor Commissioner **(State of California, Division of Labor Standards Enforcement)**.

C. Contractors and subcontractors shall be responsible for complying and staying current with all DIR requirements and regulations. More information can be found at http://www.dir.ca.gov/Public-Works/PublicWorks.html.

D. Attention is directed to Labor Code § 1735 of which reads as follows:

> No discrimination shall be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, or sex of such persons, except as provided in the Government Code §12940, and every contractor for public works violating this section is subject to all the penalties imposed for a violation of this chapter.

E. The Contractor shall abide by the provisions of the California Labor Code § 1770-1781, *et seq*. In accordance with the provisions of the California Labor Code § 1773, the general prevailing rates of per diem wages and holiday and overtime work in the locality in which the work is to be performed has been obtained from the Director of the Department of Industrial Relations, a copy of which is on file in the office of the City Clerk of the City of Irvine and will be made available to any interested party upon request. The Contractor shall post a copy of the prevailing rate of per diem wages at the job site. The Contractor, and any subcontractor under him, shall pay not less than the specified prevailing rates of wages to all workers employed in the execution of the contract.

F. Failure to comply with the subject sections will subject the Contractor to penalty and forfeiture provisions of the Labor Code § 1775.

G. In accordance with of the Labor Code § 1773.1, the Contractor must make travel and subsistence payments to each worker employed in the execution of the Contract.

H. The City will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the Contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his bid, and will not under any circumstances be considered as the basis of a claim against the City on the Contract.

I. The Contractor shall familiarize itself with the provisions of the Labor Code § 1777.5 regarding employment of apprentices, and shall be responsible for compliance therewith, including compliance by his subcontractors.

J. The Contractor and subcontractors shall comply with Labor Code § 1777.6 which stipulates that it shall be unlawful to refuse to accept otherwise qualified employees as registered apprentices solely on the grounds of race, religious creed, color, national origin, ancestry, sex, or age except as provided in Labor Code § 3077, of such employee.

K. The Contractor and subcontractors shall comply with Labor Code § 1810 and § 1811 which stipulates that eight hours labor constitutes a legal day's work, and § 1812 which stipulates that the Contractor and subcontractors shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by him in connection with the work performed under the terms of the Contract. Failure to comply with these sections of the Labor Code will subject the Contractor to penalty and forfeiture provisions of the Labor Code § 1813.

L. Failure to comply with the subject sections will subject the Contractor to penalty and forfeiture provisions of the Labor Code § 1775.

M. In accordance with of the Labor Code § 1773.1, the Contractor must make travel and subsistence payments to each worker employed in the execution of the Contract.

N. The City will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the Contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his bid, and will not under any circumstances be considered as the basis of a claim against the City on the Contract.

O. The Contractor shall familiarize itself with the provisions of the Labor Code § 1777.5 regarding employment of apprentices, and shall be responsible for compliance therewith, including compliance by his subcontractors.

P. The Contractor and subcontractors shall comply with Labor Code § 1777.6 which stipulates that it shall be unlawful to refuse to accept otherwise qualified employees as registered apprentices solely on the grounds of race, religious creed, color, national origin, ancestry, sex, or age except as provided in Labor Code § 3077, of such employee.

Q. The Contractor and subcontractors shall comply with Labor Code § 1810 and § 1811 which stipulates that eight hours labor constitutes a legal day's work, and § 1812 which stipulates that the Contractor and subcontractors shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by him in connection with the work performed under the terms of the Contract. Failure to comply with these sections of the Labor Code will subject the Contractor to penalty and forfeiture provisions of the Labor Code § 1813.

1.22 RESERVATION OF RIGHTS:

A. The City reserves the right to:

1. Disqualify any Bidder in accordance with the instructions herein.
2. Reject any bids, at its discretion, including bids found to be conditional or incomplete, contain irregularities contain any interlineations or alterations, or found to be not responsive to this Invitation for Bids (IFB).
3. Investigate the qualifications of any Bidder under consideration.

4. Require confirmation or clarification of information furnished by the Bidder.
5. Require additional evidence of Bidder's ability to perform the Work described in these bid documents.
6. Contact the submitted references to confirm information provided in the bid.
7. Postpone or cancel the entire IFB or a portion thereof.
8. Postpone the bid opening or award for its own convenience.
9. Award a Contract in part or in combination of items.
10. Issue subsequent IFB.
11. Seek the assistance of outside technical experts to review the bids.
12. Disqualify a bid upon evidence of collusion, with intent to defraud, or other illegal practices on the part of the Bidder.
13. Waive any errors or informalities in any bid to the extent permitted by law.
14. Require bidder to provide proof as to the equality, substitutability, and compatibility of any items proposed as alternates or equals.
15. Determine, at the City's sole discretion, the equality, substitutability, and compatibility of any items proposed as alternates or equals.
16. Exercise any other rights under the City's charter or municipal code.

The City has no obligation to consider any bid unless it is responsive to this IFB and conforming in all respects to the Form of Contract. This IFB does not commit the City to enter into a Contract.

END OF SECTION

SECTION 00 25 13 – MANDATORY PRE-BID MEETING

PART 1 GENERAL

A. Bidder must sign-in and attend a pre-bid meeting to be declared eligible to bid. Bids received from firms who fail to send a representative to sign-in and attend the mandatory pre-bid meeting shall be considered non-responsive and ineligible for contract award.
B. Bidder shall visit the Project site(s) prior to the bid date in order to determine the conditions normally encountered and generally recognized as inherent in or to the Work; take measurements, perform and./or cause to be performed all quantitative tests; observe and gather all information necessary in order to determine a comprehensive bid amount.
C. Additional visits to the Project site(s) shall be coordinated through the Project Manager.

1.02 PRE-BID MEETING

Facility:	Sweet Shade Community Center
Street:	15 Sweet Shade
City:	Irvine, CA 92606
Time:	10:00 a.m.
Day:	Day
Date:	Month XX, 2018

A. Bidder failure to attend this pre-bid meeting will result in CITY not accepting the bid.
B. Sign-in sheets will be provided for issuing any changes to Bidding Documents. Bidders must print their names legibly, sign their names, submit business cards for identification purposes, and comply with all requirements of the sign-in sheets. Bidders will not be allowed to sign-in for more than one (1) company and/or entity.
C. Bidder is responsible for ensuring that it has complete Bidding Documents, including all Addenda issued by City, prior to the bid due date.

1.03 NO VERBAL CHANGES

A. Nothing said or discussed before, during, at or after the mandatory pre-bid meeting shall in any way affect bidder's obligation to strictly comply with the Bidding Documents.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION --NOT USED

END OF SECTION

SECTION 00 41 00 - BIDDER'S PROPOSAL
CONSTRUCTION
OF
SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL
CITY HALL
IRVINE, CALIFORNIA

THE UNDERSIGNED, HAVING CAREFULLY EXAMINED ALL OF THE CONTRACT DOCUMENTS; PERMITS ISSUED BY JURISDICTIONAL REGULATORY AGENCIES; CONTRACT; CONTRACT ADDENDA; INSTRUCTIONS TO BIDDERS; PROPOSAL REQUIREMENTS AND CONDITIONS; SPECIFICATIONS; THE PLANS (SHEETS 1_THROUGH 35); REFERENCE SPECIFICATIONS; AND ALL OTHER INFORMATION PROVIDED BY THE CITY FOR THE CONSTRUCTION LISTED ABOVE IN AND FOR THE CITY OF IRVINE, IS FAMILIAR WITH THE CONDITIONS, HAVING PERSONALLY VISITED THE SITE OF THE WORK, AND HEREBY PROPOSES TO FURNISH ALL LABOR, MATERIALS AND EQUIPMENT, AND ALL INCIDENTAL WORK NECESSARY TO DELIVER ALL THE IMPROVEMENTS COMPLETE, IN PLACE AND IN STRICT CONFORMITY WITH THE CONTRACT DOCUMENTS, FOR THE UNIT PRICES NAMED IN THE FOLLOWING SCHEDULE OF WORK AND BID PRICES.

_____
Bidder's Company Name (please print or type)

_____
Signature of Bidder

_____
Print Name

CITY OF IRVINE
SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

SCHEDULE OF WORK

BID ITEM NO.	BID ITEM DESCRIPTION	UNIT	EST. QTY.
1	Mobilization	LS	1
2	Demolition as show on the plans and specifications	LS	1
3	Interior improvements including all partitions, ceilings, flooring, doors, windows and finishes as shown on plans and specifications	LS	1
4	Millwork as shown on plans and specifications	LS	1
5	HVAC as shown on plans and specifications	LS	1
6	Electrical as shown on plans and specifications	LS	1
7	Automatic Door opener at single-leaf door and all related infrastructure for a complete installation as shown on plans and specifications	EA	4
8	Automatic Door openers at double-leaf door and all related infrastructure for a complete installation as shown on plans and specifications	EA	1

NOTE:
The Schedule of Work shown above shall be considered as the complete bidding schedule for all items of work shown or made necessary by the Plans, Specifications or Project Special Provisions. The cost of items of work not shown in the Schedule of Work shall be considered as included in other Bid Items shown in the Schedule of Work and no additional compensation will be allowed.

Bidder's Name: _____

CITY OF IRVINE
SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

INSTRUCTIONS FOR ENTERING ELECTRONIC BIDS

In order to access the BidsOnline system and ensure successful online submission of your bid prices, follow these steps:

1. Go to https://www.planetbids.com/portal/portal.cfm?CompanyID=15927#
2. On the Vendor Portal page, log into the system (lower right hand corner of screen) with your assigned user name and password. (You must be registered in order to download documents and submit a bid.)
3. Click on "Bid Opportunities" and then on the Bid # and Description that you wish to bid on. The selected bid will open to allow you to access all tabs, documents and the pricing sheet.
4. Click on the “Documents & Attachment” tab to be sure you have downloaded all documents that are part of this bid.
   - *If you have not already downloaded all bid documents, you must download them now, in order to submit your bid. The screen will indicate which documents you've already downloaded.*
5. Click on the tab "Addenda & Emails" to be sure you have read and acknowledged all addenda that have been issued for this bid.
   - *The screen will display "yes" or "no" next to each addendum to indicate whether you have viewed and acknowledged it. If you have not previously acknowledged an addendum, do so now by clicking on the addendum to open and read it, then click on the "Acknowledge" button on the lower left hand corner of screen.*
6. To begin entering your bid, click on "Place eBid" on the lower right corner of the screen. The bid "Terms and Conditions" will pop up with a button for you to click "Accept" to acknowledge your agreement to the terms of the bid.
7. Enter the Respondee information on the “Detail” tab.
8. Click the “Attach” button on the “Attachments” tab, browse to your scanned Bid Submittal Documents, and upload all Bid Submittal Documents as a single PDF file.
9. Go to the "Line Items" tab and enter your unit prices on each line. The system will calculate the extended costs and grand total for you.
10. When you have finished entering all pricing and attachments, click on the "Save" button. This saves your bid as a draft for you to review or revise as needed anytime up to the bid submittal deadline. When you are ready to submit your bid, click the "Submit" button. You will receive a confirming message that looks like this:

Bidder’s Name: _____

Note: E-Bids are sealed and cannot be viewed by the City until the closing date and time. As noted in the screen print above, if you need to withdraw your bid, you may do so any time before the bid deadline, by going back into the system and selecting "withdraw".

Please begin entering your bid in sufficient time to complete and submit it prior to the stated deadline. The official closing time for the bid is determined, and controlled, by the electronic clock in the bid management system. Once the deadline is reached, the system will not allow any bids to be submitted, and any in process that are not completed will be rejected. The amount of time required to enter and submit your bid depends on the complexity of the bid and the processing speed of your server and internet connections.

Technical Support
In the event you encounter technical difficulties during the uploading process, please contact the Planet Bids, BidsOnline system team as shown below (M-F from 8 a.m. to 5 p.m.):

support@planetbids.com or call 818-992-1771, ext. 0

Bid prices must be entered and the bid proposal packet must be uploaded to the BidsOnline system no later than the date and time indicated in the Notice Inviting Bids. No late bids will be accepted. No other method of bid submittal will be accepted.
.

Bidder's Name: _____

CITY OF IRVINE
SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

INFORMATION REQUIRED OF BIDDERS

In determining the lowest "responsible" bidder, consideration will be given to the general competency of the bidder in regard to the work covered by the Bid Proposal. To this end, each proposal shall be supported by a statement of the Bidder's experience on this form. **Failure of the Bidder to provide requested information in a complete, accurate and legible manner shall render the bid non-responsive**. Additionally, the City reserves the right to disqualify or refuse to consider a proposal if a Bidder is determined to be non-responsible in accordance with Irvine Municipal Code § 2-12-103 "Determination of Contractor Non-Responsibility."

The Bidder is required to supply the following information. Use additional sheets as necessary.

A. Contact person name:_____ Email:_____

Address: _____

Telephone: (___)_____Fax: (___)_____

B. Type of firm (Individual, Partnership, or Corporation): _____

C. State Contractor's License Number and Classification:_____

D. DIR Registration Number: _____ Expiration Date_____

E. Number of years your firm has operated as a contractor: _____

F. Number of years your firm operated under its present business name: _____

G. List the **names and addresses** of all principals or officers authorized to bind your firm.

Name:	**Address:**

H. List any project(s) your firm has **failed to complete** within the last five years due to a termination of contract. For each project, list the type of project, client's name, contact person, current telephone number, email address, and provide a brief description of the grounds for the termination.

Check appropriate box: None ☐ See list below ☐

Type of Project	**Client Name**	**Contact Person**	**Contact Phone No. and email address**
Description:			

Bidder's Name: _____

CITY OF IRVINE
SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

Type of Project	Client Name	Contact Person	Contact Phone No. and email address
Description:			

Type of Project	Client Name	Contact Person	Contact Phone No. and email address
Description:			

I. List projects of similar nature to the **Sweet Shade Community Center Tenant Improvements** your firm is **currently** constructing. For each project, list the type of project, contract amount, client's name, contact person, current telephone number, email address, and a brief description.

Check appropriate box: None ☐ See list below ☐

Type of Project	Contract Amount	Client Name	Contact Person	Contact Phone No. and email address
Description:				

Type of Project	Contract Amount	Client Name	Contact Person	Contact Phone No. and email address
Description:				

Type of Project	Contract Amount	Client Name	Contact Person	Contact Phone No. and email address
Description:				

J. List projects of a similar nature to the **Sweet Shade Community Center Tenant Improvements** your firm has **completed** within the last five years. For each project, list the type of project, contract amount, date of completion, client's name, contact person, current telephone number, email address, and a

Bidder's Name: _____

brief description.

Check appropriate box: None ☐ See list below ☐

Type of Project	Contract Amount	Date of Completion	Client Name	Contact Person	Contact Phone No. and email address
Description:					

Type of Project	Contract Amount	Date of Completion	Client Name	Contact Person	Contact Phone No. and email address
Description:					

Type of Project	Contract Amount	Date of Completion	Client Name	Contact Person	Contact Phone No. and email address
Description:					

K. List the name of the person(s) **(A MINIMUM OF ONE)** who inspected the site of the proposed work for your firm.

Name:	Date of Inspection:

L. Complete the following in conformance with Labor Code Section 1725.5

Name of Subcontractor	Registered with DIR?	DIR Registration No.
	Yes __ No __	
	Yes __ No __	
	Yes __ No __	
	Yes __ No __	
	Yes __ No __	
	Yes __ No __	
	Yes __ No __	
	Yes __ No __	

Bidder's Name: _____

	Yes __ No __	
	Yes __ No __	
	Yes __ No __	
	Yes __ No __	

M. If requested by the City, the Bidder shall furnish a notarized financial statement, financial data, or other information and references sufficiently comprehensive to permit an appraisal of its current financial condition or ability to perform the work.

Failure to furnish information upon request will render the bid nonresponsive.

All of the above statements regarding Contractor's experience and financial qualifications are submitted in conjunction with the Bid Proposal, as a part thereof, and the truthfulness and accuracy of the information is guaranteed by the Bidder.

Bidder's Name: _____

THE CITY OF IRVINE RESERVES THE RIGHT TO REJECT ALL BIDS

The undersigned understands the contract time limit allotted for the completion of the work required by the Contract is **Ninety (90) Working Days**

The undersigned agrees, if awarded the Contract, to sign the Contract and furnish the necessary insurance certificates and bonds within ten (10) days of the date specified in the Notice of Award of Contract, not including Saturdays, Sundays and legal holidays, and to begin work within ten (10) Working Days from the date specified in the City's Notice to Proceed. Contract time accounting shall begin on the date shown in the Notice to Proceed.

Accompanying this Bid Proposal is **(check appropriate box)**:

☐ **Cashier's Check** ☐ **Certified Check** ☐ **Bid Bond**

Sign Here if Individual:

(Signature) _____

(Print Name) _____

(Address) _____

_____

Affix notary's acknowledgement

Sign Here if Co-Partnership:

Co-Partnership Name of Firm: _____

(Address) _____

_____

Members Signing:

(Signature) _____

(Print Name) _____

(Address) _____

_____

(Signature) _____

(Print Name) _____

(Address) _____

_____

Affix notary's acknowledgement

Bidder's Name: _____

Sign Here if Corporation:

(Name of Corporation) _____

(Address) _____

_____

Officers of Corporation Signing:

(Signature) _____

(Print Name) _____

(Title) _____

And

(Signature) _____

(Print Name) _____

(Title) _____

If executed by other than President and Secretary of the Corporation, attach a certified copy of resolution authorizing signature on behalf of the Corporation.

Affix notary's acknowledgement

Bidder's Name: _____

LIST OF SUBCONTRACTORS

The Bidder shall list each subcontractor performing work in an amount in excess of one-half of one percent (1/2%) of the prime contractor's total bid. Complete columns (1) and (2) and submit with the bid. Complete columns (3) and (4) and submit with the bid or hand-deliver to the Receptionist for the Purchasing Agent at the reception desk located on the first floor of the Civic Center building at the City of Irvine, located at One Civic Center Plaza, Irvine, California 92606-5207 within 24 hours after the bid opening. Failure to provide complete information in columns (1) through (4) within the time specified shall render the bid non-responsive.

Subcontractors listed must not be debarred from performing the designated work.

BUSINESS NAME and LOCATION (1)	CONTRACTOR LICENSE NUMBER (2)	BID ITEM NUMBERS (3)	PERCENTAGE OF BID ITEM SUBCONTRACTED AND PORTION OF WORK TO BE PERFORMED BY SUBCONTRACTOR (4)*

Information must be typed or clearly printed.

*** If you are subcontracting a whole bid item, insert one hundred percent (100%); if less than one hundred percent (100%), insert actual percentage.**

Bidder's Name: _____

NON-COLLUSION DECLARATION-CONTRACTOR
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID
CITY OF IRVINE BID NO. 19-1459

The undersigned declares:

I am the _____ [title] of _____ [company name], the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

_____
Signature

_____
Print Name

Bidder's Name: _____

FORM OF BID BOND

SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

(10% of the Proposal Amount)

KNOW ALL PERSONS BY THESE PRESENTS that we _____ _____ as Principal, and _____ as Surety, are held and firmly bound unto City of Irvine, hereinafter called the City in the sum of _____ _____ Dollars ($_____), for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

The conditions of this obligation are such that whereas the Principal submitted to the City a certain Bid Proposal, attached hereto and hereby made a part hereof, to enter into a contract in writing for the **Sweet Shade Community Center Tenant Improvements, CIP 361803** and will furnish all required certificates of insurance and bonds as required by the Contract.

NOW THEREFORE, if said Bid Proposal shall be rejected; or in the alternate, if said Bid Proposal shall be accepted, and the Principal shall execute and deliver a contract in the prescribed Form of Contract, shall deliver certificates evidencing that the required insurance is in effect and shall execute and deliver Performance and Payment Bonds in the forms prescribed, and shall in all other respects perform the Contract created by the acceptance of said Bid Proposal, then this obligation shall be void; otherwise this obligation shall remain in force and effect, it being expressly understood and agreed that the liability of the Surety for any and all default of the Principal hereunder shall be the amount of this obligation as herein stated. In the event suit is brought upon this bond by City and judgment is recovered, Surety shall pay all costs incurred by City in said suit, including a reasonable attorney's fee to be fixed by the court.

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

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument this ____ day of _____, 20____, the name of each party being hereto written below and these presents duly signed by each party's undersigned representative, pursuant to authority of its governing body. This bond shall be authenticated by way of notarized acknowledgment, including a copy of the power of attorney, for the Surety.

This space intentionally left blank

ATTEST:

(Principal) _____

Bidder's Name: _____

(Address) _____

_____

(By) _____

(Title) _____

ATTEST:

(Surety) _____

(Address) _____

_____

(By) _____

(Title) _____

Bidder's Name: _____

FALSE CLAIMS

Bidder shall complete the **False Claims Act Certification** below or in the alternative, provide the information requested under **False Claims Act Violations** below. **Failure to certify or provide the requested information shall render the bid non-responsive.**

"False Claims Act" as used herein is defined as either or both the Federal False Claims Act, 31 U.S.C. § 3729, *et seq*., and the California False Claims Act, Government Code § 12650, et seq.

FALSE CLAIMS ACT CERTIFICATION

I _____ hereby certify that neither
(Print name)

_____
(Contractor name)

nor_____
(Name of qualifying person licensed by Contractors State License Board)

has been determined by a court or tribunal of competent jurisdiction to have violated the False Claims Act as defined above.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this _____ day of _____ at _____
(Month and year) **(City and State)**

By _____
(Signature of owner, officer, manager or licensee responsible for submission of Bid Proposal)

FALSE CLAIMS ACT VIOLATIONS

With regard to any determinations by a tribunal or court of competent jurisdiction that the False Claims Act, as defined above, has been violated by (1) the Contractor submitting this Bid Proposal or (2) the qualifying person licensed by the State Contractors License Board to perform the work described in this Bid Proposal, shall provide on a separate sheet the following information: (1) the date of the determination of the violation, (2) the identity of the tribunal or court, (3) the identity of the government contract or project involved, (4) the identity of the government department involved, (5) the amount of fine imposed, and (6) any exculpatory information of which the City should be aware.

Bidder's Name: _____

CIVIL LITIGATION AND ARBITRATION HISTORY

Bidder shall provide the certification or information requested below. Failure to certify or provide such certification or information shall render the bid non-responsive.

For five (5) years preceding the submittal date of this Bid Proposal, identify civil litigation and arbitration arising out of the performance of a construction contract within the State of California in which the (1) Contractor submitting this bid proposal or (2) the qualifying person licensed by the State Contractors Licensing Board to perform the work described in this Bid Proposal was a named as a party in a lawsuit brought by or against the project owner or any action to confirm, vacate or modify an arbitration award involving an owner.

CIVIL LITIGATION AND ARBITRATION CERTIFICATION

If the Bidder has no civil litigation and arbitration history to report as described above, complete the following:

I _____ certify that neither
(Print name)

_____
(Contractor name)

nor_____
(Name of qualifying person licensed by Contractors State License Board)

has been involved in civil litigation and arbitration as described above.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this _____ day of _____ at _____
(Month and year) (City and State)

By _____
(Signature of owner, officer, manager or licensee responsible for submission of Bid Proposal)

Do not include litigation and arbitration which are limited solely to enforcement of mechanics' liens or stop notices. Provide on a separate sheet (1) the name and court case identification number of each case, (2) the jurisdiction in which it was filed, and (3) the outcome of the litigation, e.g. whether the case is pending, a judgment was entered, a settlement was reached, or the case was dismissed.

Bidder's Name: _____

CRIMINAL CONVICTIONS

Bidder shall provide the certification or information requested below. Failure to certify or provide such certification or information shall render the bid non-responsive.

CRIMINAL CONVICTION CERTIFICATION

If the Bidder has no criminal convictions to report as described above, complete the following:

I _____hereby certify that neither
(Print name)

_____
(Contractor name)

nor _____
(Name of qualifying person licensed by Contractors State License Board)

has been convicted of a criminal violation as described above.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this _____ day of _____ at _____
(Month and year) (City and State)

By _____
(Signature of owner, officer, manager or licensee responsible for submission of Bid Proposal)

For the five (5) years preceding the date of this Bid Proposal is due, identify on a separate sheet any criminal conviction in any jurisdiction in the United States for a violation of law arising out of the performance of a construction contract (1) by the Contractor submitting this Bid Proposal or (2) by the qualifying person licensed by the State Contractors License Board to perform the work described in the Bid Proposal.

Provide on the following page labeled “Criminal Convictions Information.” (1) the date of conviction, (2) the name and court case identification number, (3) the identity of the law violated, (4) the identity of the prosecuting City, (5) the contract or project involved, (6) the punishment imposed, and (7) any exculpatory information of which the City should be aware.

Bidder’s Name: _____

VIOLATION OF LAW OR A SAFETY REGULATION

Has the Bidder, any officer of the Bidder, or any employee who has proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of a law or a safety regulation?

☐ **Yes** ☐ **No**

If the answer is yes, explain the circumstances in the following space.

Name of bidder (print)	Signature
Address	State Contractors' License No. & Classification
City Zip Code	Telephone

END OF SECTION

Bidder's Name: _____

SECTION 00 50 00 - CONSTRUCTION CONTRACT FOR CAPITAL IMPROVEMENTS

CITY OF IRVINE

SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS CIP 361803

This Contract made and entered into this ____ day of _____, 2018, by and between City of Irvine, a municipal corporation of the State of California, hereinafter referred to as "CITY" and _____, hereinafter referred to as "CONTRACTOR."

W I T N E S S E T H:

That the CITY and the CONTRACTOR, for the consideration hereinafter named, mutually agree as follows:

A. The complete Contract includes all of the Contract Documents, which are incorporated herein by this reference, to wit:

   1. Permits and Agreements
   2. Contract
   3. Addenda
   4. Instructions to Bidders, Proposal Requirements and Conditions
   5. Contract Specifications
   6. Contract Plans
   7. Reference Specifications,

   The Contract Documents are complementary, and that which is required by one shall be as binding as if required by all.

B. CONTRACTOR shall provide and furnish all labor, materials, necessary tools, expendable equipment, and all utility and transportation services required for the following work of improvement:

   Interior partitions, ceilings, flooring, doors, windows, millwork, HVAC, electrical and other items not mentioned here, but are required by the plans and Special Provisions.

C. CONTRACTOR agrees to perform all the said work and furnish all the said materials at his own cost and expense that are necessary to construct and complete in strict conformance with Contract Documents and to the satisfaction of the Engineer, the work hereinafter set forth in accordance with the Contract therefore adopted by the City Council and as prepared by **IDS Group.**

D. CITY agrees to pay and CONTRACTOR agrees to accept in full payment for performance of this work of improvement as described, the stipulated sum of_____ ($_____) the "Contract Price."

   CITY agrees to make progress payments and final payment in accordance with the method set forth in the Special Provisions.

E. CONTRACTOR agrees to commence construction of the work provided for herein within ten (10) Calendar Days after the date specified in the Notice to Proceed, and to continue diligently in strict conformance with Contract Documents and without interruption, and to complete the construction thereof within **Ninety (90) Working Days** after the date specified in the Notice to Proceed.

F. Time is of the essence of this Contract, and it is agreed that it would be impracticable or extremely difficult to ascertain the extent of actual loss or damage which the CITY will sustain by reason of any delay in the performance of this Contract. It is, therefore, agreed that CONTRACTOR will pay as liquidated damages to the CITY the following sum: **One Thousand ($1,000) per Calendar Day**, for each and every Calendar Days delay in finishing the Work in excess of the number of Working Days prescribed above. If liquidated damages are not paid, as assessed by the CITY, the CITY may deduct the amount thereof from any money due or that may become due the CONTRACTOR under this Contract in addition to any other remedy available to CITY. By executing this Contract, Contractor agrees that the amount of liquidated damages is reasonable and shall not constitute a penalty.

G. In accordance with State of California Senate Bill No. 854, CONTRACTOR will maintain and will require all subcontractors to maintain valid and current Department of Industrial Relations (DIR) Public Works Contractor registration during the term of this project. CONTRACTOR shall notify the CITY in writing immediately, and in no case more than twenty-four (24) hours, after receiving any information that CONTRACTOR'S or any of its SUBCONTRACTOR'S DIR registration status has been suspended, revoked, expired, or otherwise changed.

H. CONTRACTOR will pay, and will require all subcontractors to pay, all employees on said Contract a salary or wage at least equal to the prevailing salary or wage established for such work as set forth in the wage determinations and wage standards applicable to this work, a copy of which is on file in the office of the City Clerk of the City of Irvine. Federal prevailing wage rates apply for federally funded projects. Travel and subsistence pay shall be paid in accordance with Labor Code § 1773.1.

I. CONTRACTOR shall be subject to the penalties in accordance with Labor Code of § 1775 for each worker paid (either by him or by any subcontractors under him) less than the prevailing rate described above on the work provided for in this Contract.

J. CONTRACTOR and subcontractors shall comply with Labor Code § 1810 and § 1811 which stipulates that eight hours labor constitutes a legal day's work, and § 1812 which stipulates that the CONTRACTOR and subcontractors shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by him in connection with the work performed under the terms of the Contract. Failure to comply with these sections of the Labor Code will subject the CONTRACTOR to penalty and forfeiture provisions of the Labor Code § 1813.

K. CONTRACTOR will comply with the provisions of Labor Code § 1777.5 pertaining to the employment of apprentices to the extent applicable to this Contract.

L. CONTRACTOR, by executing this Contract, hereby certifies:

> "I am aware of, and will comply with the Labor Code § 3700 by securing payment for, and maintaining in full force and effect for the duration of the contract, complete Workers' Compensation Insurance, and shall furnish a Certificate of Insurance to the City before execution of the Contract. The CITY, its officers, or employees, will not be responsible for any claims in law or equity occasioned by failure of the CONTRACTOR to comply with this paragraph."

CONTRACTOR further agrees to require all subcontractors to carry Workers' Compensation Insurance as required by the Labor Code of the State of California.

M. CONTRACTOR shall, concurrent with the execution of this Contract, furnish two bonds approved by the CITY, one in the amount of One Hundred Percent (100%) of the Contract Price, to guarantee the faithful performance of the work "Performance Bond", and one in the amount of One Hundred Percent (100%) of the Contract Price to guarantee payment of all claims for labor and materials furnished "Payment Bond." This Contract shall not become effective until such bonds are supplied to and approved by the CITY.

N. CONTRACTOR shall, prior to commencing work, furnish certificates evidencing compliance with all requirements of the Contract Documents pertaining to insurance.

O. Any amendments to any of the Contract Documents must be in writing executed by the CONTRACTOR and the CITY. Any time an approval, time extension, or consent of the CITY is required under the Contract Documents, such approval, extension, or consent must be in writing in order to be effective.

P. This Contract contains all of the agreements and understandings of the parties and all previous understandings, negotiations, and contracts are integrated into and superseded by this Contract.

Q. In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Contract shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Contract which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder.

R. The persons executing this Contract on behalf of the parties hereto warrant that they are duly authorized to execute this Contract on behalf of said parties and that, by so executing this Contract, the parties hereto are formally bound to the provisions of this Contract.

S. This Contract shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, personal representatives, successors, and assigns.

T. In performing its obligations and duties under this Contract, each party shall comply with all applicable local, state, and federal laws, regulations, rules, standards and ordinances.

U. In the event any action is brought between the parties hereto relating to this Contract or the breach thereof, the prevailing party in such action shall be entitled to recover from the other party reasonable expenses, attorneys' fees and costs in connection with such action or proceeding.

V. This Contract may be executed by the parties in counterparts, which counterparts shall be construed together and have the same effect as if all of the parties had executed the same instrument.

W. This Contract is to be governed by the laws of the State of California.

IN WITNESS WHEREOF, the said CONTRACTOR and the Director of Public Works, City Manager and City Clerk of the CITY have caused the names of said parties to be affixed hereto, the day and year first above written.

CONTRACTOR'S NAME:

_____
Print Name of Construction Company

(If Corporation, 2 signatures are required)

By: _____
Signature

_____
Print Name

Its:_____
Title

By: _____
Signature

_____
Print Name

Its: _____
Title

CONTRACTOR INFORMATION:
Address for Notices and Payments

_____

_____

_____

Telephone Number: _____

Email: _____

CITY OF IRVINE
A Municipal Corporation

_____
John A. Russo
City Manager of the City of Irvine

_____
Director of Public Works

ATTEST:

_____
Molly McLaughlin
City Clerk

APPROVED AS TO FORM:
RUTAN & TUCKER, LLP

_____
Jeffrey Melching

END OF SECTION

SECTION 00 50 01 - PERFORMANCE BOND

SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

KNOW ALL PERSONS BY THESE PRESENTS that we _____, as Principal, and _____ as Surety, are held and firmly bound unto City of Irvine, hereinafter called the City in the sum of _____ _____($_____) (this amount being not less than one hundred percent (100%) of the total bid price of the contract awarded by the owner to the Principal), for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

The conditions of this obligation are such that whereas the Principal entered into a contract attached hereto, with the City of Irvine.

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said Contract during the original terms thereof, and any extensions thereof that may be granted by the Owner with or without notice of the Surety, and during the life of any guarantee required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, then this obligation shall be void otherwise this obligation shall remain in full force and effect.

Further, the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or modifications of the Contract Documents and/or of the Work to be performed thereunder shall in any way affect its obligations on this bond; and it hereby waives notice of any and all such changes, extensions of time, and alterations or modifications of the contract documents and/or of the work to be performed thereunder.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, and all to be taxed as costs and included in any judgment rendered by a court of law.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument this ____ day of _____, 20____, the name of each party being hereto written below and these presents duly signed by each party's undersigned representative, pursuant to authority of its governing body. This bond shall be authenticated by way of notarized acknowledgment, including a copy of the power of attorney, for the Surety.

This area is intentionally left blank.

ATTEST:

(Principal) _____

(Address) _____

_____

(By) _____

(Title) _____

ATTEST:

(Surety) _____

(Address) _____

_____

(By) _____

(Title) _____

END OF SECTION

SECTION 00 50 02 - PAYMENT BOND
SWEET SHADE COMMUNITY CENTER TENANT IMPROVEMENTS
CIP 361803
BID NO. 19-1459

KNOW ALL PERSONS BY THESE PRESENTS that we _____, as Principal, and _____ as Surety, are held and firmly bound unto City of Irvine, hereinafter called the City in the sum of _____ _____($_____) (this amount being not less than one hundred percent (100%) of the total bid price of the contract awarded by the owner to the Principal), for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

The conditions of this obligation are such that whereas the Principal entered into a contract, attached hereto, with the City of Irvine.

NOW THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of each contract that may hereafter be made, then this obligation shall be void, otherwise this obligation shall remain in full force and effect.

The condition of this obligation is such that, if said Principal or his subcontractors, or heirs, executors, administrators, successors, or assigns thereof, shall fail to pay any of the persons named in the Civil Code § 9100 for any material used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or shall fail to pay any amount due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant or any amount required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the Contractor and his subcontractors with respect to such work and labor, then said Surety will pay and, also, in case suit is brought upon the bond, will pay a reasonable attorney's fee to be fixed by the court. This bond shall inure to the benefit of all persons named in the aforesaid Civil Code § 9100 to give a right of action to them or their assigns in any suit brought upon the bond.

Further, the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or modification of the Contract Documents or of the Work to be performed thereunder shall in any way affect its obligations on this bond; and it hereby waives notice of any and all such changes, extensions of time, and alterations or modifications of the Contract Documents and/or of the work to be performed thereunder.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument this ____ day of _____, 20____, the name of each party being hereto written below and these presents duly signed by each party's undersigned representative, pursuant to authority of its governing body. This bond shall be authenticated by way of notarized acknowledgment, including a copy of the power of attorney, for the Surety.

This area is intentionally left blank.

ATTEST:

(Principal) _____

(Address) _____

_____

(By) _____

(Title) _____

ATTEST:

(Surety) _____

(Address) _____

_____

(By) _____

(Title) _____

END OF SECTION

SECTION 00 71 00 - DEFINITIONS

The terms used in the General Conditions and within the Contract Documents have the following meanings assigned to them applicable in both the singular and plural tense. Certain terms are fully capitalized for no other reason than ease of reading.

Addenda - Additional written or graphical instructions issued prior to the opening of bids, which clarify, modify, correct, amend, add, delete and/or otherwise change the Contract Documents.

Administrative Closeout - Administrative Closeout shall be the duration allowed for completion of all Contract requirements after Substantial Completion such as Punch List items, submittal of final warranties and guaranties, and record documents.

Applicable Laws- All federal, state, and local statutes, law, ordinance, provision, rule, regulation pertaining to the furnishing of or performance of the Work.

Application for Payment - The City approved invoice form along with other supportive documentation as specified in the Contract Documents to be certified and submitted by Contractor in requesting progress and/or final payment.

"As Builts" - Plans and specifications received from Contractor following Substantial Completion that document field changes, additions or deletions to the Work (as defined in the original Contract Documents) that occurred during construction and reflect existing field conditions upon completion of the Work.

Calendar Day – The 24-hour day denoted on the calendar.

Calendar Month – The period including the first through the last day of a month.

Change Order - A written instrument confirming a change or adjustment to the Contract Amount, Milestones and/or Contract Time and/or an addition, deletion or revision in the Work. A Change Order is only effective upon approval by the City.

Change Order Proposal (COP) - A written instrument prepared and issued by Contractor, setting forth proposed adjustments to the Contract Amount, Milestones or Contract Time, if any, in response to a Request for Quotation and/or proposed addition, deletion or revision of the Work.

City – The City of Irvine, a municipal corporation.

City Representative - The person or engineering/architectural firm Agency authorizes to represent it during the performance of the Work by the Contractor and until Final Acceptance. The Agency Representative means the Agency Representative or his assistants.

Contract Completion- When City determines all Contract requirements of Contractor have been met or when the Administrative Closeout Period has expired and a Notice of Contract Completion is issued by City to Contractor.

Contract Amount – The dollar amount stated in the Contract payable by City to Contractor. The Contract Amount may be increased or decreased only by Change Order.

Contract Time - The duration in Working Days from the date in the Notice to Proceed to the Contract Completion, plus or minus Change Order adjustments.

Contractor - The person, firm, corporation or entity with whom the City has entered into the Contract.

Defective - When preceding the term work, it references Work deemed to be unacceptable, faulty, unsuitable, unsightly or otherwise not in compliance with the Contract Documents including any inspection, standard, test, submittal, and/or approvals required by the Contract Documents.

Engineer – The City Engineer acting either directly or through the Agency Representative.

Major Bid Item – A single Contract item constituting ten percent (10%) or more of the original Contract Price.

Plans- Pictorial or graphical portions of the Contract Documents, prepared by or on behalf of the Engineer, denoting the scope, design, extent, location, character, and dimensions of the Work to be performed and may include plans, elevations, sections, details, schedules and diagrams, etc., however, Shop Drawings are not Drawings as so defined herein.

Milestones- Designated events as set forth in the Construction Schedule in which Work or portions thereof are required to be started and/or completed. Supplementary Conditions may provide for the assessment of Liquidated Damages if Contractor fails to achieve one or more Milestones.

Notice of Award- Notice by City advising the successful bidder that the City has issued the Contract.

Notice of Completion - Notice by City recorded with the County Recorder upon Substantial Completion.

Notice to Proceed - The written notice issued by City to Contractor establishing the date of commencement of the Contract Time and authorizing Contractor to proceed with the Work.

Partial Use or Occupancy - Use or occupancy by City of a partially completed portion, part, space or area of the Work, prior to Substantial Completion of the Work.

Product Data - Contractor furnished literature, illustrations, standard schedules, performance charts, instructions, brochures, diagrams, catalog cuts, color charts, templates, installation and maintenance instructions, test data, agency or regulatory approvals, or other required product information furnished by Contractor relative to the Work.

Punch List - A list of minor, corrective items, which does not include uncompleted Work.

Request for Information (RFI) - A written instrument prepared by Contractor and issued to Engineer requesting information or clarification of the Contract Documents.

Request for Quotation – Contemplated revision of Contract Documents by the Agency requesting detailed information from the Contractor on impacts to contract sum or contract time.

Samples - Contractor furnished physical specimens such as swatches, natural materials, materials, fabricated items, equipment, devices, appliances, cuts, containers, color boards, textures, fabrications, finishes, or other required samples furnished by Contractor relative to the Work.

Shop Drawings - Contractor furnished original drawings such as illustrations, diagrams, schedules, fabrications, erection, coordination, layout, setting, details, standards, performance charts or curves, installation, routing, iso-metric, wiring, control, piping, or other required shop drawings furnished by Contractor relative to the Work.

Specifications - Those portions of the Contract Documents consisting of the written technical and/or administrative descriptions of materials, equipment, systems, codes, regulations, procedures, standards, workmanship, services, facilities, supplies, instructions, transportation, quality, etc., as applied to the Work.

Subcontractor - The person, firm, corporation or entity executing a direct contract with Contractor or with any subcontractor for the performance of a portion of the Work.

Substantial Completion - The stage in the progress of the Work when all of the requirements of the Contract are completed, except Punch List items, final warranties and guaranties, and record documents submittals.

Subsurface Facility - All underground or below grade facilities and/or improvements, including but not limited to, any and/or all encasements such as pipelines, wells, conduits, raceways, duct banks, ducts, cables, conductors, sensors, manholes, valve boxes, metering devices or other such facilities which collect, furnish, supply, distribute, and/or transport to this or any other site or property electricity, telephone, data, steam, gases, petroleum, cable or satellite signals, sewage, signal systems, water, storm drainage, traffic signals, or other control systems.

Work- All of the terms and conditions set forth in the Contract Documents, including the various separately identifiable parts thereof to be furnished thereunder. The Work shall include, without limitation, all labor, materials, apparatus, supplies, services, facilities, utilities, transportation, manuals, warranties, training, and the like, necessary for Contractor to faithfully perform and complete all of its obligations under the Contract.

END OF SECTION

SECTION 00 72 00 - GENERAL CONDITIONS

ARTICLE 1 – SCOPE AND CONTROL OF WORK

1-1 CONTRACT AWARD AND EXECUTION - The City will award and execute the Contract as provided in the Specifications, Instructions to Bidders or Notice Inviting Bids.

1-2 ASSIGNMENT - Do not assign the Contract or any portion of it without the City's written consent, except that you may assign money due or which will accrue to you under the Contract. If given written notice, the City will recognize the assignment to the extent permitted by law. Any assignment of money is subject to all proper withholdings in the City's favor and to all deductions, the Contract allows. The City will use all money withheld, assigned or not, to complete the Work if you default.

Do not assign Contract performance except with the City's written consent. The City will not consent to any proposed assignment that would relieve you or your Surety of your Contractual responsibilities, or to any assignment of any of the Contract Work.

1-3 SUBCONTRACTS.

1-3.1 General. Comply with Chapter 4 of the Public Contract Code including Sections 4100 through 4113.

A. The name and location of the place of business of each subcontractor who will perform work or labor or provide service to you in constructing the Work or improvement, or a subcontractor licensed by the State of California who, under subcontract to you, specially fabricates and installs a portion of the Work or improvement according to detailed drawings in the Plans and Specifications, in an amount exceeding one-half of 1 percent of your total bid.
B. The portion of the Work each such subcontractor will do under this act. List only one subcontractor for each portion as defined in your bid.

If you fail to specify a subcontractor or specify more than one subcontractor for the same portion of the Contract Work to be performed in excess of one-half of 1 percent of your total Bid, you must be qualified to and must perform that portion yourself unless the Code provides otherwise.

Pursuant to § 4107, if your Bid is accepted you may not substitute any person as a subcontractor in place of a subcontractor listed in your Bid except for the causes and by the procedures in § 4107.5, which provide procedures to correct a clerical error in listing a subcontractor.

Section 4110 provides that violating any of the provisions of Chapter 4 violates the Contract and the City may, after a public hearing, either cancel the Contract or assess you a penalty not exceeding 10 percent of the subcontract involved.

If you subcontract any part of Contract, you are as fully responsible to the City for the acts and omissions of your subcontractors as you are for the acts and omissions of your direct employees. Nothing contained in the Contract Documents creates any contractual relationship between any subcontractor and the City. Bind every subcontractor to the terms of the Contract Documents applicable to its work.

Do not employ debarred contractors on the Work pursuant to the provisions of Labor Code § 1777.1 and City of Irvine Council Ordinance No. 08-10. The Labor Commissioner publishes and distributes a

list of contractors ineligible to work as a subcontractor on a public works project. This list is available from the Department of Industrial Relations web site http://www.dir.ca.gov/dlse/debar.html.

The U.S. General Services Administration maintains a list of individuals, firms and organizations debarred, suspended or who have voluntarily excluded themselves from Federal Procurement and Non-Procurement Programs, which is available from the website http://www.sam.gov.

According to SB 854, you and each of your subcontractors must maintain a valid, current Department of Industrial Relations Public Works Contractor registration during the term of this project.

Before including a subcontractor's name on the bid, verify that each one is properly licensed and not debarred from performing the designated work.

The City will withhold payment for noncompliant subcontracted work from progress payments due, or to become due, until the noncompliance is corrected. The City may terminate the Contract if you fail to comply.

If the Engineer finds any subcontractor or person you employ is incompetent or is acting improperly, then at the Engineer's request, dismiss them from the job immediately and do not employ them on the Work again.

File a copy of each subcontract with the City before the subcontractor begins work. Each subcontract must reference the Contract with the City and its terms and all its parts are made part of that subcontract as applicable to the work it covers. Each subcontract must allow you to annul it at the City's order if in the City's opinion the subcontractor fails to comply with Contract requirements.

1-3.2 Self Performance. Perform, with your own employees, Contract work amounting to at least 30 percent of the Contract Price. When an entire item is subcontracted, base the value of work subcontracted on the Contract Unit Price. When a portion of an item is subcontracted, calculate the value of the subcontracted portion using the estimated percentage of the Contract Unit Price based on information you submit, subject to the Engineer's approval.

Give personal attention to fulfilling the Contract and keep the Work under your control. Subcontractors are your employees and you are responsible for their work.

1-3.3 Status of Subcontractors. The City will not conduct business with an individual, firm or organization, and you shall not employ or otherwise use at any tier, any subcontractor, supplier, or equipment vendor on the City's debarment list, the Department of Industrial Relations debarment list, or the U.S. General Services Administration "List of Parties Excluded from Federal Procurement and Non Procurement Programs."

1-4 CONTRACT BONDS. Before executing the Contract, file surety bonds with the City for its approval in the amounts and for the purposes noted below. Bonds issued by a surety who is listed in the latest version of U.S. Department of Treasury Circular 570, who is authorized to issue bonds in California, and whose bonding limitation shown in that circular is sufficient to provide bonds in the amount required by the Contract, is approved unless the City specifically rejects them. Attach all of the documents listed in the Code of Civil Procedure, § 995.660 a) to bonds from all other sureties and pay all bond premiums, costs and incidentals.

You and the Surety sign each bond and incorporate the Contract by reference. Notarize the Surety's authorized agent's signature.

Provide two sufficient surety bonds. The "Payment Bond" must be for 100 percent of the Contract Price to satisfy claims of material suppliers, and mechanics and laborers you employ on the Work. Maintain the bond in full force until the City accepts the Work and all claims for materials and labor are paid, and otherwise comply with the Civil Code.

The "Performance Bond" must be for 100 percent of the Contract Price to guaranty faithful performance of all work within the time prescribed and in a manner satisfactory to the City, and that all materials and workmanship are free from original or developed defects. The bond must remain in effect until the end of all warranty periods in the Contract Documents.

Should any bond become insufficient, renew the bond within 10 days after notice from the City.

If at any time the City finds any surety unsatisfactory, it will notify you and no additional payments will be due or made under the Contract until a new surety qualifies and the City accepts it.

Changes in the Work or extensions of time made pursuant to the Contract do not release you or the surety from your and its obligations and the Surety must waive notice of these changes or extensions.

1-5 THE CONTRACT DOCUMENTS.

1-5.1 General. Keep at the Work site a copy of the Plans and Specifications for the Engineer to access at all times. Supplement the Plans with those working drawings and shop drawings necessary to adequately control the Work.

If, either before beginning or during the work, you find any discrepancy between the Specifications and the Plans or between either of them and the physical conditions at the Work site or find any error or omission in any of the Plans or in any survey, promptly notify the City of the discrepancy, error or omission. Promptly notify the City in writing if you observe any plans or specifications at variance with any applicable law, ordinance, regulation, order or decree.

The City, on receiving the notice, will investigate the circumstances and give you appropriate instructions. Until then, any work you do after discovering an error, discrepancy or conflict directly or indirectly affected by the error, discrepancy or conflict, is at your risk and you bear all costs arising from it.

The City will provide, free of charge, three (3) copies of Plans and Specifications for you and one (1) copy of Plans and Specifications for each subcontractor listed in your Proposal. The City can provide additional copies of the Plans or Specifications at your expense. Keep one set of Plans and Specifications in good order and available to the City Representative at the Work site.

Titled sections of the Contract Documents, including, without limitation, the Specifications, are for convenience only and do not dictate the trade or craft involved.

Where "as shown," "as indicated," "as detailed," or words of similar meaning are used, they refer to the Drawings accompanying the Specifications unless stated otherwise. Where "provide," "furnish," "install," "complete," or words of similar meaning are used, they mean to put in place for the intended use or operation. Where "as directed," "as required," "as permitted," "as authorized," "as accepted," "as selected," or words of similar meaning are used, the Engineer's direction, requirement, permission, authorization, approval, acceptance or selection is intended unless stated otherwise.

Division 00 Procurement and Contracting Requirements, and Division 01 General Requirements, are a part of every section of the Contract Documents.

The Contract Documents are written in an abbreviated form, and may not include complete sentences. Omission of words or phrases like "Contractor shall," "shall be," etc., are intentional. Nevertheless, the requirements of the Contract Documents are mandatory. Omitted words or phrases are supplied by inference.

Words in the singular include the plural whenever applicable or the context indicates or requires.

In the interest of brevity, the Contract Documents frequently omit modifying words like "all" and "any" and articles like "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another does not affect the interpretation of either statement.

1-5.2 Contract Documents are Complementary and Inclusive. The Plans, Specifications and other Contract Documents govern the Work. The Contract Documents are complementary and cooperative. Anything in the Specifications not shown on the Plans or shown on the Plans and not in the Specifications are as though shown on or in both.

1-5.3 Conformance with Laws. As applicable, unless modified elsewhere in the Specifications, Contract Work must conform to the current editions of: Uniform Building, Plumbing, Mechanical Codes, Uniform Fire Code, National Electrical Code and City of Irvine Amendments to the aforementioned codes.

Perform all work according to the current editions and City of Irvine Amendments to, the California Building Code, the California Electrical Code, the California Plumbing Code with key amendments, California Green Building Standards Code, Building Energy Efficiency Standards, California Playground Safety Regulations, City of Irvine Codes & Ordinances, City of Irvine's Grading Manual, City of Irvine's Standards and Design Manual, City of Irvine's Park/Public Facility Standards, City of Irvine's Construction Site Security Requirements, Americans with Disabilities Act (ADA), Chapter 11B Title 24 of the California Code of Regulations, California Public Contract Laws, the Specifications, Attachments, and Construction Plans and all their applicable requirements.

Check and review the Contract Documents from a construction standpoint for conformity and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public utilities affecting the construction and operation of the physical portion of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical portion of the project and other special requirements, if any, designated in the Contract Documents. If you see any violation of any law, ordinance, code, rule or regulation or inconsistency with any restrictions or special requirements in the Contract Documents, give notice to the Engineer and correct the violation or inconsistency in the prescribed manner before beginning that portion of the Work. Unless specifically

stated otherwise in the Contract Documents, Contract Document provisions take precedence in resolving any violation and inconsistency between provisions of the Contract Documents and provisions of any laws, ordinances, codes, rules and regulations applicable to the Work unless applying the provisions of the Contract Documents would directly violate those laws, ordinances, codes, rules and regulations. If the requirements of this article or the Engineer's written interpretation or clarifications do not resolve the violation or inconsistency, the Engineer's decisions and directives regarding the Work are final.

1-5.4 Intent of Plans and Specifications. The Plans and Specifications describe the Work. The Specifications describe Work not indicated on the Plans like quality of materials, workmanship and execution; the Plans generally describe Work dimensions, elevations and general layout. The Specifications do not specify every item of Work shown on the Plans nor do the Plans show all Work described or specified in the Specifications even if the items could have been included. Provide all aspects of the Work on the Plans or in the Specifications or that are reasonably inferable from them necessary to complete the Work, whether or not the aspects of the Work are expressly covered in the Plans or the Specifications. You are responsible for insuring the Work is sound, quality construction and for including all direct and indirect costs and expenses to cover all items indicated, described or implied in the Work.

1-5.5 Ambiguity, Conflicts, Difference or Discrepancy. In the event of an ambiguity, conflict, difference or discrepancy between the various Contract Documents, the more stringent, higher quality, greater quantity and higher-level work controls. If discrepancies in the Contract Documents are not corrected by Addenda during the bid period, you warrant that the scope and amount of your bid includes all materials, supplies, equipment, services, facilities, apparatus and methods of construction to provide the higher cost, quantity and quality.

1-5.6 Priority of Addenda. Addenda take precedence over all other Contract Documents at the time of bid. Subsequent Addenda issued govern over prior Addenda only to the extent specified, where applicable and according to Title 24, California Code of Regulations.

1-5.7 Standard Technical Specifications of Societies, Institutions, Associations, etc. Any reference to standard technical specifications of any society, institute, association or governmental authority refers to that organization's standard technical specifications in effect on the date you submit your bid for the Work. If applicable standard technical specifications are revised before completing any part of the Work, you may, if acceptable to the Engineer, perform that Work according to the revised standard technical specifications. The standard technical specifications, except as modified in the Contract Documents, are as though printed in the Contract Documents. Before beginning any portion of the Work, check and review the Contract Documents from a construction standpoint for conformance and compliance with the provisions of all standard technical specifications, listed or otherwise. If you note a conflict, ambiguity or discrepancy between the provisions of the Contract Documents and standard technical specifications, notify the Engineer and ensure the conflict, ambiguity or discrepancy is corrected as prescribed before beginning that portion of the Work. Unless stated otherwise in the Contract Documents, provisions of the Contract Documents take precedence in resolving any conflict, ambiguity or discrepancy between the provisions of the Contract Documents and standard technical specifications. If the requirements of this article or the written interpretation or the Engineer's clarifications do not resolve the conflict, ambiguity or discrepancy, the Engineer's decisions and directives are final for proceeding with the Work. If you believe an Engineer's order establishes a basis for an adjustment in the Contract Amount, Milestones and Contract Time, then pursuant to Article 2, submit a Change Order Proposal within ten (10) days after the Construction Directive is issued.

1-5.8 Rules of Contract Interpretation. Provide the more stringent, higher quality material and work and greater quantities for the Work in the case of a conflict between the various sections of the Contract Documents, including the Plans and Specifications.

Where applicable, City-approved requirements on any item submitted as a Deferred Approval according to Title 24, California Code of Regulations, take precedence over any previously issued Addenda, Plan or Specification.

Except as provided in this section, in a conflict between the Plans, the following govern:

A. Specific notes govern over all other notes;
B. General notes, when identified as such, are incorporated in other portions of the Plans;
C. Schedules, when identified as such, are complementary with other notes and other portions of the Plans including those identified as general notes;
D. Larger scale Drawings govern over smaller scale Drawings;
E. Calculated, derived or numerical dimensions govern over scaled dimensions; do not perform or allow Work to be performed based on dimensions obtained by scaling the Drawings.

1-5.9 Ownership and Use of the Contract Documents. Neither you, your Subcontractors, nor your material or equipment suppliers, own or claim a copyright in the Plans, Specifications and other Contract Documents or use them on other jobs.

1-5.10 Document Retention Policy. Maintain at your sole expense for a period of ten (10) years after the Notice of Completion is recorded, a full set of project records including plans, specifications, correspondences, submittals, record documents and all other project documentation in hard copy or electronic form. If the City or its designated agent or representative makes a written request for the documents, produce or make them available for review and photocopying or electronic reproduction within ten (10) days of receiving the City's written request.

1-5.11 Request For Information (RFI) Procedures. This Section contains procedures Contractor shall follow when discovering any apparent conflicts, omissions, or errors in Contract Documents or when having any question about interpretation.

A. PROCEDURES
    1. Submit requests for clarification or additional information in writing to Engineer using Request for Information (RFI) form provided by Engineer or a similar, Engineer-approved form.
    2. Number RFIs sequentially. Add a sequential alphabetical suffix after the RFI number for each resubmission. For example, first RFI is 001, second is 002 and first resubmittal of RFI 002 is 002A.
    3. Limit each RFI to one subject.
    4. Submit an RFI if one of the following occurs:
        a. Contractor discovers an unforeseen condition or a circumstance not described in Contract Documents.
        b. Contractor discovers an apparent conflict or discrepancy between portions of Contract Documents that appears inconsistent or not reasonably inferred from intent of Contract Documents.
        c. Contractor discovers what appears to be an omission from Contract Documents that cannot be reasonably inferred from intent of Contract Documents.
    5. Submit an RFI or clarification when discovered. Submit RFIs promptly so as not to delay

Contract schedule and allow Engineer full response time described below.

6. Do not submit an RFI:
   a. As a request for substitution;
   b. As a submittal;
   c. Under pretense of a Contract Document discrepancy or omission without thoroughly reviewing documents;
   d. In a manner suggesting specific portions of Contract Documents are assumed excluded, or by taking an isolated portion of Contract Documents in part rather than in whole;
   e. In untimely manner without properly coordinating and scheduling Work of related trades.
   f. If Contractor submits an RFI contrary to any of above, Contractor shall pay cost of any review and Engineer shall deduct that cost from Contract sum.

B. RESPONSE TIME

1. Engineer, whose decision is final, shall resolve these questions and direct Contractor within a reasonable time. In most cases, Engineer will respond within 5 days. In cases involving complex issues or emergencies, parties may agree in writing to lengthen or shorten response time as appropriate.
2. If Contractor proceeds with affected work before receiving Engineer's response within timeframe described above, Engineer may require Contractor to remove or replace any portion of Work not done according to Engineer's interpretations, clarifications, instructions, or decisions and Contractor is responsible for all resulting losses.
3. If Contractor and Engineer cannot agree on the scope of Contract requirements, Contractor shall follow procedures set forth in General Conditions.

1-6 SUBMITTALS.

1-6.1 General. Provide submittals as specified or when the Engineer requests. Do not furnish or fabricate materials or perform any work requiring submittals before the Engineer reviews and accepts them. Neither the Engineer's review nor acceptance of submittals relieves you of responsibility for errors, omissions or deviations from the Contract Documents unless you specifically called them to the Engineer's attention in the letter of transmittal. You are responsible for the accuracy of the submittals. Allow a minimum of twenty (20) Working Days to review submittals unless otherwise stated in the Specifications. Include a transmittal letter with each submittal. Include payment for submittals in the contract unit price for various bid items. The review period begins again after each submittal or resubmittal.

In providing submittals, you certify they are complete in all respects and that all materials, equipment, and other work included conforms to the Contract Documents. Where the manufacturer, fabricator, subconsultant or designee designs or engineers an item, an engineer registered by the State of California, executing the design within the scope of his registration, must sign the drawings and supporting calculations. Unless the Engineer accepts it, only you may submit data. Data that, in the Engineer's opinion, are incomplete or which you have not checked or which are illegible or do not comply with Contract requirements will be returned to you for resubmittal in the proper form. The City may make this determination at any time during the review period.

Submit data in a format similar to the arrangement of the applicable section(s) of the Specifications unless otherwise specified. The City will return for resubmittal, without review, any submittal that does not follow the format specified and does not conform to the requirements listed below:

A. Data includes drawings and descriptive information in sufficient detail to show the kind, size, arrangement and operation of component materials and devices, the external connections, anchorages and supports required, performance characteristics, dimensions needed for installation and correlation with other materials and equipment, and all additional information required in the detailed section(s) of the Contract Documents. Identify field dimensions and show their relation to adjacent or critical features, work or products.

B. Calculations, when the Specifications require them, to support the adequacy of the design to meet specified performance ratings or requirements.

C. Each drawing or data sheet clearly marked with the name of the project, your name and references to applicable Specification paragraphs and Plan sheets. Collate submittals containing multiple drawings or data sheets prior to submittal.

D. Where data sheets, catalog cuts or drawings show more than the item under consideration cross out all but the applicable information. Submit only relevant pages; mark each copy of standard printed data to identify pertinent products referenced to Specification Section and Article number. Show reference standards, performance characteristics and capacities, wiring and piping diagrams and controls, component parts, finishes, dimensions and required clearances.

E. Include drawings showing wiring and pipe layouts on data submitted. Describe the proposed changes in a cover letter and show the essential details of the changes in the data submitted.

F. Present data clearly and thoroughly. Title each drawing with the project name and number; identify each element of the drawings by reference to a sheet number and detail, schedule or room number of the Contract Documents.

G. Provide manufacturer's preparation, assembly and installation instructions.

H. Submit a full range of manufacturer's standard finishes except when more stringent requirements are specified, indicating colors, textures, and patterns for the Engineer’s selection.

I. Submit samples to illustrate functional characteristics of products, including parts and attachments. Label each sample with identification required for the transmittal letter. The Specification section lists approved samples for the Work.

J. Provide field samples of finishes for the Work at a location acceptable to the Engineer as required by the individual Specifications section. Install each sample complete and finished. You may retain in the completed work, finishes in place that the Engineer has accepted.

A letter of transmittal listing the submittal contents must accompany submittals. Drawings must show the name of the project, your name and, if any, the names of suppliers, manufacturers and subcontractors. Submit shop drawings with enough time for the City’s review and in an orderly sequence according to the progress schedule to avoid delay in doing the Work. The City will return for resubmittal the following: drawings not submitted on either 11”x17” or 24”x36” sheets, submittals not accompanied by conforming transmittals and transmittals sent with an incomplete form.

Use a separate letter of transmittal for each specific item or class of materials or equipment that requires a submittal. Transmitting shop drawings on various items using a single letter of transmittal is permissible only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole.

The City will return any submittal sent (1) without a transmittal letter, (2) with an incomplete form, or (3) by facsimile.

Assign a unique sequential number to each submittal package clearly written in the space provided on the transmittal letter. Use this number in all correspondence to the City when referencing a particular submittal. Do not assign the same submittal number to different submittal packages.

On resubmittals, use the original submittal number followed by the revision number, i.e., the first resubmittal of submittal #1 is numbered 1R1, the second 1R2, etc. The City will return improperly numbered submittals and resubmittals without review. Indicate on the transmittal letter that either no exceptions to the Contract Documents are taken or deviations are submitted. List all deviations indicated on the transmittal letter. You are solely responsible for any omitted deviations. If any deviations are omitted, the City will return the submittal and the engineering data without review for resubmittal. You bear any consequences from the resulting delay.

The Engineer's review of your submittals covers only general conformity to the Contract Documents. The Engineer's acceptance of drawings returned marked NO EXCEPTION TAKEN or RESUBMITTAL NOT REQUIRED (CORRECTIONS ARE NOTED) does not constitute a blanket approval of dimensions, qualities and details of the materials, equipment, device or item shown and does not relieve you of any responsibility for errors, omission or deviations from conforming to the Contract Documents. The City reserves the right to reject any previously accepted equipment, material and construction method that deviates from the Contract Documents. When the City returns drawings and data marked CORRECT AND RESUBMIT, make the corrections noted as the Engineer instructs then resubmit in the same manner as the original submittal.

If the Engineer rejects the submittal, you are responsible for any subsequent time delays at no additional compensation from the City. Subject to these requirements, drawings and data, after final processing by the Engineer, become part of the Contract Documents and the work they show or describe is performed in conformity with them unless the Engineer requires otherwise. In the event of conflict between accepted submittals and other Contract Documents, the most stringent requirements apply unless the City has agreed in writing to less stringent requirements in response to a deviation listed on a submittal letter of transmittal.

Do not begin any part of the Work requiring a submittal until the Engineer has reviewed it and returned it to you with a notation indicating that resubmittal is not required.

The Engineer's review is only of general conformance with the design of the project and general compliance with the Contract Documents. It does not relieve you of full responsibility for providing Contract-required materials, equipment and work, properly fitting and constructing the Work, providing accurate and complete submittals, selecting construction fabricating processes and techniques and performing the Work safely.

1-7 WORK TO BE DONE. Perform all work necessary to complete the Contract in a satisfactory manner. Unless otherwise provided, furnish all materials, equipment, tools, labor and incidentals necessary to complete the Work. Leave the Work area in a neat condition. Perform any work not shown in the Plans or Specifications but necessary to complete the Work according to law and government codes and regulations as if in the Plans and Specifications.

Remove and dispose of all structures, debris or other obstructions of any character necessary to accommodate the Work. Where the obstructions are improvements the City is not legally required to remove, you must remove, maintain and permanently replace them at your expense.

1-8 SUBSURFACE DATA. Soil and test hole data, groundwater elevations and soil analyses shown on the Plans or included in the Specifications apply only at the location of the test holes and to the depths indicated. Soil test reports for test holes already drilled are available for inspection at the Engineer's office. You may perform additional subsurface exploration at your own expense. The indicated groundwater elevation is that which existed on the date specified in the data. It is your responsibility to determine and allow for the groundwater elevation on the date you perform the Work. A difference in groundwater elevation between that shown in soil boring logs and that actually encountered during construction is not a basis for Extra Work per 2-3.

1-9 RIGHTS OF WAY.
The City has provided rights of way, easements, agreements, licenses or rights of entry (collectively, right of way) for the Work. The City may also have acquired temporary right of way to construct one or more portions of the Work. If the City did acquire temporary right of way, the documents or their contractual terms and obligations are included in the Contract Documents. Comply with all the terms and obligations related to the physical use of the temporary right of way and the eventual return of the property to the owner. Schedule Work that may include landscape establishment, maintenance periods and final acceptance within the temporary right of way to start and finish within the time allotted in each temporary right of way agreement. If, through no fault of the City, there is a work delay, you are responsible for all costs the City incurs to extend use of the temporary right of way.

1-10 REFERENCE POINTS AND ELEVATIONS.

1-10.1 General. When required by the Work, the City will furnish at its expense an engineering survey of the project site giving, as applicable, benchmark elevation points, property lines and corners. Lay out the Work and preserve all established benchmark elevation points, property lines and corners and do not demolish, relocate or change the location of any benchmark elevation point, property line or corner without the Engineer's prior written approval. If any benchmark elevation point, property line or corner is lost, destroyed or relocated, notify the Engineer before replacing and relocating it. At your expense, engage the services of a State of California licensed surveyor to replace and relocate benchmark elevation points, property lines or corners lost, destroyed or relocated.

1-10.2 Conformity with the Contract Documents. The Work must conform to the lines, grades, dimensions, tolerances and material and equipment requirements shown on the Contract Documents. Although the Engineer may consider measurement, sampling and testing in determining conformity, the Engineer is the sole judge of whether the work or materials deviate from the Contract Documents and that decision is final.

If the Plans do not show specific lines, grades and dimensions, those the Engineer furnishes govern.

1-11 ENGINEER'S AUTHORITY. The Engineer is authorized to enforce compliance with the Plans and Specifications. Promptly comply with the Engineer's instructions. The Engineer's decision is final and binding on all questions relating to quantities, acceptability of material, equipment or work, execution, progress or sequence of work and interpretation of the Plans, Specifications or other Contract Documents. This precedes any payment under the Contract unless the Engineer orders otherwise.

Subject to the provisions of Government Code § 8546.7, this Contract and all related documents are subject to the examination and audit of the State Auditor at the request of the City or as part of any audit of the City, for a period of three (3) years after final payment under the Contract.

At the City's request, prepare and give the City any reports concerning your performance under this Contract. The City may also, at any time with 72 hours advance written notice, audit your books, records and documents related to your performance and your compliance with all Contract terms and conditions.

All drawings, documents, and other materials you prepare in performing this Contract are:

A. City property. At the City's request or upon termination of the Contract, deliver them to the City at your cost; and
B. Confidential. Do not make them available to any individual or entity without the City's prior written consent.

1-12 INSPECTION.

1-12.1 General. The City Representative will inspect the Work and the inspection will include monitoring and enforcing compliance of materials, equipment, installations, workmanship and methods to requirements of the Contract Documents.

The City Representative must, at all times, have safe access to the Work during construction and must be given every reasonable means to ascertain the progress, workmanship and character of materials and equipment used in the Work.

If you change project work hours and require City inspection services during those hours, give the Engineer at least two (2) Working Days written notice to arrange them.

The City Representative will inspect all installations to be backfilled or covered before backfilling. Give the City Representative a minimum of two (2) Working Days advance notice before backfilling or covering any part of the Work.

Work performed or materials concealed without the required notice specified above is subject to any tests or exposure necessary to prove to the Engineer's satisfaction that all materials used and work done conform to the Contract Documents. Furnish and pay for all labor and equipment necessary to expose, test and replace, at no cost to the City, any materials or work damaged by exposure or testing.

At your expense, make good defective work including any unsuitable materials and equipment the City Representative inspected and whose payment has been included in an estimate for payment.

Inspection of the Work does not relieve you of your obligation to fulfill all Contract requirements.

Send all Work-related inspection submittals and correspondence between you and the City to the Engineer.

Follow directions and procedures for code inspections mandated by building permits. The City will charge contractors for additional inspection fees for the third (3rd) re-inspection on any item and every re-inspection thereafter.

1-12.2 Inspection Requirements. Notify the City Representative a minimum of two (2) Working Days before inspection is required.

Unless stated elsewhere in the Specifications, the City will inspect the Work between 7a.m. and 3:30 p.m., Monday through Friday, excluding City holidays. Pay for any inspections required by your actions outside these hours at the prevailing rate of 1 1/2 times the regular hourly wage rate plus 21 percent for overhead costs.

A. Submit a request to the Engineer for approval a minimum five (5) Calendar Days, before inspections are required as a result of your actions on Saturdays, Sundays or City and federal holidays. Pay for these inspections at the prevailing rate of 1 1/2 times for Saturdays and 2 times the regular hourly wage rate for Sundays or City and federal holidays plus associated overhead costs.

B. For purposes of this section, the City observes the following holidays:
   1. New Year's Day
   2. Martin Luther King Jr. Day
   3. Presidents' Day
   4. Memorial Day
   5. Independence Day
   6. Labor Day
   7. Veterans Day
   8. Thanksgiving Day
   9. Day after Thanksgiving
   10. Christmas Eve
   11. Christmas Day

   A construction calendar showing the days each of these holidays are observed is available from the Engineer.

C. Telephone the City Representative at least two (2) Working Days before starting construction or resuming construction after suspension of the Work for any reason.

   Before beginning any work on the Contract, submit a complete City of Irvine Inspection Overtime Permit form.

D. In addition to any inspection required by Codes and Ordinances or Contract Documents, notify the Engineer a minimum of two (2) Working Days before permanently concealing any materials or work. The following list is typical but not inclusive of such required inspections:
   1. Foundation/subgrade material, footing and slab beds
   2. Reinforcing for concrete, masonry and plaster
   3. Contact surface of concrete forms

4. Concrete and masonry surfaces
5. Piping and conduit
6. Finish grade prior to paving, seeding or planting
7. All soil mixes prior to installation
8. All chemicals and amendments prior to installation or application
9. Framing
10. Insulation
11. Waterproofing

1-13 SPECIAL NOTICES. Any notice to be served according to this section, whether provided in the Specifications or directed by the Engineer, must be in writing, dated and signed by you or the Engineer. These notices are not effective unless served as follows:

A. Notice to the City: by personal delivery or by deposit in the United States mail, in a sealed envelope addressed to the City, postage paid and registered.
B. Notice from the City to you: by personal delivery to you or to your authorized representative or by deposit in the United States mail, in a sealed envelope addressed to you at your regular place of business or any other address established to conduct the work under this Contract, postage paid and registered.
C. Notice to the surety or to any other person: by personal delivery, or by deposit in the United States mail, in a sealed envelope addressed to the surety or person at the address of the surety or person given to the noticing party, postage paid and registered.

1-14 CORRESPONDENCE. Unless the Engineer specifies or requests otherwise, do not send routine correspondence, including submittals, by facsimile (fax) machines or internet email. The City will allow internet email for urgent matters such as notification of a change of conditions. Unless otherwise allowed by the Engineer, direct all internet email to the Engineer. The Engineer will give you his/her internet email address at the pre-construction meeting. Internet email received after 2 p.m. is considered received the following Working Day. Follow up all internet email with a paper copy mailed to the Engineer on the same day you send the internet email. The Engineer will not accept any illegible internet email correspondence.

1-15 CONTRACT COORDINATION. Coordinate scheduling, submittals and the Work to assure an efficient and orderly sequence of installing construction elements that will accommodate later installations.

Hold coordination meetings and pre-installation conferences with City Representatives and subcontractors in addition to the weekly progress meetings required by the City, to assure coordination of the Work.

If the City exercises partial Acceptance or beneficial occupancy of the premises, coordinate site access to complete work or to correct defective work and work not strictly conforming to the Contract Documents to minimize disruption of the City's activities.

ARTICLE 2 – CHANGES IN THE WORK

2-1 CHANGES REQUESTED BY THE CONTRACTOR.

2-1.1 General - The Engineer may grant changes to the Plans and Specifications that you request in writing, which do not materially affect the Work and which are not detrimental to the Work or to the City's interests. This does not grant you the right to demand that the Engineer accept your changes.

To request a change, submit a written Change Order Request to the Engineer that contains:

A. Description of the proposed changes;
B. Statement of the reason for the changes;
C. Reference to applicable Specifications sections and specific plans that support your request;
D. Statement of the effect on the Contract Price and Contract Time;
E. Statement of the effect on the work of separate subcontractors;
F. Documentation supporting any change in Contract Price or Contract Time, if appropriate.

2-2 CHANGES REQUESTED BY THE CITY.

2-2.1General. The City may issue a written Change Order that includes the dollar value of the change or establishes the payment method and any adjustment in the Contract Time to modify the Work including, but not limited to, the Plans, Specifications, character, quantity or time of the Work.

The Engineer may order minor changes in the Work not involving an increase or decrease in the Contract Price, or a change in the time for completion but that are consistent with the purposes for which the works are being constructed. If you believe any order for minor changes in the Work involves changes in the Contract Price or time of completion, stop work on the minor changes ordered and immediately after receiving the order, notify the Engineer in writing of your estimate of the change in the Contract Price and time of completion.

The City will not pay for changes in the Work or in the time of completion unless the changes are covered by a City-approved, written Change Order before you begin the changed work.

Once both parties execute a Change Order it is final and you waive your right to seek additional compensation for the work covered or by any project impacts. All Change Orders constitute full payment for the work they cover, including all direct and indirect overhead expenses.

Despite any other provision in the Contract Documents, the City's Change Order does not constitute the City's waiver of, or preclude the City from asserting, any claim respecting it, including but not limited to, a claim of breach of contract or a claim that the issued Change Order covers work included in the scope of Work in the Contract Documents for which you were not entitled to additional funds and time extension.

A Change Order is approved when the City signs it and a purchase order is issued.

The Engineer may approve and issue a Contract Change Order at any time. If you disagree with any terms or conditions in an approved Contract Change Order, you did not execute, proceed with the Change Order work according to 2-5 of the Specifications and submit a written protest to the Engineer within fifteen (15) days after receiving the approved Contract Change Order. The protest must include the points of disagreement and cite the Specification references, quantities and costs involved. If you

do not submit a written protest, you will be paid per the approved Contract Change Order and that payment constitutes full compensation for all work included in or required by it. The City considers unprotested approved Contract Change Orders as executed Contract Change Orders.

The Engineer may also initiate changes by sending you a Request for Quotation that includes a detailed description of the change, products, location of the change and supplementary or revised Plans and Specifications. This request is not an instruction to execute the changes or to stop work in progress.

Support each quotation for a lump-sum proposal and for each unit price not previously established, with sufficient substantiating data to allow the Engineer to evaluate the quotation.

On request, provide additional data to support time and cost computations, labor, equipment, product requirements, a recommended purchase source and unit cost and quantities required, taxes, insurance as well as credit for work deleted from the Contract, similarly documented, and justification for any change in Contract Time.

Support each claim for additional costs and for work done on a time-and-material/force account basis with the documentation required for a lump-sum proposal, plus the following:

A. Name of the City Representative who ordered the work and the date of the order;
B. Dates and times work was performed and by whom;
C. Time record, summary of hours worked and hourly rates paid;
D. Receipts and invoices for equipment used showing dates and times of use, products used, quantities and subcontracts.

In lieu of a Request for Quotation, the Engineer may issue a written Field Order for you to proceed with a change subsequently included in a Contract Change Order. Field Orders describe changes in the Work, both additions and deletions, and include a copy of revised Contract Documents defining details of the change and designate how any change in the Contract Price and the Contract Time is determined. The Engineer will sign and date the Field Order as authorization for you to proceed with the changes. You may sign and date the Field Order to indicate agreement with its terms. Do the work ordered before you receive an approved Contract Change Order.

2-2.2 Contract Unit Prices.

2-2.2.1 General. If a change is ordered in a work item covered by a Contract Unit Price not involving a substantial change in the character of the work from that shown on the Plans or stated in the Specifications, the City will adjust payment based on the increase or decrease in the quantity and Contract Unit Price.

If the actual quantity of an item of work covered by a Contract Unit Price and constructed in conformance with the Plans and Specifications varies from the Bid quantity by 25 percent or less, payment will be at the Contract Unit Price. If the actual quantity of the item of work varies from the Bid quantity by more than 25 percent, payment will be per 2-2.2.2 or 2-2.2.3.

In the case of an increase or decrease in a Bid Item, using this basis to adjust payment is limited to that portion of the change that, together with all previous changes to that item, does not exceed 25 percent of the total cost of the item based on the original quantity and Contract Unit Price.

2-2.2.2 Increases of More than 25 Percent. If the actual quantity of an item of work covered by a Contract Unit Price and constructed in conformance with the Plans and Specifications exceeds the Bid quantity by more than 25 percent, payment for the quantity in excess of 125 percent of the Bid quantity is based on an adjustment in the Contract Unit Price we mutually agree to or, at the Engineer's option, on the basis of Extra Work per 2-3. The Extra Work per 2-3 basis of payment does not include fixed costs. You recover fixed costs through payment for 125 percent of the Bid quantity at the Contract Unit Price. If payment for units of a bid item that exceeds125 percent of the price shown on the Bid Item List is less than $5,000 at the unit price, the Engineer may not adjust the unit price unless you request an adjustment in writing.

2-2.2.3 Decreases of More than 25 Percent.
If the actual quantity of an item of work covered by a Contract Unit Price and constructed in conformance with the Plans and Specifications is less than 75 percent of the Bid quantity, there is no payment adjustment payment unless you request one in writing. If you make a request, payment is based on an adjustment in the Contract Unit Price mutually agreed to or, at the Engineer's option, based on Extra Work per 2-3. In no case, however, will payment be less than would be made for the actual quantity at the Contract Unit Price nor more than would be made for 75 percent of the Bid quantity at the Contract Unit Price.

2-2.3 Agreed Prices. If mutual agreement cannot be reached, the Engineer may direct you to proceed on the basis of Extra Work per 2-3, except as otherwise specified in 2-2.2.2 and 2-2.2.3. Agreed prices must be negotiated before beginning the changed work.

2-2.4 Eliminated Items. If any Bid item is eliminated, payment will be for your actual costs incurred in connection with the eliminated item before written notification from the Engineer stating its elimination. If you order material conforming to the Plans and Specifications to use in the eliminated item before the date the Engineer notifies you of its elimination and that order cannot be canceled, you will be paid for the actual cost of the material which then becomes the City's property. The City will pay you for additional actual handling costs. If the material can be returned, you must return it and the City will reimburse you for the actual cost to do so as well as any handling charges. Actual costs as used here are computed based on Extra Work per 2-3.

2-2.5 Acceleration Clause.

A. The City reserves the right to accelerate the Work. If the City directs acceleration, its directive will be in writing. Keep cost and other project records related to the acceleration directive apart from normal project costs and records and provide a daily written record of the acceleration cost to the City.
B. If you believe that the City's action or inaction constitutes an acceleration directive, immediately notify the City in writing. In your written notification, detail the circumstances of the acceleration directive. Do not accelerate your work efforts until the City responds. If the City directs or requires acceleration, maintain all cost records referred to above and provide them to the City daily.
C. To recover additional costs due to acceleration, document the additional expenses you incurred and paid. The only recoverable labor costs are overtime or shift premium costs or the cost of additional laborers brought to the Site to perform the accelerated work. The only recoverable equipment costs are the cost of added equipment mobilized to the Site to perform the accelerated work.

2-3 EXTRA WORK.

2-3.1 General. The Engineer will classify new or unforeseen work not covered by Contract Unit Prices as Extra Work.

All costs set forth in A through J, below, are part of your overhead and profit and as included in the Contract Amount and covered in 2-3.2.6. Do ***not*** include any of the following in the Cost of the Work:

A. Payroll costs and other compensation of your project manager, superintendents, project engineers, officers, executives, principals, owners, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks and other personnel you employ at the Project site or in your principal or a branch office for general administration of the Work;
B. Costs and expenses of your principal office, branch offices and office located at the Project site;
C. Any part of your capital expenses, including interest on your capital employed for the Work and charges against you for delinquent payments;
D. Cost of premiums for all bonds and for all insurance whether or not the Contract Documents require you to purchase and maintain them excepting the cost of premiums in 2-3.2.6;
E. Costs due to negligence, act or failure to act by you, any subcontractor, or anyone else directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, correcting defective Work, disposal of materials or equipment furnished in error and repair and replacement of any property damage;
F. Consumable materials, such as drill bits, abrasive discs, gloves, rags, rope, welding tips, etc.;
G. Tools and equipment with an original costs of less than $1,000;
H. Other overhead or general expense costs of any kind and the cost of any item not specifically set forth in 2-3.2.6;
I. Consequential expenses including bonding capacity impairment, lost opportunity, labor, wage or cost escalations, legal expenses or changes in taxes;
J. All costs in 2-3.1 apply to any claims of subcontractors and suppliers, regardless of tier.

2-3.2 Payment.

2-3.2.1 General. When we cannot agree on the price for extra work before you begin it, the City will pay for the extra work based on the accumulation of costs provided here.

2-3.2.2 Basis for Establishing Costs.

A. Labor - The cost of labor is the actual cost for the wages of workers performing the Extra Work, plus employer paid payroll taxes, workers' compensation insurance, liability insurance, health and welfare, pension, vacation, apprenticeship funds and other direct costs resulting from federal, state, or local laws, as well as assessments or benefits required by lawful collective bargaining agreements.

   Do not use a labor classification that would increase the Extra Work cost unless you establish the need for it. Report labor costs for equipment operators and helpers only when the costs are not included in the invoice for the equipment rental. The labor cost for foremen must be only for time spent on the Extra Work.

B. Materials - Report the cost of materials at the invoice or lowest current price at which the materials are locally available and delivered to the Work site in the quantities required plus sales tax, freight and delivery. The City reserves the right to approve materials and supply sources or

to supply materials to you if necessary for the progress of the Work. The City will not apply a markup to any material it provides.

2-3.2.3 Tools and Equipment Rental. To determine equipment rental rate costs, use the rates listed for the equipment in the State of California, Department of Transportation (Caltrans) publication "Equipment Rental Rates and Labor Surcharge," available from Caltrans at http://www.dot.ca.gov/hq/construc/equipmnt.html, in effect on the date the work is performed, regardless of ownership and any rental or other agreement you enter into to use the equipment. If the Engineer decides it is necessary to use equipment not listed in that publication, the Engineer will establish a suitable rental rate. You may furnish any cost data that might assist the Engineer to establish the rental rate. Rental time is not reimbursed while the equipment is inoperative due to breakdowns.

Operators of rented equipment will be paid as provided in 2-3.2.2.

The rental rates paid include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance necessary equipment loading, transportation costs and all incidentals.

Equipment used intermittently that could, when not in use, be returned to its rental source at less expense to the City than holding it at the Work site, must be returned unless you elect to keep it at the Work site at no expense to the City.

All equipment must be acceptable to the Engineer, in good working condition and suitable for the purpose for which it is used.

The reported rental time for equipment already at the Work site is the duration of its use on the Extra Work. This time begins when the equipment is first used on the Extra Work plus the time required to move it from its previous site and back or to a closer site.

2-3.2.4 Other Items. The City may authorize other items required on the Extra Work including labor, services, material and equipment. These items must be different from those required for the Work and be of a type not ordinarily available from you or subcontractors.

2-3.2.5 Invoices. Submit vendors' invoices for material, equipment rental and other expenditures with the daily report per 2-3.3. If you do not substantiate the daily report with invoices or other documentation, the City will establish the cost of the item involved at the lowest price that was current at the time of the report.

2-3.2.6 Markup.

2-3.2.6.1 Work by Contractor. The City will add the following percentages to your costs as determined under 2-3 that constitutes the markup for all overhead, increase in your bonds, administrative expenses and profit on your work:

A. Labor	20%
B. Materials	15%
C. Equipment Rental	15%
D. Other Items and Expenditures	15%

2-3.2.6.2 Work by Subcontractors. When any part of the Extra Work is performed by a subcontractor of any tier, the markup established in this section will be applied to the subcontractor's actual cost of the work. Your markup on subcontractor work is limited to 5 percent.

The City will not pay for any item not set in 2-3.2.6.1 and 2-3.2.6.2, including without limitation, your overhead, general administrative expense, supervision or damages claimed for delay in performing the remainder of the Work.

Do not construe this to preclude recovery of your damages stemming from a delay the City is responsible for that is unreasonable under the circumstances and was not within our mutual contemplation.

2-3.3 Contractor Daily Reports. When we cannot agree on the cost of the Extra Work, submit a daily report to the Engineer on City-approved forms that includes applicable delivery tickets listing all labor, materials and equipment involved for that day and other authorized services and expenditures. If you do not submit the daily report by the close of the next working day, you waive any rights for that day. The City will try to reconcile the report daily, which you and the City Representative will sign. If there is a disagreement, each party will enter relevant notes to explain the points in question. Each party keeps a signed copy of the report. Submit reports by subcontractors or others to the City.

Notify the City Representative at the beginning of each day when Extra Work is in progress. The City will not pay for work it has not verified.

The report shall:

A. List the names of workers, classifications and hours worked
B. Describe and list quantities of materials used
C. List the equipment type, size, identification number and hours of operation including loading and transportation, if applicable
D. Describe other services and expenditures the City requires.

2-3.4 Price Reduction for Defective Cost or Pricing Data.

A. If the City determines that any price, including profit or fee, negotiated in connection with any Change Order or claim settlement under this Contract, or any cost reimbursable under this Contract, was increased because:
   1. You furnished cost or pricing data that was not accurate, complete and current as certified in your Certificate of Current Cost or Pricing Date;
   2. A subcontractor, supplier, materialman or prospective subcontractor at any tier furnished cost or pricing data to support a subcontract in your cost estimate that was not accurate, complete and current on the date certified in your Certificate of Current Cost or Pricing Data; or,
   3. You or a subcontractor, supplier, materialman or prospective subcontractor at any tier furnished data not within 1 or 2 above, which was not accurate.
B. The City will reduce the price and modify the Contract in writing, if necessary, to reflect the reduction. Any reduction in the Contract price because of a prospective subcontractor's defective subcontract data, when the subcontract was not awarded to that subcontractor, is limited to the amount plus applicable overhead and profit, by which the actual subcontract or actual Contract cost if there was no subcontract, was less than the prospective subcontract cost

estimate you submitted, provided that the actual subcontract price was not affected by the defective cost or pricing data.

C. Provide the following certification on all Change Order cost quotations or requests or all requests for equitable adjustment exceeding $5,000.

CERTIFICATE OF CURRENT COST AND PRICING DATA

This is to certify that, to the best of my knowledge and belief, cost or pricing data submitted in writing, or specifically identified in writing if actual submission of the data is impractical, to the City to support (proposal quotation, request for equitable adjustment, or other submissions involved, appropriately identified) are accurate, complete and current as of (date).

Contract No. _____

Proposed Change Order No. _____

Company: _____

Name: _____

Title: _____

Date: _____

Signature: _____

2-4 CHANGED CONDITIONS. Notify the Engineer of the following Work site conditions, "changed conditions," in writing, when discovered and before disturbed:

A. Subsurface or latent physical conditions differing materially from those represented in the Contract Documents;
B. Unknown physical conditions differing materially from those ordinarily encountered and generally recognized as inherent in work of the character being performed; and
C. Remove to a Class I, Class II or Class III disposal site according to provisions of existing law, material differing from that in the Contract Documents you believe may be hazardous waste as defined in § 25117 of the Health and Safety Code

The Engineer will investigate conditions that appear to be changed conditions. If the Engineer determines that conditions are changed conditions and will materially affect costs, the Engineer will issue a Change Order adjusting compensation for that portion of the Work according to 2-2.2, and you may submit a written request for a time extension according to 5-6, which the Engineer will grant.

If the Engineer determines that the conditions do not justify a compensation adjustment, you will be notified in writing. The notice will also advise you of your obligation to notify the Engineer in writing if you disagree.

If you disagree with the decision, submit a written notice of potential claim to the Engineer before beginning the disputed work. This dispute does not excuse you from any scheduled completion date in the Contract and you must proceed with all Contract Work. However, you retain all rights provided either by the Contract or by law pertaining to dispute and protest resolution between the contracting parties. Proceed according to 2-5.

Failing to give notice of changed conditions when discovered and before being disturbed constitutes a waiver of all claims connected to them.

2-5 DISPUTED WORK. If we are unable to reach agreement, the City may direct you to proceed with the Disputed Work and will pay you pursuant to 2-2, 2-3, mediation or arbitration if the City and Contractor agree to it, or as fixed in a court of law.

Keep and furnish records of Disputed Work to the Engineer according to 2-3 but do not construe this as proceeding under 2-3.

ARTICLE 3 – CONTROL OF MATERIALS

3-1 MATERIALS AND WORKMANSHIP.

3-1.1 General. Furnish all materials required to complete the Work, except materials the Specifications designate as City-furnished materials.

All materials, parts, and equipment you furnish for the Work must be new, high grade and defect free. Do not use used materials, parts and equipment unless allowed in the Specifications.

The quality of materials and workmanship are subject to the Engineer's approval. The Engineer will reject materials and workmanship that do not conform to the requirements of the Specifications. At the Engineer's direction, immediately remove defective work or material, whether in place or not, from the Work site at your expense.

If you fail to replace defective or damaged work or material after reasonable notice, the Engineer may have the work or materials replaced and deduct the replacement expense from money owed you.

3-1.1.1 Contractor Equipment and Plants. Operate only equipment and plants suitable to produce the quality of work and materials required on the project. Maintain the equipment and plants in good repair during the Work. Do not use obsolete or badly worn equipment and plants; do not exceed the Manufacturer's ratings.

Design and construct plants according to the general practice for the equipment and with enough capacity to ensure a material production rate adequate to ensure completion within the time limit(s) specified in the Contract Documents, if any.

When ordered by the Engineer, remove unsuitable equipment from the Work site and do not use the unsatisfactory plants and equipment.

3-1.1.2 Adoption or Revision Date for Standards, Codes and Tests. Whenever a standard, code, specification, or test is referred to and the designation representing the adoption date or the latest revision is omitted, use the latest revision of the standard, code, specification or test in effect on the day the Notice Inviting Bids is dated.

Submit, according to Public Contract Code § 3400, data substantiating requests for substitution of "equal" items within thirty-five (35) days of Contract award or before 10 percent of the Contract Working Days have expired, whichever is less. This time is included in the number of Working Days allowed to complete the Work. The Engineer's decision regarding substitution acceptability is final.

Materials, equipment and supplies provided must, at no charge to the City, fully conform to all applicable local, state and federal safety laws, rules and regulations and orders and provide only those materials, equipment, and supplies even though omitted in the Contract Documents, of the particular material, equipment or supply specified.

3-1.2 Protection of Work and Materials. Provide and maintain storage facilities and employ measures that preserve the specified quality of materials used in the Work. Stored materials must be reasonably accessible for inspection. Adequately protect new and existing work and all equipment for the duration of the Contract.

Do not, without the City's written consent, assign, sell, mortgage, pledge or remove installed or delivered equipment or materials necessary to complete the Work.

3-1.3 Inspection Requirements. The Engineer may inspect and test materials for the Work. Supply without charge, any samples that may be required

Give the Engineer a list of your sources of materials including locations where the materials will be available for inspection a minimum of twenty (20) Calendar Days before they are used. The Engineer may inspect, sample or test materials at the supply source or at other locations but the inspection, sampling or testing will not happen until you assure the Engineer of both your cooperation and assistance and that of the material supplier. Insure that the Engineer has free access at all times to the material inspected, sampled or tested. These inspections and tests, if made other than where the material will be incorporated in the Work, do not guarantee acceptance of the material or the continued acceptance of material presumed similar to what the City inspected and tested The City's inspection and testing do not relieve you or your suppliers of responsibility for quality control.

Deliver the manufacturers' warranties, guarantees, instruction sheets and parts lists furnished with certain materials incorporated in the Work, to the Engineer before the Contract Work is accepted.

You may examine reports and records of inspections made and tests performed when they are available at the Work site.

3-1.3.1 General. The Engineer may inspect material production or product manufacture at the supply source but not before you assure the Engineer of the cooperation and assistance of both you and the material producer. The Engineer must have free entry at all times to the parts of the plant that concern the manufacture or production of the materials. Furnish free of charge, adequate facilities to make the necessary inspection. The City assumes no obligation to inspect materials at the supply source.

Unless otherwise stated in the Specifications, inspection is required at the source for asphalt concrete pavement mixtures, structural concrete, metal fabrication, metal casting, welding, concrete pipe manufacture, protective coating application and similar shop or plant operations. The Specifications list additional materials and fabricated items that require inspection at the source.

Steel pipe in sizes less than 18 inches and vitrified clay and cast iron pipe in all sizes, are acceptable when certified as compliant with the Specifications subject to sampling and testing by the City. Standard items of equipment such as electric motors, conveyors, elevators, plumbing fixtures, etc., are inspected only at the Work site. Special items of equipment like designed electrical panel boards, large pumps, sewage plant equipment, etc., are inspected only at the performance testing source. Inspection at the source for other items is provided in the Specifications.

3-1.3.2 Inspection of Materials Not Locally Produced. When you intend to purchase materials, fabricated products or equipment from sources more than 50 miles beyond the City's geographical limits, engage at your expense an inspector or accredited testing laboratory, approved by the Engineer, to inspect the materials, equipment or process before producing any material or equipment. The inspector or representative of the testing laboratory must evaluate the materials to confirm they comply with the requirements of the Plans and Specifications. Forward the required reports to the Engineer. The approved agent must conduct a proper inspection before any materials ship or are processed, fabricated or treated. The agent's approval does not relieve you of your responsibility for complying with the requirements of the Contract Documents.

3-1.3.3 Inspection by the City. The City will provide all inspection and testing laboratory services within 50 miles of its geographical limits.

3-1.4 Test of Materials. Before incorporation into the Work and at no cost to the City, submit samples of materials the Engineer may require and deliver the materials for testing to the place and at the time the Engineer designates. The Engineer may direct, unless otherwise specified, all initial testing and a and two additional retests at no expense to you. The Specifications identify testing you provide and pay for.

To allow enough time to perform the tests, notify the Engineer in writing at least twenty (20) Working Days before you intend to use the materials. The notice must name the proposed supplier and the material source.

If you send the notice of intent to use before the materials are available for testing or inspection, or so far in advance that the materials on hand at the time will be replaced by a new lot before it's used on the Work, re-notify the Engineer when representative samples are available.

The Engineer or a designated representative will make the inspection and testing but if made at any point other than at the point of incorporation in the Work, they do not guarantee acceptance of the materials nor of continued acceptance of materials presumed similar to those inspected and tested.

Test materials according to commonly recognized procedures of technical organizations and any special procedures prescribed in the Contract Documents. Material sampling and testing will occur when, during the process of the Work, the Engineer deems desirable; cooperate in obtaining the samples.

3-1.4.1 Testing Laboratory. Use and pay for the services of an independent testing laboratory, subject to the City's approval, to perform other testing and inspection services required by the Contract Documents.

Before starting Work, submit the name, address and telephone number of your testing laboratory as well as the names of a full-time registered engineer and a responsible officer.

Using testing laboratories does not relieve you of your obligation to perform the Work according to the Contract Documents.

Laboratory field technicians employed by the City have no authority to release, revoke, alter or enlarge on the requirements of Contract Documents or to approve, accept or stop any portion of the Work.

You must:

A. Cooperate with laboratory personnel, provide access to work and arrange access to manufacturer's operations.

B. Provide preliminary representative material samples to the laboratory in the required quantities.

C. Furnish copies of mill test reports.

D. Provide casual labor and facilities for access to work being tested, obtain and handle samples at the site, facilitate inspections and tests and provide facilities for the laboratory's exclusive use to store and cure test samples.

E. Coordinate testing requests through the City Representative. Notify the City Representative at least three (3) Working Days before operations to allow for assignment of personnel and scheduling of tests.

F. Pay for additional laboratory inspections, sampling and testing required for your convenience and when initial tests indicate that work does not comply with Contract Documents.

G. When required by the Contract Documents, submit the manufacturer's certificate, executed by a responsible officer, certifying that the product(s) meet or exceed specified requirements. Provide the certification in duplicate.

3-1.5 Certificate of Compliance. Give an original, wet signed Certificate of Compliance to the Engineer before using any material or assembled material required by the Specifications or the Engineer.

The Engineer may waive Specifications materials testing requirements and accept the manufacturer's written certificate of compliance that the supplied materials meet those requirements. The Engineer may require inclusion of materials test data with the submittal.

Materials used based on a Certificate of Compliance may be sampled and tested at any time. Submitting a Certificate of Compliance does not relieve you of responsibility for incorporating material into the Work that conforms to the requirements of the Contract Documents. The Engineer may reject any material not conforming to the requirements whether in place or not.

3-1.6 Trade Names or Equals. You may supply any of the materials specified or offer an equivalent. The Engineer will determine whether the material offered is equivalent to that specified. Allow adequate time for the Engineer to make this determination.

A materials list is not intended to be comprehensive or in order of preference. You may offer any material, process or equipment you consider equivalent to that indicated. At your expense, furnish data about items you offer as equivalent to those specified as provided in the Contract Documents.

If the Engineer requires it, test the material to confirm that its quality, strength, physical, chemical or other characteristics including durability, finish, efficiency, dimensions, service and suitability will allow it to fulfill its intended function. The Engineer must approve the test methods. Report the test results promptly to the Engineer who will evaluate them and determine whether the substitute item is equivalent.

The Engineer's findings are final. Do not install and use a substitute item until the Engineer approves it.

If your substitute is not found equal to the specified material you must furnish and install the specified material. No circumstances resulting from the provisions of this section affect the Contract completion time.

Submit a products list as follows:

A. Within the time stated in the Specifications, send the Engineer the number of copies you need plus four (4) of a list of major products you propose installing that includes the manufacturer's name. Arrange the products by specification section number, title and article number.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation and reference standards.

C. The Engineer will reply in a writing that states whether there is a reasonable objection to the listed items. Failure to object to a listed item does not constitute a waiver of Contract Documents requirements.

The following limitations apply to substitutions:

A. The City will only consider requests for substitutions of products during the time specified in the Contract Documents. The City will consider subsequent requests only in the case of product unavailability or other conditions beyond your control. Material delivery schedules do not justify a substitution.

B. The City will not consider substitutions indicated on shop drawings or product data submittals without a separate formal request, or if requested directly by a subcontractor or supplier or if acceptance will require a substantial revision of the Contract Documents.

C. Do not order or install substitute products without the Engineer's written acceptance.

D. The Engineer will only consider one request for substitution for each product line. If a

substitution is not accepted, provide the specified product.

E. The Engineer will determine the acceptability of substitutions.

Requests for substitutions shall conform to the following:

A. Submit each request for substitution separately and document each request with complete data to substantiate its compliance with requirements of Contract Documents.

B. Identify the product by Specifications section and article numbers. Provide the manufacturer's name and address, trade name or product and model or catalog number; list fabricators and suppliers as appropriate.

C. Include an itemized comparison of the proposed substitution with the specified product, listing variations and referencing Specifications section and article numbers.

D. Provide cost data comparing the proposed substitution with the specified product and the net change to the Contract Price.

E. List the availability of maintenance services and replacement materials.

F. Discuss the substitution's effect on the construction schedule and any changes required in other work or products.

A request for substitution is your representation that you have investigated the proposed product and have determined it is equal to or superior in all respects to the specified product and that you provide the same warranty for the substitution as for the specified product. Coordinate installing the accepted substitute, making any changes necessary for the Work to be complete in all respects. Certify that the cost data you present is complete and includes all related costs under this Contract and waive claims for additional costs related to the substitution that may later become apparent. Submit the number of copies you need plus four (4) of the request for substitution. For accepted products, submit shop drawings, product data and samples and tests conducted in accordance with 1-6.

3-1.7 Weighing and Metering Equipment. Use only scales and metering equipment inspected for accuracy and certified within the past 12 months by the State of California Bureau of Weights and Measures, by the County Director or Sealer of Weights and Measures, or by a scale mechanic registered with or licensed by the county for proportioning materials.

The accuracy of a scale, except as stated here, must meet the standards of the Business and Professions Code and the Code of Regulations pertaining to weighing devices. Give the Engineer a Certificate of Compliance for approval prior to operation. Renew the Certificate of Compliance whenever the Engineer requires, at no cost to the City.

Arrange scales, whose figures must be clearly legible, for easy reading from the operator's platform or area. The scales must indicate the true net weight without applying any factor. Scales must be accurate to within one (1) percent when tested with the plant shut down. Weighing equipment must be insulated against vibration or movement by other operating equipment in the plant area so that the weight error with the entire plant running does not exceed two (2) percent for any setting or one and one half (1.5) percent for any batch.

3-1.8 Calibration of Testing Equipment. Testing equipment including, but not limited to, pressure gages, metering devices, hydraulic systems, force (load) measuring instruments and strain-measuring devices must be calibrated by a testing method acceptable to the Engineer at intervals not exceeding 12 months and after the equipment has been repaired, modified or relocated. Provide calibration certificates when the Engineer requests them.

3-1.9 City-Furnished Materials. City-furnished materials listed in the Specifications are available to you free of charge.

Give the Engineer a written request for City-furnished material at least fifteen (15) Working Days before the date you intend to use it that includes the quantity and type of each material.

The Specifications designate locations where City-furnished materials will be available to you free of charge. Haul those materials to the Work site at your expense, including any loading and unloading that may be involved. If the Specifications do not designate locations, the City will furnish the materials to you free of charge at the Work site. In either case, all handling and placing costs of City-furnished material are included in the price for the contract item involved.

You are responsible for City-furnished materials given to you and must pay all demurrage and storage charges. Once you take possession of City-furnished materials, replace at your cost any that are lost or damaged from any cause. You are liable to the City for the cost of replacing City-furnished materials and the City may deduct those costs from any monies due or that become due to you. All City-furnished materials not used on the Work remains the City's property and you must arrange with the City Representative to return it to the City at your expense.

ARTICLE 4 – UTILITIES

4-1 GENERAL. For purposes of this Article 4, definitions of the terms referenced below are as follows:

An "unidentified" underground main or trunk line utility is one not indicated at all on the Plans; a "misidentified" underground main or trunk line utility is one not indicated on the Plans with reasonable accuracy (a "misidentification"). An underground main or trunk line utility is one indicated on the Plans with reasonable accuracy unless its actual location is substantially and materially different from that indicated on the Plans.

The term "rearrangement" of utilities means relocating, altering, reinstalling and reconstructing utilities, including removing existing related utilities there, necessary to accommodate the Work. Whenever in this Article 4 one or more of these rearrangement activities is referenced, the reference includes all other activities required to accommodate the Work.

4-2 LOCATION.

4-2.1 General. The Plans or the Specifications include known utilities and their respective owners. Where the Plans show underground utilities, assume every property parcel will be served by a service connection for each type of utility.

Pursuant to Government Code § 4216, contact the appropriate regional notification center (Underground Service Alert of Southern California [USA] at 1-800-422-4133) for an inquiry identification number at least two (2) but not more than fourteen (14) Working Days before beginning any excavation required for the Work. Caltrans and some other agencies are not required to be a member of a regional notification center. Contact non-member agencies directly and ask them to locate and mark their subsurface installations. Pursuant to Government Code § 4216.2., coordinate any proposed excavation within ten (10) feet of a high priority subsurface installation with the operator.

Before starting the Work, physically locate subsurface installations within 24 inches of any side of excavations required for the Work. Determine the horizontal and vertical location, alignment, depth, material type and size of each subsurface installation. Excavate according to Government Code § 4216.4, and provide the subsurface installation location data to the Engineer within the time stated in the Specifications.

Notify the Engineer in writing immediately after identifying potential physical conflicts between existing subsurface installations and the Work. Include in the written notification:

A. Location date;
B. Location method;
C. Type, size, and material of subsurface installation;
D. Horizontal location;
E. Elevation (or depth from existing pavement or ground surface) of the top and bottom of the subsurface installation; and
F. Presumed owner.

Complete excavation, backfill and placement of temporary resurfacing on the same day. Place permanent resurfacing within five (5) Working Days unless otherwise required by the Specifications or directed by the Engineer.

A list of utility companies with facilities located in or near the construction area is in the Specifications. The Engineer tried to determine exiting utility substructures at the Work site by reviewing the records of owners of known utilities in the area and consulting with them, and used their information to show on the Plans their utility substructures (except for service connections) that may affect the Work.

Utility information provided on the Plans and in the Specifications has not been verified and may not be accurate or complete. Except as expressly provided in this Article 4, do not rely on the utility information. The City assumes no responsibility for its accuracy or completeness. Changed conditions within the scope of 2-4 do not include utilities.

Determine the exact location, both horizontal and vertical, type and size of all existing utilities including service connections, before beginning work that could damage the utilities or otherwise affect or be affected by the utilities or interfere with their service. Where the Plans show underground main distribution conduits like water, gas, sewer, electric power, telephone or cable television, assume that every adjacent property parcel will be served by a service connection for each type of utility shown. Investigate, research, survey and pothole as you believe necessary to make the determinations and immediately notify the Engineer of any utility discovered in a different location than indicated on the Plans or not indicated on the Plans at all.

Your cost to locate any unidentified or misidentified underground main or trunk line utility will be paid for as an addition to the Work according to Article 2. You are not entitled to this additional compensation if the existence and location of the utility, with reasonable accuracy, was or should have been known to you on the date Bids were due or could have been inferred at that time from the presence of visible facilities such as buildings, meters, junction boxes or identifying markers. The cost to locate all other utilities is included in prices in the Bid for other items of the Work.

Information about underground and internal utilities and appurtenances you are required to record in the Record Documents as specified in 6-14 must include but not be limited to, the accurate location of underground utilities determined pursuant to 4-2 that remain in place as well as utilities either you or the utility owners rearrange.

Ask the City of Irvine Traffic Operations Division at 949-724-7649, to locate any existing traffic signal conductors and interconnect within the construction area before performing Work that may affect or be affected by the existing facilities.

Except as expressly provided in this Article 4 regarding unidentified or misidentified underground main or trunk line utilities, a utility company's failure to accurately mark its facilities does not justify a time extension or additional compensation from the City.

Obtain photographs of all markings made by your forces as well as all USA markings and submit to the Engineer within two (2) Working days. All the photographs must show the markings in relation to one or more identifiable landmarks that will remain in place after completion of the Work and of any utility removal and rearrangement work in the vicinity.

Governmental agencies and utility owners reserve the right to enter at any time, any street, alley, right of way or easement to maintain and repair their property.

4-2.2 Payment. Include payment for your cost to locate utilities in the various items of work; the City will not pay additional compensation for this cost.

4-3 PROTECTION. Do not interrupt the service or disturb the support of any utility without authority from the utility owner or direction from the Engineer. Maintain valves, switches, vaults and meters as readily accessible for emergency shutoff.

Unless otherwise provided on the Plans or in the Specifications, furnish and place necessary protection and support where required to ensure support of utilities potentially impacted by the Work.

The City will pay any additional cost you incur to protect and support an unidentified underground main or trunk line utility or from misidentifying an underground main or trunk line as an addition to the Work according to Article 2. You are not entitled to this additional payment if the utility's existence and

location or with reasonable accuracy should have been known to you on the date Bids were due or could otherwise have been inferred at that time from the presence of visible facilities such as buildings, meters, junction boxes or identifying markers. Include the cost to protect and support all other utilities in prices in the Bid for other items of the Work.

Immediately notify the Engineer and the utility owner if any utility is disturbed or damaged during the Work. If the Engineer directs, restore, repair or replace the disturbed or damaged utility.

The City will pay your cost to restore, repair or replace any unidentified or misidentified underground main or trunk line utility disturbed or damaged by the Work that does not result from your failure to perform your obligations under the Contract Documents including without limitation, § 4-2, or to exercise reasonable care as an addition to the Work according to Article 2. Except where this paragraph allows additional compensation, either you or the utility owner must restore, repair or replace at your expense, all utilities you disturb or damage in the course of the Work.

To the full extent allowed by law, all obligations listed in 6-3.2 apply if any claims or liabilities as defined there, are asserted or claimed by any person or entity resulting from any disturbance or damage to utilities your act or omission caused, whether or not the utilities are accurately marked on the Plans or in the field by the utility owner and whether or not there is concurrent active or passive negligence by the City and City Personnel, but excluding any claims or liabilities arising from the sole active negligence or willful misconduct of City or City Personnel.

When placing concrete around or contiguous to any non-metallic utility installation, you must at your expense:

A. Furnish and install a 2-inch cushion of expansion joint material or other similar resilient material; or
B. Provide a sleeve or other opening which will result in a 2-inch minimum-clear annular space between the concrete and the utility; or
C. Provide other acceptable means to prevent embedment in or bonding to the concrete.

Where concrete is used for backfill or for a structure which would result in embedment or partial embedment of a metallic utility installation, or where the coating, bedding or other cathodic protection system is exposed or damaged by your operations, notify the Engineer and contact the affected utility owner about how to maintain or restore the integrity of the system, and implement the procedures at your expense.

4-4 REMOVAL. Remove all interfering portions of utilities shown on the Plans as "abandoned" or “to be abandoned in place.” Before starting removal operations, ask the City whether the abandonment is complete, and include the removal and disposal costs in your Bid for the items of work requiring the removals.

4-5 RELOCATION. When feasible, the owners responsible for utilities within the area affected by the Work will complete necessary installations, relocations, repairs, or replacements before you begin the Work. When the Plans or Specifications indicate that others will relocate, alter or construct a utility installation, the City will negotiate with the owners and have the utility work done at no cost to you. Protect relocated utilities in their new position and include the cost to protect in the Bid for the items of work requiring the relocation.

If you find utilities that interfere with the Work after the Contract is awarded, the respective utility owners will rearrange them, or the Engineer may order you to perform the rearrangement as an addition to the Work per Article 2. Alternatively, the Engineer may order changes in the Work to avoid the interference per

Article 2. The utility owner must be satisfied with your work on its utility and it must comply with the Contract Document requirements.

When the Plans or Specifications require you to rearrange a utility as part of the Work, all costs for the work are considered included in the Bid for the items of work requiring it. If an underground main or trunk line utility you are to rearrange is misidentified in the Plans, any additional cost you incur for the work as a result is treated as an addition to the Work according to Article 2 unless its location, with reasonable accuracy, was or should have been known to you on the date Bids were due or could have been inferred then by visible facilities like buildings, meters, junction boxes or identifying markers. Except as provided in this paragraph, you are not entitled to any additional compensation because of inaccuracies in the Plans regarding utility rearrangements included in the Work.

If you request temporary or permanent utility rearrangement for your convenience it is your responsibility to make all arrangements necessary for the work and to bear all related costs. You are not entitled to any additional compensation because of the utilities or work.

The provisions of this paragraph are subject to the provisions of the previous paragraph. Where the Plans or Specifications require you to rearrange any service connections, this work is included in your Bid for the items of work necessitating the work.

Where necessary, the utility owner will relocate service connections within the limits of the Work or within temporary construction or slope easements. When the Engineer directs, arrange to relocate service connections between the meter and the property line or between a meter and the limits of temporary construction or slope easements. Payment to relocate the service connections are according to 2-2 or 2-3. Payment includes restoring all existing improvements that are affected. You and the utility owner may agree to disconnect and reconnect interfering service connections. The City will not be a party to that agreement.

4-6 DELAYS. The construction schedule developed in accordance with 5-1 allows adequate time for you or the utility owner to protect, remove and rearrange utilities. If the utility owner performs the work, the construction schedule will allow for the time the utility owner requires for it. Notify the Engineer in writing of any subsequent changes in the construction schedule that will affect the time available to protect, remove, or rearrange utilities and get the Engineer's approval of the changes.

You are not entitled to any extensions of the Contract Time or compensation for damages incurred by delays attributable to utilities at the Work site except as provided in 5-6.1, or as provided below. Delays described below are not delays for which the City is responsible within the meaning of 5-6.3.

A. Subject to 5-6.2 and 5-6.4, you are entitled to an extension of the Contract Time for any delay in the Work directly attributable to an unidentified underground main or trunk line utility or the misidentification of an underground main or trunk line utility in the Plans, unless the utility's location, with reasonable accuracy, was or should have been known to you or could have been inferred from visible facilities like buildings, meters, junction boxes or identifying markers on the date Bids were due. If you are entitled to a time extension, you are also entitled to compensation for equipment idle time because of the delay, determined by the Engineer the same way determinations are made for equipment used in performing Extra Work according to Article 2. You are not entitled to any other compensation or damages because of the delay.
B. You may be given a time extension but no additional compensation for unforeseen delays attributable a utility owner’s failure to complete utility rearrangement work within the time scheduled for the work in the construction schedule or to complete utility rearrangement work that the Contract Documents indicate will be completed before your construction operations begin.

You are not entitled to a time extension or additional compensation for delays or losses described here that:

A. Result from your actions or omissions or which could have been avoided by any reasonable means, like the judicious handling of forces, equipment or plant; or
B. Arise in connection with utilities rearranged for your convenience. The Engineer will determine what damages you could have avoided.

Immediately notify the Engineer of any delays to your operations described here. Delays described here are not right of way delays within the scope of 1-9.

4-7 CONTRACTOR RESPONSIBILITIES. You must:

A. Cooperate with and provide Work site access to utility personnel.
B. Coordinate Contract Work with affected utilities. Remove all USA markings after completing the work requiring them before the City accepts and approves the Work.
C. Asphalt concrete pavement not overlaid or slurry sealed as part of the project bid items that is damaged by trenching, potholing or otherwise, must be slurry sealed after the pavement section is repaired. “Perpendicular” street cuts must be slurry sealed ten (10) feet each side of the cut and “longitudinal” cuts must be slurry sealed from pavement lane to pavement lane line for the entire damaged area or as directed by the City Representative. Type I slurry must be used on non-arterial streets and Type II slurry must be used on arterial streets. Replace damaged traffic striping, legends and markers. Avoid “patchwork” application of slurry by joining closely grouped areas of slurry applications. Compensation for this requirement is included in the prices paid for related items of work and no additional compensation is allowed.

4-8 PERMANENT UTILITIES. Contact and coordinate with utility owners all requirements for installing and connecting permanent utilities necessary for the Work including but not limited to, natural gas, electricity, water, sewer and telephone. Include all costs for this work, as well as costs to operate permanent utilities before the City accepts the Work, in Bid prices for the related items of work.

ARTICLE 5 – PROSECUTION, PROGRESS AND ACCEPTANCE OF THE WORK

5-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK. Begin the Work on the date in the Notice to Proceed and diligently complete it in the time provided in the Contract.

Notify the Engineer of your intent to begin work at least two (2) Working Days before starting any work.

Give the Engineer, within ten (10) days after executing the Contract, a construction progress schedule using the critical path method that shows the proposed dates for beginning and completing each item of the Work and the amount you anticipate each monthly payment will be due to you based on the progress schedule.

Format of the schedule is follows:

A. Prepare schedules as horizontal bar charts with a separate bar for each portion of work or operation according to the approved schedule of values that identifies the first workday of each week. Allow space to update.

B. Sequence of Listings: Chronological order at the start of each item of work.

C. Sheet Size: Multiple of 11x17 inches.

D. Provide a two week look-ahead schedule updated weekly.

Content of the schedules must:

A. Show the complete sequence of construction by activity, with dates for beginning and completing each construction element. Include any special sequencing specified in the Contract Documents.

B. Show lane closure notifications and dates.

C. Provide sub-schedules to define major and significant portions of the entire schedule.

D. Show the accumulated completion percent for each item and the total percent of Work completed as of first day of each month.

E. Provide a separate schedule showing dates for product procurement and delivery, shop drawing submittals and equipment installation as well as decision dates for finish selection, if applicable.

F. Show delivery dates for City-furnished products, if applicable.

G. Show the critical path.

Revisions to schedules must:

A. Indicate the progress of each activity to the submittal date and the projected completion date of each activity.

B. Identify activities modified since the previous submittal, major changes in scope and other identifiable changes.

C. Provide a written report describing any problem areas, anticipated delays and their impact on the schedule and include the corrective action taken or proposed and its effect.

D. Revise periodically as the Engineer directs. Failing to comply with an Engineer's directive is grounds for delaying the progress payment.

E. Show the revised critical path.

Required submittals:

A. Submit initial schedules within ten (10) days of executing the Contract. If requested, resubmit required revisions within seven (7) days of the request.

B. Submit an update schedule on or before the first day of each month beginning one month after the initial schedule as outlined in A, above. If requested, resubmit required revisions within seven (7) days of the request.

C. Submit four (4) copies of schedules to the Engineer.

D. Submit with a transmittal letter.

In addition:

A. Distribute copies of current schedules to the job site file, subcontractors, suppliers and other concerned parties.

B. Instruct recipients to report promptly, in writing, problems they anticipate will result from schedule projections.

Include the cost to conform to these requirements in the various items of work at no additional compensation.

5-2 PROSECUTION OF THE WORK. Diligently perform the Work to completion. If the Engineer determines you are not timely performing the Work you must, upon the Engineer's order, immediately take steps to remedy the situation. Include all costs to perform the Work as specified in the Contract Price. If you fail to take the necessary steps to comply fully with the Engineer's orders, the Engineer may suspend the Work completely or in part, until you do. If Work is suspended through no fault of the City, you are responsible for all expenses and losses you incur during the suspension. If you do not properly provide for public safety, traffic and protection of the Work during periods of suspension, the City may elect to do so and deduct its cost from monies due you. These actions do not relieve you of liability.

5-2.1 Time of Completion and Forfeiture Due to Delay. Complete the Work called for under the Contract within the time set forth in the Contract Documents.

You agree, according to Government Code § 53069.85, to forfeit the per day amount required by the Contract for each day of delay. The City will deduct that amount from any payments due or that become due to you.

The City has endeavored to identify all areas of the site which may contain hazardous waste as defined by Health and Safety Code § 25117, and unless otherwise noted, hazardous waste in these areas has been mitigated. However, the parties acknowledge the possibility that additional hazardous waste exists not previously identified. If, during the course of your work, you encounter hazardous waste, promptly notify the City through its designated representative. If the material is "hazardous waste" pursuant to Health and Safety Code § 25117, the City may have you perform the mitigation work or may have it done under a separate contract. If you perform the mitigation work, the City will pay its cost as an addition to the work according to Article 2. To the maximum extent permitted by law, the City is not be liable for any damages other than an appropriate time extension for delays caused by the hazardous waste conditions contemplated here.

The City will not penalize you for delays in completing the work due to unforeseeable causes beyond your control and without your fault or negligence, including but not limited to acts of nature or of the public enemy, acts of the government, acts of the City, acts of another contractor in performing a contract with the City, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather. These delays, except for acts of the City, do not entitle you to additional compensation. Your sole remedy is a time extension granted according to this section.

Within five (5) Calendar Days from the beginning of the delay, notify the Engineer in writing of the cause of the delay. The Engineer will establish the facts and the extent of the delay and extend the time to complete the Work if, in his judgment, the findings of fact justify an extension. The Engineer's findings are final.

5-2.2 Order of Work Requirements. When required by the Specifications or the Plans, follow the sequence of operations and restrictions required there.

Perform the Work to conform to the construction staging in the Specifications. Subject to the Engineer's approval, non-conflicting work in subsequent stages may proceed concurrently with work in preceding stages if you maintain satisfactory progress in the preceding stages. The Engineer's approval of any modifications you request to the order of work or staging of the work are not grounds for a Change Order request or a time extension request. If you deviate from the specified order of work or the staging plans, you do so at your own risk and assume all time impacts and cost associated with them.

5-3 SUSPENSION OF THE WORK.

5-3.1 General. The Engineer may suspend the Work in whole or in part for any time the Engineer finds in the City's best interest, for its convenience or due to your failure to carry out orders given or to perform any provision of the Contract. Immediately comply with the Engineer's written order to suspend the Work in completely or in part and resume work only when the Engineer orders or approves in writing.

The City is not liable for these suspensions except as specified in 5-6.3., which provides that delays resulting from suspensions the Engineer ordered because you failed to carry out orders given or to perform any provision of the Contract are not delays for which the City is responsible.

If the Engineer orders a work suspension as provided here, do at your expense, all the work necessary to provide a safe, smooth unobstructed passageway through construction for the public during the suspension period as provided in 6-9 and as stated in the Specifications. If you do not perform the work specified above, the City will perform the work and, if the suspension is due to your failure to carry out orders given or to perform any provision of the Contract, the City will deduct the cost from monies due or that become due to you.

If the Engineer orders a work suspension according to this section, the days on which the suspension order is in effect are Working Days if those days are Working Ways within the meaning of the definition in 5-7.2.

Suspending the Work does not relieve you of your responsibilities in the Contract Documents.

You may resume the Work after you provide:

A. A revised schedule showing each task yet to be accomplished and the timeline to perform each one to completion

B. Work force projections attached to each task listed by workweek

C. Cost expenditures attached to each task summarized by workweek

D. Lien releases from each subcontractor, supplier and vendor from whom you requested materials, equipment or any other service acknowledging the payments received

E. An Income and Expense Statement projecting how you will finance the rest of the project

5-3.2 Archaeological and Paleontological Discoveries. If you discover items of archaeological or paleontological interest, immediately stop excavation in the area and do not continue until ordered to do

so by the Engineer. When resumed, excavation operations within the area of discovery are at the Engineer's direction.

Discoveries that you may encounter include, but are not be limited to, dwelling sites, stone implements or other artifacts, animal bones, human bones and fossils.

You are entitled to an extension of time and compensation in accordance with 5-6.

5-4 TERMINATION OF THE CONTRACT FOR DEFAULT.

5-4.1 General. If, before the Work is accepted, you:

A. Become insolvent, assign your assets for the benefit of your creditors, are unable to pay your debts as they become due or are otherwise financially unable to complete the Work;
B. Abandon the work by failing to report to the work site and diligently performing the Work to completion;
C. Disregard written instructions from the Engineer or materially violate provisions of the Contract Documents;
D. Fail to perform the Work according to the schedule approved by the Engineer;
E. Disregard laws or regulations of any public body having jurisdiction or commit continuous or repeated violation of regulatory or statutory safety requirements, the City will consider you in default of the Contract.

Transmit notices and other written communications regarding default between you, the City and the surety according to 1-13.

In the event the City terminates this Contract for grounds later determined not to justify a termination for breach, the termination becomes a Termination of the Contract for Convenience pursuant to 5-5.

5-4.2 Notice to Cure. The City will issue a written notice to cure the default to you and to your surety. Begin satisfactory corrective actions within five (5) Working Days after receiving the notice.

5-4.3 Notice of Termination for Default. If you fail to begin satisfactory corrective action within five (5) Working Days after receiving the notice to cure or to diligently continue satisfactory and timely correction of the default, the City will find you in default of the Contract and the City:

A. Will terminate your right to perform under the Contract by issuing a written notice of termination for default to you and to your Surety;
B. May use any materials, equipment, tools or other facilities you furnished to secure and maintain the Work site; and
C. May furnish labor, equipment and materials the City finds necessary to secure and maintain the Work site.

The provisions of this subsection are in addition to all other legal rights and remedies available to the City.

5-4.4 Surety Responsibilities. When receiving written notice of termination for default, the surety must immediately assume all your rights, obligations and liabilities under the Contract. If the surety fails to protect and maintain the Work site, the City may do so and may recover all costs incurred. The Surety must notify the City that it is assuming all your rights, obligations and liabilities under the Contract. The City will pay all money that is due, or would become due to you, to the Surety as the Work progresses, subject to the terms of the Contact.

Within 15 Working Days of receiving the written notice of termination for default, the Surety must give the City a written plan detailing the course of action it intends to take to remedy the default. The City will

review the plan and notify the Surety if the plan is satisfactory. If the Surety does not submit a satisfactory plan, or if the Surety fails to maintain progress according to the plan the City accepts, the City may exclude, with 48 hours written notice, the Surety from the premises, take possession of all material and equipment and complete the Work in any way the City decides is appropriate. The City will charge its cost to complete the Work against the Surety and may deduct any monies due, or which would become due, the Surety. If the amounts due under the Contract are insufficient for completion, the Surety must pay the City, within 30 days after the City submits an invoice, all costs in excess of the remaining Contract Price.

5-4.5 Payment. The City will pay the Surety to complete the Work according to 8-3 minus the value of damages your acts caused the City.

5-5 TERMINATION OF THE CONTRACT FOR CONVENIENCE. The City reserves the right to terminate the Contract at any time if the Engineer determines termination is in the City's best interest.

If the City elects to terminate the Contract, the following govern the termination and your total compensation:

A. The Engineer will issue a signed written notice, terminating the Contract. Upon termination, you are relieved of further responsibility for damage to the Work excluding materials as specified in 3-1.2, 6-14 of the Specifications and, except as otherwise directed in writing by the Engineer, you must:

   1. Stop all work under the Contract except any you are specifically directed to complete;
   2. Perform work the Engineer believes necessary to secure the project for termination;
   3. Remove equipment and plant from the Work site;
   4. Protect materials from damage;
   5. Notify all subcontractors and suppliers that the Contract is terminated and that their contracts or orders are not to be performed unless the Engineer authorizes it in writing.
   6. Provide the Engineer an inventory of all materials previously produced, purchased or ordered from suppliers for use in the Work and not yet used in the Work including their storage location and other information the Engineer may request.
   7. Dispose of materials not yet used in the Work as directed by the Engineer. Provide the City good title to all materials the City purchased, including materials partially paid for as provided in 8-3.2, and with bills of sale or other documents of title for those materials.
   8. Subject to the Engineer's prior written approval, settle all outstanding liabilities and all claims arising out of subcontracts or orders for terminated materials. To the extent directed by the Engineer, assign all your right, title and interest under subcontracts or orders for materials terminated to the City.
   9. Give the Engineer documentation you are required to furnish under the Contract including, on projects where federal funds are involved, all documentation required under the federal requirements in the Contract.
   10. Take other actions directed by the Engineer.

B. Accepting the Contract as specified here does not relieve you of responsibility for damage to materials. You remain responsible for damage to materials after the Notice of Termination is issued, except as follows:

   1. Your responsibility for damage to materials partially paid for as provided in 9-3.2 and for materials the City furnished for but not used in the Work ends when the Engineer certifies that

those materials are stored in the manner and at the locations the Engineer has directed.

2. Your responsibility for damage to materials the City purchased after receiving the Notice of Termination ends when the City has taken title and delivery of the materials.

When the Engineer determines that you have completed the Work under the Contract you were directed to complete before termination and any other work that may have been ordered to secure the project for termination, the Engineer will formally accept the Contract and immediately after the Engineer's acceptance, you are not required to perform any further work.

C. Terminating the Contract does not relieve the surety of its obligation for any just claims arising out of the work performed.

D. Where the City terminates the Contract for its convenience and not your fault, the Engineer determines your total compensation based on the following:

1. The reasonable cost to you, without profit, for all work performed under the Contract including mobilization, demobilization and work done to secure the project for termination. In determining reasonable cost, the Engineer will deduct the cost of materials you keep, amounts realized by the sale of materials and for other appropriate credits against the cost of the Work. When, in the Engineer's opinion, the cost of a Contract item of work is excessively high due to costs incurred to remedy or replace defective or rejected work, the reasonable cost allowed will be the estimated reasonable cost of performing the work in compliance with the requirements of the Plans and Specifications. The City will not allow the excessive actual cost.

2. Your reasonable allowance for profit on the cost of work performed as determined under part 1, above, if you establish to the Engineer's satisfaction that it is reasonably probable you would have made a profit had the Contract been completed. In no event will the profit allowed exceed 4 percent of the cost.

3. Your reasonable cost to handle material returned to the vendor, delivered to the City or otherwise disposed of as directed by the Engineer.

4. A reasonable allowance for your administrative costs to determine the amount payable due to termination of the Contract.

All your records and your subcontractors' records necessary to determine compensation in conformance with provisions in 5-5, must be open to inspection or audit by City representatives at all times after the Notice of Termination is issued and for a period of 3 years following.

After the City accepts the Work, the Engineer may make payments on interim estimates before issuing the final estimate in conformance with the provisions in 8-3.2 and 8-4 when, in the Engineer's opinion, the amount paid, together with all amounts previously paid or allowed, do not result in total compensation exceeding that to which you are entitled. All payments, including payment on the final estimate, are subject to deductions for prior payments and amounts, if any, retained under the provisions of the Contract.

PHYSICALLY INCLUDE THE SPECIFICATIONS IN 5-5 IN ALL SUBCONTRACTS.

5-6 DELAYS AND EXTENSIONS OF TIME.

5-6.1 General. Delays caused by unforeseen events beyond your control entitle you to an extension of the Contract Time as provided here, but you are not entitled to damages or additional payment due to these delays except as specified in 5-6.3. Unforeseen events may include war, government regulations, labor disputes, strikes, fires, floods, adverse weather or elements necessitating work stoppage, inability

to obtain materials, labor or equipment, required extra work or other specific events as further described in the Specifications.

The City will not grant you an extension of time for a delay because you are not able to obtain materials unless you give the Engineer documentary proof. Provide the proof in a timely manner in accordance with the sequence of your operations and the approved construction schedule.

If events beyond your control cause delays other than those mentioned above, the Engineer may decide an extension of time is in the best interests of the City. You are not entitled to damages or additional payment due to these delays except as otherwise specified in 5-6.3.

If the cause of delays beyond your control is due solely to the City's action or inaction, the delays will entitle you to an extension of time per 5-6.2.

5-6.2 Extension of Time. The City may, from time to time, extend the time fixed to complete the Work. All applications for time extensions must be in writing filed with the City before the original time fixed in the Contract expires or as previously extended.

The City may extend the time after the time originally fixed in the Contract expires or as subsequently extended, and the extension granted begins on the expiration date. No time extension releases the sureties on any bond required under the Contract or affects forfeitures due to delay.

The City will not grant time extensions for delays not on the critical path.

5-6.3 Payment for Delays. Pursuant to § 7102 of the Public Contract Code, the City will compensate you for damages incurred due to delays for which the City is responsible. The Engineer will determine the actual costs. The City is not liable for damages you could have avoided by any reasonable means such as judicious handling of forces, equipment, or plant. The Engineer will determine damages you could have avoided.

5-6.4 Written Notice and Report. If you want payment for a delay specified in 5-6.3 or an extension of time, file a written request and report of cause with the Engineer within ten (10) Calendar Days after the delay begins. Make your request for payment or extension at least ten (10) Calendar Days before the specified completion date. If you fail to file these items within the times specified the City may refuse your request.

5-7 TIME OF COMPLETION.

5-7.1 General. Complete the Work within the time specified in the Contract or the Specifications. Complete each portion of the Work within the time specified in the Contract or the Specifications for that portion. Unless otherwise specified in the Contract or the Specifications, express the Contract Time of completion in Working Days.

5-7.2 Working Day. A Working Day is any day within the period between the date the Contract Time as specified in 5-1 starts and the date the Engineer accepts the Work, other than:

A. Saturday
B. Sunday
C. Any day the City designates a holiday
D. Any other day designated as a holiday in a Master Labor Agreement you enter into or that was entered into on your behalf as an eligible member of a contractor association,
E. Any day you are prevented for cause from working at the beginning of the workday as specified in 5-6.1, or
F. Any day you are prevented for cause from working during the first 5 hours with at least 60 percent of the normal work force as specified in 5-6.1.

5-7.3 Contract Time Accounting. The Engineer will make a daily determination of each Working Day to be charged against the Contract Time and will discuss this determination with you. You will get a Weekly Statement of Working Days showing the allowable number of Working Days of Contract time, as adjusted, at the beginning of the reporting period. The statement will also indicate the number of Working Days charged during the reporting period and the number of Contract Working Days remaining. If you do not agree with the statement, file a written protest within fifteen (15) days after receiving it that sets out the facts of the protest. Otherwise, the City assumes you accept the statement as is.

5-8 COMPLETION, ACCEPTANCE, AND WARRANTY.

5-8.1 Completion. When you consider the Work, or a designated portion of the Work, if specified in the Contract Documents is complete, submit a written request for inspection to the Engineer. By submitting the request, you certify that:

A. You have reviewed the Contract Documents.

B. Work is complete according to Contract Documents and is ready for inspection.

C. Equipment and systems have been tested, adjusted/balanced and are fully operational.

Submit your request a minimum of five (5) Working Days before the requested inspection date. Allow sufficient time during the Contract to complete inspections and make any corrections. Each day beyond the time prescribed to complete the Contract is subject to assessment of liquidated damages according to 5-9.

If the City Representative's inspection finds the Work is not complete, the City Representative will notify you in a writing that lists the deficiencies observed. Remedy the listed deficiencies immediately and send a request for final inspection. If you do not remedy the deficiencies, the City may order, at its option, reinspection(s) of the work to identify any additional deficiencies. The City's costs for the reinspection(s) are subject to 5-8.2.

When the City confirms the Work is complete and closeout submittals as referred to in 5-8.3 provided, the City Representative will notify you of the date of completion on the Weekly Statement of Working Days.

5-8.2 Acceptance. Acceptance occurs after all the requirements in the Contract Documents are met. If, in the Engineer's judgment, you have fully performed the Contract, the Engineer will recommend accepting your performance of the Contract.

5-8.3 Warranty. Warrant the Work against defective materials and workmanship for a period of one (1) year. The warranty period starts on the date the Engineer determines the Work is complete.

The warranty period for specific items covered under manufacturers' or suppliers' warranties begins on the date the items are put into service at the direction of or as approved by the Engineer in writing.

Assign to the City in writing, warranties, express or implied, from subcontractors, manufacturers or suppliers of any tier, for the materials furnished and work performed. Deliver the warranties to the Engineer before your performance of the Contract is accepted.

After notice from the Engineer and within the time specified in the notice, replace or repair defective materials and workmanship to the Engineer's satisfaction. If you do not make the replacement or repairs within the time specified, the City may perform the work at your expense. If you do not reimburse the City for its actual costs, your surety is liable for them.

5-8.4 Reinspections. If completion of the Work requires reinspection(s) by the City because you did not make corrections after the initial inspection, the City may deduct the cost for reinspection(s) from your final payment. If the Engineer observes more than ten (10) deficiencies, reinspection is required.

Inspections initiated at the City's request are not subject to provisions of this Section.

5-8.5 Closeout Submittals.
Submit:

A. Project Record Documents clearly marked with all changes to the Plans within thirty (30) Calendar Days of Final Acceptance

B. Operation and Maintenance Data

C. Warranties and Bonds

D. Spare Parts and Maintenance Materials, as specified

E. Evidence of Payment and Release of Stop Payment Notices

F. Other data and materials the Contract Documents may require

5-9 LIQUIDATED DAMAGES. Liquidated damages are as specified in the Contract.

5-10 USE OF IMPROVEMENT DURING CONSTRUCTION. The City reserves the right to take over and use all or part of any completed facility or appurtenance. It will notify you in writing before taking this action. The City's action relieves you of responsibility for injury or damage to the completed portions of the improvement resulting from the public's use or from the action of the elements or from any other cause except your operations or negligence. You need not re-clean portions of the improvement before field acceptance except for cleanup necessary by your operations. Nothing in this subsection relieves you from full responsibility for correcting defective work or materials.

If the City takes over and uses all or part of a completed facility or appurtenance, it assumes responsibility and liability for injury to persons or property caused by the use, except for any injury to persons or property caused by any willful or negligent act or omission by you, your subcontractor, their officers, employees, or agents.

ARTICLE 6 – RESPONSIBILITIES OF THE CONTRACTOR

6-1 CONTRACTOR'S EQUIPMENT AND FACILITIES.

6-1.1 General. Furnish and maintain in good condition all equipment and facilities required to properly execute and inspect the Work. Provide and maintain enclosed toilets for employees doing the Work to use. Regularly pump out and maintain these accommodations in a neat and sanitary condition.

Render your machinery and equipment inoperable at all times except during construction. You are responsible for construction means, controls, techniques, sequences, procedures and construction safety.

6-1.1.1 Equipment. Stencil or stamp at a clearly visible location on each piece of equipment except hand tools, an identifying number and:

A. On compacting equipment, its make, model number and empty gross weight that is either the manufacturer's rated weight or the scale weight.
B. On meters and on the load-receiving element and indicators of each scale, the make, model, serial number and manufacturer's rated capacity.

Give the Engineer a list describing each piece of equipment and its identifying number before beginning the Work.

Upon request, submit manufacturer's information that designates portable vehicle scale capacities.

Your measuring devices must be tested and approved under California Test 109 in the City's presence or by any of the following:

A. County Sealer of Weights and Measures
B. Certified Scale Service City
C. Division of Measurement Standards Official

6.2 LABOR.

6-2.1 General. You, your agents and employees are bound by and must comply with applicable provisions of the Labor Code and federal, state, and local labor laws.

Immediately remove and do not reemploy on the Work, any worker the Engineer finds to be incompetent, intemperate, troublesome, disorderly or otherwise objectionable or who fails to perform the Work properly and acceptably.

6-2.2 Prevailing Wages. Pursuant to §1773.2 of the Labor Code, the current prevailing rate of per diem wages at the time of the Bid as determined by the Director of the Department of Industrial Relations are on file at the office of the Engineer. Post a copy of these rates at the Work site. Pursuant to §1774 of the Labor Code, you and any subcontractors must pay not less than the specified prevailing rates of wages to workers employed under the Contract. On a federally funded Contract, you and any subcontractors must not pay less than the higher of these rates or the rates determined by the United States Department of Labor. Pursuant to §1775 of the Labor Code, you and any subcontractors forfeit, as a penalty to the City, the prescribed amounts per calendar day, or portion of it, for each worker paid less than the prevailing wage rates.

6-2.3 Payroll Records. Keep certified payroll records pursuant to §1776 of the Labor Code. You and all your subcontractors must give the City and the Labor Commissioner (Division of Labor Standards Enforcement), certified payroll records every Friday for the preceding week until the Notice of Completion is filed and recorded.

6-2.4 Hours of Labor. Pursuant to §1810 of the Labor Code, eight (8) hours of labor constitute a legal day's work. Pursuant to §1813 of the Labor Code, you and any subcontractors forfeit, as a penalty to the City, the prescribed amount per calendar day for each worker required or permitted to work more than eight (8) hours in any one (1) Calendar Day and forty (40) hours in any one (1) Calendar Week without being compensated according to §1815.

6-3 INSURANCE.

6-3.1 General. Provide and maintain insurance naming the City as an insured or additional insured with you regardless of any inconsistent statement in the policy or any subsequent endorsement whether liability is attributable to you or to the City. The insurance provisions do not limit your indemnity obligations contained in the Contract. Except as specified in 5-10, save, keep and hold harmless the City its officers, employees and agents from all damages, costs or expenses in law or in equity that arise to a person or property because of or while performing the Work, or which may be caused by a negligent act or omission by you, your employees, or a subcontractor. The City is not liable for any accident, loss or damage to the Work before completion except as specified in 5-10.

With the exception of workers' compensation insurance, an insurance company authorized by the Insurance Commissioner to transact business in the State of California must issue the policies you provide. The insurance company must have a policyholder rating of “A” or higher and a financial class VIII or higher as established by A.M. Best or a higher rating established by Moody’s or Standard & Poor's.

Notify the City according to 1-13 within five (5) days of the date your insurance carrier notifies you of any changes to or cancellation of the policy.

All policies must be endorsed to state that coverage may not be suspended, voided, cancelled, reduced in coverage or in limits, non-renewed or materially changed for any reason, without thirty (30) days prior written notice from the insurer to the City by U.S. mail or by personal delivery, except for nonpayment of premiums, in which case ten (10) days prior notice must be provided.

In lieu of this endorsement, either:

A. Submit a letter, signed by the insurance agent or broker, certifying that he/she will notify the City if coverage is suspended, voided, cancelled, reduced in coverage or in limits, non-renewed or materially changed for any reason without thirty (30) days prior written notice from the insurer to the City by U.S. mail or by personal delivery, except for nonpayment of premiums, in which case ten (10) days prior notice will be provided; or

B. Submit evidence of payment in full of the insurance premium for the life of the policy.

The City project title or description MUST be included in the “Description of Operations” box on the certificate.

Certificate Holder:
City of Irvine
c/o EXIGIS Risk Management Services
P.O. Box 4668 - ECM #35050
New York, NY 10163-4668

The City’s insurance certificate tracking services provider, EXIGIS, LLC, will send you an email with instructions for submitting insurance certificates and endorsements.

The cost to defend any claims against the City must not erode or take away from the specified limits of liability.

There will be no separate payment for insurance; include it in the Contract Price.

Without limiting your indemnification obligations, do not begin work until you obtain and maintain, at your sole cost and for the duration of this Contract, insurance coverage as provided below, against all claims for injuries against persons or damages to property that may arise from or in connection with performing the Work by you, your agents, representatives, employees and subcontractors. If you subcontract any portion of the Work in compliance with 1-3 of the Specifications, the contract between you and that subcontractor must require the subcontractor to maintain the same insurance policies you are required to maintain pursuant to 6-3.

Insurance policies are not compliant if they include any limiting provision or endorsement you have not submitted for approval in accordance with 6-3.

Your insurance must be “occurrence” rather than “claims made” insurance except for Professional Liability insurance, which may be for claims made and must apply separately to each insured against whom claim is made or suit is brought, except respecting the limits of the insurer's liability.

The insurance coverage required for General Liability, Automobile Liability and Contractor’s Pollution Liability must contain the following provisions or provide the following by endorsement:

Name as additional insured the City of**,** their elected officials, officers, employees, volunteers, boards and representatives shall be additional insureds with regard to liability and defense of suits or claims arising out of the performance of the Contract.

Additional Insured Endorsements shall not:

A. Be limited to “Ongoing Operations”

B. Exclude “Contractual Liability”

C. Restrict coverage to your “Sole” liability

D. Contain any other exclusion contrary to the Contract

This insurance must be primary and any other insurance, deductible or self-insurance available to the insured added by endorsement must be in excess of and not contribute to this insurance.

Immediately report all claims to your insurance carrier and acknowledge receipt within thirty (30) Calendar Days.

No officer, employee, or agent of the City, the Engineer, the City Representative or their consultants are personally responsible for any liability arising under or because of the Contract.

To the maximum extent permitted by law, hold harmless, indemnify, and defend the City of its representatives and each of its officers, employees, and agents from and against all actions, suits, claims, demands, judgments, attorney's fees, costs, damages to persons or property, losses, penalties, obligations, expenses or liabilities (here “claims” or “liabilities”) that may be asserted or claimed by any person or entity arising from the willful or negligent acts, errors or omissions of you, your employees, agents, representatives or subcontractors in performing any tasks or services for or on behalf of the City, whether or not there is concurrent active or passive negligence on the part of the City and City Personnel, but excluding claims or liabilities arising from the active negligence or willful misconduct of the City or City Personnel. Additionally:

A. Defend any action or actions filed in connection with these claims or liabilities and pay all costs and expenses including attorney's fees.

B. Promptly pay any judgment rendered against the City or any City Personnel for these claims or liabilities.

C. Promptly pay the City, if the City and any City Personnel is made a party to an action or proceeding for damages or other claims arising out of or in connection with your negligent performance or failure to perform your work or activities, all costs and expenses the City and City Personnel incurred in the action and reasonable attorney's fees and expert witness fees. The City may retain money due to you under the Contract as the City considers necessary until disposition of the actions or claims.

You must declare and the City must approve any deductibles or self-insured retentions before the City executes this Contract. Before beginning work, give the City, according to 6-3, written confirmation of the deductible for each insurance coverage required by this Contract or of no deductible.

6-3.2 General Liability Insurance. The policy must insure the City, its officers, employees and agents acting within the scope of their duties on the Work against any claims arising out of or in connection with the Work except as specified in 5-10. This policy must provide coverage for on-going and completed operations. The insurance certificate submitted to the City must state that your insurance is primary and that any other insurance held by the City is non-contributory.

General Liability, including premises, operations and mobile equipment, products and completed operations, broad form property damage including completed operations, explosion, collapse and underground hazards, contractual liability, personal injury, and independent contractors' liability: with a minimum limit of **Two Million Dollars ($2,000,000)** for each occurrence (combined single limit for bodily injury and property damage). A minimum limit of **Two Million Dollars ($2,000,000)** aggregate for products–completed operations and a minimum limit of **Four Million Dollars ($4,000,000)** general aggregate. This general aggregate limit must apply separately to your work under this Contract.

Procure and submit evidence of insurance for Products-Completed Operations in accordance with 6-3 for at least three (3) years from the time all Work under this Contract is completed.

The policy or policies must be endorsed to provide that the insurer waives all rights of subrogation against the City and its respective elected officials, officers, employees, agents and representatives for losses paid under the terms of the policy or policies and which arise from work performed by the named insured for the City.

6-3.3 Workers' Compensation Insurance. Pursuant to §1860 and §3700 of the Labor Code, obtain, pay for and maintain in full force for the duration of the Contract, workers' compensation insurance. The insurance company must have a policy rating equal to or better than that of the California State Compensation Insurance Fund. The City, its officers, employees and agents, are not responsible for any claims in law or in equity occasioned by your failure to comply with this requirement.

Pursuant to §1860 and §1861 of the Labor Code, submit the following certification to the Engineer before the City executes the Contract:

"I am aware of the provisions of § 3700 of the Labor code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code and I will comply with those provisions before I begin performing the work of this Contract."

The policy or policies must be endorsed to provide that the insurer waives all rights of subrogation against the City and its respective elected officials, officers, employees, agents and representatives for losses paid under the term of the policy or policies and which arise from work performed by the named insured for the City.

Workers' Compensation and Employer's Liability Insurance: Workers' Compensation Insurance in an amount required by the laws of the State of California (Statutory Limits). Employer's Liability Insurance with a minimum limit of **One Million Dollars ($1,000,000)** per occurrence.

If you have no employees requiring you to provide Workers' Compensation Insurance, certify that to City in writing before the City executes this Contract. The City and City Personnel are not responsible for any claims in law or in equity occasioned by your failure to comply with this section or with the provisions of law relating to Workers' Compensation.

If you are providing on-site staffing services, the Workers' Compensation insurance must include an Alternative Employers Endorsement.

6-3.4 Auto Liability Insurance. Give the City a certificate of insurance showing coverage of at least **One Million Dollars ($1,000,000)** for bodily injury and property damage or a combined single limit. This policy shall be "any auto" or for "all autos either owned, hired, or non-owned."

6-3.7 Self-Insurance. Self-insurance is subject to the City's review and prior approval. If you use any form of self-insurance, submit:

A. Notice of election to self-insure
B. Coverage(s) for which self-insurance applies
C. The amount of self-insurance
D. Declaration under penalty of perjury by a certified public accountant certifying the accountant has applied Generally Accepted Accounting Principles guidelines and you have sufficient funds or other resources to cover the self-insurance amounts
E. Copy of your commercial general liability policy and excess policy, including the declarations page, all amendments, riders, endorsements and other modifications in effect when the Contract is executed, for amounts not covered by self-insurance.

Self-insurance programs and self-insured retentions in insurance policies are subject to a separate annual review and approval by the City of evidence of your financial capacity to respond. Additionally, self-insurance programs or retentions must provide the City with at least the same protection from liability and defense of suits as that first-dollar insurance would provide.

6-4 PERMITS AND LICENSES. Except as provided in the Specifications, obtain all permits and licenses, pay all charges and fees and give all notices necessary and incidental to the lawful performance of the Work. Get these permits and licenses in enough time to prevent Work delays. Keep a copy of all permits at the Site. Give the City copies of permits and licenses one (1) Working Day after obtaining them. Comply with all rules and regulations included in the permits. If you do not conform to these rules and regulations, the City may perform work necessary to conform to them and deduct the cost of the work from any monies due or to become due to you.

You and all subcontractors must obtain within five (5) Calendar Days of executing the Contract, a current City of Irvine Business License and maintain it for the term of the Contract.

If the City obtained permits, licenses or other authorizations applicable to the Work, obtain a rider, pay all fees and comply with the provisions of those permits, licenses and other authorizations.

6-5 CONTRACTOR'S REPRESENTATIVE. Before starting the Work, designate in writing a representative with complete authority to act for you. You may designate an alternate representative as well. This authorized representative must be present at the Work site at all times while Work is in progress. When Work is not in progress and during periods when Work is suspended, make arrangements acceptable to the Engineer for any emergency work that may be required. The City regards any order or

communication given to this representative as given to you. A joint venture must designate only one representative and alternate. In the absence of you or your representative, the Engineer may give instructions or directions to the superintendent or person in charge of the specific work to which the order applies. This order must be complied with promptly and referred to you or to your representative.

Whenever you or your authorized representative is absent on any particular part of the Work where direction is necessary, the City Representative will give the direction to the superintendent or supervisor in charge of the particular work who must obey the orders given.

The City reserves the right to approve your Superintendent. Once approved, the Superintendent must remain on the project for the duration of the project so long as he is in your employ.

To communicate with the City, your representative, superintendent or person in charge of specific work must speak, read and write the English language.

6-6 COOPERATION AND COLLATERAL WORK. Determine the nature and extent of any simultaneous, collateral and essential work by others. The City, its workers and contractors and others have the right to operate within or adjacent to the Work during its performance.

The City, you and the workers of contractors, and others must coordinate operations and cooperate to minimize interference.

Your bid must include all costs involved to coordinate your work with others. You are not entitled to additional compensation from the City for damages resulting from such simultaneous, collateral and essential work. If necessary to avoid or minimize this damage or delay, redeploy your work force to other parts of the Work.

Nothing in the Contract grants you exclusive occupancy of the project site. Determine to your own satisfaction the scope of the project and the nature of any other contracts the City awarded or may award in constructing the project, so you perform this Contract in light of these other constraints, if any.

Do not hinder or delay any other contractor working on or adjacent to the project. If performing any project contract is likely to interfere with the simultaneous performance of another contract or contracts, the Engineer will decide which contractor must cease work temporarily and which contractor must continue or whether work under the contracts can be coordinated so that the contractors may proceed simultaneously. On all questions concerning conflicting interests of contractors performing related work, the Engineer's decision is binding on the contractors concerned. The City, the Engineer, the City Representative and their officers, employees and agents are not responsible for damages you suffer or extra costs you incur that result directly or indirectly from performing or attempting to perform any other contract or contracts on the project or from a decision or omission of the Engineer regarding the order of precedence in performing the contracts.

If, because of your negligent acts, any other contractor or subcontractor suffers loss or damage on the Work, settle with the other contractor or subcontractor by agreement or arbitration if the other contractor or subcontractor is agreeable. If the other contractor or subcontractor asserts ay claim against the City, the Engineer, the City Representative or their consultants because of damage allegedly sustained, the City will notify you. To the maximum extent permitted by law, all your obligations in 6-3.2 apply to the asserted claims or liabilities against the City, the Engineer, the City Representative and each of their officers, employees and agents.

6-6.1 Coordination. Work by other contractors, utility companies and City forces will be underway adjacent to or within the limits of this project during the Work.

6-7 WORK SITE MAINTENANCE.

6-7.1 General. Throughout all phases of construction, including suspension of the Work, until acceptance per 5-8, keep the Work site clean and free of rubbish and debris. Store Work site rubbish and debris in roll-off, enclosed containers before disposal; do not stockpile it.

Provide a self-loading, motorized street sweeper equipped with a functioning water spray system to clean all paved areas within the Work site and all paved haul routes at least once each Working Day.

Ensure there are no spills along haul routes. Remove any spills immediately and clean the area.

If you do not keep the Work site free of rubbish and debris, the Engineer may suspend the Work per 5-3 until you correct the condition.

Section 6-7 includes specifications for performing Work site maintenance including spill prevention and control, material management, waste management, water pollution control and non-storm water management.

Comply with City of Irvine Resolution No. 07-18, which establishes requirements for recycling and diverting construction and demolition waste.

Implement effective handling, storage, use and disposal practices to control material pollution and manage waste and non-storm water at the Work site before they enter storm drain systems and receiving waters.

Linear sediment barriers must comply with 6-7.6.2.

6-7.1.1 Construction Cleaning.

A. Initiate and maintain a daily program to prevent debris accumulation on-site and along access roads and haul routes. Keep areas under your control free of waste materials, debris, weeds 6” high and rubbish. Keep the site clean and orderly.
B. Provide suitable covered containers for debris and rubbish. Dispose of accumulated extraneous materials, prohibit overloading trucks to prevent spills on access and haul routes and inspect haul routes daily to enforce these requirements.
C. Supply self-loading, motorized street sweepers equipped with a functioning water spray system as part of your daily program.
D. Schedule, at a minimum, weekly debris collection and disposal. Provide additional collections and disposals whenever the weekly schedule does not prevent accumulation.

Remove debris from closed or remote spaces before closing the space, control cleaning to minimize dust and other particulates and immediately remove clay and earth on the paved surface of the roadway. Remove by hand scraping, washing, sweeping and other method(s) that will leave a clean, non-skid surface without impairing, injuring or loosening the surface.

Remove waste materials, debris, vegetation, other rubbish and non-recyclable materials as the Contract Documents require and dispose of them off-site in an approved disposal site or recycling center.

Unless otherwise specified, dispose of all concrete, asphalt, aggregate or sand base material, cement block, trees, shrubs, bushes and all other recyclable material generated during cleaning, demolition, clearing and grubbing or other phases of the Work at appropriate recycling centers. Remove reinforcing steel, wood or other harmful materials as required by the recycling center accepting the recycled materials. Supply proof of disposal at a recycling center that includes verification of tonnage by certified weigh masters tickets. If weigh masters tickets are not feasible, you and the City Representative must estimate the tonnage before disposing of it at the recycling centers.

Known recycling centers:
Ewles Materials
16081 Construction Circle West
Irvine

Use water to control dust for the life of the Contract as required by either job conditions or the City Representative. Do not use chemical agents without the City's prior written consent. You are solely responsible for safety problems, accidents or any other complications or claims arising from inadequate dust control.

The City will not make a separate payment for work performed or material used to control dust resulting from your performance of the Work or by public traffic either in or outside the right of way. Include full compensation for dust control in the price paid for the various items of work involved.

The City will not make a separate payment for any work performed or material used to clean the project. Include full compensation for cleaning in the price paid for the various items of work involved.

6-7.1.2 Final Cleaning. Clean the Work site before inspection when the Work is complete, using materials that are not hazardous to health or property and that will not damage surfaces. Remove debris from and otherwise clean exposed-to-view surfaces, remove temporary protection and labels not required to remain, clean finishes of foreign substances and remove waste, debris and surplus materials from site. Clean grounds, remove stains, spills and foreign substances from paved areas and sweep them clean. Clean other exterior surfaces and, where applicable:

A. Clean transparent and glossy materials to a polished condition; remove foreign substances. Polish reflective surfaces to a clear shine.

B. Vacuum carpeted and similar soft surfaces.

C. Clean resilient and hard surface floors.

D. Clean equipment surfaces; remove excess lubrication.

E. Clean plumbing fixtures to a sanitary condition.

F. Clean permanent filters of ventilating equipment and replace disposable filters of units operated during construction; clean ducts, blowers and coils when operating units without filters during construction.

G. Clean light fixtures and lamps.

H. Remove waste, foreign matter and debris from roofs, gutters, areaways and drainage systems.

6-7.2 Air Pollution Control. Do not release smoke, dust, equipment exhaust or other air contaminants into the air in quantities that violate any federal, state or local regulations. Abate dust nuisance by cleaning, sweeping and spraying with water or other means if necessary. Using water must conform to 6-7.6.

6-7.3 Noise Control. Control noise generated by your operations as specified in the City Municipal Code, Division 8, Chapter 2 (https://www.municode.com/library/ca/irvine/codes/code_of_ordinances?nodeId=TIT6PUWO_DIV8PO).

6-7.4 Storage of Equipment and Materials.

6-7.4.1 General. Remove materials and equipment from the Work site as soon as they are no longer needed. Before the Engineer's inspection for acceptance, clear the Work site of equipment, unused materials and rubbish to present a clean and neat appearance.

Remove excess excavated material from the Work site immediately.

Remove forms and form lumber from the Work site as soon as possible after stripping.

6-7.4.2 Storage in Public Streets. Do not store construction materials and equipment in streets, roads or highways.

Do not store excavated material, except that used as backfill in the adjacent trench, in public streets unless the Engineer specifies or approves. Remove all excess material from the Work site immediately after placing the backfill.

6-7.4.3 Material Management.

6-7.4.3.1 General. Minimize or eliminate discharging material into the air, storm drain systems and receiving waters while receiving, using, or storing the following materials:

A. Hazardous chemicals including acids, lime, glues, adhesives, paints, solvents and curing compounds
B. Soil stabilizers and binders
C. Fertilizers
D. Detergents
E. Plaster
F. Petroleum materials, including fuel, oil, and grease
G. Asphalt and concrete components
H. Pesticides and herbicides

Your employees trained in emergency spill cleanup procedures must be present when hazardous materials or chemicals are unloaded.

Where possible, use less hazardous materials.

The following activities must be performed at least 100 feet from concentrated storm water flows, drainage courses and inlets within the floodplain and at least 50 feet if outside the floodplain unless otherwise authorized:

A. Stockpiling materials
B. Storing pile-driving equipment and liquid waste containers
C. Washing vehicles and equipment in outside areas
D. Fueling and maintaining vehicles and equipment

6-7.4.3.2 Material Storage. If you store materials:

A. Store liquids, petroleum materials and substances listed in 40 CFR 110, 117, and 302, in secondary containment facilities specified by USDOT for storing hazardous materials.

B. Ensure that secondary containment facilities are impervious to the materials stored there for a minimum contact time of 72 hours.

C. Cover and adequately ventilate secondary containment facilities during nonworking days and when rain is forecasted.

D. Keep secondary containment facilities free of accumulated rainwater or spills. After rain or in the event of spills or leaks, collect the accumulated liquid and place it in drums within 24 hours. Handle the liquid as hazardous waste according to subsection 6-7 of the General Conditions.

E. Store incompatible materials like chlorine and ammonia, in different secondary containment facilities.

F. Store materials in their original containers with the original material labels maintained in legible condition. Immediately replace damaged or illegible labels.

G. Ensure that secondary containment facilities can contain precipitation from a 24-hour-long, 25-year storm, plus 10 percent of the aggregate volume of all containers or the entire volume of the largest container within the facility, whichever is greater.

H. Store bagged or boxed material on pallets. Protect bagged or boxed material from wind and rain during nonworking days and whenever rain is forecasted.

I. Provide enough separation between stored containers to allow for spill cleanup or emergency response access. Storage areas must be kept clean, well-organized and equipped with cleanup supplies appropriate for the materials stored.

J. Repair or replace perimeter controls, containment structures, covers and liners when necessary. Inspect storage areas before and after rain and at least weekly during other times.

6-7.4.3.3 Stockpile Management. Minimize stockpiling materials at the job site.

Implement water pollution control practices within 72 hours of stockpiling material or before a forecasted storm event, whichever occurs first. If using stockpiles, do not allow soil, sediment or other debris to enter storm drains, open drains and watercourses.

Active and inactive soil stockpiles must be:

A. Covered with soil stabilizing material or a temporary cover

B. Surrounded with a linear sediment barrier

Stockpiles of asphalt concrete and Portland cement concrete rubble, hot mixed asphalt and aggregate base must be:

A. Covered with a temporary cover

B. Surrounded with a linear sediment barrier

Stockpiles of pressure-treated wood must be:

A. Placed on pallets

B. Covered with impermeable material

Stockpiles of cold mix asphalt concrete must be:

A. Placed on an impervious surface

B. Covered with an impermeable material

C. Protected from storm water run-on and runoff

Control wind erosion year round.

Repair or replace linear sediment barriers and covers as needed to keep them functioning properly. When sediment accumulates to 1/3 of the linear sediment barrier height, remove the accumulated sediment.

6-7.5 Sanitary Sewers.

6-7.5.1 General. Do not interrupt the flow of sewage. If you disrupt the operation of existing sanitary sewer facilities or if disruption is necessary to perform the Work, bypass the sewage flow around the

Work. Do not transport sewage in closed conduits; dispose of it in a sanitary sewer system. Do not cover sewage with backfill or allow it to flow in trenches.

Whenever the Plans or Specifications require sewage bypass and pumping or you elect to perform it, submit, per 1-6, a Working Drawing conforming to 6-7.5.2, detailing your proposed sewage bypass and pumping plan.

6-7.5.2 Sewage Bypass and Pumping Plan. The plan must indicate the locations and capacities of all pumps, sumps, suction and discharge lines. Equipment and piping must be of a size to handle the peak flow of the section of sewer line bypassed and pumped. Equipment and piping must conform to 6-9 and to the Plans. When bypass piping crosses areas subject to traffic loads, construct the piping in adequately covered trenches protected from traffic damage. If the Engineer approves, you may use lay-flat hose or aluminum piping with an adequate casing and traffic plates. Bypass pump suction and discharge lines that extend into manholes must be rigid hose or hard pipe. Do not allow lay-flat hose to extend into manholes. Provide a backup bypass pumping system in case of malfunction. The backup bypass system must provide 100 percent standby capability and be in place and ready for immediate use. Each standby pump must be a complete unit with its own suction and discharge piping. In addition to the backup system, furnish and operate vacuum trucks when the Plans or Specifications require them.

6-7.5.3 Spill Prevention and Emergency Response Plan. Prepare and submit per 1-6, a spill prevention and emergency response plan that addresses using measures to prevent sewage spills, procedures for spill control and containment, notifications, emergency response, cleanup and spill and damage reporting.

The plan must account for all storm drain systems and watercourses within the vicinity of the Work that a sewage spill could affect. Identify catch basins that could receive spilled sewage. Unless otherwise specified, seal these catch basins before operating the bypass and pumping system. Remove all material used to seal the catch basins when the bypass and pumping system operations are complete.

Contain any sewage spill, prevent any sewage from reaching a watercourse, recover and legally dispose of spilled sewage, pay any fines or penalties related to the sewage spill imposed on the City and you by jurisdictional regulatory agencies and any other expenses or liabilities related to the sewage spill.

6-7.6 Water Pollution Control.

6-7.6.1 General. Conform to all applicable local, state and federal regulations and laws pertaining to water pollution control. Conduct and schedule your operations and follow and implement best management practices (BMPs) to prevent water pollution and conform to the following requirements:

A. Do not discharge sediments into a storm drain system or receiving waters.
B. Contain sediments generated on the Work site using appropriate BMPs.
C. Do not allow wind or runoff to discharge construction-related materials, waste, spill or residue from the Work site into streets, drainage facilities, receiving waters or adjacent properties.
D. Contain non-storm water runoff from equipment, vehicle washing or any other activity within the Work site using appropriate BMPs.
E. Prevent erosion by covering, planting or otherwise protecting erosion susceptible slopes in a way that prevents Work site discharge.

6-7.6.2 Best Management Practices (BMPs). Implement and maintain BMPs relevant to the Work, and as required by the Plans or Specifications.

For the duration of the Contract, install, construct, inspect, maintain, remove and dispose of BMPs for wind erosion control, tracking control, erosion and sediment control, non-storm water control and waste

management and materials pollution control. Unless the Engineer directs otherwise, implement and maintain BMPs during any temporary Work suspension.

6-7.6.3 Storm Water Pollution Prevention Plan (SWPPP). When specified in the Special Conditions or required by a jurisdictional regulatory agency, prepare and submit per 1-6, a SWPPP that conforms to requirements in the Specifications and of the jurisdictional regulatory agency. The City will file the Notice of Intent.

6-7.6.4 Payment. Unless otherwise specified, include payment to implement and maintain BMPs in the various items of work; no additional compensation is allowed.

6-8 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS. Repair or replace at your expense, material shown on the Plans or designated in the Specifications to be salvaged or used in reconstructed work that your operations have damaged or destroyed.

Protect public and private property adjacent to the Work and exercise due caution to avoid damaging it.

Repair or replace all existing improvements within the right of way not designated for removal (e.g., curbs, sidewalks, driveways, fences, walls, signs, utility installations, pavement, structures, etc.), which are damaged or removed because of your operations. When you must remove a portion of a sprinkler system within the right of way, cap the remaining lines.

Repairs and replacements must be at least equal to existing improvements and must match them in finish and dimension.

Protect trees, lawns and shrubbery left in place from damage or injury. If damaged or removed due to your operations, restore or replace them in as close to the original condition and location as is reasonably possible. Reseed and cover lawns with suitable mulch.

Give reasonable notice to occupants or owners of adjacent property to allow them to salvage or relocate plants, trees, fences, sprinklers and other improvements within the right of way that are designated for removal and would be destroyed because of the Work.

Include all your costs to protect, remove and restore existing improvements in the various items of work; no additional compensation is allowed.

6-8.1 Preservation of Property. Exercise care to avoid injuring existing improvements or facilities, utility facilities, adjacent property and trees and shrubbery left in place.

Repair all damage you cause to existing improvements to the Engineer's satisfaction. Where you must repair sidewalks, curbs or gutters make the repairs by removing and replacing the damaged section back to the nearest scoring lines.

Protect from injury, trees and shrubbery left in place and pole lines, fences, signs, survey markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and waterlines, all highway or street facilities and any other improvements of facilities within or adjacent to the Work, and provide and install safeguards to protect these objects from damage. If you damage objects that are part of the work performed by your operation, replace or restore them at your expense to a condition as good as when you entered the Work or as the Plans and Specifications require.

You are not relieved of your responsibility under this article just because a pipe or other underground facility is not on the Plans. It is your responsibility to discover underground improvement or facilities that your operations may damage.

In addition to any legal requirements, shore up, brace, underpin and protect as necessary all foundations and other parts of existing structures including structures adjacent to and adjoining the Work site which are

in any way affected by excavations or other operations connected with the Work.

Give notice to any adjacent or adjoining landowner or other party before beginning the Work whenever notice is required either from the City or from you.

6-8.2 Video Recording and Photographing Pre-existing Conditions. Video record and photograph pre-existing conditions at the project site before any construction activities including but not limited to:

A. Property markers

B. Right of way and easement conditions

C. Utility markings and USA markings

D. Existing property damages

E. Survey conditions

F. Pavement conditions, markings, and striping

G. Adjacent property conditions

H. Sidewalk, curb, and gutter conditions

I. Safety conditions

J. Unusual conditions or equipment

K. Interior and exterior surfaces

L. Equipment condition (HVAC, electrical, fire, etc.)

M. Existing landscape conditions, including vegetation and irrigation, along the project limit.

Submit your recordings/photographs on CD, DVD or USB media to the Engineer no later than five (5) Working Days after the Notice to Proceed is issued.

Include payment for video recording and photographing services in the various items of work; no additional compensation is allowed.

6-9 SAFETY

6-9.1 Work Site Safety.

6-9.1.1 General. Provide safety measures necessary to protect the public and workers within or near the Work site. Ensure your operations do not create safety hazards.

Provide safety equipment, material and assistance to City Representatives so they may inspect all phases of the Work.

When removing asbestos, implement the requirements of the CCR Title 8, Div. 1, Chapter 4, Subchapter 4 and Subchapter 7.

6-9.1.2 Work Site Safety Official. Designate in writing a “Project Safety Official” who is at the Work at all times and who is thoroughly familiar with your Injury and Illness Prevention Program (IIPP) and Code of Safe Practices. The Project Safety Official must be available at all times to abate potential safety hazards and must be authorized to and responsible for shutting down an unsafe operation if necessary.

Failure to provide the required Work Site Safety Official is grounds for the City to stop all Work and operations at no cost to the City until you comply.

6-9.1.3 Emergencies. Unusual conditions may arise on the Work that require immediate and unusual provisions to protect the public from danger or loss or damage to life and property due directly or indirectly to the Work. It is your responsibility to provide this protection.

Take steps to protect the public from danger or damage, or loss of life or property, which would result if your work interrupts or contaminates or causes the public water supply, irrigation or other public service to fail or your partly completed work fails.

When the Engineer determines an emergency exists that you could have prevented but did not and your construction may damage the public or utilities or adjacent structures or property as a result, the Engineer may take immediate steps to protect public or private, personal or property interests, or to prevent the loss of human life by having material furnished and work done that the City Representative believes is necessary.

You bear the cost of the labor, material and repair costs determined necessary. If you do not pay them when presented with bills, certified by the City Representative, the City will pay them and deduct that amount from any amounts due, or which may become due to you. The City's failure to take precautionary measures does not relieve you of your full responsibility for public safety.

The foregoing is in addition to and not a limitation of any other rights or remedies available to the City.

6-9.2 Safety Orders.

6-9.2.1 General. Have copies or suitable extracts of Construction Safety Orders and General Industry Safety Orders issued by the State Division of Industrial Safety at the Work site.

Give the Engineer, as a condition of obtaining City issued permits and before excavating, a permit from the Division of Occupational Safety and Health pursuant to Chapter 6 beginning with § 6500 of Part 1 of Division 5 of the Labor Code and a detailed plan showing the design of shoring, bracing, sloping or other provisions to protect workers from caving ground while excavating any trench(es) five (5) or more feet deep. A registered civil or structural engineer must prepare the plan. As a part of the plan, include a notice stating that the registered civil or structural engineer certifies that the plan complies with the CAL/OSHA Construction Safety Orders. Give a copy of the plan and the permit to the Engineer.

In accordance with generally accepted construction practices, you are solely and completely responsible for job site conditions, including the safety of all persons and property while performing the Work and you must comply with all local, county, state and federal laws, rules, regulations and orders relating to safety of the public and workers.

Hold harmless, indemnify and defend the City, the Engineer, City Representatives and each of their officers, employees and agents from civil or criminal penalties that result from your failure to comply with applicable safety laws, rules, regulations and orders. To the maximum extent permitted by law, your obligations in 6-3.2 apply in the event of a failure to comply with applicable safety laws, rules, regulations or orders.

The duty, if any, of the City Representative to review construction or to inspect your performance does not include review or inspection of the adequacy of your safety measures in, on or near the construction site.

6-9.2.2 Shoring Plan. Before excavating any trench 5 feet or more in depth, submit according to 1-6, a detailed Working Drawing (shoring plan) showing shoring design, bracing, sloping, or other provisions used for the workers' protection. If the shoring plan varies from shoring system standards, the shoring plan must be prepared by a California registered Structural or Civil Engineer. The shoring plan must accommodate existing underground utilities. Do not start excavation until the Engineer accepts the shoring plan and you have a permit from the State Division of Industrial Safety. Give the Engineer a copy of this permit according to 1-6. If you do not submit a shoring plan or do not comply with an

accepted shoring plan you must suspend work at the affected location(s). The suspended work will not support a claim for Extra Work and you will not receive additional compensation or Contract Time.

6-9.2.3 Payment. Include payment for shoring in the Bid item provided.

Payment for complying with the provisions of safety orders and all other laws, ordinances and regulations is considered included in the various items of work and no additional compensation will be allowed.

6-9.3 Confined Spaces.

6-9.3.1 Confined Space Entry Program (CSEP). Implement, administer and maintain a CSEP in accordance with CCR, Title 8, § 5156, 5157 and 5158.

Before starting the Work, prepare and submit a CSEP according to 1-6. The CSEP must address all potential physical and environmental hazards and contain procedures to ensure safe entry into confined spaces for reasons including:

A. Training personnel
B. Purging and cleaning the space of materials and residue
C. Potential isolation and control of energy and material inflow
D. Controlled access to the space
E. Atmospheric testing of the space
F. Ventilating the space
G. Special hazards consideration
H. Personal protective equipment
I. Rescue plan provisions

The submittal must include the names of your personnel, including each subcontractor's personnel assigned to the Work that will have CSEP responsibilities, their CSEP training and their specific assignment and responsibility for carrying out the CSEP.

6-9.3.2 Permit-Required Confined Spaces. Entry into permit-required confined spaces as defined in CCR, Title 8, § 5157, may be required as part of the Work. Consider manholes, tanks, vaults, pipelines, excavations, or other enclosed or partially enclosed spaces as permit-required confined spaces until the pre-entry procedures prove otherwise. Implement a permit-required CSEP before doing any work in a permit-required confined space. Make a copy of the permit available for your and the Engineer's review at the Work site at all times.

6-9.3.3 Payment. Include payment for the CSEP in the various items of work; no additional compensation is allowed.

6-9.4 Security and Protective Devices.
6-9.4.1 General. Security and protective devices consist of fencing, steel plates or other devices specified to protect open excavations.

6-9.4.2 Security Fencing. Completely fence open excavations. Security fencing must remain in place unless workers are present and construction is in progress then you must provide equivalent security.

6-9.4.3 Steel Plate Covers. Provide steel plate covers necessary to protect against accidental entry into openings, trenches and excavations.

Protect transverse or longitudinal cuts, voids, trenches, holes and excavations in the right of way that are not completed in one (1) Working Day with adequately designed barricades and structural steel plates (plates) that support legal vehicle loads to maintain unobstructed traffic flow.

Secure in advance the Engineer's approval before using any bridging on the Work.

Adequately shore trenches to support bridging and traffic loads.

Design plates for HS 20-44 truck loading according to the Caltrans Bridge Design Specifications Manual.

Refer to Table 6-9.4.3(A), below, for minimum plate thicknesses:

Table 6-9.4.3(A) - Trench Width/Minimum Plate Thickness

Trench Width	Minimum Plate Thickness
10"	1/2"
1'-11"	3/4"
2'-7"	7/8"
3'-5"	1"
5'-3"	1 1/4"

For spans greater than 5’ 3", give the Engineer a structural design prepared by a California Registered Civil Engineer.

The surface of the plates must be skid-resistant with a nominal Coefficient Of Friction (COF) of 0.35 as determined by California Test Method 342.

Plates must extend at least 12” beyond trench edges and must provide complete coverage that protects any person, bicycle, motorcycle or motor vehicle from injury or damage from separations or gaps because the plates move. Install and secure plates to prevent movement or displacement using adjustable cleats, shims, welding or other devices in a way that minimizes noise. Install plates as follows:

Install plates by milling the pavement to a depth equal to the thickness of the plate and to a width and length equal to those of the plate.

If the Engineer agrees, you may submit an alternate installation method that accords with 1-6, “Submittals,” for the Engineer’s acceptance.

Maintain the plates and shoring or any other approved device used to secure the plates. If notified by the City Representative, City Code Enforcement or the Irvine Police Department that a plate needs repair because of plate movement, noise, anchors and asphalt ramps, immediately mobilize necessary personnel and equipment. If you do not respond to the emergency request within 2 hours, the City will perform the repairs and invoice you the actual cost including overhead, or $500 per incident, whichever is greater.

When you remove plates, repair any damage to the pavement with a fine graded asphalt concrete mix or slurry seal to the Engineer’s satisfaction.

Include payment for steel plate covers in the various items of work; no additional compensation is allowed.

6-10 PATENT FEES AND ROYALTIES. Assume all costs to use patented materials, equipment, devices or processes on or in the Work and hold harmless, indemnify and defend the City, the Engineer, the City Representative and each of their officers, employees and agents from all claims, suits or actions resulting from your use of patented materials, equipment devices or processes. To the maximum extent permitted by law, your obligations in 6-3.2 apply in the case of these claims, suits or actions.

6-11 LAWS TO OBSERVE.

Stay informed about and report to the City Representative, all existing and future state and national laws and county and municipal ordinances and regulations that affect persons doing the Work, materials used in the Work or performing the Work and of all orders and decrees of bodies or tribunals with jurisdiction or authority over the Plans, Specifications or Contract.

Comply with and require your agents, employees and subcontractors to comply with all existing and future laws, ordinances, regulations, orders and decrees even if not in the Specifications or on the Plans. Hold harmless, indemnify and defend the City, the Engineer, the City Representative and each of their officers, employees and agents against any claim or liability arising from or based on violation of any law, ordinance, regulation, order or decree whether by itself, its employees, its agents or its subcontractors. To the extent permitted by law, all your obligations in 6-3.2 apply in the case of any claim or liability.

Comply with all applicable federal laws, including those set forth in "Federal Requirements" of the Special Conditions.

6-12 ANTITRUST CLAIMS. Pursuant to §7103.5 of the Public Contract Code:

> "In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under § 4 of the Clayton Act (15 U.S.C. Sec 15) or Cartwright Act (Chapter 2 [commencing with § 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or subcontract. The assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties."

6-12.1 Property Rights in Materials. Once you attach materials to the Work or the soil or after the City pays you for materials delivered to the Work site or stored under the City's control, you have no property right in them.

6-12.2 Warranty of Title. Do not purchase any materials, supplies or equipment for the Work subject to a chattel mortgage or under a conditional sale contract or other agreement by which the seller or supplier retains an interest in all or any part. Warrant clear title to all materials, supplies and equipment installed and incorporated in the Work. When all Work is complete, deliver the premises and all improvements and appurtenances you construct or place, to the City free of claims, liens, encumbrances or charges. Confirm that neither you nor any persons, firm or corporation furnishing material or labor for work the Contract covers has a lien on the premises or any improvement or appurtenance. This does not prevent you from installing metering devices or other equipment of utility companies or of municipalities who commonly retain title to the device or equipment. Nothing in this article defeats or impairs the right of persons furnishing materials or labor under your bond for their protection, or any right under any law permitting persons to look to funds due you from the City.

Insert the provisions of 6-12.2 in all subcontracts and material contracts and give notice of its provision to all persons furnishing materials for the work when there is no formal contract for the materials.

6-13 CONTRACTOR'S RESPONSIBILITY FOR THE WORK. Until the Work is accepted, you are responsible for care of the Work and of the materials used there including materials for which you have received partial payment or materials furnished by the City. You bear the risk of injury, loss or damage to any part of the Work from the elements or from any other cause arising from either the execution or the non-execution of the Work.

At your expense, rebuild, repair, and make good all injuries, losses or damages to the Work or the material from any cause before it is complete and accepted. Where necessary to protect the work or materials from damage, provide at your expense suitable drainage and build temporary structures necessary to protect

the work or materials from damage. Suspension of the Work does not relieve you of your responsibility for the work and materials specified here. If ordered by the City Representative, properly store at your expense, materials partially paid for or furnished by the City. Your storage is on the City's behalf and the City is at all times entitled to possess the materials. Promptly return them to the Work site when requested. Do not dispose of any of the stored materials except on the City's written authorization.

In an emergency affecting the safety of life or property, including adjoining property, act at your discretion as though instructed by the City, to prevent the threatened loss or injury.

6-14 PROJECT RECORD DOCUMENTS.

6-14.1 Maintenance of Documents and Samples. Maintain one record copy of:

A. Contract Drawings

B. Specifications

C. Addenda

D. Change Orders and Other Contract Modifications

E. Reviewed Shop Drawings, Product Data, and Samples

F. Field Test Records

G. Construction Schedules

H. Manufacturer's Certificates

Maintain documents in clean, dry, legible condition; do not use them for construction purposes.

Keep Record Documents and samples accessible to the City Representative for inspection. The Engineer will not approve applications for partial payment if Record Documents are not current. The City Representative must this verify before submitting each Application for Payment.

6-14.2 Recording. Record changes to the Plans and discoveries of buried objects at the Work on Record Documents with red ballpoint pen. Label each Document "PROJECT RECORD" in large printed letters and record information concurrently with construction progress. Do not conceal any work until the required information is recorded and legibly mark each item on the Contract Drawings and Shop Drawings to record actual construction, including:

A. Measured depths of elements in relation to a fixed datum point

B. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements

C. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible construction features

D. Field changes of dimension and detail

E. Changes made by Contract modifications

F. Details not on original Contract Drawings

G. Previously unknown buried objects

Legibly mark each item to record actual construction, including:

A. Manufacturer, trade name, and catalog number of each product installed, particularly optional and substitute items

B. Changes made by Addenda or modifications

Maintain other documents per the requirements of individual Specifications sections.

6-14.3 Submittals. At Contract closeout, deliver Record Documents and samples per 6-14.1. The Engineer will not approve your request for final payment until you deliver all Record Documents.

Send submittals with a cover letter signed by you or by your authorized representative listing the date, project title and number, and number and title of each Record Document.

6-15 AUDIT AND ACCESS TO RECORDS.

A. Maintain all books, records, documents and other evidence directly pertinent to performing the Work according to generally accepted accounting principles and practices consistently applied. Maintain all financial information and data you used to prepare or support any cost submission, including your original bid, required for this Contract or any Change Order, claim or other request for equitable adjustment and a copy of the cost summary or information submitted to the City. The Engineer must have access, with twenty four hours advance written notice, at all times during normal business hours, to all books, records, documents, financial information and other evidence to inspect, audit, and copy. Provide, at no cost to the City, proper facilities for this.
B. Apply the provisions of this section applicable to all Change Orders, claims or other requests for equitable adjustment affecting the Contract Time or price. Physically include the provisions of this section in all subcontracts and material supply contracts or purchase orders at any tier. The provisions of this section apply to all subcontracts at any tier in excess of $10,000 and to all Change Orders, claims and other requests for equitable adjustment related to project performance.
C. Audits conducted under this section must accord with generally accepted auditing standards and the established procedures and guidelines of the reviewing or auditing agency.
D. Release all information discovered and reports prepared after accessing records under the provisions of this section to the City and to other affected agencies.
E. Maintain and make available during performance of the Work and for three years after final payment or until final settlement of all disputes, claims or litigation, whichever occurs later, records under the provisions of this Section. In addition, maintain and make available, records relevant to the Contract, to any Change Order, dispute, litigation, settlement of any claim arising out of performance, or cost or items to which an audit exception has been taken until final payment or final resolution of the dispute, litigation, claim or exception, whichever occurs later.
F. This section applies to all financial records and all Change Orders and claims. It also applies to all records pertaining to all contracts, Change Orders and Contract Amendments:
   1. To the extent the records pertain directly to Contract performance;
   2. Where there is any indication that fraud, gross abuse or corruption may be involved;
   3. Where the Contract is terminated for default or convenience.
G. Access to records is not limited to the required retention periods. The City's Authorized Representatives must have access to records at any reasonable time for as long as the records are maintained.

6-16 DAILY RECORDS.

A. Prepare and maintain Daily Inspection Records to document progress of the Work daily. Daily records must include a daily accounting of all labor and all equipment on the site for you and for all subcontractors at any tier. Daily records must clearly distinguish work performed under a Change Order, base scope work and disputed work.

B. If any labor or equipment is idled solely because of City actions or inactions, the daily records must include which laborers and equipment were idled and for how long. If specific work activities stopped solely because of City actions or inactions and you reassigned labor and equipment to other activities, the daily records must clearly document the activities stopped and where labor and equipment was redirected.
C. Copy and give the Daily records to the City Representative at the end of every Work Day or at the beginning of the following Work Day.

ARTICLE 7 – FACILITIES FOR CITY PERSONNEL

7-1 GENERAL. Facilities provided for City personnel must be at suitable locations approved by the Engineer and must be in a lockable room, building, or trailer provided for this purpose.

Facilities must conform to the applicable codes, ordinances and regulations of the local jurisdiction, the State of California and to current practice. The interior must be paneled or suitably lined to provide a facility with a good appearance.

Before installing the field office, discuss with the City Representative location, access and related facilities. The facilities must be structurally sound, weather tight and with floors raised above ground.

At your option, portable or mobile buildings may be used. When mobile homes are used, modify them for office use. Do not use mobile homes as living quarters.

Pay fees and charges for applications, permits and building inspections.

Fill and grade the site for temporary structures to provide surface drainage. Construct the temporary field office on a proper foundation and provide utility service connections. If used, secure portable or mobile buildings. Provide steps and landings at entrance doors.

With the City Representative's approval, remove the temporary field office and its contents and services when no longer needed. Remove foundations and debris, restore the site to the original elevations and clean the area.

Provide while in use, janitorial and other maintenance services to all facilities provided. Maintenance services include supplying appropriate paper products and dispensers, trash receptacles you empty weekly or sooner, if required. Remove the emptied trash from the Work site.

Include all costs to furnish, maintain, service and remove these Work site facilities in other Bid items.

The City will not approve the first progress payment until all facilities are in place and comply fully with the Specifications.

7-2 FIELD OFFICE FACILITIES. The City Representative's office must be a separate space for the City's sole use and have a lockable entrance door and two (2) keys.

Provide interior desk and table lighting and exterior lighting at the entrance door.

The office must have a minimum floor space of 175 sqft, at least one door and a window area of not less than 22 sqft. All doors and windows must have screens.

Provide the following furniture: one plan table, one standard 5 foot long double-pedestal desk with a drawer suitable for holding files, two chairs, one drafting stool and one plan rack.

Provide electric power including a minimum of four duplex convenience outlets. Illuminate office tables and desk. Install an outdoor lighting fixture with a 300-watt bulb.

Provide heating and air conditioning of sufficient capacity at no charge to the City. Provide drinking water in the office and integral sanitary facilities directly adjoining. Sanitary facilities must include a toilet and wash basin with hot and cold running water.

Provide extended area, non-coin-operated telephone service in the office that includes an extension cord long enough to serve the plan table and the desk.

7-3 REMOVAL OF FACILITIES. Remove field offices, laboratories and bathhouse facilities at the Work site when the Work is complete. The buildings and equipment you furnish at the Work site under this subsection remain your property.

7-4 BASIS OF PAYMENT. Include all costs incurred in furnishing, maintaining, servicing and removing field offices laboratories or bathhouse facilities required at the Work site in the Bid item for furnishing them. If the Plans require the facilities and no Bid item is in the Proposal, include the costs in other Bid items. Plant owners are responsible for costs incurred with offices and laboratories at their plants.

ARTICLE 8 – MEASUREMENT AND PAYMENT

8-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK.

8-1.1 General. Unless otherwise specified, the City will determine quantities of work from measurements or dimensions in horizontal planes. However, it will consider linear quantities of pipe, piling, fencing and timber as being the true length measured along the longitudinal axis.

Unless otherwise provided in the Specifications, volumetric quantities are the product of the mean area of vertical or horizontal sections and the intervening horizontal or vertical dimension. The planimeter is a precision instrument suitable for measuring all areas.

The Engineer must approve the Schedule of Values, the Construction Schedule and the Contract required submittals before making the initial progress payment.

The Engineer must receive the monthly revised Construction Progress Schedule before making a subsequent progress payment

8-1.2 Measurement Methods. Measure materials and items of work paid based on measurement, according to methods stipulated in the particular sections involved.

8-1.3 Certified Weights. For a payment based on weight, weigh using certified platform scales or, when approved by the Engineer, on a completely automated weighing and recording system. Give the Engineer duplicate licensed weighmaster's certificates showing actual net weights. The City will accept the certificates as evidence of weights delivered.

8-2 LUMP SUM WORK. The City will pay for items whose quantities are indicated "Lump Sum," "LS," or "Job," at the price indicated in the Bid. That payment constitutes full compensation for the items of work and all work appurtenant to it.

8-2.1 Detailed Schedule. Give the City a cost break-down for all Contract lump sum items. Within fifteen (15) Calendar Days after award of Contract, give the Engineer cost break-down tables to review. The Engineer will approve the cost break-down tables in writing before making any partial payment for the applicable items.

Determine the quantities required to complete the Work shown on the Plans and include the quantities and their values in the cost break-downs you give the Engineer for approval. You are responsible for the accuracy of the quantities and values in your cost break-downs.

The total of the amounts for the line items of work in each cost break-down table for each lump sum item must equal the contract lump sum price bid. Include overhead and profit in each individual line item of work you list.

The City will not adjust compensation in contract lump sum prices because of differences between quantities shown in your cost break-downs and quantities required to complete the Work as shown on the Plans and as detailed in the Specifications.

The City will use individual line item values in the approved cost break-down tables to determine partial payments during the progress of the Work and as the basis for calculating a compensation adjustment for contract lump sum items because of changes in line items of work the Engineer ordered. When the total ordered changes to line items of work increases or decreases the lump sum price bid by more than 25 percent, the compensation adjustment for the applicable lump sum item will be determined as specified for increases and decreases in the total pay quantity of an item of work in Article 2 of the General Conditions.

8-3 PAYMENT.

8-3.1 General. The quantities listed in the Proposal do not govern final payment. The City will pay you only for actual quantities of Contract items constructed according to the Contract Documents. When the Work is complete, if the actual quantities show either an increase or decrease from the quantities in the Proposal, Contract Unit Prices will prevail except as specified in 2-2.2.

The unit and lump sum prices paid are full compensation for the items of work and all appurtenant work including furnishing all materials, labor, equipment, tools and incidentals.

The City considered the cost of work items not in the “Schedule of Work and Prices” in the Bidders Proposal as included in the cost of the other work that is listed and no additional compensation is allowed.

When an item of work is designated as (F) in the “Schedule of Work and Prices,” the estimated quantity for that work item is the final pay quantity unless the Engineer revises any dimensions of the item, or the item or a portion of it is eliminated. If the Engineer revises the dimensions of any portion of the item and the revisions result in an increase or decrease in the estimated quantity of that work item, the final pay quantity for the item will be revised in the amount represented by the changes in the dimensions. If a final pay item is eliminated, the estimated quantity for the item will be eliminated. If a portion of a final pay item is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work.

Consider the estimated quantity for each item of work designated as (F) in the “Schedule of Work and Prices” as approximate only; no guarantee is made that the quantity which can be determined by computations, based on the details and dimensions shown on the Plans, will equal the estimated quantity. No allowance will be made if the quantity based on computations does not equal the estimated quantity.

In case of discrepancy between the quantity shown in the “Schedule of Work and Prices” for a final pay item and the quantity or summation of quantities for the same item shown on the Plans, payment will be based on the quantity shown in the “Schedule of Work and Prices.”

The City will not pay you for materials wasted or disposed of in a manner not called for in the Contract. This includes rejected material not unloaded, material rejected after it has been placed, and material placed outside the Plan lines. The City will not compensate you for disposing of rejected or excess material.

The City will pay for work performed or materials furnished under an Assessment Act Contract as provided in particular proceedings or legislative act under which the contract was awarded. Whenever, at your request, the City performs any portion of the Work, you are responsible for the cost, which may be deducted from any amount due or becoming due from the City.

When immediate action is required to prevent injury, death, or property damage and you do not take and are not reasonably expected to take precautions which are your responsibility, the City may, after a reasonable attempt to notify you, have precautions taken and charge their cost to you, or may deduct their cost from any amount due or becoming due from the City. Do not construe the City’s action or inaction under these circumstances as relieving you or your surety from liability.

Payment does not relieve you of your Contractual obligations. Do not construe payment as acceptance of any of the Work or as the transfer of ownership of any equipment or materials to the City. You retain ownership and are obligated to store any fully or partially completed work or structure for which payment has been made or to replace any materials or equipment you are required to provide under the Contract which may be damaged, lost, stolen or otherwise degraded in any way before the Work is accepted, except as specified in 6-9.

No payment affects warranty periods.

If the City receives, within the time fixed by law, a properly executed notice to stop payment because you failed to pay for labor or materials used in the Work, it will withhold all money due you for the labor or materials according to applicable laws.

Sixty (60) days after the date the City accepts the Work or as prescribed by law, the City will pay the amount deducted from the final estimate it retained except amounts required by law to be withheld by properly executed and filed notices to stop payment, or as authorized by the Contract to be retained longer.

8-3.1.1 Application for Payment. Use the City of Irvine Certified Invoice for Progress Payment Form furnished to you.

Type the required information and follow the schedule of work and bid prices in your accepted Bidder's proposal for unit price contract. Use data on the accepted Schedule of Values for lump sum work. Provide a dollar value in each column for each line item for the portion of work performed and list each authorized Change Order number and dollar amount and the adjusted Contract Price. Have an authorized officer sign the application to certify it. After getting the City Representative's concurrence on the invoice amount, submit the invoice for payment.

Under a transmittal letter, submit the original and one (1) copy of each Application for Payment as stipulated in 8-3.2. Include the submittal date, project title and number, and submit the updated Progress Schedule with the Application for verification of progress. The City will reject any incomplete payment application.

Submit data supporting any line item amounts the Engineer questions.

Provide one copy of the data with a cover letter for each copy of the data submitted and show the application number and date, and line item by number and description.

Sign each Application for Payment and certify to the City that:

A. The data supporting the Application for Payment is accurate and the Work has progressed to the point indicated;
B. To the best your knowledge and belief, the Work accords with the Contract Documents;
C. You are entitled to payment in the amount certified; and
D. You have paid all sums the City paid you to reimburse subcontractor work to the subcontractors performing the work without any retention, withholding or back charge.

8-3.2 Progress Payments.

8-3.2.1 Conditions to Progress Payments. Submit your Application for Payment to the Engineer using City of Irvine Certified Invoice for Progress Payment Form, once a month. Submit invoices within fifteen (15) days from the end of each month. This estimate must include the value of the total amount of the work you complete during the calendar month preceding that in which the estimate is made.

Without limitation to any other provisions of the Contract Documents, the following precede a proper submission and the Engineer's approval of each Application for Payment:

A. Submit the detailed Schedule per 8-2.1;
B. Submit the certification required in 8-3.1.1;
C. Submit conditional releases of stop notices, if any, and bond rights upon progress payment, complying with California Civil Code § 8132, for all Work performed during the time covered by the current Application for Payment, which you, your subcontractors of every tier, and all material suppliers to each sign, and forms of unconditional release of stop notice and bond

rights upon progress payment, complying with California Civil Code § 8134, for all Work performed during the time covered by the previous Application for Payment that you, your subcontractors of every tier and all material suppliers each sign;

D. Maintain Record Drawings as required by the Contract Documents;

E. Submit monthly and daily reports as required by the Contract Documents;

F. Submit scheduling information and update the Construction Schedule as required by the Contract Documents regarding preparing or updating schedule information;

G. Submit certified payroll records as required by the Contract Documents;

H. Comply with all requirements for submitting documents or performing conditions that, by the terms of the Contract Documents, constitute conditions to your right to receive payment for Work performed.

8-3.2.2 Payments by City. Pursuant to California Public Contract Code § 20104.50, the City will pay an undisputed, properly submitted Application for Payment within thirty (30) days after the Engineer receives it, based on 90 percent of its value determined pursuant to 8-2.1:

A. The portion of the Work permanently installed;
B. Plus the value of materials delivered on the ground or in storage as approved by City pursuant to 8-3.8;
C. Less the aggregate of previous payments; and
D. Less any other withholdings authorized by the Contract Documents.

8-3.2.3 Rejection by City. The City will return any Application for Payment it disputes or determines is improper and unsuitable for payment not more than seven (7) days after receiving it, together with a written explanation of why the payment request was rejected. The City's failure to either timely reject an Application for Payment or specify grounds for rejection does not waive of any of its rights. Correct and resubmit rejected Applications for Payment within seven (7) days after receiving them.

8-3.3 Final Payment.

8-3.3.1 Retention.

Pursuant to 8-2.1, the City will also withhold, in addition to withholding permitted by 8.37, a sum equal to 5 percent of all sums otherwise due you as progress payments from each progress payment ("Retention") and hold it until it is due as described here.

8-3.3.2 Conditions to Final Payment. Submit your Application for Final Payment using the City of Irvine Certified Invoice for Progress Payment Form, before you request a final inspection of the Work according to 5-8. Include with the Application for Final Payment the following:

A. An affidavit that payrolls, materials and equipment bills and other project debts for which the City or the City's property or funds might be liable, have been paid or satisfied;

B. Your certification required by 8-3.1;

C. Surety's consent to Final Payment;

D. A certificate evidencing that the insurance required by the Contract Documents is in force;

E. Conditional Waiver and Release Upon Final Payment in the form required by California Civil Code § 8136, executed by you, all subcontractors of every tier and all material suppliers, covering the final payment period;

F. Unconditional Waiver and Release Upon Progress Payment in the form required by California Civil Code § 8134, executed by you, all subcontractors of every tier and all material suppliers of each, covering the previous payment period;

G. All Record Documents including, without limitation, complete and accurate record drawings which you kept up to date during performance of the Work;

H. Documentation that you have inspected, tested and adjusted the performance of every system or facility of the Work to ensure that it complies with the terms of the Contract Documents;

I. Four (4) copies of all warranties from vendors and subcontractors, operation and maintenance manuals, instructions and related agreements and equipment certifications and similar documents;

J. Releases of rights and claims relating to patents and trademarks required by the Contract Documents; and

K. Any other documents or information required by the Contract Documents as a condition of Final Payment or Final Completion.

8-3.3.3 Retention Release. Pursuant to Public Contract Code § 7107, within sixty (60) days after the City delivers the Notice of Completion, it will release the Final Payment, including Retention withheld, subject to the City's right to withhold 150% of any disputed amounts.

8-3.3.4 Disputed Amounts. Pursuant to California Public Contract Code § 7107, the City may deduct and withhold from the Final Payment due under 8-3.3.3, up to 150% of any disputed amounts including amounts to protect the City against any loss caused or threatened as a result of your failure to perform all obligations required as a condition of Completion and Final Payment. Alternatively, the City may elect, in its sole discretion, to accept the Work without correction or completion and adjust the Contract Price pursuant to the Contract Documents.

8-3.3.5 Acceptance of Final Payment. Accepting Final Payment constitutes a waiver of all your rights against the City to recover any loss excepting only those Claims you submitted as required by the Contract Documents before or at the time of Final Payment.

8-3.4 Miscellaneous.

8-3.4.1 Joint Payment. The City has the right, if it deems necessary in its sole discretion, to issue joint checks payable to you and to any subcontractor(s) of any tier. The joint check payees are solely responsible to allocate and disburse the joint payment funds. A payee's endorsement of the check constitutes its receipt of payee's payment. No joint check creates a contract between the City and a subcontractor of any tier, or any obligation from the City to a subcontractor or any third party rights against the City or the Engineer.

8-3.4.2 Withholding/Duty to Proceed. Paying, withholding or retaining all or part of a payment you claim is due to you does not relieve you of your obligations under the Contract Documents. Continue to perform the Work diligently regardless of the City's payment, withholding or retention of any payment. The City's good faith partial payment, withholding or retention of any disputed part of a payment, whether correctly or incorrectly asserted, is not a breach of the Contract Documents and is not grounds for an adjustment of the Contract Price or Contract Time.

8-3.4.3 No Acceptance. The City's payment or its partial or entire use of the Work does not constitute approval or acceptance of all or any portion of the Work.

8-3.4.4 Contractor Payment Warranty. Submitting an Application for Payment constitutes your warranty that:

A. Title to Work covered by an Application for Payment passes to the City either by integration into the construction or on receipt of your payment, whichever occurs first; and

B. Work covered by previous Applications for Payment are free and clear of liens, stop notices, claims, security interests or encumbrances you or any other person imposes.

8-3.4.5 Corrections. An inaccuracy or error in any Application for Payment does not release you from the error or from losses arising from the Work or from any obligation imposed by the Contract Documents. The City retains the right to subsequently correct any error made in any previously approved Application for Payment or progress payment issued by adjusting subsequent payments.

8-3.5 Payments By Contractor. Do not include in your Applications for Payment sums for any subcontractor's portion of the Work you do not intend to pay to that subcontractor. When you receive the City's payment, pay the subcontractor performing Work on the Project out of that payment for the portion of the Work the subcontractor is entitled to according to the terms of its contract with you and with applicable laws including, without limitation, California Public Contract Code § 7107.

Notwithstanding any City withholding pursuant to the terms of the Contract Documents, you remain responsible for promptly satisfying from your own funds, sums due all subcontractors who have performed Work included in your Application for Payment. Require each subcontractor, by appropriate agreement, to pay its subcontractors and material suppliers in a similar manner. The City is not obligated to pay or to be responsible in any way for paying a subcontractor of any tier or material supplier**.**

8-3.6 Payment Withheld.

8-3.6.1 Withholding by City. In addition to any other amounts the City may have the right to retain under the Contract Documents, it may withhold a sufficient amount of any payment otherwise due you as the City, in its sole discretion, determines is necessary to cover actual or threatened loss due to any of the following:

A. Third-Party Claims. Third-party claims or stop notices filed or reasonable evidence indicating the probable filing of claims or stop notices;

B. Defective Work. Defective Work not remedied;

C. Nonpayment. Failure to make proper payments to your subcontractors for services, labor, materials or equipment;

D. Inability to Complete. Reasonable doubt that the Work can be completed for the unpaid balance of the Contract Sum or within the Contract Time;

E. Violation of Applicable Laws. Failure or failure of your subcontractors to comply with applicable laws or lawful orders of governmental authorities;

F. Penalty. Any claim or penalty asserted against the City because you failed to comply with applicable laws or lawful orders of governmental authorities including, without limitation, labor laws;

G. Failure to Meet Contract Time. Any damages which may accrue because you failed to meet the Construction Schedule or to perform within the Contract Time;

H. Setoff. Any reason specified elsewhere in the Contract Documents as grounds for a withholding offset or set off or that would legally entitle the City to a set-off or recoupment;

I. Consultant Services. Additional professional, consultant or inspection services required because you failed to comply with the Contract Documents;

J. Liquidated Damages. Liquidated damages assessed against you;

K. Materials. Materials the City ordered pursuant to the Contract Documents;

L. Damages. Loss you, or a subcontractor to the City, or separate contractors, or any other person or entity under contract to the City caused;

M. Clean Up. Clean up the City performed that is chargeable to you pursuant to the Contract Documents;

N. Employee Benefits. Failure to pay contributions due to employee benefits funds pursuant to any applicable collective bargaining agreement or trust agreement;.

O. Required Documents. Failure to submit on a timely basis, proper and sufficient documentation required by the Contract Documents including, without limitation, Construction Schedule updates, 'look ahead' schedules, Submittals, Schedules of Values, information on Subcontractors, Change Orders, certifications and other required reports or documentation;

P. Other Breach. A breach of any obligation or provision of the Contract Documents.

8-3.6.2 Release of Withholding. If the City determines, in its sole discretion, that you have removed the above-mentioned grounds for withholding and have paid, credited or otherwise satisfied all losses incurred or threated, the City will pay you the amounts withheld because of them.

8-3.6.3 Application of Withholding. The City may apply sums withheld pursuant to 8-3.6.1 to pay any loss or threatened loss the City determines, in its sole discretion, is appropriate. It may make these payments without a prior judicial determination of its actual rights regarding the loss. You agree and designate the City as your agent for this purpose and agree that these payments are payments made to you by the City under the Contract. The City is not liable to you for these payments made in good faith. The City will give you an accounting of funds paid on your behalf. Alternatively, the City, in its sole discretion, may exercise its right to adjust the Contract Price as provided in the Contract Documents.

8-3.6.4 Continuous Performance. If the City pays the undisputed portion, if any, of funds withheld in good faith, you must continue to perform the Work without interruption while any disputes or disagreements with the City are pending.

8-3.7 Substitution of Securities. At your request, the City will pay funds withheld from progress payments pursuant to the requirements of Public Contract Code § 22300, if you deposit in escrow with a bank acceptable to the City, securities eligible for the investment of state funds under Government Code § 16430, or bank or savings and loan certificates of deposit, on the following conditions:

A. Pay the City and the Escrow Agent for the escrow deposit.

B. The value of securities or certificates of deposit placed in escrow is at least equivalent to the retention amounts owed you pursuant to this section.

C. You enter into an escrow agreement satisfactory to the City that includes provisions governing, among other things;

1. Value of securities deposited;

2. Powers of attorney or other documents required to transfer the securities deposited;

3. Cash conversion to fund defaults including but not limited to, terminating your control over the

Work, stop notices legally filed, liquidated damages assessed or other amounts retained under the Contract ;

4. Decreased value of securities on deposit; and
5. Termination of escrow when the Contract is complete.

D. Obtain the surety's written consent to the agreement.

8-3.8 Delivered Materials. The City may make, at its discretion, payments for materials or equipment not incorporated into the Work but delivered on the ground at the site that you stored there or stored off-site under the City's control. The City will only consider these payments if you submit satisfactory evidence that you have title to the material or equipment, that the material or equipment will be used in the Work and that the material is satisfactorily stored, protected and insured and other procedures are in place, acceptable to the City, to protect the City's interests. To consider this payment, materials or equipment stored off-site must, in addition to the above requirements and unless otherwise specifically approved by the City in writing, be stored in a bonded warehouse, fully insured, and available to the City for inspection. The City has sole discretion to determine the amount of material and equipment stored on the site at any given time.

8-3.9 Mobilization

8-3.9.1 General. Mobilization is preliminary work and operations that include but are not limited to, those necessary to move personnel, equipment, materials and incidentals to the Work site for the Work and for all other necessary work and operations or costs incurred including bonds, insurance and financing before beginning work on Contract items.

Mobilization also includes the cost, time and labor to move necessary construction equipment to and from the job site, supervisory time on the job by your personnel to keep the site safe and all other related work required for all non-working days during construction. Secure adequate storage for equipment and materials.

Have as your agent, a competent English speaking superintendent who can read and thoroughly understand the plans, specifications, other related documents and directions from the City's Representative on-site at all times.

8-3.9.2 Measurement and Payment. Mobilization is eligible for partial payment if the Contract includes a bid item for it. Payment for mobilization is at the Lump-Sum (LS) price bid and includes obtaining and paying for all permits and business licenses as required by the City, state and other agencies. The City will waive its permit fee. Comply with the requirements specified by each license or permit. The City will not pay for mobilization until you submit a Construction Schedule that has been reviewed and accepted and is current. The City will make progress payments for this item according to the percent of the project completed and will include mobilization and administration costs for the entire contract period including the construction schedule required in these Specifications. The City will make payments based on the following:

A. When the monthly partial payment estimate of the amount earned, not including the amount earned for mobilization, is 5 percent or more of the original contract amount, 50 percent of the contract item price for mobilization or 5 percent of the original contract amount, whichever is less, will be included in the estimate for payment.

B. When the monthly partial payment estimate of the amount earned, not including the amount earned for mobilization, is 10 percent or more of the original contract amount, the total amount earned for mobilization is 75 percent of the mobilization contract item price or 7.5 percent of the original contract amount, whichever is less, will be included in the estimate for payment.

C. When the monthly partial payment estimate of the amount earned, not including the amount

earned for mobilization, is 20 percent or more of the original contract amount, the total amount earned for mobilization is 95 percent of the mobilization contract item price or 9.5 percent of the original contract amount, whichever is less, will be included in the estimate for payment.

D. When the monthly partial payment estimate of the amount earned, not including the amount earned for mobilization, is 50 percent or more of the original contract amount, the total amount earned for mobilization is 100 percent of the mobilization contract item price or 10 percent of the original contract amount, whichever is less, will be included in the estimate for payment.

E. When all the Work is complete, the City will pay any amount bid for mobilization exceeding 10 percent of the original contract amount.

8-4 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the Engineer's opinion, it is not practical to remove and replace the Work, the Engineer will specify one of the following remedies:
   1. The defective Work may remain but the unit price will be adjusted;
   2. The defective Work will be partially repaired at the Engineer's instructions and the unit price will be adjusted;

C. Individual Specification sections may modify these options or may require a specific formula or percentage price reduction.

D. The Engineer's authority to assess the defect and make a payment adjustment is final.

8-5 PROMPT PAYMENT. In addition to requirements specified elsewhere, the following also apply: Subsection (f) of § 20104.50 of the Public Contract Code, Article 1.7 of Part 3 of Division 2. Timely progress payments; legislative intent; interest; payment requests:

A. It is the intent of the Legislature in enacting this section to require all local governments to pay their contractors on time so that these contractors can meet their obligations. In requiring local governments to pay promptly, the Legislature finds that prompt payment of outstanding receipts is not merely a municipal affair, but is a matter of statewide concern.

B. It is the intent of the Legislature in enacting this article to regulate public policy relating to prompt payment of local governments' outstanding receipts. The Legislature finds that all government officials, including those in local government, must set a standard of prompt payment that any business in the private sector that may contract for services should look to for guidance.

C. Any local agency failing to make any progress payment within 30 days after receiving an undisputed and properly submitted payment request from a contractor on a construction contract must pay interest to the contractor equivalent to the legal rate in subdivision (a) of § 685.010 of the Code of Civil Procedure.

D. Upon receiving a payment request, each local agency must comply with both of the following:

   1. The local agency must review each payment request as soon as possible after receipt to determine whether the payment request is proper payment request.

   2. The local agency must return to the contractor as soon as possible but not later than seven days after receipt, any payment request determined not to be a proper payment request. A document setting out why the payment request is not proper must accompany any request returned pursuant to this paragraph.

E. The number of days available to a local agency to make a payment without incurring interest under this section is reduced by the number of days by which it exceeds the seven-day return requirement in paragraph (2) of subsection (c).
F. For purposes of this article:
    1. A “local agency” includes, but is not limited to, a city, including a charter city, a county, a city and county and any public entity subject to this part.
    2. A “progress payment” includes all payments due contractors, except that portion of the final payment designated by the contract as retention.
    3. A payment request is properly executed if funds are available to pay it and payment is not delayed by an audit inquiry by the local agency’s financial officer.
G. Each local agency must require that this article, or a summary of it, is included in the terms of any contract subject to this article.

8-6 CLAIMS. Any claims you submit against the City for Work covered by this Contract for $375,000 or less is subject to the procedures specified in Public Contract Code § 20104, *et seq*.

8-6.1 Claims Submission and Documentation.

A. You may submit a claim concerning a matter properly noticed according to the requirements of this Contract.
B. Furnish all claim documentation as specified here no later than thirty (30) days after the event or condition causing the claim has been resolved. If you do not furnish the required claim documentation within this time, you waive your right to compensation for the claim.
C. Furnish three (3) certified copies of the required claim documentation. The documentation must be complete when furnished. The City will evaluate your claim based on City project records and the documentation you provide.
D. Claim documentation must conform to Generally Accepted Accounting Principles and be in the following format:
    1. General Introduction
    2. General Background Discussion
    3. Issues
    4. Index of Issues (listed numerically)
    5. For each issue (begin each issue on a new page)
        a. Background
        b. Chronology
        c. Your position (why you believe the City is liable)
        d. Supporting documentation of merit or entitlement
        e. Supporting documentation of damages
    6. All critical path method schedules, both as-planned, monthly updates, schedule revisions, and as-built together with computer disks of all schedules related to the claim.
    7. Productivity Exhibits, if appropriate
    8. Summary of Issues and Damages
E. City by reference, photocopy or explanation, supporting documentation relevant to each issue. Supporting documentation may include, but is not be limited to, general conditions, general requirements, technical specifications, drawings, correspondence, conference notes, shop drawings and submittals, shop drawing logs, survey books, inspection reports, delivery schedules, test reports, daily reports, subcontracts, fragmentary CPM schedules or time impact

analyses, photographs, technical reports, requests for information, field instructions and all other related records that support your claim.

F. Cite, photocopy or explain supporting documentation of damages for each issue. Supporting documentation may include, but shall not be limited to, all documents related to preparing and submitting the bid, certified, detailed labor records including labor distribution reports, material and equipment procurement records, construction equipment ownership cost or rental records, subcontractor or vendor files and cost records, service cost records, purchase orders, invoices, project as-planned and as-built cost records, general ledger records, variance reports, accounting adjustment records and any other accounting materials that support your claim.

G. Have each copy of the claim documentation certified by a responsible office of yours according to the requirements of the Contract Documents.

H. If you cannot support any part of the claim and it is determined that this inability is due to the falsity of the certification or misrepresentation of fact or fraud on your part, you are liable to the City as provided under California Government Code § 12650 *et. seq*.

I. Your claims must be accompanied by a notarized certificate containing the following language: Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act, Government code § 12650 *et. seq*., the undersigned,

(Name) _____

(Title) _____

(Company) _____

hereby certifies that the claim for the additional compensation and time, if any, made here for the work on this Contract is a true statement of the actual costs incurred and time sought, and is fully documented and supported under the Contract between the parties.

Dated _____

Signature _____

Subscribed and sworn before me this _____ day

of _____

Notary Public

My Commissions expires _____

Failing to submit the notarized certificate is cause for denying the claim.

END OF SECTION

SECTION 01 10 00 - SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Project Name: **Sweet Shade Community Center Tenant Improvements**

B. Owner's Name: **City of Irvine**

C. Project Manager's Name: **Chris Brown**

D. Architect's Name: **IDS Group**

E. The Project consists of the construction of interior partitions, ceilings, flooring, doors, windows, millwork, HVAC, electrical and other items not mentioned here, but are required by the plans and Special Provisions.

1.02 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract.

1.03 DESCRIPTION OF ALTERATIONS WORK

A. Scope of demolition and removal work is shown on Plans.

B. Scope of alterations work is shown on Plans.

C. Alter existing systems and add new construction per the Plans. Protect existing systems.

1.04 CITY OCCUPANCY

A. City intends to keep the public restrooms open during the construction period.

B. Cooperate with City to minimize conflict and to facilitate City's operations.

C. Schedule the Work to accommodate City operations.

1.05 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Plans.

B. Arrange use of site and premises to allow:
   1. City operations.
   2. Work by Others.
   3. Work by City.
   4. Use of site and premises by the public.

C. Provide access to and from site as required by law and by City:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.

D. Utility Outages and Shutdown:
   1. All utility shutdowns must be coordinated with and approved by the Project Manager a minimum of two weeks in advance.
   4. Prevent accidental disruption of utility services to other facilities.

1.07 WORK SEQUENCE AND PHASING

A. Time is of the essence; therefore, the Work shall be executed in the most efficient manner possible.

B. To the greatest extent possible, the contractor shall phase the Work in a manner that is the least disruptive to facility operations.

C. Coordinate construction schedule and operations with Project Manager.

END OF SECTION

SECTION 01 35 53 - SECURITY PROCEDURES

PART 1 GENERAL

1.01 SECURITY PROGRAM

A. Protect Work, existing premises and Owner's operations from theft, vandalism, and unauthorized entry.

B. Initiate program at project mobilization.

C. Initiate program in coordination with Owner's existing security system at project mobilization.

D. Maintain program throughout construction period until Owner occupancy.

1.02 ENTRY CONTROL

A. Restrict entrance of persons and vehicles into Project site and existing facilities.

B. Allow entrance only to authorized persons with proper identification.

C. Maintain log of workers and visitors, make available to Owner on request.

F. Coordinate access of Owner's personnel to site in coordination with Owner's security forces.

1.03 CONTRACTOR BACKGROUND CHECK REQUIREMENTS

Prior to commencing services, Contractor workers are required to successfully pass a California Department of Justice and/or Federal Bureau of Investigation (FBI) Live Scan Fingerprinting background check ("Live Scan") performed by the City of Irvine Police Department. The Contractor shall be responsible for obtaining the Live Scan for its workers prior to performing work and shall bear the cost thereof. The cost of this procedure shall be included in the Bid Item for Mobilization.

The City's Human Resources staff will coordinate the scheduling of the Live Scan. On the day of the Live Scan, the worker must obtain an application form from the City of Irvine Human Resources Division (located on the third floor of the Civic Center). Upon completion of the application form, the worker will be directed to the Police Department, where the Live Scan will be performed. The worker must possess a photo ID such as a Driver's License at the time of the Live Scan. Also at the time of the Live Scan, payment must be made to the Police Department via cash or check made payable to "The City of Irvine." The cost of the Live Scan is approximately $60.00, per individual. Credit cards are not accepted. The Police Department will provide the City's Human Resources Division with the results of the Live Scan. Human Resources staff will then notify the Contractor and City Representative of the results. The cost of this procedure shall be included in the Bid Item for Mobilization.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Submittals.

B. Quality assurance.

C. References and standards.

D. Testing and inspection agencies and services.

E. Control of installation.

F. Mock-ups.

G. Tolerances.

H. Manufacturers' field services.

I. Defect Assessment.

1.02 RELATED REQUIREMENTS

A. Section 00 72 00 - General Conditions.

B. Section 00 71 00 - Definitions.

C. Section 01 60 00 - Product Requirements.

1.03 REFERENCE STANDARDS

A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2014).

B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2016.

C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2015a.

D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2012a.

E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2014a.

F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2015.

G. IAS AC89 - Accreditation Criteria for Testing Laboratories; 2010.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures. ***– NOT APPLICABLE***

B. Design Data: Submit for Engineer's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.

C. Test Reports: After each test/inspection, promptly submit two copies of report to Engineer and to Contractor.

1. Include:
   a. Date issued.
   b. Project title and number.
   c. Name of inspector.
   d. Date and time of sampling or inspection.
   e. Identification of product and specifications section.
   f. Location in the Project.
   g. Type of test/inspection.

h. Date of test/inspection.
i. Results of test/inspection.
j. Conformance with Contract Documents.
k. When requested by Engineer, provide interpretation of results.

2. Test report submittals are for Engineer's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.

D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Engineer, in quantities specified for Product Data.
1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
2. Certificates may be recent or previous test results on material or product, but must be acceptable to Engineer.

E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

F. Manufacturer's Field Reports: Submit reports for Engineer's benefit as contract administrator or for Owner.
1. Submit report in duplicate within 30 days of observation to Engineer for information.
2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

G. Erection Drawings: Submit drawings for Engineer's benefit as contract administrator or for Owner.
1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
2. Data indicating inappropriate or unacceptable Work may be subject to action by Engineer or Owner.

1.05 QUALITY ASSURANCE

A. Testing Agency Qualifications:
1. Prior to start of Work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
3. Qualification Statement: Provide documentation showing testing laboratory is accredited under IAS AC89.

1.06 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.

C. Obtain copies of standards where required by product specification sections.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

E. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.07 TESTING AND INSPECTION AGENCIES AND SERVICES

A. Owner will employ services of an independent testing agency to perform certain specified testing; payment for cost of services will be derived from allowance specified in Section 01 21 00; see Section 01 21 00 and applicable sections for description of services included in allowance. ***– NOT APPLICABLE***

B. Owner will employ and pay for services of an independent testing agency to perform other specified testing.

C. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.

D. As indicated in individual specification sections, Owner or Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.

E. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

F. Contractor Employed Agency:
   1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM C1021, ASTM C1077, ASTM C1093, ASTM D3740.
   2. Inspection agency: Comply with requirements of ASTM D3740, ASTM E329 _____
   3. Laboratory Qualifications: Accredited by IAS according to IAS AC89.
   4. Laboratory: Authorized to operate in the State in which the Project is located.
   5. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
   6. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have Work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.

B. Accepted mock-ups establish the standard of quality the Engineer will use to judge the Work.

C. Integrated Exterior Mock-ups: construct integrated exterior mock-up as indicated on Drawings. Coordinate installation of exterior envelope materials and products as required in individual Specification Sections. Provide adequate supporting structure for mock-up materials as necessary.

D. Room Mock-ups: Construct room mock-ups as indicated on Drawings. Coordinate installation of materials, products, and assemblies as required in Specification Sections; finish according to requirements. Provide required lighting and any supplemental lighting where required to enable Engineer to evaluate quality of the mock-up.

E. Notify Engineer and Consultant fifteen (15) working days in advance of dates and times when mock-ups will be constructed.

F. Provide supervisory personnel who will oversee mock-up construction. Provide workers that will be employed during the construction at Project.

G. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.

H. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

I. Obtain Engineer's approval of mock-ups before starting work, fabrication, or construction.
   1. Engineer will issue written comments within seven (7) working days of initial review and each subsequent follow up review of each mock-up.
   2. Make corrections as necessary until Architect's approval is issued.

J. Accepted mock-ups shall be a comparison standard for the remaining Work.

K. Where mock-up has been accepted by Engineer and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Engineer.

L. Where possible salvage and recycle the demolished mock-up materials.

3.03 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

A. See individual specification sections for testing and inspection required.

B. Testing Agency Duties:
   1. Test samples of mixes submitted by Contractor.
   2. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.
   3. Perform specified sampling and testing of products in accordance with specified standards.
   4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
   5. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.
   6. Perform additional tests and inspections required by Engineer.
   7. Attend preconstruction meetings and progress meetings.
   8. Submit reports of all tests/inspections specified.

C. Limits on Testing/Inspection Agency Authority:
   1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.

2. Agency may not approve or accept any portion of the Work.
3. Agency may not assume any duties of Contractor.
4. Agency has no authority to stop the Work.

D. Contractor Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
3. Provide incidental labor and facilities:
   a. To provide access to Work to be tested/inspected.
   b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
   c. To facilitate tests/inspections.
   d. To provide storage and curing of test samples.
4. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Engineer.

F. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.

3.05 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Engineer 30 days in advance of required observations.
1. Observer subject to approval of Engineer.
2. Observer subject to approval of Owner.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.06 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the opinion of Engineer, it is not practical to remove and replace the Work, Engineer will direct an appropriate remedy or adjust payment.

C. If, in the opinion of Owner, it is not practical to remove and replace the Work, Owner will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 01 41 00 - REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY OF REFERENCE STANDARDS

A. Regulatory requirements applicable to this project are the following:

B. 28 CFR 35 - Nondiscrimination on the Basis of Disability in State and Local Government Services; Final Rule; Department of Justice; current edition.

C. 28 CFR 36 - Nondiscrimination by Public Accommodations and in Commercial Facilities; Final Rule; Department of Justice; current edition.

D. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.

E. 49 CFR 37 - Transportation Services for Individuals with Disabilities (ADA); current edition.

F. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

G. FED-STD-795 - Uniform Federal Accessibility Standards (UFAS); 1988.

H. 29 CFR 1910 - Occupational Safety and Health Standards; current edition.

I. State of California amendments to some or all of the following.

J. City of Irvine amendments to some or all of the following.

K. Zoning Codes.

L. ICC A117.1 - Accessible and Usable Buildings and Facilities.

M. ICC (IFC) - International Fire Code.

N. NFPA 1 - Fire Code.

O. NFPA 101 - Life Safety Code.

P. ICC (IBC) - International Building Code.

Q. ICC (IRC) - International Residential Code for One- and Two-Family Dwellings.

R. NFPA 5000 - Building Construction and Safety Code.

S. CBC (CBC) Building Code.

T. ICC (IPC) - International Plumbing Code.

U. IAPMO (UPC) - Uniform Plumbing Code.

V. CPC (CPC) Plumbing Code.

W. ICC (IMC) - International Mechanical Code.

X. IAPMO (UPC) - Uniform Plumbing Code.

Y. CMC (CMC) California Mechanical Code.

Z. ICC (IFGC) - International Fuel Gas Code.

AA. Fuel Gas Code.

AB. ICC (IPSDC) - International Private Sewage Disposal Code.

AC. Private Sewage Disposal Code.

AD. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

AE. Elevator Code.

AF. ICC (IECC) - International Energy Conservation Code.

AG. Building Energy Efficiency Standards.

AH. ICC (IPMC) - International Property Maintenance Code.

AI. California Green Building Standards Code.

1.02 RELATED REQUIREMENTS

A. Section 01 40 00 - Quality Requirements.

1.03 QUALITY ASSURANCE

A. Designer Qualifications: Where delegated engineering design is to be performed under the construction contract provide the direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 45 33 - CODE-REQUIRED SPECIAL INSPECTIONS

PART 1 GENERAL

Refer to the City of Irvine – Special Inspection Manual and Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary utilities.

B. Temporary telecommunications services.

C. Temporary sanitary facilities.

D. Temporary Controls: Barriers, enclosures, and fencing.

E. Security requirements.

F. Vehicular access and parking.

G. Waste removal facilities and services.

H. Project identification sign.

1.02 (NOT USED)

1.03 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.

B. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009.

1.04 TEMPORARY UTILITIES - SEE SECTION 01 51 00

A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.

B. Existing facilities may not be used.

C. New permanent facilities may be used.

D. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.05 TELECOMMUNICATIONS SERVICES

A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.

B. Provide equivalent equipment and connections for Engineer's field office.

C. Telecommunications services shall include:

1. Telephone Land Lines: One line, minimum; one handset per line.
2. Internet Connections: Minimum of one; DSL modem or faster.
3. Project web site.

1.06 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Maintain daily in clean and sanitary condition.

C. At end of construction, return facilities to same or better condition as originally found.

1.07 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Provide barricades and covered walkways required by City for public rights-of-way and for public access to existing building.

C. Provide protection for plants designated to remain. Replace damaged plants.

D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.08 FENCING

A. Provide 6 foot (1.8 m) high privacy fence around construction site; equip with vehicular and pedestrian gates with locks.

1.09 EXTERIOR ENCLOSURES

A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.10 INTERIOR ENCLOSURES

A. Provide temporary partitions and ceilings as indicated to separate work areas from City-occupied areas, to prevent penetration of dust and moisture into City-occupied areas, and to prevent damage to existing materials and equipment.

B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:
   1. STC rating of 35 in accordance with ASTM E90.
   2. Maximum flame spread rating of 75 in accordance with ASTM E84.

C. Paint surfaces exposed to view from City-occupied areas.

1.11 SECURITY - SEE SECTION 01 35 53

A. Provide security and facilities to protect Work, existing facilities, and City's operations from unauthorized entry, vandalism, or theft.

B. Coordinate with City's security program.

1.12 VEHICULAR ACCESS AND PARKING - SEE SECTION 01 55 00

A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.

B. Coordinate access and haul routes with governing authorities and City.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Provide means of removing mud from vehicle wheels before entering streets.

E. Designated existing on-site roads may be used for construction traffic.

F. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.13 WASTE REMOVAL

A. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.

B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

C. Provide containers with lids. Remove trash from site periodically.

D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.14 PROJECT SIGNS - SEE SECTION 01 58 13

1.15 PROJECT IDENTIFICATION

A. Erect on site at location established by Engineer.

B. Provide project identification sign of design, construction, and location approved by Owner.

C. No other signs are allowed without Owner permission except those required by law.

1.16 (NOT USED)

1.17 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.

B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.

C. Clean and repair damage caused by installation or use of temporary work.

D. Restore existing facilities used during construction to original condition.

E. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 51 00 - TEMPORARY UTILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary Utilities: Electricity, lighting, heat, ventilation, and water.

1.02 RELATED REQUIREMENTS

A. Section 01 50 00 - Temporary Facilities and Controls:
   1. Temporary telecommunications services for administrative purposes.
   2. Temporary sanitary facilities required by law.

1.03 TEMPORARY ELECTRICITY

A. Cost: By Contractor.

C. Provide power service required from utility source.

D. Connect to City's existing power service.
   1. Do not disrupt City's need for continuous service.
   2. Exercise measures to conserve energy.
   3. Provide separate metering and reimburse City for cost of energy used.

E. Provide power outlets for construction operations, with branch wiring and distribution boxes located at each floor. Provide flexible power cords as required.

F. Provide main service disconnect and over-current protection at convenient location and meter.

G. Permanent convenience receptacles may be utilized during construction.

H. Provide adequate distribution equipment, wiring, and outlets to provide single phase branch circuits for power and lighting.

I. For electricity, the Contractor shall:
   1. Provide portable power plants and/or connection to existing system for construction needs.
   2. Source of existing power: Southern California Edison Company (SCE). Prior to connecting to existing system:
      a. Obtain permit from City of Irvine, Community Development Department for installation of temporary power pole and/or system.
      b. Arrange for required inspections and coordinate temporary meter installation with City and SCE.

1.04 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

A. Provide and maintain incandescent lighting for construction operations to achieve a minimum lighting level of 2 watt/sq ft.

B. Provide and maintain 1 watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.

C. Provide and maintain 0.25 watt/sq ft H.I.D. lighting to interior work areas after dark for security purposes.

D. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

E. Maintain lighting and provide routine repairs.

F. Permanent building lighting may be utilized during construction.

1.05 TEMPORARY HEATING

A. Cost of Energy: By Contractor.

B. Provide heating devices and heat as needed to maintain specified conditions for construction operations.

C. Maintain minimum ambient temperature of 65 degrees F in areas where construction is in progress, unless indicated otherwise in specifications.

D. Existing facilities shall not be used.

1.06 TEMPORARY COOLING

A. Cost of Energy: By Contractor.

B. Provide cooling devices and cooling as needed to maintain specified conditions for construction operations.

C. Maintain maximum ambient temperature of 75 degrees F in areas where construction is in progress, unless indicated otherwise in specifications.

D. Existing facilities shall not be used.

1.07 TEMPORARY VENTILATION

A. Existing ventilation equipment may not be used.

1.08 TEMPORARY WATER SERVICE

A. Cost of Water Used: By Contractor.

B. Provide and maintain suitable quality water service for construction operations at time of project mobilization.

C. Extend branch piping with outlets located so water is available by hoses with threaded connections.

D. Water Source: Irvine Ranch Water District (IRWD)

1. Obtain meter, inspections and approvals prior to use of existing system.
2. Comply with IRWD requirements.

E. Conservation:

1. Minimize water use whenever possible.
2. Maintain watering equipment in good working order.
3. Repair leaks promptly.

1.09 TEMPORARY SANITARY FACILITIES

A. Furnish and maintain portable toilet units in a clean, operable and sanitary condition for use by construction personnel.

B. Place units in conformance with applicable laws, codes and regulations.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 55 00 - VEHICULAR ACCESS AND PARKING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Access roads.

B. Parking.

C. Existing pavements and parking areas.

D. Permanent pavements and parking facilities.

E. Construction parking controls.

F. Flag persons.

G. Flares and lights.

H. Haul routes.

I. Traffic signs and signals.

J. Maintenance.

K. Removal, repair.

L. Mud from site vehicles.

PART 2 PRODUCTS

2.01 MATERIALS

A. Temporary Construction: Contractor's option.

B. Materials for Permanent Construction: As specified in product specification sections, including earthwork, paving base, and topping.

2.02 SIGNS, SIGNALS, AND DEVICES

A. Stock Post Mounted and Wall Mounted Traffic Control and Informational Signs:

1. Products:
   a. Brimar Industries, Inc.: www.safetysign.com.
   b. Substitutions: See Section 01 60 00 - Product Requirements.

B. Post Mounted and Wall Mounted Traffic Control and Informational Signs: Specified in Section 01 58 13 - Temporary Project Signage.

C. Automatic Traffic Control Signals: As approved by local jurisdictions.

D. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.

E. Flag Person Equipment: As required by local jurisdictions.

PART 3 EXECUTION

3.01 PREPARATION

A. Clear areas, provide surface and storm drainage of road, parking, area premises, and adjacent areas.

3.02 ACCESS ROADS

A. Use of existing on-site streets and driveways for construction traffic is not permitted.

B. Use of designated existing on-site streets and driveways for construction traffic is permitted.

C. Tracked vehicles not allowed on paved areas.

D. Construct new temporary all-weather access roads from public thoroughfares to serve construction area, of a width and load bearing capacity to provide unimpeded traffic for construction purposes.

E. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.

F. Extend and relocate as Work progress requires, provide detours as necessary for unimpeded traffic flow.

G. Location as indicated.

H. Location as approved by Engineer.

I. Provide unimpeded access for emergency vehicles. Maintain 20 foot (6 m) width driveways with turning space between and around combustible materials.

J. Provide and maintain access to fire hydrants free of obstructions.

3.03 PARKING

A. Use of existing parking facilities by construction personnel is not permitted.

B. Use of designated areas of existing parking facilities by construction personnel is permitted.

C. Use of new parking facilities by construction personnel is not permitted.

D. Use of designated areas of new parking facilities by construction personnel is permitted.

E. Arrange for temporary parking areas to accommodate use of construction personnel.

F. When site space is not adequate, provide additional off-site parking.

G. Locate as indicated.

H. Locate as approved by Engineer.

3.04 PERMANENT PAVEMENTS AND PARKING FACILITIES

A. Prior to Substantial Completion the base for permanent roads and parking areas may be used for construction traffic.

B. Avoid traffic loading beyond paving design capacity. Tracked vehicles not allowed.

3.05 CONSTRUCTION PARKING CONTROL

A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations.

B. Monitor parking of construction personnel's vehicles in existing facilities. Maintain vehicular access to and through parking areas.

C. Prevent parking on or adjacent to access roads or in non-designated areas.

3.06 FLAG PERSONS

A. Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

3.07 FLARES AND LIGHTS

A. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.08 HAUL ROUTES

A. Confine construction traffic to designated haul routes.

B. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

3.09 TRAFFIC SIGNS AND SIGNALS

A. At approaches to site and on site, install at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.

B. Install and operate automatic traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations.

C. Relocate as Work progresses, to maintain effective traffic control.

3.10 MAINTENANCE

A. Maintain traffic and parking areas in a sound condition free of excavated material, construction equipment, Products, mud, snow, and ice.

B. Maintain existing paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

3.11 REMOVAL, REPAIR

A. Remove temporary roads when permanent paving is usable.

B. Remove underground work and compacted materials to a depth of 2 feet (600 mm); fill and grade site as specified.

C. Remove equipment and devices when no longer required.

D. Repair damage caused by installation.

E. Remove post settings to a depth of 2 feet (600 mm).

3.12 MUD FROM SITE VEHICLES

A. Provide means of removing mud from vehicle wheels before entering streets.

END OF SECTION

SECTION 01 57 21 - INDOOR AIR QUALITY CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Construction procedures to promote adequate indoor air quality after construction.

B. Building flush-out after construction and before occupancy.

C. Testing indoor air quality before commencement of construction; existing building areas only.

D. Testing indoor air quality after completion of construction.

E. Testing air change effectiveness after completion of construction.

F. Testing smoking room ventilation and isolation.

1.02 PROJECT GOALS

A. Dust and Airborne Particulates: Prevent deposition of dust and other particulates in HVAC ducts and equipment.
   1. Cleaning of ductwork is not contemplated under this Contract.
   2. Contractor shall bear the cost of cleaning required due to failure to protect ducts and equipment from construction dust.
   3. Establish condition of existing ducts and equipment prior to start of alterations.

C. Airborne Contaminants: Procedures and products have been specified to minimize indoor air pollutants.
   1. Furnish products meeting the specifications.
   2. Avoid construction practices that could result in contamination of installed products leading to indoor air pollution.

D. Environmental Tobacco Smoke Control: Smoking rooms have been designed with direct exhaust to outdoors, no recirculated air, impermeable partitions from floor to structure above, and negative pressure of at least 0.03 inch wg (7 Pa).

E. Residential Units Air Isolation: Units have been designed with impermeable party walls and sealed openings in walls and floors.

1.03 RELATED REQUIREMENTS

B. Section 01 40 00 - Quality Requirements: Testing and inspection services.

C. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions.

1.04 REFERENCE STANDARDS

A. ASHRAE Std 52.2 - Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size; 2012, with 2015 amendments.

B. ASHRAE Std 129 - Measuring Air-Change Effectiveness; 1997 (Reaffirmed 2002).

C. ASTM D5149 - Standard Test Method for Ozone in the Atmosphere: Continuous Measurement by Ethylene Chemiluminescence; 2002 (Reapproved 2008).

D. ASTM D5197 - Standard Test Method for Determination of Formaldehyde and Other Carbonyl Compounds in Air (Active Sampler Methodology); 2009.

E. ASTM E779 - Standard Test Method for Determining Air Leakage Rate by Fan Pressurization; 2010.

F. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions From Indoor Sources Using Environmental Chambers; California Department of Public Health; v1.1, 2010.

G. EPA 600/4-90/010 - Compendium of Methods for the Determination of Air Pollutants in Indoor Air; April 1990.

H. EPA 625/R-96/010b - Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air; Jan-99.

I. SMACNA (OCC) - IAQ Guidelines for Occupied Buildings Under Construction; 2007.

1.05 DEFINITIONS

A. Adsorptive Materials: Gypsum board, acoustical ceiling tile and panels, carpet and carpet tile, fabrics, fibrous insulation, and other similar products.

B. Contaminants: Gases, vapors, regulated pollutants, airborne mold and mildew, and the like, as specified.

C. Particulates: Dust, dirt, and other airborne solid matter.

D. Wet Work: Concrete, plaster, coatings, and other products that emit water vapor or volatile organic compounds during installation, drying, or curing.

1.06 SUBMITTALS

A. Administrative Requirements, for submittal procedures.

B. Indoor Air Quality Management Plan: Describe in detail measures to be taken to promote adequate indoor air quality upon completion; use SMACNA (OCC) as a guide.
   1. Submit not less than 60 days before enclosure of building.
   2. Identify potential sources of odor and dust.
   3. Identify construction activities likely to produce odor or dust.
   4. Identify areas of project potentially affected, especially occupied areas.
   5. Evaluate potential problems by severity and describe methods of control.
   6. Describe construction ventilation to be provided, including type and duration of ventilation, use of permanent HVAC systems, types of filters and schedule for replacement of filters.
   7. Describe cleaning and dust control procedures.

C. Interior Finishes Installation Schedule: Identify each interior finish that either generates odors, moisture, or vapors or is susceptible to adsorption of odors and vapors, and indicate air handling zone, sequence of application, and curing times.

D. Duct and Terminal Unit Inspection Report.

E. Air Contaminant Test Plan: Identify:
   1. Testing agency qualifications.
   2. Locations and scheduling of air sampling.
   3. Test procedures, in detail.
   4. Test instruments and apparatus.
   5. Sampling methods.

F. Air Contaminant Test Reports: Show:
   1. Location where each sample was taken, and time.
   2. Test values for each air sample; average the values of each set of 3.
   3. HVAC operating conditions.
   4. Certification of test equipment calibration.
   5. Other conditions or discrepancies that might have influenced results.

G. Ventilation Effectiveness Test Plan: Identify:
   1. Testing agency qualifications.
   2. Description of test spaces, including locations of air sampling.
   3. Test procedures, in detail; state whether tracer gas decay or step-up will be used.
   4. Test instruments and apparatus; identify tracer gas to be used.
   5. Sampling methods.

H. Ventilation Effectiveness Test Reports: Show:
   1. Include preliminary tests of instruments and apparatus and of test spaces.
   2. Calculation of ventilation effectiveness, E.
   3. Location where each sample was taken, and time.
   4. Test values for each air sample.
   5. HVAC operating conditions.

6. Other information specified in ASHRAE Std 129.
7. Other conditions or discrepancies that might have influenced results.

I. Smoking Room Test and Inspection Plan: Identify:
1. Testing agency qualifications.
2. Description of test spaces, including locations of air sampling.
3. Test procedures, in detail.
4. Test instruments and apparatus; identify tracer gas to be used.
5. Sampling methods.

J. Smoking Room Test and Inspection Reports: Show:
1. Include preliminary tests of instruments and apparatus.
2. Include inspection of membrane seals in test spaces.
3. HVAC operating conditions.
4. Location where each sample was taken, and time.
5. Test values for each air sample.
6. Other information specified in ASHRAE Std 129.
7. Other conditions or discrepancies that might have influenced results.

1.07 QUALITY ASSURANCE

A. Testing and Inspection Agency Qualifications: Independent testing agency having minimum of 5 years experience in performing the types of testing specified.

PART 2 PRODUCTS

2.01 MATERIALS

A. Low VOC Materials: See Section 01 61 16.

B. Low VOC Materials: See other sections for specific requirements for materials with low VOC content.

C. Auxiliary Air Filters: MERV of 8, minimum, when tested in accordance with ASHRAE Std 52.2.

PART 3 EXECUTION

3.01 CONSTRUCTION PROCEDURES

A. Prevent the absorption of moisture and humidity by adsorptive materials by:
1. Sequencing the delivery of such materials so that they are not present in the building until wet work is completed and dry.
2. Delivery and storage of such materials in fully sealed moisture-impermeable packaging.
3. Provide sufficient ventilation for drying within reasonable time frame.

B. Begin construction ventilation when building is substantially enclosed.

C. If extremely dusty or dirty work must be conducted inside the building, shut down HVAC systems for the duration; remove dust and dirt completely before restarting systems.

D. When working in a portion of an occupied building, prevent movement of air from construction area to occupied area.

E. Use of HVAC equipment and ductwork for ventilation during construction is not permitted:
1. Provide temporary ventilation equivalent to 1.5 air changes per hour, minimum.
2. Exhaust directly to outside.
3. Seal HVAC air inlets and outlets immediately after duct installation.

F. HVAC equipment and supply air ductwork may be used for ventilation during construction:
1. Operate HVAC system on 100 percent outside air, with 1.5 air changes per hour, minimum.
2. Ensure that air filters are correctly installed prior to starting use; replace filters when they lose efficiency.
3. Do not use return air ductwork for ventilation.
4. Do not use return air ductwork for ventilation unless absolutely necessary.

5. Seal return air inlets or otherwise positively isolate return air system to prevent recirculation of air; provide alternate return air pathways.
6. Where return air ducts must be used for ventilation, install auxiliary filters at return inlets, sealed to ducts; use filters with at least the equivalent efficiency as those required at supply air side; inspect and replace filters when they lose efficiency.

G. Do not store construction materials or waste in mechanical or electrical rooms.

H. Prior to use of return air ductwork without intake filters clean up and remove dust and debris generated by construction activities.
1. Inspect duct intakes, return air grilles, and terminal units for dust.
2. Clean plenum spaces, including top sides of lay-in ceilings, outsides of ducts, tops of pipes and conduit.
3. Clean tops of doors and frames.
4. Clean mechanical and electrical rooms, including tops of pipes, ducts, and conduit, equipment, and supports.
5. Clean return plenums of air handling units.
6. Remove intake filters last, after cleaning is complete.

I. Do not perform dusty or dirty work after starting use of return air ducts without intake filters.

J. Use other relevant recommendations of SMACNA (OCC) for avoiding unnecessary contamination due to construction procedures.

3.02 BUILDING FLUSH-OUT

A. Contractor's Option: Either full continuous flush-out OR satisfactory air contaminant testing is required, not both.

B. Perform building flush-out before occupancy.

C. Do not start flush-out until:
1. All construction is complete.
2. HVAC systems have been tested, adjusted, and balanced for proper operation.
3. Cleaning of inside of HVAC ductwork, specified elsewhere, has been completed.
4. Inspection of inside of return air ducts and terminal units confirms that cleaning is not necessary.
5. New HVAC filtration media have been installed.

D. Building Flush-Out: Operate all ventilation systems at normal flow rates with 100 percent outside air until a total air volume of 14,000 cubic feet per square foot (4500 cubic meters per square meter) of floor area has been supplied.
1. Obtain Owner's concurrence that construction is complete enough before beginning flush-out.
2. Maintain interior temperature of at least 60 degrees F (15 degrees C) and interior relative humidity no higher than 60 percent.
3. If additional construction involving materials that produce particulates or any of the specified contaminants is conducted during flush-out, start flush-out over.
4. If interior spaces must be occupied prior to completion of the flush-out, supply a minimum of 25 percent of the total air volume prior to occupancy, and:
   a. Begin ventilation at least three hours prior to daily occupancy.
   b. Continue ventilation during all occupied periods.
   c. Provide minimum outside air volume of 0.30 cfm per square foot (0.0015 cu m/s/sq m) or design minimum outside air rate, whichever is greater.

E. Install new HVAC filtration media after completion of flush-out and before occupancy or further testing.

3.03 AIR CONTAMINANT TESTING

A. Contractor's Option: Either full continuous flush-out, or satisfactory air contaminant testing is required, not both.

B. Perform air contaminant testing before starting construction, as base line for evaluation of post-construction testing.

C. Perform air contaminant testing before occupancy.

D. Do not start air contaminant testing until:
   1. All construction is complete, including interior finishes.
   2. HVAC systems have been tested, adjusted, and balanced for proper operation.
   3. Cleaning of inside of HVAC ductwork, specified elsewhere, has been completed.
   4. New HVAC filtration media have been installed.

E. Indoor Air Samples: Collect from spaces representative of occupied areas:
   1. Collect samples while operable windows and exterior doors are closed, HVAC system is running normally as if occupied, with design minimum outdoor air, but with the building unoccupied.
   2. Collect samples from spaces in each contiguous floor area in each air handler zone, but not less than one sample per 25,000 square feet (2300 square meters); take samples from areas having the least ventilation and those having the greatest presumed source strength.
   3. Collect samples from height from 36 inches (915 mm) to 72 inches (1830 mm) above floor.
   4. Collect samples from same locations on 3 consecutive days during normal business hours; average the results of each set of 3 samples.
   5. Exception: Areas with normal very high outside air ventilation rates, such as laboratories, do not need to be tested.
   6. When retesting the same building areas, take samples from at least the same locations as in first test.

F. Outdoor Air Samples: Collect samples at outside air intake of each air handler at the same time as indoor samples are taken.

G. Analyze air samples and submit report.

H. Air Contaminant Concentration Limits:
   1. Formaldehyde: Not more than 16.3 parts per billion.
   2. PM10 Particulates: Not more than 20 micrograms per cubic meter.
   3. Total Volatile Organic Compounds (TVOCs): Not more than 500 micrograms per cubic meter.
   4. Chemicals Listed in CAL (CDPH SM) Table 4-1, except Formaldehyde: Allowable concentrations listed in Table 4-1.
   5. Carbon Monoxide: Not more than 9 parts per million and not more than 2 parts per million higher than outdoor air.
   6. Carbon Dioxide: Measure in ppm, in relation to outdoor air ; not more than 700 ppm higher than outdoor air.
   7. Airborne Mold and Mildew: Measure in relation to outside air ; not higher than outside air.
   8. Regulated Pollutants: Measure in relation to outside air ; not more than contained in outside air.

I. Air Contaminant Concentration Test Methods:
   1. Formaldehyde: ASTM D5197, EPA 625/R-96/010b Method TO-11A, or EPA 600/4-90/010 Method IP-6.
   2. Particulates: EPA 600/4-90/010 Method IP-10.
   3. Ozone: ASTM D5149.
   4. Total Volatile Organic Compounds (TVOC): EPA 625/R-96/010b Method TO-1, TO-15, or TO-17; or EPA 600/4-90/010 Method IP-1.
   5. Chemicals Listed in CAL (CDPH SM) Table 4-1, except Formaldehyde: ASTM D5197, or EPA 625/R-96/010b Method TO-1, TO-15, or TO-17.
   6. Carbon Monoxide: EPA 600/4-90/010 Method IP-3, plus measure outdoor air; measure in ppm; report both indoor and outdoor measurements.

J. If air samples show concentrations higher than those specified, ventilate with 100 percent outside air and retest at no cost to Owner, or conduct full building flush-out specified above.

3.04 SMOKING ROOM INSPECTION AND TESTING

A. Perform smoking room inspection and testing before occupancy.

B. Do not begin testing until HVAC testing, adjusting, and balancing has been satisfactorily completed.

C. Smoking room(s) have been designed to have an airtight sealed membrane; inspect membrane seal at the following locations and repair as required:
   1. Between partitions and floor structure.
   2. Between partitions and roof structure.
   3. Around pipes, conduits, and ducts passing through floors within sealed membrane.

D. Test each smoking room for isolation and exhaust effectiveness by measuring pressure differential between smoking room and each adjacent space and vertical chase:
   1. With the smoking room doors closed, operate the exhaust system in normal manner.
   2. For each separate adjacent spaces, take pressure readings for 15 minutes, with minimum of one measurement every 10 seconds.
   3. The test is failed if the lowest pressure differential between the smoking room and an external space is less than 0.004 inches water gage (1 Pa), or if the average pressure differential is less than 0.02 inches water gage (5 Pa).
   4. Correct defects in the membrane seal. If seal is demonstrably correct, notify Engineer.

E. Test each smoking room for isolation and exhaust effectiveness using procedures similar to those defined in ASHRAE Std 129.
   1. Take air samples in each adjacent space approximately 10 feet (3 m) from each side of smoking room.
   2. Take one air sample at least 30 feet (9 m) from each side of doorway to smoking room.
   3. Calibration: Test with door(s) to adjacent spaces open and exhaust not operating; using tracer gas step-up procedure, increase tracer gas concentration in smoking room to a level that is detectable at all sample locations in adjacent spaces.
   4. Test: Allow tracer gas concentration outside smoking room to dissipate; close door(s) but do not seal; operate exhaust normally; test using same procedure, tracer gas concentration, and sample locations.
   5. Acceptable Results: Not more than 1 percent of smoking room tracer gas concentration detectable at any sample location.

3.05 VENTILATION EFFECTIVENESS TESTING

A. Perform ventilation effectiveness testing before occupancy.

B. Do not begin ventilation effectiveness testing until:
   1. HVAC testing, adjusting, and balancing has been satisfactorily completed.
   2. Building flush-out or air contaminant testing has been completed satisfactorily.
   3. New HVAC filtration media have been installed.

C. Test each air handler zone in accordance with ASHRAE Std 129.

D. If calculated air change effectiveness for a particular zone is less than 0.9 due to inadequate balancing of the system, adjust, and retest at no cost to Owner.

END OF SECTION

SECTION 01 58 13 - TEMPORARY PROJECT SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project identification sign.

B. Project informational signs.

1.02 RELATED REQUIREMENTS

A. Responsibility to provide signs.

1.03 REFERENCE STANDARDS

A. FHWA (SHS) - Standard Highway Signs; Federal Highway Administration; 2004.

1.04 QUALITY ASSURANCE

A. Design sign and structure to withstand 50 miles/hr (80 km/hr) wind velocity.

B. Sign Painter: Experienced as a professional sign painter for minimum three years.

C. Finishes, Painting: Adequate to withstand weathering, fading, and chipping for duration of construction.

1.05 SUBMITTALS

A. Administrative Requirements for submittal procedures.

B. Shop Drawing: Show content, layout, lettering, color , foundation , structure , sizes and grades of members.

PART 2 PRODUCTS

2.01 SIGN MATERIALS

A. Structure and Framing: New, wood, structurally adequate.

B. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4 inch (19 mm) thick, standard large sizes to minimize joints.

C. Rough Hardware: Galvanized.

D. Paint and Primers: Exterior quality, two coats.

E. Lettering: Exterior quality paint, contrasting colors.

F. Lettering: Pre-cut vinyl self-adhesive products, white.

2.02 PROJECT IDENTIFICATION SIGN

A. One painted sign of construction, design, and content shown on Drawings, location designated.

B. One painted sign, 48 sq ft (4.5 sq m) area, bottom 6 feet (2 m) above ground.

C. Content:
   1. Project number, title, logo and name of Owner as indicated on Contract Documents.
   2. Names and titles of authorities.
   3. Names and titles of Engineer and Consultants.
   4. Name of Prime Contractor and major Subcontractors.

D. Graphic Design, Colors, Style of Lettering: Designated by Engineer.

E. Lettering: Standard Alphabet Series C, as specified in FHWA (SHS).

2.03 PROJECT INFORMATIONAL SIGNS

A. Painted informational signs of same colors and lettering as Project Identification sign, or standard products; size lettering to provide legibility at 100 foot (30 m) distance.

B. Provide at each field office, storage shed , and directional signs to direct traffic into and within site. Relocate as Work progress requires.

C. Provide municipal traffic agency directional traffic signs to and within site.

2.04 SIGNS, SIGNALS, AND DEVICES

A. Stock Post Mounted and Wall Mounted Traffic Control and Informational Signs:
   1. Products:
      a. Brimar Industries, Inc.: www.safetysign.com.
      b. Substitutions: See Section 01 60 00 - Product Requirements.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install project identification sign within 30 days after date fixed by Notice to Proceed.

B. Erect at designated location.

C. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.

D. Install sign surface plumb and level, with butt joints. Anchor securely.

E. Paint exposed surfaces of sign, supports, and framing.

3.02 MAINTENANCE

A. Maintain signs and supports clean, repair deterioration and damage.

3.03 REMOVAL

A. Remove signs, framing, supports, and foundations at completion of Project and restore the area.

END OF SECTION

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General product requirements.

B. Re-use of existing products.

C. Transportation, handling, storage and protection.

D. Product option requirements.

E. Substitution limitations and procedures.

F. Procedures for Owner-supplied products.

G. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

A. Document 00 21 13 - Instructions to Bidders: Product options and substitution procedures prior to bid date.

B. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.

C. Section 01 74 19 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting packaging and substitutions.

1.03 REFERENCE STANDARDS

A. 16 CFR 260.13 - Guides for the Use of Environmental Marketing Claims; Federal Trade Commission; Recycled Content; Current Edition.

B. ASTM D6866 - Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis; 2016.

C. C2C (DIR) - C2C Certified Products Registry; Cradle to Cradle Products Innovation Institute; www.c2ccertified.org/products/registry.

D. CAN/CSA Z809 - National Standard for Sustainable Forest Management; CSA International Inc; 2008.

E. EN 15804 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products; 2012.

F. GreenScreen (LIST) - GreenScreen for Safer Chemicals List Translator; Clean Production Action; www.greenscreenchemicals.org.

G. GreenScreen (METH) - GreenScreen for Safer Chemicals Method v1.2; Clean Production Action; www.greenscreenchemicals.org.

H. HPDC (Tool) - Create an HPD On-Line Tool; Health Product Declaration Collaborative; http://www.hpd-collaborative.org/.

I. ISO 14025 - Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures; 2006.

J. ISO 14040 - Environmental management -- Life cycle assessment -- Principles and framework; 2006.

K. ISO 14044 - Environmental management -- Life cycle assessment -- Requirements and guidelines; 2006.

L. ISO 21930 - Sustainability in building construction -- Environmental declaration of building products; 2007.

M. NEMA MG 1 - Motors and Generators; 2014.

N. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 SUBMITTALS

A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
   1. Submit within 15 days after date of Agreement.
   2. For products specified only by reference standards, list applicable reference standards.

B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

1.05 QUALITY ASSURANCE

A. Bio-Based Content: Of vegetable or animal origin, not including products made by killing the animal.
   1. Determine percentage of bio-based content in accordance with ASTM D6866.
   2. Bio-based content must be sourced from a Sustainable Agriculture Network certified farm.

B. Cradle-to-Cradle Certified: End use product certified Cradle-to-Cradle v2 Basic or Cradle-to-Cradle v3 Bronze, minimum, as evidenced by C2C (DIR).

C. Environmental Product Declaration (EPD): Publicly available, critically reviewed life cycle analysis having at least a cradle-to-gate scope.
   1. Good: Product-specific; compliant with ISO 14044.
   2. Better: Industry-wide, generic; compliant with ISO 21930, or with ISO 14044, ISO 14040, ISO 14025, and EN 15804; Type III third-party certification with external verification, in which the manufacturer is recognized as the program operator.
   3. Best: Commercial-product-specific; compliant with ISO 21930, or with ISO 14044, ISO 14040, ISO 14025, and EN 15804; Type III third-party certification with external verification, in which the manufacturer is recognized as the program operator.
   4. Where demonstration of impact reduction below industry average is required, submit both industry-wide and commercial-product-specific declarations; or submit at least 5 declarations for products of the same type by other manufacturers in the same industry.

D. GreenScreen Chemical Hazard Analysis: All ingredients of 100 parts-per-million or greater evaluated using GreenScreen (METH).
   1. Good: GreenScreen (LIST) evaluation to identify Benchmark 1 hazards; a Health Product Declaration includes this information.
   2. Better: GreenScreen Full Assessment.
   3. Best: GreenScreen Full Assessment by GreenScreen Licensed Profiler.
   4. Acceptable Evidence: GreenScreen report.

E. Health Product Declarations (HPD): Complete, published declaration with full disclosure of known hazards, prepared using HPDC (Tool); HPD's with "unknown" listed for any hazard will not be considered acceptable.

F. Manufacturer's Inventory of Product Content: Publicly available inventory of all ingredients identified by name and Chemical Abstract Service Registration Number (CAS RN).
   1. For ingredients considered a trade secret or intellectual property, the name and CAS RN may be omitted, provided the ingredient's role, amount, and GreenScreen Benchmark are given.

G. Recycled Content: Determine percentage of post-consumer and pre-consumer (post-industrial) content separately, using the guidelines contained in 16 CFR 260.13.
   1. Previously used, reused, refurbished, and salvaged products are not considered recycled.
   2. Wood fabricated from timber abandoned in transit to original mill is considered reused, not recycled.
   3. Determine percentage of recycled content of any item by dividing the weight of recycled content in the item by the total weight of all material in the item.
   4. Determine value of recycled content of each item separately, by multiplying the content percentage by the value of the item.
   5. Acceptable Evidence:
      a. For percentage of recycled content, information from manufacturer.
      b. For cost, Contractor's cost data.

H. Reused Products: Materials and equipment previously used in this or other construction, salvaged and refurbished as specified.
   1. Wood fabricated from timber abandoned in transit after harvesting is considered reused, not recycled.
   2. Acceptable Evidence: Information about the origin or source, from Contractor or supplier.

I. Source Location: Location of harvest, extraction, recovery, or manufacture; where information about source location is required to be submitted, give the postal address:
   1. In all cases, indicate the location of final assembly.
   2. For harvested products, indicate location of harvest.
   3. For extracted (i.e. mined) products, indicate location of extraction.
   4. For recovered products, indicate location of recovery.
   5. For products involving multiple manufacturing steps, provide a description of the process at each step, with location.
   6. Acceptable Evidence:
      a. Manufacturer's certification.
      b. Life cycle analysis (LCA) performed by third-party.

J. Sustainably Harvested Wood: Solid wood, wood chips, and wood fiber certified or labeled by an organization accredited by one of the following:
   1. American Forest Foundation, The American Tree Farm System; refer to http://www.treefarmsystem.org.
   2. Canadian Sustainable Forest Management System, under CAN/CSA Z809; refer to http://www.csasfmforests.ca.
   3. The Forest Stewardship Council, The Principles for Natural Forest Management; for Canada visit http://www.fsccanada.org, for the USA visit http://www.fscus.org.
   4. Sustainable Forestry Board, under The Sustainable Forestry Initiative® of the American Forest & Paper Association; refer to http://www.afandpa.org.
   5. Acceptable Evidence: Copies of invoices bearing the certifying organization's certification numbers.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.

B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.

C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

D. Specific Products to be Reused: The reuse of certain materials and equipment already existing on the project site is required.

1. See Section 01 10 00 for list of items required to be salvaged for reuse and relocation.
2. If reuse of other existing materials or equipment is desired, submit substitution request.

2.02 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

B. DO NOT USE products having any of the following characteristics:
1. Made outside the United States, its territories, Canada, or Mexico.
2. Made using or containing CFC's or HCFC's.
3. Made of wood from newly cut old growth timber.
4. Containing lead, cadmium, asbestos.

C. Where all other criteria are met, Contractor shall give preference to products that:
1. If used on interior, have lower emissions, as defined in Section 01 61 16.
2. If wet-applied, have lower VOC content, as defined in Section 01 61 16.
3. Are extracted, harvested, and/or manufactured closer to the location of the project.
4. Have longer documented life span under normal use.
5. Result in less construction waste.
6. Are made of vegetable materials that are rapidly renewable.
7. Are made of recycled materials.
8. If made of wood, are made of sustainably harvested wood, wood chips, or wood fiber.
9. If bio-based, other than wood, are or are made of Sustainable Agriculture Network certified products.
10. Are Cradle-to-Cradle Certified.
11. Have a published Environmental Product Declaration (EPD).
12. Have a published Health Product Declaration (HPD).
13. Have a published GreenScreen Chemical Hazard Analysis.
14. Have a published Manufacturer's Inventory of Chemical Content.

D. Provide interchangeable components of the same manufacture for components being replaced.

E. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to NFPA 70, include lugs for terminal box.

F. Cord and Plug: Provide minimum 6 foot (2 m) cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

2.03 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.04 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

A. Instructions to Bidders specifies time restrictions for submitting requests for substitutions during the bidding period and the documents required. Comply with requirements specified in Section 00 21 13.

B. Submit substitution requests by completing the form in Section 00 43 25; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable. ***– NOT APPLICABLE***

C. Engineer will consider requests for substitutions only within 15 days after date of Agreement.

D. Substitutions will not be considered when a product becomes unavailable through no fault of the Contractor.

E. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

F. A request for substitution constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
   2. Agrees to provide the same warranty for the substitution as for the specified product.
   3. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.
   5. Agrees to reimburse Owner and Engineer for review or redesign services associated with re-approval by authorities.

G. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

H. Substitution Submittal Procedure (after contract award):
   1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
   2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
   3. Engineer will notify Contractor in writing of decision to accept or reject request.

3.02 OWNER-SUPPLIED PRODUCTS

A. See Section 01 10 00 - Summary for identification of Owner-supplied products.

B. Owner's Responsibilities:
   1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
   2. Arrange and pay for product delivery to site.
   3. On delivery, inspect products jointly with Contractor.
   4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
   5. Arrange for manufacturers' warranties, inspections, and service.

C. Contractor's Responsibilities:
   1. Review Owner reviewed shop drawings, product data, and samples.
   2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
   3. Handle, store, install and finish products.
   4. Repair or replace items damaged after receipt.

3.03 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.04 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

H. Comply with manufacturer's warranty conditions, if any.

I. Do not store products directly on the ground.

J. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

K. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

L. Prevent contact with material that may cause corrosion, discoloration, or staining.

M. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

N. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 61 16 - VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for Indoor-Emissions-Restricted products.

B. Requirements for VOC-Content-Restricted products.

C. Requirement for installer certification that they did not use any non-compliant products.

1.02 RELATED REQUIREMENTS

A. Section 01 40 00 - Quality Requirements: Procedures for testing and certifications.

B. Section 01 57 21 - Indoor Air Quality Controls: Procedures and testing.

C. Section 01 60 00 - Product Requirements: Fundamental product requirements, substitutions and product options, delivery, storage, and handling.

1.03 DEFINITIONS

A. Indoor-Emissions-Restricted Products: All products in the following product categories, whether specified or not:
   1. Interior paints and coatings.
   2. Interior adhesives and sealants, including flooring adhesives.
   3. Flooring.
   4. Composite wood.
   5. Products making up wall and ceiling assemblies.
   6. Thermal and acoustical insulation.
   7. Free-standing furniture.
   8. Other products when specifically stated in the specifications.

B. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
   1. Interior paints and coatings.
   2. Interior adhesives and sealants, including flooring adhesives.
   3. Wet-applied roofing and waterproofing.
   4. Other products when specifically stated in the specifications.

C. Interior of Building: Anywhere inside the exterior weather barrier.

D. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.

E. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.

F. Inherently Non-Emitting Materials: Products composed wholly of minerals or metals, unless they include organic-based surface coatings, binders, or sealants; and specifically the following:
   1. Concrete.
   2. Clay brick.
   3. Metals that are plated, anodized, or powder-coated.
   4. Glass.
   5. Ceramics.
   6. Solid wood flooring that is unfinished and untreated.

1.04 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings; 2005 (Reapproved 2013).

C. BIFMA e3 - Furniture Sustainability Standard; Business and Institutional Furniture Manufacturers Association; 2012.

D. BIFMA M7.1 - Standard Test Method for Determining VOC Emissions; Business and Institutional Furniture Manufacturers Association; 2011.

E. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions From Indoor Sources Using Environmental Chambers; California Department of Public Health; v1.1, 2010.

F. CARB (ATCM) - Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products; California Air Resources Board; current edition.

G. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2007.

H. CHPS (HPPD) - High Performance Products Database; Current Edition at www.chps.net/.

I. CRI (GLP) - Green Label Plus Testing Program - Certified Products; www.carpet-rug.org; current edition.

J. GreenSeal GS-36 - Adhesives for Commercial Use; 2013.

K. SCAQMD 1113 - South Coast Air Quality Management District Rule No.1113; current edition.

L. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition.

M. SCS (CPD) - SCS Certified Products; current listings at www.scscertified.com.

N. UL (GGG) - GREENGUARD Gold Certified Products; current listings at http://http://productguide.ulenvironment.com/QuickSearch.aspx.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

C. Installer Certifications Regarding Prohibited Content: Require each installer of any type of product (not just the products for which VOC restrictions are specified) to certify that either 1) no adhesives, joint sealants, paints, coatings, or composite wood or agrifiber products have been used in the installation of his products, or 2) that such products used comply with these requirements.

1.06 QUALITY ASSURANCE

A. Indoor Emissions Standard and Test Method: CAL (CDPH SM), using Standard Private Office exposure scenario and the allowable concentrations specified in the method, and range of total VOC's after 14 days.
   1. Wet-Applied Products: State amount applied in mass per surface area.
   2. Paints and Coatings: Test tinted products, not just tinting bases.
   3. Evidence of Compliance: Acceptable types of evidence are the following;
      a. Current UL (GGG) certification.
      b. Current SCS (CPD) Floorscore certification.
      c. Current SCS (CPD) Indoor Advantage Gold certification.
      d. Current listing in CHPS (HPPD) as a low-emitting product.
      e. Current CRI (GLP) certification.
      f. Test report showing compliance and stating exposure scenario used.
   4. Product data submittal showing VOC content is NOT acceptable evidence.
   5. Manufacturer's certification without test report by independent agency is NOT acceptable evidence.

B. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), or ASTM D3960, unless otherwise indicated.
   1. Evidence of Compliance: Acceptable types of evidence are:

a. Report of laboratory testing performed in accordance with requirements.
b. Certification by manufacturer that product complies with requirements.

C. Composite Wood Emissions Standard: CARB (ATCM) for ultra-low emitting formaldehyde (ULEF) resins.
1. Evidence of Compliance: Acceptable types of evidence are:
a. Current SCS "No Added Formaldehyde (NAF)" certification; www.scscertified.com.
b. Report of laboratory testing performed in accordance with requirements.
c. Published product data showing compliance with requirements.
d. Certification by manufacturer that product complies with requirements.

D. Furnishings Emissions Standard and Test Method.
1. Evidence of Compliance:
a. Test report showing compliance and stating exposure scenario used.

E. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this D7.

PART 2 PRODUCTS

2.01 MATERIALS

A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.

B. Indoor-Emissions-Restricted Products: Comply with Indoor Emissions Standard and Test Method, except for:
1. Composite Wood, Wood Fiber, and Wood Chip Products: Comply with Composite Wood Emissions Standard or contain no added formaldehyde resins.
2. Furnishings: Comply with Furnishings Emissions Standard and Test Method.
3. Inherently Non-Emitting Materials.

C. VOC-Content-Restricted Products: VOC content not greater than required by the following:
1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
2. Aerosol Adhesives: GreenSeal GS-36.
3. Joint Sealants: SCAQMD 1168 Rule.
4. Paints and Coatings: Each color; most stringent of the following:
a. 40 CFR 59, Subpart D.
b. SCAQMD 1113 Rule.
c. CARB (SCM).
5. Wet-Applied Roofing and Waterproofing: Comply with requirements for paints and coatings.

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.

B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

END OF SECTION

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Requirements for alterations work, including selective demolition , except removal, disposal, and/or remediation of hazardous materials and toxic substances.

C. Pre-installation meetings.

D. Cutting and patching.

E. Surveying for laying out the work.

F. Cleaning and protection.

G. Starting of systems and equipment.

H. Demonstration and instruction of Owner personnel.

I. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

J. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.

B. Section 01 40 00 - Quality Requirements: Testing and inspection procedures.

C. Section 01 50 00 - Temporary Facilities and Controls: Temporary exterior enclosures.

D. Section 01 50 00 - Temporary Facilities and Controls: Temporary interior partitions.

E. Section 01 51 00 - Temporary Utilities: Temporary heating, cooling, and ventilating facilities.

F. Section 01 74 19 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.

G. Section 01 76 10 - Temporary Protective Coverings: Materials for protection of installed work.

H. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.

I. Individual Product Specification Sections:
   1. Advance notification to other sections of openings required in work of those sections.
   2. Limitations on cutting structural members.

1.03 REFERENCE STANDARDS

A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures. ***– NOT APPLICABLE***

B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
   1. On request, submit documentation verifying accuracy of survey work.
   2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.
   3. Submit surveys and survey logs for the project record.

C. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
   1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences. Include design drawings and calculations for bracing and shoring.

2. Identify demolition firm and submit qualifications.
3. Include a summary of safety procedures.

D. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
1. Structural integrity of any element of Project.
2. Integrity of weather exposed or moisture resistant element.
3. Efficiency, maintenance, or safety of any operational element.
4. Visual qualities of sight exposed elements.
5. Work of Owner or separate Contractor.
6. Include in request:
a. Identification of Project.
b. Location and description of affected work.
c. Necessity for cutting or alteration.
d. Description of proposed work and products to be used.
e. Alternatives to cutting and patching.
f. Effect on work of Owner or separate Contractor.
g. Written permission of affected separate Contractor.
h. Date and time work will be executed.

E. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.05 QUALIFICATIONS

A. For demolition work, employ a firm specializing in the type of work required.

B. For survey work, employ a land surveyor registered in the State in which the Project is located and acceptable to Engineer. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

C. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in the State in which the Project is located.

D. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

1.06 PROJECT CONDITIONS

A. Use of explosives is not permitted.

B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

E. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
2. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.

F. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
1. Minimize amount of bare soil exposed at one time.
2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
   1. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time of day; excessively noisy includes jackhammers.
   2. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
   3. Indoors: Limit conduct of especially noisy interior work to the hours of 6 pm to 7 am.

H. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
   1. Pest Control Service: Weekly treatments.

I. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

J. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.07 COORDINATION

A. See Section 01 10 00 for occupancy-related requirements. ***– NOT APPLICABLE***

B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements , with provisions for accommodating items installed later.

C. Notify affected utility companies and comply with their requirements.

D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

G. Coordinate completion and clean-up of work of separate sections.

H. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.

B. Require attendance of parties directly affecting, or affected by, work of the specific section.

C. Notify Engineer four days in advance of meeting date.

D. Prepare agenda and preside at meeting:
   1. Review conditions of examination, preparation and installation procedures.
   2. Review coordination with related work.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Engineer, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work.

B. Promptly notify Engineer of any discrepancies discovered.

C. Owner will locate and protect survey control and reference points.

D. Contractor shall locate and protect survey control and reference points.

E. Control datum for survey is that established by Owner provided survey.

F. Control datum for survey is that indicated on Drawings.

G. Control datum for survey.

H. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

I. Promptly report to Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

J. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.

K. Utilize recognized engineering survey practices.

L. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.

M. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
   1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
   2. Grid or axis for structures.
   3. Building foundation, column locations, ground floor elevations.

N. Periodically verify layouts by same means.

O. Maintain a complete and accurate log of control and survey work as it progresses.

P. On completion of foundation walls and major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

3.05 GENERAL INSTALLATION REQUIREMENTS

A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.

B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

F. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as shown.
   2. Report discrepancies to Engineer before disturbing existing installation.
   3. Beginning of alterations work constitutes acceptance of existing conditions.

B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
   1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on drawings.
   2. Provide sound retardant partitions of construction indicated on drawings in locations indicated on drawings.

C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
   1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
   2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.

D. Remove existing work as indicated and as required to accomplish new work.
   1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
   2. Remove items indicated on drawings.
   3. Relocate items indicated on drawings.
   4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
   5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.

2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
   a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
   b. See Section 01 10 00 for other limitations on outages and required notifications.
   c. Provide temporary connections as required to maintain existing systems in service.
4. Verify that abandoned services serve only abandoned facilities.
5. Remove abandoned pipe, ducts, conduits, and equipment , including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.

F. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.

G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
   1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Engineer.
   2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
   3. Where a change of plane of 1/4 inch (6 mm) or more occurs in existing work, submit recommendation for providing a smooth transition for Engineer review and request instructions.
   4. Where a change of plane of 1/4 inch (6 mm) or more occurs in existing work.
   5. Trim existing wood doors as necessary to clear new floor finish. Refinish trim as required.

H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.

I. Refinish existing surfaces as indicated:
   1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
   2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.

J. Clean existing systems and equipment.

K. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

L. Do not begin new construction in alterations areas before demolition is complete.

M. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. See Alterations article above for additional requirements.

C. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.

3. Provide openings for penetration of mechanical, electrical, and other services.
4. Match work that has been cut to adjacent work.
5. Repair areas adjacent to cuts to required condition.
6. Repair new work damaged by subsequent work.
7. Remove samples of installed work for testing when requested.
8. Remove and replace defective and non-conforming work.

D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

G. Restore work with new products in accordance with requirements of Contract Documents.

H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material, to full thickness of the penetrated element.

J. Patching:
1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
2. Match color, texture, and appearance.
3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.08 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.09 PROTECTION OF INSTALLED WORK

A. See Section 01 76 10 for temporary protective covering materials.

B. Protect installed work from damage by construction operations.

C. Provide special protection where specified in individual specification sections.

D. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

E. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

F. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

G. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.

H. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

I. Prohibit traffic from landscaped areas.

J. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.10 SYSTEM STARTUP

A. Coordinate with requirements of Section 01 91 13 - General Commissioning Requirements. ***– NOT APPLICABLE***

B. Coordinate schedule for start-up of various equipment and systems.

C. Notify Engineer and owner seven days prior to start-up of each item.

D. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.

E. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

F. Verify that wiring and support components for equipment are complete and tested.

G. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.

H. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

I. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.11 DEMONSTRATION AND INSTRUCTION

A. See Section 01 79 00 - Demonstration and Training. ***– NOT APPLICABLE***

B. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.

C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.

D. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

E. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.

F. Perform instruction in a classroom environment.

G. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

H. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

I. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

3.12 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.13 FINAL CLEANING

A. Owner will provide comprehensive cleaning after final acceptance.

B. Execute final cleaning prior to final project assessment.

1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.

C. Use cleaning materials that are nonhazardous.

D. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

E. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

F. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

G. Clean filters of operating equipment.

H. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, drainage systems.

I. Clean site; sweep paved areas, rake clean landscaped surfaces.

J. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

K. Clean Owner-occupied areas of work.

3.14 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.
   1. Provide copies to Engineer.
   2. Provide copies to Owner.
   3. Provide copies to Engineer and Owner.

B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.

C. Notify Engineer when work is considered ready for Engineer's Substantial Completion inspection.

D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Engineer's Substantial Completion inspection.

E. Owner will occupy all of the building as specified in Section 01 10 00.

F. Conduct Substantial Completion inspection and create Final Correction Punch List containing Engineer's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Engineer.

G. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

H. Accompany Project Coordinator on Contractor's preliminary final inspection.

I. Notify Engineer when work is considered finally complete and ready for Engineer's Substantial Completion final inspection.

J. Complete items of work determined by Engineer listed in executed Certificate of Substantial Completion.

3.15 MAINTENANCE

A. Provide service and maintenance of components indicated in specification sections.

B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

A. Owner requires that this project generate the least amount of trash and waste possible.

B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.

C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.

D. Required Recycling, Salvage, and Reuse: The following may not be disposed of in landfills or by incineration:
   1. Aluminum and plastic beverage containers.
   2. Corrugated cardboard.
   3. Wood pallets.
   4. Clean dimensional wood : May be used as blocking or furring.
   5. Land clearing debris, including brush, branches, logs, and stumps.
   6. Concrete : May be crushed and used as riprap, aggregate, sub-base material, or fill.
   7. Bricks : May be used on project if whole, or crushed and used as landscape cover, sub-base material, or fill.
   8. Concrete masonry units : May be used on project if whole, or crushed and used as sub-base material or fill.
   9. Precast concrete panels : May be used for erosion control or landscape features.
   10. Asphalt paving : May be recycled into paving for project.
   11. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
   12. Glass.
   13. Gypsum drywall and plaster.
   14. Plastic buckets.
   15. Carpet, carpet cushion, carpet tile, and carpet remnants , both new and removed.
   16. Asphalt roofing shingles.
   17. Paint.
   18. Plastic sheeting.
   19. Rigid foam insulation.
   20. Vinyl siding.
   21. Windows, doors, and door hardware.
   22. Plumbing fixtures.
   23. Mechanical and electrical equipment.
   24. Fluorescent lamps (light bulbs).
   25. Acoustical ceiling tile and panels.

F. The following recycling incentive programs are mandatory for this project; Contractor is responsible for implementation as per the California Green-Building Code and relevant Municipal Codes.

G. Owner has made arrangements for salvage of the following materials by others: TBD

H. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, incineration, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.

I. Contractor shall develop and follow a Waste Management Plan designed to implement these requirements.

J. The following sources may be useful in developing the Waste Management Plan:
   1. State Recycling Department.

2. Recycling Haulers and Markets: The attached list contains local haulers and markets for recyclable materials. This list is provided for information only and is not necessarily comprehensive; other haulers and markets are acceptable.
3. Recycling Economics Information: The attached list contains information that may be useful in estimating the costs or savings or recycling options.

K. Methods of trash/waste disposal that are not acceptable are:
1. Burning on the project site.
2. Burying on the project site.
3. Dumping or burying on other property, public or private.
4. Other illegal dumping or burying.

L. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 DEFINITIONS

A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.

B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.

C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.

D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.

E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.

F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.

G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.

H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.

I. Return: To give back reusable items or unused products to vendors for credit.

J. Reuse: To reuse a construction waste material in some manner on the project site.

K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.

L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.

M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.

N. Toxic: Poisonous to humans either immediately or after a long period of exposure.

O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.03 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures. ***– NOT APPLICABLE***

B. Sustainable Design Documentation: Submit Landfill Alternatives Proposal, Waste Management Plan, and Waste Disposal Reports.

C. Landfill Alternatives Proposal: Within 10 calendar days after receipt of Notice of Award of Bid, or prior to any trash or waste removal, whichever occurs sooner, submit a projection of trash/waste that will require disposal and alternatives to landfilling, with net costs.
   1. Submit to Engineer for Owner's review and approval.
   2. If Owner wishes to implement any cost alternatives, the Contract Price will be adjusted as specified elsewhere.
   3. Include an analysis of trash/waste to be generated and landfill options as specified for Waste Management Plan described below.
   4. Describe as many alternatives to landfilling as possible:
      a. List each material proposed to be salvaged, reused, or recycled.
      b. List the proposed local market for each material.
      c. State the estimated net cost resulting from each alternative, after subtracting revenue from sale of recycled or salvaged materials and landfill tipping fees saved due to diversion of materials from the landfill.
   5. Provide alternatives to landfilling for at least the following materials:
      a. Aluminum and plastic beverage containers.
      b. Corrugated cardboard.
      c. Wood pallets.
      d. Clean dimensional wood.
      e. Land clearing debris, including brush, branches, logs, and stumps.
      f. Concrete.
      g. Bricks.
      h. Concrete masonry units.
      i. Precast concrete panels.
      j. Asphalt paving.
      k. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
      l. Glass.
      m. Gypsum drywall and plaster.
      n. Plastic buckets.
      o. Carpet, carpet cushion, carpet tile, and carpet remnants , both new and removed: DuPont (http://flooring.dupont.com) and Interface (www.interfaceinc.com) conduct reclamation programs.
      p. Asphalt roofing shingles.
      q. Paint.
      r. Plastic sheeting.
      s. Rigid foam insulation.
      t. Vinyl siding.
      u. Windows, doors, and door hardware.
      v. Plumbing fixtures.
      w. Mechanical and electrical equipment.
      x. Fluorescent lamps (light bulbs).
      y. Acoustical ceiling tile and panels.

D. Once Owner has determined which of the landfill alternatives addressed in the Proposal above are acceptable, prepare and submit Waste Management Plan; submit within 10 calendar days after notification by Engineer.

E. Submit Waste Management Plan within 10 calendar days after receipt of Notice of Award of Bid, or prior to any trash or waste removal, whichever occurs sooner; submit projection of all trash and waste that will require disposal and alternatives to landfilling.

F. Waste Management Plan: Include the following information:
   1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.

2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project trash/waste in the landfill(s).
3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.
   a. List each material proposed to be salvaged, reused, or recycled.
   b. List the local market for each material.
   c. State the estimated net cost, versus landfill disposal.
4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.
5. Materials Handling Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.
6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.
7. Recycling Incentives: Describe procedures required to obtain credits, rebates, or similar incentives.

G. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
2. Submit Report on a form acceptable to Owner.
3. Landfill Disposal: Include the following information:
   a. Identification of material.
   b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project disposed of in landfills.
   c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
   d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
4. Incinerator Disposal: Include the following information:
   a. Identification of material.
   b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project delivered to incinerators.
   c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
   d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
5. Recycled and Salvaged Materials: Include the following information for each:
   a. Identification of material, including those retrieved by installer for use on other projects.
   b. Amount, in tons or cubic yards (cubic meters), date removed from the project site, and receiving party.
   c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
   d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
   e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
6. Material Reused on Project: Include the following information for each:
   a. Identification of material and how it was used in the project.
   b. Amount, in tons or cubic yards (cubic meters).

c. Include weight tickets as evidence of quantity.

7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

H. Recycling Incentive Programs:

1. Where revenue accrues to Contractor, submit copies of documentation required to qualify for incentive.
2. Where revenue accrues to Owner, submit any additional documentation required by Owner in addition to information provided in periodic Waste Disposal Report.

PART 2 PRODUCTS

2.01 PRODUCT SUBSTITUTIONS

A. See Section 01 60 00 - Product Requirements for substitution submission procedures.

B. For each proposed product substitution, submit the following information in addition to requirements specified in Section 01 60 00:

1. Relative amount of waste produced, compared to specified product.
2. Cost savings on waste disposal, compared to specified product, to be deducted from the Contract Price.
3. Proposed disposal method for waste product.
4. Markets for recycled waste product.

PART 3 EXECUTION

3.01 WASTE MANAGEMENT PROCEDURES

A. See Section 01 10 00 for list of items to be salvaged from the existing building for relocation in project or for Owner.

B. See Section 01 30 00 for additional requirements for project meetings, reports, submittal procedures, and project documentation. ***– NOT APPLICABLE***

C. See Section 01 50 00 for additional requirements related to trash/waste collection and removal facilities and services.

D. See Section 01 60 00 for waste prevention requirements related to delivery, storage, and handling.

E. See Section 01 70 00 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

3.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.

B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Engineer.

C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

D. Meetings: Discuss trash/waste management goals and issues at project meetings.

1. Pre-bid meeting.
2. Pre-construction meeting.
3. Regular job-site meetings.
4. Job safety meetings.

E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.

1. As a minimum, provide:
   a. Separate area for storage of materials to be reused on-site, such as wood cut-offs for blocking.
   b. Separate dumpsters for each category of recyclable.

c. Recycling bins at worker lunch area.

2. Provide containers as required.
3. Provide temporary enclosures around piles of separated materials to be recycled or salvaged.
4. Provide materials for barriers and enclosures that are nonhazardous, recyclable, or reusable to the maximum extent possible; reuse project construction waste materials if possible.
5. Locate enclosures out of the way of construction traffic.
6. Provide adequate space for pick-up and delivery and convenience to subcontractors.
7. If an enclosed area is not provided, clearly lay out and label a specific area on-site.
8. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.

F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.

G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.

H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.

I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION

SECTION 01 76 10 -TEMPORARY PROTECTIVE COVERINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary protective coverings for installed floors, walls, other surfaces..

1.02 RELATED REQUIREMENTS

A. Section 01 70 00 - Execution and Closeout Requirements: Coordination of requirements for materials specified in this section.

1.03 REFERENCE STANDARDS

A. ANSI A135.4 - American National Standard for Basic Hardboard; 2012.

B. ASTM C208 - Standard Specification for Cellulosic Fiber Insulating Board; 2012.

C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.

D. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.

E. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films; 2015.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements for submittal procedures. ***– NOT APPLICABLE***

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes available; and installation instructions.

C. Shop Drawings: Indicate existing finished surfaces to be protected.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Temporary Protective Coverings:
   1. Fortifiber Building Systems Group ; fortifiber.com.
   2. Protex Products; www.protex-products.com.
   3. Surface Shields, Inc ; www.surfaceshields.com.

B. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 GENERAL

A. Provide materials that are easily removed without damage to the surfaces covered and with the following characteristics:
   1. Water resistant.
   2. Vapor permeable.
   3. Impact resistant.
   4. Slip resistant.
   5. Flame retardant.

2.03 MATERIALS

A. Sheet Materials :
   1. Corrugated polypropylene sheet.
   2. Recycled paperboard/plastic composite sheet.
   3. Recycled paperboard sheet.
   4. Wood Hardboard: ANSI A135.4, tempered, 1/4 inch (6 mm) thick nominal.
   5. Plywood, 1/2 inch (13 mm) thick nominal.
   6. Fiberboard: ASTM C208, 1/2 inch (13 mm) thick nominal.
   9. Water Vapor Permeability: tested in accordance with ASTM E96/E96M.
   10. Flame Retardance: Meet requirements of NFPA 701.

11. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.

B. Rolled Materials :
   1. Self-adhering polyethylene film.
   2. Recycled cellulose fiberboard paper.
   3. Laminated glass fiber reinforced kraft paper.
   4. Rosin coated paper.
   5. Roll Width: TBD
   6. Thickness: TBD
   7. Water Vapor Permeability: tested in accordance with ASTM E96/E96M.
   8. Flame Retardance: Meet requirements of NFPA 701.
   9. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.

C. Corner and Door Jamb Protection Materials:
   1. Cardboard, shaped specifically for application.
   2. PVC plastic.

D. Tape: Type recommended by protective covering material manufacturer.

PART 3 EXECUTION

3.01 PREPARATION

A. Remove dirt and debris from surfaces to be protected.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Trim or overlap sheet materials to fit area to be covered.

C. Roll out and cut rolled materials to fit area to be covered.

D. Tape seams. Avoid taping directly to finished surfaces.

E. Stretch self-adhering film materials to completely cover surface.

F. Install door jamb protection to full height of opening.

G. Position corner protection.

3.03 REMOVAL

A. Remove protective coverings prior to Date of Substantial Completion. Reuse or recycle materials if possible.

END OF SECTION

SECTION 01 78 00 - CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project Record Documents.

B. Operation and Maintenance Data.

C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

A. Section 00 72 00 - General Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.

B. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.

C. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.

D. Individual Product Sections: Specific requirements for operation and maintenance data.

E. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

A. Project Record Documents: Submit documents to Engineer with claim for final Application for Payment.

B. Operation and Maintenance Data:
   1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.
   2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
   3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of all document sets as required prior to final submission.
   4. Submit two sets of revised final documents in final form within 10 days after final inspection.

C. Warranties and Bonds:
   1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
   2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed shop drawings, product data, and samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to finish first floor datum.
   2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. For Each Product, Applied Material, and Finish:
   1. Product data, with catalog number, size, composition, and color and texture designations.
   2. Information for re-ordering custom manufactured products.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional information as specified in individual product specification sections.

E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. For Each Item of Equipment and Each System:
   1. Description of unit or system, and component parts.
   2. Identify function, normal operating characteristics, and limiting conditions.
   3. Include performance curves, with engineering data and tests.
   4. Complete nomenclature and model number of replaceable parts.

B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

D. Include color coded wiring diagrams as installed.

E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

G. Provide servicing and lubrication schedule, and list of lubricants required.

H. Include manufacturer's printed operation and maintenance instructions.

I. Include sequence of operation by controls manufacturer.

J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

K. Provide control diagrams by controls manufacturer as installed.

L. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.

M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

O. Include test and balancing reports.

P. Additional Requirements: As specified in individual product specification sections.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.

B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

C. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Engineer , Consultants, Contractor and subcontractors, with names of responsible parties.

F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.

G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.

H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.

I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

J. Arrangement of Contents: Organize each volume in parts as follows:
   1. Project Directory.
   2. Table of Contents, of all volumes, and of this volume.
   3. Operation and Maintenance Data: Arranged by system, then by product category.
      a. Source data.

b. Product data, shop drawings, and other submittals.
c. Operation and maintenance data.
d. Field quality control data.
e. Photocopies of warranties and bonds.

4. Design Data: To allow for addition of design data furnished by Engineer or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

3.06 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

F. Manual: Bind in commercial quality 8-1/2 by 11 inch (216 by 279 mm) three D side ring binders with durable plastic covers.

G. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.

H. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.

I. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

END OF SECTION

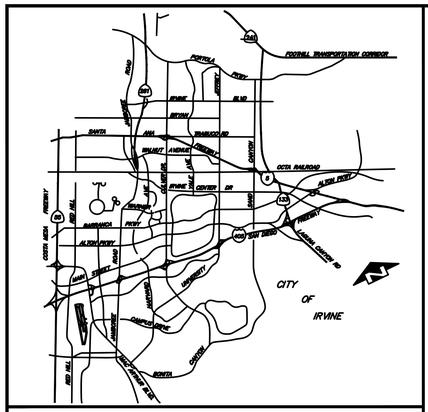
T□E CIT□ OF IRVINE

CITY OF IRVINE 1971

BUILDING PLANS

NOTE: DESIGNER TO PROVIDE PROJECT SPECIFIC INPUT
WHERE INDICATED BY INSTRUCTIONS IN BOLD AND
BRACKETED BY THE FOLLOWING SYMBOL <>

(VERSION 2017.0)



VICINITY MAP

LOCATION MAP

PROJECT INFORMATION REQUIREMENTS

PROJECT LOCATION: 15 Sweet Shade, Irvine, CA 92606

PROJECT DESCRIPTION

RELOCATE CITY OF IRVINE DISABILITY SERVICES FROM CIVIC CENTER TO SWEET SHADE COMMUNITY CENTER. MINOR DEMOLITION OF WALLS, CEILINGS, HVAC AND POWER.
NEW WALLS, FINISHES, POWER

SPECIAL CONDITIONS OF LAND USE APPROVAL
SPECIAL CONDITIONS RELATING TO THIS PROJECT ARE ESTABLISHED IN
NOT APPLICABLE
SEE SHEET <NOT APPLICABLE> UNDER THE HEADING LAND USE CONDITIONS OF APPROVAL FOR COMPLETE CONDITIONS OF APPROVAL.

USE(S) OCCUPANCY (IES) AND FLOOR AREAS(S)

A-3 OCCUPANCY	1578	SF	15 OLF	106 OCC.
B OCCUPANCY	265	SF	100 OLF	3 OCC.
B OCCUPANCY(CONFERENCE RM)	122	SF	15 OLF	9 OCC.
B OCCUPANCY(WORK AREA)	178	SF		6 OCC.
STORAGE (ACCESSORY USE)	42	SF		
MEN'S RR (ACCESSORY USE)	114	SF		
WOMEN'S RR (ACCESSORY USE)	212	SF		
TEL/DATA (ACCESSORY USE)	43	SF		
JANITOR (ACCESSORY USE)	37	SF		
PANTRY (ACCESSORY USE)	23	SF		
VESTIBULE	117	SF		
TOTAL	2731	SF		124 OCC.

3,289 GROSS SQUARE FEET

NUMBER OF STORIES < 1 >

MEZZANINES < NONE >

TYPE OF CONSTRUCTION < TYPE V - B >

FIRE PARTITION WALLS < NO >

FIRE BARRIER WALLS < NO >

FIRE WALL < NO >

HORIZONTAL ASSEMBLIES <NOT APPLICABLE>

SPRINKLERS YES

AN NFPA AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED UNDER SEPARATE APPROVAL THROUGH THE ORANGE COUNTY FIRE AUTHORITY. SPRINKLERS ARE PROVIDED EXISTING.

ALLOW HEIGHT AND AREA ANALYSIS PER CBC SECTION 504.3:
FROM EXISTING (NO CHANGE)

ALLOWABLE HEIGHT, 60'-0".
ALLOWABLE AREA, 24,000 SF.

PARKING SUMMARY
NO CHANGE IN LAND USE OR PARKING
SEE SHEET A.0.01 FOR ADDITIONAL INFORMATION

TOTAL PARKING PROVIDED

ACCESSIBLE PARKING
TOTAL REQUIRED
TOTAL PROVIDED

APPLICABLE STATE CODES (WITH CITY OF IRVINE AMENDMENTS)

CALIFORNIA BUILDING CODE	2016
CALIFORNIA GREEN BUILDING STANDARDS CODE	2016
CALIFORNIA ELECTRICAL CODE	2016
CALIFORNIA PLUMBING CODE	2016
CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS	2016

WATER CONSERVING PLUMBING FIXTURE VERIFICATION/RETROFIT:

BUILDINGS FOR WHICH AN INITIAL FINAL INSPECTION WAS RECEIVED ON OR BEFORE JANUARY 1, 1994 SHALL COMPLY WITH THE CITY OF IRVINE'S INFORMATION BULLETIN # 321. WAS THE INITIAL FINAL INSPECTION ON THE PROPERTY UNDERGOING THE PROPOSED TENANT IMPROVEMENT RECEIVED PRIOR TO JANUARY 1, 1994: NO

CALIFORNIA GREEN BUILDING STANDARDS CODE

PROVISIONS OF THE CALIFORNIA GREEN BUILDING STANDARDS CODE APPLY TO ALL NEW LOW-RISE RESIDENTIAL BUILDINGS (THREE STORIES AND LESS INCLUDING HOTELS AND MOTELS) AND ALL NON-RESIDENTIAL TENANT IMPROVEMENT WITH VALUATION EQUAL OR GREATER THAN $200,000 AND ADDITIONS EQUAL OR GREATER THAN 1,000 SQUARE FEET.

SEE SHEET NOT APPLICABLE FOR COMPLETED CITY OF IRVINE GREEN BUILDING STANDARDS NOTES.

CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS

PROVISIONS OF THE CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARD APPLY TO THIS PROJECT SEE SHEET <NOT APPLICABLE> FOR COMPLETE COMPLIANCE DOCUMENTATION.

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

THIS PROJECT IS SUBJECT TO BOTH SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATION PER CALIFORNIA BUILDING CODE (CBC) CHAPTER 17 AND SHALL FOLLOW THE REQUIREMENTS AS DEFINED IN CITY OF IRVINE INFORMATION BULLETINS NO. 278 AND 251.

SEE SHEET <NOT APPLICABLE> FOR COMPLETED PROJECT SPECIFIC CITY OF IRVINE SPECIAL INSPECTION PROGRAM FORM.

SEE SHEET <NOT APPLICABLE> FOR COMPLETED PROJECT SPECIFIC CITY OF IRVINE SPECIAL OBSERVATION PROGRAM FORM.

CITY OF IRVINE MUNICIPAL CODE

[NOTE: COMPLETE IMC TEXT IS AVAILABLE ON THE INTERNET AT WWW.MUNICODE.COM]
THE DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH ALL APPLICABLE IRVINE MUNICIPAL CODE PROVISIONS INCLUDING BUT NOT LIMITED TO:

CONSTRUCTION WORK HOURS [IMC SECT. 6-8-205]
MON-FRI 7 AM TO 7 PM
SAT 9 AM TO 6 PM
NO WORK ON SUNDAYS OR FEDERAL HOLIDAYS

SECURITY DESIGN STANDARDS [IMC SECT. 5-9-520 AND 5-9-528]
SEE SHEET FOR APPLICABLE COMPLETED SECURITY CODE PROVISIONS:<INSERT PLAN SHEET NUMBER>

ROOFING [IMC 5-9-401 I. & 5-9-402 E.]

ROOF COVERING CLASSIFICATION SHALL MEET MINIMUM CLASS A.

ATTIC AND UNDERFLOOR VENT COVERS [IMC 5-9-401 H. & 5-9-402 D.]

ROOF AND UNDERFLOOR VENT OPENINGS SHALL BE COVERED WITH NON-COMBUSTIBLE, CORROSION RESISTANT, METAL WIRE MESH OR OTHER MATERIALS HAVING OPENINGS OF 1/16 INCH MINIMUM TO 1/8 INCH MAXIMUM. (CBC 706A.2) SEE DETAIL

NOT APPLICABLE

OFF-SITE FABRICATION

ALL OFF-SITE FABRICATION OF STRUCTURAL STEEL COMPONENTS INCLUDING STEEL STAIRS AND PRE-CAST CONCRETE SHALL BE DONE IN AN APPROVED FABRICATOR SHOP AS REQUIRED BY CITY OF IRVINE INFORMATION BULLETIN NO. 311. SEE BULLETIN FOR DETAILS AND REQUIRED DOCUMENTATION REQUIRED AT THE RECEIPT OF ANY SHIPMENT OF OFF-SITE FABRICATED ITEMS.

PRE-CONSTRUCTION MEETING REQUIREMENT

ALL CONSTRUCTION PROJECTS INVOLVING ADDITIONS TO NON-RESIDENTIAL STRUCTURES SHALL NOT COMMENCE UNTIL A PRE-CONSTRUCTION MEETING HAS BEEN HELD. THESE MEETINGS, WHILE NOT REQUIRED BY CITY CODE FOR TENANT IMPROVEMENTS NOT ADDING AREA, ARE BENEFICIAL FOR MAJOR TENANT IMPROVEMENTS OR ANY RESTAURANT INSTALLATIONS. TO SCHEDULE A PRE-CONSTRUCTION MEETING CONTACT ROGER CARTON, NON-RESIDENTIAL INSPECTIONS SUPERVISOR AT (949)724-6331.

DEFERRED SUBMITTALS

THIS PROJECT HAS BEEN PERMITTED WITHOUT REVIEW AND/OR APPROVAL OF THE FOLLOWING DEFERRED SUBMITTALS. PLANS APPROVED BY THE CITY SHALL BE OBTAINED FOR EACH DEFERRED ITEM LISTED BELOW PRIOR TO COMMENCING ANY WORK WITHIN THE SCOPE OF SUCH DEFERRAL. DEFERRALS MUST BE REVIEWED AND ACCEPTED BY THE ARCHITECT OR ENGINEER OF RECORD PRIOR TO SUBMITTING FOR REVIEW WITH THE CITY.

FIRE SPRINKLER SYSTEM, FIRE ALARM REWORK

ADDITIONS AND ALTERATIONS:

PRIOR TO USE, OCCUPANCY OR FINAL INSPECTION, EXISTING OR RETROFITTED ADDRESSING MEETING THE HEIGHT, CONTRAST AND FONT REQUIREMENTS OF SECTION 5-9-517 ITEM L OF THE CITY OF IRVINE MUNICIPAL CODE SHALL BE VERIFIED BY THE CITY INSPECTOR.

CONTRACTOR SHALL RESTORE ALL ORIGINAL AND REQUIRED FIRE PROTECTION ON STRUCTURAL ELEMENTS AND RATED ASSEMBLIES.

PRIOR TO FINAL INSPECTION, THE OPENING FORCE FOR DOORS SERVING THE DESIGNATED ACCESSIBLE PATH OF TRAVEL SHALL BE VERIFIED TO COMPLY WITH CBC 11B-404.2.9. POWERED EXTERIOR DOORS, PER EXCEPTION 2, SERVING A SPACE WITH AN OCCUPANCY OF 150 OR MORE ARE REQUIRED TO BE EQUIPPED WITH BACK-UP POWER.

FIRE DEPARTMENT NOTES:

1. *FOR ASSISTANCE WITH FIRE-RELATED PLAN REVIEW ISSUES OR TECHNICAL QUESTIONS, PLEASE CALL (714) 573-6108. FOR FIRE-RELATED INSPECTION QUESTIONS OR ISSUES, PLEASE CONTACT YOUR OCFA INSPECTOR DIRECTLY OR OCFA INSPECTION SCHEDULING AT (714) 573-6150 FOR ASSISTANCE.*
2. *THE PROJECT SHALL COMPLY WITH THE CURRENTLY ADOPTED CALIFORNIA BUILDING CODE, CALIFORNIA FIRE CODE, AND OTHER CODES, STANDARDS, REGULATIONS AND REQUIREMENTS AS ENFORCED BY THE ORANGE COUNTY FIRE AUTHORITY. APPROVAL OF THESE PLANS SHALL NOT PERMIT THE VIOLATION OF ANY CODE OR LAW.*
3. *FOR PROJECTS INVOLVING NEW STRUCTURES, ADDITIONS TO EXISTING STRUCTURES, INSTALLATION OF GATES/WALLS/FENCES, OR ALTERATION OF VEHICULAR ACCESS, A FIRE MASTER PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE OCFA PRIOR TO SUBMITTAL OF ARCHITECTURAL PLANS. AN APPROVED FIRE MASTER PLAN SHALL BE SUBMITTED WITH THE ARCHITECTURAL PLANS.*
4. *ALL WEATHER FIRE ACCESS ROADS SHALL BE APPROVED BY THE OCFA AND BE IN PLACE BEFORE ANY COMBUSTIBLE MATERIALS ARE PLACED ON THE SITE. ACCESS ROADS SHALL BE MAINTAINED CLEAR OF OBSTRUCTIONS DURING AND AFTER CONSTRUCTION.*
5. *ADDRESS NUMBERS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS, BE A MINIMUM SIX INCHES HIGH, CONTRAST WITH THEIR BACKGROUND, AND BE PLAINLY VISIBLE FROM THE ROADWAY THE BUILDING IS ADDRESSED ON OR AS OTHERWISE ALLOWED BY OCFA GUIDELINE B-09.*
6. *BUILDINGS UNDER CONSTRUCTION OR DEMOLITION SHALL CONFORM TO CFC CHAPTER 33. NO SMOKING OR COOKING IS ALLOWED IN STRUCTURES WHERE COMBUSTIBLE MATERIALS ARE EXPOSED OR WITHIN 25' OF COMBUSTIBLE MATERIALS STORAGE AREAS. CUTTING, WELDING, OR OTHER HOT WORK SHALL BE IN CONFORMANCE WITH CFC CHAPTER 35.*
7. *LOCATIONS AND CLASSIFICATIONS OF EXTINGUISHERS SHALL BE IN ACCORDANCE WITH THE CFC AND CCR TITLE 19. AT LEAST ONE EXTINGUISHER SHALL BE PROVIDED DURING CONSTRUCTION ON EACH FLOOR AT EACH STAIRWAY, IN EACH STORAGE AND CONSTRUCTION SHED, IN LOCATIONS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED OR USED, OR WHERE SIMILAR HAZARDS ARE PRESENT. BEFORE FINAL OCCUPANCY, AT LEAST ONE 2A:10B:C EXTINGUISHER SHALL BE PROVIDED SO THAT NO POINT IS MORE THAN 75' TRAVEL DISTANCE FROM THE EXTINGUISHER. EXTINGUISHERS SHALL BE LOCATED ALONG THE PATH OF EGRESS TRAVEL AND IN A READILY VISIBLE AND ACCESSIBLE LOCATION, WITH THE BOTTOM OF THE EXTINGUISHER AT LEAST 4" ABOVE THE FLOOR. ADDITIONAL EXTINGUISHERS MAY BE REQUIRED BY THE INSPECTOR AND FINAL PLACEMENT IS SUBJECT TO APPROVAL.*
8. *WALL, FLOOR AND CEILING FINISHES AND DECORATIVE MATERIALS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CBC/CFC CHAPTER 8. DECORATIVE MATERIALS SHALL BE PROPERLY TREATED BY A PRODUCT OR PROCESS APPROVED BY THE STATE FIRE MARSHAL. SUCH ITEMS SHALL BE APPROVED AND INSPECTED PRIOR TO INSTALLATION.*
9. *KNOX BOXES/KEY CABINETS SHALL BE PROVIDED FOR ALL POOL ENCLOSURES, GATES IN THE PATH OF FIREFIGHTER TRAVEL TO STRUCTURES, SECURED PARKING LEVELS, DOORS GIVING ACCESS TO ALARM PANELS AND/OR ANNUNCIATORS, AND ANY OTHER STRUCTURES OR AREAS WHERE IMMEDIATE ACCESS IS REQUIRED OR IS UNDULY DIFFICULT.*
10. *DUMPSTERS AND TRASH CONTAINERS EXCEEDING 1.5 CUBIC YARDS SHALL NOT BE STORED IN BUILDINGS OR PLACED WITHIN 5 FEET OF COMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE ROOF EAVE LINES UNLESS PROTECTED BY AN APPROVED SPRINKLER SYSTEM OR LOCATED IN A TYPE I OR IIA STRUCTURE SEPARATED BY 10 FEET FROM OTHER STRUCTURES. CONTAINERS LARGER THAN 1 CUBIC YARD SHALL BE OF NON- OR LIMITED-COMBUSTIBLE MATERIALS OR SIMILARLY PROTECTED OR SEPARATED. CFC 304.3*
11. *EXITS, EXIT SIGNS, FIRE ALARM PANELS, HOSE CABINETS, FIRE EXTINGUISHER LOCATIONS, AND STANDPIPE CONNECTIONS SHALL NOT BE CONCEALED BY CURTAINS, MIRRORS, OR OTHER DECORATIVE MATERIAL. THE EGRESS PATH SHALL REMAIN FREE AND CLEAR OF ALL OBSTRUCTIONS AT ALL TIMES. NO STORAGE IS PERMITTED IN AISLES.*
12. *EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. DOORS SHALL NOT BE PROVIDED WITH THUMB-TURN LOCKS OR DEADBOLTS THAT DO NOT UNLATCH IN TANDEM WITH THE NORMAL OPERATING LEVER. RATED DOORS SHALL BE SELF-CLOSING AND LATCHING; SUCH DOORS SHALL NOT BE EQUIPPED WITH DOOR STOPS OR OTHERWISE PROPPED OPEN.*
13. *SPRINKLER AND ALARM SYSTEMS SHALL BE PROVIDED WHEN REQUIRED BY CBC/CFC CHAPTER 9 AND LOCAL ORDINANCE. IN STRUCTURES OF UNDETERMINED USE, THE MINIMUM FIRE SPRINKLER DESIGN DENSITY REQUIRED SHALL BE ORDINARY HAZARD (GROUP 2) WITH A DESIGN AREA OF 3000 SQUARE FEET.*
14. *EXISTING SPRINKLER AND ALARM SYSTEMS IN SPACES UNDERGOING REMODELING SHALL BE EVALUATED BY A LICENSED CONTRACTOR KNOWLEDGEABLE IN SUCH SYSTEMS TO DETERMINE WHETHER CHANGES WILL BE NECESSARY TO MAINTAIN THESE SYSTEMS IN CONFORMANCE WITH APPLICABLE STANDARDS. IF MODIFICATIONS ARE NECESSARY, PLANS SHALL BE SUBMITTED TO THE OCFA FOR REVIEW AND APPROVAL PRIOR TO MODIFICATION OF THE SYSTEM. SPRINKLER AND ALARM SYSTEMS SHALL BE SUPERVISED BY A UL-LISTED CENTRAL ALARM STATION.*
15. *WHERE COMMERCIAL-TYPE FOOD HEATING OR COOKING EQUIPMENT THAT PRODUCES GREASE-LADEN VAPORS IS PRESENT, AN AUTOMATIC EXTINGUISHING SYSTEM SHALL BE PROVIDED AND SHALL COMPLY WITH CFC, CMC, AND NFPA 17A. REVIEW AND APPROVAL OF A HOOD AND DUCT EXTINGUISHING SYSTEM PLAN BY THE OCFA IS REQUIRED PRIOR TO INSTALLATION, MODIFICATION, REARRANGEMENT, OR USE OF COOKING EQUIPMENT.*
16. *HAZARDOUS MATERIALS EQUIPMENT, PROCESSES, STORAGE, DISPENSING, OR USE SHALL COMPLY WITH CBC AND CFC REGULATIONS AND SHALL BE REVIEWED AND APPROVED BY THE OCFA PRIOR TO SUCH MATERIALS OR EQUIPMENT BEING BROUGHT ON SITE.*
17. *STORAGE AREAS GREATER THAN 500 SQ.FT. WITH HIGH HAZARD MATERIALS STORED HIGHER THAN SIX FEET AND OTHER MATERIALS STORED HIGHER THAN TWELVE FEET ARE NOT PERMITTED WITHOUT FIRST SUBMITTING PLANS TO AND OBTAINING APPROVAL FROM THE OCFA.*
18. *A NEW HVAC UNIT EXCEEDING A 2,000 CFM CAPACITY SHALL BE PROVIDED WITH A DUCT SMOKE DETECTOR. THIS DETECTOR SHALL SHUT DOWN ONLY THE AFFECTED INDIVIDUAL HVAC UNIT UPON SMOKE DETECTION. THIS DETECTOR MUST ALSO BE INTERFACED TO AN EXISTING FIRE ALARM SYSTEM. THE DETECTOR SHALL ONLY PROVIDE A SUPERVISORY SIGNAL AT THE FIRE ALARM PANEL UPON SMOKE DETECTION.*

SHEET INDEX:

SEE SHEET CS - Cover Sheet *FOR SHEET INDEX.*

STORM WATER POLLUTION PREVENTION NOTES

STORMWATER POLLUTION PREVENTION DEVICES AND PRACTICES SHALL BE INSTALLED AND/OR INSTITUTED AS NECESSARY TO ENSURE COMPLIANCE TO THE CITY OF IRVINE WATER QUALITY STANDARDS CONTAINED IN CHAPTER 3. WATER, OF DIVISION 8 OF TITLE 6 OF THE IRVINE MUNICIPAL CODE AND ANY EROSION CONTROL PLAN ASSOCIATED WITH THIS PROJECT. ALL SUCH DEVICES AND PRACTICES SHALL BE MAINTAINED, INSPECTED AND/OR MONITORED TO ENSURE ADEQUACY AND PROPER FUNCTION THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT.

COMPLIANCE TO THE WATER QUALITY STANDARDS AND ANY EROSION AND SEDIMENT CONTROL PLAN ASSOCIATED WITH THIS PROJECT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING REQUIREMENTS:

1. *AN EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROL MEASURES (BMPs) SHALL BE IMPLEMENTED TO PROTECT THE EXPOSED PORTIONS OF THE SITE FROM EROSION AND TO PREVENT SEDIMENT DISCHARGES.*
2. *SEDIMENTS AND OTHER POLLUTANTS SHALL BE RETAINED ON SITE UNTIL PROPERLY DISPOSED OF, AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.*
3. *STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS SHALL BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND AND WATER FLOW.*
4. *FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS SHALL BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM, NOR BE ALLOWED TO SETTLE OR INFILTRATE INTO SOIL.*
5. *EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTES.*
6. *TRASH AND CONSTRUCTION SOLID WASTES SHALL BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.*
7. *SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICULAR TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITS SHALL BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.*
8. *STORMWATER POLLUTION PREVENTION DEVICES AND/OR PRACTICES SHALL BE MODIFIED AS NEEDED AS THE PROJECT PROGRESSES TO ENSURE EFFECTIVENESS.*

SHOPPING CART COMPLIANCE: NOT APPLICABLE

THIS PROJECT IS A RETAIL ESTABLISHMENT THAT MAY BE SUBJECT TO THE CITY OF IRVINE SHOPPING CART CONTAINMENT OR RETRIEVAL PROVISIONS CONTAINED IN IRVINE MUNICIPAL CODE SECTIONS 4-11-701 THROUGH 4-11-709. IN SUCH CASE COMPLIANCE IS REQUIRED AT THE TIME OF OCCUPANCY. THEREFORE, SELECT THE APPROPRIATE NOTE FROM THE SELECTION BELOW AND INCLUDE ON THE GENERAL NOTE SHEET.

SHOPPING CART COMPLIANCE
THIS PROJECT IS FOR A RETAIL ESTABLISHMENT THAT WILL USE ELEVEN OR MORE SHOPPING CARTS IN ITS BUSINESS OPERATIONS. THEREFORE, NO OCCUPANCY MAY OCCUR UNTIL A SHOPPING CART CONTAINMENT OR RETRIEVAL PLAN HAS BEEN APPROVED AS DESCRIBED AT WWW.CITYOFIRVINE.ORG/SHOPPINGCART AND THE ESTABLISHMENT IS PREPARED TO IMPLEMENT THE PLAN ON ITS INTENDED OPENING DAY.
OR
SHOPPING CART COMPLIANCE
THIS PROJECT IS FOR A RETAIL ESTABLISHMENT THAT WILL USE LESS THAN ELEVEN SHOPPING CARTS IN ITS BUSINESS OPERATIONS. THEREFORE, SHOPPING CART CONTAINMENT OR RETRIEVAL PROVISIONS IN IRVINE MUNICIPAL CODE SECTIONS 4-11-701 THROUGH 4-11-709 WILL NOT APPLY UNLESS AND UNTIL ADDITIONAL CARTS ARE UTILIZED WHICH BRING THE TOTAL TO ELEVEN OR MORE.
OR
SHOPPING CART COMPLIANCE
THIS PROJECT IS FOR A RETAIL ESTABLISHMENT THAT CURRENTLY COMPLIES WITH THE SHOPPING CART CONTAINMENT OR RETRIEVAL PROVISIONS IN IRVINE MUNICIPAL CODE SECTIONS 4-11-701 THROUGH 4-11-709 UNDER A PLAN APPROVED ON:
_____ (APPROVAL DATE).

RECYCLING:

CONSTRUCTION WASTE MATERIAL SHALL BE RECYCLED PER APPROVED CONSTRUCTION WASTE REDUCTION COMPLIANCE REPORT.

NO.	DATE	REVISIONS
1		
2		
3		
4		
5		
6		
7		

DESIGNED:
DRAWN:
CHECKED:
DATE:
SCALE:

DEVELOPER:
SOILS ENGINEER: DATE
REPORT #

PLANS PREPARED BY:
IDS GROUP
Phone: (949) 387-7700 Fax: (949) 387-8082
No. C39573 7-31-19
LICENSE NO. EXP. DATE
ARCHITECT:

CITY OF IRVINE
COMMUNITY DEVELOPMENT DEPARTMENT

PLAN CHECK :
PERMIT :

SHEET TI1
OF 1

C□□□ □□lr□□□□

S□ □□□S□□d□P□r□C□□ □ □□□□□C□□□□r

15 Sweet Shade
Irvine, California 92606

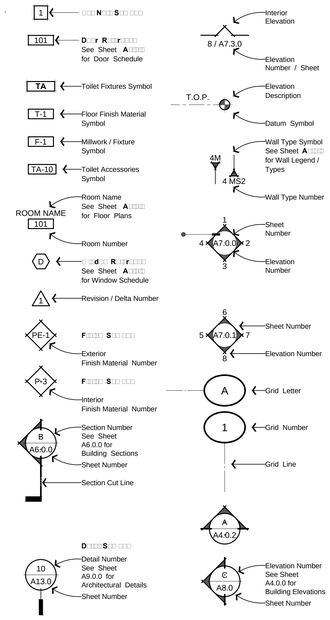
D□□□□□□□□ S□r□□□□□ R□□□□□□□□□□

T□□□□□□l□ □r□□□□ □□□

ABBREVIATIONS

&	And
L	Angle
@	At
d	Penny
Ø	Round
w/	With
A.	Area
A.B.	Anchor Bolt
ABV.	Above
A.C.	Asphaltic Conc.
A / C	Air Condition / Conditioning
ACC.	Access
ACOUST.	Acoustic (Al)
A.D.	Area Drain
ADD.	Addendum
ADD'L.	Additional
ADJ.	Adjacent
ADJT.	Adjustable
A.F.F.	Abv. Fin. Flr.
AGG.	Aggregate
ALT.	Alternate
ALUM.	Aluminum
ANOD.	Anodized
A.P.	Access Panel
APPR.	Approved
APPROX.	Approximate
ARCH.	Architect (Ural)
ASPH.	Asphalt
AUTO.	Automatic
AVG.	Average
B.D.	Building Dept.
BD.	Board
BEL.	Below
BIT.	Bituminous
BLDG.	Building
BLK.	Block
BLK'G.	Blocking
BLT.-UP	Built-up
B.M.	Bench Mark
BM.	Beam
B.N.	Boundary Nailing
BOT.	Bottom
B.P.	Bearing Plate
BRCG.	Bracing
BRG.	Bearing
BTWN.	Between
B.U.R.	Built-up Roofing
BVL.	Bevel (Ed)
C	Camber
CAB.	Cabinet
C.B.	Catch Basin
C.C.	Center To Center
CEM.	Cement
CER.	Ceramic
C.F.	Cubic Feet
C.F.M.	Cubic Feet / Min.
C.H.B.	Concealed H.b.
CHAM.	Chamfer
C.I.	Cast Iron
C.I.P.	Cast - In - Place
CIR.	Circle
C.J.	Control Joint
C.L.	Center Line
CLG.	Ceiling
CLK'G.	Caulking
CLR.	Clear
CLS.	Closure
C.M.U.	Concrete Masonry Unit
C / O	Clean Out
C.O.	Clear Opening
COL.	Column
COMB.	Combination
COMP.	Compact(ed)
COMPO.	Composition
CONC.	Concrete
CONN.	Connection
CONST.	Construction
CONT.	Continuous
CONTR.	Contractor
CORR.	Corrugated
CPT.	Carpet
CSK.	Countersunk
CTR.	Center
C.T.	Ceramic Tile
CU.	Cubic
C. YD.	Cubic Yard
D.	Drain
DBL.	Double
DCK'G.	Decking
DEMO.	Demolition / Demolish
DEPR.	Depress (ion)
DET.	Detail
D.F.	Douglas Fir
D.H.	Double Hung
DIA.	Diameter
DIAG.	Diagonal
DIM.	Dimension
DISC.	Discontinuous
D.L.	Dead Load
DISP.	Dispenser
DN.	Down
DIV.	Division
DR.	Door
D.P.	Dampproofing
D.S.	Down Spout
DWG.	Drawing
DWR.	Drawer
E.	East
EA.	Each
E.B.	Expansion Bolt
E.F.	Each Face
E.J.	Expansion Joint
EL.	Elevation
ELECT.	Electric (Al)
ELEV.	Elevator
E.N.	Edge Nailing
ENCL.	Enclosure
ENG.	Engineer
EQ.	Equal
EQUIP.	Equipment
E.S.	Each Side
EST.	Estimate
E.W.	Each Way
EXH.	Exhaust
EXIST.	Existing
EXP.	Expand
EXPO.	Expose(d)
EXT.	Exterior
FAB.	Fabricate
FAST.	Fasten (Er)
F.D.	Floor Drain
FDN.	Foundation
F.E.	Fire Extinguisher
F.E.C.	Fire Extinguisher Cabinet
F.F.	Finished Floor
F.G.	Finished Grade
F.H.	Fire Hydrant
FILL.	Fillet
FIN.	Finish (Ed)
FIXT.	Fixture
F.L.	Flow Line
FL. / FLR.	Floor
FLEX.	Flexible
FLSH'G.	Flashing
FLUOR.	Fluorescent
F.O.C.	Face Of Concrete
F.O.F.	Face Of Finish
F.O.M.	Face Of Masonry
F.O.S.	Face Of Stud
F.O.W.	Face Of Wall
F.P.	Fireproof (Ed)
FR.	Frame (O)
FRMG.	Framing
F.S.	Finished Surface
FT.	Foot, Feet
FTG.	Footing
FURR.	Furred, Furring
FUT.	Future
GA.	Gauge
GALV.	Galvanized
G.B.	Grab Bar
G.C.	General Contractor
GEN.	General
G.I.	Galvanized Iron
GL.	Glazing, Glass
GLB.	Glue - Laminated Beam
GND.	Ground
GR.	Grade, Grading
GRT.	Grout
GYP.	Gypsum
GYP. BD.	Gypsum Board
H	High
H.B.	Hose Bibb
H.C.	Hollow Core
H.D.	Heavy Duty
HD.	Head
HDCP.	Handicap
HDR.	Header
HDWD.	Hardwood
HDWE.	Hardware
HGR.	Hanger
H.M.	Hollow Metal
HORIZ.	Horizontal
H.P.	High Point
HR.	Hour
HT.	Height
HTG.	Heating
HTR.	Heater
HVAC	Heating, Ventilation, Air Conditioning
H.W.	Hot Water
I.D.	Inside Diameter / Dimension
IN.	INCH (ES)
INCL.	Included / Including
INFO.	Information
INSUL.	Insulation
INT.	Interior
INV.	Invert
JAN.	Janitor
JST.	Joist
JT.	Joint
K.B.	Hilti Kwik - Bolt
KIT.	Kitchen
K.PL.	Kick Plate
LAG.	Lag Bolt
LAM.	Laminated
LAT.	Lateral
LAV.	Lavatory
LDGR.	Ledger
LG.	Long
LGTH.	Length
L.H.E.	Low Hydrogen Electrode
L.L.H.	Long Leg Horizontal
L.L.V.	Long Leg Vertical
L.P.	Low Point
LT.	Light
LTWT.	Lightweight
MACH.	Machine
MAS.	Masonry
MAT'L.	Material
MAX.	Maximum
M.B.	Machine Bolt
MECH.	Mechanical
MED.	Medium
MEM.	Member
MEMB.	Membrane
M.	Men
MET.	Metal
MFR.	Manufacture (R)
M.H.	Manhole
M.I.	Malleable Iron
MIN.	Minimum
MIR.	Mirror
MISC.	Miscellaneous
MLDG.	Moulding
M.O.	Masonry Opening
MT.	Mount
MTD.	Mounted
MULTI.	Multiple
N.	North
NAT.	Natural
N.G.	Natural Grade
N.I.C.	Not In Contract
NO.	Number
NOM.	Nominal
N.S.	Near Side
N.T.S.	Not To Scale
O /	Over
O.A.	Overall
OBS.	Obscure
O.C.	On Center
O.D.	Outside Dia. / Dim.
OFD.	Overflow Drain
OFS.	Overflow Scupper
O.H.	Overhead
O.H.D.	Overhead Door
OPG.	Opening
OPP.	Opposite
PAR.	Parallel
PART.	Partition
P.C.	Pipe Column
P.C.F.	Pounds Per Cubic Feet
PEN.	Penetration
PERF.	Perforate (D)
PERI.	Perimeter
PG.	Page
P.L.	Property Line
PL.	Plate
P.LAM.	Plastic Laminate
PLAS.	Plaster
PLUMB.	Plumbing
PLYWD.	Plywood
P.N.	Plywood Nails
PNL.	Panel
PR.	Pair
PRCST.	Precast
PREFAB.	Prefabricate (D)
PRESS.	Pressure
PRF.	Preformed
P.S.F.	Lbs. / Sq. Foot
P.S.I.	Lbs. / Sq. Inch
P.T.	Pressure Treated
PT.	Point (Ed)
PTD.	Painted
P.T.D.	Paper Towel Dispenser
PVMT.	Pavement
Q.T.	Quarry Tile
R.	Riser
R.A.	Return Air
RAD.	Radius
R.D.	Roof Drain
REF.	Reference
REFER.	Refrigerator
REG.	Register
REINF.	Reinforced (Ing)
REM.	Remove
REQ.	Required
RESIL.	Resilient
RET.	Return
REV.	Revise (ed) Revision
RFG.	Roofing
RFTR.	Rafter
R.H.	Redhead Bolt
R.H.B.	Recessed Hose Bibb
R.I.	Rough - In
RM.	Room
RO.	Rough
R.O.	Rough Opening
R.O.W.	Right Of Way
R.S.	Resawn
RWD.	Redwood
S.	South
S.A.	Supply Air
S.C.	Solid Core
SCHED.	Schedule
SCR.	Screw
S.D.	Storm Drain
SDG.	Siding
SEAL.	Sealant
SECT.	Section
SEIS.	Seismic
SEL.	Select
S.F.	Sq. Foot / Feet
SHT.	Sheet
SHTG.	Sheathing
SIM.	Similar
SL.	Sleeve
SM.	Smooth
SPCG.	Spacing
SPECS	Specifications
SPL.	Splash
SQ.	Square
S.S.	Select Str.
S / S	Service Sink
S.ST.	Stainless Steel
STAG.	Stagger (ed)
STD.	Standard
STG.	Seating
STIFF.	Stiffener
STL.	Steel
STOR.	Storage
STR.	Structural
SUB.	Sub - Contractor
SUSP.	Suspended
SW.BD.	Switch Board
SYM.	Symbol
SYS.	System
TR.	Tread
T&B	Top & Bottom
T&G	Tongue & Groove
TEL.	Telephone
TEMP.	Temper (Ed)
THK.	Thick (Ness)
THR.	Threshold
THRU	Through
T.	Top
T.O.B.	Top Of Beam
T.O.C.	Top Of Curb
T.O.F.	Top Of Framing
T.O.L.	Top Of Ledger
T.O.P.	Top Of Parapet
T.O.PVG.	Top Of Paving
T.O.S.	Top Of Sheathing
T.O.SLB.	Top Of Slab
T.O.STL.	Top Of Steel
T.O.W.	Top Of Wall
T.S.G.	Tapered Steel Girder
TYP.	Typical
U.B.C.	Uniform Building Code
UNF.	Unfinished
U.N.O.	Unless Noted Otherwise
UNREINF.	Unreinforced
URI.	Urinal
UTIL.	Utility
VAR.	Varies
V.B.	Vapor Barrier
V.C.P.	Vitreous Clay Pipe
VERT.	Vertical
V.G.	Vertical Grain
VNR.	Veneer
VOL.	Volume
V.T.	Vinyl Tile
V.T.R.	Vent Thru Roof
W	West
W /	With
W / C	Water Closet
WD.	Wood
WDW.	Window
W.H.	Water Heater
WH.	Wall Hung
W.I.	Wrought Iron
W / O	Without
W.	Women
WP.	Waterproof (ed) Waterproofing
W.R.	Water Resistant
WSCT.	Wainscot
WT.	Weight
WTH.	Width
YD.	Yard

SYMBOLS



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PROJECT DATA

LEGAL □URISDICTION□ (Building) City, State

ACCESSORS PARCEL NO□□ 000-000-00

APPLICABLE CODES□

□□□□ California Code of Regulations
□□□□ California Building Standards Code (Title 24)

□□□□ California Building Standards Administrative Code
□□□□ California Building Code
□□□□ California Electrical Code
□□□□ California Mechanical Code
□□□□ California Plumbing Code
□□□□ California Energy Code
□□□□ California Fire Code
□□□□ California Existing Building Code

NFPA □□□ □□ Standard for Installation of Fire Sprinkler Systems

NFPA □□ National Fire Alarm and Signaling Code Life Safety Code
NFPA □□□ Code

PROJECT INFORMATION

LEGAL DESCRIPTION□ Lot 168 of Tract No. 16580 Being a portion of Block 61 of Irvine Company's Subdivision, as shown on a map recorded in Book 1, Page 88 Miscellaneous Record Maps, Records of Orange County, California.

SCOPE OF □OR□□

1. Relocate City of Irvine Disability Services from Civic Center to Sweet Shade Community Center. Minor demolition of walls, ceilings, HVAC and power. New walls, finishes, power

E□EMPT FROM CAL GREEN PROJECT VALUATION LESS THAN $200,000

BUILDING OCCUPANCY

CONSTRUCTION T□PE□ V B (Fully Sprinklered)

OCCUPANC□ GROUP□ A3 Non - separated

NUMBER OF STORIES□ 1

□ONE□ 2.3 Medium Density Residential

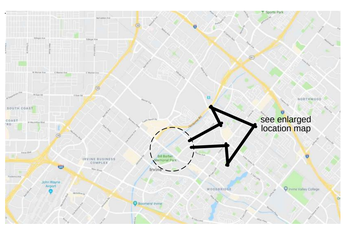
SHEET INDEX

S□EET NUMBER	DRA□ING DESCRIPTION
COVER S□EET	
T□	City of Irvine Title Sheet
CS	Cover Sheet
GN□	General Notes
GN□	General Notes
GN□	General Notes
GN□	Specifications
GN□	Specifications
□C□	Accessibility Requirements
□C□	Accessibility Requirements
□C□	Accessibility Requirements
ARC□ITECTURAL	
A□□□	Existing and Occupancy Analysis
A□□□	Existing Site Plan
AD□□□	Demolition Floor Plan
AD□□□	Demolition Reflected Ceiling Plan
A□□□	Floor Plan
A□□□	Reflected Ceiling Plan
A□□□	Enlarged Floor Plans
A□□□	Enlarged Restroom Plans
A□□□	Door/ Window Schedule
A□□□	Details
MEC□ANICAL	
M□□□	Notes, Legends, Abbreviations
M□□□	Mechanical Schedules
M□□□	Specifications
M□□□	Title 24
M□□□	Title 24
M□□□	Demo Floor Plan
M□□□	Mechanical Floor Plan
M□□□	Details
P□□□	Piping floor plan
ELECTRICAL	
E□□□□	Notes, Legends, Abbreviations
E□□□□	Single Line Diagram
E□□□□	Title 24 Compliance Forms
E□□□□	Site Plan
E□□□□	Demolition Floor Plan
E□□□□	Demolition Reflected Ceiling Plan
E□□□□	Remodel Floor Plan
E□□□□	Remodel Reflected Ceiling Plan

SHEET INDEX

S□EET NUMBER	DRA□ING DESCRIPTION

VICINITY MAP



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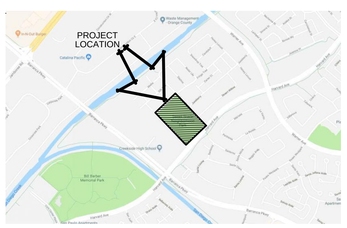
LOCATION MAP



□□r□□

OCCUPANT LOAD

See sheet T-1

PLUMBING CALCULATION

T□PE OF OCCUPANC□□ A-3

TOTAL OCCUPANTS□ 124 OCC.

	Male	Female
RE□UIRED	1 Water Closet (s) 1 Urinal (s) 1 Lavatory (s)	3 Water Closet (s) 1 Lavatory (s)
PROVIDED	1 Water Closet (s) 1 Urinal (s) 1 Lavatory (s)	4 Water Closet (s) 2 Lavatory (s)

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Issuance / Revisions

No.	Date	Description
1	□□□□□□□□	Plan Check Resubmittal /Client Revisions
2	□□□□□□□□	Bid Set /Client Revisions

Architect / Designer / Engineer

IDS
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Client Name

City of Irvine
1 Civic Center Plaza
Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

LICENSED ARCHITECT
JOHN JOSEPH STEPP
No. C15573
Exp. 01-31-19
STATE OF CALIFORNIA

Engineer's Stamp

Drawing Description

COVER SHEET

(BID SET)

Project Number	17X085.01
Print Date	2018.08.27

2018.09.13

Sheet Number

CS

GENERAL NOTES

GENERAL CONSTRUCTION NOTES

1. Do not scale Construction Documents. Contact the Architect or Construction Manager if any discrepancies arises.
2. Construction fence, security, etc. (if required) shall be the responsibility of the General Contractor.
3. Clean up on a daily basis is required and will be strictly enforced. The Contractor is responsible for final 'Detail' cleaning of the BUILDING STRUCTURE. This cleaning will allow operations to enter the premises, and open for business.
4. General Contractor will be responsible for all construction staking.
5. The Project Superintendent shall be responsible to coordinate activities of all supplied equipment installers whose names will be supplied by the Construction Manager. Should the superintendent encounter any difficulty getting proper response or cooperation from any installer , he / she is to contact the Construction Manager for immediate resolution of the problem.
6. The General Contractor is responsible for all supplied equipment until the equipment is accepted by the Construction Manager. Any damages and / or shortages to said equipment are to be handled by the Contractor via freight claim and / or insurance claim.

   Note: When accepting freight from common carrier, verify that there is no visible signs of damage, and if it is required that major items be opened and inspected for freight damage.
7. General Contractor is to submit closeout packages within 60 days of turn over. General Contractor is to submit as - builts (reproducible) with their closeout packages.
8. Upon completion of the project and before payment of the final draw, General Contractor shall deliver to the new Owner a manual addressing all warrantees and listing all Sub-Contractors responsible, all equipment information and warrantees collected during construction shall also be incorporated in this manual.

E TERIOR INTERIOR SIGNS

1. Signs to be supplied and installed by Sign Vendor. 'SIGN' installation are by the General Contractor. 'SIGNS' shall be approved by Contractor and IDS Group prior to installation. (If Applicable)
2. The General Contractor shall coordinate installation for all project Signage with the Sign Company. (If Applicable)

SECURIT

1. General Contractor shall ensure that a pre-wire inspection is scheduled with the Security Consultant and that the alarm is scheduled to be installed by Security Consultant.
2. The Contractor shall provide conduit or interior wall chases for all security type equipment. Exact locations shall be coordinated prior to installation.

S OP DRA INGS

1. General Contractor to review all shop drawings and stamp, highlight any variance, before submitting to the Architect / Engineers.
2. The Contractor shall supply and install all millwork per all Architectural Drawing and Shop Drawings.

SANITAR FACILITIES

1. Plumbing facility shall be provided in accordance with the California Plumbing Code (CPC) Section 413.0 and CPC table 4-1.

ACCESSIBILITY

ACCESSIBILIT

1. The General Contractor is responsible for compliance with current 2016 CBC (Accessibility Requirements) regulations in the event that a cross slope clearances or heights if fixture, switches and equipment ramp cannot be installed to comply with code and the drawings. The Construction Manager shall be notified before the work continues. Construction Manager shall contact the ARCHITECT if additional information is required to resolve any problems.

ENERGY CONSERVATION NOTES

ENERG CONSERVATION

1. Insulation used shall comply with california quality standards
2. All swinging doors and windows leading to unconditioned areas shall be fully weather stripped.
3. After installing insulation, the installer shall post in a conspicuous location in the building a certificate signed by the installer and the builder stating that the installation conforms to the requirements of Title 24, Part 2, and that the installation conforms with the requirements of Title 20. The certificate shall state the manufacturer's name and material identification, the installed 'R' value, and (in application of loose fill insulation) the minimum installed weight per square foot consistent with the manufacturer's labeled density for the desired 'R' value
4. For infiltration control all openings and penetrations must be caulked and sealed, such as around windows, at sole plates and openings for utility pipes and wires plates and openings for utility pipes.
5. The State of California Energy Conservation Standard Sections of Title 24 of the California Administrative Code have been reviewed and the design submitted substantially conforms to the energy regulations for non-residential and residential buildings.

ENVIRONMENTAL UALIT

1. At the time of rough installation or during storage on the Construction Site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal, or other acceptable methods to reduce the amount or dust or debris which may collect in the system. (5. 504. 3)

FIRE PROTECTION NOTES

FIRE PROTECTION

1. Fire prevention division shall be notified three working days in advance to conduct the inspection of all fire alarm and fire protection systems.
2. Fire evacuation plans are required to be posted in the kitchen / storage area the following information shall be included:

   a). Floor lay-out to include any and all obstructions
   b). Emergency egress or escape routes both preferred and alternate
   c). The location of the sign
3. When required, Fire Hydrants shall comply with Fire Department requirements for on-site Fire Hydrants (CFC Appendix C)
4. The construction, remodel, or demolition of a building shall comply with CFC Chapter 14.
5. Interior finish shall comply with codes as follows: CBC .
6. **D r M r**
   In every Group A, E, I, R-1 and R-2 Occupancies all drapes, hangings, curtains, drops and all other decorative material including Christmas trees, that would tend to increase the fire and panic hazard shall be made from a non-flammable material or shall be treated and maintained in a flame-retardant condition by means of a flame - retardant solution or process approved by the 'State Fire Marshal'. Per California Code of Regulations Title 19, Article 3, Subsection 3.08 – Decorative Materials. Provide a California State Fire Marshal Certificate of Flame Retardant or a California State Fire Marshal approved testing lab certification for any decorative materials prior to final inspections. Samples (4" x 12") are required to be submitted to VCFD for testing and approval.
7. Plans for any automatic sprinkler system (including tenant improvement work), hood suppression system and / or alarm system, shall be submitted with fees to City of Irvine Fire Department for review and approval prior to installation.
8. Wall and ceiling finishes shall comply with Flame Spread Rating of III and Smoke Density Rating of 450.
9. An occupant load sign shall be posted in each assembly room or similar purpose room having a occupant load of 50 or more.
10. When required, the Contractor shall secure and pay for permits required by the Fire Prevention Bureau prior to occupying the premises.
11. **L d L**
    Section 1008.1.9.3 Item 2: In Buildings in Occupancy Group 'A' having an occupant load of 300 or less, Groups B, F, M and S, the main exterior Door or doors are permitted to be equipped with a readily visible durable sign is posted on the egress side on or adjacent to the door stating:

    "T IS DOOR TO REMAIN UNLOC ED EN BUILDING IS OCCUPIED"
    The sign shall be in letters 1 inch high on a contrasting background.

    N
    The use of the key - operated locking device is revocable by the building official for due cause.
12. The installation of automatic fire sprinkler systems shall comply with the CBC Section 903. 3. 1 through 903. 3. 6
13. A portable Fire Extinguisher (s) shall be provided for all areas.
14. All 'Exits' shall be openable from inside without the use of a key, any special knowledge, or effort. No deadbolts, sliding bolts, etc. CBC Section 1008. 1. 9 and CFC Section 1008.
15. Building Numbers shall be easily visible and legible from the street or road fronting the property. CFC Section 505.
17. EXIT signs shall be internally illuminated. CFC Section 1006 and CBC Section 1011.2. and Section 1011.4.
18. Provide two separate sources of power for EXIT signs conforming to Code Sections as follows: CBC Section 1011.5.3.
19. Emergency lighting system shall be in compliance with the applicable provisions of the Electrical Code, lighting must provide not less than one foot candle at floor level per CBC Section 1006.2.
20. Minimum 2A 10B:C fire extinguishers shall be provided. Travel distance to any extinguisher shall not exceed 75 feet from any portion of the building. Extinguisher (s) shall be hung no higher than 44 inches measured from the floor to the top of the extinguisher.
21. Provide fire dampers at the following locations. See Mechanical Drawings for locations and other requirements.

    a. Ducts penetrating Fire-Rated shafts.
    b. Ducts penetrating the ceiling of Fire-Resistive Floor - Ceiling or Roof - Ceiling assemblies
22. Provide fire blockings and draftstops as required at wood construction.
23. Electrical panels may not be placed within 1 - hour corridors or 2 - hour stair enclosures.
24. Beams supporting more than one floor must be individually protected with 5/8" Type 'X' Gypsum Board.
25. Interior wall and ceiling finish schedule, CBC Chapter 8 flame spread rating:

    A. 0 - 25 Flame - Spread Index = Class for enclosed vertical exit - ways
    B. 26 - 75 Flame - Spread Index = Class II for other exit - ways
    C. 76 - 200 Flame - Spread Index = Class III for rooms or areas
26. No hazardous materials will be stored and / or used within the building, which exceed the quantities listed in CBC Tables 414. 2. 2 and 414. 2 .5
27. **P rd r**
    Each door in a means of egress from a Group A, or assembly area not classified as an assembly Occupancy, E, I-2 or I-2.1 Occupancies having an occupant load of 50 or more and any Group H Occupancy shall not be provided with a latch or lock unless it is panic hardware.

    Exception:
    A main exit of a Group A Occupancy in compliance with Section 1008.1.8.3, Item 2
28. Additional EXIT signs and emergency lighting may be required prior to final inspection for occupancy. A preliminary walk-through inspection is recommended with Contractor and Electrician.

FIRE DEPARTMENT NOTES

FIRE DEPARTMENT NOTES

1. Maintain jobsite safety during Construction as per Chapter 33 of the 2016 California Fire code.
2. Fire Extinguishers to be located and sized as per City of Irvine Specification #424 and Fire Inspectors' direction.
3. Property ADDRESS per City of Irvine Specification #428. Installed by the sign Contractor under a separate contract. Minimum size of numbers is 10" and shall be contrast with background Verify location prior to installation.
4. Knox Box fire fighter access is required near the main entrance as per City Specifications #403. It must be as close as possible to the main entrance and readily visible to responding Fire Fighters.
5. All apparatus access fire lanes must be constructed and marked / signed as per City Specifications #401 and #415.
6. Maximum occupant load Signage must be permanent in nature and posted above or near the inside of the main entrance. The interior dining, and exterior patio and the total must all be included on the sign with appropriate language.
7. An application for Places Of Assembly HBFD operational permit must be received by the City of Irvine prior to final Fire Inspection.

FIRE PREVENTION

1. Exit doors shall swing in the direction of exit travel when serving any hazardous area or when serving an occupant load of 50 or more.
2. Exit doors shall be operable from the inside without the use of a key or any special knowledge or effort.
3. Exception: this requirement shall not apply to exterior exit doors in a group "b" occupancy if there is a visible, durable sign on or adjacent to the door stating "this door to remain open during business hours". The letters shall be not less Than 1 inch high on a contrasting background. The locking device must be a type That will be readily distinguishable as locked.
4. Panic hardware, when installed, shall comply with all applicable building code Requirements. The activating member shall be mounted at a height of not less Than 30 inches nor more than 44 inches above the floor. The unlatching force Shall not exceed 15 pounds when applied in the direction of exit travel.
5. 3.5 the means of egress, including the exit discharge shall be illuminated at all times The building space served by the means of egress is occupied. The means of Egress illumination level shall not be less than 1 foot-candle (11-lux) at the Walking surface level.
6. Exit illumination shall comply with CBC.
7. Exit signs shall be installed at required exit doorways and where otherwise necessary to clearly indicate the direction of egress when the exit serves an occupant load of 50 or more.
8. Exception: main exterior exit doors which obviously and clearly are identifiable as Exits need not be signed when approved by the building official.
9. When necessary, the final location and quantity of exit signs shall be determined by the fire department prior to construction of any work.
10. The color and design of lettering, arrows and other symbols on exit sign shall Be in high contrast with their background (3/4" x 6" letters min.) (Title 19, Chapter 10 UBC).
11. All rated corridor doors shall have a threshold with a smoke and draft seal at head and jambs.
12. Interior wall and ceiling finishes shall be non-combustible or have a Flame Spread index of 0 to 25; smoke-developed index 0-450.
13. All drapes, hanging curtains and other decorative materials shall be treated and maintained in a flame retardant condition.
14. Fire dampers or doors shall be provided where air ducts penetrate fire rated Walls or ceiling as per 2010 cbc section 716. Smoke dampers shall be provided where air ducts penetrate fire rated walls or ceiling as per 2010 cbc section 716.
15. Extend / modify fire / life safety system as required.
16. Extend fire sprinklers systems as required.
17. Fire sprinkler/or life safety plans must be submitted to the city for review and approval prior to building permit issuance.
18. Fire sprinkler system plan must be revised and approved by the cities Fire Department prior to the installation or modification of sprinkler systems.
19. A portable fire extinguisher with a minimum 2a10bc rating shall be provided every 75' of travel distance from any point within the area defined as scope of work per these plans. Provide fire extinguishers as required by fire department field Inspector.
20. All emergency lighting sources shall emit a minimum value of one foot candle measured at floor level.
21. Provide emergency notification system for the hearing and visual impaired per A.D.A. Requirements.

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Issuance / Revisions

No.	Date	Description
1		Plan Check Resubmittal /Client Revisions
2		Bid Set /Client Revisions

Architect / Designer / Engineer

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Client Name

City of Irvine
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Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

LICENSED ARCHITECT JOSEPH STEBER C11573 Exp. 01-31-19 STATE OF CALIFORNIA

Engineer's Stamp

Drawing Description

GENERAL NOTES

(BID SET)

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

GN 1

2018.09.13

GENERAL NOTES

GENERAL NOTES

1. The installation Contractor (The "Contractor") shall be responsible for compliance with all applicable codes.
2. The general conditions of the contract for construction, standards form of The American Institute of Architects, current edition, shall apply to all work in this contract, except as specifically modified below and/or by the agreement.
3. Prior to beginning any work the general contractor shall furnish a construction schedule showing the chronological phase of his work and all related work for the completion of the project. This schedule shall indicate all ordering lead times, length of time for each phase, its start and completion, with a projected completion date.
4. All work performed by the contractor/subcontractor shall conform to the requirements of municipal, local or federal and state laws, as well as any other governing requirements, whether or not specified on the drawings.
5. Where the contract notes or drawings call for any work of a more stringent nature than that required by the building code or any other department having jurisdiction over the work, the work of the more stringent nature called for by the contract, construction notes or drawings shall be furnished in all cases.
6. The contractor shall be fully and solely responsible for the removal replacement and rectification of all damaged and defective material and workmanship in connection with the contract work. He shall replace or repair as directed all such damaged or defective materials which shall appear within a Period of one year from the date of substantial completion.
7. The contractor/subcontractor shall obtain and pay for all legally required approvals and permits necessary for the execution and completion of his work. Forward copies to IDS Group.
8. All IDS Group drawings and all construction notes are complementary, and what is called for by either will be binding as if called for by all. Any work shown or referred to on any one set of drawings shall be provided as though shown on all related drawings.
9. The general contractor is wholly responsible for the coordination and scheduling of the work effort for all subcontractors, craftsman and tradesman required to complete the job.
9. The general contractor shall notify saa immediately if he cannot comply with all work called for on these drawings.
10. The general contractor shall notify IDS Group immediately of any discrepancies or omissions between the drawings, these notes, and field conditions before commencing any work and request clarification.
11. Before submitting a proposal, all contractors shall visit the premises, familiarize themselves with existing conditions and satisfy themselves as to the nature and scope of the work and the difficulties that attend to its execution.
12. The submission of a proposal shall be construed as evidence that such an examination has been made and later claims for labor, equipment, or material required for difficulties encountered, which could have been foreseen had such an examination been made, will not be recognized.
13. Each contractor shall check and verify all dimensions and conditions at the job site as it relates to their work.
14. All contractors shall contact the building management to determine the rules of the building owner for construction to determine when and how deliveries can be made (see below), what phases of construction can be done on regular or overtime, and in general any special building requirements which will affect their work (if overtime work is required by any trade, approval must be obtained prior to the execution of any work including cost). The general intent is that all construction work shall be done on regular time except noise generating construction.
15. Each contractor shall make all required arrangements for delivery of equipment and/or materials. It shall be the responsibility of each contractor to check the rules and regulations governing work on the premises, including the following:
    a. Date and time or delivery shall be established in conjunction with the person having jurisdiction over premises. Overtime charges and/or any necessary expense shall be paid by contractor requiring service.
    b. Building conditions, including size and loading capacity of elevators, size of doorways, corridors, window openings, etc., shall be checked by the Contractor before delivery to assure items will fit into space.
    c. All charges involving the installation and/or operation of a hoist system, If required, shall be borne by the contractor using the system. Charges involving the temporary removal and reinstallation of window sash and/or fixed panels required for delivery shall be borne by the contractor.
16. The general contractor, his subcontractor and any other contractor involved in this project shall take note that any cost caused by defective or ill-timed work as a result of, but not limited to inferior workmanship or materials, improper scheduling or delinquent ordering shall be borne by the party responsible therefore.
17. The general contractor shall remove all rubbish and waste materials, both from his own and other subcontractors employees, including that rubbish which is a by-product of carpet and cabinet installation, telephone company installation, etc. And provide for its removal from the site.
18. The use of the words "provide" or "provided" in connection with any item specified is intended to mean, unless otherwise noted, that which shall be furnished and installed, and connected where so required.
19. Where the terms "approved equal", "other approved", "equal to", "acceptable" or The other general qualifying terms are used in these notes, it shall be understood that reference is made to the ruling and judgment of IDS Group.
20. The general contractor shall supply cut sheet specifications of all fixtures and equipment called for on drawing, i.e., light fixtures, hardware, etc.
21. The general contractor shall have ten working days from award of the contract to submit substitutions of specified products or work for review by IDS Group. He shall include cut sheets with specifications and reasons for substitution. IDS Group shall respond in ten working days to submittal. No substitutions shall be accepted after the initial time limit has passed.
22. The general contractor shall submit all fabrication shop drawings and fixture cuts to IDS Group for review. He shall provide (3) copies. IDS Group shall have 40 working Hours (5 days) shop drawing turnaround time from date of receipt. All shop drawings and cuts signed "reviewed" shall supersede original drawings in design appearance only. Contractors shall assume responsibility for errors in their drawings.
23. The general contractor shall provide submittals for review and approval by IDS Group. G.C. Is to provide three samples of the specified materials. Submittals shall Include but not be limited to the following: draw downs of all paints, samples of all carpets, all specified floor base, samples of all wall finishes, samples of specified cabinet finishes, samples of ceiling grid and ceiling tile, packages of lighting submittals, door and hardware, millwork shop drawings, millwork hardware submittals, etc.
24. All woodwork, blocking, grounds, etc. To be fire retardant treated.
25. The general contractor shall exercise strict dust containment control over the job to prevent dirt or dust from leaving the job site.
26. The general contractor shall properly protect the building and any adjoining property or work and any damage to same, caused by his work or workmen must be made good without delay. Patching and replacing of damaged work shall be done by the general contractor.
27. The general contractor shall provide all necessary protection for his work until turned over to the client.
28. The general contractor shall include in his estimate all costs, (including overtime work) for removal, new installation and reinstallation work for any plumbing, ceiling (take-down and reinstallation), electrical, telephone communications equipment or HVAC work on ceiling plenum.
29. The construction notes and/or drawings are supplied to illustrate the design and the general type of construction desired. They are intended to apply to the finest quality of construction, material and workmanship throughout.
30. The general contractor shall maintain a current and complete set of construction drawings on site during all phases of construction for use by all construction drawings on site during all phases of construction for use by all trades.
31. The general contractor upon acceptance and approval of the drawings assumes full responsibility for the construction, materials, and workmanship of the work described in these notes and drawings, and will be expected to comply with the spirit as well as the letter in which they were written.
32. The general contractor, subcontractor and tenants contractor shall submit certificates to the building manager and owner upon completion of work, Including but not limited to the following:
    a. Fireproof wood test report (if required)
    b. Electrical, plumbing and air conditioning certificates issued by:
       - department of water supply, gas and electricity.
       - board of fire underwriters.
33. All existing appurtenances not being removed shall be refurbished where required. Any loose items tightened (ceiling exit signs, etc.) and any missing parts replaced by the general contractor to achieve a finished first class installation and appearance.
34. All required exits, ways of approach thereto, and ways of travel from the exit Into the street shall continuously be maintained free from all obstructions and impediments for unobstructed egress in the case of fire or other emergency.
35. During the entire period of demolition and construction, all existing exits, exit lighting, fire protective devices and alarms shall be continuously maintained.
36. Where openings occur in existing fire rated areas or partitions due to existing or new conduit runs, ductwork, cables, piping, etc., and/or where existing fireproofing has been removed as a result of existing or new construction work. The general contractor shall close and/or patch as required all openings to match immediate adjacent area in material, finish and fire rating.
37. The general contractor shall provide and install fire extinguisher as required By federal occupational safety and health act (OSHA) by fire department Regulations, and as shown on IDS Group drawings.
38. The general contractor shall replace all broken or cracked window glazing. All window sashes shall be inspected by the contractor and all inoperable conditions shall be repaired.
39. Insurance and bonding for the project shall be as directed by and to the satisfaction of the owner.
40. The general contractor shall verify size, electrical requirements, location and characteristics of all work and/or equipment supplied by the owner or others, with the manufacturer or supplier prior to the start of related work.
41. The general contractor shall submit all applications for payment to the owner or owner designated agent for review and approval. The form of the application for payment shall be aia document g702, supported by aia document g702a continuation sheet. A 10% retainage of each application for payment shall be withheld by the owner until release of final payment unless noted otherwise in the agreement between the owner and contractor.
42. IDS Group is unaware of any existing asbestos within the area of new work. It is the owner's responsibility to advise the general contractor & His sub-contractors of any asbestos within the facility. The general contractor shall take all necessary precautions required by law to protect all workers & occupants if any asbestos is identified and notify the owner immediately.
43. Contract close-out shall occur only after the architect has prepared a punchlist and the punchlist items have been corrected. The general contractor shall submit to the owner maintenance and warranty manuals, release of liens and record drawings with his final application for payment.
44. The general contractor shall see that all subcontractors receive complete sets of working drawings or assume full responsibility for coordination of work when complete sets are not available to subcontractor.
45. Manufacturers name, trademark, logos, etc., shall not be visible to the public.
46. All assemblies or details marked as alternates to base requirements to be priced Individually.
47. Where special items require extended lead time preventing installation by projected move in date, contractor is to propose an available alternate for approval by IDS Group and tenant as well as to prepare pricing for possible temporary assemblies.
48. Dimensions govern, do not scale drawings. Details govern plans.
49. Each trade shall provide and install caulking where required.
50. Provide structural supports as required at all wall mounted equipment, cabinets, plumbing and light fixtures.
51. At the end of each day of construction or finish work, each trade shall be responsible for removing any debris from the site. The job site shall be cleaned to the satisfaction of the tenant, owner and saa upon completion of the project by the contractor.
52. All finish contractors to field verify size of rooms and walls prior to placing orders or submitting bids.
53. These drawings are for design intent. It is the responsibility of the contractor to verify site conditions, and inform saa of any conflicts or any additional work necessary to provide a complete finished project, prior to submitting bids.
54. Provide certification of all electrical, mechanical, and plumbing fixtures be C.E.C.
55. Contractor shall review the construction document and make the owner/tenant aware of required items that are missing from the construction document. If required items are missing the contractor shall bring these items to the attention of the owner during the bidding period.
56. Architectural documents supersede engineering drawings in the event a discrepancy occurs that has aesthetic ramifications, contact the architect for clarification.
57. Contractor to verify with landlord if x-ray is required prior to core drilling.

DEMOLITION NOTES

GENERAL DEMOLITION NOTES

1. The general contractor shall furnish all labor and material required to complete demolition and removal of all items as indicated in IDS Group drawings or as otherwise directed by IDS Group.
2. The general contractor shall furnish building management and IDS Group with a complete inventory list of all items that can be reused and/or stored in building stock.
3. The general contractor shall execute all work with the regulations of the building for demolition and removal of debris, including overtime work required.
4. All work demolished shall be removed from the premises except items to be reused or returned to tenant or as otherwise noted.
5. The general contractor shall remove from premises conduits left after wall demolition, including switch boxes, plates, bridges or any other telephone or electrical, wiring and equipment.
6. In all areas where demolition (removal of tile, carpeting, partitions, (etc.) causes and unevenness in slab, the contractor shall patch to level the slab to receive new finished flooring.
7. The general contractor shall provide a visqueen seal from floor to ceiling at all interfaces to protect adjacent building property while demolition and construction are in progress. This seal is to be kept closed at all times.
8. The general contractor shall at all times protect the property of the building owner including but not limited to, windows, floor and ceiling tile, public toilets, elevators, doors, bucks, electrical and air conditioning equipment, convector enclosures, etc.
9. The general contractor shall furnish a system of temporary lights throughout the space under construction as required.
10. The general contractor shall cap and flush off behind finish surfaces all Projecting plumbing, floor electrical/telephone outlets, and all other projecting Items which are being abandoned.
11. Upon completion of the demolition work, the general contractor shall provide that all areas be left broom clean.
12. Not Used
13. "Construction dust control": during construction dust control measures shall suspended during periods of high winds (i.e.: over 15 mph). All hauling trucks shall have loads covered or wetted and loaded below the sideboards to minimize dust.
14. Demolition not described here but necessary for the completion of the work shall be the responsibility of the contractor. The demolition drawings are issued for information only and show the general extent of the demolition required. These drawings do not necessarily show everything to be removed in order to prepare the existing building elements for remodeling or new construction. The architectural drawings show the existing partitions with doors and other items to remain.
15. The contractor shall at no time do any work or place any construction that my affect the operations of the other tenants, including any interruptions in the supply of power or other utilities, without first notifying the building owner and obtaining permission from them to proceed.
16. All removed material other than items to be salvaged or reused shall become contractors property u.O.N., and shall be removed from owner's property. Clean up and dispose of debris promptly and continuously as the work progresses. Secure and pay for required hauling permits, dumping fees and charges.
17. Electrical, mechanical and plumbing to be removed to the furthest termination point on the floor. Remove all unused and disconnected HVAC, electrical,plumbing and phone/data cabling above ceiling and remove to the furthest termination point on the floor. Coordinate extent of removal with Mechanical / electrical / plumbing drawings.
18. The work of this project includes alterations of the existing building to achieve the arrangement indicated on the drawings. The contractor shall visit the job the arrangement indicated on the drawings. The contractor shall visit the job site to determine the extent of demolition work required by the construction activities. The architectural drawings for these areas show the changes to be made. The contractor shall revise, rearrange, reroute or remove existing wiring and HVAC distribution as required to accommodate the changes and additions shown and to provide continuing electrical and HVAC services for those existing areas of the project which are to remain in operation.
19. Existing light fixtures, electrical outlets, raceway and wiring etc. Will be removed as noted per architectural demolition drawings.
20. In areas where there are no alterations indicated the existing facilities shall be retained in service. In case of doubt assume that the existing electrical wiring is to remain in operation throughout the construction period and thereafter.
21. The alteration of the existing building is work of a complex nature which will require accurate planning, careful preparation and execution, attention to detail and close supervision by the contractor. The contractor will be required to do this work in full cooperation with the other construction trades and subject to scheduling.
22. Remove all fire dampers in existing ductwork where fire rated walls are demolished. Remove all fire dampers that are not code compliant where dampers will need to be upgraded to meet current code requirements and rate wall to remain.
23. Thermostats and pneumatic lines shall be removed gently and coiled back to the device they control and left in place. All other thermostats shall be removed an returned to building engineer.
24. Upon the removal of the existing ceiling, the existing mechanical system will be evaluated by the engineer for possibility for re-use. If the existing mechanical systems are to be reused, existing main duct, VAV boxes, pneumatic control tubing etc. shall remain and shall be protected to avoid damage to existing HVAC Equipment during demolition.
25. Contractor to verify that all existing light fixtures not being reused shall be returned to building stock.
26. Leave sprinklers intact as - is (only during demolition). All fire life safety equipment shall be left in place. If a structure holding a device is removed, the contractor shall support the fire life safety device in a manner that does not Impair its function in anyway.
27. Remove all data/tele cabling in ceiling back to original demark. (unless otherwise Instructed) contractor to verify with tenant's cabling vendor.
28. Abandoned plumbing lines and drains to be removed back to point of origination as required for new tenant's build-out.
29. After demolition the space shall be left in a clean and broom swept condition.
30. Intent of the drawing is to show existing building conditions with information developed from available documents. Contractor shall make a detailed survey of existing conditions pertaining to the work before commencing demolition. The Contractor shall report discrepancies between drawings and actual field conditions to the architect.
31. Maintain fully charged fire extinguisher readily available during all demolition operations.
32. All removed material other than items to be salvaged or reused shall become contractors property U.O.N., and shall be removed from owner's property. Clean up and dispose of debris promptly and continuously as the work progresses. Secure and pay for required hauling permits, dumping fees and charges.
33. Where construction to be removed intersects construction to remain, work shall include all attachment devices (shot pins, anchors, lag bolts, nails, nailers, Shims, etc.).

REFLECTED CEILING NOTES

REFLECTED CEILING NOTES

1. Contractor shall refer to all pertinent sections of the general notes, specifications an general conditions and schedule of finishes for complete and proper installation of work.
2. General contractor shall ensure clearance for light fixtures, ducts, fire sprinklers, etc. Should any obstructions occur that prevent installation of any required component, notify architect prior to installation of grid. Installation without approval shall be removed reinstalled per direction of architect at general contractors sole expense.
3. Fire / Life Safety fixtures shown on plan are suggested locations only. Fire / Life Safety Contractor to coordinate and submit design/build drawings. For appropriate location of strobes and exit signs to be submitted to IDS Group for approval and Fire Department for permit prior to the commencement of any installation.
4. Both new and existing sprinkler heads for the area of work will be located per sprinkler contractor. Design / build drawings. Will be submitted to fire department for approval.
5. All fixtures and sprinkler heads are to be located at the center of ceiling tile unless noted otherwise, provide proposed locations in drywall ceiling to IDS Group for approval.
6. Ensure that room separation of lighting is maintained by providing switching required to accomplish this.
7. Refer to detail for typical suspended ceiling grid support.
8. All lay in panels shall be secured to the suspension system with two hold-down clips minimum for each tile within a 4-foot radius of the exit lights and EXIT Signs.
9. Ceiling grid shall be installed within a level horizontal tolerance of 1/8" per 12'-0" support and brace.
10. Provide access panels as required where ceiling system is gyp. Board. (exact location of access panels to be approved by tenant/ architect). All access panels in gypsum board ceiling to be GFRG access panels sized as required. "moonlight molds" or approved equal. Provide both 24" x 24" & 18" x 18" sized opening access panels. Confirm size and location with IDS Group. Access panels shall be provided for electrical, plumbing and air conditioning controls as required by The Uniform Building Code, uniform mechanical code, NFPA, UPC and Local City Codes. If location and type not shown on drawings, confirm location and type With IDS Group prior to installation.
11. Relocate/raise existing back boxes, conduit, HVAC equipment, devices and any other items that will need upward relocation based on new project ceiling height.
12. Ceiling grid systems within area of work are to be installed in a continuous grid Pattern so that when a penetrating partition is removed, necessary ceiling repairs will result in a consistent ceiling grid.
13. Design build documents shall indicate existing diffuser and sprinkler head locations, contractor to provide quantities as required by building code. Contractor to provide location layout to IDS Group prior to installation.
14. Smoke detectors shall be installed in tenant space by licensed alarm systems contractor, work shall be connected to existing building system.
15. Electrical engineer will be responsible for emergency lighting calculations and specs.
16. All sprinklers are building standard U.O.N.
17. All switching and lighting layouts shall comply with Title 24.
18. Provide an emergency exit and exit lighting system as required by governing jurisdictions.
19. Rework HVAC, sprinklers, fire life safety and switching as required.
20. The heating, ventilating, and air conditioning systems shall accommodate the new occupancy. All rooms and areas shall have supply and return air. Thermostats shall have automatic changeover feature, (no manual switching from heating to cooling cycles), with metal, non visual tamper proof covers.
21. If light fixtures are to be reused/relocated, contractor shall clean & re-lamp to match as necessary. All lights and fixtures of the same type (new and existing) shall have matching lamps.
22. Prior to installation, HVAC zones and t-stat locations to be approved by tenant & coordinated with furniture plans and wall finish locations.
23. Lateral supports to be provided by post wires of minimum 12 Ga., splayed in four directions 90 degrees apart. Connected to the main runner with 12 inches of the cross runner and to the structure above or to partition. Attach to walls or brace an angle not exceeding 45 degrees from the plane of the ceiling. Support points shall be placed 12" O.C. In each direction with the first point within 4'-0" from each wall.
24. 3403.6 Suspended ceiling upgrade. When an addition, alteration or repair is performed on an occupancy in which there is an existing suspended ceiling, such suspended ceiling shall be modified throughout to comply with the provisions of ASTM C 635 and ASTM C 636. (2016 CBC 808.1.1.1).
25. Contractor to verify with architect if linear diffuser is required where ceiling system is gyp. Board.
26. Contractor/tenant must comply with (2016 CBC 1013.6.1, 1013.6.2, and 1013.6.3) For the exit sign graphic, illumination, and power source.
27. All existing ceilings to remain the general contractor shall provide additional and /or new compression post and lateral bracing of the ceiling grid at exposed areas which are not in compliance with current codes.
28. All devices mounted on the ceiling (i.e. Sprinkler heads, exit signs, speakers, Etc.) are to be mounted in the center of tile unless otherwise noted.
29. At all gypsum board ceiling areas use fully concealed sprinkler heads, color to be white.
30. Verify specification with the electrical engineering drawings. Verify quantity of fixtures between architectural drawings and engineering. If quantity is different notify architect during bidding.
31. Smoke detectors shall be installed in tenant space by licensed alarm system contractor, work shall be connected to existing building system.
32. General contractor to provide exit signs readily visible to clearly indicate the direction of egress travel. Exit signs shall be properly illuminated. (2016 CBC 1013.6.1, 1013.6.2, and 1013.6.3) all exit sign graphics, illumination, and power Source must comply with (2016 CBC 1013.6.1, 1013.6.2, and 1013.6.3).
33. 3403.6 - suspended ceiling upgrade. When an addition, alteration or repair is performed on an occupancy in which there is an existing suspended ceiling, such suspended ceiling shall be modified throughout to comply with the provisions of ASTM C 635 and ASTM C 636. (2016 cbc 808.1.1.1).
34. Typical heights of devices per detail on sheet HC 1
    a. Locate top of thermostats, pull boxes and control devices at +48" above Finished floor.
    b. Locate center line of switches/ dimmers at +36" above finished floor. Gang with other outlets where adjacent, provide a single piece coverplate where Switches/ dimmers are ganged together.

CEILING NOTES

1. Suspension system shall be as indicated in reflected ceiling plan. Light fixtures shall be independently supported at opposite corners with no. 12 wires, painted red.
2. Lateral support shall be provided by four (12 gauge minimum) wires splayed in four directions at 90 degrees apart and shall connect to the Main runner within 12 inches of the cross runner to the structure above or to partition walls or shall be braced at an angle not exceeding 45 degrees from the plane of the ceiling. Support points shall be placed 12'-0" O.C. In each direction with the first point within 4'-0" from each wall.
3. Provide suspended ceiling of furred out surfaces where required to conceal piping, ducts, etc. In finished rooms. Should conditions require alterations at indicated ceiling heights due to structural or mechanical requirements, obtain the facilities management's approval before installing furring.

POWER / VOICE / DATA NOTES

PO ER VOICE DATA NOTES

1. X-ray floor prior to the commencement of any floor coring. Avoid coring through any existing steel.
2. The contractor shall coordinate his work with manufacturers specifications.
3. The work shall be installed in strict accordance with the requirements of the National Board of fire underwriters, public utilities company, telephone company and all other authorities having jurisdiction.
4. All new materials required shall conform with the standards of the underwriters Laboratories, inc. In every case where such a particular type of material in question, unless otherwise noted.
5. Verify location of floor monument cores with IDS Group in the field prior to the start of any coring. (coordinate core location with millwork and furniture layout). Provide conduit distribution from cores to wall stub-ups. Provide fire safe and smoke sealant at floor penetrations as required.
6. Provide fire caulking and or acoustical caulking at outlets at acoustical and Fire rated partitions. Typical dimension range given at all private offices is a general guideline. Outlets on either side of the wall should shift, 6" to 12" in opposite directions.
7. No "back-to-back" outlets are permitted within a wall. Outlets must be staggered in location and installed in separate stud cavities.
8. Refer to detail on Sheet HC 1 for typical installation height of all wall mounted devices, switched, outlets, and thermostats.
9. All fixtures provided for data cabling shall comply to data consultant's performance criteria. (eg: cat5, ecat5, cat6...)
10. The electrical contractor shall submit cuts of all fixtures as directed.
11. The electrical contractor shall coordinate any electrical or lighting installation into the cabinet work with the cabinet contractor if and as required.
12. The electrical contractor shall provide all temporary lighting and electrical service for all trades as required.
13. Where more than one switch occurs in the same location, they shall be installed in gang type box under one cover plate.
14. All electrical, telephone receptacles and light fixtures shall be located as dimensioned on IDS Group plans.
15. All new outlets on columns will be centered on face shown. unless otherwise noted.
16. Power and telephone outlets shown on plans are not inclusive of all outlets required by tenant. Contractor shall verify with tenant all required outlets, etc. with the tenant prior to completing wall construction.
17. All fire prevention and electrical wiring is to be placed in conduit.
18. Fire rated teflon plenum cables shall be used for telephone and any low-voltage circuits not in conduit.
19. Unless otherwise noted, all outlets side by side shall be 6" from center of plate with positioning dimensions centered between.
20. Provide telephone outlet boxes (where shown on 'electrical/ telephone plan') and all necessary conduit runs to telephone equipment as required.
21. All electrical and telephone wiring conduit shall be concealed in partitions and / or ceiling.
22. The electrical and/or general contractor shall provide all cutting and patching of all chases in floors, walls, and ceilings, as required.
23. Provide new blank cover plates for abandoned outlet locations.
24. Convenience receptacles shall be duplex type rated 15 AMP., 125 V., grounded Typ., unless otherwise noted.
25. The electrical contractor shall provide all power wiring.
26. The electrical contractor will coordinate his work with the air conditioning engineer and contractor prior to executing his work.
27. As it relates to this set of documents a dedicated circuit (dc) shall be a single circuit with multiple outlets dedicated to a specific equipment usage.
28. Provide conduit from server room to ceiling for horizontal cable distribution. Data vendor to confirm size and quantity of conduits.
29. Electrical contractor to field verify that all circuits at the main panel are adequate for new requirements, install new conduit, or panels if required.
30. Typical heights of electrical outlets and devices are as indicated:
    a. Locate centerline of all wall mounted electrical, telephone and data outlets at +18" above finished floor in vertical position, unless otherwise noted.
    b. Electrical, telephone and data outlets mounted at a height +30" above Finished floor or more are to be installed vertically to centerline of dimension indicated.
    c. See typical mounting heights elev. Sheet a-0.1 for additional dimensions and Criteria.
31. All exposed electrical devices, i.E. Switches, strobes, outlets, wall telephone Mounts, etc. And all coverplates to match "bldg. Std.".
32. General contractor is to verify the plug and circuiting of any specialty equipment during rough in electrical to insure the proper voltage and plug Configuration.
33. Contractor to coordinate telephone/ data conduit size requirements with clients telephone / data vendor.
34. General contractor is to have furniture vendor approve all power and telephone feeds for workstations prior to installation. G.C. Is to have furniture vendor approve all electrical and data in private offices prior to installation.
35. Furniture vendor for either workstations or case goods shall field verify background to verify clear dimensions required for furniture prior to ordering furniture. Do not scale the drawings.
36. Total energy consumption for power as required by C.A.C. Title 24.
37. Electrical contractor to field verify that all circuits at the main panel are adequate for new requirements, install new conduit, or panels if required.
38. Contractor must coordinate all electrical outlets for furniture with furniture contractor before placement in field.
39. Contractor shall provide electrical and mechanical drawings stamped and signed by licensed engineers. Provide complete working drawings, calculations and descriptive data as required to obtain permits for tenant electrical work. (Does not always apply).
40. Label all junction boxes with circuits. Label panel with preprinted typewritten panel schedule.
41. All conduits run in emt or flex, no bx or prewired cable.
42. Contractor to provide conduit and necessary connections between tenant's telephone equipment and building main telephone closet. Size as required by tenant vendor.
63. All electrical outlets to be 120v. Single phase and minimum 15 amps 3-wire grounded with 1/2" conduit. (unless otherwise noted).
44. Provide support for all conduits above the ceiling as required per code.

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Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

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Architect's Stamp

LICENSED ARCHITECT JOSEPH STEBER C-11573 Exp. 01-31-19 STATE OF CALIFORNIA

Engineer's Stamp

(BID SET)

2018.09.13

Drawing Description

GENERAL NOTES

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

GN 2

GENERAL NOTES

□V A C□NOTES

1. Heating, ventilating and air conditioning engineering and work as required. Engineering to be performed by the general contractor on 'design build' basis.
2. The hvac engineer will provide necessary engineering drawings to rework all existing equipment and to determine all new equipment to meet the above requirements.
3. Submit shop drawings indicating all new work and all existing equipment to remain including diffusers, thermostats and any required access panels, to IDS Group. For review prior to proceeding with fabrication and/or installation or relocation.
4. The HVAC contractor shall be responsible for field supervision of all their work during installation and shall inspect all systems for proper operations at completion of the job.
5. Installation shall be coordinated with all trades as required for proper assembly. Ceiling diffusers to be relocated to maintain new fixture patterns.
6. Interior spaces shall be mechanically ventilated in accordance with the administrative code. Plans showing mechanical ventilation system will be filed in accordance with the rules of the building department.
7. Any building service shut downs required for this work shall be required in writing by the HVAC contractor at least 72 hours in advance of the shut down. The HVAC contractor shall obtain approval from all authorities having jurisdiction prior to shut down. Any shut down affecting the normal HVAC service of other building occupants shall be done on overtime.
8. Balancing of entire system shall be done by an independent air balance company. Submit report to IDS Group and landlord.
9. All duct work shall be insulated as required for thermal and acoustic considerations. Reference Note 4.7 and 4.8 for additional information.
10. Mechanical ventilation in toilet room shall provide one (1) complete air change every fifteen (15) minutes and shall be vented to outside air.
11. All new materials required shall be equal to or better in quality than the existing.
12. All new diffusers shall match appearance of existing.

PLUMBING NOTES

1. The general contractors, plumbing sub- contractor shall supply and install all plumbing rough-ins, fixtures and accessories shown on all construction plans and detail drawings unless otherwise noted.
2. The plumbing contractor shall submit cuts of all new fixtures, fittings and Accessories to IDS Group for review and approval.
3. The plumbing contractor shall coordinate his work with manufacturers specifications.
4. All existing plumbing being abandoned shall be capped behind existing finished surfaces. Existing surfaces shall be patched to match existing surrounding surfaces in material and finish. The general contractor shall also include in his bid a cost for work for ceiling removal and reinstallation required for plumbing work in ceiling plenum of floor below to complete work on floor being renovated.
5. The plumbing contractor shall coordinate his work with all other trades.
6. Furnish all valves as indicated on the drawings or as may be required for the proper control of the various apparatus and pipelines installed under this section so that any fixtures line or piece of apparatus may be cut off for repair without interference or interruption of the service to the rest of the building.
7. Before being covered up or built-in all piping shall be tested as required by the authorities having jurisdiction.
8. Toilet flush controls provided and installed as part of the work shall be operable with one hand hand and shall not require tight grasping, pinching or twisting of the wrist. Controls for the flush valves shall be mounted on the wide side of the toilet areas: no more than 44" above the floor. The force required to activate the controls shall be not greater than 5 pounds.
9. Other flush controls provided and installed as part of the work shall be operable with one hand, and shall not require tight grasping, pinching, or twisting of the wrist and shall be mounted no more than 44" above the floor. The force required to activate controls shall not be greater than 5 pounds.
10. Faucet controls or other operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the the wrist. The force required to activate the controls shall be no greater than 5 pounds. Lever operated, push type and electronically controlled mechanisms are examples of acceptable designs. Self closing valves are allowed if the faucet remains open for at least 10 seconds.

METAL FRAMING S□STEM

1. Metal framing and associated hardware shown on these drawing is specified as unistrut and installed per manufacture's requirements.
2. Use 1/2 " diameter hardware in all fittings holes unless noted otherwise. provide 9/16" diameter hole in members where needed to install fittings.
3. Components including cap screws and channel nuts shall be unistrut.
4. 1/2" diameter unistrut hardware (e.g., cap screw) shall be torque to 50 ft- unless noted otherwise.
5. Unless specifically noted otherwise all channel and fitting shall have electroplated zink (eg.)
6. Provide p1063/p1064 squre washer at channel open face fastener (e.g., cap screw or hex nut) without other fitting.

SEISMIC CABLE RESTRAINT

1. Seismic cable restraint and associated hardware shown on there drawings is specified as gripple and installed per manufacture's requirements, as noted in their seismic installations manual (aka opa-2123-10).
2. If there is a conflict between the seismic installation and these drawings, these drawings shall govern.

CONSTRUCTION NOTES

1. Contractor shall perform non-destructive testing to locate existing post-tensioned cable and reinforcing bars to installing anchors. Do not cut any existing post-tensioned cable or reinforcing bars.
2. Locate all anchors a minimum 2" away from existing post-tensioned cables and reinforcing bars.
3. The contractor shall prepare a written procedure prior to construction for an installation method to avoid contacting in any way post-tension cable and gover and other embedded items. Approved methods could include use of ground penetrating radar equipment such as Hilti Ferroscan PS200. Fasteners shall clear existing rebar and post-tension cables by 1" min.

PO□ER ACTUATED FASTENER□PAF□GENERAL NOTES
□INSTALLED IN CONCRETE FIELD METAL DEC□□OR CONCRETE SLAB□

1. Power actuated fastener (paf), Powder driven fasteners (PDF), power driven pins (PDP), shot pins all represent the same fastener and will hereafter be referred to as power actuated fastener (PAF).
2. 2. Allowable strength shall be compared to allowable stress design (ASD) level demand in accordance with the 2016 CBC.
3. allowable strengths are for a single fastener witch meet requirements per section below and tables. The allowable strengths are based upon the least of the allowable strengths listed in the ICC ESRS 1799,2024,2138, & 2269.
4. Minimum concrete strength f'c = 200 PSI for normal weight concrete.
5. PAF shall note be used in pre-stressed concrete unless non-destructive testing methods are used to locate strand and reinforcement prior to fastener installation.
6. PAF installation shall not nick or damage existing concrete reinforcement. Should this occur the RDP in responsible charge shall be notified immediately. PAF shall be installed 1" clear of existing reinforcement. this may required non-destructive testing.
7. Paf shall be installed per current ICC-ES evaluation reports (or reports from other testing agencies).

PARTITION□□ALL CONDITIONS

1. Partition wall supporting cabinets or equipment on one side or both sides of wall distributing up to 50 lb total vertical load per stud (37 plf). Center of gravity less than 6" from the face of stud.

BOTTOM TRAC□□CONNECTION TO N□□C SLAB FASTENER MA□□SPACING SC□EDULE

BOTTOM CONNECTION DEMANDS (PARTITION WALL CONDITION)						
MAX. PARTITION WALL HEIGHT	SDS	MAXIMUM FASTENER IN SPACING IN INCHES AT BOTTOM CONNECTION				
		PAF	3/8"ø EXP ANCHOR W/ 2" EMBED	1/2"ø EXP ANCHOR W/ 2 1/4" EMBED	3/8"ø SCREW ANCHOR W/ 2 1/2" EMBED	1/2"ø SCREW ANCHOR W/ 2 1/2" EMBED
12 FT	1.00~1.25	8" O.C. SPACING	32	32	32	32

POWER ACTUATED FASTENER INSTALLED INTO NORMAL-WEIGHT CONCRETE (f'c MIN=200 psi)					
NORMAL SHANK DIAMETER	MIN. EMBED (IN)	MIN. SPACING (IN)	MIN. EDGE DISTANCE (IN)	TENSION (LB)	SHEAR (LB)
0.145 MIN.	1 1/4	5.1	4	90	90

MILL□□OR□NOTES

1. Refer to the General notes and information for additional notes.
2. Millworker to submit complete shop drawings for approval and verify all dimensions in the field before fabrication. Confirm finishes on shop drawings. Submit (4) 9" x 9" samples of each finish for approval.
3. All wood veneered or conversion varnish finished millwork shall be fabricated to AWI premium grade standards. All exposed surfaces including doors, tops and base shall be veneered. Casework shall be birch plywood stained to match finish veneer.
4. All plastic laminate millwork to be fabricated to AWI custom grade standards. All exposed surfaces to be laminate. Casework at white laminate to be 5/8" White Kortron. Casework at colored laminate shall be 5/8" Black kortron.
5. Coordinate locations and provide metal backing at wall framing for all wall-mounted millwork.
6. Contractor shall supply and install all necessary hardware as required by the specifications or intent of the design. Submit to architect for approval cut sheets of all cabinet hardware and samples of all pulls and knobs before fabrication.
7. Contractor to ensure delivery and installation of casework and finish carpentry will not be damaged by other construction work.
8. Composite wood and agrifiber products, including core materials, must not contain added ureaformaldehyde resins.
9. Laminate adhesives used to fabricate on-site and shop applied assemblies containing these laminate adhesives must contain no added ureaformaldehyde.
10. All adhesives and sealants used for millwork, paneling, or veneering shall be low VOC and must not exceed the VOC content limits of SCAQMD Rule #1168 requirements in effect on January 1, 2011.
11. Aerosol adhesives shall meet requirements equal to green seal standard GC-36 in effect January 1, 2011.
12. Millworker/contractor shall submit MSD sheets, signed attestations or other official literature from manufacturer for all adhesives and sealants used on the project.
13. The general contractor shall closely coordinate his work with that of the cabinet contractor.
14. All 'installed' cabinets shall be scribed to wall or ceiling. Cabinet contractor to check job progress and coordinate with other trades involved.
15. All cabinet finishes shall be as noted on the detailed drawings concerned.
16. The cabinet contractor shall submit shop drawings and samples to IDS Group.
17. The cabinet contractor shall check and verify all dimensions and conditions at job site.
18. The cabinet contractor shall provide rubber bumpers on all wood doors.
19. Where members are mitered or butted, they shall be joined and secured in a Manner to insure against the joint opening.
20. All finished work shall, as far as practical, be assembled and finished in the shop and delivered to the building ready to erect in place.
21. All the work shall be fabricated, assembled, finished and erected to meet current WIC standards.
22. Where files are shown as being set into cabinet work, the cabinet contractor shall set and bolt all files together.
23. All millwork shop drawings are to call out all materials and finishes. All joints, corners and edges are to be detailed in individual details. All dimensions, critical or otherwise, are to be called out on the shop drawings. IDS Group will not review drawings which are incomplete and show minimal detailing.
24. Coordination of millwork, stone, or other specialties contractors is the responsibility of the general contractor.
25. All millwork, special products, and special assemblies are subject to submittal and shop drawings review. Shop drawings and submittal's shall not be waived unless written permission to do so is given by IDS Group.
26. All standard wall backing for casework, toilet accessories, hanging wall equipment, etc., shall be 16 Ga. Galvanized steel, 4" wide, covering 3 studs minimum and screwed to metal studs.
27. All millwork shown shall have plastic laminate tops, exposed sides, doors, and drawer fronts, unless otherwise noted.
28. Shelves and semi-exposed surfaces, including drawer interiors, shall be finished with a cabinet liner of a uniform color throughout.
29. Adjustable metal standards shall be dapped into the sides of cabinets, Unless otherwise noted.
30. Door and drawer pull hardware samples are to be submitted to IDS Group For approval prior to installation.

PAINTING AND□□ALL COVERING

1. Unless otherwise specified, all areas are to be painted in accordance with finish plans.
2. Walls shall include surfaces from floor to ceiling, including pilasters, fascia jambs bucks, reveals, returns, and all vertical surfaces not included in ceiling.
3. Paint colors shall be specified by IDS Group. And the General Contractor shall submit 3 samples (12" x 12") for review by IDS Group.
4. All walls and ceilings shall be properly prepared, spackle, sanded, etc. to provide a perfectly smooth finish and surface ready for prime and paint.
5. All existing loose paint shall be removed and spackle or plaster patched.
6. All existing unevenness in all partitions shall be sanded or chipped away and surfaces plaster-patched or spackle to insure a perfectly even surface.
7. All wood shelving and painted doors shall receive priming, sanding and two full coats of semi-gloss enamel free of brush marks, unless otherwise noted.
8. The contractor shall remove all electrical switch plates and outlet plates, Surface hardware, etc., prior to painting, protecting and replacing same when painting has been completed. He shall remove all paint from where it has spilled, splashed or splattered on surfaces, including but not limited to light fixtures, diffusers, registers and slab fittings, etc.
9. The contractor shall use a latex base paint in colors and finishes selected by IDS Group. He shall properly prepare all surfaces to receive One (1) prime coat and two (2) finish coast of paint in color selected by IDS Group.
10. The general contractor shall install wall coverings as per manufacturers installation specifications, where designated. All wall coverings shall be smooth, with no wrinkles, bubbles or loose edges, all paste and brush marks shall be thoroughly removed. Wall covering adjoining wood or metal trim shall be cut straight and square. All workmanship which is not judged to be first quality by IDS Group will not be accepted.
11. The contractor shall examine all areas of construction after completion of work by all trades (including telephone installation, flooring, etc.) and indicate all necessary 'touch-up' painting and / or patching.
12. It is the intent of the drawings that all exposed surfaces receive finishes as indicated on the drawings or in the specifications unless specifically noted otherwise. Any surfaces which do not have a specific finish noted or are noted to remain unfinished shall be brought to the attention of IDS Group and finished per IDS Group Instruction.
13. Finish front side, back side and door edges at strike side and hinge side. Leave top and bottom unpainted to prevent warping.
14. Paint all metal access doors and access panels to match adjacent wall or ceiling finish. Graphics on door or panel (if any) are to be repainted / re-applied to match existing, if applicable.
15. Closet wall surfaces are to be painted to match the color of the adjacent outside wall surfaces.
16. Contractor is to provide building standard blinds at all exterior windows. Contractor is verify the condition of the existing blinds prior to pricing. Provide a price to clean all blinds, contractor is to seal all blinds to prevent dust from collecting. If blinds are in need of replacement or missing provide a cost for new in these locations. Verify condition of all blinds at windows prior to pricing. Any new blinds shall match existing, verify manufacturer, style, color and mounting prior to pricing. Any new interior glazing is to be provided with new building standard blinds to match existing.
17. Marble tile installation shall be a thin-set application conforming to ANSI A108.4 CA Handbook and Section 12 Sheet GN-1, requirements for Horizontal and vertical applications. Grouted joints shall be 1/16" and Conform to ANSI A108.10 and CA Handbook Specifications. Grout color is to be specified by designer. Expansion joints shall meet CA Method EJ171. All horizontal surfaces shall receive a clear sealer coat as manufactured by MIRA SEAL #511 or equal and shall be applied by manufacturers recommendations.
18. Granite tile installation shall be a thin-set application conforming to ANSI A108.4 CA Handbook and Section 12 Sheet GN-1, requirements for horizontal and vertical applications. Grouted joints shall be 1/16" and Conform to ANSI A108.10 and CA Handbook Specifications. Grout color is to be specified by designer. Expansion joints shall meet CA Method EJ171. All horizontal surfaces shall receive a clear sealer coat as manufactured by MIRA SEAL #511 or equal and shall be applied by manufacturers recommendations.
19. Contractor is to install ceramic tile in accordance with ANSI / TCA A108.5 installation specifications. Mortar bed shall be a thin-set bond coat, dry cement mortar meeting ANSI / TCA A118.4. Grout shall be cement dry cure type, with latex additive for strength and acid resistance, color to be specified by designer. Provide necessary caps, stops, returns, trimmers and other shapes to complete installation. Provide cove type base to match wall where wall tile is used, otherwise match color of floor tile. Provide threshold at wall or frame openings to other building areas not receiving ceramic tile floor finish.
21. All finishes shall comply to a maximum flame spread of 200 and a maximum smoke density of 450.
22. Contractor to verify availability of all products specified and notify architect immediately if there are any discrepancies with project completion date. Products may require a two to six week lead-time. Notify architect of all long lead items.
23. All paint shall be applied in accordance with the manufacturer's specification for the particular surface.
24. All surfaces shall be properly prepared with the sealer prior to installation of wall coverings and installed per manufacturer's recommendation.
25. Repair/replace window coverings where necessary.
26. Contractor to refinish doors & frames (remove all scratches and dings) when they are being reused.
27. All paint finish of metal parts of doors, perimeter enclosures, etc., shall be semi-gloss, unless otherwise noted (U.N.O.)

PATC□ING AND CLEANING

1. The General Contractor shall do all cutting, fitting, and patching work that may be required to make all parts come together properly and fit to receive or be received by work of other contractor shown upon or reasonably implied by the Drawings and notes.
2. The General Contractor shall provide all floor cutouts and patching required for the installation of all work.
3. The General Contractor shall survey all existing finished surfaces to include Corner beads, stops, etc. For chips, crack holes, damaged surfaces, marble wainscot and plaster ceiling whenever door bucks have been removed, and any other defects causing an appearance different from a new first class finished repairing, then general contractor shall remove all existing and install new surfaces to the satisfaction of IDS group. All other damaged surfaces (finished floor slab, convector enclosures, etc.) shall be repaired to the satisfaction of IDS Group.
4. The General Contractor shall inspect all existing plaster surfaces and where as a result of demolition, finished surfaces do not align, if existing plaster shall be chopped away. New corner beads and stops installed and surface re-plastered to a smooth, flush, aligned surface.
5. The General Contractor shall metal lath over all new conduit chases in masonry partitions.
6. All damaged existing areas to remain and existing area affected by demolition or new construction work shown on drawings shall be patched as required to match immediate existing adjacent areas in materials, fire rating, finish and color. Unless otherwise noted.
7. All fire proofing removed from columns and beams during the course of construction shall be replaced with the same material and rating as that which was removed.

FLOOR COVERING NOTES

1. Contractor shall supply and install all floor finishes as specified on the drawings and specifications.
2. All floors to receive carpeting shall be CPT-1 U.O.N. All carpeting to be installed direct glue, U.O.N.
3. All carpet seams are to be sealed as per carpet manufacturer's published installation instructions. Seaming diagrams to be approved by IDS Group before ordering / installation of carpeting.
4. All base to be painted shall match adjacent wall U.O.N. See floor finish plans for locations and finish schedule for specification.
5. The general contractor shall flash patch all cracks, holes or other imperfections (projections shall be removed and patched to provide a continuous smooth floor surface). Level not to exceed 1/4" in 10-0" non-cumulative.
6. The general contractor shall notify IDS Group. After floor patching is done and receive their review prior to installation of finished Flooring.
7. All new flooring is to be installed by general contractor and shall be as specified on IDS Group construction documents.
8. All workmanship shall be of the best quality and when the work is complete, it shall be free from buckles, bubbles, open joints or other imperfections. Seams shall be kept in accurate alignment along both coordinates. Tile having chipped or rounded corners will be rejected an if laid, shall be removed and replaced with acceptable tile.
9. Tile shall be lain in square pattern with courses parallel to walls, unless otherwise indicated on drawings. The tile shall be securely cemented and shall be laid with tight joints. The adhesive used for cementing tile shall be applied far enough in advance of the setting to permit the adhesive to reach its initial set but not its final set.
10. Spaces being surfaced shall be closed to traffic and other work during the laying of flooring. Stone floors shall be covered after installation for protection.
11. All masonry walls and drywalls shall have specified straight vinyl base in carpeted areas and cove vinyl base in tile areas unless otherwise noted.
12. Upon completion, all work shall be cleaned by the contractor removing all spots of adhesive and surface stains and all scraps. Cartons and containers shall be removed from the building.
13. When directed, after cleaning, the general contractor shall give resilient tile floor two (2) applications of an approved non-slip wax which is to be thoroughly machine buffed and left in condition entirely satisfactory to IDS Group.
14. The general contractor shall provide and maintain adequate protection for all resilient flooring work for the duration of the contract, and remove all protection prior to punch list.
15. Stone, wood and tile flooring contractors to submit actual dimension plan for approval prior to installation.
16. The General Contractor to coordinate all flooring contractors involved to assure flush installation of all varying floor materials used. All transition Methods to be approved by IDS Group.
17. Closet floors are to have same flooring as the flooring in adjacent area, Unless otherwise noted.
18. Install carpet from the same dye lot.
19. Submit carpet submittal from actual carpet runs. Approval is at the discretion of the designer.
20. Create carpet to carpet or carpet to other flooring transitions beneath the centerline of the doors in the closed position.
21. Provide black rubber reducer strip where carpet and VCT transition occurs, Unless otherwise noted.
22. All finishes shall comply to a maximum flame spread of 200 and a maximum Smoke density of 450.
23. Contractor to verify availability of all products specified and notify architect immediately if there are any discrepancies with project completion date. Products may require a two to six week lead-time. Notify architect of all long lead items.
24. Where floor mounted outlets are required on carpeted area, cut the carpet in an 'X' over the hole and carpet under, this allows carpet patching where outlets are later capped. Do not trim the carpet.
25. Provide and install specified base for all carpeted areas, U.O.N.
26. Provide and install specified base for resilient tile floor areas, U.O.N.
27. Provide and install all tile flooring in accordance with manufacturer's instructions.
28. Carpet contractor must verify existing floor conditions prior to bid and Installation.
29. No substitutions of any material allowed without written approval of architect.
30. Carpet must meet or exceed carpet and rug institute's green label plus testing and product requirements.
31. Carpet pad, if specified, must meet or exceed carpet and rug institute's green label testing and product requirements.
32. Carpet adhesives must be low voc and must not exceed the VOC content limits of SCAQMD Rule #1168 requirements in effect on January 1, 2011.
33. Carpet subcontractor/contractor shall submit MSD sheets, signed attestations or other official literature from manufacturer for all floor finish, base and adhesives used on the project.
34. Provide appropriate sealer on stone flooring to achieve the slip coefficient required by code. Obtain all test results and provide the original test results to the designer. Apply sealer per manufactures instructions.
35. Ceramic tile installation method - (dry method). Contractor to install ceramic tile in accordance with ansi/tca a108.5 specifications. Horizontal mortar bed shall be a thin set bond coat, dry or latex Portland Cement mortar meeting ANSI / TCA F113-89. Vertical application shall meet ANSI / TCA Method W242-89, grout shall be cementing dry cure type with latex additive for strength and acid resistance; color to be as specified by IDS Group. Provide all necessary caps, stops, returns, trimmers and other shapes to complete installation. Provide cove type base to match wall where wall tile is used, otherwise match color of floor tile. Provide threshold at wall or frame openings to other building areas not receiving ceramic tile floor finish.
36. Ceramic tile installation method - (wet method). Contractor is to install ceramic Tile in accordance with ansi/tca a108.5 specifications. Horizontal mortar bed Shall be a thin set bond coat, dry or latex Portland Cement mortar meeting Ansi/tca f122-89. Vertical application shall meet ansi/tca method w223-89. Shower stall shall meet ansi/tca b416-89. Grout shall be cementing dry cure Type with latex additive for strength and acid resistance; color to be as Specified by IDS Group. Provide all necessary caps, stops, Returns, trimmers and other shapes to complete installation. Provide cove type Base to match wall where wall tile is used, otherwise match color of floor Tile. Provide threshold at wall or frame openings to other building areas not receiving ceramic tile floor finish.
37. Stone specification installation. Stone tile installation shall be a thin-set application conforming to ANSI A108.4 Handbook and Section 12 , requirements for horizontal and vertical applications. Grouted joints shall be 1/18" and conform to ANSI / TCA A108.10 Handbook specifications. Grout color to be specified by IDS Group. Grout color at stone tile flooring shall be colored to match the adjacent flooring material unless otherwise noted. Where more than one color is to be installed, grout color shall be confirmed with the IDS Group before installation. Expansion joints shall meet TCA Method EJ171. All horizontal surfaces shall receive a clear sealer coat as manufactured by MIRA-SEAL #511 or equal, and shall be applied by manufacturers recommendations.
38. The General Contractor is to provide a separate unit cost for all flooring material specified in this document, i.e. C-x etc., vct-x etc., etc.. Refer to Sheet A2.2.0 for flooring materials specified. The general contractor is to provide a unit cost for each flooring specification. Provide a separate cost for the installation of the flooring material, separate for carpet, vct, etc.. Any bid that does not provide a break down will be discarded.
39. Provide flush stone threshold to match adjacent stone flooring at transitions between stone and carpet flooring.
40. Contractor to prep floors as required for new floor covering, float floors to level surface as required.
41. Where floor mounted outlets are required on carpeted area, cut the carpet in an 'X' over the hole and carpet under, this allows carpet patching where outlets are later capped. Do not trim the carpet.
42. Provide and install all tile flooring in accordance with manufacturer's instructions.
43. Flooring contractor must verify existing floor conditions prior to bid and installation.
44. Provide rubber reducer strip where VCT occurs, typical. Color to be specified.

PARTITION NOTES

1. The General Contractor shall provide and install all partitions designated on IDS group Drawings.
2. The General Contractor shall provide all type and grade markings on the finish Floor of all partitions for IDS group review.
3. Unless otherwise noted, all dimensions for partitions are from finish face of new walls, finish face of existing walls. All heights are from the top of the finished floor. Unless otherwise noted.
4. Walls shown aligned with base building structure shall be flush and smooth with base building structure. Unless otherwise noted.
5. The General Contractor shall use corner beads at all exposed corners and exposed ends in plaster and drywall partitions.
6. All partitions shall be anchored firmly as per manufacturers specifications and as required by the State and Local Codes.
7. The General Contractor shall supply all return air openings in slab to slab partitions above hung ceilings to match area calculations requirements as shown on engineering drawings. All openings in demising and sound attenuated walls to have sound boots. Openings in fire rated wall shall have fire dampers as required by local building codes. Contractor to coordinate with engineering drawings and inform IDS group of discrepancies prior to bid process.
8. The general contractor shall provide sufficient framing for all wall partitions for duct work, return air openings and grill openings above and below hung ceiling. These are to be coordinated with hvac engineering drawings and the Mechanical Contractors shop drawings. All openings shall be properly sealed for soundproofing and vibration.
9. The general contractor shall provide and install all access panels as required for mechanical, electrical and plumbing installations per local building codes. Locations shall be coordinated with saa prior to final installation.
10. The general contractor will not be entitled to extras for opening any partitions because of telephone installation, security systems or computer data systems.
11. IDS Group shall have the rights to review and approve all chalk lines prior to installation of track. IDS Group is to be notified of any required deviation from construction dimensions or clearances as designated on plan or any apparent construction conflicts.
12. All gypsum board construction is to meet the gypsum association standards as Enforced by the southern california drywall contractors association inc..
13. The general contractor is to verify prior to pricing the rating of the existing partitions, columns, etc.. The general contractor shall provide wall furring at existing partitions with a rating of greater then 1 hour as necessary to accommodate electrical or plumbing conditions as indicated on this document.
14. Standard drywall studs should be electro-galvanized steel with punched utility openings and knurled flange at least 1-1/4" wide flange returns. Furnish 25 Ga. studs except where 20 gauge or heavier is shown or required.
15. Gauge specified above are a minimum, where required stud height exceeds code compliance, provide heavier gauge studs or decrease stud spacing as necessary to conform to code.
16. All interior partitions have been designed compliant to CBC and can withstand a horizontal load of 5 lbs.
17. All fire rated partitions shall meet construction requirements per CBC .
18. All penetrations through fire rated partitions shall be fully sealed and fitted with appropriately sized fire dampers.
19. All drywall shall be installed with vertical joints only. All joints shall occur at studs only.

DOOR NOTES

1. All manually operated edge or surface-mounted flush bolts are prohibited on exit doors. When exit doors are used in pairs and approved automatic flush bolts are used, the door leaf having the automatic flush bolts shall have no door knob or surface-mounted hardware. The unlatching of any leaf shall not Require more than one operation.
2. All exit door hardware shall be of an approved type and tested in accordance with procedures established by SFM 33.2 and SFM 33.3 as shown in Chapter 2-60 of title 24.
3. All hollow metal door frames shall be provided with steel frames.
4. All thresholds shall not exceed 1/2" change in elevation.
5. The contractor shall undercut all new and existing doors as required to accommodate all floor coverings. Verify exact thickness of all new floor covering with IDS Group prior to undercutting of doors.
6. Standard minimum distance between door jambs and walls perpendicular and adjacent to door openings to be 4" unless otherwise noted.
7. The General Contractor shall provide and install required bucks and assemblies as shown on IDS group. Drawings unless otherwise noted.
8. The General Contractor shall provide and install doors as specified on IDS Group drawings unless otherwise noted.
9. All lock sets shall be coded and/or keyed in accordance with the building requirements. Codes and/or keys are to be delivered to tenant properly tested and/or tagged. The number of master and pass keys shall be coordinated with Building Management.
10. Detailed door and hardware schedules shall be submitted to IDS Group. For review, and fabrication of material shall not be commenced until such review has been returned.
11. Maximum effort to operate doors shall not exceed 5 pounds for exterior doors and 5 pounds for interior doors, such pull/push effort being applied at right angles to hinged doors and at the center plane of the sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standard. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate administrative, not to exceed 15 pounds.
12. The bottom 10" of all doors (except sliding and automatic) shall have a Smooth uninterrupted surface.
13. All required exit doorways shall have a minimum 32" clear opening with the door at 90 degrees to the closed position.
14. One of a pair of doors shall meet the minimum width requirements.
15. Maximum height of threshold to be 1/2" maximum vertical change at edge is 1/4" With a maximum bevel of 45 degrees.
16. Latching and locking door that are hand activated and which are in the path of travel shall be operable with a single effort by lever type hardware, panic bars, push pull activating bars, or bars or other hardware designed to provide passage without requiring the ability to grasp the opening hardware.
17. See door schedule for requirements of doors, windows, and hardware, i.E. Door Schedule, hardware schedule and door and window details.
18. Typical doors conventions are as follows:
    a. Dimensions to edge of door locating door openings are to inside face of jamb, unless otherwise noted.
    b. Door openings are to be located so that inside face of butt side jamb is 4" from face of perpendicular wall at corner, allowing for a 90 degree swing typical, unless otherwise noted.
19. aUndercut building standard interior doors as required to clear finished floor by 1/4". All rated doors shall be ordered so as to clear the finished floor by 1/4", unless otherwise noted.
20. Any glazing on or within 24" of a door (in the same place) shall be tempered or approved equal, Section 2406.4 and 2406.6.

DRAFTING CONVENTION NOTES

1. Large scale drawings take precedence over small scale drawings. Details take precedence over all. Notify architect of conflicts or discrepancies in writing.
2. Dimension Conventions:
    a. Horizontal dimensions are shown from face of finish, unless otherwise noted.
    b. Dimensions noted "clear" or "clr." must be precisely maintained: allowing for Thickness or materials.
    c. Dimensions are not adjustable without architect's approval, unless noted.
    d. Dimensions to exterior window wall are to inside finished face of the wall, unless otherwise noted.
    e. Dimensions to exterior glazing are to the inside face of the exterior glazing.
    f. Vertical dimensions are from the top of the finished floor, unless otherwise noted.
    g. Do note scale drawings. If any item of work cannot be located, do not proceed with the work before clarifying with architect.
    h. Verify dimensions marked 'V.I.F.' prior to start of construction. Report Inconsistencies to architect.
3. Definition of Terminology:
    a. 'Typical' means identical for all conditions, unless otherwise noted.
    b. 'Similar' means comparable characteristics for the conditions noted. Verify dimensions and orientation on plans and elevations.
    c. 'Provide' means furnish and install, complete and in place.
    d. 'Furnish' means furnish only, installation by general contractor unless otherwise Noted.
    e. 'Install' means put into place, supplied by general contractor unless otherwise Noted.
    f. 'Align' means accurately locate finish faces in the same plane.

CLEANING NOTES

1. The existing to remain, existing relocated or new items installed by the General Contractor in addition to being amply protected throughout the period on construction shall be thoroughly cleaned to the satisfaction of IDS Group prior to being turned over to the tenant.
2. The base building toilet facilities shall be amply protected throughout the period of construction and all damaged or malfunctioning items shall be repaired, replaced and/or thoroughly cleaned to the satisfaction of IDS Group prior to being turned over to the tenant.
3. Items at are to be removed are to be cleaned, stored, repaired if necessary.

C□ANGES□CLAIMS□REVISIONS

1. The tenant without invalidating the contract may order extra work or make changes by altering, adding to or deducting from the work the contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim for extensions of time caused thereby shall be adjusted at the time of ordering such change.

TRANSPORTATION

1. The general contractor agrees to pay all transportation charges on all his material or equipment to the point of use, and shall be responsible for all unloading, checking and storing of same in connection with this contract.

CLAIMS FOR E□TRA□OR□

1. If the general contractor claims that any revision to drawings involve extra cost under this contract, he shall give IDS Group. Written notice thereof within a reasonable time after receipt of such instructions, in any event before proceeding to execute the work and the procedure shall then be as provided for in the 'changes in the work'. No such claims shall be valid unless so made. Unless otherwise agreed, no payment on such bills will be made Until final settlement.
2. All claims for additional work will be submitted in writing for review by IDS Group and should include a complete description of the work being performed, materials being used, the construction plan room number of the area being worked in, and the authorization under which the work is being performed.

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Issuance / Revisions

No.	Date	Description
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2	□□□□□□□□	Bid Set /Client Revisions

Architect / Designer / Engineer

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STATE OF CALIFORNIA

Engineer's Stamp

(BID SET)

Drawing Description

GENERAL NOTES

Project Number	17X085.01
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Sheet Number	GN 3

2018.09.13

C r
SECTION CAST IN PLACE CONCRETE
SUMMAR

A. Cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
1. Footings.
2. Slabs-on-grade.

SUBMITTALS

A. Product Data: For each type of product indicated.
B. Shop Drawings:
1. Reinforcing:
a. Detail reinforcing in accordance with ACI 315. Indicate reinforcement sizes, spacings, locations and quantities of reinforcing, bending and cutting schedules, splicing, and supporting and spacing devices.
b. Indicate embedded items.
2. Slab Layouts: Dimension locations of control, expansion, and construction joints. Relate to building grid lines.
C. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments. Indicate amounts of mixing water to be withheld for later addition at Project site.
D. Certifications: Submit mill certificates for cement, aggregates, and reinforcing.

MATERIALS

A. Steel Reinforcement:
1. Reinforcing Bars: Deformed.
a. Use salvaged bars whenever available.
b. Minimum recycled content: 60%
B. Concrete Materials:
1. Portland Cement: ASTM C 150, Type I, gray, supplemented with 50% [fly ash] [ground granulated blast-furnace slag].
2. Aggregate: Normal weight.
3. Water: ASTM C 94/C 94M.
4. Admixtures : Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete.
Do not use calcium chloride or admixtures containing calcium chloride.
a. Air-Entrainment: ASTM C 260.
b. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
c. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
d. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
e. Accelerator ASTM C 494, Type C or E, non-corrosive, non-chloride.
C. Fiber Reinforcement: Synthetic, polypropylene.
1. Fibrillated polypropylene micro - fibers engineered and designed for use in concrete, complying with ASTM C 1116/C 1116M, Type III
D. Waterstops: Flexible rubber.
E. Plastic Vapor Retarder : ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.
F. Curing Materials: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
G. Related Materials:
1. Expansion- and isolation-joint-filler strips ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork.
2. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
3. Non-Shrink Grouts: ASTM C 1107, Grade B; non-shrink non-catalyzed natural aggregate grout; minimum compressive strength of 7000 PSI at 28 days; 25 to 30 second flow when tested in accordance with ASTM C 939 at 45 to 90 degrees F; cement gray in color
4. Form Release Coating: Water based type; VOC <150g/l; Nox-Crete "Utility Release. Cresset Chemical Company Crete 20_VOC," or approved; non staining.
H. Repair Materials:
1. Repair Underlayment:Cement-based,polymer - modified, self - leveling product that can be applied in thicknesses from 1/8 inch(3.2 mm) and that can be feathered at edges to match adjacent floor elevations.
a. Cement Binder : ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
b. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
c. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch(3.2 to 6 mm) or coarse sand as recommended by underlayment manufacturer.
d. Compressive Strength: Not less than 4100 psi(29 MPa) at 28 days when tested according to ASTM C 109/C 109M.
2. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch(3.2 mm) and that can be feathered at edges to match adjacent floor elevations.
a. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
b. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
c. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch(3.2 to 6 mm) or coarse sand as recommended by topping manufacturer.
d. Compressive Strength: Not less than 5000 psi(34.5 MPa) at 28 days when tested according to ASTM C 109/C 109M.

INSTALLATION
A. Floor and Slab Finishes:
1. Broom: Exterior concrete platforms, steps, and ramps.

FIELD UALIT CONTROL
A. Testing: By [Owner] [Contractor]-engaged agency.
B. Inspections: By Owner-engaged special inspector.

END OF SECTION

M
SECTION METAL FABRICATIONS
SUMMAR
A. Steel framing and supports for mechanical and electrical equipment.
B. Steel framing and supports for applications where framing and supports are not specified in other Sections.
C. Shelf angles.
D. Fencing

SUBMITTALS
A. Product Data: For the following:
1. Paint products.
2. Grout.
3. All prefabricated products.
B. Shop Drawings: Show fabrication and installation details for metal fabrications.
1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.
2. Provide templates for anchors and bolts specified for installation under other Sections.
C. Welding certificates.

PRODUCTS
A. Materials: Steel plates, shapes, and bars, steel pipe, slotted channel framing.
1. Provide steel W-shapes, channels, angles, M-shapes, S-shapes with a minimum recycled content of 60 percent.
B. Miscellaneous Framing and Supports:
1. Steel framing and supports for mechanical and electrical equipment, applications where framing and supports are not specified in other Sections.
C. 2. Galvanize where indicated.
3. Prime with zinc-rich primer where indicated.
D. Shelf angles, galvanized.
E. Steel weld plates and angles not specified in other Sections, for casting into concrete.

END OF SECTION

d d P
SECTION INTERIOR ARC ITECTURAL OOD OR
SUMMAR
A. Interior standing and running trim.
B. Melamine cabinets.
C. Closet and utility shelving.

UALIT ASSURANCE
A. S d rd A I

MATERIALS
A. Wood Products: Comply with the following:
1. Moisture Resistant Medium-Density Fiberboard: ANSI A208.2, Grade MD, MR50, made with binder containing no urea formaldehyde.
2. Medium - Density Fiberboard: ANSI A208.2 , Grade MD, made with binder containing no urea formaldehyde.
3. Veneer-Faced Panel Products (Hardwood Plywood):HPVA HP-1, made with adhesive containing no urea formaldehyde.
B. Adhesives, General: Do not use adhesives that contain urea formaldehyde.
C. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
1. Wood Glues: 30 g/L.
2. Contact Adhesive: 250 g/L.
a. VOC Limits: 80 g/L
D. Closet and Utility Shelving:
1. Grade: Economy.
2. Shelf Material: 3/4-inch(19-mm) thermoset decorative panel with PVC or polyester edge banding.
3. Cleats: 3/4-inch(19-mm) panel product.
E. Shop Finishing:
1. Grade: Same grade as woodwork.
2. Extent: All woodwork shop finished.

INSTALLATION
A. Scribe and cut millwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
B. Anchor millwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with millwork and matching final finish if transparent finish is indicated.
C. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
1. Install cabinets with no more than 1/8 inch in 96-inch(3 mm in 2400-mm) sag, bow, or other variation from a straight line.
D. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
1. Align adjacent solid - surfacing-material countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
2. Install countertops with no more than 1/8 inch in 96-inch(3 mm in 2400-mm) sag, bow, or other variation from a straight line.
3. Secure coved backsplashes to tops per manufactures fabrication manual and to walls with adhesive.
4. Calk space between backsplash and wall with sealant specified in Division 7 Section "Joint Sealants."

END OF SECTION

SECTION ALUMINUM INTERIOR
1.01 SUMMARY

This section includes:
1. Aluminum, medium-duty interior sliding service windows as indicated in drawings and in sections.

1.02 SUBMITTALS

A. Product Data: Submit Manufacturer's technical product data substantiating that products comply.
B. Shop drawings: Submit for fabrication and installation of windows. Include details, elevations and installation requirement of finish hardware and cleaning.
C. Certification: Provide printed data in sufficient detail to indicate compliance with the contract documents.

1.04 PROJECT CONDITIONS

A. Field measurements: Check opening by accurate field measurement before fabrication. Show recorded measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.

1.05 WARRANTY

All material and workmanship shall be warranted against defects for a period of one (1) year from the original date of purchase.

2.01 ACCEPTABLE MANUFACTURER'S

A. Basis of design: Design is based on aluminum, interior sliding service window manufactured by C R L r C C

2.02 MATERIALS

A. Frames: Aluminum frame modules shall be constructed of 6063-T5 extruded aluminum. Window rolls on top-hung ball bearing rollers. Catch locks included with all interior windows. Overall frame sizes are to be in accordance with the contract drawings.
B. Finish: All aluminum to be clear anodized.
C. Glazing: The glazing vinyl supplied is ¼" in thickness.Glass not included, to be supplied by others.
D. Options: Keyed lock, Overhead track. Models: F r O r O X = sliding panel, O = fixed panel, as viewed from clerks side.

3.01 INSTALLATION

A. Install window in accordance with manufacturer's printed instructions and recommendations.

END OF SECTION

SECTION ROUG CARPENTR
PART GENERAL
SUMMAR
A. Section includes the following:
1. Framing with dimension lumber.
2. Wood blocking and nailers.
3. Utility shelving.

DEFINITIONS
A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
4. NeLMA: Northeastern Lumber Manufacturers' Association.
5. NLGA: National Lumber Grades Authority.
6. RIS: Redwood Inspection Service.
7. SPIB: The Southern Pine Inspection Bureau.
8. WCLIB: West Coast Lumber Inspection Bureau.
9. WWPA: Western Wood Products Association.

SUBMITTALS
A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
3. For fire-retardant treatments specified to be High-Temperature (HT) type, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
B. Fastener Patterns: Full-size templates for fasteners in exposed framing..
C. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

UALIT ASSURANCE
A. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria":
1. Dimension lumber framing.
2. Miscellaneous lumber.

PART PRODUCTS
MANUFACTURERS
A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
1. Products: Subject to compliance with requirements, provide one of the products specified.
2. Or Equal

OOD PRODUCTS GENERAL
A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece .
3. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
4. Provide dressed lumber, S4S, unless otherwise indicated.

DIMENSION LUMBER FRAMING
A. Maximum Moisture Content: 19 percent .
B N L d B r Interior Partitions:
1. Hem-fir (north); NLGA.
2. Mixed southern pine; SPIB.
3. Spruce-pine-fir; NLGA.
4. Hem-fir; WCLIB, or WWPA.
5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
6. Northern species; NLGA.
7. Eastern softwoods; NeLMA.
8. Western woods; WCLIB or WWPA.
9. enters.

MISCELLANEOUS LUMBER
A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
1.Blocking.
2. Nailers.
3. Utility shelving.
B. For items of dimension lumber size, provide C r S d rd S d r N the following species:
1.Hem-fir (north); NLGA.
2. Mixed southern pine; SPIB.
3. Spruce-pine-fir; NLGA.
4. Hem-fir; WCLIB, or WWPA.
5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
6. Western woods; WCLIB or WWPA.
7. Northern species; NLGA.
8. Eastern softwoods; NeLMA.

C. For concealed boards, provide lumber in any of the following species and grades:
1. Mixed southern pine, No. [ ] [ ] grade; SPIB.
2. Hem-fir or hem-fir (north), [C r C] [S d rd r C] grade; NLGA, WCLIB, or WWPA.
3. Spruce-pine-fir (south) or spruce-pine-fir, [C r C] [S d rd r C] grade; NeLMA, NLGA, WCLIB, or WWPA.
4. Eastern softwoods, No. [ ] [ ] Common grade; NeLMA.
5. Northern species, No. [ ] [ ] Common grade; NLGA.
6. Western woods, [C r C] [S d rd r N C] grade; WCLIB or WWPA.

D. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
E. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

INSTALLATION GENERAL
A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate [rr]nailers, blocking,]and similar supports to comply with requirements for attaching other construction.
B. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.
C. Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.
D. Do not splice structural members between supports, unless otherwise indicated.
E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
1.Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.

OOD BLOC ING AND NAILER INSTALLATION
A. Install where indicated and where required for[r d r] attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.
C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

ALL AND PARTITION FRAMING INSTALLATION
A. General: Provide single bottom plate and double top plates using members of 2-inch nominal thickness whose widths equal that of studs, except single top plate may be used for non-load-bearing partitions[d r d r r r r r] d d r r r d r r d . Fasten plates to supporting construction, unless otherwise indicated.
1.For interior partitions and walls, provide size wood studs spaced o.c., unless otherwise indicated.
2. Provide continuous horizontal blocking at midheight of partitions more than 96 inches high, using members of 2-inch nominal thickness and of same width as wall or partitions.
B. Construct corners and intersections d r r d r r d r r
C. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Support headers on jamb studs.
1. For non-load-bearing partitions, provide double-jamb studs and headers not less than 4-inch nominal depth for openings 48 inches and less in width, 6-inch nominal depth for openings 48 to 72 inches in width, 8-inch nominal depth for openings 72 to 120 inches in width, and not less than 10-inch nominal depth for openings 10 to 12 feet in width.

SECTION ALUMINUM FRAMES
PART GENERAL
SUMMAR
A. Section Includes: Kawneer Architectural Aluminum Storefront Systems, including perimeter trims, stools, accessories, shims and anchors, and perimeter sealing of storefront units.
1. Types of Kawneer Aluminum Storefront Systems include:
a. InFrame™ Interior Framing System - 2" x 6" (50.8 x 152.4) nominal dimension; Non-Thermal; Center Glazed, Screw Spline, Punched Opening Fabrication.

S

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, hardware, finishes, and installation instructions for each type of aluminum frames indicated.
B. Shop Drawings: Include plans, elevations, sections, details, hardware, and attachments to other work, operational clearances and installation details.
C. Samples for Initial Selection: For units with factory-applied color finishes including samples of hardware and accessories involving color selection.
D. Samples for Verification: For aluminum frames and components required.
E. Fabrication Sample: Of each vertical-to-horizontal intersection of aluminum frames, made from 12" (304.8 mm) lengths of full-size components and showing details of the following:
1. Joinery, including concealed welds.
2. Anchorage.
3. Expansion provisions.
4. Glazing.
5. Flashing and drainage.

1.3 A r M r

A. Installer Qualifications: An installer which has had successful experience with installation of the same or similar units required for the project and other projects of similar size and scope.
B. Manufacturer Qualifications: A manufacturer capable of providing aluminum frames that meet or exceed performance requirements indicated and of documenting this performance by inclusion of test reports, and calculations.
6. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum frames and are based on the specific system indicated.

Pr C d
A. Field Measurements: Verify actual dimensions of aluminum frame openings by field measurements before fabrication and indicate field measurements on Shop Drawings.

rr
A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty.
B. Warranty Period: Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from date of shipment by manufacturer.

PART PRODUCTS
M r
A. Basis-of-design Product:
1. Kawneer Company Inc.
2. InFrame™ Interior Framing System (Non-Thermal)
3. System Dimensions: 2" x 6" (50.8 x 152.4) nominal dimension
4. Glass: Center Plane

M
A. Aluminum Extrusions: Alloy and temper recommended by aluminum storefront manufacturer for strength, corrosion resistance, and application of required finish and not less than 0.070" (1.8 mm) wall thickness at any location for the main frame and complying with ASTM B 221: 6063-T6 alloy and temper.
B. Fasteners: Aluminum, nonmagnetic stainless steel or other materials to be non-corrosive and compatible with aluminum framing members, trim hardware, anchors, and other components.
C. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.
D. Reinforcing Members: Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.
E. Sealant: For sealants required within fabricated storefront system, provide permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.
F. Tolerances: Reference to tolerances for wall thickness and other cross-sectional dimensions of storefront members are nominal and in compliance with AA Aluminum Standards and Data.

G S

A. Glazing: As specified in Division 08 Section "Glazing".
B. Glazing Gaskets: Manufacturer's standard compression types; replaceable, extruded EPDM rubber.
C. Spacers and Setting Blocks: Manufacturer's standard elastomeric type.
D. Bond-Breaker Tape: Manufacturer's standard TFE-fluorocarbon or polyethylene material to which sealants will not develop adhesion.
E. Glazing Sealants: For structural-sealant-glazed systems, as recommended by manufacturer for joint type, and as follows:
1. Weatherseal Sealant: ASTM C 920 for Type S, Grade NS, Class 25, Uses NT, G, A, and O; single-component neutral-curing formulation that is compatible with structural sealant and other system components with which it comes in contact; recommended by structural-sealant, weatherseal-sealant, and aluminum-framed-system manufacturers for this use.

A r M r

A. Joint Sealants: For installation at perimeter of aluminum-framed systems, as specified in Division 07 Section "Joint Sealants".
B. Bituminous Paint: Cold-applied, asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos; formulated for 30 mil (0.762 mm) thickness per coat.

2.5 Aluminum Finishes
A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes:
1. Kawneer Permanodic™ AA-M10C21A31, AAMA 611, Architectural Class II Clear Anodic Coating (Color #17 Clear) (Standard).

PART E ECUTION
E
A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather tight aluminum frame installation.
1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
4. Proceed with installation only after unsatisfactory conditions have been corrected.

I
A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing aluminum framed storefront system, accessories, and other components.
B. Install aluminum framed storefront system level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
C. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

F d C r
A. Manufacturer's Field Services: Upon Owner's written request, provide periodic site visit by manufacturer's field service representative.

Ad C d Pr
A. Clean aluminum surfaces immediately after installing aluminum framed storefronts. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
B. Clean glass immediately after installation. Comply with glass manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.
C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION

D r d d
SECTION FLUS OOD DOORS
SUBMITTALS
A. Product Data: For each type of door indicated. Include details of core and edge construction and trim for openings.
B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.
1. Indicate dimensions and locations of mortises and holes for hardware.
2. Indicate dimensions and locations of cutouts.
3. Indicate requirements for veneer matching.
4. Indicate doors to be factory finished and finish requirements.
5. Indicate fire-protection ratings for fire-rated doors.
C. Warranty: Sample of special warranty.

UALIT ASSURANCE
A. Quality Standard: AWI.
1. AWI Quality Certification Labels or an AWI letter of licensing for doors.
2. WI-Certified Compliance Certificate for doors and installation.
B. Fire-Rated Wood Doors: Positive pressure testing.

DOOR CONSTRUCTION GENERAL
A. Low-Emitting Materials: Made with adhesives and composite wood products that do not contain urea formaldehyde.

PRIMING FINIS ING
A. Shop Priming:
1. Doors for Opaque Finish: One coat of wood primer.
2. Doors for Transparent Finish: Stain and first coat of finish.
B. Factory Finishing: All doors.

END OF SECTION

SECTION DOOR ARD ARE
SUMMAR
A. Commercial door hardware for swinging doors.
B. Other doors to the extent indicated.
C. Cylinders for doors specified in other Sections.

SUBMITTALS
A. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.

ARRANT
A. Warranty Period: One year from date of Substantial Completion, except as follows:
1. Manual Closers: 25 years from date of invoice.
2. Cylindrical Locksets: Two years from date of invoice.
3. Sur-Lock Exit Device: Five years from date of invoice.

MAINTENANCE SERVICE

SECTION G PSUM BOARD
SUMMAR
A. Interior gypsum board.

SUBMITTALS
A. Product Data: For each type of product indicated.
B. Samples: For the following products:
1. Textured Finishes: Manufacturer's standard size for each textured finish indicated and on same backing indicated for Work.

MATERIALS
A. Interior Gypsum Board:
1. General: Complying with ASTM C 36/C 36M or ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent.
a. Must be certified as low emitting. Certification must be based upon the California Department of Health Services Standard Practice for The Testing Of Volatile Organic Emissions From Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda or a jurisdictionally recognized standard using equivalent testing methodologies and VOC thresholds.
b. Provide 3 level finish.
2. Type X:
a. Thickness: 5/8 inch(15.9 mm).
b. Long Edges: Tapered.
B. Trim Accessories:
a. Interior: Cornerbead.

END OF SECTION

SECTION ACOUSTICAL PANEL CEILINGS
SUMMAR
A. Acoustical panels and exposed suspension systems.

SUBMITTALS
A. Product Data: For each type of product indicated.
B. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:
1. Ceiling suspension system members.
2. Method of attaching hangers to building structure.
3. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.
C. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of size indicated below.
1. Acoustical Panel: Set of full-size Samples of each type, color, pattern, and texture.
2.Exposed Suspension System Members, Moldings, and Trim: Set of 12-inch-(300-mm-) long Samples of each type, finish, and color.
D. Qualification Data: For testing agency.
E. Field quality-control test reports.
F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each acoustical panel ceiling.
G. Maintenance Data: For finishes to include in maintenance manuals.

UALIT ASSURANCE
A. Acoustical Panel Quality Standard: ASTM E 1264.
B. Metal Suspension System Quality Standard: ASTM C 635.

MANUFACTURERS
A. Basis of design product acoustic ceiling tile:
1. Armstrong tile Dune Tegular
B. Basis of design product metal suspension system:
1. Armstrong Silhouette XL 9/16" suspension system with 1/8" reveal.

MATERIALS
A. Acoustical Ceiling Panels General: Must be certified as low emitting. Certification must be based upon the California Department of Public Health CDPH/EHLB/Standard method version 1.1/2010
B. Acoustical Ceiling Panels
1. Classification: Type III, mineral base Form 2, water felted; Pattern CE (lightly textured).
2. Color: White
3. Modular Size: 24 by 24 inches(610 by 1220 mm).
4. Broad Spectrum Antimicrobial Fungicide and Bactericide Treatment: Provide acoustical tiles treated with manufacturer's standard antimicrobial formulation that inhibits fungus, mold, mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, mold, mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, and MOLD, MILDEW D 3274 or ASTM G 21.
E. Metal Suspension Systems:
1. Hot dipped galvanized steel
2. Color: White
F. Metal Edge Moldings and Trim: Roll-formed sheet metal.

INSTALLATION
A. Installation: [ASTM C 636] [UBC Standard 25-2].

FIELD UALIT CONTROL
A. Testing: By [Owner] [Contractor]-engaged agency to test acoustical panel ceiling hanger fasteners.

END OF SECTION

SECTION INTERIOR PAINTING
SUMMAR
A. Surface preparation and the application of paint systems on interior substrates.

SUBMITTALS
A. Samples for Verification:
1. For each non-standard latex topcoat color and gloss indicated.
2. For each type of non-standard paint system and in each color and gloss of topcoat indicated.

UALIT ASSURANCE
A. Quality Standards: "MPI Approved Products List" and "MPI Architectural Painting Specification Manual."
B. Mockups for each color and finish.

MANUFACTURERS
A. Manufacturers: Subject to compliance with requirements; provide products by one of the following:
1. Sherwin-Williams Company (The).
2.or approved equal.

METAL PRIMERS
A. Rust-Inhibitive Primer (Water Based): MPI #107.

LATE PAINTS
A. Latex, Interior, Institutional Low Odor/VOC, (Gloss Level 2): MPI #144.
1. Sherwin-Williams Company; Harmony Interior Latex
2. or approved equal.
B. Latex, Interior, (Gloss Level 2): MPI #44.
1. Sherwin-Williams Company; Color Accents Interior Latex
2. or approved equal.

INTERIOR PAINTING SC EDULE
A. Steel Substrates:
1. Institutional Low-Odor/VOC Latex System: MPI INT 5.1S.
a. Prime Coat: Rust-inhibitive primer (water based).
b. Intermediate Coat: Institutional low-odor/VOC interior latex matching topcoat.
c. Topcoat: Institutional low-odor/VOC interior latex (eggshell).
C. Wood Substrates:
1. Institutional Low-Odor/VOC Latex System: MPI INT 6.3V.
a. Prime Coat: Interior latex primer/sealer.
b. Intermediate Coat: Institutional low-odor/VOC interior latex matching topcoat.
c. Topcoat: Institutional low-odor/VOC interior latex (eggshell).
D. Gypsum Board Substrates:
1.Institutional Low-Odor/VOC Latex System: MPI INT 9.2M.
a. Prime Coat:Interior latex primer/sealer.
b. Intermediate Coat: Institutional low-odor/VOC interior latex matching topcoat.
c. Topcoat: Institutional low-odor/VOC interior latex (eggshell).
E. High-Impact Gypsum Board Substrates:
1. High-Performance Architectural Latex System: MPI INT 9.2B.
a. Prime Coat: Interior latex primer/sealer.
b. Intermediate Coat: Institutional low-odor/VOC interior latex matching topcoat.
c. Topcoat: Institutional low-odor/VOC interior latex (eggshell).

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Issuance / Revisions

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SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes commercial door hardware for the following:
   1. Swinging doors.

B. Door hardware includes, but is not necessarily limited to, the following:
   1. Electromechanical door hardware.
   2. Automatic operators.

C. Related Sections:
   1. Division 08 Section "Door Hardware Schedule".
   2. Division 08 Section "Automatic Door Operators".
   3. Division 08 Section "Access Control Hardware".

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
   1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
   2. ICC/IBC - International Building Code.
   3. NFPA 70 - National Electrical Code.
   4. NFPA 101 - Life Safety Code.
   5. UL/ULC and CSA C22.2 – Standards for Automatic Door Operators Used on Fire and Smoke Barrier Doors and Systems of Doors.
   6. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards:
   1. ANSI/BHMA Certified Product Standards - A156 Series
   2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.1 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.

3. Content: Include the following information:
   a. Type, style, function, size, label, hand, and finish of each door hardware item.
   b. Manufacturer of each item.
   c. Fastenings and other pertinent information.
   d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
   e. Explanation of abbreviations, symbols, and codes contained in schedule.
   f. Mounting locations for door hardware.
   g. Door and frame sizes and materials.
   h. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Shop Drawings: Details of electrified access control hardware indicating the following:

1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
   a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
   b. Complete (risers, point-to-point) access control system block wiring diagrams.
   c. Wiring instructions for each electronic component scheduled herein.

2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.

D. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.2 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

D. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
   1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
   2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

E. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

F. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
   1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
   2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
   3. Review sequence of operation narratives for each unique access controlled opening.
   4. Review and finalize construction schedule and verify availability of materials.
   5. Review the required inspecting, testing, commissioning, and demonstration procedures

G. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.4 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.5 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of the hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:
   1. Two years for electromechanical door hardware.

1.6 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 ELECTRIC STRIKES

A. Standard Electric Strikes: Heavy duty, cylindrical and mortise lock electric strikes conforming to ANSI/BHMA A156.31, Grade 1, UL listed for both Burglary Resistance and for use on fire rated door assemblies. Stainless steel construction with dual interlocking plunger design tested to exceed 3000 lbs. of static strength and 350 ft-lbs. of dynamic strength. Strikes tested for a minimum 1 million operating cycles. Provide strikes with 12 or 24 VDC capability and supplied standard as fail-secure unless otherwise specified. Provide latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike where specified.
   1. Manufacturers:
      a. HES (HS).

B. Provide electric strikes with in-line power controller and surge suppressor by the same manufacturer as the strike with the combined products having a five year warranty.

2.3 ELECTROHYDRAULIC DOOR OPERATORS

A. General: Provide low energy operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; and for compliance with UL 325. Coordinate operator mechanisms with door operation, hinges, and activation devices.
   1. Fire-Rated Doors: Provide door operators for fire-rated door assemblies that comply with NFPA 80 for fire-rated door components and are listed and labeled by a qualified testing agency.

B. Standard: Certified ANSI/BHMA A156.19.

C. Performance Requirements:
   1. Opening Force if Power Fails: Not more than 15 lbf required to release a latch if provided, not more than 30 lbf required to manually set door in motion, and not more than 15 lbf required to fully open door.
   2. Entrapment Protection: Not more than 15 lbf required to prevent stopped door from closing or opening.

D. Configuration: Surface mounted or in-ground as required. Door operators to control single swinging and pair of swinging doors.

E. Certification: Furnish Operators with GreenCircle Certification.

F. Operation: Power opening and spring closing operation capable of meeting ANSI A117.1 accessibility guideline. Provide time delay for door to remain open before initiating closing cycle as required by ANSI/BHMA A156.19. When not in automatic mode, door operator to function as manual door closer with fully adjustable opening and closing forces, with or without electrical power.

G. Features: Operator units to have full feature adjustments for door opening and closing force and speed, backcheck, motor assist acceleration from 0 to 30 seconds, time delay, vestibule interface delay, obstruction recycle, and hold open time from 0 up to 30 seconds.

H. Provide outputs and relays on board the operator to allow for coordination of exit device latch retraction, electric strikes, magnetic locks, card readers, safety and motion sensors and specified auxiliary contacts.

I. Brackets and Reinforcements: Manufacturer's standard, fabricated from aluminum with nonferrous shims for aligning system components.

J. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Norton Door Controls (NO) - 6000 Series.

2.4 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.5 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
   1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
   1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
   2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
   3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
   4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

B. The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.

C. Manufacturer's Abbreviations:
   1. HS - HES
   2. NO - Norton

Hardware Sets

Set: 1.0

Doors: North Porch

2 Door Operator	6070	689	NO	⚡
2 Electric Power Transfer	EL-EPT		SU	⚡
2 Push Plate	639		NO	⚡
2 Signal Switch Kit	050251		VD	

Notes: Re-use the balance of the door, frame and hardware.

Use signal switch kit to prevent the automatic operator from working unless the exit device(s) is(are) dogged open.

Verify correct part number for signal switch kit.

Set: 2.0

Doors: West Porch

1 Electric Strike	1500C	630	HS	⚡
1 Door Operator	6060	689	NO	⚡
2 Push Plate	639		NO	⚡

Notes: Re-use the balance of the door, frame and hardware.

Set: 3.0

Doors: Hall

1 Electric Strike	1500C	630	HS	⚡
1 Door Operator	6020	689	NO	⚡
2 Push Plate	639		NO	⚡

Notes: Re-use the balance of the door, frame and hardware.

Set: 4.0

Doors: Men, Women

1 Door Operator	6010	689	NO	⚡
2 Push Plate	639		NO	⚡

Notes: Re-use the balance of the door, frame and hardware.

Relocate existing locks, push and pull plates to be between 30" and 44" AFF to comply with code requirements. Patch and fill all resultant voids to provide a smooth, unobstructed surface. Finish to match the balance of the door.

END OF SECTION 080671

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Issuance / Revisions

No.	Date	Description
1	□□□□□□□□	Plan Check Resubmittal /Client Revisions
2	□□□□□□□□	Bid Set /Client Revisions

Architect / Designer / Engineer

IDS GROUP

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Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

LICENSED ARCHITECT
JOSEPH STABILE
No. C11573
Exp. 03-31-19
STATE OF CALIFORNIA

Engineer's Stamp

Drawing Description

SPECIFICATIONS

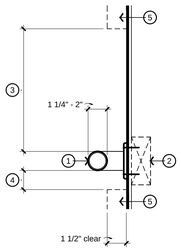
(BID SET)

Project Number	17X085.01
Print Date	2018.08.27

2018.09.13

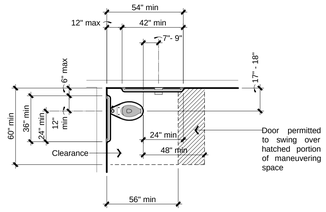
Sheet Number

GN 5



1. Grab bar cross - section (diameter or width) shall be 1 1/4" to 2" or its shape provides equivalent a gripping surface
2. Provide backing as required
3. 12" Minimum Clear unobstructed area above Top of Handrail
4. 1 1/2" Minimum Clear unobstructed area below below of handrail
5. Obstructed objects - where occurs
6. Recessed objects - where occurs

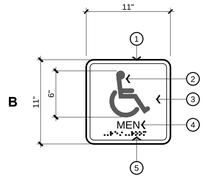
Pr□□□□□□□O□□□□



S□□□ □□ C□□□r□□□□ □□ □ □□□r C□□□□

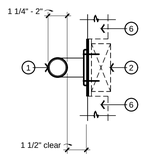
A

NOT USED
SCALE: NTS — 30



B

1. White Border
2. Raised / White figure pictogram (1/32" min)
3. Contrasting background Blue in color and shall be equal to color number 15090 in Federal Standard 595B (1117B5. 8. 1. 1)
4. Raised white letters (1/32" min)
5. Grade 2 Braille



R□□□□□ d O□□□□□

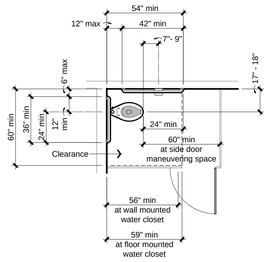
N□□□

Maximum projection into clear space shall be 3"

Grab bars shall not rotate within their fittings

A grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements

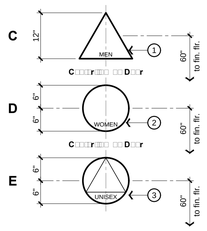
Edges shall have a min. radius of 1/8"



O□□□S□□□□□□ D□□r

B

GRAB BAR
SCALE: 1/4" = 1'-0" — 24

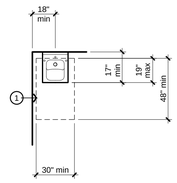


1. 1/4" Thick Equilateral Triangle
2. 1/4" Thick Circle
3. 1/4" Thick Circle with 1/4" thick equilateral triangle superimposed within circle

C□□□r□□□ □□D□□r

D□□r M□□□□d S□□□□□

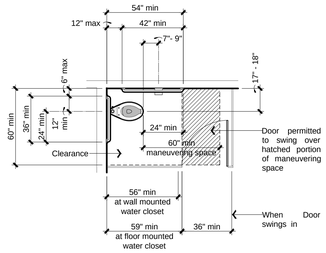
Note: Pictograms and / or lettering are not required on door mounted signage
(Symbols shown Not to Scale)



1. Required clear area adjoining or overlapping accessible route. Doors shall not swing over clear space.

N□□□
Sink must have lever type faucet.

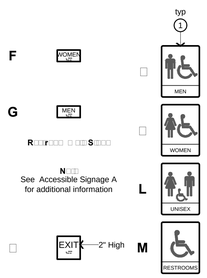
P□□□



I□□S□□□□□□ D□□r

C

ACCESSIBLE SIGNAGE
SCALE: 1/4" = 1'-0" — 27



1. Wall mounted accessibility signage to be located on latch side of door

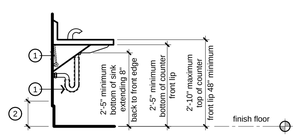
R□□r□□□ □□□S□□□

N□□
See Accessible Signage A for additional information

N□□□
Color & contrast of Door Signage shall distinctively contrast with the color and contrast of the door

T□□□□ E□□S□□□ □□□S□□□□□

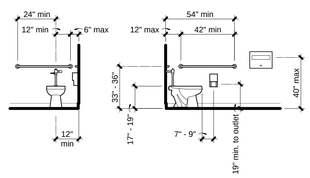
ACCESSIBLE LAVATORY (plan)
SCALE: 1/4" = 1'-0" — 23



1. Insulate hot water supply line and drain line
2. 9" Min. (Extending 1'-5" back from front edge)

S□□□□□□

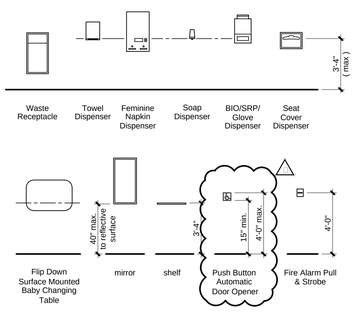
ACCESSIBLE TOILET (maneuvering space)
SCALE: 1/4" = 1'-0" — 18



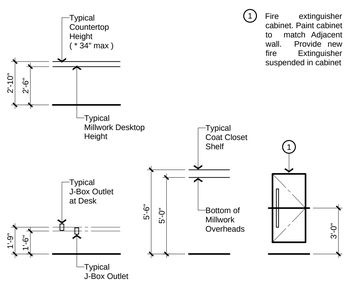
F r□□□ E□□□□□□□□

S□d□ E□□□□□□□□

ACCESSIBLE LAVATORY (section)
SCALE: 1/4" = 1'-0" — 22

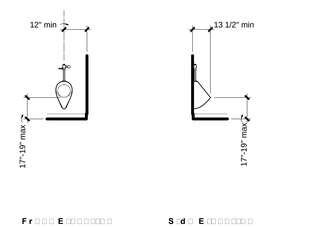


ACCESSIBLE MOUNTING HEIGHTS
SCALE: 1/4" = 1'-0" — 26



1. Fire extinguisher cabinet. Paint cabinet to match Adjacent wall. Provide new fire Extinguisher suspended in cabinet

21



F r□□□ E□□□□□□□□

S□d□ E□□□□□□□□

ACCESSIBLE URINAL (wall hung type)
SCALE: 1/4" = 1'-0" — 16

NOT USED
SCALE: NTS — 15

NOT USED
SCALE: NTS — 14

NOT USED
SCALE: NTS — 13

NOT USED
SCALE: NTS — 12

Control elevations are comprised of:

Finish ceiling level (FCL)
Finish floor level (FFL)
Top of Slab (TOS)

All dimensions given are from FFL datum. Finish floor material is assumed to be 3/8" thick glue down carpet. Floor finish and thickness will vary from location to location. Refer to plans and details for specific flooring Information.

No allowance has been made for any depressions or elevations in the slab. Elevation heights should Take into account any variations in the floor slab.

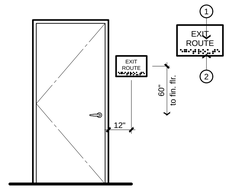
Certain elevation dimensions are associated with code required maximum or minimum mounting heights. Such dimensions should be held despite variations in the slab. Code dimensions are in parenthesis with an asterisk next to the critical dimension. E.G.: (* +15" min.)

N□□□□

1. All vertical dimensions are Shown from finish floor to location shown.
2. The thermostat and card readers shall be located so that the top of the outlet box is no more than 48" nor less than 15" to the bottom of the outlet box above the finished Floor (2010 CBC 1117b.6).

MOUNTING HEIGHTS AT DOOR
SCALE: 1/4" = 1'-0"

NOT USED
SCALE: NTS — 10



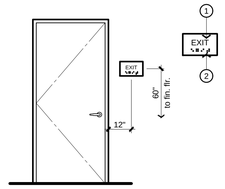
1. Letters & Numerals shall be raised 1/32", upper case, Sans Serif type, at least 5/8" high, but no more than 2"
2. Characters shall be accompanied with Grade II Braille superimposed within placard

As per 2016 CBC 1013.4 each exit access door from an interior room or area to a corridor or hallway shall be identified by a tactile exit With the words "EXIT ROUTE".

N□□□□

1. Characters and background of signs shall be Eggshell, Matte, or a non - glare finish. Characters and Symbols shall be in constrast with their backgrounds
2. Size / Dimension of Accessible Signage shall be based on Room Name information. G. C. shall verify size / dimensions of accessible signage prior to fabrication. (U.O.N.)
3. Submit full size samples of all signs to the building owner and tenant for approval.

TACTILE EXIT ROUTE SIGNAGE
SCALE: 3/8" = 1'-0" — 9



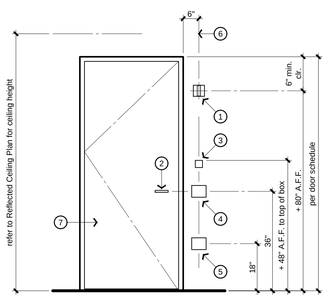
1. Letters & Numerals shall be raised 1/32", upper case, Sans Serif type, at least 5/8" high, but no more than 2"
2. Characters shall be accompanied with Grade II Braille superimposed within placard

As per 2016 CBC 1013.4 each exit door that leads directly to a grade-level exterior exit by means of an exit enclosure or an exit passageway shall be identified by a tactile exit with the word 'EXIT'.

N□□□□

1. Characters and background of signs shall be Eggshell, Matte, or a non - glare finish. Characters and Symbols shall be in constrast with their backgrounds
2. Size / Dimension of Accessible Signage shall be based on Room Name information. G. C. shall verify size / dimensions of accessible signage prior to fabrication. (U.O.N.)
3. Submit full size samples of all signs to the building owner and tenant for approval.

TACTILE EXIT SIGNAGE
SCALE: 3/8" = 1'-0" — 8



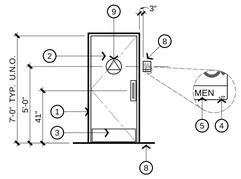
1. Wall mounted F.L.S. Strobe device.
2. Door Handle
3. Key card reader or thermostat
4. Wall switch, dimmer or wall mounted motion sensor, wall phones and 'J' boxes at counters. Multiple switches to be ganged into one cover plate.
5. Electrical Wall outlet. Multiple outlets to be ganged into one cover plate.
6. Adjust centerline dimension to 12" as required to accommodate multiple ganged devices
7. Door / Door Frame per Door Schedule

6

NOT USED
SCALE: NTS — 7

NOT USED
SCALE: NTS — 5

NOT USED
SCALE: NTS — 4

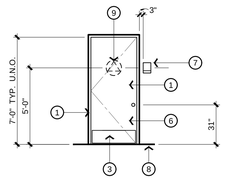


(Interior Door)
T□PE A

1. Door / Door Frame (Refer to Door Schedule)
2. Door mounted International Accessibility Identification Signage
3. 10" x 34" Kickplate each side where occurs
4. Corresponding Grade II Braille where occurs
5. Height of lettering 5/8" minimum to 2" maximum upper case characters lettering raised 1/32"
6. Door Finish per Finish Schedule
7. Wall mounted Accessibility Signage to be located on latch side of door
8. Finish Floor. Refer to Floor Plan - Sheet A2.3.0 for Floor Finish Type.
9. See Detail 27 / HC 1 for Door and Wall Mounted signage

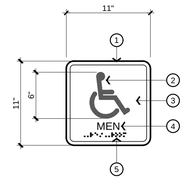
N□□□□

1. Wall Sign mounting location shall allow a person to approach within 3" of wall signage without encountering protruding objects or standing within the swing of a door.
2. General Contractor to verify existing signs conform to Accessible requirements



(Interior Door)
T□PE B

ADA DOOR SIGNAGE
SCALE: 1/4" = 1'-0" — 2



1. White Border
2. Raised / White figure pictogram (1/32" min)
3. Contrasting background Blue in color and shall be equal to color number 15090 in Federal Standard 595B (1117B5. 8. 1. 1)
4. Raised white letters (1/32" min)
5. Grade 2 Braille

ACCESSIBLE SIGNAGE
SCALE: NO SCALE — 1

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Issuance / Revisions

No.	Date	Description
1	□□□□□□□□	Plan Check Resubmittal /Client Revisions
2	□□□□□□□□	Bid Set /Client Revisions

Architect / Designer / Engineer

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Client Name

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Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

Engineer's Stamp

(BID SET)

Drawing Description

ACCESSIBILITY REQUIREMENTS

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

HC 1

2018.09.13

ACCESSIBILITY REQUIREMENTS

CLEAR FLOOR SPACE FOR WHEELCHAIRS

1. Minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30" x 48". Minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object. Floor or ground space for wheelchairs may be part of the knee space required under some objects.
2. Provide an additional 12" width on one side for alcoves greater than 15" deep and designed for side approach.
3. Provide additional 6" width on one side for alcoves greater than 24" deep and designed for front approach.

WALKWAYS AND PROTRUDING OBJECTS

1. Objects projecting from walls with their leading edges between 27" and 80" above the finished floor shall protrude no more than 4" into walks, halls, corridors, passageways or aisles.
2. Objects mounted with their leading edges at or below 27" above the finished floor may protrude any amount.
3. Free standing objects mounted on posts or pylons may overhang 12" maximum from 27" to 80" above the ground or finished floor.
4. Protruding objects shall not reduce the required clear width of an accessible route or maneuvering space.
5. Any obstruction overhanging a pedestrian way shall be a minimum of 80 inches above the walking surface as measured to the bottom of the obstruction.

WALKS AND SIDEWALKS

1. Walks and Sidewalks shall have a continuous common surface not interrupted by steps or by abrupt changes in level which exceed 1/2", and shall be a minimum of 48" inches width.
2. Surface cross slope shall not exceed 1/4 inch per foot.

   Walks, sidewalks, and pedestrian ways shall be free of grating whenever possible. Grid openings within gratings located in the surface of any of these areas shall be limited to 1/2" in the direction of the traffic flow.

   When the slope in the direction of travel of any walk exceeds 1 vertical to 20 horizontal, it shall comply with the provisions of pedestrian ramps.

ENTRANCES DOORS

1. All primary entrances and exterior ground floor Exit Doors to buildings and facilities shall be made accessible to the physically disabled
2. All accessible entrances shall be identified with at least (1) Standard sign and with additional directional signs, as Required, visible from approaching pedestrian ways.
3. Every required entrance or passage doorway shall be of A size as to permit the installation of a door not less than 36" in width, and not less than 80" in hgt. Doors shall be Capable of opening at least 90 degrees and shall be Mounted so that the clear width of the doorway is not less Than 32". Latching and locking doors that are hand Activated and which are in a path of travel, shall be Operable with a single effort by lever type hardware, panic Bars, push - pull.
4. Activating bars, or other hardware designed to provide Passage without requiring the ability to grasp the opening Hardware. Lever hand activated door opening shall be Centered between 30 inches and 44 inches maximum above The floor.
5. The floor or landing length on each side of an entrance or Passage door shall be level and clear at least 60" in the Direction of the door swing, and at least 48".
6. Opposite the direction of the door swing as measured at right angles to the face of the door in the closed position. the side of the level and clear area on the side which the door swings shall extend a minimum of 18" (24" at exterior doors) past the strike edge of the door for doors with front approach, 24" for doors requiring latch side approach, and 36 inches for doors with hinge side approach. Refer to Detail No. 3 on this drawing for additional clearance requirements
7. The floor or landing shall not be more than 1/2" lower than The threshold of the doorway. Changes in level between 1/4" and 1/2" shall be leveled with a slope not greater Than 1:2.
8. The bottom 10 inches of all doors (except automatic and Sliding) shall have a smooth uninterrupted surface to Allow the door to be opened by a wheelchair foot rest Without creating a trap or hazardous condition. Where Narrow frame Doors are used, a 10 inch high smooth Panel shall be installed on the push side of the door, Which will allow the door to be opened by a wheelchair Footrest.
9. Maximum effort to operate doors shall not exceed 5 Pounds for exterior doors and 5 pounds for interior doors. Such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. compensating devices or automatic door operators may be increased to the minimum allowable by the appropriate administrative authority, not to exceed 15 pounds. CBC Section 1133b. 2. 5
10. All hand - activated door opening hardware shall meet the following requirements:
    A. Shall be centered between 30" and 44" above the floor
    B. Latching and locking doors shall be operated with a single effort by lever type hardware, panic bars, push - pull activating bars or other hardware designed to provide passage without the ability to grasp.
11. Thresholds shall not exceed 1/2" in height.
12. The tenant space, a primary entrance to the building, the Primary path of travel from the entrance to the tenant Space and the sanitary facilities, drinking fountains and Public telephones serving the tenant space must be Accessible to the handicapped.
13. Food service aisles shall be 36" minimum clear width with a Preferred width of 42" where passage around stopped Wheelchairs by others is desired.
14. Entrance (s) to the building or facility and the primary path of travel to the specific area of new work, alteration, structural repair or addition shall be accessible. Path - Of - Travel incorporated all elements from the exterior arrival site to the remodeled area. Section 1114b.1.2 and 1114b.1.3.

EXIT MEANS OF EGRESS

1. a. EXIT signs shall be internally or externally illuminated.
   b. Internally Illuminated EXIT signs shall be listed and labeled and shall be installed in accordance with Manufacturer's instructions and Section 2702.
   c. Externally illuminated EXIT signs shall comply with the graphics and power source requirements in Sections 1011. 5. 1 and 1011. 5. 3 , respectively. When the face of an EXIT sign is illuminated from an external source, it shall have an intensity of not less than 5 - foot - candles (54 lux) (1011. 2) EXIT signs shall be located so that they are clearly visible.
2. EXIT signs shall be illuminated at all times. (1011.3)
3. Any time a building or a portion of a building is occupied, the means of egress serving the occupied portion shall be illuminated at an intensity of not less than 1 - foot - candle (54 lux) at the walking surface level.
4. The power supply for means of egress illumination shall be provided by the premise's electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress.
5. The EXIT sign shall also be connected to an emergency electrical system which is to provide continued illumination for a duration of not less than 1 1/2 hours in case of primary power loss. Continued illumination is to be provided from storage batteries, unit equipment, or an on - site generator and the installation of the emergency power system shall be installed in accordance with Chapter 27. (1006. 3)
6. Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 - foot - candle (11 lux) and a minimum at any point of 0.1 foot - candle (1 lux) measured along the path of egress at floor level. A maximum - to - minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. (1006. 4)
7. EXIT signs shall be connected to an emergency power system that will provide an illumination of not less than 90 min. in case of primary power loss (1011.6.3).
8. Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. See 1008.1.9 for exceptions.
9. Door handles, lock and other operating devices shall be installed at a minimum 34" and a maximum 48" above finished floor.
10. THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED.
11. All egress door operation shall also comply with Section 1008.1.9 - 1008.1.9.12.
12. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied.

RAMPS

1. All ramps used as exits and any path of travel having a slope greater than 1:20 shall comply with the requirements of this section. Ramps shall have the least possible slope.
2. Pedestrian ramps serving primary entrances to a building shall have a minimum width of 48 inches. Ramps serving an occupancy load greater than 300 shall have a minimum width of 60 inches.
3. All ramps in areas accessible to persons with disabilities on a path of travel or serving exits shall have a 1:12 maximum slope with cross slopes no greater than 1:50.
4. The level landing width of any ramp shall extend past the strike edge of any door or gate as shown on detail no. 3 on this drawing.
5. Doors in any position shall not reduce the minimum dimension of the ramp landing to less than 42 inches, and shall not reduce the required width by more than 3 inches, when fully open.

SANITARY FACILITIES GENERAL

1. All doorways leading to sanitary facilities shall have clear unobstructed openings of 32 inches minimum.
2. All sinks, faucet controls, and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbs, lever operated, push type, and electronically controlled mechanisms are examples of acceptable designs. Self closing valves are allowed if the faucet remains open for at least 10 seconds.
3. Lavatories shall be mounted with a minimum distance of 18" from a wall or partition to the center of the fixture. Accessible lavatories shall be mounted with the rim or counter surface no higher than 34 inches above the floor.
4. Switches for control of lights, ventilation, fire alarms, etc. Shall be installed minimum 36" and maximum 48" above the finished floor. Electrical outlets shall be installed not less than 15" above the finished floor.

TOILET ROOM FIXTURES AND ACCESSORIES

1. The height of accessible water closets shall be a minimum of 17" and a maximum of 19" measured to the top of the toilet seat.
2. Provide 18 inches from the centerline of the water closet to the adjacent wall.
3. Toilet and urinal flush controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Controls for the flush valves valves shall be mounted on the open (wide) side of the toilet stall, no more than 44 inches above the floor. The force required to activate controls shall be no greater than 5 lbs.
4. Where urinals are provided, at least one shall have a clear space 30 inches wide by 48 inches long in front of the urinal. At least one urinal with a rim projecting a minimum of 14 inches from the wall and a maximum of 17 inches above the floor shall be installed.
5. A clear floor space 30 inches wide by 48 inches long shall be provided in front of a lavatory to allow forward approach. Such clear space shall adjoin or overlap an accessible route and shall extend into knee and toe space underneath lavatory. See Detail No. 6 on this Drawing.
6. Lavatories shall be mounted with a clearance of at least 29" from the floor to the bottom of the apron with knee clearance under the front lip extending a minimum of 30" in width with 8" minimum depth at the top. Toe clearance shall be same width and minimum of 9 inches high from the floor and a minimum of 17 inches deep from the front of the lavatory.
7. Hot water and drain pipes under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories.
8. Mirrors shall be mounted with bottom edge of the reflective surface not more than 40 inches from the floor.
9. Locate paper towel dispensers, sanitary napkin dispensers and waste receptacles with all operable parts not more than 40 inches from the floor.
10. Locate toilet tissue dispensers on the wall within 12" of the front edge of toilet seat. Dispensers that control delivery or that do not permit continuous paper flow shall not be used.

MULTIPLE ACCOMMODATION TOILET FACILITIES

1. A clear space measured from the floor to a height of 27" above the floor, within the sanitary facility room, of sufficient size to inscribe a circle of a diameter not less than 60 inches, or a clear space not less than 56" x 63" in size shall be provided. Doors other than the door to the disabled toilet compartment, in any position, may encroach into this space by not more than 12 inches.
2. An accessible individual toilet stall shall provide at least 28" clear space from a fixture or 32" clear space from a wall at one side of the water closet. A 48" long clear space in front of water closet shall be provided if the compartment has an end opening door (facing the water closet). A 60" long clear space shall be provided when door is located at the side of compartment. Grab bars shall not project more than 3 inches into clear space specified above.
3. Water Closet compartment shall be equipped with a door that has an automatic closing device, and shall provide a clear unobstructed opening width of 32" when located at the end, and 34 inches when located at the side (measured when when the door is positioned at an angle of 90 degrees from its closed position)
4. Toilet partitions for the accessinle toilet shal be provided with a latch that does not require grasp of twisting, and a U-shape or loop immediately below the latch on the inside AND outside of the partition door. CBC 1115B. 3. 1. 4. 5.
5. Except for door openings, a clear unobstructed access not less than 44" shall be provided to all water closet compartments designed for use by the disabled. The space immediately in front of a water closet compartment shall be not less than 48" as measured at right angles to the compartment door in its closed position.

GRAB BARS

1. Grab bars shall be located on one side and the back of the Physically disabled toilet stall or compartment and shall Be securely attached 33 inches above and parallel To the floor.
2. Grab bars at the side shall be minimum 42" long with the Front end positioned 24" from front of the water closet. Grab bars at the back shall not be less than 36".
3. The diameter or width of the gripping surfaces of a grab Bar shall be between 1 1/4" and 1 1/2" or the shape shall Provide an equivalent gripping surface. If the grab bars Are mounted adjacent to a wall. The space between the Wall and the grab bars shall be 1 1/2".
4. Grab bars, and any wall or other surface adjacent to it, Shall be free of any sharp or abrasive elements. Grab bar Edges shall have a minimum radius of 1/8".
5. Grab bars shall not rotate within their fittings.
6. Grab bars shall be designed to support a 250 pound force.

SIGNAGE

1. Braille symbols. Contracted grade 2 braille shall be used used wherever braille symbols are specifically required. Dots shall be 1/10 inch on center in each cell with 2/10 inch space between cells. Dots shall be raised a minimum of 1/40 inch above the background.
2. Proportions. Letters and numbers on signs shall have a width - to - height ratio of between 3:5 and 1:1 and a stroke width - to - height ratio of between 1:5 and 1:10.
3. Character height. Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read, the minimum height is measured using an uppercase 'X'. Lowercase characters are permitted. For signs suspended or projected above the finish floor the minimum character height shall be 3 inches.
4. Contrast of symbol. Characters and symbols shall contrast with their background, either light characters on a dark background or dark characters on a light background.
5. Raised characters and pictorial symbol signs. When raised characters or symbols are used, they shall conform to the following:
   a. Letter type. Letters and numbers on signs shall be raised 1/32 inch minimum and shall be sans - serif uppercase characters accompanied by grade 2 braille.
   b. Symbol size. Raised characters or symbols shal be a minimum of 5/8 inch high.
   c. Pictorial symbol signs (pictograms). Pictorial symbol signs (pictograms) shall be accompanied by the equivalent verbal description placed directly below the pictogram. The border dimension of the pictogram shall be a minimum of 6" in height.
6. Mounting location and height. Where permanent identification is provided for rooms and spaces, raised letters shall be provided and shall be accompanied by braille. Signs shall be installed on the wall adjacent to the latch outside of the door. Where there is no wall space on the latch side, including at double leaf doors, signs shall be placed on the nearest adjacent wall, preferably on the right. Mounting height shall be 60" above the finish floor to the center line of the sign. Mounting location shall be determined so that a person may approach the swing of a door. Within 3" of the signage encountering protruding objects

SEATING

1. If seating spaces for person in wheelchairs are provided at fixed tables or counters, clear floor space complying with section 1118b.4 shall be provided. Such clear floor space shall not overlap knee and 19" inches deep shall be provided section 1122b.2 .

KNEE CLEARANCE

1. If seating for person in wheelchairs are provided at fixed tables or counters, knee space at least 27 inches height, 30 inches wide and 19" deep shall be provided section 1122b.3.

DINING SURFACE OR COUNTER SURFACES

1. The tops of tables and counters shall be 28" to 34" from the floor ground. Section 1122b.4 .

REACH RESTRICTIONS

1. Public cashier counters shall be 34" in height.
2. Relationship of maneuvering clearances to wheelchair Spaces. One full unobstructed side of the clear floor or Ground space for a wheelchair shall adjoin another Wheelchair clear floor space. If a clear floor space is Located in an alcove or otherwise confined all or part of Three sides, additional maneuvering clearances shall be Provided.
3. Forward reach. If the clear floor space allows only Forward approach to an object, the maximum high forward Reach allowed shall be 48 inches. The minimum low forward Reach is 15 inches.
4. Side reach. If the clear floor space allows parallel Approach by a person in a wheelchair, the maximum High side reach allowed shall be 54 inches and the low Side reach shall be no less than 9 inches above the floor.
5. The operating part of all accessories shall be installed at 40' maximum to the centerline of the operating part from finished floor surface. CBC 1115b. 8. 3

ELECTRICAL NOTES

1. Controls and switches intended to be used by the occupant of the room or area to control lighting and receptacle outlets, appliances, or cooling, heating, and ventilating equipment, shall be located no more than 48 inches measured from the top of the outlet box nor less than 15 inches measured from the bottom of the outlet box to the level of the finish floor or working platform. (1117B. 6. 5. 1)
2. Electrical receptacle outlets on branch circuits of 30 amperes or less and communication system receptacles shall be located no more than 48 inches measured from the top of the receptacle outlet box or receptacle housing nor less than 15" measured from the bottom of the receptacle outlet box or receptacle housing to the level of the finish floor or working platform. (1117B. 6. 5. 2)
3. The power supply for means of egress illumination shall be provided by the premise's electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress.

NOTIFICATION APPLIANCES FOR THE HEARING IMPAIRED

1. If emergency warning systems are provided, they shall include both audible alarms and visual alarms complying with NFPA 72 and Chapter 9, Sections 907. 5. 2. 1 and 907. 5. 2. 3. (1114B. 2. 2)

ENTRANCES AND EXITS

Exit as defined is "that portion of a means of egress system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protective's as required to provide a protected path of egress travel between the exit access and the exit discharge. Exits include exterior exit doors at ground level, exit enclosures, exit passageways, exterior exit stairs, exterior exit ramps and horizontal exits." (1002.1).

Public way as defined is "a street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet. (1002.1).

1. All entrances and exterior ground floor exit doors to buildings and facilities shall be made accessible to persons with disabilities. (1133b.1.1.1.1).
2. Revolving doors shall not be used as a required entrance for persons with Disabilities. (1133b.2.3.3).
3. During periods of partial or restricted use of a building or facility, the entrances used for primary access shall be accessible to and usable by persons with disabilities. (1133b.1.1.1.2).
4. Recessed doormats shall be adequately anchored to prevent interference with Wheelchair traffic. (1133b.1.1.1.3, Fig. 11b-25).
5. All gates, including ticket gates, shall meet all applicable accessibility specifications of doors. (1133b.1.1.1.4).
6. Every required exit doorway shall be capable of opening at least 90 degrees, shall have a minimum clear opening of 32 inches, and shall be of a size as to permit the installation of a door not less than 3 feet in width and not less than 6'-8" in Height. (1133b.2.2).
7. The space between two consecutive door openings in a vestibule, serving other than a required exit stairway, shall provide a minimum of 48 inches of clear space from any door opening into such vestibule when the door is positioned at an angle of 90 degrees from its closed position. Doors in a series shall swing either in the same direction or away from the space between the doors. See Figures 11b-30 & 11b-31. (1133b.2.4.4).

DOORS

1. Door handles, pulls, latches, locks and other operating devices on doors required to be accessible shall not require tight grasping, tight pinching or twisting of the wrist to operate. Manually operated bolts or surface bolts are not permitted. The unlatching of any door or leaf shall not require more than one operation. (1008).
2. Latching and locking doors that are hand activated and which are in a path of travel shall be operable with a single effort by lever type hardware, by panic bars, push-pull activating bars, or other hardware designed to provide passage without requiring the ability to grasp the opening hardware. (1133b.2.5.2).
3. Hand-activated door opening hardware shall be centered between 30" and 44" above The floor. (1133b.2.5.2).
4. When installed, doorways shall have a minimum clear opening of 32 inches with the door open 90 degrees. (1133b.1.1.1.1, fig 11b -5b & 11b-33).
5. For hinged doors, the opening width shall be measured with the door positioned at An angle of 90 degrees from its closed position. (1133b.2.3, fig 11b-5b).
6. Where a pair of doors is utilized, at least one of the doors shall provide a clear, unobstructed opening width of 32 inches with the leaf positioned at an angle of 90 degrees from its closed position. (1133b.2.3.1).
7. When an automatic or power assisted door operator is utilized to operate a pair of doors, at least one of the doors shall provide a clear, unobstructed opening width of 32" with the door positioned at an angle of 90 degrees from its closed position. Automatic doors shall comply with BHMA A156.10 or BHMA A156.19. (1133b.2.3.2).
8. Minimum maneuvering clearances at doors shall be as shown in Figure 11b-26a & 11b-26b. The floor or ground area within the required clearances shall be level and clear. (1133b.2.4.2).
9. There shall be a level and clear floor or landing on each side of a door. The level area shall have a length in the direction of door swing of at least 60" and the length opposite the direction of door swing of 48" as measured at right angles to the plane of the door in the closed position. Where the plane of the doorway is offset or locked in an alcove a distance more than 8 inches measured from the plane of the doorway to the face of the wall, the door shall be provided with 60" maneuvering clearance for front approach. (1133b.2.4.2, 1133b.2.5.3, Fig. 11b-26, Fig. 11b-33a).
10. The width of the level area on the side to which the door swings shall extend 24 inches past the strike edge of the door for exterior doors and 18 inches past the strike edge for interior doors. Where the plane of the doorway is offset 8 or more inches from any obstruction within 18 inches measured laterally on the latch side, the door shall be provided with maneuvering clearance for front approach. (1133b.2.4.3, 1133b.2.4.5, 1133b.2.5.3, Fig. 11b-33(a)).
11. Provide clear space of 12" past strike edge of the door on the opposite side to which the door swings if the door is equipped with both a latch and a closer. (fig 11b-26 (a)).
12. The floor or landing shall be not more than ½ inch lower than the threshold of The doorway. (1133b.2.4.1).
13. The bottom 10" of all doors except automatic and sliding shall have a smooth, uninterrupted surface to allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10" high smooth panel shall be installed on the push side of the door, which will allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. (1133b.2.6, fig 11b-29).
14. Maximum effort to operate exterior and interior doors shall not exceed 5 pounds, with such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum Allowable by the appropriate administrative authority, not to exceed 15 lbf. (1133b.2.5).
15. When the door has a closer, then the sweep period of the closer shall be Adjusted so that from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing edge of the door. (1133b.2.5.1).
16. Where turnstiles and crowd control barriers are utilized in a facility for the purpose of providing fully controlled access, such as where an admission price is charged, a door or gate that is accessible to persons with disabilities shall be provided adjacent to each turnstile exit or entrance. This alternate passageway shall be maintained in an unlocked condition during business hours and the door or gate shall not activate a publicly audible alarm system. The door or gate may be latched where all gates are restricted and controlled by an attendant and a sign is posted stating, "All gates are restricted and controlled by an attendant." the accessible door or gate shall provide the same use pattern. Where posts, rails, or other pedestrian controls are utilized to create crowd control aisles or lanes, a minimum aisle width not less than indicated in Figure 11b-5e (a) and (b) with 32 inches of Clear opening. (1133b.2.3.4).

FLOORS AND LEVELS

Level area is defined as "A specified surface that does not have a slope in any Direction steeper than 1/4 inch in one foot from the horizontal (2.083% gradient). " (1102b).

1. In buildings and facilities, floors of a given story shall be a common level throughout, or shall be connected by pedestrian ramps, passenger elevators, or special access lifts. (1120b.1).
2. Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs, and curb ramps, shall be stable, firm, and slip-resistant. (1120b.2 & 1124b.1).
3. Changes in level up to 1/4" may be vertical and without edge treatment. (1124b.2, Fig. 11b-5e (c)).
4. Changes in level between 1/4" Inch and 1/2" shall be beveled with a slope no steeper that 1:2. (1124b.2, fig 11b-5e (d)).
5. If carpet or carpet tile is used on a ground or floor surface, it shall be securely attached; have a firm cushion, pad or backing or no cushion or pad; and have a Level loop, textured loop, level cut pile, or level cut/uncut pile texture. The Maximum pile height shall be 1/2" exposed edges of carpet shall be fastened to floor surfaces and have trim along the entire length of the exposed edge. Carpet Edge trim shall comply with Section 1124b.2. (1124b.3, Fig. 11b-7e).
6. F gratings are located on floors, then they shall have spaces no greater than 1/2" wide in one direction. If gratings have elongated openings, they shall be placed so that the long dimension is perpendicular to the dominant direction of travel. (1124b.4, fig 11b-7e).

CORRIDORS AND AISLES

1. Every corridor and hallway serving an occupant load of 10 or more shall not be Less than 44 inches in width. (1133b.3.1).
2. Corridors and hallways serving an occupant load of less than 10 shall not be less than 36 inches in width. (1133b.3.1).
3. Corridors which are located on accessible route and exceed 200 feet in length Shall: (1133b.3.2, Fig 11b-34).
   a. Have a minimum clear width of 60" ; or
   b. Have, at reasonable intervals, a 60 inches by 60 inches minimum wheelchair Turning space or passing alcove; not to exceed 200 feet; or
   c. Have, at a central location, an intervening crossing or tee corridor, a minimum of 44 inches in width.
4. Circulation aisles and pedestrian ways shall be sized according to functional Requirements and in no case shall be less than 36 inches in clear width. (1105b.3.6).
5. Every portion of every building in which are installed seats, tables, merchandise, Equipment, or similar materials shall be provided with aisles leading to an exit. (1133b.6.1).
6. Every aisle shall be not less than 36 inches wide if serving only one side, and not Less than 44 inches wide if serving both sides. (1133b.6.2).

WALKWAYS AND PROTRUDING OBJECTS

1. Abrupt changes in level, except between a walk or sidewalk and an adjacent street or driveway, exceeding 4 inches in a vertical dimension, such as at planters or fountains located in or adjacent to walks, sidewalks, or other pedestrian ways, shall be identified by warning curbs projecting at least 6 inches in height above the walk or sidewalk surface to warn the blind of a potential drop off. (1133b.8.1).
2. When a guard or handrail is provided, no curb is required when a guide rail is provided centered 3 inches plus or minus 1 inch above the surface of the walk or sidewalk, the walk is 5 percent or less gradient or no adjacent hazard exists. (1133b.8.1, Fig. 11b-27 (c)).
3. Objects projecting from walls with their leading edges between 27 inches and 80 inches above the finished floor shall protrude no more than 4 inches into walks, halls, corridors, passageways, or aisles. (1133b.8.6.1, fig 11b-7a).
4. Objects mounted with their leading edges at or below 27 inches above the finished floor may protrude any amount into walks, halls, corridors, passageways, or aisles. (1133b.8.6.1, fig 11b-7a).
5. Free - standing objects mounted on posts or pylons may overhang 12" maximum from 27" to 80" above the ground or finished floor. (1133b.8.6.1, Fig. 11b-7b).
6. Protruding objects shall not reduce the clear width of an accessible route or maneuvering space. (1133b.8.6.1, fig 11b-7d).
7. Walks, halls, corridors, passageways, aisles, or other circulation spaces shall have 80 inches minimum clear head room. (1133b.8.6.2, Fig. 11b-7a & 7c).
8. Any obstruction that overhangs a pedestrian way shall be a minimum of 80 inches above the walking surface as measured from the bottom of the obstruction. (1133b.8.2, Fig. 11b-28).
9. Where a guy support is used parallel to a path of travel, including, but not limited to sidewalks, a guy brace, sidewalk guy or similar device shall be used to prevent an overhanging obstruction as defined. (1133b.8.2).
10. If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36 inches wide, complying with Section 1121b.3.1, Item 8(a) . (1133b.8.5).
11. Transit boarding platforms shall conform to the requirements of Section 1121b.3.1, Item 8(b) . Only approved DSA/AC detectable warning products and directional surfaces shall be installed as provided in the California Code of Regulations, Title 24, Part 1, Articles 2, 3, and 4. (1133b.8.4 &1133b.8.5).

STAIRWAYS

1. Stairways shall have handrails on each side, and every stairway required to be more Than 88 inches in width shall be provided with not less than one intermediate handrail for each 88 inches of required width. Intermediate handrails shall be spaced approximately equally across the entire width of the stairway. Handrails shall be continuous along both sides of the stairway. (1133b.4.1.1).
2. The top of handrail gripping surface shall be mounted 34 to 38 inches above the Nosing of the treads. (1133b.4.2.1, Fig. 11b-35).
3. Handrails shall extend a minimum of 12 inches beyond the top nosing and 12 inches plus the tread width beyond the bottom nosing and ends shall be returned or terminate in newel posts or safety terminals. (1133b.4.2.2, 1133b4.2.3, Fig. 11b-35, 37).
4. The handgrip portion of handrails shall be not less than 1 1/4 inches or more than 1 1/2 inches in cross-sectional nominal dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Gripping surfaces (top or sides) shall be uninterrupted by newel posts, other construction elements, or obstructions. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. Edges shall have a minimum radius of 1/8 inch. (1133b.4.2.6, Fig 11b-36).
5. The orientation of at least one handrail shall be in the direction of the run of the stair and perpendicular to the direction of the stair nosing, and shall not reduce the minimum required width of stairs. (1133b.4.2.4).
6. Handrails projecting from a wall shall have a space of 1-1/2 inches between the wall and the handrail. Handrails may be located in a recess if the recess is a maximum of 3 inch deep and extends at least 18 inches above the top of the rail. Handrails shall not rotate within their fitting. (1133b.4.2.5, fig 11b-36).
7. The upper approach and the lower tread of each stair shall be marked by a strip of clearly contrasting color at least 2 inches wide placed parallel to and not more than one inch from the nose of the step or landing to alert the visually impaired. The strip shall be of material that is at least as slip resistant as the other treads of the stair. (1133b.4.4, fig 11b-35).
8. Where stairways occur outside a building, the upper approach and all treads shall be marked by a strip of clearly contrasting color at least 2 inches wide and placed parallel to and not more than 1" from the nose of the step or landing to alert the visually impaired. The strip shall be of a material that is at least as slip-resistant as the other treads of the stair. A painted strip shall be acceptable. (1133b.4.4, fig 11b-35).
9. All tread surfaces shall be slip-resistant. Weather exposed stairs and their approaches shall be designed so that water will not accumulate on walking surfaces. Treads shall have smooth, rounded, or chamfered exposed edges, and no abrupt edges at the nosing (lower front edge). (1133b.4.5.1, fig 11b-35).
10. The nosing shall not project more than 1 1/2 inches past the face of the riser below. (1133b.4.5.2, Fig. 11b-35).
11. Open risers are not permitted. On any given flight of stairs, all steps shall have uniform riser height and uniform tread widths consistent with 1133b.4. Stair treads shall be no less than 11 inches deep, measured from riser to riser. Risers shall be sloped or the underside of the nosing shall have an angle not less than 60 degrees from the horizontal. (1133b.4.5.3, fig 11b-35).
12. Tactile floor designation signs that comply with section 1117b.5.1 shall be located at each floor level landing in all enclosed stairways in buildings two or more stories in height to identify the floor level. At exit discharge level, the sign shall include a raised five-pointed star located to the left of the identifying floor level. The outside diameter of the star shall be the same as the height of the raised characters. (1133b.4.3).

CONTROLS AND OPERATING MECHANISMS

1. Controls and operating mechanisms in accessible spaces, along accessible routes or as part of accessible elements and those in Section 109.1 are required to be Accessible. (1117b.6.1).
2. Clear floor space complying with section 1118b.4 that allows a forward or parallel approach by a person using a wheelchair shall be provided at controls, dispensers, receptacles, and other operable equipment. (1117b.6.2).
3. The highest and lowest operable part of all controls, dispensers, receptacles, and other operable equipment shall be placed within one of the reach ranges specified in sections 1118b.5 and 1118b.6. Electrical and communication system receptacles on walls shall be mounted no less than 15 inches above the floor. (1117b.6.3).
4. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, punching, or twisting of the wrist. To force required to activate controls shall be no greater than 5 pounds of force. (1117b.6.4).
5. For accessible lavatories, faucet controls and operating mechanisms shall be operable with one hand and shall not require grasping, pinching, or twisting of the wrist. The force required to active faucet controls and operating mechanisms shall be no greater than 5 lbf. Lever-operated, push-type, and electronically controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds. (1115b.4.3).

SPACE ALLOWANCE AND REACH RANGES

1. The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 inches by 48 inches. The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object. Clear floor or ground space for wheelchairs may be a part Of the knee space required under some objects. (1117b.2.3, 1118b.4.1, fig 11-b-5a).
2. One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor or ground space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances shall be provided. (1117b.2.4, 1118b.4.2, Fig. 11-b-5a).
3. The space required for a wheelchair to make a 180 degree turn is a clear space of 60" diameter or a t-shaped space. (1118b.3, Fig. 11b-12 (a) & (b)).
4. The minimum clear width required for a wheelchair to turn around an obstruction shall be 36 inches where the obstruction is 48 inches or more in length and 42 inches and 48 inches where the obstruction is less than 48 inches in length. (Fig. 11b-5e).
5. The minimum clear width for single wheelchair passage shall be 32 inches at a point and 36 inches continuously. (1118b.1, Fig. 11b-10).
6. The minimum width for two wheelchairs to pass is 60 inches. (1118b.2, fig 11b-11).
7. If the clear floor space only allows forward approach to an object, the maximum High forward reach allowed shall be 48 inches. See Figure 11b-5c (a) . The minimum low forward reach is 15 inches. If the high forward reach is over an obstruction, reach and clearances shall be as shown in Figure 11b-5c (b) . (1118b.5).
8. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches and the low side reach shall be no less than 9 inches above the floor as shown in Figures I 1 b-5d(a) & (b) . If the side reach is over and obstruction, the reach and clearances shall be as shown in Figure 11b-5d (c) . (1118b.6).

EMPLOYEE AREAS AND WORKSTATIONS

Work station is defined as "An area defined by equipment and / or work surfaces intended for use by employees only, generally for one or a small number of employees at a Time..." (1102b).

1. Employee areas shall conform to all requirements of the division of the state Architect - access compliance in the California Building Code, Plumbing Code, and Electrical Code. (1123b.1).
2. Specific workstations need only comply with aisle width and floors and levels, and entry-ways shall be 32 inches in clear width. Aisles shall not be less than 36 inches if serving only one side, and not less than 44 inches wide if serving both Sides. (1123b.2,1133b.6.2).
3. Employee work areas shall be accessible by means of 36 inch minimum aisle and 32 inch minimum clear opening door width. (1105b.3.2.3).

FIXED OR BUILT IN SEATING TABLES AND COUNTERS

1. Where fixed or built-in seating, tables, or counters are provided for the public, and in general employee areas, five percent but never less than one must be accessible, as required in Section 1122b. (1122b.1).
2. If seating spaces for persons in wheelchairs are provided at fixed tables or counters, clear floor space complying with section 1118b.4 shall be provided. Such Clear floor space shall not overlap knee space by more than 19 inches. (1122b.2, Fig 11b-13).
3. If seating for persons in wheelchairs is provided at fixed tables or counters, knee spaces at least 27 inches high, 30 inches wide, and 19 inches deep shall be provided. (1122b.3, fig 11b-13).
4. The tops of tables and counters shall be 28 inches to 34 inches from the floor or ground. (1122b.4).
5. Where a single counter contains more than one transaction station, such as a bank counter with multiple teller windows or a retail sales counter with multiple cash register stations, at least 5 percent, but never less than one of each type of station shall be located at a section of counter that is at least 36 inches long and no more than 28 to 34 inches high. (1122b.4).

SIGNS AND IDENTIFICATION

California's standards for signage are more stringent and are significantly larger and wider than federal law, Americans with Disabilities Act (ADA) Section 4.30. (1117b.5). The international symbol of accessibility shall be the standard used to identify facilities that are accessible to and usable by physically disabled persons as set forth in Title 24 and as specifically required in this section. (1117b.5.8.1, fig 11b-6).

1. The international symbol of accessibility shall consist of a white figure on a blue Background. The blue shall be equal to Color No. 15090 in Federal Standard 595B. (1117b5.8.1.1).
2. All building and facility entrances that are accessible to and usable by persons with disabilities and at every major junction along or leading to an accessible route of travel shall be identified with a sign displaying the international symbol of accessibility and with additional directional signs, as required, to be visible to persons along approaching circulation paths. (1117b.5.8.1.2. & 1127b.3).
3. When perm

ACCESSIBILITY REQUIREMENTS

ENTRANCES AND E ITS

Exit as defined is "that portion of a means of egress system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protective's as required to provide a protected path of egress travel between the exit access and the exit discharge. Exits include exterior exit doors at ground level, exit enclosures, exit passageways, exterior exit stairs, exterior exit ramps and horizontal exits." (1002.1).

Public way as defined is "a street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet. (1002.1).

1. All entrances and exterior ground floor exit doors to buildings and facilities shall be made accessible to persons with disabilities. (1133b.1.1.1.1).
2. Revolving doors shall not be used as a required entrance for persons with Disabilities. (1133b.2.3.3).
3. During periods of partial or restricted use of a building or facility, the entrances used for primary access shall be accessible to and usable by persons with disabilities. (1133b.1.1.1.2).
4. Recessed doormats shall be adequately anchored to prevent interference with Wheelchair traffic. (1133b.1.1.1.3, Fig. 11b-25).
5. All gates, including ticket gates, shall meet all applicable accessibility specifications of doors. (1133b.1.1.1.4).
6. Every required exit doorway shall be capable of opening at least 90 degrees, shall have a minimum clear opening of 32 inches, and shall be of a size as to permit the installation of a door not less than 3 feet in width and not less than 6'-8" in Height. (1133b.2.2.2).
7. The space between two consecutive door openings in a vestibule, serving other than a required exit stairway, shall provide a minimum of 48 inches of clear space from any door opening into such vestibule when the door is positioned at an angle of 90 degrees from its closed position. Doors in a series shall swing either in the same direction or away from the space between the doors. See Figures 11b-30 & 11b-31. (1133b.2.4.4).

ENTRANCES AND E ITS

1. All entrances and all exterior ground floor exit doors to buildings and facilities shall be made accessible to persons with disabilities.
2. All accessible entrances shall be identified with at least one standard sign and with additional directional signs, as required, visible from approaching pedestrian ways.
3. All gates, including ticket gates, shall meet all applicable accessibility specifications of doors.
4. Every required exit doorway which is located within an accessible path of travel shall be capable of opening at least 90 degrees, shall have a minimum clear opening of 32", and shall be of a size as to permit the installation of a door Not less than 3' in width and not less then 6'-8" in height.
5. Latching and locking doors that are hand activated and which are in a path of travel shall be operable with a single effort by lever type hardware, by panic bars, push-pull activating bars, or other hardware designed to provide passage without requiring the ability to grasp the opening hardware.
6. Hand-activated door opening hardware shall be centered between 30" and 44" above the floor.
7. The floor and landing on each side of an entrance or passage door shall be level and clear. The level and clear area shall have a length in the direction of door swing of at least 60" and the length opposite the direction of door swing of 44" as measured at right angles to the plane of the door in its closed position.
8. The floor or landing shall be not more than 1/2" lower than the threshold of the doorway. Change in level between 1/4" and 1/2" shall be beveled with a slope no greater than 1:2.
9. The bottom 10" of all doors except automatic and sliding shall have a smooth uninterrupted surface to allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10" high smooth panel shall be installed on the push side of the door, which will allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition.
10. Maximum effort to operate interior and exterior doors shall not exceed 5 pounds, with such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When Fire Doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate administrative authority, not to exceed 15 pounds.
11. For hinged doors, the opening width shall be measured with the door position at an angle of 90 degrees from the closed position.
12. Where a pair of doors is utilized, at least one of the doors shall provide a clear, unobstructed opening width of 32" with the leaf positioned at an angle of 90 degrees from its closed position.
13. When an automatic door operator is utilized to operate a pair of doors, at least one of the doors shall provide a clear unobstructed opening width of 32" with the door positioned at an angle of 90 degrees from its closed position.
14. Minimum maneuvering clearances at doors shall be as shown in figure 11B-26. The floor or ground area within the required clearances shall be level and Clear.
15. There shall be a level and clear floor or landing on each side of a door. The level area shall have a length in the direction of door swing of at least 60" and the length opposite the direction of door swing of 48" as measured at right angles to the plane of the door in the closed position. Where the plane of the doorway is offset or located in an alcove a distance more than 8" measured from the plane of the doorway to the face of the wall, the door shall be provided with 60" maneuvering clearance for front approach.
16. Provide clear space of 12" past strike edge of the door on the opposite side to which the door swings if the door is equipped with both a latch and a closer.
17. Where the door opens into a stair of a smoke proof enclosure, the landing need not have a length of 60".
18. When the door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3" from the latch, measured to the landing edge of the door.
19. Where turnstiles and crowd control barriers are utilized in a facility for the purpose of providing fully controlled access, such as where an admission price is charged, a door or gate that is accessible to persons with disabilities shall be provided adjacent to or within a distance not to exceed 30' from each turnstile exit or entrance. This alternate passageway shall be maintained in an unlocked condition during business hours and the door or gate shall not activate a publicly audible alarm system. A sign is posted stating "The door or gate may be latched where all gates are restricted and controlled by an attendant and a sign". "All gates are restricted and controlled by attendant." The accessible door or gate shall provide the same use pattern. Where posts, rails, or other pedestrian controls are utilized to create crowd control aisles or lanes, an minimum aisle width not less than indicated in figure 11B-5e (a) and (b) with 32" of clear opening.
20. Accessible entrances to and from exits from a building must be provided, according to ADA AG 4.1.3 (8) and applicable codes.
21. Maneuvering clearances at doors shall be level (1:50 max. Slope) and clear if doors are not automatic or power assisted.
22. Revolving doors shall not be used as a required entrance for persons with disabilities.
23. All doors in alcoves shall comply with the clearances for front approaches.
24. Provide tactile exit sign per section.
25. Accessible stall in multi-accommodation toilet facilities shall be a minimum of 60" wide per .

AISLES

1. Every corridor shall be as shown on the plans and shall be determined as per CBC Chapter 10, but shall not be less than 44 inches in width.
2. Every portion of every building in which are installed seats, tables, merchandise, equipment or similar materials shall be provided with aisles leading to an exit.

NOTIFICATION APPLIANCES FOR T E EARING IMPAIRED

1. Approved notification appliances for the hearing impaired shall be installed in accordance with the provisions of NFPA 72 and CBC, chapter 9, section 907.9.1 and 907.9.2.

   a. Restrooms
   b. Corridors
   c. Music Practice Rooms
   d. Band Rooms
   e. Gymnasium
   f. Multipurpose Rooms
   g. Occupational Shops
   h. Occupied Rooms where Ambient Noise impairs hearing of the Fire Alarm.
   i. Lobbies
   j. Meeting Rooms
   k. Classrooms

2. Strobe signaling devices required for the hearing impaired shall be state Fire Marshall, NFPA 72: per chapter 6, section 6-4, visible characteristics, public mode.
3. The flash rate shall not exceed 3 flashes per second nor be less than 1 flash every three seconds NFPA 72: per chapter 6, section 6-4.2, light pulse characteristics.
4. Audible signals intended for operation in the public mode shall have a sound level of not less than 75 DBA at 10' or more than 130 DBA at the minimum hearing distance from the audible appliance. NFPA 72: per chapter 6, section 6-3, audible characteristics, public mode.
5. Audible signals intended for operation in the private mode shall have a sound level of not less than 45 DBA at 10' or more than 130 DBA at the minimum hearing distance from the audible appliance. NFPA 72: per chapter 6, section 6-3.2, audible characteristics, private mode.
6. The light source color shall be clear or nominal white and shall not exceed 1000 Candela (effective intensity). (NFPA 72 sec 4-4.2.2).
7. Wall mounted appliances shall be mounted such that the entire lens is not less than 80" and not greater than 96" above the finished floor. Ceiling-mounted appliances shall be installed per Table 4-4.4.1.1. (NFPA 72 sec 4-4.4).
8 Notification appliances installed in rooms shall be spaced as follows: (NFPA 72 sec4-4.4.1)

   1). Spacing shall be in accordance with Figure 4-4.4.1. and Tables 4-4.4.1 and (b). The separation between appliances shall not exceed 100'. (NFPA 72 sec 4-4.4.1).

   2). Visible notification appliances shall be installed in accordance with Table 4-4.4.1.1 (a), using one of the following: (NFPA 72 sec 4-4.4.1.1).

   a. A single visible notification appliance.
   b. Two visible notification appliances located on opposite walls.
   c. In rooms 80' x 80' or greater, where there are more than two appliances in any field of view, they shall be spaced a minimum of 55' from each other.
   d. More than two visible notification appliances that flash in synchronization.

   Note: Where a room configuration is not square, the square room size that entirely encompasses the room or subdivides the room into multiple squares shall be used.

9. Notification appliances installed in corridors shall be spaced as follows: (NFPA 72 SEC. 4-4.4.1).

   a. Table 4-4.4.2.1 shall apply to corridors not exceeding 20' in width. For corridors greater than 20' in width, refer to figure 4-4.4.1.1 and tables 4-4.4.1.1 (a) and (b). (nfpa 72 sec 4-4.4.2.1)

   b. Visual appliances shall be rated not less than 15 Candela. (NFPA 72 SEC 4-4.4.2.1).
   c. The visible appliances shall be located no more than 15' from the end of the corridor with a separation no greater than 100' between appliances. (NFPA 72 SEC 4-4.4.2.2).
   d. Where there is an interruption of the concentrated viewing path, such as a fire door, an elevation change, or any other obstruction, the area shall be considered as a separate corridor. (NFPA 72 SEC 4-4.4.2.2).

10. An electrical plan check and fire dept. Plan check is required prior to installation of visual notification appliances

SANITAR FACILITIES

1. Toilet facilities that serve buildings, facilities or portions of buildings or facilities that are required by these standards to be accessible to persons with disabilities, shall be on an accessible route and shall conform to the requirements of Section 1115B. (1115B.1).
2. Where separate facilities are provided for persons of each sex, these facilities shall be accessible to persons with disabilities. Where unisex facilities are provided, these facilities shall be accessible to persons with disabilities. (1115B.1.1, Fig. 11B-1A).

   a. Toilet centering from wall 18" 15"- 12" toilet seat height 17"-19" 15" 10"-12" Grab bar height (side) 33" 27"+ 20"-22" toilet paper in front of toilet 12" maximum 6" maximum
   b. 6" max napkin disposal in front of toilet 12" max 12" maximum n/a dispenser or mirror
   c. Height 40" max 36" max 32" max lavatory/sink top height 34" max 29" max 24" max.
   d. Lavatory/sink knee clearance 27" min 24" min 19" min urinal lip height 17" max 15" Max
   e. 13" min urinal flush handle height 44" max 37" max 32" max drinking fountain bubbler
   f. 13" min urinal flush handle height 44" max 37" max 32" max drinking fountain bubbler Min
   g. Ramp/stair handrail height 34"-38" 27" 22"

3. Doorways leading to men's sanitary facilities shall be identified by an equilateral triangle 1/4" thick with edges 12" long and a vertex pointing upward. Women's sanitary facilities Shall be identified by a circle 1/4" thick and 12" in diameter. (1115b.6).
4. Unisex sanitary facilities shall be identified by a circle 1/4" thick, 12" in diameter, with a 1/4" thick triangle superimposed on the circle and within the 12" diameter. (1115b.6).
5. Geometric (circle & triangle) symbols on sanitary facility doors shall be centered on the Door at a height of 60" and their color and contrast shall be distinctly different from The color and contrast of the door. (1115b.6).

   Note: See also section 1117b.5.1 for additional signage requirements applicable to Sanitary Facilities.

SINGLE ACCOMMODATION SANITAR FACILITIES

Note: Single accommodation sanitary facility is defined as "a room that has not more than one of each type of sanitary fixture, is intended for use by only one person at a time, has no partition around the toilet, and has a door that can be locked on the inside by The room occupant". (202).

1. Show sufficient space in the toilet room for a wheelchair measuring 30" wide by 48" long To enter the room and permit the door to close. (1115.B.3.2.1).
2. Show a clear floor space of at least 60" in diameter, or a T-shaped space complying with Figures 11b-12(a) and (b). No door shall encroach into this space for more than 12". (1115b.3.2.1, FIG 11b-1a).
3. Doors shall not swing into the clear floor space required for any fixture. (1115b.3.2.2).
4. Show that the centerline of the water closet fixture shall be 18" from the side wall or Partition. On the other side of the water closet, provide a minimum 28" wide clear floor space if the water closet is adjacent to a fixture or a minimum of 32" wide clear floor space if the water closet is adjacent to a wall or partition. This clear space shall extend From the rear wall to the front of the water closet. (1115b.4.1, fig 11b-1a).
5. All doors, fixtures, and controls shall be on an accessible route with a minimum clear Width of 36" except at doors. If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in figure 11b-5e. (1115b.3.2.4).
6. The entrance door shall contain a privacy latch which complies with section 1117b.6. (1115b.3.2.7).
7. Provide 18 inches clearance on the strike side of the door. (1115b.3.1).
8. In existing buildings, a single accommodation toilet water closet may be located in an area which provides a clear space of 36"wide by 48 inches long in front of the water closet. (1115b.3.2).

MULTIPLE ACCOMMODATION SANITAR FACILITIES

Note: Multiple accommodation sanitary facility is defined as "a room that has more than one sanitary fixture, is intended for the use of more than one person at a time, and which usually is provided with privacy compartments or screens shielding some fixtures from View". (202).

1. Show a clear space measured from the floor to a height of 27" above the floor, within The sanitary facility room, of sufficient size to inscribe a circle with a diameter not less than 60". Doors shall not swing into the floor space required for any fixture. Other than the door to the accessible water closet compartment, a door, in any position, may encroach into this space by not more than 12". (1115b.3.1.1 & 1115b3.1.2, FIG 11b-1b).
2. A water closet fixture located in a compartment shall provide a minimum 28" wide clear space from a fixture or a minimum 32" wide clear space from a wall at one side of the Water closet. The other side of the water closet shall provide 18" from the centerline of The water closet to the wall. Grab bars shall not project more than 3" into these clear spaces. The stall shall be minimum of 60" wide. (1115b.4.1.1, fig 11b-1b).
3. If the compartment has a side-opening door, show a minimum 60" wide and 60" deep clear floor space in front of the water closet. (1115b.3.1.4.2).
4. If the compartment has an end-opening door, show a minimum 60" wide and 48" deep clear floor space in front of the water closet. The door shall be located in front of the clear floor space and diagonal to the water closet, with a maximum stile width of 4". (1115b.3.1.4.3, Fig. 11b-1a & b).
5. Note that the water closet compartment shall be equipped with a door that has an Automatic-closing device, and shall have a clear, unobstructed opening width of 32" when Located at the end and 34" when located at the side with the door positioned at an angle of 90 degrees from its closed position. (1115b.3.1.4.4, fig 11b-1a & b).
6. Note that the inside and outside of the compartment door shall be equipped with a loop or u-shaped handle immediately below the latch. The latch shall be flip-over style, sliding, or other hardware not requiring the user to grasp or twist. (1115b.3.1.4.5).
7. Except for door opening widths and door swings, show a clear unobstructed access not Less than 44" shall be provided to water closet compartments designed for use by persons with disabilities. The space immediately in front of a water closet compartment shall be not less than 48" as measured at right angles to compartment door in its closed position. (1115b.3.1.4.5, fig 11b-1b).
8. Where six or more compartments are provided within a multiple accommodation toilet room, In addition to the standard accessible stall required above, at least one additional Ambulatory Accessible Compartment shall be 36" wide with an outward swinging self - closing door and parallel grab bars complying with sections 1115b.4.1. item 3. (1115b.3.1.5).
9. Provide an 18 inches clearance at the strike side of water closet compartment doors (no Exception) (1115b.3.1, item 4.4).

SANITAR FACILIT FI TURES AND ACCESSORIES

1. Show the height of accessible water closets shall be a minimum of 17" and a maximum of 19" measured to the top of a maximum 2" high toilet seat, except that 3" seats shall be Permitted only in alterations where the existing fixture is less than 15" high. (1115b.4.4).
2. Show a clear floor space 30" by 48" in front of a lavatory to allow a forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19" into knee and toe space underneath the lavatory. A door swing shall not encroach into this clear space. (1115b.4.3.3, 1115b.3.2.2, Fig. 11b-1b).
3. Show that all lavatories, when located adjacent to a side wall or partition, shall be a minimum distance of 18" to the center line of the fixture. (1115b.4.3.2, Fig. 11b-1a).
4. Show that lavatories that are designated to be accessible shall be a minimum 17" in horizontal depth and mounted with the rim or counter edge no higher than 34" above the finished floor and with vertical clearance measured from the bottom of the apron or the outside bottom edge of the lavatory of 29", reducing to 27" at a point located 8" back from the front edge. In addition, a minimum 9" high toe clearance must be provided extending back toward the wall to a distance no more than 6" from the back wall. The toe clearance space must be free of equipment or obstructions. (1115b.4.3.2, fig.11b-1d).
5. Show that hot water and drain pipes under accessible lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories. (1115b.4.3.4).
6. Where urinals are provided, at least one shall have a clear floor space 30" by 48" in front of the urinal to allow forward approach. (1115b.4.2.3).
7. Show that urinals shall be floor mounted, stall-type or wall hung. Where one or more wall hung urinals are provided, at least one with an elongated rim projecting a minimum of 14" from the wall, a maximum of 17" from the wall, and a maximum of 17" above the floor shall be provided. (1115b.4.2.1).
8. Note that controls for water closet flush valves shall be mounted on the wide side of toilet areas. Automatic spring to lifted position seats are not allowed. (1115b.4.1.5, 1115b.4.1.7).
9. Note that water closet and urinal flush valve controls, and faucet and operating mechanism controls, shall be operable with one hand, shall not require tight grasping, pinching, or twisting of the wrist, and shall be mounted no more than 44" above the floor. (1115b.4.1.5, 1115b.4.2.2, 1115b.4.3.1).
10. Note the force required to activate water closet and urinal flush valve controls, and faucet and operating mechanism controls, shall be no greater than 5 lbf. electronic or automatic flushing controls are acceptable and preferable. (1115b.4.1.5, 115b.4.2.2, 1115b.4.3.1).
11. Note that self-closing faucet control valves are allowed if the faucet remains open for at least 10 seconds. (1115b.4.3.1).
12. Show that mirrors shall be mounted with the bottom edge of the reflecting surface no higher than 40" from the floor. (1115b.8.1).
13. If medicine cabinets are provided, at least one shall be located with a usable shelf no higher than 44" above the floor. A clear floor space 30" by 48" complying with Section 1118b.4 shall be provided in front of a medicine cabinet to allow a forward or parallel approach. (1115b.8.2).
14. Where towel, sanitary napkins, waste receptacles, dispensers, or other equipment and controls are provided, show at least one of each type shall be located on an accessible route, with all operable parts, including coin slots, within 40" from the finished floor and shall comply with Section 1117b.6. (1115b.8.3).
15. Show that toilet tissue dispensers shall be located on the wall within 12" of the front edge of the toilet seat, mounted below the grab bar at a minimum height of 19", and 36" maximum to the far edge from the rear wall. Dispensers that control delivery or that do not permit continuous paper flow shall not be used. (1115b.8.4, Fig. 11b-1a).
16. Show that toilet room floors shall have a smooth, hard, non-absorbent surface such as portland cement, concrete, ceramic tile or other approved material which extends upward onto the walls at least 5". Walls within water closet compartments and walls within 24" of the front and sides of urinals shall be similarly finished to a height of 48" and, except for structural elements, the materials used in such Walls shall be a type which is not adversely affected by moisture. (1115b.3.1.6).

MULTIPLE ACCOMODATION SANITAR FACE GRAB BARS

1. Show that grab bars for water closets not located within a compartment shall comply with Section 1115b.7 and shall be provided on the side wall closest to the water closed and on the rear wall. (1115b.4.1.3).
2. Show that grab bars for water closets located within an accessible compartment shall comply with Section 1115b.7 and shall be provided on the side wall closest to the water closet and on the rear wall. (1115b.4.1.3).
3. How that grab bars for water closets located within ambulatory accessible compartments shall be provided on both sides of the compartment. (1115b.4.1.3).
4. Show that the side grab bars shall be 42" long minimum, located 12" maximum from the rear wall, and extend 54" minimum from the rear wall. The front end shall be positioned 24" minimum in front of the water closet, and shall be securely attached and centered 33" above and parallel to the floor. (1115b.4.1.3.1, fig 11b 1a & 1b).
5. Show that the rear grab bars shall be 36" long minimum and extend from the centerline of the water closet 12" minimum on one side and 24" minimum on the other side. The rear grab bar shall be securely attached and centered 33" above and parallel to the floor, except that where a tank-type toilet is used, which obstructs placement at 33", the bar may be as high as 36", with 1 1/2" minimum Between the bar and top of tank. (1115b.4.1.3.2, Fig 11b-1a).
6. Show the diameter or width of the gripping surfaces of a grab bar shall be 1 1/4" to 1 1/2" nominal, or the shape shall provide an equivalent gripping surface. If grab bars are mounted adjacent to a wall, the space between the wall and the grab bars shall be 1 1/2". (1115b.7.1, fig 11b-1c).
7. Note that the structural strength of grab bars, tub and shower seats, fasteners, and mounting devices shall meet the following specifications: (1115b.7.2).

   a. Bending stress in a grab bar or seat induced by the maximum bending moment from the application of a 250 lb. point load shall be less than the allowable stress for the material of the grab bar or seat. (1115b.7.2.1).
   b. Shear stress induced in a grab bar or seat by the application of a 250 lb. point Load shall be less than the allowable shear stress for the material of the grab bar or seat, and its mounting bracket or other support is considered to be fully restrained, then direct and torsional shear stresses shall not exceed the allowable shear stress. (1115b.7.2.2).
   c. Shear force induced in fastener or mounting devices from the application of a 250 lb. point load shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever has the smaller allowable load. (1115b.7.2.3).
   d. Tensile force induced in a fastener by a direct tension force of a 250 lb. point load, plus the maximum moment from the application of a 250-lb point load, shall be less than the allowable withdrawal load between the fastener and supporting structure. (1115b.7.2.4).
   e. Grab bars shall not rotate within their fittings. (1115b.7.2.5).

8. Note that the grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements. Edges shall have a minimum radius of 1/8". (1115b.7.3).

DRIN ING FOUNTAIN r d CBC S B

1. Where only one drinking fountain area is provided on a floor, there shall be a drinking fountain which is accessible to individuals who use wheelchairs, and one accessible to those who have difficulty bending or stooping. This can be accommodated by the use of "hi-low" fountains, or by such other means as would achieve the required accessibility for each group on each floor. (1117b.1.1).
2. Where more than one drinking fountain is provided on a floor, 50% of those provided shall comply with items 1, 2, 4, and 5 of Section 1115b.4.6 and shall be on an accessible route. All drinking fountains shall comply with Section 1117b.1.1.
3. Shall have a clear knee space between the bottom of the apron and the floor or ground not less than 27" in height, 30" in width, and 8" in depth. The depth shall be taken from the front edge of the fountain back toward the wall or mounting post. (1117b.1.2).
4. Note that the knee and toe clearance space shall be free of equipment or obstructions. (2010 CBC 1117b.1.2).
5. Show a toe clearance of 9" in height above the floor, and 17" in depth from the front edge of the fountain. (1117b.1.2).
6. Show a clear floor space at least 30" by 48" shall be provided in front of the drinking fountain to allow forward approach. A side approach drinking fountain is not acceptable. (1117b.1.2).
7. All drinking fountains shall be located completely within alcoves or otherwise positioned so as not to encroach into pedestrian ways. The alcove in which the drinking fountain is located shall not be Less than 32" in width and 18" in depth. Protruding objects located in alcoves or encroaching into pedestrian ways are permitted to project 4" into walks, halls, Corridors, passageways, or aisles. (1117b.1.3, fig 11b-3).
8. Show that the drinking fountain bubbler shall be activated by a manually operated System not requiring a force greater than 5 lbf., that is front mounted or side mounted and located within 6" of the front edge of the fountain or preferably an electronically controlled device. (1117b.1.4, fig 11b-3).
9. Note that the bubbler outlet orifice shall be located within 6" of the front of the drinking fountain and shall be within 36" of the floor. The water stream from the bubbler shall be substantially parallel to the front edge of the drinking fountain. (1115b.1.4, fig 11b-3).
10. Note that the spout shall provide a flow of water at least 4" high so as to allow the insertion of a cup or glass under the flow of water. On an accessible drinking fountain with a round or oval bowl, the spout must be positioned so the flow of water is within 3" of the front edge of the fountain. (1117b.1.7).

ACCESSIBLE SIN S

1. Where provided, show that accessible kitchen sinks and noncommercial kitchen and Counter bar sinks shall have a clear floor space at least 30" by 48" complying with 1118b.4 and providing a forward approach. The clear floor space shall be on an accessible route and shall extend a maximum of 19" underneath the sink. (1115b.4.3.1, Fig 11b-1d).
2. Show that each accessible sink shall be a maximum of 6 1/2" deep. Sinks shall be mounted with the counter or rim no higher than 34" above the finish floor. Show knee clearance that is at least 27" high, 30" wide, and 19" deep under sinks. (1115b.4.3.2, item 1).
3. Note that hot water and drain pipes exposed under sinks shall be insulated or otherwise configured so as to protect against contact. There shall be no sharp or abrasive surfaces under sinks. (1115b.4.3.4, item 1).
4. Note that faucet controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be not greater than 5 lbs. lever-operated, push-type, and electronically controlled mechanisms are examples of acceptable designs. (1115b.4.3.1, item 1).
5. Note that self-closing faucet control valves are allowed if the faucet remains open for at least 10 seconds. (1115b.4.3.1, item 1).

RAMPS E TERIOR OR INTERIOR

1. Any path of travel shall be considered a ramp if its slope is greater than 1' rise In 20' of horizontal run. (1133b.5.1).
2. The maximum slope of a ramp that serves any exit way, provides access for persons with physical disabilities, or is in the accessible route of travel shall be 1 foot rise in 12 feet of horizontal run (8.3 percent gradient). The least possible slope shall be used for any ramp. (1133b.5.3).
3. The cross slope of ramp surfaces shall be no greater than 1:50. (1133b.5.3.1).
4. Pedestrian ramps shall have a minimum clear width of 48 inches, unless required to be wider by some other provision of this code. (1133b.5.2) (1133b.5.2).
5. Where a pedestrian ramp is the only exit discharge path serving entrances to buildings or when it serves an occupant load of 300 or more, the ramp shall have a minimum clear width of 60 inches. (1133b.5.2).
6. Level landings shall be provided at the top and bottom of each ramp. (1133b.5.4.1, Fig. 11b-38 & 39).
7. Intermediate landings shall be provided at intervals not exceeding 30 inches of vertical rise and at each change of direction. (1133b.5.4.1, fig 11b-38 & 39).
8. Top landings shall be not less than 60 inches wide and shall have a length of not less than 60 inches in the direction of ramp run. Landings at the bottom of ramps shall have a dimension in the direction of ramp run of not less than 72 inches. (1133b.5.4.2, Fig. 11b-38 & 39).
9. Doors in any position shall not reduce the minimum dimension of the landing to less than 42 inches and shall not reduce the required width by more than 3 inches when fully open. (1133b.5.4.3, fig 11b-39(b)).
10. The width of the landing shall extend 24 inches past the strike edge of any door or gate for exterior ramps and 18 inches past the strike edge for interior Ramps. (1133b.5.4.4, Fig. 11b-39).
11. All ramp landings shall be level with maximum slope in any direction not to exceed 1/4" per foot (2.083 percent slope). (1133b.5.4.1, 1102b).
12. At bottom and intermediate landings, the width shall be at least the same as required for the ramp. (1133b.5.4.5, fig 11b-38 & 39).
13. Intermediate and bottom landings at a change of direction in excess of 30 degrees shall have a dimension in the direction of ramp run of not less than 72 inches to accommodate the handrail extension. (1133b.5.4.6, fig 11b-38).
14. Other intermediate landings shall have a dimension in the direction of ramp run of not less than 60 inches. (1133b.5.4.7, fig 11b-38).
15. Handrails are required on ramps that provide access if the ramp slope exceeds 1 foot rise in 20 feet of horizontal run (5 percent gradient), except that at exterior door landings, handrails are not required on ramps less than 6 inches rise or 72 inches in length. (1133b.5.5.1).
16. Handrails shall be placed on each side of each ramp, shall be continuous the full Length of the ramp, shall be 34 to 38 inches above the ramp surface to the top of the handrail, shall extend a minimum of 1 foot beyond the top and bottom of the ramp, and shall parallel the floor or ground surface. Handrails shall always be continuous and the ends of handrails shall be either rounded or returned smoothly to the floor, wall or post. (1133b.5.5.1, fig 11b-27(b) & (c)).
17. The grip portion of handrails shall be not less than 1 1/4 inches nor more than 1 1/2 inches In cross sectional nominal dimension, or the shape shall provide an equivalent gripping surface, and all surfaces shall be smooth with no sharp corners. Handrails shall not rotate within their fittings. (1133b.5.5.1, fig 11b-36).
18. Handrail projecting from a wall shall have a space of 1 1/2 inches between the wall and the handrail. (1133b.5.5.1, Fig. 11b-36).

   a. handrails may be located in a recess if the recess is a maximum of 3 inches deep and extends at least 18 inches above the top of the rail. (1133b.5.5.1, Fig. 11b-36).
   b. any wall or other surface adjacent to handrails shall be free of sharp or abrasive elements. Edges shall have a minimum radius of 1/8 i nch. (1133b.5.5.1, Fig. 11b-36).

19. Where the ramp surface is not bounded by a wall, the ramp shall comply with one of the following requirements. (1133b.5.6, Fig. 11b-27(b) & (c)).

   a. a guide curb a minimum of 2 inches in height shall be provided at each side of The ramp; (1133b.5.6.1) or
   b. a wheel guide rail shall be provided, centered 3 inches, plus or minus 1 inch Above the surface of the ramp. (1133b.5.6.2).

20. In existing buildings or facilities where the extension of the handrail in the direction of the ramp run would create a hazard, the extension may be turned 90 degrees to the run of the ramp. (1133b.5.5.1.1, 1133b.4.2.4).
21. Ramps more than 30" above the adjacent ground shall be provided with guards that comply with section 1013. Such guards shall be continuous from the top of the ramp to the bottom of the ramp. (1133b.5.7).

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No.	Date	Description
1		Plan Check Resubmittal /Client Revisions
2		Bid Set /Client Revisions

Architect / Designer / Engineer

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Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

LICENSED ARCHITECT JOHN JOSEPH STIBRAL No. C-15573 Exp. 03-31-19 STATE OF CALIFORNIA

Engineer's Stamp

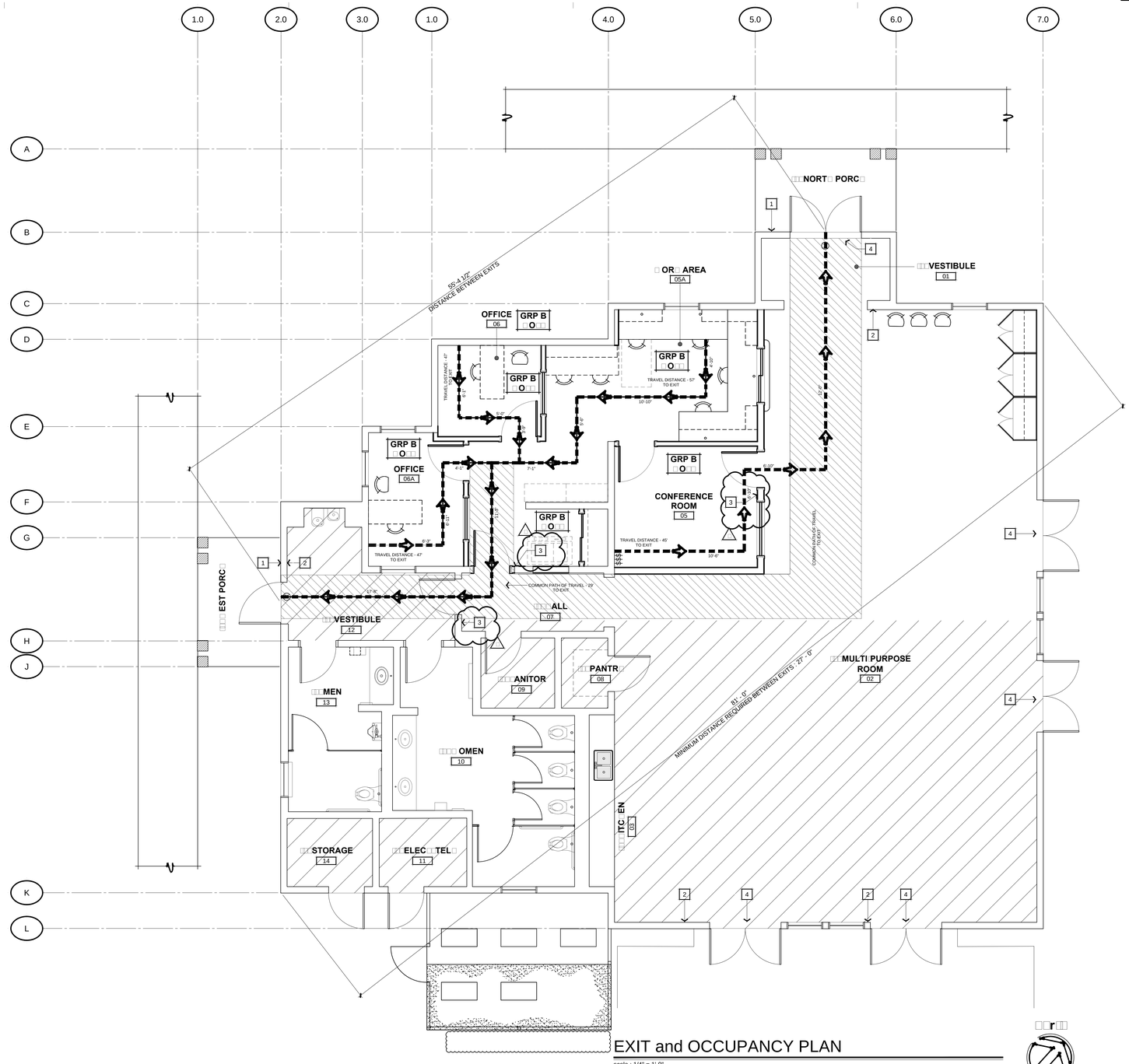
Drawing Description

ACCESSIBILITY REQUIREMENTS

(BID SET)

Project Number	17X085.01
Print Date	2018.08.27
Sheet Number	HC 3

2018.09.13



EXIT and OCCUPANCY PLAN

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

EXIT and OCCUPANCY KEY NOTES

1. New international symbol of accessibility per detail 1/HC-1
2. Existing tactile exit signage to remain
3. New tactile exit route signage, see detail 9/HC-1
4. Existing panic hardware to remain

EXIT and OCCUPANCY ANALYSIS

A-3 OCCUPANCY	1578 SF	15 OLF	106	OCC.
B OCCUPANCY	265 SF	100 OLF	3	OCC.
B OCCUPANCY	173 SF		6	OCC.
B OCC.(CONF.RM)	123 SF.	15 OLF	9	OCC.
TOTAL OCCUPANTS			124	OCC.

EXIST and OCCUPANCY LEGEND

- Accessible path of travel, minimum 44"
- GRP B / O — occupancy group / occupant load
- Common Path of Travel - Max 200' Fully Sprinkled
- N.I.C.
- Existing Exit sign
- New Exit sign

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EXITING AND OCCUPANCY PLAN

(BID SET)

2018.09.13

Project Number	17X085.01
Print Date	2018.08.27

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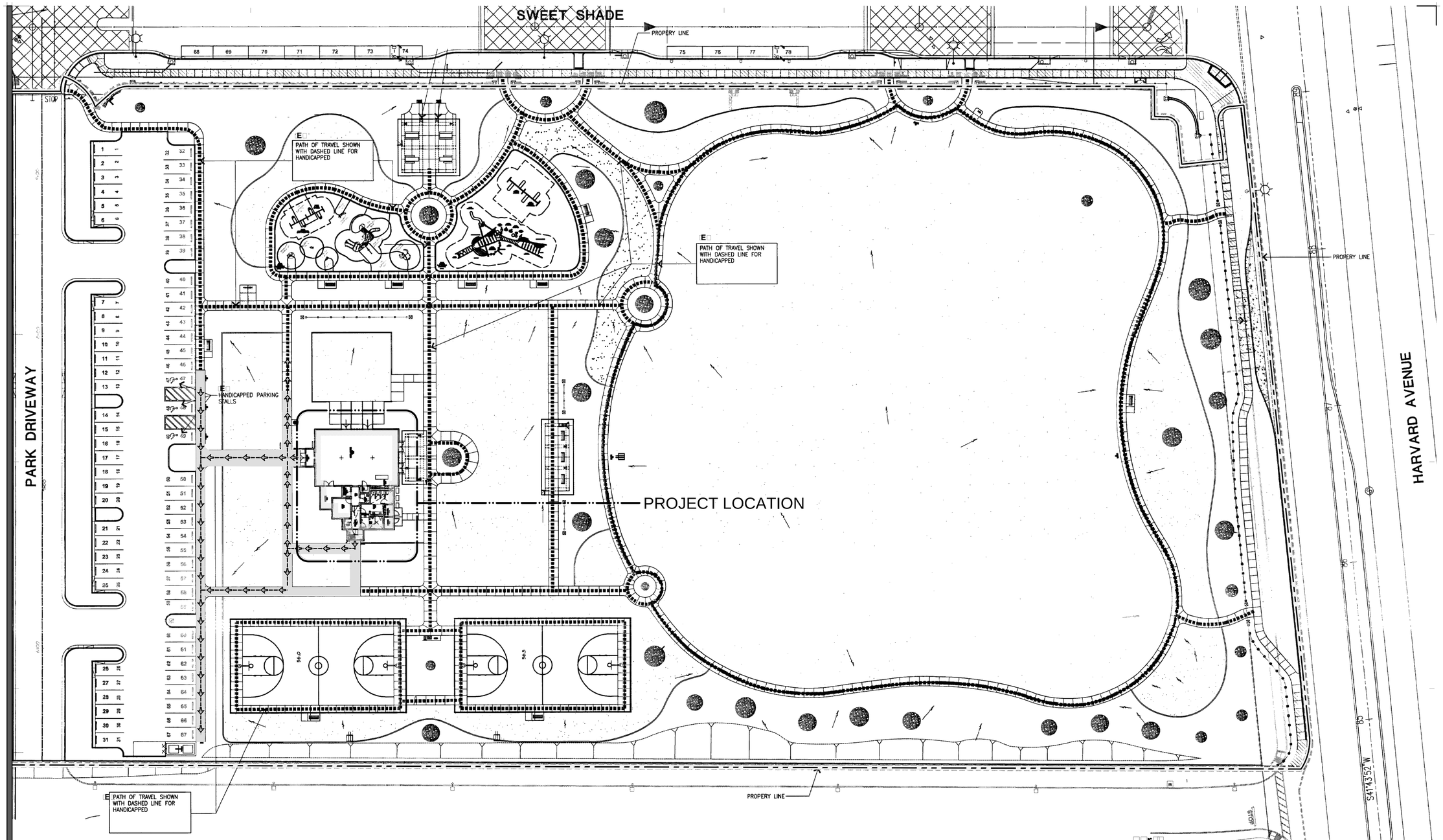

EXISTING SITE PLAN

scale : 1" = 300'

PARKING CALCULATION

Community park (8 AC) (5 spaces 1st 2 AC, 1 spaces / AC thereafter) 11 spaces
Community building (1 space / 50 sf.) 60 spaces
Picnic table (1 space / table) 4 spaces

total required 75 stalls
total provide 78 stalls

SITE PLAN LEGEND

ADA Accessible Path of Travel

Property Line

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Tenant Improvement

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EXISTING
SITE PLAN

(BID SET)

2018.09.13

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

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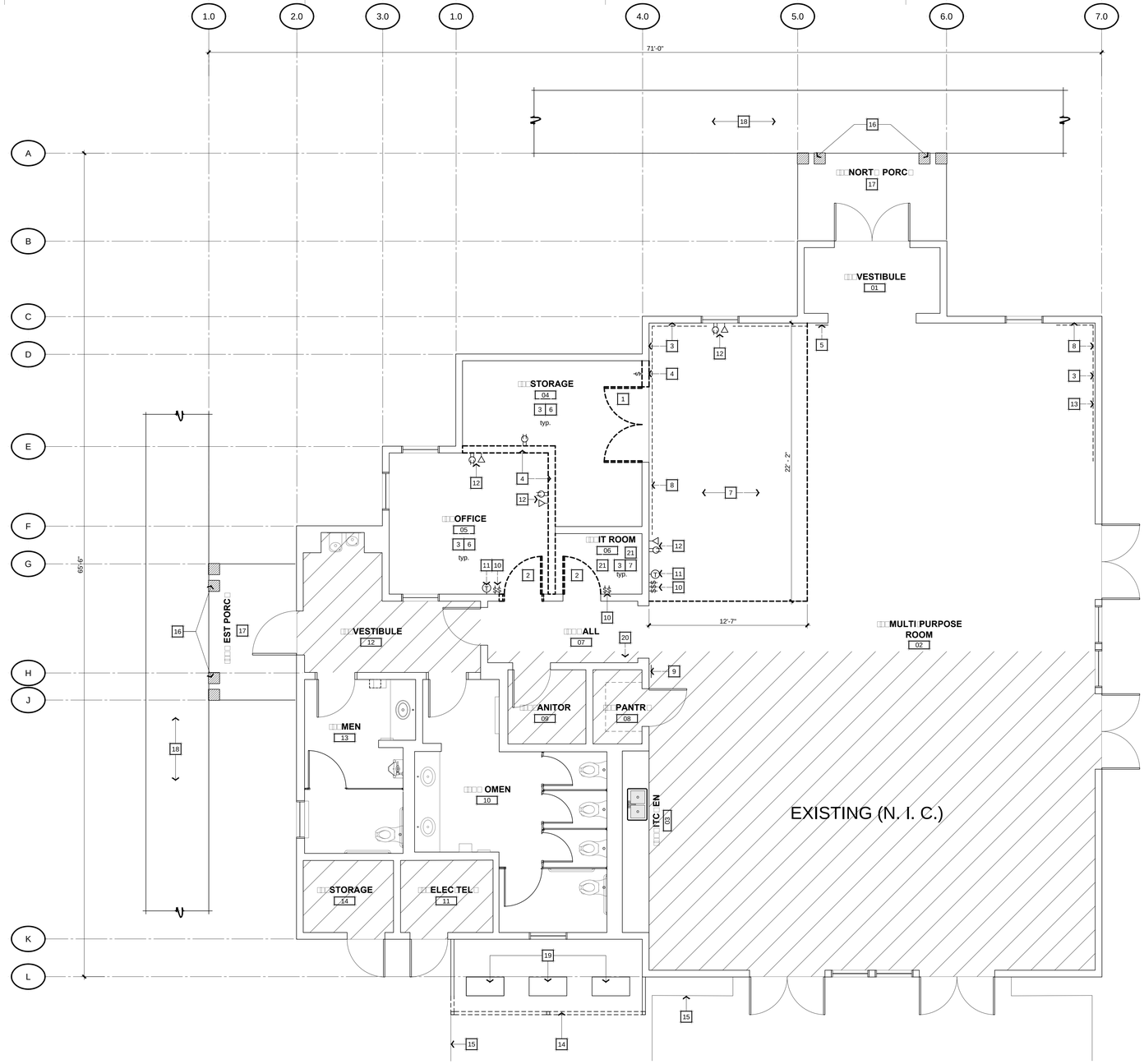

DEMOLITION PLAN

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

GENERAL NOTES

.Existing electrical to remain U.O.N.

DEMO PLAN KEY NOTES

1. Remove door, frame, casing, & hardwares.
2. Remove door, casing, & hardwares, Save for relocated
3. Remove wall base, save for relocation.
4. Remove portion of wall
5. Remove wall mounted exit signage near base of wall
6. Remove carpet flooring.
7. Remove resilient flooring.
8. Remove wall baffles, save for relocation.
9. Remove existing occupant load signage, save for relocation.
10. Demolish existing light switches, see electrical drawings.
11. Existing thermostat to be demolished, see mechanical drawings
12. Demolish electrical & data outlets. See electrical drawings
13. Remove tack Board
14. Demolish metal fence, replace w/new
15. Demolish existing landscape as required
16. Existing decorative column
17. Existing slab on grade
18. Existing concrete walkway
19. Existing mechanical to remain, See Mechanical drawings.
20. Existing FEC to remain, Protect in place
21. Coordinate with owner the relocation of (E) IT equipments.

DEMO PLAN LEGEND

- Existing Wall
- Building element to be demolished
- Thermostat
- Door to be demolished
- Door to remain

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DEMO PLAN

(BID SET)

2018.09.13

Project Number	17X085.01
Print Date	2018.08.27

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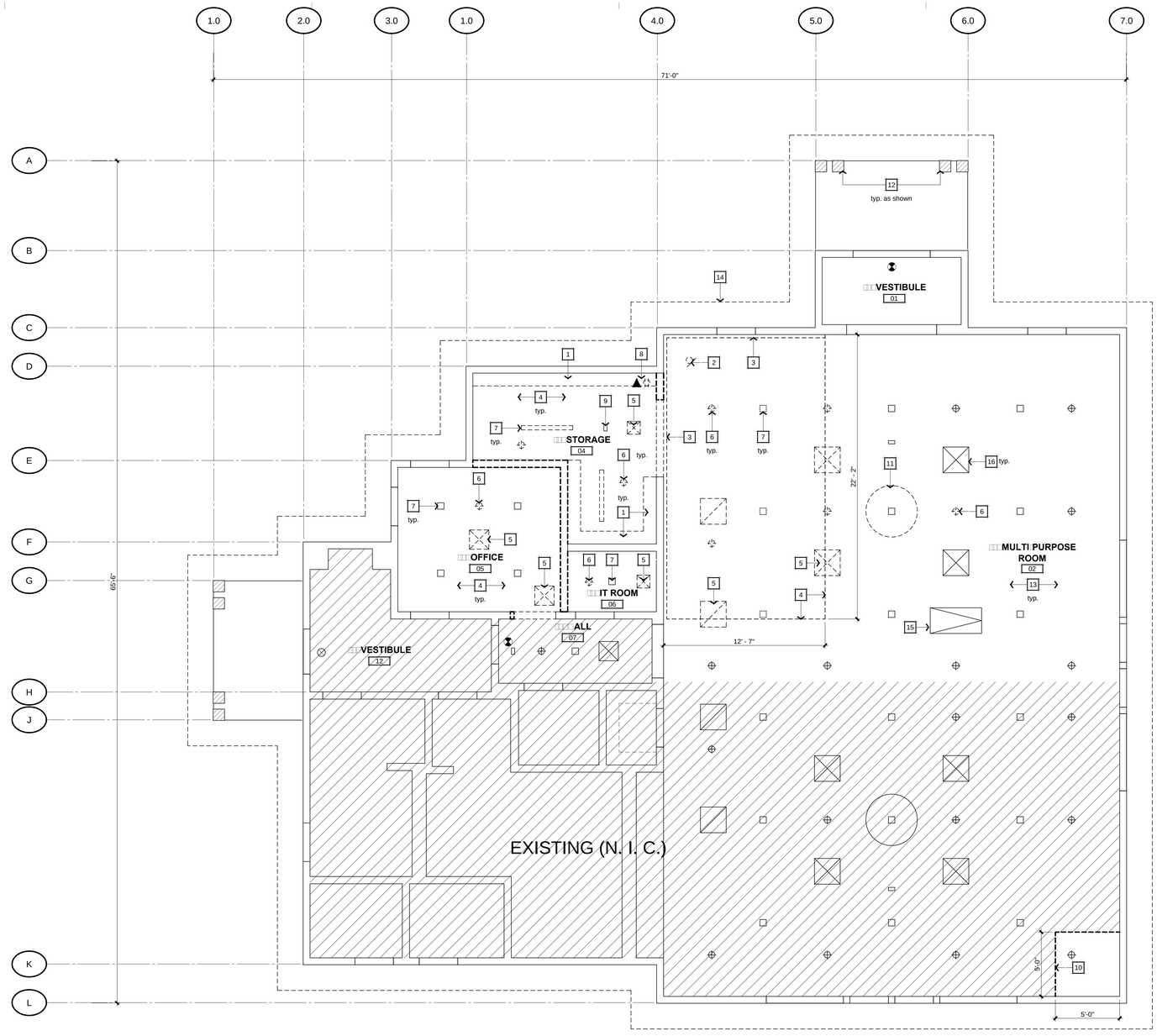

DEMO REFLECTED CEILING PLAN

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

GENERAL NOTES

- Existing sprinkler heads to be reconfigured under separated permit

DEMO REFLECTED CEILING PLAN KEY NOTES

1. Remove wall storage shelves
2. Remove TV & ceiling mount, save for relocation.
3. Remove portion of crown molding, Save for reuse.
4. Remove portion of gyp. board ceiling.
5. Remove supply & return registers. See mechanical drawings.
6. Fire sprinkler heads to be relocated, deferred submittal.
7. Remove lights. See Electrical drawings.
8. Remove ceiling receptacle. See electrical drawings.
9. Remove bug lights. See Electrical drawings.
10. Remove portion of gyp. board ceiling for TV mount relocation.
11. Remove existing chandelier, save for relocation.
12. Existing decorative column to remain .
13. Existing gypsum board ceiling to remain.
14. Existing roof line above.
15. Existing access panel to remain.
16. Existing supply and return registers to remain.

DEMO REFLECTED CEILING PLAN LEGEND

- Existing Wall
- To be demolished
- Mechanical register to be removed
- Fluorescent light to be removed
- Sprinkler to be removed

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LICENSED ARCHITECT JOSEPH STIBER C-15573 EXP. 01-31-19 STATE OF CALIFORNIA

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DEMO REFLECTED CEILING PLAN

(BID SET)

Project Number	17X085.01
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Sheet Number

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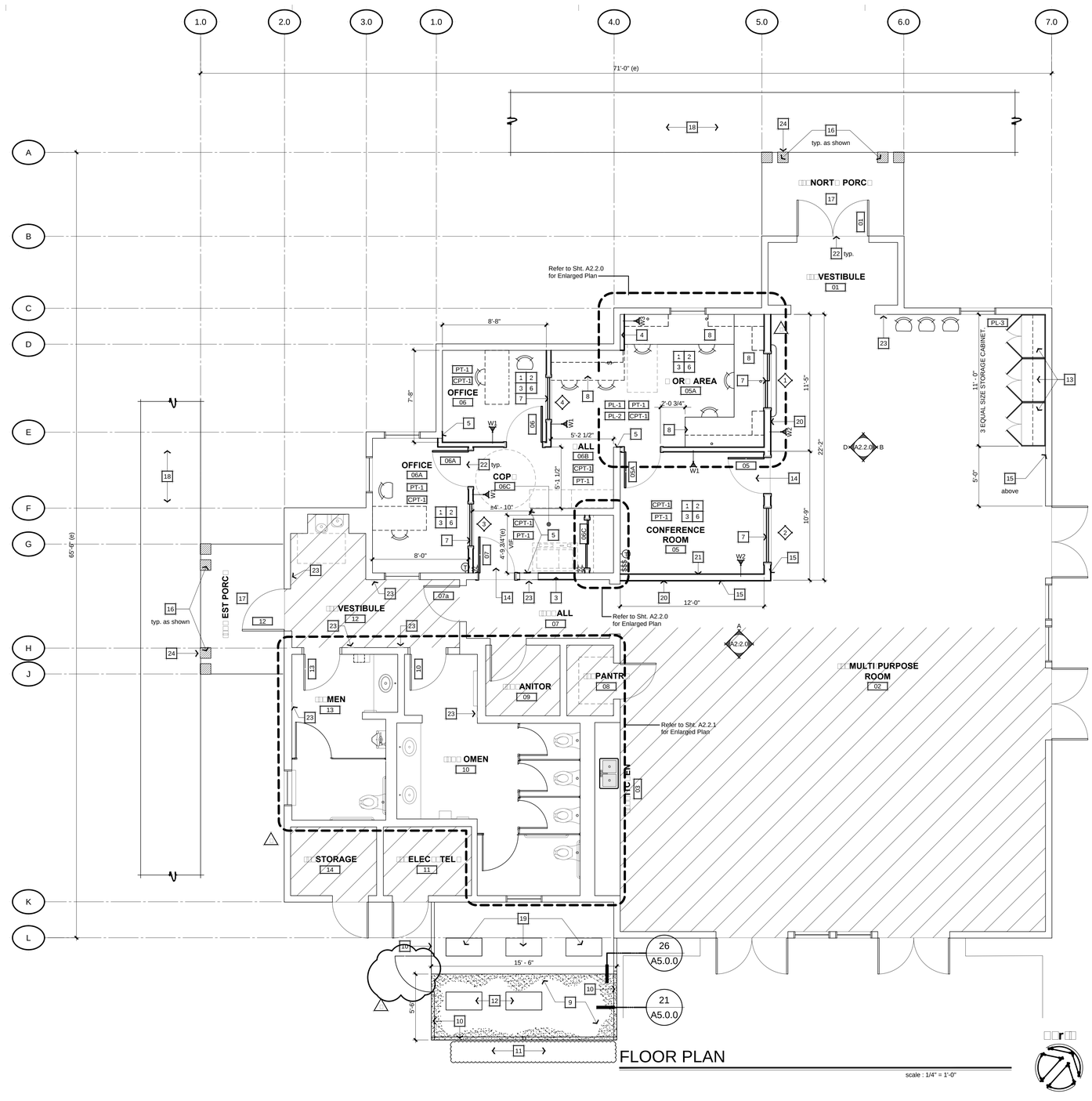
2018.09.13

ROOM FINISH SCHEDULE

	ROOM NAME	FLOOR FIN	FLOOR BASE	ALL FIN	CEILING FIN	CEILING HGT	REMARKS
	CONFERENCE ROOM	CPT	WD	GB / PT	ACT/GB	9'-0"	
A	OR AREA	CPT	WD	GB / PT	ACT/GB	varies see reflected ceiling plan	
	OFFICE	CPT	WD	GB / PT	ACT	9'-0"	
A	OFFICE	CPT	WD	GB / PT	ACT	9'-0"	
B	ALL	CPT	WD	GB / PT	ACT	9'-0"	
C	COP AREA	CPT	WD	GB / PT	ACT	9'-0"	

1. See A2.2.0 for finish schedule



FLOOR PLAN

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

GENERAL NOTES

1. See 1,3,4 / A2.2.0 for additional finish locations

FLOOR PLAN KEY NOTES

1. New flooring on existing post-tensioned concrete slab
2. New wood base. Match existing base profile & color
3. New Gyp. Board partition
4. New Gyp. Board furring
5. Patch Gyp. Board wall from demolition work, Typ.
6. New door
7. New window w/ window shade
8. Bid alternate
9. New concrete pad
10. New fence, see detail 21 & 26/A5.0.0
11. Relocate existing landscaping
12. New mechanical units. See mechanical drawings
13. New Storage cabinets, see detail 16/A5.0.0
14. Relocated existing door and hardware (provide new door frame)
15. Relocated wall baffles
16. Existing decorative column
17. Existing concrete slab on grade
18. Existing concrete walkway
19. Existing mechanical unit. See mechanical drawings
20. Paint new wall to match existing color and finish
21. Provide wall backing for future TV installation
22. Verify opening force of existing doors per note on additions and alterations, sheet T1
23. Interior Wall Mounted Push button Automatic door opener
24. Exterior Wall Mounted Push button Automatic door opener

FLOOR PLAN LEGEND

- Existing Wall
- New Stud Wall
- Existing Door
- New Door
- Furniture (N.I.C.) (Owner Furnish)
- Window Type See Window Schedule A3.0.0

WALL TYPE LEGEND

- W1 — 2 x 4 Stud Wall. See Det. 1 / A5.0.0
- W2 — 2 x 6 Stud Wall. See Det. 2 / A5.0.0
- W3 — 2 x 4 Stud Wall Furring. See Det. 8 / A5.0.0

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Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

Engineer's Stamp

Drawing Description

FLOOR PLAN

(BID SET)

Project Number	17X085.01
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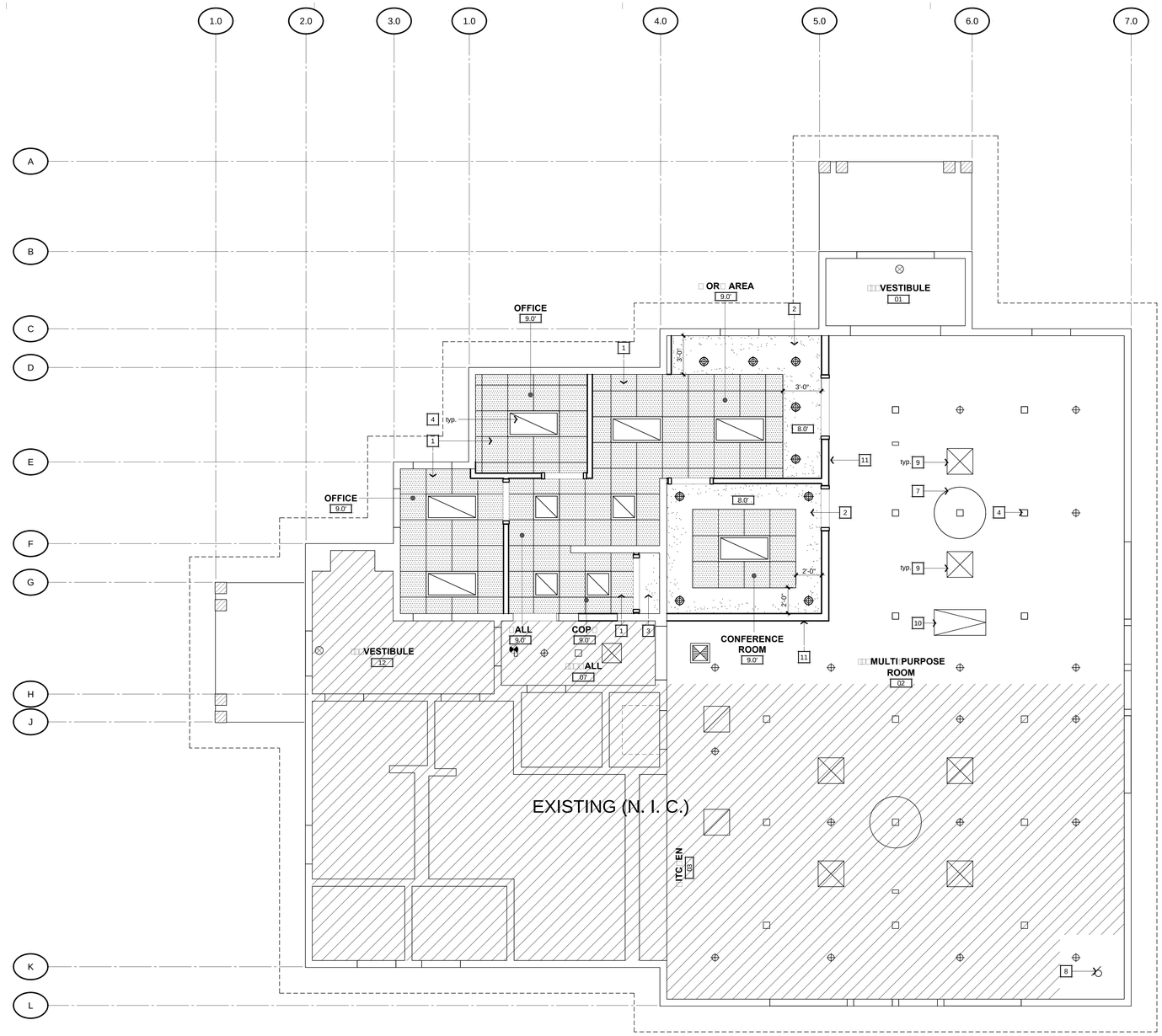
Sheet Number

A2.0.0

2018.09.13



REFLECTED CEILING PLAN

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

FLOOR PLAN KEY NOTES

1. New suspended acoustic ceiling tile
2. New gypbd. soffit
3. New gyp. board ceiling
4. New lights, See electrical drawings
5. New supply & return registers, See Mechanical drawings
6. New fire sprinkler heads
7. Relocated Chandelier
8. Relocated TV & mount
9. Relocated supply and return register
10. Existing access panel to remain
11. Reinstall existing crown molding, provide matching as required

GENERAL NOTES

1. General contractor shall coordinate new work with existing sprinkler lines

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Architect's Stamp

LICENSED ARCHITECT
JOHN JOSEPH STEBBINS
No. C11573
Exp. 01-31-19
STATE OF CALIFORNIA

Engineer's Stamp

Drawing Description

REFLECTED CEILING PLAN

(BID SET)

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Print Date	2018.08.27

Sheet Number

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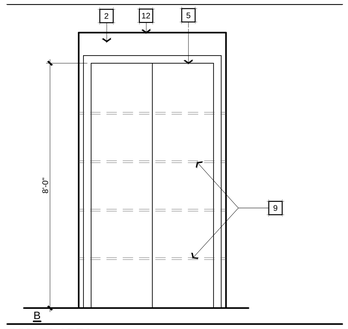
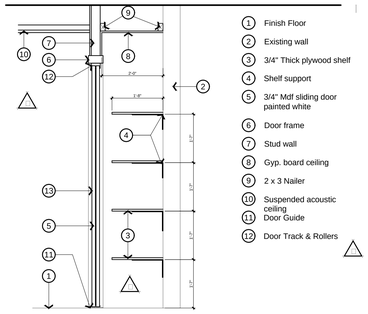
2018.09.13



COPIER AREA 6

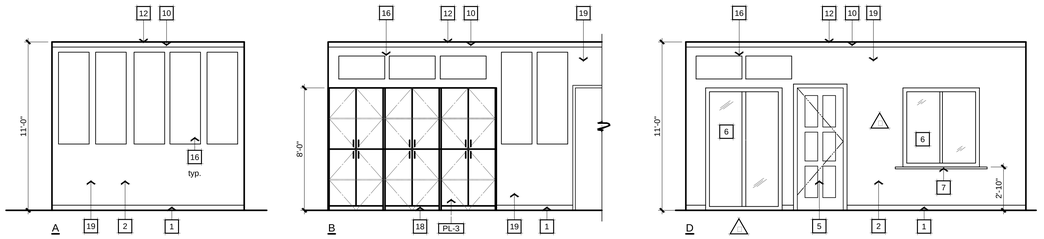
SCALE: 1/2" = 1'-0"



1 Finish Floor
2 Existing wall
3 3/4" Thick plywood shelf
4 Shelf support
5 3/4" Mdf sliding door painted white
6 Door frame
7 Stud wall
8 Gyp. board ceiling
9 2 x 3 Nailer
10 Suspended acoustic ceiling
11 Door Guide
12 Door Track & Rollers

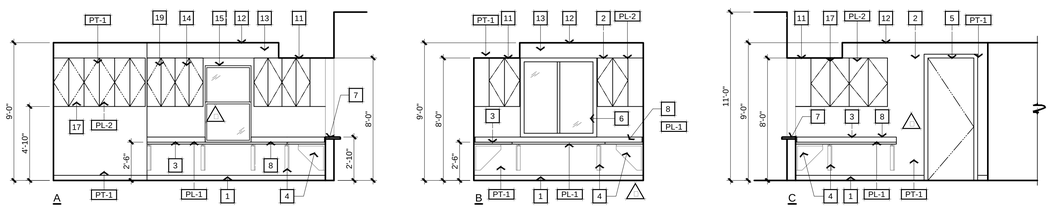
Storage @ Copy Area 5

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



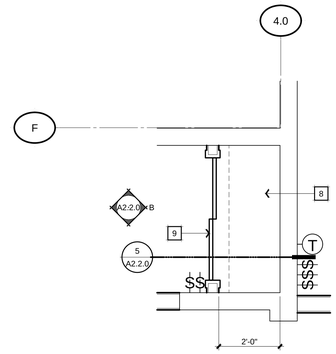
MULTI-PURPOSE ROOM (e) 4

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



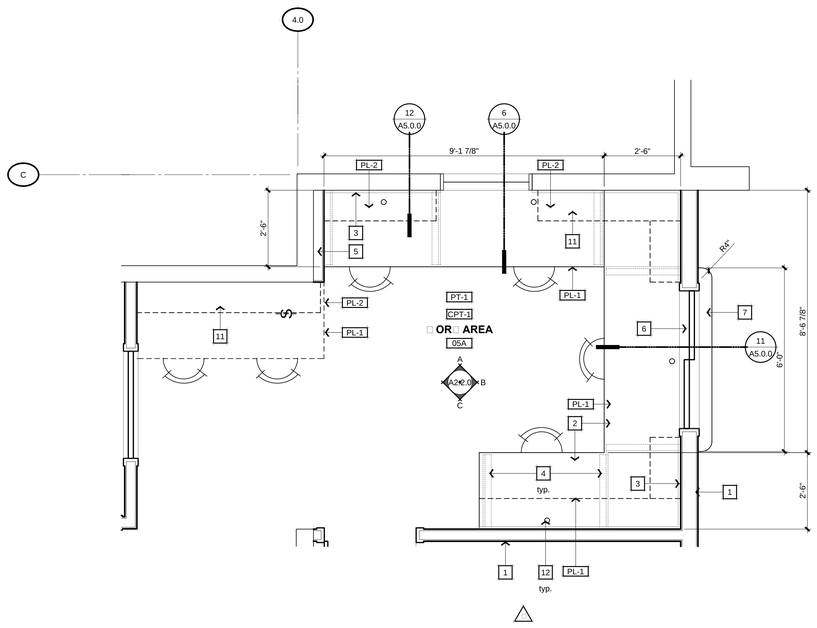
WORK SPACE 3

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



COPIER AREA ENLARGED PLAN 2

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



WORK SPACE ENLARGED PLAN 1

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

ELEVATIONS KEY NOTES

1. Wall base to match existing
2. Stud wall at 16" O.C. w/ 5/8" thick gypsum board both sides.
3. Work Counter. See 6/A5.0.0 & 11/A5.0.0 for detail.
4. Work Counter gusset.
5. Door as scheduled
6. Window as scheduled
7. Transaction counter
8. 4" high back splash
9. Storage shelves
10. Crown Molding. Match existing profile
11. Gypsum board soffit
12. Ceiling line
13. Soffit beyond
14. Existing exterior wall.
15. Existing window
16. Reinstall existing sound baffles. Verify Pattern with user.
17. Wall Cabinet
18. Lockable Plastic Laminate Millwork. See 16/A5.0.0
19. Paint new wall to match existing color and finish

FINISH SCHEDULE LEGEND

CARPET TILE

CPT-1 **S B T T**
Color: Storm cloud 17597 (Monolithic Installation)
Size: 24"x24"

PAINT

PT-1 **D Ed rd**
Color: DE6365 Cold Morning LRV 73
Finish: Eggshell

PLASTIC LAMINATE

PL-1 **P L C r**
Wilsonart - 8212K-28 Phantom Ecru

PL-2 **P L C**
Wilsonart - Alabaster D431-60 Matte Finish

PL-3 **P L M r**
Nevmar- WM8340T Clear Maple

ENLARGED PLAN KEY NOTES

1. Stud wall at 16" O.C. w/ 5/8" thick gypsum board both sides.
2. Work Counter. See 6 / A5.0.0 for detail.
3. 4" high backsplash. Typical at work counter
4. Work Counter support. See 11 / A5.0.0 for detail.
5. Wall Furring.
6. Window as scheduled, See window schedule sheet A3.0.0
7. Transaction Counter, See detail 4/A3.0.0
8. Storage shelves
9. MDF sliding door painted white
10. Existing exterior wall.
11. Wall cabinet, See detail 12/A5.0.0
12. Grommets, Verify in Field

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Irvine, CA. 92606

Architect's Stamp

LICENSED ARCHITECT
JOSEPH STEBER
No. C11573
Exp. 01-31-19
STATE OF CALIFORNIA

Engineer's Stamp

Drawing Description

ENLARGED PLANS

(BID SET)

2018.09.13

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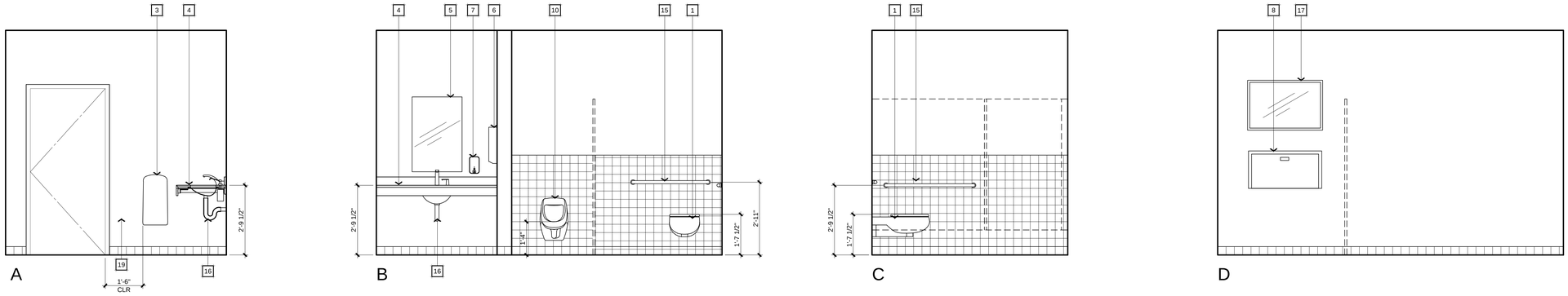
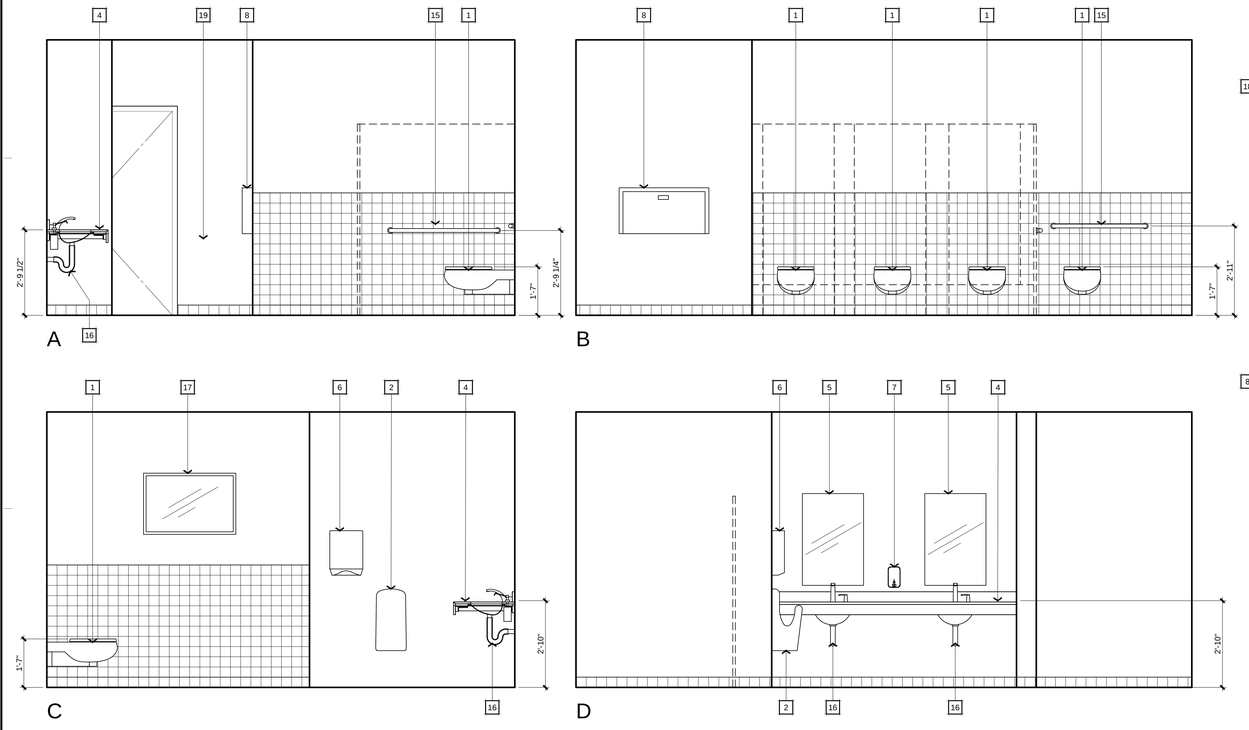


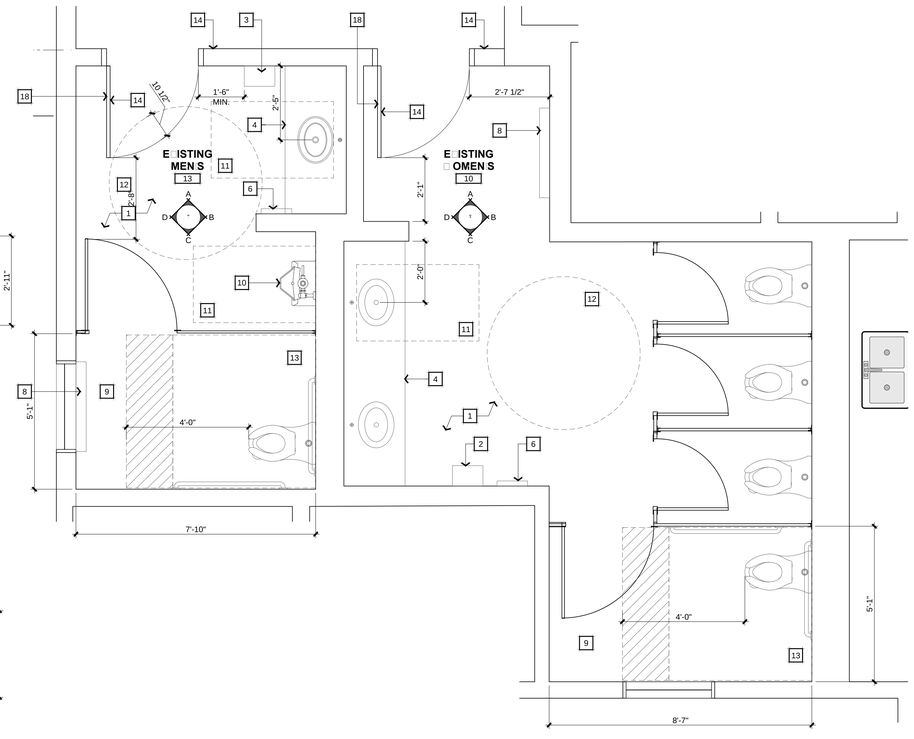
MEN'S EXISTING RESTROOM ELEVATIONS 3

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



WOMEN'S EXISTING RESTROOM ELEVATIONS 2

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



ENLARGED EXISTING RESTROOMS 1

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

17 Existing glazing to remain

18 Adjust door hardware height to no less than 34" and no greater than 48" a.f.f., patch door

19 Patch and repair wall to match existing

KEY NOTES

1. Existing plumbing fixture to remain - UON
2. Existing hand dryer to remain - see 26/HC1
3. Relocate existing hand dryer - shift to provide 18" clear at pull side of door
4. Existing accessible lavatory to remain - see 22, 23/HC1
5. Existing mirror to remain - see accessible mounting heights 26/HC1
6. Existing paper towel dispenser to remain - see accessible mounting heights 26/HC1
7. Existing soap dispenser to remain - see 26/HC1
8. Existing baby changing station to remain - see 26/HC1
9. Existing accessible restroom stall - see 17, 18/HC1
10. Existing urinal to remain - see 16/HC1
11. 30x48 clear space
12. 60" dia. turning radius
13. 56"x60" clear space
14. Existing accessible door & wall signage to remain - see 27/HC1
15. Existing grab bar to remain - see 17/HC1
16. New Under sink pipe Insulation

GENERAL NOTES

1. See sheet HC-1 for accessible details and requirements

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Tenant Improvement

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Irvine, CA. 92606

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LICENSED ARCHITECT JOSEPH STIBBS STATE OF CALIFORNIA
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Exp. 03-31-19

Engineer's Stamp

Drawing Description

ENLARGED
RESTROOM PLANS

(BID SET)

2018.09.13

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

A2.2.1

WINDOW SCHEDULE

◇	ROOM NAME NUM	INDO						REMAR S
		SI E	FINIS	T	T PE	TEMP	FRAME	
	WORK AREA	5'-0" x 5'-5"	Clear Anodized		A	Yes	Match Exisitng	Lockable
	CONFERENCE ROOM	5'-0" x 8'-0"	Clear Anodized		C	Yes	Match Exisitng	
	OFFICE	4'-0" x 5'-2"	Clear Anodized		B	Yes	Match Exisitng	
	OFFICE	4'-0" x 5'-2"	Clear Anodized		B	Yes	Match Exisitng	

DOOR SCHEDULE

	ROOM NAME NUM	DOOR								DOOR FRAME	REMAR S
		SI E	MTL	FINIS	T	T PE	CORE	GLA	D R		
01	(E) Vestibule	6'-0" x 8'-0"	WD								Automatic Door Opener Ada
	Conference Room	3'-0" x 8'-0"	"	PTD	1 3/4"	A	"	"	B	WD	Existing Door to be reinstalled - provide new door frame
A	Conference Room / Work Area	3'-0" x 8'-0"	"	PTD	1 3/4"	C	SOLID	"	A	WD	
	Office	3'-0" x 8'-0"	"	PTD	1 3/4"	C	SOLID	"	A	WD	
A	Office	3'-0" x 8'-0"	"	PTD	1 3/4"	C	SOLID	"	A	WD	
	(E) Hallway	3'-0" x 8'-0"	"	PTD	1 3/4"	B	"	"	B	WD	
	(E) Hallway	3'-0" x 8'-0"	WD							WD	Automatic Door Opener Ada
	(E) Women's Restroom	3'-0" x 8'-0"	HM							SF	Automatic Door Opener Ada
	(E) Vestibule	3'-6" x 7'-8"	HM							HM	Automatic Door Opener Ada
	(E) Men's Restroom	3'-0" x 8'-0"	HM							SF	Automatic Door Opener Ada

NOTES

1. Match new hardware with existing hardware.
2. Adjust all doors with closers so that from an open position of 90 degrees, the entire time required to move the door to a position of 12 degrees from the latch side is 5 seconds minimum.

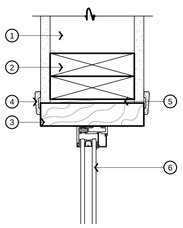
DOOR HARDWARE

Group A

Closer: 1 ea. LCN 4041-RwPA-ALUM
Door close w/hold open arm or approved equal
Lock: 1 ea. Sargent G172-8276-RH-PLK-26D
or approved equal
Note: Verify door hardware in field

Group B

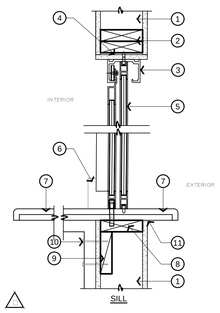
Existing door hardware to be reinstalled



HEAD / JAMB / SILL

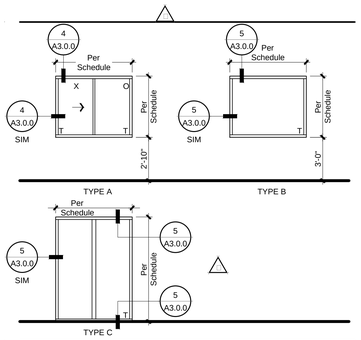
1. 2 x Stud wall at 16" o.c. w/ 5/8" thick gypsum board, both side.(Verify wall type)
2. Header / frame
3. Window frame
4. Window casing
5. Shim space
6. Window as scheduled

WINDOW DETAIL 5
SCALE: 3" = 1'-0"

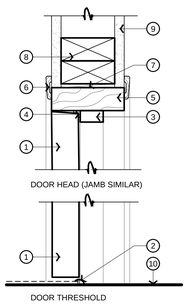


1. 2 x 6 Stud wall at 16" o.c. w/ 5/8" thick gypsum board, both side
2. Header / frame
3. Window frame & casing
4. Shim space
5. Window as scheduled
6. 4" high back splash beyond
7. Countertop
8. 2 x 6 framing
9. 2 x 6 blocking
10. Fastener
11. Sealant / Caulking

WINDOW DETAIL 4
SCALE: 1 1/2" = 1'-0"

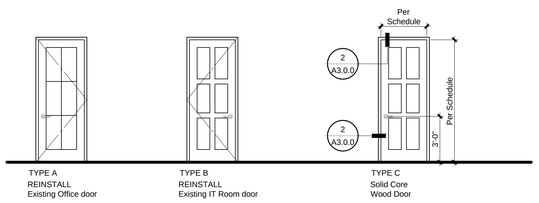


WINDOW TYPE 3



1. Door as scheduled
2. Carpet transition
3. 1 x 2 Door stop
4. Weather stripping
5. Door frame out of 2 x 6
6. Door casing
7. Shim space
8. Door header/frame
9. 5/8" thk. gypsum bd.
10. Fin. Floor

DOOR DETAIL 2
SCALE: 3" = 1'-0"



DOOR TYPES 1

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15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

LICENSED ARCHITECT JOSEPH STIBER C-15573 EXP. 01-31-19 STATE OF CALIFORNIA

Engineer's Stamp

Drawing Description

DOOR / WINDOW SCHEDULE & TYPES

(BID SET)

2018.09.13

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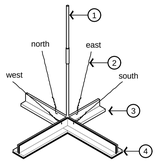


1. Install compression strut at 12'-0" O.C. each direction with the first point within 6' from each wall per ASTM C 635 / 636
2. #12 wire splayed in the plane each runner at 45 degrees
3. Cross Runner
4. Main Runner

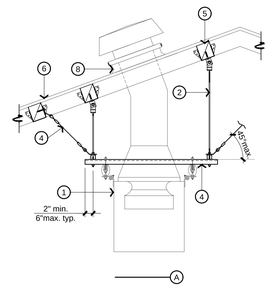
NOTES

1. Ceiling system per CBC Chapters 8 & 16
2. All wires (vertical and splayed) shall be #12 GA. Galvanized steel wire 2'-0" O.C.
3. Each end of all wires shall have 3 tight turns within 1 1/2 " of attachment
4. Vertical hanger wires shall occur at 48" maximum along all main runners. Vertical hanger wires SHALL ALSO OCCUR AT ALL main runners within 8" max. of all walls and ceiling DISCONTINUITIES. VERTICAL hanger wires SHALL NOT BE MORE THAN 1 IN 6 OUT OF PLUMB.
5. Splay wires (4 at 90 degrees from eachother) shall be PROVIDED at 12' O.C. in both directions and not more than 6' from any wall. When required by local and state codes
6. All ceiling light FIXTURES AND HVAC AIR registers shall be SUPPORTED BY A MIN. of (2) hangers at opposite corner. Ceiling system shall not support other items
7. All interior ceiling and wall finishes shall be installed in accordance with U.B.C. SEC. 25-2 and shall be flame spread CLASS III

Suspended Ceiling Support 30

SCALE: NTS

25



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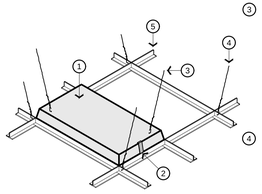
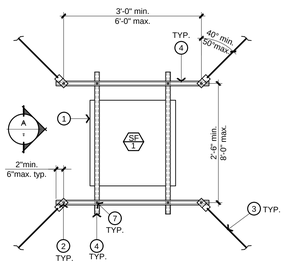


1. Fixture per Fixture Fixture Schedule (less than 56 lbs)
2. T-Bar clip at ea. end
3. All Suspended Light Fixtures and HVAC Registers shall be supported w/ hangers at ea. corner fastened to ceiling framing members. Vert. #12 hanger wire 6" max. from each corner of fixture. Attach wire directly to corner of fixture.
4. Refer to Detail for additional information (30)
5. Suspended CLG Grid per Reflected Ceiling Plan

Light Fixture at Suspended Ceiling 29

SCALE: NTS

24



1. 200# MAX. WEIGHT/ INCLUDING SUPPORTED DUCT WORK, SEE MECH.
2. 1\2" Ø ROD THREADED ROD, TYP.
3. GRIPPLE GS10-10E4-S5 CABLE RESTRAINT AT EACH ROD WITH HEX NUTS/WASHERS AS NEEDED, ATTACHED TO 4x4 BLOCKING WITH ONE 3\8"Øx3" LAG BOLT, TYP.
4. P1000T
5. 4x4BLOCKING W/SIMPSON LUS44& SD SCREWS AT EACH END, TYPICAL OF 8
6. (E) ROOF SHEATHING AND FRAMING (PRE FABRICATED TRUSSES). DO NOT CUT OR DAMAGE ANY (E) STRUCTURAL ELEMENTS WITHOUT PRIOR APPROVAL.
7. 1\2"Ø CAP SCREW WASHER AND HEX NUT THROUGH BACK-TO-BACK P1000T CHANNEL BOLTS, TYPICAL OF 4 LOCATIONS
8. (E) CURB

NOTES:

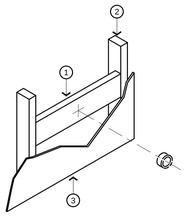
1. SEE DETAIL METAL FRAMING SYSTEM AND SEISMIC CABLE RESTRAINT SYSTEM NOTES ON SHEET GN-3
2. LAG BOLTS SHALL BE CENTERED ON BLOCKING FACE/EDGE AND 4" MINIMUM END DISTANCE..

23

SUSPENDED SUPPLY FAN UNIT 17

SCALE: N.T.S.

15



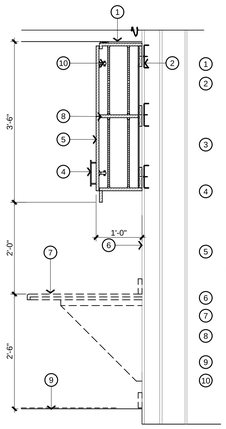
1. 2x6 blocking at accessories 2x12 at grab bars and television mounted
2. Stud framing
3. Gypsum board finish

NOTE:

BLOCKING REQUIRED BEHIND WALL MOUNTED ACCESSORIES AND EQUIPMENT.

BLOCKING DETAIL 14

SCALE: 6" = 1'-0"

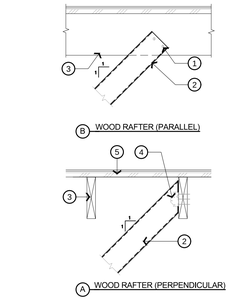


1. Ceiling
2. 6" x 1-1/4" x 20 ga continuous backing channel or equal with (3) #10 screws to each stud, typ.
3. 3/4" melamine shelf with chrome shelf pins in 5mm holes at 1-1/4" o.c.
4. 4" brushed stainless wire pull mounted vertically with counter sunk screws and silencers at door caps, typ.
5. 3/4" plastic laminate cabinet door, typ. finish both sides and provide edge band at all 4 edges
6. Existing wall
7. Countertop
8. 3/4" thick adjustable mdf shelf
9. Finish floor
10. European hinges typ. (Blum, Mepla or Soss

UPPER CABINET 12

SCALE: 3/4" = 1'-0"

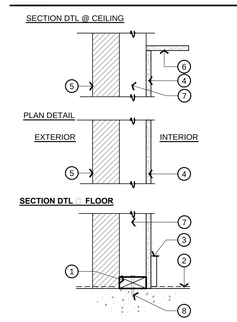
10



1. (2) #10 WOOD SCREW
2. 4"x18 GA. METAL STUD DIAG. BRACE
3. (E) RAFTER
4. SIMP. A34 W/ (4) 8d NAILS TO RAFTER & (4) #6 SMS TO BRACE
5. (E) ROOF STRUCTURE ABOVE

DIAG. BRACING @ WOOD 9

SCALE: NTS

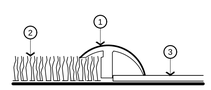


1. 2 X 4 Bottom plate
2. Finish floor
3. Base as scheduled
4. 5/8" thick gyp. board
5. Existing wall
6. Ceiling as scheduled
7. 2x4 wood stud at 16" 16" o.c.
8. PAF, see sheet GN-3

WALL TYPE 3 8

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

7

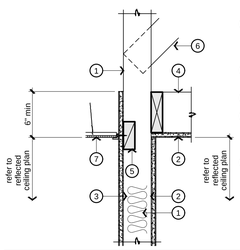


1. Reducer strip
2. Carpet with backing
3. Existing Floor Finish

CARPET TRANSITION 7

SCALE: 6" = 1'-0"

6

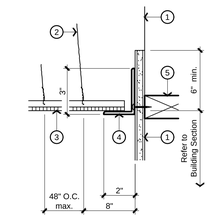


1. Wood Stud Wall per Plan and Wall Legend
2. 5/8" Type 'X' Gypsum Board Per Wall Legend
3. Insulation per Floor Plan and Wall Legend (where required)
4. Ceiling Joists per Floor Plan
5. 2x Blocking
6. Wood Stud Diagonal Bracing (alternate) at 45° at 48" On Center
7. Suspended T-bar Ceiling System per Reflected Ceiling Plan

Suspended Ceiling / Framed Ceiling Detail 5

SCALE: NO SCALE

4

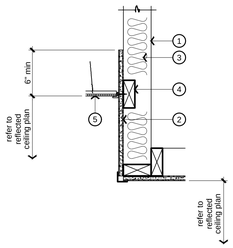


1. Structural member per Structural Dwgs.
2. 12 gauge hanger wire at 48" on center
3. Main Runner Top
4. Continuous Metal 'T' Trim at Perimeter
5. 2 x Wood Stud Wall Blocking

Suspended Ceiling Connection at Wall 4

SCALE: NO SCALE

3

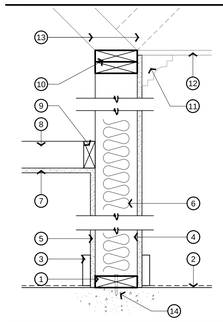


1. Wood Stud Wall per Plan and Wall Legend
2. 5/8" Type 'X' Gypsum Board Per Wall Legend
3. Insulation per floor Plan and Wall Legend (where required)
4. 2x Blocking
5. Suspended T-bar Ceiling System per Reflected Ceiling Plan

Soffit to Suspended Ceiling Connection 3

SCALE: NTS

2

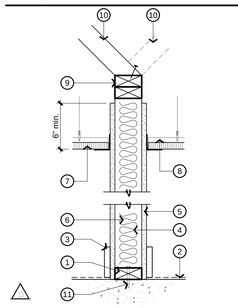


1. 2 X 6 Bottom plate
2. Finish floor
3. Base as scheduled
4. 2 x 6 studs at 16" o.c.
5. 5/8" thk. gypbd.
6. Batt insulation
7. Gypbd. soffit.
8. 2 x 4 framing
9. 2 x 4 nailer
10. 2 X 6 Double top plate
11. Crown molding
12. Existing ceiling
13. Alternate diagonal bracing @ 48" O.C. w/ 8d toe nailing to structural frame.
14. PAF, see sheet gn-3

WALL TYPE 2

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

1

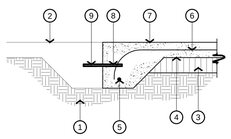


1. 2 X 4 Bottom plate
2. Finish floor
3. Base as scheduled
4. 2 x 4 studs at 16" o.c.
5. 5/8" thick gypbd.
6. Batt insulation
7. Ceiling tile
8. Ceiling grid system
9. 2 X 4 Double top plate
10. Alternate diagonal bracing @ 48" O.C. w/ 8d toe nailing to structural frame.
11. Power actuated fastener, see sheet GN-3

WALL TYPE 1

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

27

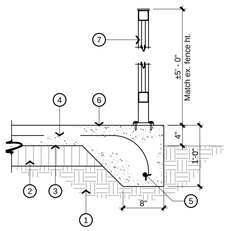


1. Existing grade
2. Existing concrete pad
3. Compacted base
4. Vapor barrier
5. #5 rebar
6. Welded wire mesh
7. Concrete pad
8. #5 dowel embedded to ex concrete pad @ 24" O.C.
9. Drill 3/4" Ø x 5" deep. Fill hole w/ epoxy adhesive

CONCRETE PAD CONNECTION 26

SCALE: 3/4" = 1'-0"

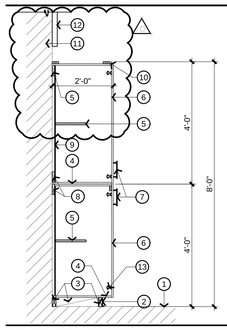
22



1. Existing grade
2. Compacted base
3. Vapor barrier
4. Welded Wire mesh
5. #5 rebar
6. Conc. pad
7. Metal fence

CONCRETE PAD & FENCE DETAIL 21

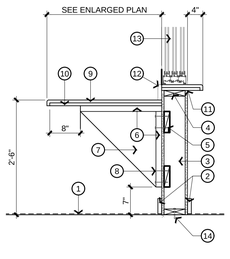
SCALE: 1" = 1'-0"



1. Finish floor
2. Base as scheduled. Match existing base
3. 2 x 4 framing
4. 3/4" thick plywood frame
5. 3/4" thick adjustable mdf shelf
6. Cabinet door. Match kitchen cabinet finish
7. Cabinet pull and lock
8. 1 x 4 framing
9. Hardwood Plywood backing
10. 1 x 2 hardwood trim
11. EXISTING WALL
12. Reinstall sound baffles
13. Cabinet hinge

CABINET DETAIL 16

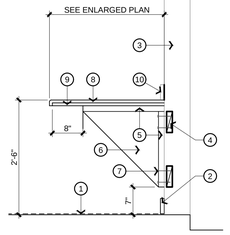
SCALE: 1/2" = 1'-0"



1. Finish floor
2. Base as scheduled
3. 2 x 6 Stud wall
4. 2 x 6 framing
5. 2 x 6 blocking
6. 2 x 3 framing attached to 2 x 6 blocking
7. 3/4" Thick plywood gusset attached to 2 x 3 framing.
8. 2 - Lag screw
9. 3/4" Thick plywood
10. Countertop
11. Caulking / sealant
12. 4" high back splash beyond
13. Window as scheduled
14. PAF, see sheet GN-3

COUNTER DETAIL 2 11

SCALE: 3/4" = 1'-0"



1. Finish floor
2. Base as scheduled
3. Existing exterior wall
4. 2 x 6 blocking
5. 2 x 3 framing attached to 2 x 6 blocking
6. 3/4" Thick plywood gusset attached to 2 x 3 framing.
7. 2 - Lag screw
8. 3/4" Thick plywood
9. Countertop
10. 4" high back splash beyond

COUNTER DETAIL 6

SCALE: 3/4" = 1'-0"

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Issuance / Revisions

No.	Date	Description
1		Plan Check Resubmittal /Client Revisions
2		Bid Set /Client Revisions

Architect / Designer / Engineer

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Project Name

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Relocation
Tenant Improvement

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Architect's Stamp

LICENSED ARCHITECT
JOSEPH STIBER
No. C31573
Exp. 03-31-19
STATE OF CALIFORNIA

Engineer's Stamp

Drawing Description

DETAILS

(BID SET)

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

A5.0.0

2018.09.13

MECHANICAL LEGEND

ABBR. / SYMBOL	DESCRIPTION	ABBR. / SYMBOL	DESCRIPTION
	SQUARE OR RECTANGULAR DUCT	D	CONDENSATE DRAIN, DRAIN
	ROUND DUCT		FLOW INDICATOR, FLOW METER
	FIRE DAMPER		FLEXIBLE PIPE CONNECTOR
	COMBINATION FIRE/SMOKE DAMPER	GV	GATE VALVE
	DUCT WITH MANUAL VOLUME DAMPER		BALANCING VALVE
	DUCT WITH ACOUSTICAL LINER-SIZES GIVEN ARE CLEAR INSIDE DIMENSIONS.		PLUG VALVE
	INCLINE RISE OR DROP IN DIRECTION OF AIR FLOW	CK.V.	CHECK VALVE
	FLEXIBLE DUCT - DOUBLE LINE	PRV, T&PRV	PRESSURE RELIEF VALVE, TEMPERATURE & PRESSURE RELIEF VALVE
	FLEXIBLE DUCT - SINGLE LINE	AAV	AUTOMATIC AIR VENT
	DIRECTION OF FLOW	BV	BALL VALVE
	TRANSITION	BFV	BUTTERFLY VALVE
	VAV (VAV-NO.)	P.G. OR P.I.	PRESSURE GAGE, PRESSURE INDICATOR
	SIDEWALL REGISTER	T.G. OR T.I.	THERMOMETER, TEMPERATURE INDICATOR
	DUCT DOWN		2-WAY CONTROL VALVE
	DUCT UP		3-WAY CONTROL VALVE
	UP AND DOWN		PRESSURE REDUCING VALVE
	CEILING REGISTER	BF	BLIND FLANGE
	EXHAUST REGISTER	T/P	TEMPERATURE/ PRESSURE TEST PORT
	CEILING DIFFUSER	OS	OCCUPANCY SENSOR
	SUPPLY DUCT	LS	LIGHTING CONTROL SWITCH
	RETURN DUCT	LC	LIGHTING CONTROLLER
	EXHAUST DUCT	TC	TIME SWITCH
	CEILING ACCESS PANEL	DS	DAYLIGHT SENSOR
	DUCT WITH TURNING VANES	DM	DIMMER
VD	VOLUME DAMPER	LR	LIGHTING CONTROL RELAY
	EQUIPMENT DESIGNATION & NUMBER	CO2	CARBON DIOXIDE SENSOR
T	ROOM THERMOSTAT	TS	TEMPERATURE SENSOR
SD	SMOKE DETECTOR	PS X	POWER SUPPLY. "X" IS VOLTAGE
P.O.C.	POINT OF CONNECTION	CWS	COOLING WATER SUPPLY
U/C	UNDERCUT DOOR	CWR	COOLING WATER RETURN
D/L	DOOR LOUVER	CHWS	CHILLED WATER SUPPLY
1	NOTE DESIGNATION	CHWR	CHILLED WATER RETURN
H	ROOM HUMIDISTAT	HWS	HOT WATER SUPPLY
	INTERLOCK	HWR	HOT WATER RETURN
	PARALLEL BLADE DAMPER	**WIRING LEGEND**	
	OPPOSED BLADE DAMPER		LINE VOLTAGE WIRING
M	MOTORIZED DAMPER OR VALVE		LINE VOLTAGE (120 VOLT) WIRING
BDD	BACKDRAFT DAMPER		LOW VOLTAGE (30 VOLT AND LESS) D.C. WIRING
	PIPE UNION		USED WITH NUMBERS AS WIRING REFERENCE POINTS TO SIMPLIFY WIRING DIAGRAM
ICW	INDUSTRIAL COLD WATER		INDICATES CONTROL PANEL TERMINAL
DCW	DOMESTIC COLD WATER		NETWORK WIRING
	REDUCER		

ABBREVIATIONS

ABBR. / SYMBOL	DESCRIPTION	ABBR. / SYMBOL	DESCRIPTION	ABBR. / SYMBOL	DESCRIPTION
AD	ACCESS DOOR	FS	FLOW SWITCH	OSA	OUTSIDE AIR
AFF	ABOVE FINISHED FLOOR	ENT	ENTERING	OV	OUTLET VELOCITY
AHJ	AUTHORITY HAVING JURISDICTION	ESP	EXTERNAL STATIC PRESSURE	PD	PRESSURE DROP
AI	ANALOG INPUT			POC	POINT OF CONNECTION
AO	ANALOG OUTPUT	°F	DEGREES FAHRENHEIT	POD	POINT OF DEMOLITION
AMB	AMBIENT	FC	FLEXIBLE CONNECTION	RA	RETURN AIR
AP	ACCESS PANEL	FD	FIRE DAMPER	RAT	RETURN AIR TEMP.
ARCH	ARCHITECTURAL	FLA	FULL LOAD AMPS	RG	RETURN GRILLE
BAS	BUILDING AUTOMATION SYSTEM	FPM	FEET PER MINUTE	RH	RELATIVE HUMIDITY
BDD	BACK DRAFT DAMPER	GPM	GALLONS PER MINUTE	RM	REFRIGERANT MONITOR SENSING POINT
BHP	BRAKE HORSEPOWER	HP	HORSEPOWER	RPB	REVERSE PRESSURE BACKFLOW
BTUH	BTU PER HOUR	HWS/R	HEATING HOT WATER SUPPLY AND RETURN	RPM	REVOLUTIONS PER MINUTE
CC	COOLING COIL	HZ	HERTZ	SA	SUPPLY AIR
CD	CEILING DIFFUSER	IN	INCHES	SAT	SUPPLY AIR TEMPERATURE
CFM	CUBIC FEET PER MINUTE	ICW	INDUSTRIAL COLD WATER	SD	SMOKE DETECTOR
CWS/R	COOLING WATER SUPPLY AND RETURN	KW	KILOWATT	SF	SUPPLY FAN
CTWS/R	COOLING TOWER WATER SUPPLY AND RETURN	(L)	LINED DUCTWORK	SG	SUPPLY GRILLE
CG	CEILING GRILLE	LB	POUND	SP	STATIC PRESSURE
CNTRL	CONTROL	LAT	LEAVING AIR TEMPERATURE	SPEC	SPECIFICATION
CONN	CONNECTION	LWT	LEAVING WATER TEMPERATURE	SQ FT	SQUARE FOOT
CONT	CONTINUATION	LVG	LEAVING	S/S	START/ STOP
CR	CEILING REGISTER	LWB	LEAVING WB TEMPERATURE	ST	SOUND TRAP
CSF	COMBINATION FIRE/SMOKE DAMPER	MA	MAKEUP AIR	T	THROAT
DDC	DISTRIBUTED DIGITAL CONTROL	MAT	MIXED AIR TEMPERATURE	TS	TEMPERATURE SENSOR
DI	DIGITAL INPUT	MAX	MAXIMUM	TT	TEMPERATURE TRANSMITTER
DO	DIGITAL OUTPUT	MCC	MOTOR CONTROL CENTER	TSP	TOTAL STATIC PRESSURE
DPT	DIFFERENTIAL PRESSURE TRANSMITTOR	MIN	MINIMUM	TDH	TOTAL DYNAMIC HEAD
Ø	(DIA) DIAMETER	NC	NORMALLY CLOSED	T OR TEMP	TEMPERATURE
D	CONDENSATE DRAIN, DRAIN	NO	NORMALLY OPEN	TYP	TYPICAL
dP	PRESSURE DROP	RL	REFRIGERANT LINES	UI	UNIVERSAL INPUT
EA	EXHAUST AIR	SS	STAINLESS STEEL	VD	VOLUME DAMPER
EAT	ENTERING AIR TEMPERATURE	CV	CONSTANT VOLUME	VAV	VARIABLE AIR VOLUME
EWT	ENTERING WATER TEMPERATURE	GV	GRAVITY VENTILATOR	VFD	VARIABLE FREQUENCY DRIVE
EDB	ENTERING DB TEMPERATURE	NO.	NUMBER	WB	WET BULB
EWB	ENTERING WB TEMPERATURE	OAD	OUTSIDE AIR DAMPER	WC	WATER COLUMN
EMS	ENERGY MANAGEMENT SYSTEM	OPER WT	OPERATING WEIGHT	WG	WATER GAUGE
EF	EXHAUST FAN	OPNG	OPENING	WM	WATER METER
EXH.	EXHAUST				
FM	FLOW METER				

GENERAL NOTES

1. DESIGN SHALL CONFORM TO REQUIREMENTS OF LOCAL AND NATIONAL CODES. REFER TO THE "APPLICABLE CODES" TABLE ON THIS DRAWING SHEET.
2. CONTRACTOR SHALL OBTAIN AND PAY FOR REQUIRED PERMITS ASSOCIATED WITH THIS PROJECT. ARRANGE AND COORDINATE ALL REQUIRED INSPECTIONS BY THE APPROPRIATE LOCAL AHJ.
3. PROVIDE COMPLETE AND PROPERLY FUNCTIONING MECHANICAL SYSTEM FOR THIS PROJECT. BY SUBMITTING A BID ON THIS PROJECT. THE CONTRACTOR ACCEPTS THESE DOCUMENTS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND DESIGN INTENT. ADDITIONAL COSTS TO ACHIEVE THE INTENDED SCOPE OF WORK AS A RESULT OF UNREPORTED DISCREPANCIES OR OMISSIONS WILL NOT BE ACCEPTED.
4. IF THE CONTRACTOR CHOOSES TO EXCLUDE ANY WORK FOR ANY REASON. THE EXCLUSION MUST BE CLEARLY IDENTIFIED IN THE BID. IF THERE ARE NO EXCLUSIONS SPECIFICALLY IDENTIFIED IN THE BID, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING WORK AND MATERIAL REQUIRED TO SATISFY THE INTENT OF THE DOCUMENTS AS DEFINED BY THE BASIS OF DESIGN AND OWNER'S REPRESENTATIVE. ADDITIONAL COSTS TO ACHIEVE THE INTENDED SCOPE OF WORK AS A RESULT OF ANY UNIDENTIFIED EXCLUSION WILL NOT BE ACCEPTED.
5. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEM WITH THE WORK OF OTHER TRADES. IF DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A PROBLEM RELATIVE TO THE DOCUMENTS, THE LOCAL APPLICABLE CODES AND GOVERNING DOCUMENTS, OR THE WORK CANNOT BE INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS FOR ANY REASON, NOTIFY THE CONSTRUCTION MANAGER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. THE CONTRACTOR MAY BE RESPONSIBLE FOR REMOVING, AT NO ADDITIONAL COMPENSATION, ANY WORK INSTALLED, PRIOR TO RECEIVING DIRECTION FROM THE OWNER'S REPRESENTATIVE, IN VIOLATION OF THE CONTRACT DOCUMENTS OR APPLICABLE CODES.
6. SYMBOLS SHOWN ON THE DRAWINGS AND IN THE SCHEDULES INDICATE THE TYPE OF EQUIPMENT ONLY. REVIEW DRAWINGS TO DETERMINE THE EXACT QUANTITIES REQUIRED FOR EACH EQUIPMENT TYPE.
7. CONTRACTOR SHALL EMPLOY "CLEAN CONSTRUCTION" METHODS TO KEEP THE HVAC AND PIPING SYSTEMS FREE OF DUST, DIRT AND DEBRIS. DURING CONSTRUCTION, DUCTWORK SHALL BE SEALED AT OPENINGS WHENEVER WORK CEASES FOR GREATER THAN ONE DAY. DUCT OPENINGS, DIFFUSERS, GRILLES AND REGISTERS SHALL BE SEALED WITH VISQUINE IN ANY AREA OF THE PROJECT WHERE DUST GENERATING CONSTRUCTION ACTIVITIES OCCUR, INCLUDING THE PREPARATION OF WALL BOARD, PREPARATION, GRINDING OR FINISHING OF CONCRETE WORK OR ANY OTHER SIMILAR ACTIVITY. IF SIMILAR REWORK OF A PREVIOUSLY FINISHED AREA IS REQUIRED, AIR HANDLING UNITS AND FAN COILS SERVING THAT AREA SHALL BE SHUT DOWN, AND ALL GRILLES, REGISTERS, DIFFUSERS AND DUCT OPENINGS IN THAT AREA, WHETHER ABOVE OR BELOW THE CEILING, SHALL BE SEALED WITH VISQUINE TO PREVENT INFILTRATION OF DUST, DIRT AND DEBRIS INTO THE AIR DISTRIBUTION SYSTEM.
8. PROVIDE ALL CORING, TRENCHING, CUTTING AND PATCHING AS REQUIRED TO PERFORM THE MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL WORK FOR THIS PROJECT.
9. COORDINATE PADS, CURBS, SUPPORTS AND OPENINGS FOR EQUIPMENT WITH APPROVED EQUIPMENT SUBMITTALS.
10. DIMENSIONS OF LINED DUCTWORK ARE TO BE OUTSIDE DIMENSIONS WITH THICKNESS OF LINING INDICATED.
11. COORDINATE REQUIREMENTS FOR WALL LOUVERS, DOOR LOUVERS AND UNDERCUTS WITH ARCHITECT. LOUVERS SHALL BE MINIMUM OF 50% FREE AREA.
12. COORDINATE LOCATIONS OF THERMOSTATS WITH ARCHITECT AND OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. THERMOSTATS MOUNTED ON EXTERIOR WALLS SHALL HAVE INSULATED BACKS. AVOID LOCATIONS NEAR EXTERIOR DOORS OR IN DIRECT SUNLIGHT. MOUNTING HEIGHT PER ADA.
13. COORDINATE THE CEILING TYPES AND DO NOT INSTALL WORK THAT REQUIRES ACCESS (JUNCTION BOXES, VALVES, DEVICES, ETC.) ABOVE INACCESSIBLE CEILINGS. IF IT IS NECESSARY TO INSTALL SUCH WORK ABOVE AN INACCESSIBLE CEILING, PROVIDE ACCESS PANELS AS REQUIRED TO PERMIT ACCESS. COORDINATE ACCESS PANEL LOCATIONS WITH THE ASSOCIATED EQUIPMENT LOCATIONS. SHOW ACCESS PANELS ON SHOP DRAWINGS. INSTALL ACCESS PANELS IN WALLS OR CEILINGS AS SHOWN ON ARCHITECTURAL PLANS OR AS DIRECTED BY THE ARCHITECT.
14. PROVIDE 1" DIAMETER COLORED STICKER ON CEILINGS TO INDICATE LOCATIONS OF FIRE DAMPERS, BALANCING DAMPERS, VAV TERMINALS, FAN COILS ABOVE CEILINGS. SHOP DRAWINGS SHALL INCLUDE A LEGEND FOR COLOR CODE.
15. VOLUME DAMPERS SHALL BE INSTALLED IN EACH SUPPLY AND EXHAUST BRANCH DUCT SERVING AN INDIVIDUAL SUPPLY OUTLET OR EXHAUST INLET. IN OFFICE AREAS, PROVIDE A MAXIMUM 6 FEET OF ACOUSTIC FLEX BETWEEN DAMPER AND SUPPLY OUTLET.
16. PROVIDE SUPPORT STEEL, HANGERS, VIBRATION ISOLATION, AND ACCESSORIES REQUIRED TO INSTALL MECHANICAL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DO NOT SUPPORT CEILINGS, LIGHTING FIXTURES, OR ANY OTHER DEVICES FROM DUCTWORK, PIPES, AND ELECTRICAL CONDUIT. UNLESS OTHERWISE NOTED, DO NOT ALLOW DUCTWORK, PIPES, AND CONDUIT TO DIRECTLY CONTACT THE BUILDING STRUCTURE, CEILING SYSTEM, LIGHT FIXTURES, ANY OTHER BUILDING SYSTEM COMPONENT, OR EACH OTHER.
17. PERFORM MECHANICAL WORK IN ACCORDANCE WITH ALL CURRENT AND APPLICABLE LOCAL CODES AND REGULATIONS AND AS REQUIRED BY THE LOCAL AHJ.
18. VERIFY THAT EQUIPMENT AND MATERIAL TO BE INSTALLED IN THE RETURN AIR PATH IS RATED FOR USE IN THE RETURN AIR PATH AND MEETS REQUIREMENTS OF THE APPLICABLE CODES AND REGULATIONS. SUPPLY AND RETURN AIR PLENUMS SHALL BE OF NON-COMBUSTIBLE CONSTRUCTION. SEALED AIRTIGHT, AND CONFORM TO ALL APPLICABLE CODE REQUIREMENTS. MATERIALS SHALL HAVE A MOLD, HUMIDITY, AND EROSION RESISTANT FACE THAT MEETS THE REQUIREMENTS OF UL181. COMBUSTIBLE MATERIALS EXPOSED WITHIN THE PLENUM MUST COMPLY WITH IMC SECTION 602.2. FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED RATING OF NOT MORE THAN 50.
19. PROVIDE CODE APPROVED FIRE STOPPING AT ALL PIPING, CONDUIT, AND DUCTWORK PENETRATIONS THROUGH BUILDING CONSTRUCTION TO ACHIEVE FIRE, SMOKE, AND SOUND RATINGS AS REQUIRED.
20. REPAIR ANY DAMAGE TO FIREPROOFING DUE TO INSTALLATION OF MECHANICAL WORK.
21. DUCTWORK THAT PENETRATES THROUGH FIRE RESISTIVE CORRIDORS WITHOUT SERVING THE CORRIDOR SHALL BE A MINIMUM OF 26 GAUGE GALVANIZED STEEL. ALL GALVANIZED SHEET METAL DUCT SHALL BE G-90 ZINC-COATED.
22. INSTALL MECHANICAL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
23. PROVIDE MECHANICAL EQUIPMENT SUITABLE FOR THE INTENDED PURPOSE. MANUFACTURERS SHALL HAVE HAD SIMILAR PRODUCTS IN SATISFACTORY SERVICE FOR A MINIMUM OF 3 YEARS.
24. PERFORM SYSTEM COMMISSIONING, CLEANING, SERVICING, BALANCING, TESTING, AND CERTIFICATION REQUIRED BY THE BRIDGING DOCUMENTS, CODE, LOCAL AUTHORITY HAVING JURISDICTION, AND AS RECOMMENDED BY THE EQUIPMENT MANUFACTURERS, PRIOR TO OCCUPANCY.
25. UPON COMPLETION OF TESTING, OPERATE EQUIPMENT TO VERIFY THAT ALL SYSTEMS FUNCTION PROPERLY. AFTER VERIFYING THE PROPER OPERATION, DEMONSTRATE THE OPERATION OF SYSTEMS AND EQUIPMENT TO THE OWNERS REPRESENTATIVES. PROVIDE 48 HOURS NOTICE AND SCHEDULE THE DEMONSTRATION WITH THE OWNER.
26. PROVIDE EQUIPMENT AND CONTROL SYSTEM OPERATION AND MAINTENANCE MANUALS. FINAL APPROVED SUBMITTALS AND AS-BUILT DRAWINGS AS DESCRIBED IN SPECIFICATIONS. EQUIPMENT MANUAL SHALL BE EDITED TO INCLUDE ONLY OPTIONS AND FEATURES THAT HAVE BEEN INSTALLED.
27. PROVIDE TRAINING FOR OWNER'S MAINTENANCE AND ENGINEERING STAFF TO INCLUDE SYSTEM OPERATION, CAPABILITIES AND LIMITATIONS AND MAINTENANCE REQUIREMENTS. TRAINING SHALL INCLUDE BOTH CLASSROOM AND FIELD. REFER TO SPECIFICATIONS.
28. GUARANTEE ALL WORK AND MATERIALS FOR A MINIMUM OF ONE YEAR FROM THE DATE OF OWNER ACCEPTANCE.
29. MECHANICAL CONTRACTOR'S CONTROL SUB-CONTRACTOR SHALL INCLUDE ALL LOW VOLTAGE WIRING AND CONDUIT REQUIRED FOR THE BUILDING AUTOMATION AND CONTROL SYSTEM. ELECTRICAL CONTRACTOR SHALL PROVIDE 120V POWER FOR CONTROL SYSTEMS AT LOCATIONS COORDINATED WITH THE CONTROLS SUB-CONTRACTOR. AS A MINIMUM, 120V POWER FOR CONTROL NEEDS TO BE PROVIDED AT EACH AIR HANDLER AND VAV TERMINAL.
30. CONTRACTOR IS RESPONSIBLE FOR PERFORMING ACCEPTANCE TESTING AS REQUIRED BY T24 FOR THE SYSTEMS AND FEATURES INCLUDED IN THIS SCOPE OF WORK. FOR THE CONTROL RETROFIT, REQUIRED ACCEPTANCE TESTS ARE LISTED IN SPECIFICATIONS.

SCOPE OF WORK

1. EXISTING FAN COIL FC-1 TO REMAIN AND REUSE. DEMOLITION OF EXISTING DUCTWORK ONLY CONNECTING INTO THIS SYSTEM. DIFFUSER AND GRILLES SHALL BE REMOVED AND PLACED INTO STORAGE FOR REUSE.
2. DEMO DUCTWORK AND DIFFUSERS CONNECTING TO FAN COIL FC-3. SEE SHEET M-1.0 FOR MORE DETAIL.
3. PROVIDE NEW DUCTWORK FOR EXISTING FAN COIL FC-1 AND RECONNECT TO EXISTING DIFFUSES AND GRILLES FOR NEW LOCATIONS.
4. CLEAN ROOM AND REMOVE DEBRIS.
5. INSTALL TWO NEW SPLIT SYSTEM HEAT PUMP UNNITS WITH ASSOCIATED REFRIGERANT PIPING AND ACCESSORIES.
6. RECONNECT EXISTING FAN COIL FC 3 WITH NEW DIFFUSERS AND DUCTWORK.
7. INSTALL NEW OSA SUPPLY FAN SF 1 AND DUCTWORK TO SUPPLY THE REQUIRED OSA AIR INTO THE ROOM.
8. PROVIDE NEW CONDENSATE DRAIN FOR NEW FAN COIL UNITS (FC 4 & 5). CONNECT TO EXISTING CONDENSATE DRAIN SHOWN IN SHEET P-2.0.

SHEET INDEX

S.No.	SHEET NUMBER	SHEET TITLE
1	M-0.1	NOTES, LEGEND AND ABBREVIATIONS
2	M-0.2	SCHEDULES
3	M-0.3	SPECIFICATIONS
4	M-0.4	TITLE 24
5	M-0.5	TITLE 24
6	M-1.0	DEMO FLOOR PLAN
7	M-2.0	MECHANICAL FLOOR PLAN
8	M-5.0	DETAILS
9	P-2.0	PIPING FLOOR PLAN

SEISMIC NOTES

THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1615A.1.12 THROUGH 1615A1.22 AND ASCE 7-05 CHAPTER 6 AND 13.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICE SUCH AS GAS, ELECTRIC AND WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCT WORK, PIPING, AND CONDUIT.

1. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
2. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THESE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-05 SECTIONS 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, 13.6.5.6. AND 2016 CBC, SECTIONS 1651A.1.20, 1615A.1.21 AND 1615A.1.22.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPA #) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

COPIES OF THE APPROVED DRAWINGS SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

APPLICABLE CODES

ALL MECHANICAL EQUIPMENT, MATERIAL, TESTING AND DETAILS OF INSTALLATION SHALL CONFORM TO THE MECHANICAL REQUIREMENTS AND REGULATIONS ENFORCED BY THE STATE OF CALIFORNIA UTILIZING THE FOLLOWING CODES:

APPLICABLE CODES

2016 CALIFORNIA BUILDING CODE, VOLUMES 1 AND 2
2016 CALIFORNIA ELECTRICAL CODE
2016 CALIFORNIA MECHANICAL CODE
2016 CALIFORNIA PLUMBING CODE
2016 CALIFORNIA ENERGY CODE (BUILDING ENERGY EFFICIENCY STANDARDS) FOR RESIDENTIAL & NON-RESIDENTIAL BUILDINGS)
2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen)
2016 CALIFORNIA FIRE CODE

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Relocation
Tenant Improvement

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Engineer's Stamp

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Drawing Description

NOTES LEGEND, ABBREVIATIONS

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DX SPLIT HEAT PUMP UNIT SCHEDULES

INDOOR FAN COIL UNIT

SYMBOL	MANUFACTURER & MODEL NO.	TYPE	SERVING	SUPPLY CFM	FAN SPEED	VOLTAGE	FLA	MOCP	SOUND PRESS. dB(A)	UNIT DIMENSIONS (HxWxD INCHES)	OP. WT. (LBS)	REMARKS:	MOUNTING DETAIL
FC 4	CARRIER 40MBQB12D–3	DUCTED FAN COIL	OPEN OFFICE	380	HI	208-1-60	1.03	-	38	25"x28"x8"	40.0	1 2 3	11 / M-5.0
FC 5	CARRIER 40MBQB09D–3	DUCTED FAN COIL	CONFERENCE ROOM	300	MEDIUM	208-1-60	1.03	-	33	25"x28"x8"	40.0	1 2 3	11 / M-5.0

AIR-COOLED OUTDOOR CONDENSING UNIT

SYMBOL	MANUFACTURER & MODEL NO.	LOCATION	COOLING CAPACITY (BTU/H) @ 105°F OUTDOOR)	HEATING CAPACITY (BTU/H) @ 17° AMB	SEER / HSPF	VOLTAGE/ Ph/HZ	M.C.A.	MOCP	SOUND PRESS. dB(A)	REFRIG.	UNIT DIMENSIONS (HxWxD INCHES)	OPER. WT. (LBS)	REMARKS:	MOUNTING DETAIL
CU 4 HEAT PUMP* 1 TON	CARRIER 38MAQB12R–03	GROUND LEVEL	13,000 / 11,000	13,500	19.0 / 10.5	208-1-60	9.0	15	56	R410A	13"x32"x22"	92.0	4	8 / M-5.0
CU 5 HEAT PUMP* 3/4 TON	CARRIER 38MAQB09R–3	GROUND LEVEL	11,000 / 9,000	11,500	19.0 / 11.1	208-1-60	9.0	15	56	R410A	13"x32"x22"	92.0	4	8 / M-5.0

REMARKS:

1. FURNISHED WITH WIRED FACTORY REMOTE WALL MOUNTED ROOM TEMPERATURE CONTROLLER.
2. FURNISH INDOOR UNIT WITH FACTORY WALL OR CEILING MOUNTING BRACKET/SUPPORT. INSTALL UNIT STRICTLY PER MANUF. INSTALLATION INSTRUCTIONS.
3. INDOOR FAN COIL UNIT 208V/SINGLE PHASE POWER OBTAINED FROM PARTNER OUTDOOR CONDENSING UNIT.
4. SIZE AND INSTALL REFRIGERANT PIPING STRICTLY PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS. FIELD DETERMINE THE SHORTEST POSSIBLE ROUTING OF REFRIGERANT PIPING BETWEEN INDOOR AND OUTDOOR UNITS. PROVIDE ARMAFLEX CLOSED CELL ELASTOMERIC REFRIGERANT PIPING INSULATION (OR EQUAL) WITH MINIMUM 1/2 " THICKNESS R 4.8 MINIMUM VALUE, PER CEC TABLE 120.3-A AT 40°F SUCTION TEMPERATURE.

FANS SCHEDULE

SYMBOL	MANUFACTURER & MODEL NO.	SERVING	DUTY	LOCATION	TYPE & ARRANGEMENT	DRIVE	CFM	E.S.P. IN. H2O	FAN RPM	MINIMUM STATIC EFF.	FAN BHP	LOW SPEED CFM	FAN MOTOR HP	SUPPLY POWER VOLTAGE	SOUND RATING (SONES)	DIMENSIONS: (INCL. 12"H CURB) W" x D " x H"	OPER. WT. (INCL. CURB) (LBS.)	REMARKS:	MOUNTING DETAIL
SF 1	GREENHECK SQ-160-VG	FC-1, FC-2, FC-3, FC-4, AND FC-5	OSA	CEILING	INLINE	DIRECT	1270	0.50	1,140	55%	0.18	560	3/4	115V-1ø-60HZ	5.9	26"x26"x26"	136	1	12 / M-5.0

REMARKS:

1. VARIGREEN ECM MOTOR WITH 0-10VDC INPUT FOR REMOTE SIGNAL.

AIR DISTRIBUTION SCHEDULE (UNLESS OTHERWISE NOTED ON PLANS)

TAG	MANUFACTURER & MODEL NO.	DESCRIPTION	FRAME TYPE	REMARKS:
CD1	TITUS MCD BORDER 3, OR EQUAL	MODULAR CORE	LAY IN	WITH 2'X2' FILLER PANEL. NO O.B.D. PROVIDE TOP HAT FOR ROUND DUCT COLLAR.
CD2	TITUS MCD BORDER 1, OR EQUAL	MODULAR CORE	SURFACE	NO O.B.D. PROVIDE TOP HAT FOR ROUND DUCT COLLAR.
RG1 / TG1 / EG1	TITUS 50F-NT BORDER 3, OR EQUAL	1/2"X1/2"X1/2" CORE	LAY IN	WITH 2'X2' FILLER PANEL. NO O.B.D. PROVIDE TOP HAT FOR ROUND DUCT COLLAR.
RG2 / TG2 / EG2	TITUS 50F BORDER 1, OR EQUAL	1/2"X1/2"X1/2" CORE	SURFACE	NO O.B.D. PROVIDE TOP HAT FOR ROUND DUCT COLLAR.

LEGEND:

CD1	TAG	CD	SUPPLY DIFFUSER
150	CFM	RG	RETURN GRILLE
12x12	SIZE	TG	TRANSFER GRILLE
		EG	EXHAUST GRILLE

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MECHANICAL SCHEDULE

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17X085 IRVINE DISABILITY SERVICES RELOCATION - MECHANICAL SHEET SPECS:

PART 1 - SPLIT-SYSTEM AIR-CONDITIONING HEAT PUMP UNITS

1.1 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED. INCLUDE RATED CAPACITIES, OPERATING CHARACTERISTICS, AND FURNISHED SPECIALTIES AND ACCESSORIES. INCLUDE PERFORMANCE DATA IN TERMS OF CAPACITIES, OUTLET VELOCITIES, STATIC PRESSURES, SOUND POWER CHARACTERISTICS, MOTOR REQUIREMENTS, AND ELECTRICAL CHARACTERISTICS.

B. SHOP DRAWINGS: INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK. DETAIL EQUIPMENT ASSEMBLIES AND INDICATE DIMENSIONS, WEIGHTS, LOADS, REQUIRED CLEARANCES, METHOD OF FIELD ASSEMBLY, COMPONENTS, AND LOCATION AND SIZE OF EACH FIELD CONNECTION.

1. WIRING DIAGRAMS: FOR POWER, SIGNAL, AND CONTROL WIRING.

C. SAMPLES FOR INITIAL SELECTION: FOR UNITS WITH FACTORY-APPLIED COLOR FINISHES.

D. OPERATION AND MAINTENANCE DATA.

E. FILTERS: ONE SET FOR EACH FAN COIL UNIT.

F. GASKETS: ONE SET FOR EACH ACCESS DOOR.

1.2 WARRANTY

1. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF SPLIT-SYSTEM AIR-CONDITIONING UNITS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

2. WARRANTY PERIOD:

a. FOR COMPRESSOR: FIVE YEAR(S) FROM DATE OF SUBSTANTIAL COMPLETION.

b. FOR PARTS: ONE YEAR(S) FROM DATE OF SUBSTANTIAL COMPLETION.

c. FOR LABOR: ONE INSERT NUMBER YEAR(S) FROM DATE OF SUBSTANTIAL COMPLETION.

1.3 OUTDOOR UNITS (5 TONS OR LESS)

A. AIR-COOLED, COMPRESSOR-CONDENSER COMPONENTS:

1. OUTDOOR-MOUNTED, AIR-COOLED, SPLIT-SYSTEM HEAT PUMP UNIT SUITABLE FOR GROUND OR ROOFTOP INSTALLATION. UNIT CONSISTS OF A HERMETIC COMPRESSOR, AN AIR-COOLED COIL, PROPELLER-TYPE CONDENSER FAN, AND A CONTROL BOX. UNIT WILL DISCHARGE SUPPLY AIR UPWARD AS SHOWN ON CONTRACT DRAWINGS. UNIT WILL BE USED IN A REFRIGERATION CIRCUIT TO MATCH UP TO A PACKAGED FAN COIL OR COIL UNIT.

2. QUALITY ASSURANCE

a. UNIT SHALL BE RATED IN ACCORDANCE WITH THE LATEST EDITION OF AHRI STANDARD 240.

b. UNIT SHALL BE CERTIFIED FOR CAPACITY AND EFFICIENCY AND LISTED IN THE LATEST AHRI DIRECTORY.

c. UNIT CONSTRUCTION SHALL COMPLY WITH LATEST EDITION OF ANSI/ ASHRAE AND WITH NEC.

d. UNIT SHALL BE CONSTRUCTED IN ACCORDANCE WITH UL STANDARDS AND WILL CARRY THE UL LABEL OF APPROVAL. UNIT WILL HAVE C-UL APPROVAL.

e. UNIT CABINET SHALL BE CAPABLE OF WITHSTANDING FEDERAL TEST METHOD STANDARD NO. 141 (METHOD 6061) 500-HR SALT SPRAY TEST.

f. AIR-COOLED CONDENSER COILS SHALL BE PRESSURE TESTED AND THE OUTDOOR UNIT SHALL BE LEAK TESTED.

g. UNIT SHALL BE CONSTRUCTED IN ISO9001 APPROVED FACILITY.

3. DELIVERY, STORAGE, AND HANDLING

a. UNIT SHALL BE SHIPPED AS SINGLE PACKAGE ONLY AND IS STORED AND HANDLED PER UNIT MANUFACTURER'S RECOMMENDATIONS.

4. WARRANTY

a. ONE (1) YEAR FROM DATE OF SYSTEM ACCEPTANCE BY THE OWNER, OR EIGHTEEN (18) MONTHS FROM DATE OF INSTALLATION, WHICHEVER COMES FIRST.

5. EQUIPMENT

a. FACTORY ASSEMBLED, SINGLE PIECE, AIR-COOLED HEAT PUMP UNIT. CONTAINED WITHIN THE UNIT ENCLOSURE IS ALL FACTORY WIRING, PIPING, CONTROLS, COMPRESSOR, REFRIGERANT CHARGE PURON (R-410A), AND SPECIAL FEATURES REQUIRED PRIOR TO FIELD START-UP.

6. UNIT CABINET

a. UNIT CABINET SHALL BE CONSTRUCTED OF GALVANIZED STEEL, BONDERIZED, AND COATED WITH A POWDER COAT PAINT.

7. FANS

a. CONDENSER FAN SHALL BE DIRECT-DRIVE PROPELLER TYPE, DISCHARGING AIR UPWARD.

b. CONDENSER FAN MOTORS SHALL BE TOTALLY ENCLOSED, 1-PHASE TYPE WITH CLASS B INSULATION AND PERMANENTLY LUBRICATED BEARINGS.

c. SHAFTS SHALL BE CORROSION RESISTANT.

d. FAN BLADES WILL BE STATICALLY AND DYNAMICALLY BALANCED.

e. CONDENSER FAN OPENINGS WILL BE EQUIPPED WITH STEEL WIRE SAFETY GUARDS.

8. COMPRESSOR

a. COMPRESSOR SHALL BE HERMETICALLY SEALED.

b. COMPRESSOR SHALL BE MOUNTED ON RUBBER VIBRATION ISOLATORS.

9. CONDENSER COIL

a. CONDENSER COIL SHALL BE AIR COOLED.

b. COIL SHALL BE CONSTRUCTED OF ALUMINUM FINS MECHANICALLY BONDED TO COPPER TUBES WHICH ARE THEN CLEANED, DEHYDRATED, AND SEALED.

10. REFRIGERATION COMPONENTS

a. REFRIGERATION CIRCUIT COMPONENTS SHALL INCLUDE LIQUID-LINE SHUTOFF VALVE WITH SWEAT CONNECTIONS, VAPOR-LINE SHUTOFF VALVE WITH SWEAT CONNECTIONS, SYSTEM CHARGE OF PURON (R-410A) REFRIGERANT, POE COMPRESSOR OIL, ACCUMULATOR, AND REVERSING VALVE.

11. OPERATING CHARACTERISTICS

a. THE CAPACITY OF THE UNIT SHALL MEET OR EXCEED THE BTUH AS INDICATED ON THE EQUIPMENT SCHEDULE AT A SUCTION TEMPERATURE OF 40 F. THE POWER CONSUMPTION AT FULL LOAD SHALL NOT EXCEED THE WATTAGE AS INDICATED ON THE EQUIPMENT SCHEDULE.

b. COMBINATION OF THE UNIT AND THE EVAPORATOR OR FAN COIL UNIT SHALL HAVE A MINIMUM TOTAL NET COOLING CAPACITY AND MINIMUM AIRFLOW AS INDICATED ON THE EQUIPMENT SCHEDULE WITH ENTERING AIR TEMPERATURE AT THE EVAPORATOR AT 67 F WET BULB AND 80 F DRY BULB, AND AIR ENTERING THE UNIT AT 92 F.

c. THE SYSTEM SHALL HAVE A MINIMUM SEER AS INDICATED ON THE EQUIPMENT SCHEDULE AT DOE CONDITIONS.

12. ELECTRICAL REQUIREMENTS

a. NOMINAL UNIT ELECTRICAL CHARACTERISTICS SHALL BE 208/ 230 V, SINGLE PHASE, 60 HZ. THE UNIT SHALL BE CAPABLE OF SATISFACTORY OPERATION WITHIN VOLTAGE LIMITS OF 197 V TO 253 V.

b. UNIT ELECTRICAL POWER SHALL BE SINGLE POINT CONNECTION.

c. CONTROL CIRCUIT SHALL BE 24V.

1.4 INSTALLATION

A. INSTALL UNITS LEVEL AND PLUMB.

B. INSTALL EVAPORATOR-FAN COMPONENTS USING MANUFACTURER'S STANDARD MOUNTING DEVICES SECURELY FASTENED TO BUILDING STRUCTURE.

C. INSTALL ROOF-MOUNTED, COMPRESSOR-CONDENSER COMPONENTS ON EQUIPMENT SUPPORTS.

D. INSTALL SEISMIC RESTRAINTS.

E. INSTALL AND CONNECT PRECHARGED REFRIGERANT TUBING TO COMPONENT'S QUICK-CONNECT FITTINGS. INSTALL TUBING TO ALLOW ACCESS TO UNIT.

1.5 CONNECTIONS

A. INSTALL PIPING TO, ALLOW SPACE FOR SERVICE AND MAINTENANCE OF UNIT.

1.6 FIELD QUALITY CONTROL

A. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT, TEST, AND ADJUST COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS.

B. PERFORM TESTS AND INSPECTIONS.

1. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS, AND TO ASSIST IN TESTING.

C. TESTS AND INSPECTIONS:

1. LEAK TEST: AFTER INSTALLATION, CHARGE SYSTEM AND TEST FOR LEAKS. REPAIR LEAKS AND RETEST UNTIL NO LEAKS EXIST.

2. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATION.

3. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.

D. REMOVE AND REPLACE MALFUNCTIONING UNITS AND RETEST AS SPECIFIED ABOVE.

E. PREPARE TEST AND INSPECTION REPORTS.

1.7 STARTUP SERVICE

A. ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO PERFORM STARTUP SERVICE.

B. COMPLETE INSTALLATION AND STARTUP CHECKS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

1.8 DEMONSTRATION

A. ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO TRAIN OWNER'S MAINTENANCE PERSONNEL TO ADJUST, OPERATE, AND MAINTAIN UNITS.

PART 2 - HVAC POWER VENTILATORS, SUPPLY FAN

2.1 PERFORMANCE REQUIREMENTS

A. PROJECT ALTITUDE: BASE FAN-PERFORMANCE RATINGS ON SEA LEVEL.

B. OPERATING LIMITS: CLASSIFY ACCORDING TO AMCA 99.

2.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED. INCLUDE RATED CAPACITIES, OPERATING CHARACTERISTICS, AND FURNISHED SPECIALTIES AND ACCESSORIES. ALSO INCLUDE THE FOLLOWING:

1. CERTIFIED FAN PERFORMANCE CURVES WITH SYSTEM OPERATING CONDITIONS INDICATED.

2. CERTIFIED FAN SOUND-POWER RATINGS.

3. MOTOR RATINGS AND ELECTRICAL CHARACTERISTICS, PLUS MOTOR AND ELECTRICAL ACCESSORIES.

4. MATERIAL THICKNESS AND FINISHES, INCLUDING COLOR CHARTS.

5. DAMPERS, INCLUDING HOUSINGS, LINKAGES, AND OPERATORS.

B. SHOP DRAWINGS: INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK.

1. DETAIL EQUIPMENT ASSEMBLIES AND INDICATE DIMENSIONS, WEIGHTS, LOADS, REQUIRED CLEARANCES, METHOD OF FIELD ASSEMBLY, COMPONENTS, AND LOCATION AND SIZE OF EACH FIELD CONNECTION.

2. WIRING DIAGRAMS: FOR POWER, SIGNAL, AND CONTROL WIRING.

C. DELEGATED-DESIGN SUBMITTAL: FOR UNIT HANGERS AND SUPPORTS INDICATED TO COMPLY WITH PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

1. VIBRATION ISOLATION BASE OR SUSPENSION SYSTEM DETAILS: DETAIL FABRICATION INCLUDING ANCHORAGES AND ATTACHMENTS TO STRUCTURE AND TO SUPPORTED EQUIPMENT. INCLUDE ADJUSTABLE MOTOR BASES, RAILS, AND FRAMES FOR EQUIPMENT MOUNTING.

2. DESIGN CALCULATIONS: CALCULATE REQUIREMENTS FOR SELECTING VIBRATION ISOLATORS AND FOR DESIGNING VIBRATION ISOLATION BASES.

D. COORDINATION DRAWINGS: REFLECTED CEILING PLANS AND OTHER DETAILS, DRAWN TO SCALE, ON WHICH THE FOLLOWING ITEMS ARE SHOWN AND COORDINATED WITH EACH OTHER, USING INPUT FROM INSTALLERS OF THE ITEMS INVOLVED:

1. ROOF FRAMING AND SUPPORT MEMBERS RELATIVE TO DUCT PENETRATIONS.

2. CEILING SUSPENSION ASSEMBLY MEMBERS.

3. SIZE AND LOCATION OF INITIAL ACCESS MODULES FOR ACOUSTICAL TILE.

4. CEILING-MOUNTED ITEMS INCLUDING LIGHT FIXTURES, DIFFUSERS, GRILLES, SPEAKERS, SPRINKLERS, ACCESS PANELS, AND SPECIAL MOLDINGS.

E. OPERATION AND MAINTENANCE DATA: FOR FANS TO INCLUDE OPERATION, AND MAINTENANCE MANUALS.

F. FURNISH EXTRA MATERIALS THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS.

G. FAN SHALL BE CENTRIFUGAL FILTERED SUPPLY FAN AS SCHEDULED ON DRAWINGS.

H. CERTIFICATIONS: FAN SHALL BE MANUFACTURED AT AN ISO 9001 CERTIFIED FACILITY. FAN SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL 705) AND UL LISTED FOR CANADA (CUL 705). FAN SHALL BEAR THE AMCA CERTIFIED RATINGS SEAL FOR SOUND AND AIR PERFORMANCE.

I. CONSTRUCTION: THE FAN SHALL BE OF BOLTED CONSTRUCTION UTILIZING CORROSION RESISTANT FASTENERS. HOUSING SHALL BE MINIMUM 18 GAUGE GALVANIZED STEEL, BOLTED TO A MINIMUM 16 GAUGE STEEL FAN BASE WITH PRE-PUNCHED MOUNTING HOLES. UNIT SHALL BE PROVIDED WITH AN INSULATED TOP COVER AND 1" WASHABLE PERMANENT ALUMINUM FILTER. INTERNAL BLOWER AND MOTOR ASSEMBLY SHALL BE MOUNTED ON RUBBER VIBRATION ISOLATORS. UNIT SHALL BEAR AN ENGRAVED ALUMINUM NAMEPLATE. NAMEPLATE SHALL INDICATE DESIGN CFM, STATIC PRESSURE, AND MAXIMUM FAN RPM. UNIT SHALL BE SHIPPED IN ISTA CERTIFIED TRANSIT TESTED PACKAGING.

J. WHEEL: WHEEL SHALL BE DWDI CENTRIFUGAL FORWARD CURVED TYPE, CONSTRUCTED OF PAINTED STEEL. WHEEL SHALL BE BALANCED IN ACCORDANCE WITH AMCA STANDARD 204-05, BALANCE QUALITY AND VIBRATION LEVELS FOR FANS.

K. MOTOR: MOTOR SHALL BE NEMA DESIGN B WITH CLASS B INSULATION RATED FOR CONTINUOUS DUTY AND FURNISHED AT THE SPECIFIED VOLTAGE, PHASE AND ENCLOSURE.

L. BEARINGS (SIZE 90-180): BEARINGS SHALL BE PERMANENTLY LUBRICATED, SEALED BALL TYPE SELECTED FOR A MINIMUM L50 LIFE IN EXCESS OF 200,000 HOURS AT MAXIMUM CATALOGED OPERATING SPEED.

M. BEARINGS (SIZE 200): BEARINGS SHALL BE DESIGNED AND INDIVIDUALLY TESTED SPECIFICALLY FOR USE IN AIR HANDLING APPLICATIONS. CONSTRUCTION SHALL BE HEAVY DUTY REGREASABLE BALL TYPE IN A PILLOW BLOCK CAST IRON HOUSING SELECTED FOR A MINIMUM L50 LIFE IN EXCESS OF 200,000 HOURS AT MAXIMUM CATALOGED OPERATING SPEED.

N. DRIVES: DRIVES SHALL BE PRECISION MACHINED CAST IRON TYPE, KEYED AND SECURELY ATTACHED TO THE WHEEL AND MOTOR SHAFTS. DRIVES SHALL BE SIZED FOR 150% OF THE INSTALLED MOTOR HORSEPOWER. THE VARIABLE PITCH MOTOR DRIVE MUST BE FACTORY SET TO THE SPECIFIED FAN RPM.

O. FAN SHALL BE AS MANUFACTURED BY GREENHECK (BASIS OF DESIGN), LOREN COOK COMPANY, OR EQUAL.

2.3 INSTALLATION

A. INSTALL FANS LEVEL AND PLUMB.

B. SUPPORT OR SUSPEND FANS WITH VIBRATION- AND SEISMIC-CONTROL DEVICES.

C. CEILING UNITS: SUSPEND UNITS FROM STRUCTURE; USE STEEL WIRE OR METAL STRAPS.

D. INSTALL UNITS WITH CLEARANCES FOR SERVICE AND MAINTENANCE.

E. INSTALL DUCTS ADJACENT TO FANS TO ALLOW SERVICE AND MAINTENANCE.

2.4 FIELD QUALITY CONTROL

A. PERFORM TESTS AND INSPECTIONS.

1. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS, AND TO ASSIST IN TESTING.

B. TESTS AND INSPECTIONS:

1. VERIFY THAT SHIPPING, BLOCKING, AND BRACING ARE REMOVED.

2. VERIFY THAT UNIT IS SECURE ON MOUNTINGS AND SUPPORTING DEVICES AND THAT CONNECTIONS TO DUCTS AND ELECTRICAL COMPONENTS ARE COMPLETE. VERIFY THAT PROPER THERMAL-OVERLOAD PROTECTION IS INSTALLED IN MOTORS, STARTERS, AND DISCONNECT SWITCHES.

3. VERIFY THAT CLEANING AND ADJUSTING ARE COMPLETE.

4. VERIFY INLET CONE CLEARANCE FROM FAN WHEEL. ADJUST TO MAINTAIN CLEARANCE.

5. DISCONNECT FAN DRIVE FROM MOTOR, VERIFY PROPER MOTOR ROTATION DIRECTION, AND VERIFY FAN WHEEL FREE ROTATION AND SMOOTH BEARING OPERATION. RECONNECT FAN DRIVE SYSTEM, ALIGN AND ADJUST BELTS, AND INSTALL BELT GUARDS.

6. ADJUST BELT TENSION.

7. ADJUST DAMPER LINKAGES FOR PROPER DAMPER OPERATION.

8. VERIFY LUBRICATION FOR BEARINGS AND OTHER MOVING PARTS.

9. VERIFY THAT MANUAL AND AUTOMATIC VOLUME CONTROL AND FIRE AND SMOKE DAMPERS IN CONNECTED DUCTWORK SYSTEMS ARE IN FULLY OPEN POSITION.

10. DISABLE AUTOMATIC TEMPERATURE-CONTROL OPERATORS, ENERGIZE MOTOR AND ADJUST FAN TO INDICATED RPM, AND MEASURE AND RECORD MOTOR VOLTAGE AND AMPERAGE.

11. SHUT UNIT DOWN AND RECONNECT AUTOMATIC TEMPERATURE-CONTROL OPERATORS.

12. REMOVE AND REPLACE MALFUNCTIONING UNITS AND RETEST AS SPECIFIED ABOVE.

C. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.

D. PREPARE TEST AND INSPECTION REPORTS.

PART 3 - REFRIGERANT PIPING

3.1 PERFORMANCE REQUIREMENTS

IF MORE THAN ONE TYPE OF REFRIGERANT IS REQUIRED FOR PROJECT, RETAIN APPLICABLE PARAGRAPHS BELOW AND INDICATE ON DRAWINGS WHICH PIPING CIRCUIT REQUIRES WHICH REFRIGERANT.

A. LINE TEST PRESSURE FOR REFRIGERANT R-410A:

1. SUCTION LINES FOR AIR-CONDITIONING APPLICATIONS: 300 PSIG (2068 KPA).

2. SUCTION LINES FOR HEAT-PUMP APPLICATIONS: 535 PSIG (3689 KPA).

3. HOT-GAS AND LIQUID LINES: 535 PSIG.

3.2 COPPER TUBE AND FITTINGS

A. COPPER TUBE: ASTM B88, TYPE K OR L.

B. WROUGHT-COPPER FITTINGS: ASME B16.22.

C. WROUGHT-COPPER UNIONS: ASME B16.22.

SEE EVALUATIONS FOR DISCUSSIONS OF SOLDER AND BRAZING MATERIALS.

D. SOLDER FILLER METALS: ASTM B 32. USE 95-5 TIN ANTIMONY OR ALLOY HB SOLDER TO JOIN COPPER SOCKET FITTINGS ON COPPER PIPE.

E. BRAZING FILLER METALS: AWS A5.8/A5.8M.

F. FLEXIBLE CONNECTORS:

1. BODY: TIN-BRONZE BELLOWS WITH WOVEN, FLEXIBLE, TINNED-BRONZE-WIRE-REINFORCED PROTECTIVE JACKET.

2. END CONNECTIONS: SOCKET ENDS.

3. OFFSET PERFORMANCE: CAPABLE OF MINIMUM 3/4-INCH MISALIGNMENT IN MINIMUM 7-INCH- LONG ASSEMBLY.

4. PRESSURE RATING: FACTORY TEST AT MINIMUM 500 PSIG.

5. MAXIMUM OPERATING TEMPERATURE: 250 DEG. F.

3.3 PIPING APPLICATIONS FOR REFRIGERANT R-410A

A. SUCTION LINES NPS 4 AND SMALLER FOR CONVENTIONAL AIR-CONDITIONING APPLICATIONS: COPPER, TYPE ACR OR TYPE L, ANNEALED OR DRAWN-TEMPER TUBING AND WROUGHT-COPPER FITTINGS WITH BRAZED OR SOLDERED JOINTS.

B. HOT-GAS AND LIQUID LINES, NPS 4 AND SMALLER: COPPER, TYPE ACR OR K, ANNEALED- OR DRAWN-TEMPER TUBING AND WROUGHT-COPPER FITTINGS WITH SOLDERED OR BRAZED JOINTS.

C. SAFETY-RELIEF-VALVE DISCHARGE PIPING: COPPER, TYPE ACR OR TYPE K, ANNEALED- OR DRAWN-TEMPER TUBING AND WROUGHT-COPPER FITTINGS WITH BRAZED OR SOLDERED JOINTS.

D. INSTALL REFRIGERANT PIPING ACCORDING TO ASHRAE 15.

E. INSTALL PIPING IN CONCEALED LOCATIONS UNLESS OTHERWISE INDICATED AND EXCEPT IN EQUIPMENT ROOMS AND SERVICE AREAS.

F. INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE.

G. INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL REMOVAL.

H. INSTALL PIPING ADJACENT TO MACHINES TO ALLOW SERVICE AND MAINTENANCE.

I. INSTALL PIPING FREE OF SAGS AND BENDS.

J. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS.

K. SELECT SYSTEM COMPONENTS WITH PRESSURE RATING EQUAL TO OR GREATER THAN SYSTEM OPERATING PRESSURE.

L. INSTALL PIPING AS SHORT AND DIRECT AS POSSIBLE, WITH A MINIMUM NUMBER OF JOINTS, ELBOWS, AND FITTINGS.

M. ARRANGE PIPING TO ALLOW INSPECTION AND SERVICE OF REFRIGERATION EQUIPMENT.

N. INSTALL REFRIGERANT PIPING IN PROTECTIVE CONDUIT WHERE INSTALLED BELOWGROUND.

O. INSTALL REFRIGERANT PIPING IN RIGID OR FLEXIBLE CONDUIT IN LOCATIONS WHERE EXPOSED TO MECHANICAL INJURY.

P. SLOPE REFRIGERANT PIPING AS FOLLOWS:

1. INSTALL HORIZONTAL HOT-GAS DISCHARGE PIPING WITH A UNIFORM SLOPE DOWNWARD AWAY FROM COMPRESSOR.

2. INSTALL HORIZONTAL SUCTION LINES WITH A UNIFORM SLOPE DOWNWARD TO COMPRESSOR.

3. INSTALL TRAPS AND DOUBLE RISERS TO ENTRAIN OIL IN VERTICAL RUNS.

4. LIQUID LINES MAY BE INSTALLED LEVEL.

Q. WHEN BRAZING OR SOLDERING, REMOVE SOLENOID-VALVE COILS AND SIGHT GLASSES; ALSO REMOVE VALVE STEMS, SEATS, AND PACKING, AND ACCESSIBLE INTERNAL PARTS OF REFRIGERANT SPECIALTIES. DO NOT APPLY HEAT NEAR EXPANSION-VALVE BULB.

R. INSTALL PIPING WITH ADEQUATE CLEARANCE BETWEEN PIPE AND ADJACENT WALLS AND HANGERS OR BETWEEN PIPES FOR INSULATION INSTALLATION.

S. IDENTIFY REFRIGERANT PIPING AND VALVES.

T. INSTALL SLEEVES FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FLOORS.

U. INSTALL SLEEVE SEALS FOR PIPING PENETRATIONS OF CONCRETE WALLS AND SLABS.

V. INSTALL ESCUTCHEONS FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FLOORS.

3.4 PIPE JOINT CONSTRUCTION

A. REAM ENDS OF PIPES AND TUBES AND REMOVE BURRS. BEVEL PLAIN ENDS OF STEEL PIPE.

B. REMOVE SCALE, SLAG, DIRT, AND DEBRIS FROM INSIDE AND OUTSIDE OF PIPE AND FITTINGS BEFORE ASSEMBLY.

C. FILL PIPE AND FITTINGS WITH AN INERT GAS (NITROGEN OR CARBON DIOXIDE), DURING BRAZING OR WELDING, TO PREVENT SCALE FORMATION.

D. SOLDERED JOINTS: CONSTRUCT JOINTS ACCORDING TO ASTM B 828 OR CDA'S "COPPER TUBE HANDBOOK."

E. BRAZED JOINTS: CONSTRUCT JOINTS ACCORDING TO AWS'S "BRAZING HANDBOOK," CHAPTER "PIPE AND TUBE."

1. USE TYPE BCUP, COPPER-PHOSPHORUS ALLOY FOR JOINING COPPER SOCKET FITTINGS WITH COPPER PIPE.

2. USE TYPE BAG, CADMIUM-FREE SILVER ALLOY FOR JOINING COPPER WITH BRONZE OR STEEL.

3.5 HANGERS AND SUPPORTS

A. INSTALL HANGERS FOR COPPER TUBING WITH THE FOLLOWING MAXIMUM SPACING AND MINIMUM ROD SIZES:

1. NPS 1/2: MAXIMUM SPAN, 60 INCHES; MINIMUM ROD SIZE, 1/4 INCH.

2. NPS 5/8: MAXIMUM SPAN, 60 INCHES; MINIMUM ROD SIZE, 1/4 INCH.

3. NPS 1: MAXIMUM SPAN, 72 INCHES; MINIMUM ROD SIZE, 1/4 INCH.

3.6 FIELD QUALITY CONTROL

A. PERFORM TESTS AND INSPECTIONS AND PREPARE TEST REPORTS.

B. TESTS AND INSPECTIONS:

1. COMPLY WITH ASME B31.5, CHAPTER VI.

2. TEST REFRIGERANT PIPING, SPECIALTIES, AND RECEIVERS. ISOLATE COMPRESSOR, CONDENSER, EVAPORATOR, AND SAFETY DEVICES FROM TEST PRESSURE IF THEY ARE NOT RATED ABOVE THE TEST PRESSURE.

3. TEST HIGH- AND LOW-PRESSURE SIDE PIPING OF EACH SYSTEM SEPARATELY AT NOT LESS THAN THE PRESSURES INDICATED IN PART 1 "PERFORMANCE REQUIREMENTS" ARTICLE.

a. FILL SYSTEM WITH NITROGEN TO THE REQUIRED TEST PRESSURE.

b. SYSTEM SHALL MAINTAIN TEST PRESSURE AT THE MANIFOLD GAGE THROUGHOUT DURATION OF TEST.

c. TEST JOINTS AND FITTINGS WITH ELECTRONIC LEAK DETECTOR OR BY BRUSHING A SMALL AMOUNT OF SOAP AND GLYCERIN SOLUTION OVER JOINTS.

d. REMAKE LEAKING JOINTS USING NEW MATERIALS, AND RETEST UNTIL SATISFACTORY RESULTS ARE ACHIEVED.

3.7 SYSTEM CHARGING

A. CHARGE SYSTEM USING THE FOLLOWING PROCEDURES:

1. INSTALL CORE IN FILTER DRYERS AFTER LEAK TEST BUT BEFORE EVACUATION.

2. EVACUATE ENTIRE REFRIGERANT SYSTEM WITH A VACUUM PUMP TO 500 MICROMETERS. IF VACUUM HOLDS FOR 4 HOURS, SYSTEM IS READY FOR CHARGING.

3. BREAK VACUUM WITH REFRIGERANT GAS, ALLOWING PRESSURE TO BUILD UP TO 2 PSIG.

4. CHARGE SYSTEM WITH A NEW FILTER-DRYER CORE IN CHARGING LINE.

3.8 ADJUSTING

A. ADJUST THERMOSTATIC EXPANSION VALVE TO OBTAIN PROPER EVAPORATOR SUPERHEAT.

B. ADJUST HIGH- AND LOW-PRESSURE SWITCH SETTINGS TO AVOID SHORT CYCLING IN RESPONSE TO FLUCTUATING SUCTION PRESSURE.

C. ADJUST SET-POINT TEMPERATURE OF AIR-CONDITIONING OR CHILLED-WATER CONTROLLERS TO THE SYSTEM DESIGN TEMPERATURE.

D. PERFORM THE FOLLOWING ADJUSTMENTS BEFORE OPERATING THE REFRIGERATION SYSTEM, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS:

1. OPEN SHUTOFF VALVES IN CONDENSER WATER CIRCUIT.

2. VERIFY THAT COMPRESSOR OIL LEVEL IS CORRECT.

3. OPEN COMPRESSOR SUCTION AND DISCHARGE VALVES.

4. OPEN REFRIGERANT VALVES EXCEPT BYPASS VALVES THAT ARE USED FOR OTHER PURPOSES.

5. CHECK OPEN COMPRESSOR-MOTOR ALIGNMENT AND VERIFY LUBRICATION FOR MOTORS AND BEARINGS.

E. REPLACE CORE OF REPLACEABLE FILTER DRYER AFTER SYSTEM HAS BEEN ADJUSTED AND AFTER DESIGN FLOW RATES AND PRESSURES ARE ESTABLISHED.

PART 4 - METAL DUCTS

4.1 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF THE FOLLOWING PRODUCTS:

1. LINERS AND ADHESIVES.

2. SEALANTS AND GASKETS.

3. SEISMIC-RESTRAINT DEVICES.

B. SHOP DRAWINGS:

1. FABRICATION, ASSEMBLY, AND INSTALLATION, INCLUDING PLANS, ELEVATIONS, SECTIONS, COMPONENTS, AND ATTACHMENTS TO OTHER WORK.

2. FACTORY- AND SHOP-FABRICATED DUCTS AND FITTINGS.

3. DUCT LAYOUT INDICATING SIZES, CONFIGURATION, LINER MATERIAL, AND STATIC-PRESSURE CLASSES.

4. ELEVATION OF TOP OF DUCTS.

5. DIMENSIONS OF MAIN DUCT RUNS FROM BUILDING GRID LINES.

6. FITTINGS.

7. REINFORCEMENT AND SPACING.

8. SEAM AND JOINT CONSTRUCTION.

9. PENETRATIONS THROUGH FIRE-RATED AND OTHER PARTITIONS.

10. EQUIPMENT INSTALLATION BASED ON EQUIPMENT BEING USED ON PROJECT.

11. LOCATIONS FOR DUCT ACCESSORIES, INCLUDING DAMPERS, TURNING VANES, AND ACCESS DOORS AND PANELS.

12. HANGERS AND SUPPORTS, INCLUDING METHODS FOR DUCT AND BUILDING ATTACHMENT AND VIBRATION ISOLATION.

C. COORDINATION DRAWINGS: PLANS, DRAWN TO SCALE, ON WHICH THE FOLLOWING ITEMS ARE SHOWN AND COORDINATED WITH EACH OTHER, USING INPUT FROM INSTALLERS OF THE ITEMS INVOLVED:

1. DUCT INSTALLATION IN CONGESTED SPACES. INDICATING COORDINATION WITH GENERAL CONSTRUCTION, BUILDING COMPONENTS, AND OTHER BUILDING SERVICES. INDICATE PROPOSED CHANGES TO DUCT LAYOUT.

2. SUSPENDED CEILING COMPONENTS.

3. STRUCTURAL MEMBERS TO WHICH DUCT WILL BE ATTACHED.

4. SIZE AND LOCATION OF INITIAL ACCESS MODULES FOR ACOUSTICAL TILE.

5. PENETRATIONS OF SMOKE BARRIERS AND FIRE-RATED CONSTRUCTION.

6. ITEMS PENETRATING FINISHED CEILING INCLUDING THE FOLLOWING:

a. LIGHTING FIXTURES.

b. AIR OUTLETS AND INLETS.

c. SPEAKERS.

d. SPRINKLERS.

e. ACCESS PANELS.

f. PERIMETER MOLDINGS.

4.2 SINGLE-WALL RECTANGULAR DUCTS AND FITTINGS

A. GENERAL FABRICATION REQUIREMENTS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" BASED ON INDICATED STATIC-PRESSURE CLASS UNLESS OTHERWISE INDICATED.

B. TRANSVERSE JOINTS: SELECT JOINT TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 2-1, "RECTANGULAR DUCT/TRANSVERSE JOINTS;" FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT-SUPPORT INTERVALS, AND OTHER PROVISIONS IN SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."

C. LONGITUDINAL SEAMS: SELECT SEAM TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 2-2, "RECTANGULAR DUCT/LONGITUDINAL SEAMS;" FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT-SUPPORT INTERVALS, AND OTHER PRO

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 1 of 4)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

A. MECHANICAL COMPLIANCE DOCUMENTS & WORKSHEETS (check box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, refer to the 2016 Nonresidential Manual
Note: The Enforcement Agency may require all forms to be incorporated onto the building plans.

YES	NO	Comp. Doc./Worksheet #	Title
☑	☐	NRCC-MCH-01-E (Part 1 of 3)	Certificate of Compliance, Declaration. Required on plans for all submittals.
☑	☐	NRCC-MCH-01-E (Part 2 of 3)	Certificate of Compliance, Required Acceptance Tests (MCH-02-A to 11-A). Required on plans for all submittals.
☑	☐	NRCC-MCH-01-E (Part 3 of 3)	Certificate of Compliance, Required Acceptance Tests (MCH-12-A to 18-A). Required on plans where applicable.
☑	☐	NRCC-MCH-02-E (Part 1 of 2)	Mechanical Dry Equipment Summary is required for all submittals with Central Air Systems. It is optional on plans.
☑	☐	NRCC-MCH-02-E (Part 2 of 2)	Mechanical Wet Equipment Summary is required for all submittals with chilled water, hot water or condenser water systems. It is optional on plans.
☑	☐	NRCC-MCH-03-E	Mechanical Ventilation and Reheat is required for all submittals with multiple zone heating and cooling systems. It is optional on plans.
☐	☑	NRCC-MCH-07-E (Part 1 of 2)	Power Consumption of Fans. Required on plans where applicable
☐	☑	NRCC-MCH-07-E (Part 2 of 2)	Power Consumption of Fans, Declaration. Required on plans where applicable

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 2 of 4)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

B. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required compliance documents)

Test Performed By:

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for HVAC systems. The designer is required to check the applicable boxes for all acceptance tests that apply and list all equipment that requires an acceptance test. All equipment of the same type that requires a test, list the equipment description and the number of systems.

Installing Contractor:
The contractor who installed the equipment is responsible to either conduct the acceptance test themselves or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible.

Enforcement Agency:
Plancheck – The NRCC-MCH-01-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked.
Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description		MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	MCH-09-A	MCH-10-A	MCH-11-A
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
Carrier 38BNC0	1	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐
Carrier 38MAQ0	1	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐
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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
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CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 3 of 4)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

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Installing Contractor:
The contractor who installed the equipment is responsible to either conduct the acceptance test themselves or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible.

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Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description		MCH-12-A	MCH-13-A	MCH-14-A	MCH-15-A	MCH-16-A	MCH-17-A	MCH-18-A
Equipment Requiring Testing or Verification	# of Units	Fault Detection & Diagnostics for DX Units	Automatic Fault Detection & Diagnostics for Air & Zone	Distributed Energy Storage DX AC Systems	Thermal Energy Storage (TES) Systems	Supply Air Temperature Reset Controls	Condenser Water Reset Controls	ECMS
Carrier 38BNC0	1	☐	☐	☐	☐	☐	☐	☐
Carrier 38MAQ0	1	☐	☐	☐	☐	☐	☐	☐
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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 4 of 4)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	ALEXANDER YAU	Documentation Author Signature:	
Company:	IDS	Signature Date:	3/15/2018
Address:	1 PETERS CANYON RD.	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	CA. 92606	Phone:	(949) 387-8500

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Walter Maclean	Responsible Designer Signature:	Walter M Maclean
Company:	IDS Group	Date Signed:	3/15/2018
Address:	1 Peters Canyon Rd	License:	31382
City/State/Zip:	Irvine, CA 92606	Phone:	(949)387-8500

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 1 of 3)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

A. Equipment Tags and System Description[1] – Dry Systems		FC-4	FC-5	
MANDATORY MEASURES	*T-24 Sections*	*Reference to the Requirements in the Contract Documents[2]*		
Heating Equipment Efficiency[3]	110.1 or 110.2(a)			
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)			
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)			
Furnace Standby Loss Control	110.2(d)			
Low Leakage AHUs	110.2(f)			
Ventilation[4]	120.1(b)			
Demand Control Ventilation[5]	120.1(c)4			
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(e)3			
Shutoff and Reset Controls[7]	120.2(e)			
Outdoor Air and Exhaust Damper Control	120.2(f)			
Isolation Zones	120.2(g)			
Automatic Demand Shed Controls	120.2(h)			
Economizer FDD	120.2(i)			
Duct Insulation	120.4			
PRESCRIPTIVE MEASURES				
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y Y/N	Y Y/N	Y/N
Supply Fan Pressure Control	140.4(c)			
Simultaneous Heat/Cool[8]	140.4(d)			
Economizer	140.4(e)			
Heat and Cool Air Supply Reset	140.4(f)			
Electric Resistance Heating[9]	140.4(g)			
Duct Leakage Sealing and Testing[10]	140.4(l)			

Notes:
1. Provide equipment tags (e.g. AHU 1 to 10) and system description (e.g. Single Duct VAV reheat) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where equipment is required to be listed per Title 20 1601 et seq.
4. Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.
5. If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.
6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications and the sequence of operation
7. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required). For all systems identify the specification for the thermostats and time clocks (if applicable).
8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 2 of 3)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

B. Equipment Tags and System Description[1] – Wet Systems				
MANDATORY MEASURES	*T-24 Sections*	*Reference to the Requirements in the Contract Documents[2]*		
Heating Hot Water Equipment Efficiency[3]	110.1			
Cooling Chilled and Condenser Water Equipment Efficiency[3]	110.1, 140.4(i)			
Open and Closed Circuit Cooling Towers conductivity or flow-based controls	110.2(e) 1			
Open and Closed Circuit Cooling Towers Maximum Achievable Cycles of Concentration (LSI)[4]	110.2(e) 2			
Open and Closed Circuit Cooling Towers Flow Meter with analog output	110.2(e) 3			
Open and Closed Circuit Cooling Towers Overflow Alarm	110.2(e) 4			
Open and Closed Circuit Cooling Towers Efficient Drift Eliminators	110.2(e) 5			
Pipe Insulation	120.3			
PRESCRIPTIVE MEASURES				
Cooling Tower Fan Controls	140.4(h)2, 140.4(h)5	Y/N	Y/N	Y/N
Cooling Tower Flow Controls	140.4(h)3			
Centrifugal Fan Cooling Towers[5]	140.4(h)4			
Air-Cooled Chiller Limitation[6]	140.4(j)			
Variable Flow System Design	140.4(k)			
Chiller and Boiler Isolation	140.4(k)			
CHW and HHW Reset Controls	140.4(k)			
WLHP Isolation Valves	140.4(k)			
VSD on CHW, CW & WLHP Pumps >5HP	140.4(k)			
DP Sensor Location	140.4(k)			

Notes:
1. Provide equipment tags (e.g. CH 1 to 3) or system description (e.g. CHW loop) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. For chillers operating at non-standard efficiencies provide the Kadj values. For chillers also note whether the efficiencies are Path A or Path B.
4. Identify if cooling towers have propeller fans. If towers use centrifugal fans document which exception is used.
5. If air-cooled chillers are used, document which exceptions have been used to comply with 140.4(j) and the total installed design capacity of the air-cooled chillers in the chilled water plant.
6. Identify the existence of a completed MCH-06-E when open or closed circuit cooling towers are specified to be installed, otherwise enter "N/A".

STATE OF CALIFORNIA
HVAC SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Wet System Requirements	(Page 3 of 3)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

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Company:	IDS	Signature Date:	3/15/2018
Address:	1 PETERS CANYON RD.	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	CA. 92606	Phone:	(949) 387-8500

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Responsible Designer Name:	Walter Maclean	Responsible Designer Signature:	Walter M Maclean
Company:	IDS Group	Date Signed:	3/15/2018
Address:	1 Peters Canyon Rd	License:	31382
City/State/Zip:	Irvine, CA 92606	Phone:	(949)387-8500

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Issuance / Revisions

No.	Date	Description
1	2018.06.15	Plan Check Resubmittal /Client Revisions

Architect / Designer / Engineer

IDS GROUP
1 Peters Canyon Road, Suite 130
Irvine, CA. 92606
Tel: 949-387-8500 Fax: 949-387-0800

Client Name

City of Irvine
1 Civic Center Plaza
Irvine, CA. 92606

Project Name

City of Irvine Disability Services Relocation Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

NOT FOR CONSTRUCTION
These Drawings has been Published prior to obtaining Building Permits and are subject to change

Architect's Stamp

Engineer's Stamp

REGISTERED PROFESSIONAL ENGINEER WALTER W. MACLEAN No. 31382 Exp. 6-30-18 MECHANICAL STATE OF CALIFORNIA

Drawing Description

TITLE 24

2018.06.15 (Plan Check Resubmittal)

Project Number	17X085.00
Print Date	2018.06.14
Sheet Number	M-0.4

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 1 of 2)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

A. Mechanical Ventilation and Reheat

ACTUAL DESIGN INFO (FROM EQUIPMENT SCHEDULES, ETC)						AREA BASIS			OCCUPANCY BASIS			ROOM BASIS	MINIMUM		VAV Reheated Primary Air CFM			VAV Deadband Primary Air CFM		
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
ZONE/SYSTEM/ VAV BOX TAG	DESIGN PRIMARY COOLING FLOW (CFM)	DESIGN PRIMARY HEATING FLOW (CFM)	DESIGN PRIMARY AIRFLOW DEADBAND (CFM)	DESIGN PRIMARY HEATING FLOW (CFM)	CNTRL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (FT^2)	MIN CFM PER AREA	MAX. OP PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	MIN CFM BY ROOM	REQ'D VENT FLOW (CFM)	COMPLIES?	PERCENTAGE REDUCTION FOR PRIMARY COOLING	MAXIMUM REHEAT (CFM)	COMPLIES?	% BASED DESIGN PRIMARY AIR (CFM)	MAX STEADY-STATE PRIMARY AIR (CFM)	COMPLIES?
Zone 1							88	0.15	13	0.4	30.0	13		13			☒ Pass ☐ Fail			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
Zone 2							66	0.15	10	0.3	30.0	10		10			☒ Pass ☐ Fail			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
Zone 3							110	0.15	16	0.5	30.0	16		16			☒ Pass ☐ Fail			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
												Total		39			☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
Zone 1							179	0.15	27	3.0	30.0	90		90			☒ Pass ☐ Fail			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
												Total		90			☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
Zone 1							121	0.50	61	4.0	15.0	61		61			☒ Pass ☐ Fail			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 1 of 2)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

A. Mechanical Ventilation and Reheat

ACTUAL DESIGN INFO (FROM EQUIPMENT SCHEDULES, ETC)						AREA BASIS			OCCUPANCY BASIS			ROOM BASIS	MINIMUM		VAV Reheated Primary Air CFM			VAV Deadband Primary Air CFM		
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
ZONE/SYSTEM/ VAV BOX TAG	DESIGN PRIMARY COOLING FLOW (CFM)	DESIGN PRIMARY HEATING FLOW (CFM)	DESIGN PRIMARY AIRFLOW DEADBAND (CFM)	DESIGN PRIMARY HEATING FLOW (CFM)	CNTRL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (FT^2)	MIN CFM PER AREA	MAX. OP PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	MIN CFM BY ROOM	REQ'D VENT FLOW (CFM)	COMPLIES?	PERCENTAGE REDUCTION FOR PRIMARY COOLING	MAXIMUM REHEAT (CFM)	COMPLIES?	% BASED DESIGN PRIMARY AIR (CFM)	MAX STEADY-STATE PRIMARY AIR (CFM)	COMPLIES?
											Total		61				☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
																	☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
																	☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
																	☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
																	☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
																	☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 2 of 2)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	ALEXANDER YAU	Documentation Author Signature:	
Company:	IDS	Signature Date:	3/15/2018
Address:	1 PETERS CANYON RD.	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	CA, 92606	Phone:	(949) 387-8500

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Responsible Designer Name:	Walter Maclean	Responsible Designer Signature:	
Company:	IDS Group	Date Signed:	3/15/2018
Address:	1 Peters Canyon Rd	License:	31382
City/State/Zip:	Irvine, CA 92606	Phone:	(949)387-8500

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 1 of 3)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

A. MECHANICAL COMPLIANCE FORMS & WORKSHEETS
(indicate if worksheet is included)

For detailed instructions on the use of this and all Energy Standards compliance documents, refer to the 2016 Nonresidential Manual
Note: The Enforcement Agency may require all compliance documents to be incorporated onto the building plans. The NRCC-MCH-04-E and NRCC-MECH-05-E are alternative compliance documents to NRCC-MCH-01-E, NRCC-MCH-02-E and NRCC-MCH-03-E for projects using only single zone packaged HVAC systems.

YES	NO	Form	Title
✓		NRCC-MCH-04-E (1 of 2)	Certificate of Compliance. Required on plans when used.
✓		NRCC-MCH-04-E (2 of 2)	Mechanical Acceptance Tests. Required on plans when used.
		NRCC-MCH-05-E (1 of 2)	HVAC Prescriptive Requirements. It is required on plans when used.
		NRCC-MCH-05-E (2 of 2)	Mechanical SWH Equipment Summary is required for all submittals with service water heating, pools or spas. It is required on plans where applicable.

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 2 of 3)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and list all equipment that require an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this compliance document will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Enforcement Agency:
Systems Acceptance. Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

Systems Acceptance. Before occupancy permit is granted. All newly installed HVAC equipment must be tested using the Acceptance Requirements.
The NRCC-MCH-04-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for ALL newly installed and replaced equipment. In addition a Certificate of Acceptance documents shall be submitted to the building department that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of Section 10-103(b) and Title 24 Part 6. The building inspector must receive the properly filled out and signed compliance documents before the building can receive final occupancy.

Test Description		MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-11-A	MCH-12-A	MCH-14-A	MCH-18-A	Test Performed By:
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Automatic Demand Shed Control	FDD for Packaged DX Units	Distributed Energy Storage DX AC Systems	Energy Management Control System	
Carrier 38BF	1	✓	✓									
Carrier 38M	1	✓	✓									

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 3 of 3)
Project Name: City of Irvine Disability Services Relocation Tenant Improvement	Date Prepared: 3/15/2018

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Issuance / Revisions

No.	Date	Description
1	2018.06.15	Plan Check Resubmittal /Client Revisions

Architect / Designer / Engineer

IDS
IDS GROUP
1 Peters Canyon Road, Suite 130
Irvine, CA. 92606
Tel: 949-387-8500 Fax: 949-387-0800

Client Name

City of Irvine
1 Civic Center Plaza
Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

NOT FOR CONSTRUCTION
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Architect's Stamp

Engineer's Stamp

REGISTERED PROFESSIONAL ENGINEER
WALTER M. MACLEAN III
No. 31382
Exp. 6-30-18
MECHANICAL
STATE OF CALIFORNIA

Drawing Description

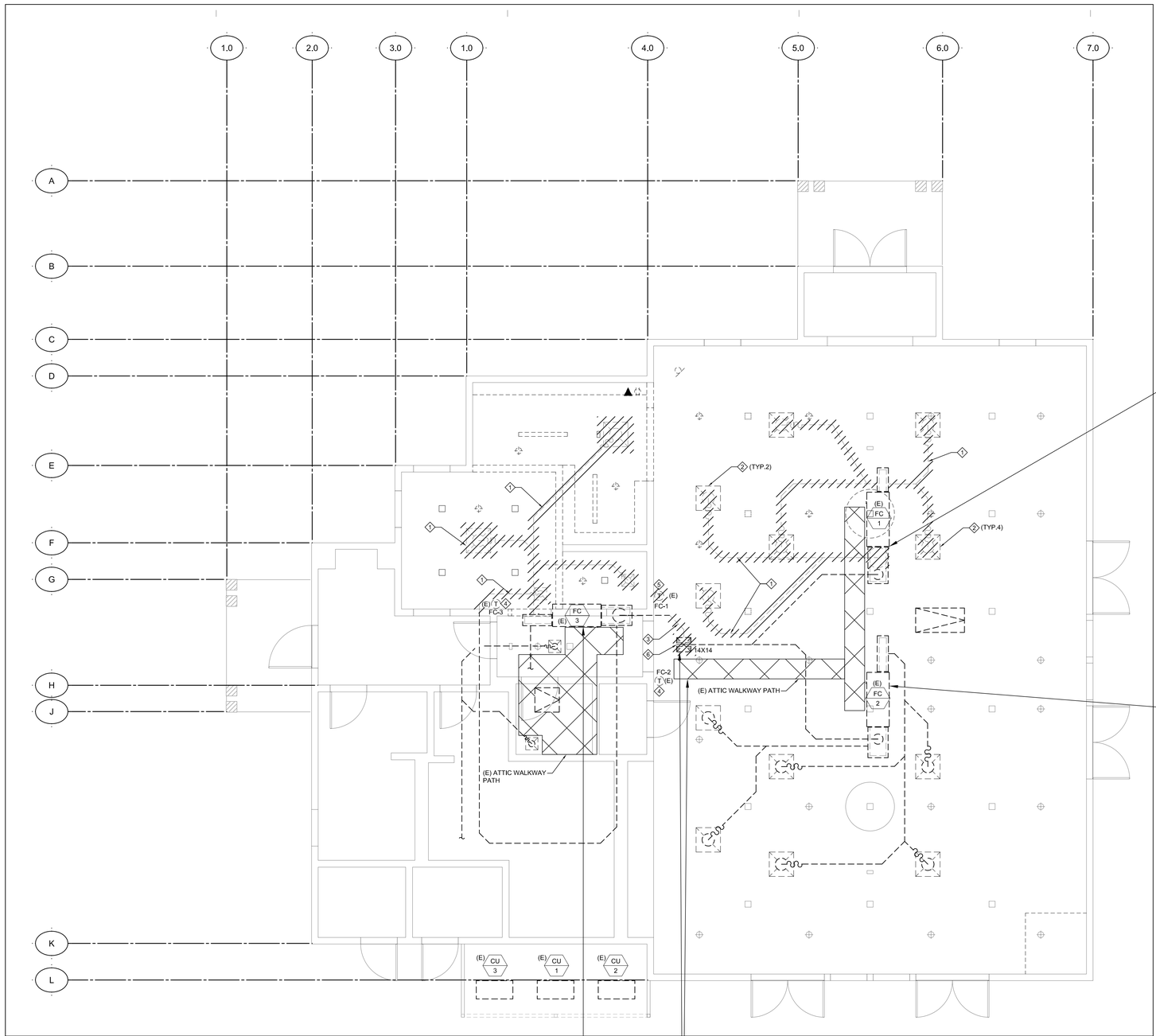
TITLE 24

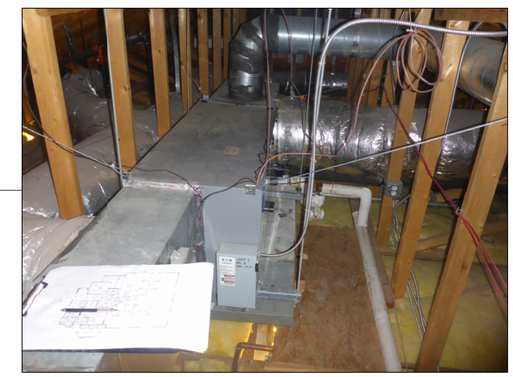
Project Number	17X085.00
Print Date	2018.06.14

Sheet Number

M-0.5

2018.06.15 (Plan Check Resubmittal)





DEMOLITION KEYNOTES

1. DEMOLISH EXISTING SUPPLY, RETURN DUCTWORK.
2. DIFFUSER, REGISTERS, & GRILLES SHALL BE CAREFULLY REMOVED AND PLACED IN STORAGE FOR REUSE.
3. DEMOLISH AND REMOVE EXISTING OSA DUCTWORK.
4. EXISTING THERMOSTAT TO REMAIN AND REUSE.
5. EXISTING THERMOSTAT SHALL BE RELOCATED FOR REUSE. SEE M-2.0 FOR NEW LOCATION.
6. OSA ROOF PENETRATION TO REMAIN AND REUSE. DEMOLISH AND REMOVE A SECTION OF OSA DUCT DROP. REPLACE DROP WITH OSA FAN. SUPPLY NEW FITTINGS, CONNECTIONS AND SUPPORTS FOR OSA FAN. SEE DETAIL 12/M-5.0.

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Issuance / Revisions

No.	Date	Description
1	2018.06.15	Plan Check Resubmittal /Client Revisions

Architect / Designer / Engineer

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Client Name

City of Irvine

1 Civic Center Plaza
Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

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Architect's Stamp

Engineer's Stamp

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EXP. 6-30-18
MECHANICAL
STATE OF CALIFORNIA

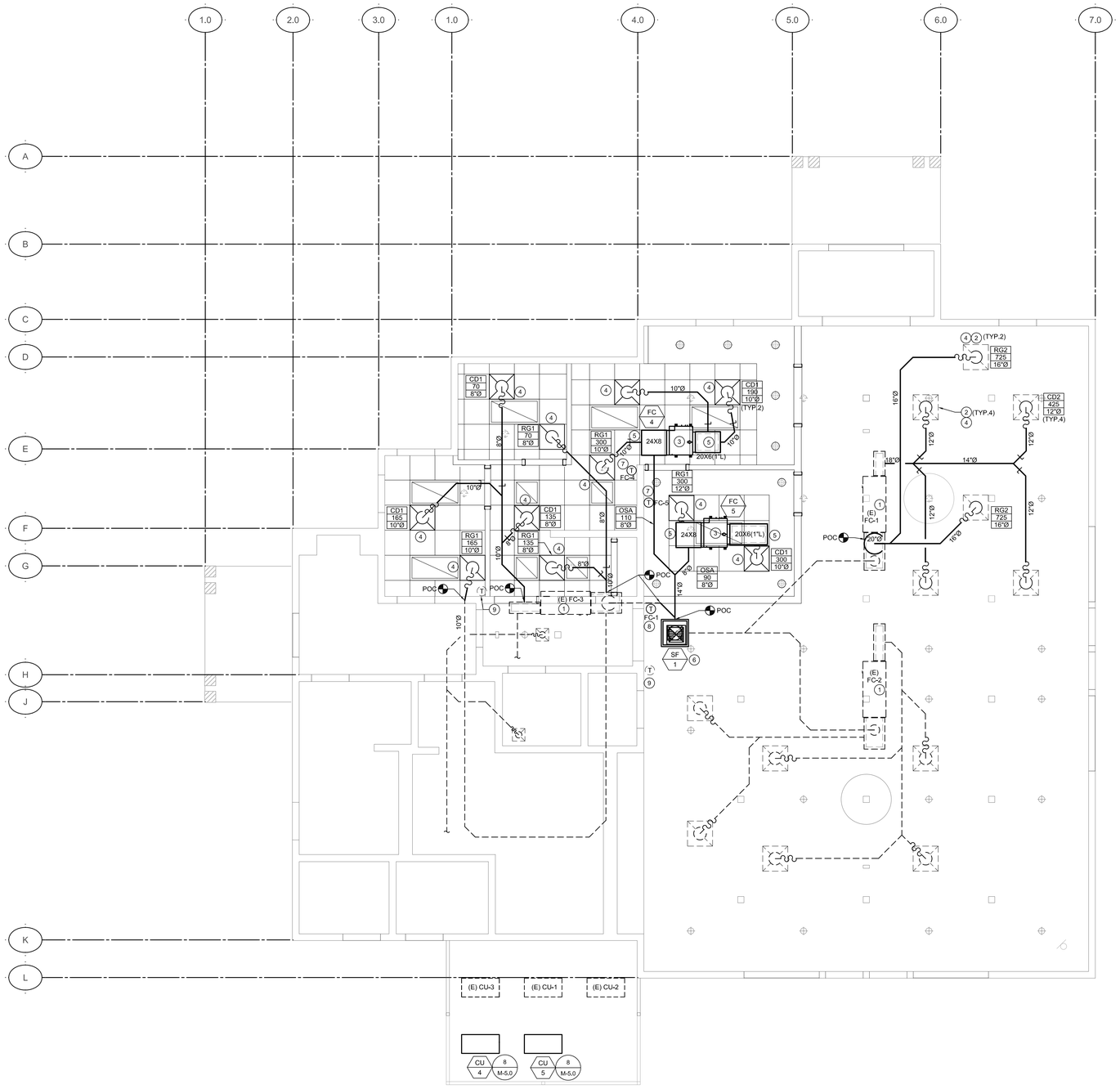
Drawing Description

DEMO
FLOOR PLAN

Project Number	17X085.00
Print Date	2018.06.14
Sheet Number	M-1.0

2018.06.15 (Plan Check Resubmittal)

DEMOLITION FLOOR PLAN | 1/4" = 1'-0" | 1



KEYNOTES

1. EXISTING FAN COIL UNIT TO REMAIN AND REUSE
2. EXISTING DIFFUSERS AND GRILLES IN STORAGE TO BE REUSED TO MAINTAIN SIMILAR LOOK.
3. DUCTED CEILING MOUNTED FAN COIL UNIT. ROUTE REFRIGERANT PIPING, POWER AND CONTROL CONDUITS UP TO CONDENSING UNIT ON GRADE. PROVIDE INDOOR UNIT WITH CONDENSATE PUMP. SEE PLUMBING DRAWINGS FOR CONDENSATE PIPE ROUTING.
4. PROVIDE R-6 FLEX DUCT CONNECTION TO CEILING DIFFUSER. FLEX DUCT LENGTH NOT TO EXCEED 5'-0" PER C.M.C 603.5. EXTEND SHEET METAL DUCT TO MEET THIS REQUIREMENT.
5. PROVIDE FULL SIZE LINED BOX AT TOP OF DIFFUSER AND GRILLE FOR SIDE CONNECTION OF R-6 FLEX DUCT. FLEX DUCT LENGTH NOT TO EXCEED 5'-0" PER C.M.C 603.5. EXTEND SHEET METAL DUCT TO MEET THIS REQUIREMENT.
6. NEW OSA FAN TO BE INSTALLED IN VERTICAL POSITION. SEE SHEET M-5.0 DETAIL 12.
7. NEW THERMOSTAT SHALL BE INSTALLED 48" AFF. SEE DETAIL 1/M5.0.
8. NEW LOCATION FOR FC-1 THERMOSTAT. SEE DETAIL 1/M5.0.
9. EXISTING THERMOSTAT TO REMAIN AND REUSE.

GENERAL NOTES

1. COORDINATE RELOCATION OF FIRE SPRINKLER HEADS IN ALTERED AREA PER ARCH. DRAWINGS.

MECHANCIAL FLOOR PLAN-RENOVATION | 1/4" = 1'-0" | 1

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STATE OF CALIFORNIA

Drawing Description

MECHANICAL
FLOOR PLAN

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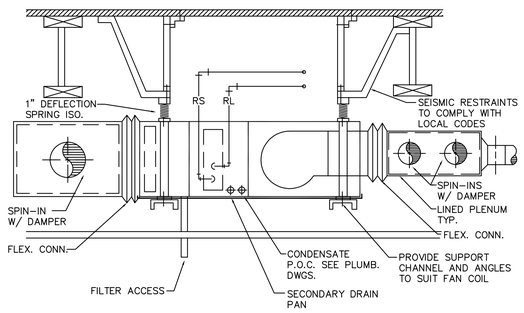
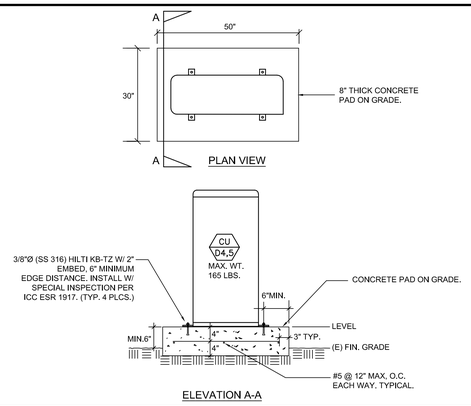
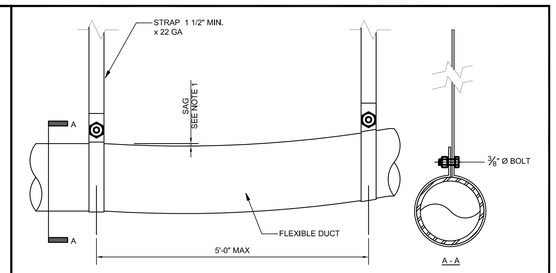


FAN COIL MOUNTING | NO SCALE | 11



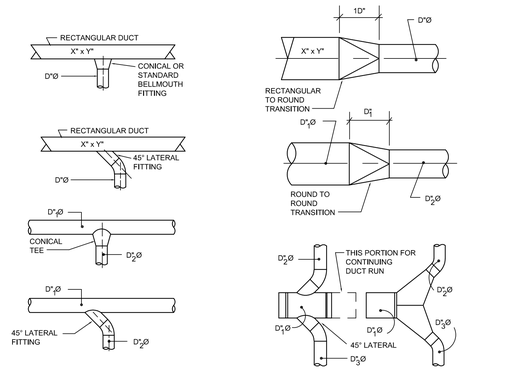
TYPICAL CONDENSING UNIT MOUNTING DETAIL | NO SCALE | 8



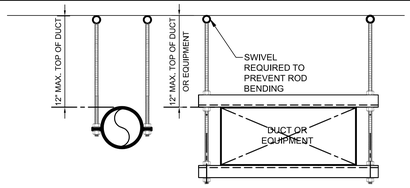
NOTES:

1. THE MAX. PERMISSIBLE SAG SHALL BE 1/2" PER FOOT OF SPACING BETWEEN SUPPORTS.
2. LONG HORIZONTAL FLEXIBLE DUCT RUNS WITH SHARP BEND SHALL HAVE ADDITIONAL SUPPORTS BEFORE AND AFTER THE BEND APPROXIMATELY ONE DUCT DIAMETER FROM THE CENTERLINE OF THE BEND
3. DUCT SHALL EXTEND STRAIGHT FOR ONE DUCT DIAMETER FROM A CONNECTION BEFORE BENDING

FLEXIBLE DUCT SUPPORT | NO SCALE | 4



DUCT TRANSITION REQUIREMENTS | NO SCALE | 10

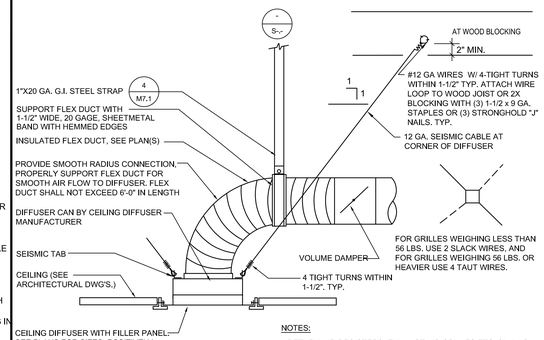


NOTES:
HVAC AND OTHER DUCTWORK SHALL BE DESIGNED FOR SEISMIC FORCES AND SEISMIC RELATIVE DISPLACEMENTS AS REQUIRED IN ASCE 7-10 SECTION 13.3. DESIGN FOR DISPLACEMENTS ACROSS SEISMIC JOINTS SHALL BE REQUIRED FOR DUCTWORK WITH Ip=1.5 WITHOUT CONSIDERATION OF THE EXCEPTIONS BELOW.

EXCEPTIONS:
THE FOLLOWING EXCEPTIONS PERTAIN TO DUCTWORK NOT DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR FLAMMABLE GASES OR USED FOR SMOKE CONTROL:

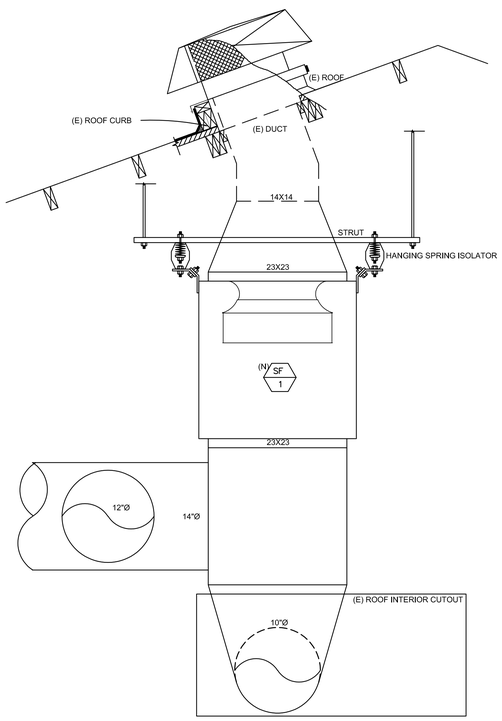
1. DESIGN FOR THE SEISMIC FORCES OF SECTION 13.3 SHALL NOT BE REQUIRED FOR DUCTWORK WHERE EITHER:
   A. TRAPEZE ASSEMBLIES ARE USED TO SUPPORT DUCTWORK AND THE TOTAL WEIGHT OF THE DUCTWORK SUPPORTED BY TRAPEZE ASSEMBLIES IS LESS THAN 10LB/FT; OR
   B. THE DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE DUCT RUN IS 12 IN. OR LESS IN LENGTH FROM THE DUCT SUPPORT POINT TO THE SUPPORTING STRUCTURE. WHERE ROD HANGERS ARE USED WITH A DIAMETER GREATER THAN 3/8 INCH, THEY SHALL BE EQUIPPED WITH SWIVELS TO PREVENT INELASTIC BENDING IN THE ROD.
2. DESIGN FOR THE SEISMIC FORCES OF SECTION 13.3 SHALL NOT BE REQUIRED WHERE PROVISIONS ARE MADE TO AVOID IMPACT WITH LARGE DUCTS OR MECHANICAL COMPONENTS OR TO PROTECT THE DUCTS IN THE EVENT OF SUCH IMPACT; AND HVAC DUCTS HAVE A CROSS-SECTIONAL AREA OF 6 SQUARE FEET OR LESS, OR WEIGHT 10 LB/FT OR LESS.

CRITERIA WHEN BRACING IS NOT REQUIRED FOR DUCTS | NO SCALE | 7

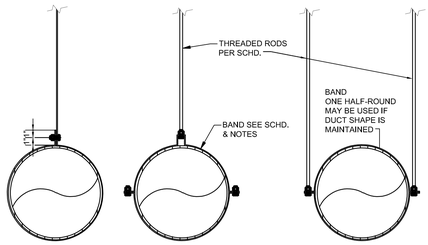


NOTES:
1. RETURN AIR REGISTERS, EXHAUST AIR GRILLES ETC, SIMILAR.
2. FLEXIBLE DUCT & INSULATION SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50 (C.M.C. SECTION 604.3)

CEILING DIFFUSER MOUNTING | NO SCALE | 3



SUPPLY FAN VERITICAL MOUNT WITH HANGING SPRING ISOLATOR | NO SCALE | 12

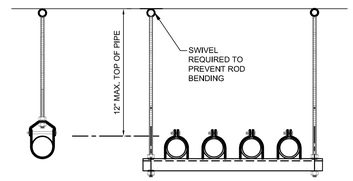


STRAP AND THREADED ROD HANGER SCHEDULE FOR ROUND DUCT				
DUCT DIAMETER	MAX. SPACING	ROD	STRAP	BAND
10" Ø OR LESS	8'-0" FT	3/8" Ø	1" x 22 GA	1" x 22 GA
11" Ø TO 18" Ø	8'-0" FT	3/8" Ø	1" x 20 GA	1" x 20 GA
19" Ø TO 24" Ø	8'-0" FT	3/8" Ø	1" x 20 GA	1" x 20 GA
25" Ø TO 36" Ø	8'-0" FT	(2) 3/8" Ø		1" x 20 GA
37" Ø TO 50" Ø	8'-0" FT	(2) 3/8" Ø		2" x 18 GA

NOTES:

1. DUCTS SHALL BE EQUIPPED WITH TIGHT-FITTING CIRCULAR BANDS EXTENDING AROUND THE ENTIRE PERIMETER OF THE DUCT AT EACH SPECIFIED SUPPORT INTERVAL.
2. CIRCULAR BANDS SHALL BE NOT LESS THAN 1 INCH WIDE NOR LESS THAN EQUIVALENT TO THE GAUGE OF THE DUCT MATERIAL IT SUPPORTS.
3. EACH CIRCULAR BAND SHALL BE PROVIDED WITH CONNECTIONS TO THE SUSPENDING SUPPORT.

RIGID ROUND DUCT SUPPORT | NO SCALE | 9

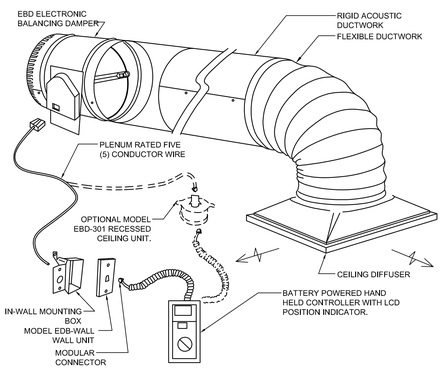


NOTES:
DESIGN OF PIPING SYSTEMS AND ATTACHMENTS FOR THE SEISMIC FORCES AND RELATIVE DISPLACEMENTS OF SECTION 13.3, ASCE 7-10 SHALL NOT BE REQUIRED WHERE ONE OF THE

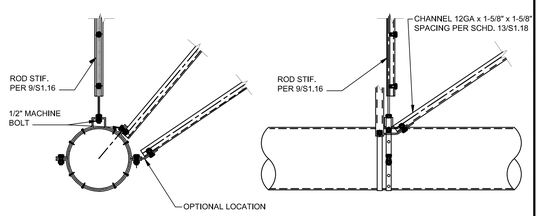
FOLLOWING CONDITIONS APPLY:

1. TRAPEZE ASSEMBLIES ARE USED TO SUPPORT PIPING WHERBY NO SINGLE PIPE EXCEEDS THE LIMITS SET FORTH IN 3a, OR 3b BELOW AND THE TOTAL WEIGHT OF THE PIPING SUPPORTED BY THE TRAPEZE ASSEMBLIES IS LESS THAN 10 LB/FT.
2. THE PIPING IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUNS IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS EYE NUTS, OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
3. PIPING HAVING AN Rp IN TABLE 13.6-1 ASCE 7-10 OR 4.5 OR GREATER IS USED AND PROVISIONS ARE MADE TO AVOID IMPACT WITH OTHER STRUCTURAL OR NONSTRUCTURAL COMPONENTS OR TO PROTECT THE PIPING IN THE EVENT OF SUCH IMPACT AND WHERE THE FOLLOWING SIZE REQUIREMENT ARE SATISFIED:
   a. FOR SEISMIC DESIGN CATEGORIES D, E, OR F AND VALUES OF Ip ARE GREATER THAN 1.0, THE NOMINAL PIPE SIZE SHALL BE 1 IN. OR LESS
   b. FOR SEISMIC DESIGN CATEGORIES D, E, OR F WHERE Ip=1.0, THE NOMINAL PIPE SIZE SHALL BE 3 IN. OR LESS.

CRITERIA WHEN BRACING IS NOT REQUIRED FOR PIPES | NO SCALE | 6

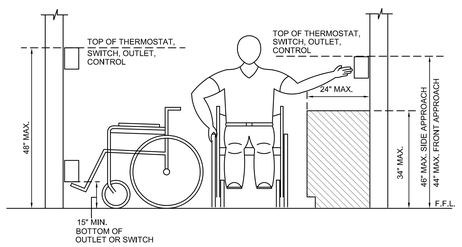


ELECTRONIC BALANCING DAMPER FOR INACCESSIBLE CONDITIONS | NO SCALE | 2



TRANSVERSE BRACE **LONGITUDINAL BRACE**

TRANSVERSE AND LONGITUDINAL BRACING FOR CIRCULAR DUCT | NO SCALE | 5



THERMOSTAT MOUNTING | NO SCALE | 1

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ALFRED M. MACKIE
No. 31382
Exp. 6-30-18
MECHANICAL
STATE OF CALIFORNIA

Drawing Description

DETAILS

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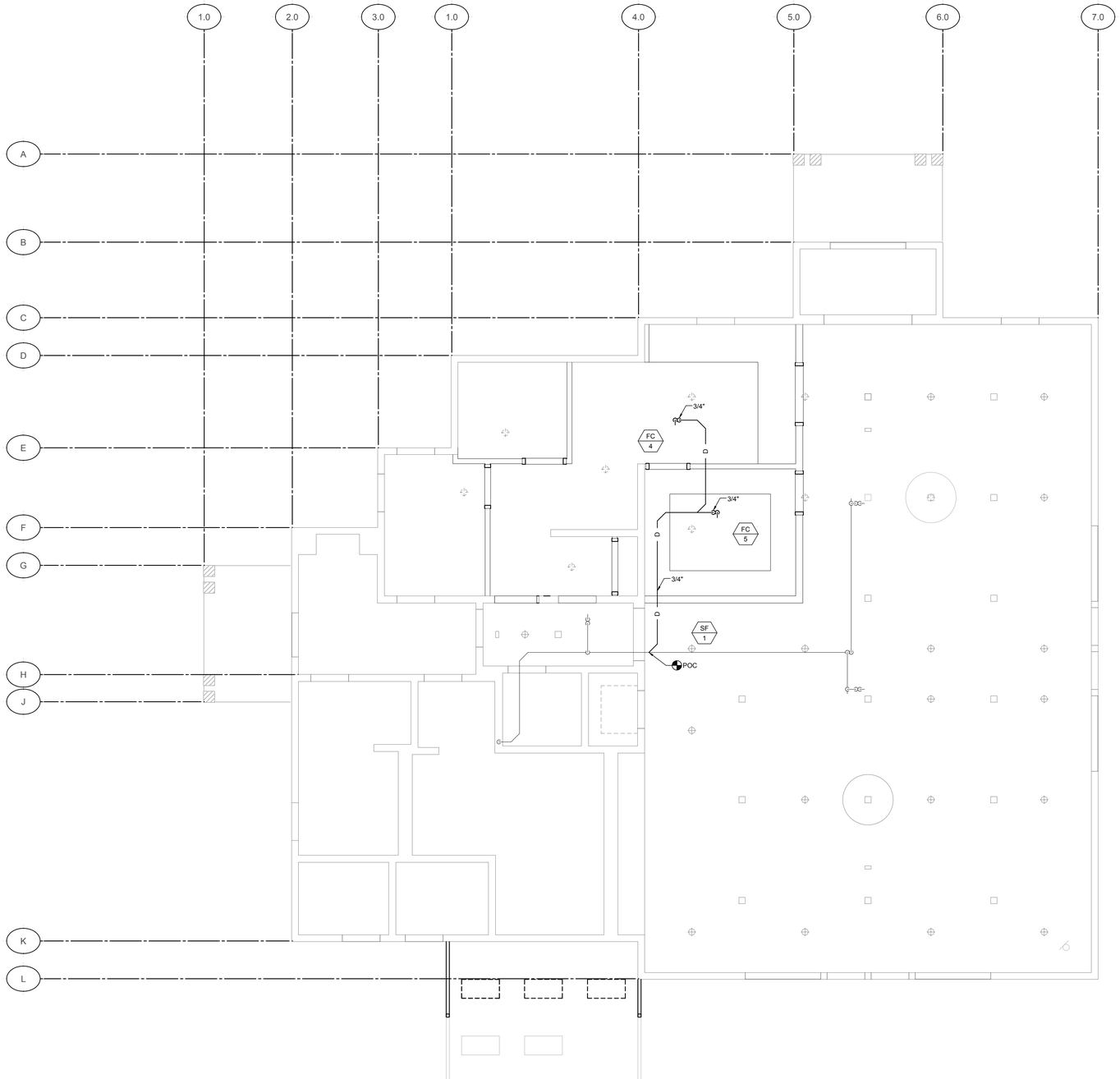

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PIPING
FLOOR PLAN

Project Number	17X085.00
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Sheet Number

P-2.0

2018.03.30 (Plan Check Submittal)

PIPING FLOOR PLAN-RENOVATION | 1/4" = 1'-0" | 1

GENERAL ELECTRICAL NOTES

1. ALL SYMBOLS ARE NOT NECESSARILY USED IN THIS PROJECT.
2. ANY AND ALL REFERENCES TO 'CODE' SHALL STATE: ALL WORK TO COMPLY WITH THE LATEST ADDITION OF THE CALIFORNIA ELECTRICAL CODE AS AMENDED AND ADOPTED BY THE CITY OF IRVINE, 2016 C.E.C.
3. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY . THE ENGINEER RESERVES THE RIGHT TO ALLOW OTHER METHODS AND MATERIALS NOT REFLECTED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO REQUEST THE ENGINEER WAIVE THE STANDARDS TO ALLOW ALTERNATE MEANS AND METHODS PRIOR TO BEGINNING THE PROJECT. CONTRACT DOCUMENT REVISIONS TO ACCOMMODATE INSTALLED CONDITIONS, WITHOUT PRIOR APPROVAL, WILL RESULT IN ADDITIONAL DESIGN CHARGES TO THE CONTRACTOR.
4. ELECTRICAL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE NECA INSTALLATION STANDARDS TO THE SATISFACTION OF THE OWNER AND ENGINEER.
5. ALL WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE CURRENTLY ACCEPTED EDITION OF ALL APPLICABLE NATIONAL, STATE AND CITY CODES AND ORDINANCES.
6. ALL ELECTRICAL SYSTEM COMPONENTS SHALL BE LISTED OR LABELED BY UL OR OTHER RECOGNIZED TESTING FACILITY AS ALLOWED BY AUTHORITY HAVING JURISDICTION.
7. WHERE AN APPARENT DISCREPANCY EXISTS BETWEEN THE REQUIREMENTS OF THE GENERAL NOTES AND INFORMATION PORTRAYED IN THE ELECTRICAL DRAWINGS, THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF THE GREATER QUALITY OR QUANTITY.
8. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BID AND VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL INCLUDE IN BASE BID ALL COSTS REQUIRED FOR PERMITS AND INSPECTIONS.
9. CONTRACTOR SHALL VERIFY, WITH OWNER'S REPRESENTATIVE PRIOR TO SUBMITTING BID, ALLOWABLE WORKING HOURS, EMPLOYEE PARKING AREAS, MATERIAL DELIVERY, STORAGE REQUIREMENTS, DEMOLITION AND REMOVAL OF CONSTRUCTION DEBRIS, AS WELL AS DAILY CLEAN UP REQUIREMENTS. INCLUDE ALL COSTS IN BID FOR DUST BARRIERS, DUMPSTERS ETC. AS REQUIRED FOR THE DURATION OF THE PROJECT. PERFORM ALL WORK AS DIRECTED BY OWNER'S REPRESENTATIVE.
10. ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS AT NO ADDITIONAL COST TO OWNER.
11. CONTRACTOR SHALL GUARANTEE ALL WORK AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. ALL DEFECTS SHALL BE PROMPTLY CORRECTED BY CONTRACTOR WITHOUT ADDITIONAL CHARGE TO OWNER.
12. PROVIDE AS-BUILT DRAWINGS TO OWNER. DRAWINGS SHALL INCLUDE ACCURATE CONDUIT AND DEVICE LOCATIONS DIMENSIONED FROM PERMANENT LANDMARKS SUCH AS BUILDING WALLS.
13. DO NOT SCALE ELECTRICAL DRAWINGS. VERIFY EXACT LOCATION OF ALL DEVICES, JUNCTION BOXES, LIGHTING FIXTURES, ETC. WITH ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ROUGH-IN. EVERY OUTLET HEIGHT SHALL BE VERIFIED ON EACH WALL WITH THE INTERIOR PLANNING AND DESIGN DRAWINGS. COORDINATE WITH CABINET SHOP DRAWINGS TO ENSURE PROPER HEIGHT AND LOCATION WITH RESPECT TO MILLWORK, EQUIPMENT, ETC.
14. THESE DRAWINGS INDICATE THE FINISHED REQUIREMENTS FOR THE ELECTRICAL SYSTEMS, EQUIPMENT, LIGHTING FIXTURES, OUTLETS AND DEVICES. DUE TO STRUCTURAL CONDITIONS, MECHANICAL DUCT, PIPING CONFLICTS, OR OTHER LEGITIMATE REASONS, THE CONTRACTOR MAY DESIRE TO INSTALL THE WORK INDICATED IN A MANNER DIFFERENT FROM THAT SHOWN. SUCH CHANGES SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING. UPON APPROVAL, THE WORK SHALL BE PERFORMED AND THE AS-BUILT DRAWINGS SHALL BE REVISED TO ACCURATELY REFLECT THE WORK AS ACTUALLY INSTALLED.
15. RACEWAY SYSTEMS ARE SHOWN DIAGRAMMATICALLY. ACTUAL LOCATION AND ROUTING OF ALL SHALL BE DETERMINED BY CONTRACTOR TO SUIT FIELD CONDITIONS.
16. PROVIDE DEDICATED NEUTRAL FOR EACH NEW CIRCUIT. HOME RUN CONDUCTORS MAY BE COMBINED INTO ONE CONDUIT. NO RACEWAY OR CABLE SHALL CONTAIN MORE THAN NINE (9) CURRENT CARRYING CONDUCTORS. WHERE MULTIPLE CONDUCTORS IN EXCESS OF THREE (3) ARE INDICATED ON THESE DRAWINGS, THEY HAVE BEEN DERATED AS REQUIRED BY NEC ARTICLE 310 REQUIREMENTS.
17. PLASTIC CABLE TIES SHALL NOT BE USED AS A MEANS OF SUPPORT FOR MC CABLE. USE ONLY APPROVED CABLE SUPPORTS PER CABLE MANUFACTURER'S INSTALLATION REQUIREMENTS.
18. RACEWAYS SHALL BE INSTALLED CONCEALED (IN CMU OR OTHER WALL) WHENEVER POSSIBLE. RACEWAYS INSTALLED EXPOSED SHALL BE ROUTED OUT OF PUBLIC VIEW AS MUCH AS POSSIBLE. RACEWAYS SHALL BE RUN PARALLEL WITH, OR AT RIGHT ANGLE TO WALLS.
19. PROVIDE APPROVED EXPANSION FITTINGS WHERE RACEWAYS CROSS BUILDING EXPANSION JOINTS. PROVIDE BONDING JUMPER(S) SIZED PER CODE WHERE REQUIRED. PROVIDE ALL FITTINGS REQUIRED FOR A COMPLETE INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXPANSION JOINT LOCATION(S).
20. MINIMUM RACEWAY SIZE SHALL BE 1/2". MINIMUM HOMERUN SIZE SHALL BE 3/4". MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG U.N.O. TYPICAL. ALL POWER RELATED CONDUITS SHALL HAVE A CODE SIZE GROUND WIRE INSTALLED IN EACH RUN.
21. CONTRACTOR SHALL PROVIDE PULL CORDS IN ALL EMPTY CONDUITS. WHERE MORE THAN ONE CONDUIT TERMINATES IN A JUNCTION BOX, THE CONTRACTOR SHALL IDENTIFY EACH CONDUIT AND JUNCTION BOX IN A MANNER ALLOWING IDENTIFICATION AFTER ALL WALL FINISHES HAVE BEEN APPLIED.
22. CONTRACTOR SHALL PROVIDE ALL RACEWAY SYSTEMS INDICATED ON THE DRAWING PER NEC REQUIREMENTS AND GENERAL NOTES. ANY DEVIATION FROM THE WIRING METHODS INDICATED SHALL BE ALLOWED ONLY BY SPECIFIC WRITTEN APPROVAL FROM EITHER THE ENGINEER OR OWNER. CONTRACTOR'S BID SHALL INCLUDE ALL COSTS FOR RACEWAY SYSTEMS AS SPECIFIED UNLESS SPECIFIC WRITTEN APPROVAL FOR AN ALTERNATIVE WIRING METHOD IS OBTAINED FROM EITHER THE ENGINEER OR OWNER AND IS SUBMITTED AS PART OF CONTRACTOR'S FORMAL BID PROPOSAL.

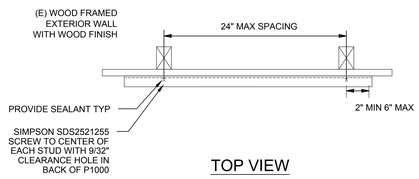
NOTES (CONT'D.)

23. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECT SIZE AND INSTALLATION OF ALL OUTLET, PULL AND JUNCTION BOXES IN ACCORDANCE WITH NEC 314-16. ALL BOXES SHALL BE MINIMUM 4" SQUARE BY 1-1/2" DEEP OR AS INDICATED ON THE DRAWINGS. ALL BOXES SHALL BE RECESSED WITH COVER PLATE TO SUIT THE INTENDED APPLICATION.
24. PRIOR TO INSTALLATION, CONTRACTOR SHALL REVIEW THE COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR CONFLICTS WITH OTHER TRADES. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL WORK WITH OTHER TRADES TO AVOID CONFLICT DURING INSTALLATION. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS IN EQUIPMENT LOCATION AND ROUTING AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
25. CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY CUT AND PATCH EXISTING CONSTRUCTION AS REQUIRED TO INSTALL NEW ELECTRICAL WORK ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS THE EXISTING WORK AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK TO THE SATISFACTION OF THE OWNER.
26. ALL ELECTRICAL EQUIPMENT SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS TO ACCOMMODATE QUANTITY AND SIZE OF CONDUCTORS REQUIRED. CONTRACTORS SHALL PROVIDE EQUIPMENT WITH OVERSIZED ENCLOSURES WHERE REQUIRED.
27. ALL NEW PANELBOARDS AND SWITCHBOARDS SHALL BE OF THE SAME MANUFACTURER AND HAVE LOCKING DOORS AND BE KEYED THE SAME U.N.O.
28. PROVIDE TYPE WRITTEN UPDATED PANEL DIRECTORY TO BE MOUNTED ON INSIDE OF ALL PANEL DOOR COVERS. DIRECTORY SHALL REFLECT ALL ADDITIONS OR MODIFICATIONS TO EXISTING PANELS AND SHALL REFLECT ACTUAL "AS-BUILT" CONDITIONS.
29. WHERE MOTORS ARE INSTALLED IN SUSPENDED CEILINGS, CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH IN SUSPENDED CEILING WITHIN REACH FROM ACCESS POINT.
30. SIZING OF MOTOR-RELATED ELECTRICAL COMPONENTS, INCLUDING FEEDER AND/ OR BRANCH CIRCUITS (WIRE AND CONDUIT) AND OVERCURRENT PROTECTION (BREAKER AND/ OR FUSES) IS BASED ON RATINGS INDICATED IN THE CONTRACT DOCUMENTS AS WELL AS NEC APPROXIMATED LOADS FOR A GIVEN MOTOR HORSEPOWER, VOLTAGE AND PHASE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ACTUAL MOTOR AND APPLIANCE RATING AND LOADS. CONTRACTOR TO PROVIDE CORRECTLY SIZED MOTOR OVERLOAD ELECTRICAL COMPONENTS BASED ON NAMEPLATE RATING. REFLECT ALL CHANGES IN THE AS-BUILT DRAWINGS.
33. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW OF THE FOLLOWING EQUIPMENT:
    - A. ELECTRICAL SWITCHGEAR: SWITCHBOARDS, WITH PANELS, MOTOR CONTROL CENTERS AND SAFETY DEVICES.
    - B. OVERCURRENT DEVICES: CIRCUIT BREAKERS AND FUSES INCLUDING TIME/CURRENT TRIP CURVES.
    - C. LIGHTING FIXTURES: INDOOR/OUTDOOR AS SPECIFIED, PHOTOMETRIC PERFORMANCE DATA AND LAMPS.
    - D. DEVICES: SWITCHES, RECEPTACLES, MOTOR CONTROLLERS AND DEVICE PLATES.
34. ALL PENETRATIONS OF FIRE RESISTIVE FLOORS OR WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DIAGRAMS THAT CONFORM TO UL LISTING FOR "THROUGH-PENETRATION FIRE STOP SYSTEMS".
35. CONTRACTOR SHALL ENGAGE THE SERVICES FOR A STATE LICENSED FIRE ALARM MANUFACTURER/INSTALLER TO PREPARE ALL DESIGN DRAWINGS AND CALCULATIONS REQUIRED FOR SYSTEM APPROVAL BY THE AUTHORITY HAVING JURISDICTION. SUBMIT ALL PLANS AND PROVIDE ALL PERMITS REQUIRED FOR A COMPLETE AND OPERABLE APPROVED LIFE SAFETY SYSTEM.
36. ALL EQUIPMENT ELECTRICAL TERMINATIONS TO UNDERGO A TORQUE TEST. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MANUFACTURER'S RECOMMENDED TORQUE DOCUMENTATION AND TOOLS TO PERFORM TORQUE TEST.
37. ALL UNDERGROUND SERVICE CONDUITS SHALL BE SEALED PER NEC ARTICLE 230-8.
38. FLOOR MOUNTED ELECTRICAL EQUIPMENT SHALL BE MOUNTED ON A 4" HIGH CONCRETE PAD.
39. INSTALL TRANSFORMER FOLLOWING MANUFACTURER'S RECOMMENDATIONS FOR VENTILATION CLEARANCES.
40. COORDINATE ELECTRICAL REQUIREMENTS FOR ALL PLUMBING AND MECHANICAL EQUIPMENT WITH FINAL CONTRACTOR SELECTION. THE CONTRACTOR SHALL SIZE DISCONNECTS BASED UPON CIRCUIT BREAKER RATINGS AND PROVIDE FUSING AS REQUIRED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS AND U.L. LISTING REQUIREMENTS.
41. PROVIDE 10 AWG CONDUCTORS FOR 20 AMPERE, 120V BRANCH CIRCUITS LONGER THAN 75' AND 8 AWG CONDUCTORS FOR 20 AMPERE, 120V BRANCH CIRCUITS LONGER THAN 120'. PROVIDE 10 AWG CONDUCTORS FOR 20 AMPERE, 277V BRANCH CIRCUITS LONGER THAN 200'. UNLESS INDICATED OTHERWISE.
43. SECURITY SYSTEM (DEFERRED SUBMITTAL)

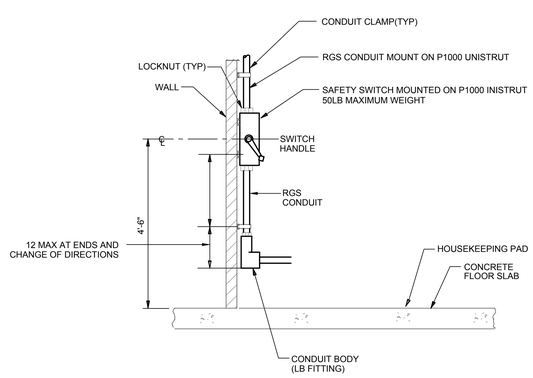
    ELECTRICAL CONTRACTOR SHALL COORDINATE WITH SECURITY SYSTEM CONTRACTOR AND PROVIDE ALL BOXES, CONDUIT AND WIRING AS REQUIRED FOR SECURITY SYSTEMS COMPLETE INSTALLATION. OBTAIN SECURITY SYSTEM DRAWINGS PRIOR TO BID.

FIRE ALARM SYSTEM (DEFERRED SUBMITTAL)

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH FIRE ALARM SYSTEM CONTRACTOR AND PROVIDE ALL BOXES, CONDUIT AND WIRING AS REQUIRED FOR FIRE ALARM SYSTEMS COMPLETE INSTALLATION. FIRE ALARM CONTRACTOR SHALL OBTAIN CITY APPROVED PLANS AND PERMIT.



TOP VIEW



SIDE VIEW

WALL MOUNTING DISCONNECT SWITCH DETAIL | 1/2" = 1'-0" | 1

ELECTRICAL LEGEND

LIGHTING

- LINEAR FLUORESCENT FIXTURE
- LINEAR FLUORESCENT FIXTURE
- SUSPENDED LINEAR FLUORESCENT FIXTURE
- FLUORESCENT WALL MOUNT FIXTURE
- LINEAR FLUORESCENT STRIP FIXTURE
- LIGHT FIXTURE - RECESSED OR SURFACE
- PENDANT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- WALL SCONCE
- WALL WASHER
- A — LETTER REFERS TO FIXTURE TYPE
- MONO-POINT LIGHT FIXTURE
- TRACK LIGHT FIXTURE
- PARKING LOT POLE MOUNTED LIGHT FIXTURE
- BOLLARD LIGHT FIXTURE
- EXIT SIGN - CEILING MOUNTED
- EXIT SIGN - WALL MOUNTED
- EXIT SIGN - W/ARROWS INDICATE DIRECTION
- EMERGENCY BATTERY UNIT WITH HEADS
- FIXTURE w/ EMERGENCY BATTERY OR GENERATOR
- S — SINGLE POLE SWITCH, 20A, 120/277V
- S_2 — TWO POLE SWITCH, 20A, 120/277V
- S_3 — THREE-WAY SWITCH, 20A, 120/277V
- S_4 — FOUR-WAY SWITCH, 20A, 120/277V
- S_D — DIMMER SWITCH, MIN. 2000W, 120/277V
- S_M — HP RATED MOTOR SWITCH WITH THERMAL OVERLOAD PROTECTION
- S_a — LOWER CASE LETTER DENOTES FIXTURES TO BE CONTROLLED
- S_P — PILOT SWITCH, 20A, 120/277V
- PUSH BUTTON CONTROL STATION
- OS — OCCUPANCY/VACANCY SENSOR - CEILING
- OS — OCCUPANCY/VACANCY SENSOR - WALL MOUNTED
- OCCUPANCY SENSOR w/DIMMER- WALL MOUNTED
- CH — TRASH CHUTES
- LC — LIGHTING CONTACTOR
- TC — TIME CLOCK
- PC — PHOTOCELL

POWER

- SINGLE RECEPTACLE, NEMA 5-20R, 20A, 125V
- DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V
- GFCI DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V
- GFCI DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V, +42" AFF OR ABOVE BACK SPASH.
- DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V
- DUPLEX RECEPTACLE / HALF-SWITCHED
- SIXPLEX RECEPTACLE
- GFCI RECEPTACLE, ABOVE COUNTER. BACK SPLASH
- SPECIAL PURPOSE OUTLET (TYPE AS NOTED)
- C — CLOCK OUTLET NEMA 5-20R, 20A, 125V w/ RECESSED COVER PLATE AT +9O", U.N.O.
- DUPLEX RECEPTACLE NEMA 5-20R, 20A, 125V - FLUSH MOUNT CEILING
- DUPLEX RECEPTACLE, MOUNTED FLUSH IN FLOOR BOX WITH FITTINGS. PROVIDE RATING AS REQUIRED. "P" DESIGNATES PEDESTAL TYPE.
- FLOOR OUTLET w/ DEVICE AS INDICATED
- COMBINATION FLOOR OUTLET w/ DEVICES AS INDICATED
- JUNCTION BOX
- JUNCTION BOX - STUB-OUT
- JUNCTION BOX - WALL MOUNT
- JUNCTION BOX - FLUSH FLOOR MOUNT
- MULTI-OUTLET SURFACE RACEWAY w/ NEMA 5-20R, 20A, 125V AT 12" ON CENTER., U.N.O.
- PB — PULLBOX - EXTERIOR OR INTERIOR AS INDICATED
- TELEPHONE TERMINAL CABINET AT +72" TO TOP
- TELEPHONE BACKBOARD
- PANELBOARD - SURFACE MOUNT
- PANELBOARD - FLUSH MOUNT
- SWITCHBOARD OR DISTRIBUTION BOARD
- METER SERVICE PEDESTAL
- NON-FUSED DISCONNECT SWITCH
- F — FUSED DISCONNECT SWITCH
- MOTOR CONTROLLER OR STARTER
- COMBINATION CONTROLLER/DISCONNECT SWITCH
- VENDOR FURNISHED COMBINATION CONTROLLER/DISCONNECT SWITCH
- BAT — REMOTE BATTERY AS NOTES.
- USB/COMBINATION DUPLEX RECEPTACLE
- ADF — AUXILIARY DATA FRAME

SIGNAL

- F-1 — THERMOSTAT OUTLET AT +54" (HVAC UNIT DESIGNATION)
- ENCLOSED CIRCUIT BREAKER
- R — RELAY
- TS — TIME SWITCH
- C — CONTACTOR
- T — TRANSFORMER
- ATS — AUTOMATIC TRANSFER SWITCH
- TELEPHONE OUTLET AT +18"
- DATA OUTLET AT +18"
- COMBINATION TELE/COMPUTER OUTLET AT +18"
- TELEPHONE OUTLET ABOVE COUNTER
- TELE/DATA OUTLET ABOVE COUNTER
- DATA OUTLET ABOVE COUNTER
- FLUSH FLOOR BOX WITH COMBINATION TELE/DATA OUTLET
- TV — TELEVISION OUTLET
- TELEVISION CAMERA (CCTV)
- S — FIRE ALARM HORN/STROBE
- CR — CARD READER - 4" SQUARE JUNCTION BOX (+48" AFF) W/ 3/4" C.O.STUP-UP IMTP AN ACCESSIBLE CEILING SPACE. DEVICE AND CABLING BY OTHERS.
- PR — PROXIMITY READER - 4" SQUARE JUNCTION BOX (+48" AFF) W/ 3/4" C.O.STUP-UP IMTP AN ACCESSIBLE CEILING SPACE. DEVICE AND CABLING BY OTHERS.
- KP — KNOX BOX - COORDINATE EXACT LOCATIONS WITH FIRE DEPARTMENT.
- FS — FLOW SWITCH
- TS — TAMPER SWITCH
- SD — SMOKE DETECTOR
- FD — FIRE/SMOKE DAMPER
- CO — CARBON MONOXIDE DETECTOR (SPECIFIED BY MECHANICAL ENGINEER)
- DUCT MOUNTED SMOKE DETECTOR
- H — HEAT DETECTOR
- S — SPEAKER, CEILING OR WALL MOUNTED
- DH — DOOR HOLD OPEN
- AV — COMBINATION DATA / POWER / AUDIO-VISUAL FLUSH FLOOR BOX WIREMOLD OMNIBOX SERIES FLOOR BOX #880S3
- CS — CONTROL STATION

NOTES: FOR PHONE AND DATA OUTLETS PROVIDE ONE (1) 3/4"C.O. RISER UP WALL WITH PULL STRING TO ACESSIBLE CEILING SPACE.

- PP — POWER PACK FOR RECEPTACLE CONTROL

SINGLE LINE

- CIRCUIT BREAKER
- SERVICE CABLE TERMINATION
- FUSE
- FUSED DISCONNECT SWITCH
- SWITCH
- TVSS — SURGE SUPPRESSOR
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- GROUNDING ELECTRODE
- M — POWER METER
- MOTOR
- G — GENERATOR
- ST — SHUNT TRIP
- GFI — GROUND FAULT INTERRUPT
- TRANSFER SWITCH
- CONTACT (NORMALLY OPEN)
- CONTACT (NORMALLY CLOSED)
- TIME SWITCH
- CONTROL SWITCH
- PUSH BUTTON

WIRING

- CONDUIT ROUTED UNDERFLOOR / UNDERGROUND
- RACEWAY IN CEILING OR CONCEALED IN WALLS.
- RACEWAY TURNED UP
- RACEWAY TURNED DOWN
- HOMERUN TO PANELBOARD 3/4"C W/3#12 CONDUCTORS UNO
- CONDUIT CAP-OFF
- CS — CONDUIT SEAL W / EXPOY 5 COMPOUND SEALANT.
- #10 — 3/4" EMT RACEWAY. # INDICATES CONDUCTOR SIZE.
- #12 NEUTRAL, HOT, GROUND IN 3/4 " U.N.O
- LOW VOLTAGE WIRING

MISCELLANEOUS

- HP / B-1 — EQUIPMENT TAG
- # / SHEET — DIAGRAM TAG
- REVISION SYMBOL
- 1 — KEYNOTE SYMBOL
- SCHEDULED EQUIPMENT
- F01 — FEEDER TAG
- TV — CEILING MOUNTED TV OUTLET
- PB — PUSH BUTTON

ELECTRICAL SHEET INDEX

Sheet List Table

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E1.0.0	SITE PLAN
E1.0.1	DEMOLITION FLOOR PLAN
E1.0.2	DEMOLITION REFLECTED CEILING PLAN
E2.0.1	REMOCEL FLOOR PLAN
E2.0.2	REMODEL REFLECTED CEILING PLAN

STANDARD ABBREVIATIONS

A	AMPERE	NC	NORMALLY CLOSED
AFF	ABOVE FINISHED FLOOR	NEC	NATIONAL ELECTRICAL CODE
AF	ARC FAULT, AMP FUSE	NECA	NATIONAL ELECTRICAL CONTRACTOR'S ASSOCIATION
AFG	ABOVE FINISHED GRADE		
AIC	AMPERE INTERRUPTING CAPACITY	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AL	ALUMINUM		
ARCH'L	ARCHITECTURAL	NEUT	NEUTRAL
AS	AMP SWITCH	NFC	NATIONAL FIRE CODE
AWG	AMERICAN WIRE GAUGE	NF	NON-FUSIBLE
BC	BARE COPPER	NIC	NOT IN CONTRACT
BLDG	BUILDING	NL	NIGHT LIGHT
C	CONDUIT	NO	NORMALLY OPEN
CAB	CABINET	NPCO	NEVADA POWER COMPANY
CAT	CATALOG/CATEGORY	NTS	NOT TO SCALE
CB	CIRCUIT BREAKER	OCP	OVERCURRENT PROTECTION
CKT	CIRCUIT	OVHD	OVERHEAD
CLG	CEILING	P	POLE
CO, EC	CONDUIT ONLY	PB	PULL BOX
COMM	COMMUNICATION	PH	PHASE
CU	COPPER	PNL	PANEL
(D) DEMO	DEMOLITION / DEMOLISH	PP	POLE POWER
DISC.	DISCONNECT	PV	PV PHOTOVOLTAIC
DN	DOWN	PVC	POLYVINYL CHLORIDE
DWG	DRAWING	PWR	POWER
EA	EACH	QTY	QUANTITY
ELECT.	ELECTRICAL	RECEP	RECEPTACLE
ELEV	ELEVATOR	REQ'D	REQUIRED
EM	EMERGENCY	RSC	RIGID STEEL CONDUIT
EMT	ELECTRICAL METALLIC TUBING	(R)	RELOCATED
EQUIP	EQUIPMENT	SCHED	SCHEDULE
(E), EXIST	EXISTING	SECT	SECTION
FBO	FURNISHED BY OTHERS	SP	SINGLE POLE
FF	FINISHED FLOOR	SN	SOLID NEUTRAL
FIXT	FIXTURE	SPEC	SPECIFICATION
FLEX	FLEXIBLE METALLIC CONDUIT (STEEL)	SW	SWITCH
FLUOR	FLUORESCENT	SWBD	SWITCHBOARD
FT	FEET OR FOOT	SWGR	SWITCH GEAR
GFA	GROUND FAULT ALARM	SYS	SYSTEM
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TEMP	TEMPORARY
GND	GROUND	TELE	TELEPHONE
IRC	HORSEPOWER	T-STAT	THERMOSTAT
HVAC	HEATING, VENTILATING & AIR CONDITIONING	TTB	TELEPHONE TERMINAL BACKBOARD
HP	INTERNATIONAL BUILDING CODE	TTC	TELEPHONE TERMINAL CABINET
IMC	INTERMEDIATE METAL CONDUIT	TYP.	TYPICAL
IN	INCH(ES)	UBC	UNIFORM BUILDING CODE
IBC	INTERNATIONAL RESIDENTIAL CODE	U.N.O.	UNDERWRITERS LABORATORY
ISC	SHORT CIRCUIT AMPERES	UL	UNLESS NOTED OTHERWISE
JB, J-BOX	JUNCTION BOX	V	VOLT OR VOLTAGE
KCMIL, MCM	THOUSAND CIRCULAR MILS	VA	VOLT AMPERE
KVA	KILOVOLT AMPERE	VD	VOLTAGE DROP
KW	KILOWATT	VP	VAPOR PROOF
LTG	LIGHTING	W	WATT, WIRE
MAX.	MAXIMUM	WCR	WITHSTAND CURRENT RATING
MCB	MAIN CIRCUIT BREAKER	WP	UL LISTED WEATHERPROOF, NEMA 3R
MECH.	MECHANICAL	XFMR	TRANSFORMER
MIN.	MINIMUM		
MLO	MAIN LUGS ONLY		
MTD	MOUNTED		
UGPS	UNDERGROUND PULL SECTION		

CODES

2016 NATIONAL ELECTRICAL CODE

2016 CALIFORNIA ELECTRICAL CODE

2016 CALIFORNIA BUILDING CODE

2016 CALIFORNIA ENERGY CODE

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Issuance / Revisions

No.	Date	Description
1	2018.06.15	Plan Check Resubmittal /Client Revisions
2	2018.08.24	Bid Set /Client Revisions

Architect / Designer / Engineer

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Project Name

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Relocation
Tenant Improvement

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Architect's Stamp

Engineer's Stamp

REGISTERED PROFESSIONAL ENGINEER KEVIN Z. O'NEILL E 18557 Exp. 12-31-18 ELECTRICAL STATE OF CALIFORNIA

Drawing Description

GENERAL NOTES SYMBOL LIST ABBREVIATIONS AND SHEET INDEX

(BID SET)

2018.08.27

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

E-001

POLE NO.	C.B. AMP/P	SERVICE	LOAD KVA TOTAL	TYPE	A	B	TYPE	TOTAL	SERVICE	C.B. AMP/P	POLE NO.
1	20/1	LTG - MP ROOM - GENERAL	0.8	L	1.6		L	0.8	LTG - STORE/JAN/PANTRY/KITCHEN	20/1	2
3	20/1	LTG - MP ROOM - HANGLIGHTS	0.6	L		1.6	L	1	LTG - DRIVE POST	20/2	4
5	20/1	LTG - TOILETS/OFFICES/HALL	1	L	2		L	1			6
7	20/1	SPARE				1	L	1	LTG - SITE POST	20/2	8
9	20/2	LTG- PARKING LOT	1	L	2		L	1			10
11			1	L		2	L	1	LTG - BLDG EXT	20/1	12
13	20/2	LTG - SITE POST	1	L	1.5		M	0.5	INFO TECH	20/1	14
15			1	L		2.08	R	1.08	RECEP - INFOR TECH	20/1	16
17	20/2	LTG -SITE POST	1	L	2.08		R	1.08	RECEP - MP ROOM	20/1	18
19			1	L		2.08	R	1.08	RECEP - MP ROOM	20/1	20
21	20/1	SPARE			1.08		R	1.08	RECEP - MP ROOM	20/1	22
23	20/1	RECEP - BASKETBALL CT	1.08	R		2.16	R	1.08	RECEP - MP ROOM	20/1	24
25	20/1	RECEP - BASKETBALL CT	1.08	R	1.08				SPARE	20/1	26
27	20/1	LTG -SHADE STRUCTURE	1	L		1			SPARE	20/1	28
29	20/1	LTG -SHADE STRUCTURE	1	L	1				SPARE	20/1	30
31	20/1	LTG -SHADE STRUCTURE	1	L		2	L	1	SITE SIGNS	20/1	32
33	20/1	LTG -SHADE STRUCTURE	1	L	1				SPARE	20/1	34
35	20/1	LTG -SHADE STRUCTURE	1	L		3.9	A	2.9	CU - 3	30/2	36
37	20/1	RECEP - MEADOW	1.08	R	3.98		A	2.9			38
39	20/1	LTG -SHADE STRUCTURE	1	L		1.5	L	0.5	LTG - FLAG POLE	20/1	40
41	20/1	LTG -SHADE STRUCTURE	1	L	1				SPARE	20/1	42
		CONNECTED LOAD PER PHASE			18.32	19.32					

NOTE: EXISTING LOADS ARE ESTIMATED.

LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "L": CONTINUOUS LOADS	22.70	125%	28.38
TYPE "R": RECEPTACLES (FIRST 10KVA)	8.64	100%	8.64
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "M": MISCELLANEOUS LOADS	0.50	100%	0.50
TYPE "A": AC LOADS	5.80	100%	5.80
TYPE "K": KITCHEN LOADS		65%	
LARGEST MOTOR LOAD		25%	
TOTAL	37.64		43.32

VOLTS: 120/240V,1PH,3W
MAIN C.B.: M.L.O
BUS: 225AMP
POLES: 42
MOUNTING: SURFACE
AIC RATING:

DEMAND AMPS	HIGH LEG CONNECTED AMPS
180	161

PANEL **A EXIST.**

POLE NO.	C.B. AMP/P	SERVICE	LOAD KVA TOTAL	TYPE	A	B	TYPE	TOTAL	SERVICE	C.B. AMP/P	POLE NO.
1	20/1	RECEP - ELECT/STORE/TOILET	1.08	R	2.28		R	1.2	DISHWASHER	20/1	2
3	20/1	RECEP - ESTERIOR	1.08	R		2.28	R	1.2	GARB DISP	20/1	4
5	20/1	RECEP - COMM BKBD	1.08	R	2.58		R	1.5	KITCHEN CENTER	20/1	6
7	20/1	RECEP - COMM BKBD	1.08	R		2.58	R	1.5	KITCHEN CENTER	20/1	8
9	20/1	RECEP - OFFICE/INFO TECH/STOR	1.08	R	2.28		R	1.2	KITCHEN REF	20/1	10
11	20/1	RECEP - OFFICE/STORE	1.08	R		2.58	R	1.5	KITCHEN MICROWAVE	20/1	12
13	20/2	FC - 1	1	A	3.9		R	2.9	KITCHEN OVEN	30/2	14
15			1	A		3.9	R	2.9			16
17	20/2	FC - 2	1	A	2.9		M	1.9	WATER HEATER	20/2	18
19			1	A		2.9	M	1.9			20
21	20/2	FC - 3	1	A	1.5		A	0.5	EF-1	15/1	22
23			1	A		1.5	M	0.5	IRRIGATION CONTROLLER	20/1	24
25	50/2	CU - 1	4	A	4.5		M	0.5	IRRIGATION CONTROLLER	20/1	26
27			4	A		4.5	M	0.5	IRRIGATION CONTROLLER	20/1	28
29	50/2	CU - 2	4	A	4.5		M	0.5	IRRIGATION CONTROLLER	20/1	30
31			4	A		4.5	M	0.5	RECEP - M/P ROOM, 208V	20/1	32
33	20/1	PANTRY DVD/DOOR PWR SUP	0.5	M	1		M	0.5	RECEP - M/P ROOM, 208V	15/1	34
35	20/1	SPARE							SPARE	20/1	36
37	20/1	SPARE							SPARE	20/1	38
39	20/1	SPARE							SPARE	20/1	40
41	20/1	SPARE							SPARE	20/1	42
		CONNECTED LOAD PER PHASE			25.44	24.74					

NOTE: EXISTING LOADS ARE ESTIMATED.

LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "L": CONTINUOUS LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "R": RECEPTACLES (OVER 10KVA)	10.38	50%	5.19
TYPE "M": MISCELLANEOUS LOADS	7.30	100%	7.30
TYPE "A": AC LOADS	22.50	100%	22.50
TYPE "K": KITCHEN LOADS		65%	
LARGEST MOTOR LOAD		25%	
TOTAL	50.18		44.99

VOLTS: 120/240V,1PH,3W
MAIN C.B.: 225AMP
BUS: 225AMP
POLES: 42
MOUNTING: SURFACE
AIC RATING:

DEMAND AMPS	HIGH LEG CONNECTED AMPS
187	212

PANEL **B EXIST.**

POLE NO.	C.B. AMP/P	SERVICE	LOAD KVA TOTAL	TYPE	A	B	TYPE	TOTAL	SERVICE	C.B. AMP/P	POLE NO.
1	20/1	RECEP - MP ROOM FLOOR	1.08	R	2.16		R	1.08	RECEP - EXTERIOR	20/1	2
3	20/1	RECEP - MP ROOM FLOOR	1.08	R		2.16	R	1.08	RECEP - EXTERIOR	20/1	4
5	20/1	MENS' RR HAND DRYER	1.5	M	2.58		R	1.08	RECEP - EXTERIOR	20/1	6
7	20/1	MENS' RR HAND DRYER	1.5	M		2.58	R	1.08	RECEP - EXTERIOR	20/1	8
9	20/1	WOMENS' RR HAN DRYER	1.5	M	2.58		R	1.08	RECEP - EXTERIOR	20/1	10
11	20/1	WOMENS' RR HAN DRYER	1.5	M		2.58	R	1.08	RECEP - EXTERIOR	20/1	12
13	20/1	FACP	1	M	2.08		R	1.08	RECEP - BASKETBALL CT	20/1	14
15	20/1	LTG - OFFICES				1.08	R	1.08	RECEP - BASKETBALL CT	20/1	16
17	20/1	LTG - HALL			0.72		R	0.72	RECEP - OFFICES	20/1	18
19	20/1	RECEP - OPEN OFFICE/CONF	0.72	R		1.44	R	0.72	RECEP - OFFICES	20/1	20
21	20/1	RECEP - OPEN OFFICE/CONF	0.9	R	2.1		R	1.2	COPIER	20/1	22
23	20/1	RECEP - OPEN OFFICE	1.08	R		1.62	R	0.54	RECEP - HALLWAY	20/1	24
25	20/1	RECEP - OPEN OFFICE	0.54	R	0.54				SPARE	20/1	26
27	20/1	RECEP - OPEN OFFICE	0.54	R		0.76	A	0.22	FC-4, FC-5	20/2	28
29	25/1	SF-1	1.7	A	1.92		A	0.22			30
31	20/2	CU-4	0.94	A		1.88	A	0.94	CU-5	20/2	32
33			0.94	A	1.88		A	0.94			34
35	20/1	DOOR OPENER	1.5	M		3	R	1.5	DATA RACK	20/1	36
37	20/1	SPACE							SPACE	20/1	38
39	20/1	SPACE							SPACE	20/1	40
41	20/1	SPACE							SPACE	20/1	42
		CONNECTED LOAD PER PHASE			16.56	17.1					

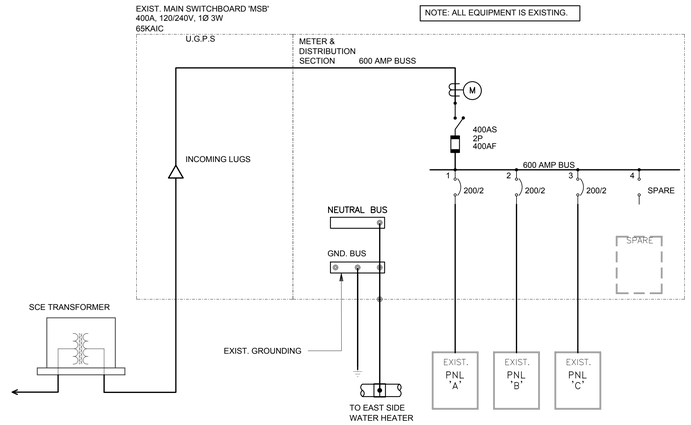
NOTE: EXISTING LOADS ARE ESTIMATED.

LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "L": CONTINUOUS LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "R": RECEPTACLES (OVER 10KVA)	9.26	50%	4.63
TYPE "M": MISCELLANEOUS LOADS	8.50	100%	8.50
TYPE "A": AC LOADS	5.90	100%	5.90
TYPE "K": KITCHEN LOADS		65%	
LARGEST MOTOR LOAD		25%	
TOTAL	33.66		29.03

VOLTS: 120/240V,1PH,3W
MAIN C.B.: M.L.O
BUS: 225AMP
POLES: 42
MOUNTING: SURFACE
AIC RATING:

DEMAND AMPS	HIGH LEG CONNECTED AMPS
121	143

PANEL **C EXIST.**



EXISTING SINGLE LINE DIAGRAM | NTS | 1

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Issuance / Revisions

No.	Date	Description
1	2018.06.15	Plan Check Resubmittal /Client Revisions
2	2018.08.24	Bid Set /Client Revisions

Architect / Designer / Engineer

IDS GROUP
1 Peters Canyon Road, Suite 130
Irvine, CA. 92606
Tel: 949-387-8500 Fax: 949-387-0800

Client Name

City of Irvine

1 Civic Center Plaza
Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

Engineer's Stamp

REGISTERED PROFESSIONAL ENGINEER
KEVIN Z. O'NEAL
E 18567
Exp. 12-31-18
ELECTRICAL
STATE OF CALIFORNIA

Drawing Description

SINGLE LINE DIAGRAM

(BID SET)

2018.08.27

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

E0.0.2

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 4 of 4)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

G. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)

☐ This sections shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of this compliance document.
☐ This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office
☐ Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance shall not be traded between offices having different lighting systems.

Office Portable Luminaire Schedule 1	2	3	4	5	6	7	8	Office Location 9	Field Inspector 10	
Complete Luminaire Description (i.e., LED, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires	Installed portable luminaire watts in this office (Col2 x Col3)	Square Feet of Office	Watts per square foot (Col4 / Col5)	If Col6 < 0.3, enter zero; if Col6 > 0.3, enter (Col6-0.3)	(Col7 x Col7)	Identify Office area in which these portable luminaires are installed	Pass	Fail
									☐	☐
									☐	☐
									☐	☐
									☐	☐
									☐	☐

Total installed portable luminaire watts that are greater than 0.3 W/ft^2 per office: _____

Enter sum total of all pages into NRCC-LTI-01-E; Page 1

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 3 of 4)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

E. Declaration of Required Certificates of Acceptance
Declare by selecting yes for all of the Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Compliance Document/Title	
☑	☐	NRCA-LTI-02-A Must be submitted for occupancy sensors and automatic time switch controls.	☐ Field Inspector
☐	☑	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐ Field Inspector
☐	☑	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐ Field Inspector
☐	☑	NRCA-LTI-05-A – must be submitted for institutional tuning power adjustment factor (PAF).	☐ Field Inspector

A Separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☐ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

F. Indoor Lighting Schedule and Field Inspection Energy Checklist

☐ The actual indoor lighting power listed on the next 2 pages includes all installed permanent and planned portable lighting systems.
☐ When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.
☐ When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines
☐ Also include track lighting in schedule, and submit the track lighting compliance document (NRCC-LTI-05-E) when line-voltage track lighting is installed.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 2 of 4)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

C. Summary of Allowed Lighting Power
Conditioned and Unconditioned space Lighting must not be combined for compliance

	Indoor Lighting Power for Conditioned Spaces	Watts		Indoor Lighting Power for Unconditioned Spaces	Watts
01	**Installed** Lighting NRCC-LTI-03-E, Table H, page 5	= 567		**Installed** Lighting NRCC-LTI-01-E, Table H, page 5	= 0
02	Portable Only for Offices NRCC-LTI-03-E, Table G, page 4	+			
03	Minus Lighting Control Credits NRCC-LTI-03-E, page 2	- 0		Minus Lighting Control Credits NRCC-LTI-01-E, page 2	- 0
04	Adjusted **Installed** Lighting Power (row 1 plus row 2 minus row 3)	= 567		Adjusted **Installed** Lighting Power (row 1 minus row 3)	= 0
	Complies ONLY if **Installed** ≤ **Allowed** (Box 04 < Box 05)			Complies ONLY if **Installed** ≤ **Allowed** (Box 04 < Box 05)	
05	**Allowed** Lighting Power Conditioned NRCC-LTI-03-E, page 1	575		**Allowed** Lighting Power Unconditioned NRCC-LTI-01-E, page 1	0
	Alterations with replacement luminaires that have at least 50/35% lower power compared to the original existing luminaires, may instead use the allowed wattage from NRCC-LTI-06, page 2			Alterations with replacement luminaires that have at least 50/35% lower power compared to the original existing luminaires, may instead use the allowed wattage from NRCC-LTI-06, page 2	

D. Declaration of Required Certificates of Installation
Declare by selecting yes for all of the Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Compliance Document/Title	
☑	☐	NRCA-LTI-01-E - Must be submitted for all buildings	☐ Field Inspector
☐	☑	NRCA-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCA-LTI-03-E - Must be submitted for a line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting, to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCA-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCA-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCA-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐ Field Inspector

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 1 of 4)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

A. General Information

Climate Zone: 8 — Conditioned Floor Area: 596 — Unconditioned Floor Area: 0

Building Type:					
☐ Schools	☑ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel
	☐ Relocatable Public Schools	☑ Conditioned Spaces	☐ Unconditioned Spaces
Phase of Construction:	☐ New Construction	☐ Addition	☑ Alteration
Method of Compliance:	☐ Complete Building	☑ Area Category	☐ Tailored

Project Address: 15 Sweet Shade

B. Lighting Compliance Documents (select yes for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

YES	NO	COMP. DOC.	TITLE
☑	☐	NRCC-LTI-01-E	Certificate of Compliance. All Pages required on plans for all submittals.
☑	☐	NRCC-LTI-02-E	Lighting Controls, Certificate of Compliance, and PAF Calculation. All Pages required on plans for all submittals.
☑	☐	NRCC-LTI-03-E	Indoor Lighting Power Allowance
☐	☑	NRCC-LTI-04-E	Tailored Method Worksheets
☐	☑	NRCC-LTI-05-E	Line Voltage Track Lighting Worksheets
☐	☐	NRCC-LTI-06-E	Indoor Lighting Existing Conditions

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-02-E
Indoor Lighting - Lighting Controls — (Page 2 of 3)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:
☑ CONDITIONED SPACES ☐ UNCONDITIONED SPACES

B. Mandatory and Prescriptive Indoor Lighting Control Schedule, PAF Calculation, and Field Inspection Checklist

Lighting Control Schedule 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
			Standards Complying With [1] (✓ all that apply, or enter "E" if Exempted)							PAF Credit Calculation [2]					
Location in Building	Type/Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc...)	# of Units	§130.1(a)	§130.1(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(a)2	§140.6(d)	Watts of Affected Lighting	PAF	Control Credit (Col. 11 x Col. 12)	1st Acceptance Test Required	Field Inspector Pass	Field Inspector Fail
Office 1		1											✓	☐	☐
Office 2		1	☑	☑	☑	☐	☐	☐	☐				✓	☐	☐
Open Office		1	☑	☑	☑	☐	☐	☐	☐				✓	☐	☐
Conference Room		1	☑	☑	☑	☐	☐	☐	☐				✓	☐	☐
Copy Room		1	☑	☑	☑	☐	☐	☐	☐				✓	☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐

Control Credit PAGE TOTAL (Sum of Column 13): 0
IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF Control Credit for all pages HERE (Sum of all Column 13): 0
Enter Control Credit total into NRCC-LTI-01-E; Page 1.

1. §130.1(a) = Manual area controls; §130.1(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(a) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Skylit Daylight Controls.
2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-02-E
Indoor Lighting - Lighting Controls — (Page 1 of 3)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

A. Mandatory Lighting Control Declaration Statements (Indicate if the measure applies by checking yes or no below.)

YES	NO	Control Requirements
☑	☐	Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 130.6.
☐	☑	Lighting shall be controlled by a lighting control system or energy management control system in accordance with §130.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b).
☐	☑	One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and §130.6. Additionally, an Installation Certificate shall be submitted in accordance with Section 130.4(b).
☐	☑	A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 110.9 and Section 130.0. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b).
☐	☑	All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1.
☑	☐	All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a).
☑	☐	General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled, in accordance with Section 130.1(a)4.
☑	☐	The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.5 watts per square foot shall meet the multi-level lighting control requirements in accordance with Section 130.1(b).
☑	☐	All installed indoor lighting shall be equipped with controls that meet the applicable Shut-OFF control requirements in Section 130.1(c).
☐	☑	Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans.
☐	☐	Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e).
☑	☐	Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4(a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF controls, and demand responsive controls.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 6 of 4)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.
Documentation Author Name: Jesus Soriano — Signature: Jesus Soriano — Signature Date: 3/2/2018
Company: IDS — CEA Certificate Identification (if applicable):
Address: 1 Peters Canyon Road, Suite 130
City/State/Zip: Irvine, CA 92606 — Phone: (949) 387-8500

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Robin O'Neil — Responsible Designer Signature: Robin O'Neil — Date Signed: 03/02/2018
Company: IDS Electrical Engineers, Inc. — License: E18557
Address: 1 Peters Canyon Road, Suite 130
City/State/Zip: Irvine, CA 92606 — Phone: (949) 387-8500

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 5 of 4)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

A Separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

H. Indoor Lighting Schedule and Field Inspection Energy Checklist

Luminaire Schedule 01	02	03	Installed Watts 04		05	06	Location 07	Field Inspector [1] 08	
			How wattage was determined						
Name or Item Tag	Complete Luminaire Description (i.e. 3 lamp fluorescent troffer, F37T8, one dimmable electronic ballast)	Watts per Luminaire	CEC Default Table Value	Manufacturer Specification	Number of Luminaires	Total Installed Watts (Col 3 x Col 4)	Primary Function Area in which these luminaires are installed	Pass	Fail
A	Recessed 2X4 ft LED	48.0	☐	☑	1	48	Convention/Conference/Meetin	☐	☐
A	Recessed 2X4 ft LED	48.0	☐	☑	5	240	Office <= 250 sqft	☐	☐
B	Recessed 2X2 ft LED	36.0	☐	☑	4	144	Corridor/Restroom/Support	☐	☐
C	7' Dia Downlight LED	15.0	☐	☑	4	60	Convention/Conference/Meetin	☐	☐
C	7' Dia Downlight LED	15.0	☐	☑	5	75	Office <= 250 sqft	☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐

INSTALLED WATTS PAGE TOTAL: 567 — Enter sum total of all pages into NRCC-LTI-01-E; Page 2

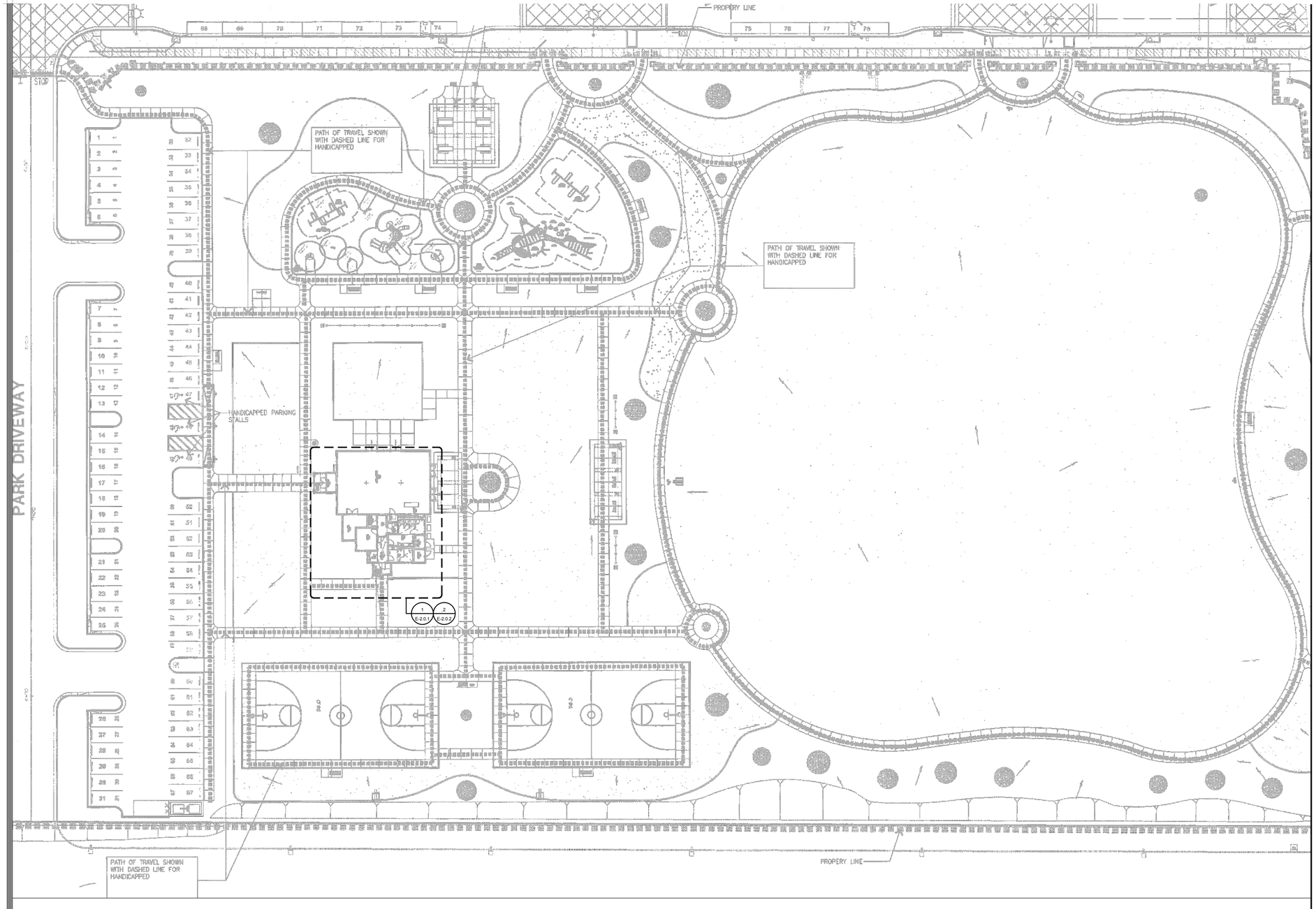
CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — April 2016

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 04/18) — CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE — NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance — (Page 3 of 4)
Project Name: Sweet Shady Park — Date Prepared: 3/2/2018

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☑ CONDITIONED spaces ☐ UNCONDITIONED spaces

C-3 AREA CATEGORY METHOD ADDITIONAL LIGHTING WATTAGE ALLOWANCE (from Table 140.6-C Footnotes)

01 Primary Function	02 Sq Ft or Linear ft^1	03 Additional Watts Allowed	04 Wattage Allowance (02 x 03)	05 Description(s) and Quantity of Special Luminaire Types in each Primary Function Area	06 Total Design Watts [2]	07 ALLOWED WATTS Smaller of 04 or 06



N E W S

SITE PLAN | 1"=30'-0" | 1

Issuance / Revisions

No.	Date	Description
1	2018.06.15	Plan Check Resubmittal /Client Revisions
2	2018.08.24	Bid Set /Client Revisions

Architect / Designer / Engineer

IDS GROUP
1 Peters Canyon Road, Suite 130
Irvine, CA. 92606
Tel: 949-387-8500 Fax: 949-387-0800

Client Name

City of Irvine

1 Civic Center Plaza
Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

Engineer's Stamp

REGISTERED PROFESSIONAL ENGINEER
ROBIN Z. OTEYZA
E 18557
12-31-18
ELECTRICAL
STATE OF CALIFORNIA

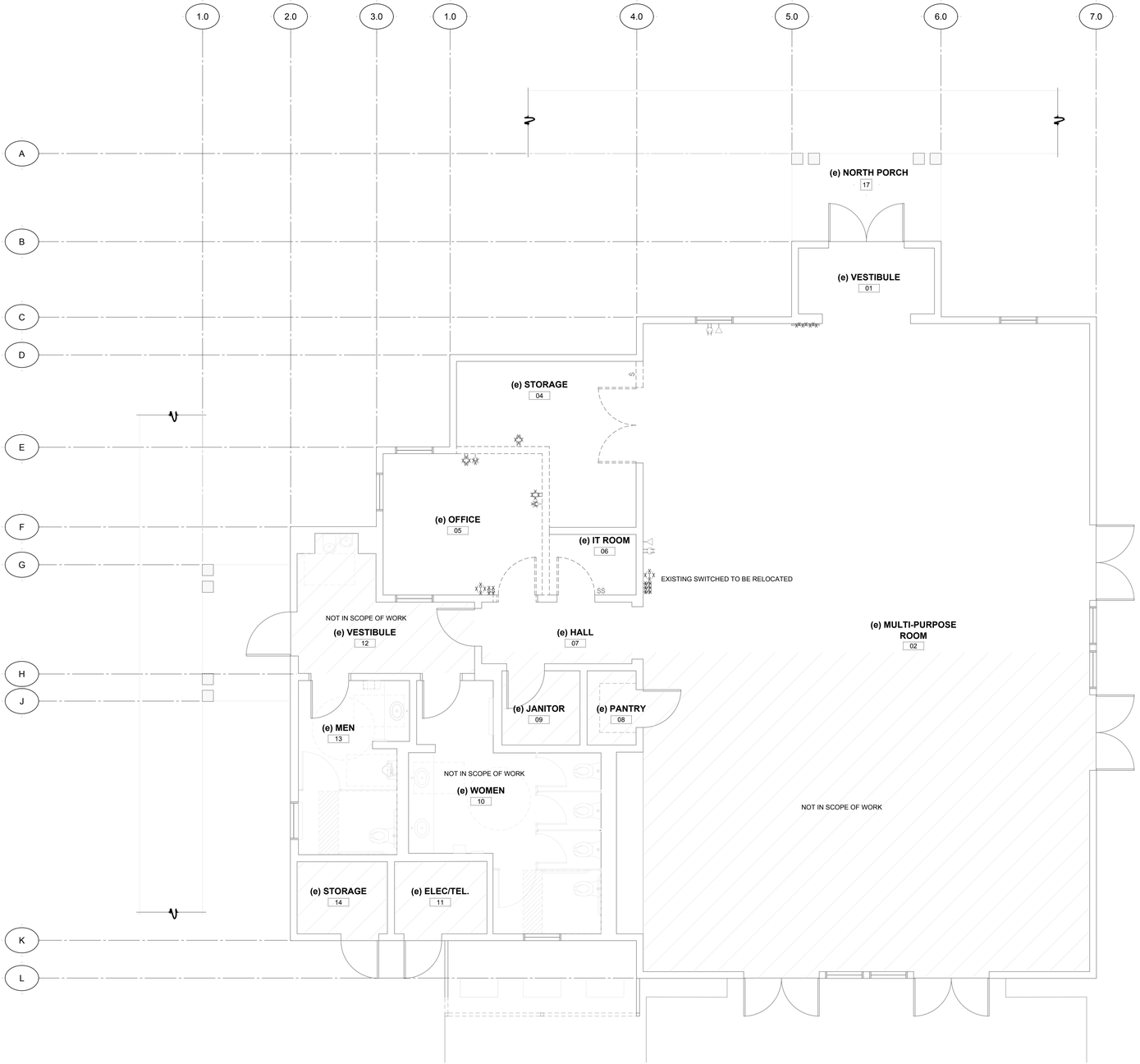
Drawing Description

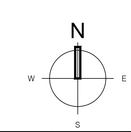
SITE PLAN

(BID SET)

2018.08.27

Project Number	17X085.01
Print Date	2018.08.27
Sheet Number	E1.0.0





DEMOLITION FLOOR PLAN | 1/4"=1'-0" | 1

DEMO NOTES

1. COORDINATE WORKS WITH ALL OTHER DISCIPLINES INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL AND PLUMBING, EXISTING OR NEW CONDITIONS.
2. PATCH AND REPAIR TO MATCH EXISTING ANY UNUSED WALL OR CEILING.
3. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO ANY DEMOLITION WORK.
4. ALL SALVAGED MATERIALS, WIRES AND CONDUIT SHALL BE TURNED OVER TO THE OWNER IN A PROPER PACKAGING CONTAINER
5. BEFORE STARTING IN EVERY PHASE OF DEMOLITION WORK, CONTRACTOR SHALL CONDUCT COMPLETE CIRCUIT TRACING IN EXISTING ELECTRICAL SYSTEMS SUCH AS: POWER, LIGHTING, VOICE/ DATA AND FIRE ALARM.
6. ALL EXISTING EQUIPMENT WERE TAKEN FROM EXISTING CONDITION OF THE BUILDING. THE ELECTRICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS AND EXISTING CIRCUIT NUMBERS FROM PANELBOARD TO BE REMOVED.
7. COORDINATE THE EXTENT OF WORK WITH ARCHITECT AND OWNER.
8. REMOVE ALL LIGHT FIXTURES AND CONTROL DEVICES UNLESS OTHERWISE NOTED.
9. EQUIPMENT TO BE REMOVED SHALL INCLUDE ALL CONDUIT, WIRING AND APPURTENANCES BACK TO THE PANEL BOARD OR EXISTING DEVICE OR FIXTURE TO REMAIN.

KEY NOTES

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Issuance / Revisions

No.	Date	Description
1	2018.06.15	Plan Check Resubmittal /Client Revisions
2	2018.08.24	Bid Set /Client Revisions

Architect / Designer / Engineer

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Client Name

City of Irvine

1 Civic Center Plaza
Irvine, CA. 92606

Project Name

City of Irvine
Disability Services
Relocation
Tenant Improvement

15 Sweet Shade
Irvine, CA. 92606

Architect's Stamp

Engineer's Stamp

Drawing Description

DEMOLITION FLOOR PLAN

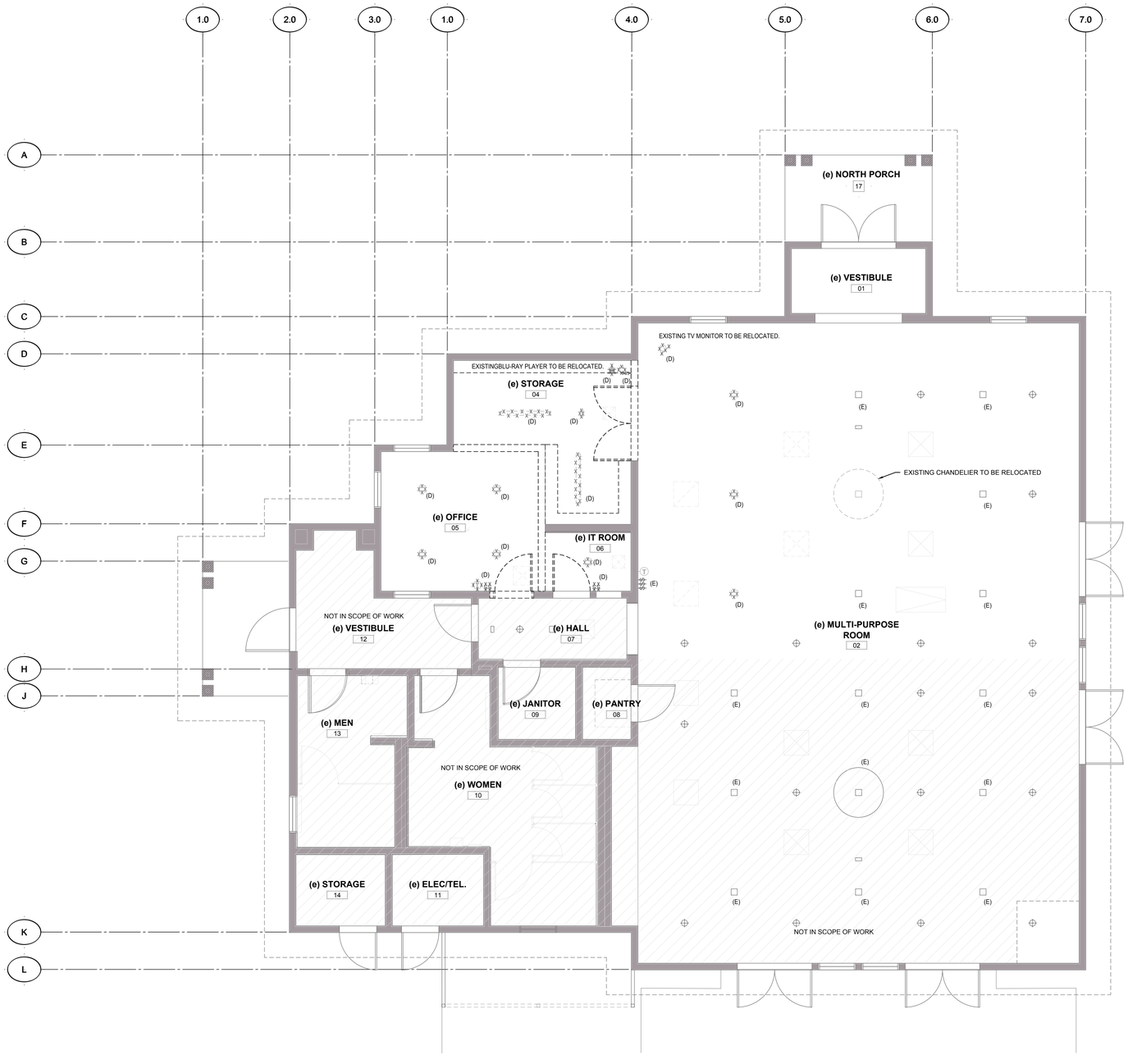
(BID SET)

Project Number	17X085.01
Print Date	2018.08.27

2018.08.27

Sheet Number

E1.0.1



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Engineer's Stamp

REGISTERED PROFESSIONAL ENGINEER
KEVIN Z. DONG
E 18557
Exp. 12-31-18
ELECTRICAL
STATE OF CALIFORNIA

Drawing Description

DEMOLITION
REFLECTED CEILING
PLAN

(BID SET)

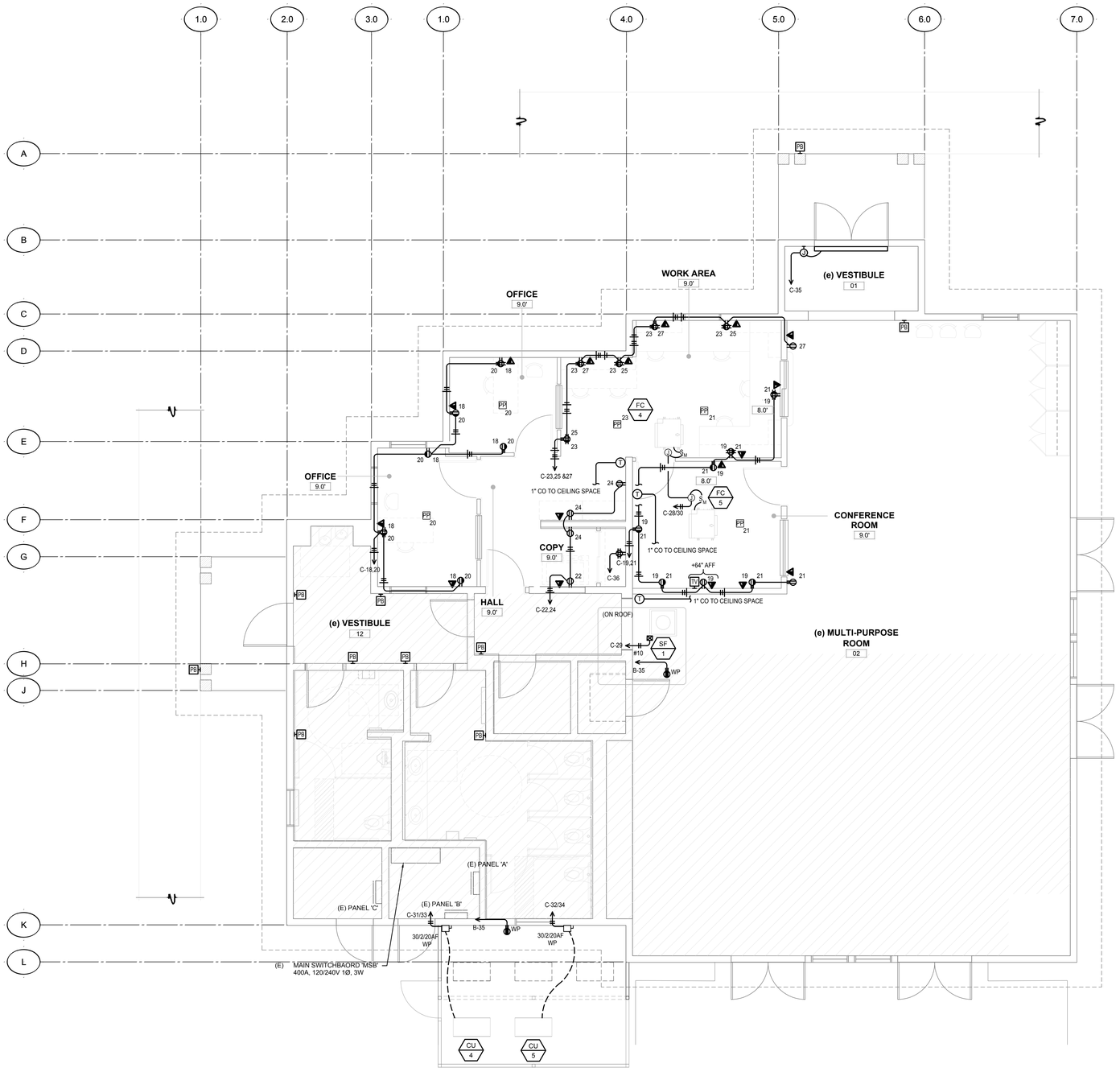
2018.08.27

Project Number	17X085.01
Print Date	2018.08.27

Sheet Number

E1.0.2

DEMOLITION REFLECTED CEILING PLAN | 1/4"=1'-0" | 1



GENERAL NOTES

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 12" MINIMUM. FIRE RATED WALLS SHALL HAVE AN OFFSET OF 24" MINIMUM. COORDINATE W/ ARCH'L FIRE RATED WALL DETAILS.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE W/ AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
3. HEIGHT OF ALL RECEPTACLES AT COUNTER SHELVES, ETC., SHALL BE VERIFIED W/ OWNER PRIOR TO ROUGH-IN. PROVIDE G.F.C.I. TYPE RECEPTACLE WITHIN 6 FEET OF ANY SINK.
4. ALL UNDERGROUND CONDUITS SHALL BE PVC SCHED. 40, MINIMUM 3/4"C. RUN CODE SIZE INSULATED EQUIPMENT GROUND CONDUCTOR.
5. REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE SIZES FOR PANEL BOARDS AND TRANSFORMERS.
6. 3/4" C.O. FOR EACH THERMOSTAT BACK TO EACH CORRESPONDING HVAC UNIT AND BETWEEN MECHANICAL UNITS AS NEEDED FOR CONTROLS. REFER TO MECHANICAL DRAWINGS FOR EXACT QUANTITY AND LOCATION.
7. 1" C.O. HOME RUN FOR EACH TELE/DATA OUTLET 6" IN THE CEILING SPACE, U.N.O.
8. COORDINATE EXACT LOCATION OF MECHANICAL EQUIPMENT AND POWER CONNECTION LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. SEE MECHANICAL EQUIPMENT SCHEDULE..

KEY NOTES

THIS DRAWING, AND ALL OTHER DATA, DESIGNS AND INFORMATION HEREIN, REMAIN THE PROPERTY OF THE ARCHITECT. THEY ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY, WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN CONSENT OF THE ARCHITECT. ALL RIGHTS PER ARCHITECT'S AGREEMENT, INCLUDING THE RIGHTS OF ARCHITECT'S ORIGINAL ARCHITECTURAL WORK, ARE HEREBY RESERVED.

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Architect's Stamp

Engineer's Stamp

REGISTERED PROFESSIONAL ENGINEER
KEVIN L. CRAIG
E 18557
Exp. 12-31-18
ELECTRICAL
STATE OF CALIFORNIA

Drawing Description

REMOCEL FLOOR PLAN

(BID SET)

Project Number 17X085.01

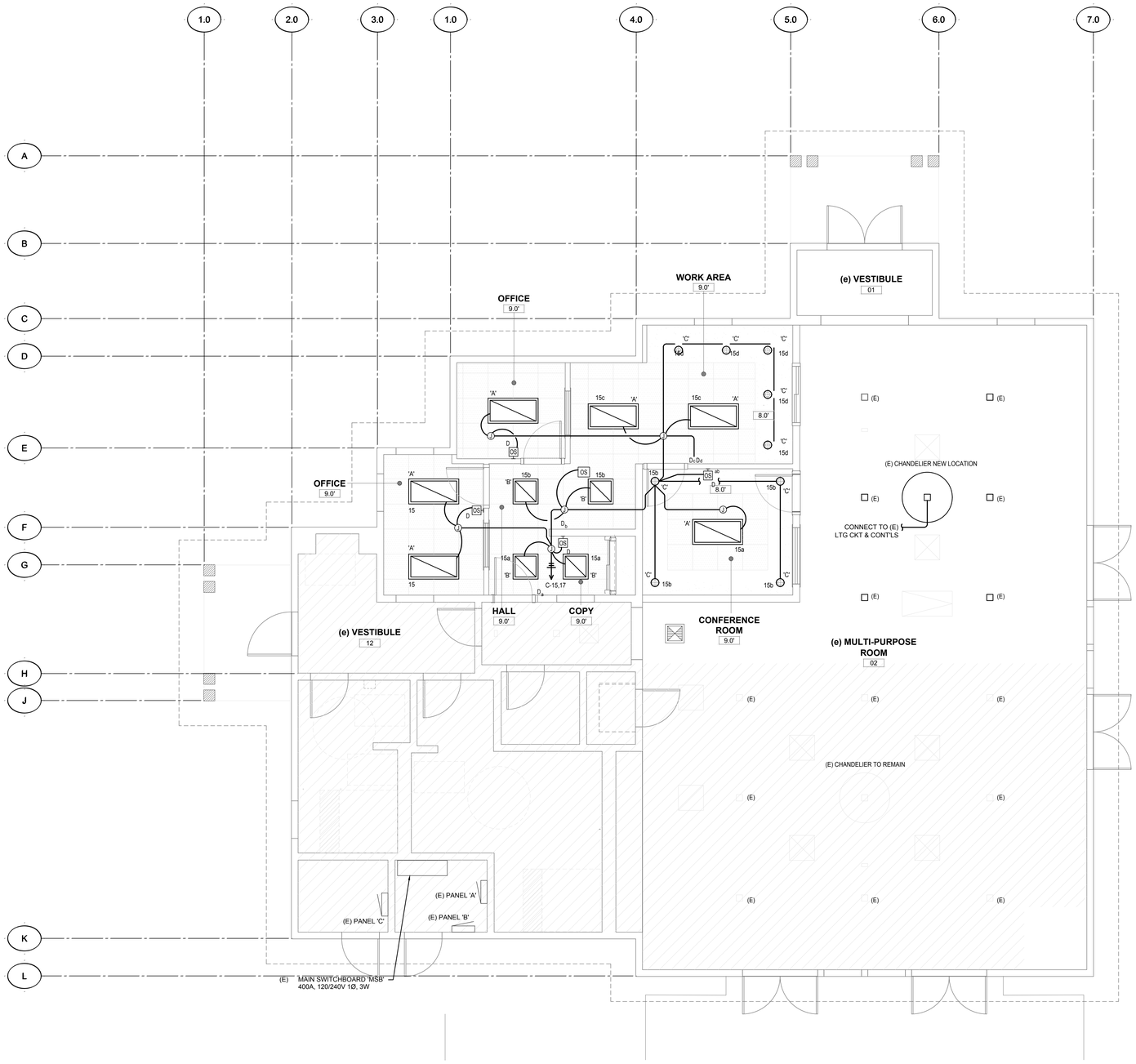
Print Date 2018.08.27

2018.08.27

Sheet Number

E2.0.1

REMOCEL FLOOR PLAN | 1/4"=1'-0" | 1



LIGHTING FIXTURE SCHEDULE

TAG	MANUFACTURER	DESCRIPTION	(QTY) LAMPS	WATTS/FIXTURE	VOLT	MOUNTING
A	LITHONIA LIGHTING 2AVL4- -A-40L-MDR- -EZ1-LP835 OR EQUAL	2X4 RECESSED 3500k, 4000 LUMENS 48 WATTS WITH 0-10V DIMMING LED	LED	48	120	RECESSED
B	LITHONIA LIGHTING 2AVL2- -A-40L-MDR- -EZ1-LP835 OR EQUAL	SAME AS TYPE A BUT 2'X2'	LED	36	120	RECESSED
C	LITHONIA LIGHTING REAL6CD6-MW-ESL-1000L-35K	7" DIA LED, 1000 LUMENS, 3500K	LED	15	120	RECESSED

N
W E
S

REMODEL REFLECTED CEILING PLAN | 1/4"=1'-0" | 1

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ELECTRICAL
STATE OF CALIFORNIA

Drawing Description

REMODEL REFLECTED CEILING PLAN

(BID SET)

2018.08.27

Project Number	17X085.01
Print Date	2018.08.27
Sheet Number	E2.0.2

3.9

REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: OCTOBER 9, 2018

TITLE: MEASURE M2 COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM GRANT APPLICATIONS

Director of Transportation

City Manager

RECOMMENDED ACTIONS

1. Authorize staff to prepare and submit grant funding applications for the Comprehensive Transportation Funding Program for four recommended projects.

2. Adopt - A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, APPROVING THE SUBMITTAL OF GRANT APPLICATIONS TO THE ORANGE COUNTY TRANSPORTATION AUTHORITY FOR FUNDING UNDER THE COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM

EXECUTIVE SUMMARY

To support City Council's priority to improve traffic circulation and assist in managing traffic congestion on major arterial roadways, staff presented four project recommendations for the Measure M2/OC Go Comprehensive Transportation Funding Program (CTFP) to the Transportation Commission on September 18, 2018 (Attachment 1). On August 13, 2018, the Orange County Transportation Authority (OCTA) released its guidelines and notification of grant fund availability under the Measure M2 CTFP. This report presents key information for projects considered by staff. The recommended projects were selected based on competitiveness and the potential to address the City Council's desire to improve traffic flow. Grant applications are due October 18, 2018.

COMMISSION RECOMMENDATION

On September 18, 2018, staff presented four projects to the Transportation Commission with the recommendation to submit grant application. The Transportation Commission voted unanimously for staff to prepare the four subject project applications for presentation to City Council, and recommended City Council adopt the resolution approving submittal of the grant applications.

ANALYSIS

The City has received more than $30 million from Measure M2 since the inception of the Measure in 2011. Revenues are generated by the countywide half-cent transportation

sales tax program and OCTA makes these funds available to local agencies through the annual CTFP competitive grant application process for infrastructure and rehabilitation projects. This year's grant funding provides approximately $32 million in allocations for arterial and intersection capacity enhancements, and $8 million for multi-jurisdictional traffic signal synchronization projects to all Orange County cities and the County of Orange (34 agencies in total) on a competitive basis.

Grant program guidelines and eligibility criteria favor projects that can be implemented and funded in phases to ensure timely use of grant funds. Staff recommends applying for four projects:

- University Drive Widening from Ridgeline Drive to I-405 (construction phase)
- MacArthur Boulevard Traffic Signal Synchronization
- Red Hill Avenue Traffic Signal Synchronization
- Lake Forest Drive Traffic Signal Synchronization (City of Lake Forest as lead)

A brief description of each project is included in Attachment 1, and site maps are included as Attachment 2. Attachment 3 provides a summary of the anticipated project application score, proposed grant request, proposed matching funds, and probable source of matching funds for each respective project. Attachment 4 is the resolution required to be submitted with the grant applications.

If applications were submitted for all four projects, the total grant request is estimated to be approximately $2,250,000 for capacity enhancements (from the $32 million that is available to all 34 agencies) and $2.9 million for the traffic signal synchronization projects (from the $8 million available to all agencies), as shown on Attachment 3. Because there are insufficient funds to cover all projects throughout the entire County, it is recommended that grant applications be submitted for those projects that would be most competitive and provide the most benefit to the City of Irvine. Additional projects were considered, but deemed to not be ready for grant funding, or not competitive under this program. A full listing of considered capacity enhancement locations is included as Attachment 5.

Approval of the recommended action will allow staff to proceed with the development and submittal of grant applications, including further refinement of project scopes of work and development of cost estimates. Staff will then submit the grant applications to OCTA to meet the application deadline of October 18, 2018.

ALTERNATIVES CONSIDERED

City Council could provide direction to staff to modify the list of projects, or could elect not to participate in the CTFP grant program. Staff does not recommend these alternatives, because based on preliminary review, the recommended projects appear to be competitive, per the grant program guidelines and the total funding availability, and the City could benefit from securing countywide funding for these circulation and traffic signal synchronization projects.

FINANCIAL IMPACT

Funding for the preparation of these grant applications is available in the Transportation operations budget. If any grant funds are awarded, any matching funds needed as a result of this effort, will be presented for City Council approval prior to accepting any grant funds.

REPORT PREPARED BY Melissa Dugan, Supervising Transportation Analyst

ATTACHMENTS

1. Transportation Commission Staff Report – September 18, 2018 (without attachments)
2. Errata to September 18, 2018 Transportation Commission Staff Report (with attachments)
3. Project Descriptions
4. Site Location Maps
5. Project Review Summary Table
6. Resolution
7. CTFP Grant Projects Considered

REQUEST FOR TRANSPORTATION COMMISSION ACTION

MEETING DATE: SEPTEMBER 18, 2018

TITLE: MEASURE M2 COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM GRANT APPLICATIONS

Director of Transportation

RECOMMENDED ACTIONS

Authorize staff to prepare grant applications for the Comprehensive Transportation Funding Program for four recommended projects listed in the staff report.

EXECUTIVE SUMMARY

On August 13, 2018, the Orange County Transportation Authority (OCTA) released its guidelines and notification of grant fund availability under the Measure M2 Comprehensive Transportation Funding Program (CTFP). This report presents key information for eight projects considered by staff. The recommended projects were selected based on competitiveness and the potential to address the City Council's desire to improve traffic flow. Transportation Commission approval of the recommended action authorizes staff to prepare grant applications for City Council consideration at its regularly scheduled meeting on October 9, 2018. Grant applications are due October 18, 2018.

ANALYSIS

The City has received more than $30 million from Measure M2 since the inception of the Measure in 2011. Revenues are generated by the countywide half-cent transportation sales tax program and OCTA makes these funds available to local agencies through the annual CTFP competitive grant application process for infrastructure and rehabilitation projects. This year's grant funding provides approximately $32 million in allocations for arterial and intersection capacity enhancements, and $8 million for multi-jurisdictional traffic signal synchronization projects to all Orange County cities and the County of Orange (34 agencies in total) on a competitive basis.

Grant program guidelines and eligibility criteria favor projects that can be implemented and funded in phases to ensure timely use of grant funds. Staff recommends applying for four projects:

- University Drive Widening from Ridgeline Drive to I-405 (for construction phase)
- MacArthur Boulevard Traffic Signal Synchronization
- Redhill Avenue Traffic Signal Synchronization
- Lake Forest Drive Traffic Signal Synchronization (City of Lake Forest as lead)

A brief description of each project is included in Attachment 1, and site maps are included as Attachment 2. Attachment 3 provides a summary of the anticipated project application score, proposed grant request, proposed matching funds, and probable source of matching funds for all four projects. Attachment 4 is the draft resolution that is required to be submitted with the grant applications.

If applications were submitted for all four projects, the total grant request is preliminarily estimated to be $2,250,000 for capacity enhancements (from the $32 million that is available to all 34 agencies) and $3.5 million for the traffic signal synchronization projects (from the $8 million available to all agencies), as shown on Attachment 3. Because there are insufficient funds to cover all projects, it is recommended that grant applications be submitted for those projects that would be most competitive and provide the most benefit to the City of Irvine. Additional projects were considered, but deemed to not be ready for grant funding, or not competitive under this program. A full list of considered capacity enhancement locations is included as attachment 5.

Approval of the recommended action will allow staff to proceed with the development of grant applications, including further refinement of project scopes of work and development of cost estimates. Staff will then bring the grant applications to the City Council on October 9, 2018, for approval to submit the grant applications to OCTA. Grant applications are due to OCTA on October 18, 2018.

ALTERNATIVES CONSIDERED

The City Council could provide direction to staff to modify the list of projects, or could elect not to participate in the CTFP grant program. Staff does not recommend these alternatives because, based on preliminary review, the recommended projects appear to be competitive, per the grant program guidelines and the total funding availability, and the City could benefit from securing countywide funding for these circulation and traffic signal synchronization projects.

FINANCIAL IMPACT

Funding for the preparation of grant applications is available in the Transportation Department's operations budget. Any grant funds awarded and matching funds needed as a result of this effort will be presented to City Council for consideration and approval prior to accepting any grant funds awarded to the City.

REPORT PREPARED BY Melissa Dugan, Supervising Transportation Analyst

ATTACHMENTS

1. Project Descriptions
2. Site Location Maps
3. Project Review Summary Table
4. Resolution
5. CTFP Grant Projects Considered
6. September 18, 2018 – Transportation Commission Presentation

Memo

To: Transportation Commissioners

From: Mark Linsenmayer, Director of Transportation

Date: September 10, 2018

Re: **Errata – Agenda Item 2 – Measure M2 Comprehensive Transportation Funding Program Grant Applications – Updated Resolution and Attachments**

The September 18, 2018 Transportation Commission staff report for this item was to include a second action item (indicated below in red); however, it was erroneously deleted during formatting. In addition, two attachments had outdated information on them. The corrected staff report and attachments are attached to this memo. The revisions are described below.

Agenda Item No. 2 MEASURE M2 COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM GRANT APPLICATIONS:

RECOMMENDED ACTIONS

1. Authorize staff to prepare grant applications for the Comprehensive Transportation Funding Program for four recommended projects listed in the staff report.

2. Recommend City Council Adopt – A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, APPROVING THE SUBMITTAL OF GRANT APPLICATIONS TO THE ORANGE COUNTY TRANSPORTATION AUTHORITY FOR FUNDING UNDER THE COMPREHENSIVE TRANSPORTATION FUNDING PROGRAMS

Attachment 3 incorrectly listed the Lake Forest-led Signal Synchronization project as Rockfield Boulevard. The correct roadway is Lake Forest Boulevard. The incorrect Page 5 can be replaced with the updated Attachment 3, attached to this memo.

Attachment 4 incorrectly listed two additional intersection improvement projects, which will not be competitive under the program and had to be removed. These locations are Culver Drive at Barranca Parkway and Jeffrey Road at Barranca Parkway. The other four listed projects are correct. The revisions are:

- University Drive Widening from Ridgeline Drive to Interstate-405
- ~~Culver Drive at Barranca Parkway Intersection Improvements~~
- ~~Jeffrey Road at Barranca Parkway Intersection Improvements~~
- MacArthur Boulevard/Talbert Avenue Traffic Signal Synchronization
- Redhill Avenue Traffic Signal Synchronization
- Lake Forest Drive Traffic Signal Synchronization

ATTACHMENT 2

The date of the Council meeting was also corrected from October 9 to October 10, 2018.

The incorrect Page 7 can be replaced with the updated second page of attachment 4, attached to this memo.

A copy of the corrected staff report will be placed at the dais.

cc: Melissa Dugan

Attachments:

1. Revised September 18, 2018 Transportation Commission Staff Report
2. Revised Attachment 3 of the September 18, 2018 Staff Report
3. Revised Attachment 4 of the September 18, 2018 Staff Report

REQUEST FOR TRANSPORTATION COMMISSION ACTION

MEETING DATE: SEPTEMBER 18, 2018

TITLE: MEASURE M2 COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM GRANT APPLICATIONS

Director of Transportation

RECOMMENDED ACTIONS

1. Authorize staff to prepare grant applications for the Comprehensive Transportation Funding Program for four recommended projects listed in the staff report.

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EXECUTIVE SUMMARY

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ATTACHMENT 1
TO ERRATA DATED SEPTEMBER 10, 2018

Grant program guidelines and eligibility criteria favor projects that can be implemented and funded in phases to ensure timely use of grant funds. Staff recommends applying for four projects:

- University Drive Widening from Ridgeline Drive to I-405 (for construction phase)
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REPORT PREPARED BY Melissa Dugan, Supervising Transportation Analyst

ATTACHMENTS

1. Project Descriptions
2. Site Location Maps
3. Project Review Summary Table
4. Resolution
5. CTFP Grant Projects Considered
6. September 18, 2018 – Transportation Commission Presentation

PROJECT REVIEW SUMMARY						
Project	**Phase**	**Estimated Score (100 Max)** [1]	**Total Cost for Project Phase**	**Proposed Grant Request**	**Proposed City Matching Funds**	**Probable Source of Matching Funds**
Arterial and Intersection Capacity Enhancements						
University Drive Widening	Construction	83	$3,000,000	$2,250,000	$750,000 (25%)	Local Funds
		Subtotal	**$3,000,000**	**$2,250,000**	**$750,000**	
Traffic Signal Synchronization						
MacArthur Boulevard	Implementation and Maintenance	66	$1,425,000	$1,336,000	$150,000[2]	Local Funds
Red Hill Avenue	Implementation and Maintenance	56	$2,100,000	$1,700,000	$110,000[2]	Local Funds
Lake Forest Drive (Lake Forest as Lead)	Implementation and Maintenance	N/A[3]	N/A[3]	N/A[3]	$30,000[2]	Local Funds
		Subtotal	**$3,525,000**	**$3,036,000**	**$308,000**	
		Total	**$6,525,000**	**$5,286,000**	**$1,040,000**	

Note:

1. Estimated Scores are subject to change as applications are completed
2. City matching funds equal 20% of improvements located within the City of Irvine. Other participating agencies would similarly contribute local matching funds.
3. City of Lake Forest is leading this application and are still developing the application and project scope.

CITY COUNCIL RESOLUTION NO. ___

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, APPROVING THE SUBMITTAL OF GRANT APPLICATIONS TO THE ORANGE COUNTY TRANSPORTATION AUTHORITY FOR FUNDING UNDER THE COMPREHENSIVE TRANSPORTATION FUNDING PROGRAMS

THE CITY COUNCIL OF THE CITY OF IRVINE HEREBY RESOLVES, DETERMINES, AND ORDERS AS FOLLOWS THAT:

WHEREAS, the City of Irvine desires to implement the transportation improvements listed below; and

WHEREAS, the City of Irvine has been declared by the Orange County Transportation Authority to meet the eligibility requirements to receive M2 "Fair Share" funds; and

WHEREAS, the City of Irvine's Circulation Element is consistent with the County of Orange Master Plan of Arterial Highways; and

WHEREAS, the City of Irvine will provide matching funds for each project as required by the Orange County Comprehensive Transportation Funding Programs Guidelines; and

WHEREAS, the Orange County Transportation Authority intends to allocate funds for transportation improvement projects within the incorporated cities and the County of Orange; and

WHEREAS, the City of Irvine will not use Measure M2 funds to supplant Developer Fees or other commitments; and

WHEREAS, the City of Irvine will include all projects funded by Net Revenues in the seven-year Capital Improvement Program as part of the Measure M2 Ordinance eligibility requirement; and

WHEREAS, the City of Irvine will process a formal amendment to the seven-year Capital Improvement Program to add projects approved for funding upon approval from the Orange County Transportation Authority Board of Directors; and

WHEREAS, the City of Irvine has adopted a Local Signal Synchronization Plan consistent with the Regional Traffic Signal

Synchronization Master Plan as a key component of local agencies' efforts to synchronizing traffic signals across local agencies' boundaries; and

WHEREAS, the City of Irvine supports the City of Lake Forest in the submittal of the Rockfield Boulevard Signal Synchronization project; and

NOW, THEREFORE, the City Council of the City of Irvine DOES HEREBY RESOLVE as follows:

SECTION 1. The Director of Transportation is hereby authorized to submit or support applications to the Orange County Transportation Authority to allocate funds in the amounts specified in the City's applications from the Comprehensive Transportation Funding Programs. Said funds shall be matched by funds from the City of Irvine as required and shall be used as supplemental funding to aid the City of Irvine in the implementation of the following improvement projects:

- University Drive Widening From Ridgeline Drive to Interstate-405
- MacArthur Boulevard / Talbert Avenue Traffic Signal Synchronization
- Redhill Avenue Traffic Signal Synchronization
- Lake Forest Drive Traffic Signal Synchronization

SECTION 2. The City Council of the City of Irvine delegates signature authority to the Director of Transportation or his designee to facilitate the delivery of the projects.

PASSED AND ADOPTED by the City Council of the City of Irvine at a regular meeting held on the 9th day of October 2018.

_____
MAYOR OF THE CITY OF IRVINE

ATTEST:

_____
CITY CLERK OF THE CITY OF IRVINE

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF IRVINE)

I, Molly McLaughlin, City Clerk of the City of Irvine, HEREBY DO CERTIFY that the foregoing resolution was duly adopted at a regular meeting of the City Council of the City of Irvine, held on October 9, 2018.

AYES:	COUNCILMEMBERS:
NOES:	COUNCILMEMBERS:
ABSENT:	COUNCILMEMBERS:

_____

CITY CLERK OF THE CITY OF IRVINE

PROJECTS UNDER CONSIDERATION FOR THE COMBINED TRANSPORTATION FUNDING PROGRAM

Regional Capacity Program (Arterial and Intersection Capacity Enhancements)

University Drive Widening
Construction phase to widen eastbound University Drive from two to three lanes from Ridgeline Drive to I-405. The City Council previously allocated $650,000 in Systems Development Charge (SDC) funds for this project to commence the preliminary engineering/environmental phase, which is underway. The project also currently has a previous Comprehensive Transportation Funding Program (CTFP) grant for $327,262, with $109,088 in City-matching SDC funds, to complete design in Fiscal Year 2018-19. The application will request 75 percent funding for the construction phase, and the remaining 25 percent will need to be funded through alternate methods.

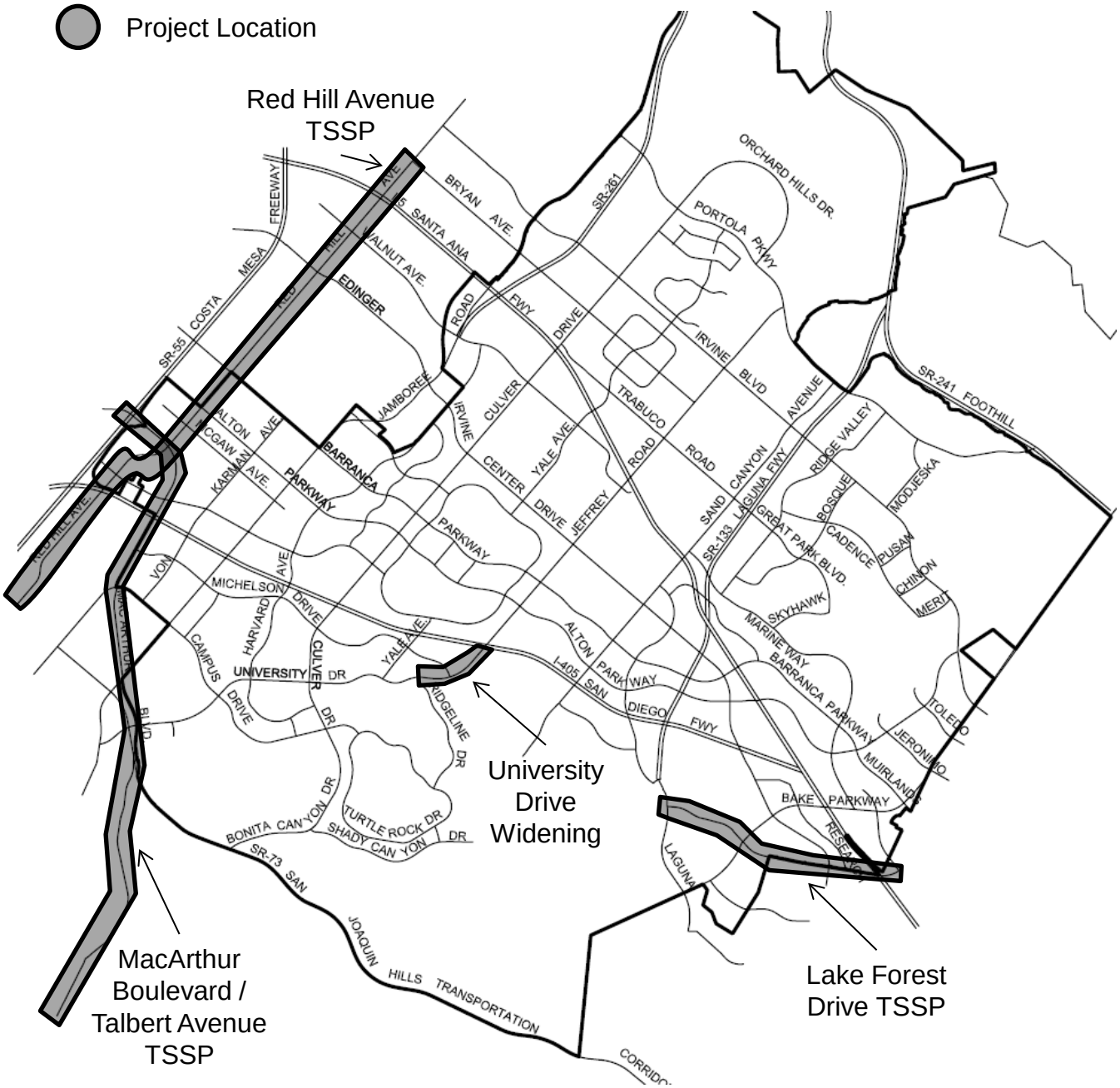
Regional Traffic Signal Synchronization Program

MacArthur Boulevard/Talbert Avenue Traffic Signal Synchronization
Implementation and operations/maintenance phases of upgraded traffic signal synchronization on MacArthur Boulevard/Talbert Avenue from SR-55 to Pacific Coast Highway. This is a joint project with Caltrans and City of Newport Beach that would include 22 total signalized intersections, eight of which are located within City of Irvine (with an additional five Caltrans intersections within Irvine). Additional project improvements within Irvine would include six new closed circuit television (CCTV) cameras, seven controller upgrades, and two new video detection systems.

Red Hill Avenue Traffic Signal Synchronization
Implementation and operations/maintenance phases of upgraded traffic signal synchronization on Red Hill Avenue from Irvine Boulevard to Bristol Street. This is a joint project with Caltrans, City of Costa Mesa, and City of Tustin, and would include 28 total signalized intersections, seven of which are located within City of Irvine. Additional project improvements within Irvine would include five new CCTV cameras, three controller upgrades, and two new video detection systems.

Lake Forest Drive Traffic Signal Synchronization
Implementation and operations/maintenance phases of upgraded traffic signal synchronization on Lake Forest Drive from Portola Parkway to SR-133. The City of Lake Forest would take the lead on submission of the project application, as well as project management. The project would include two signalized locations that are located within City of Irvine. Additional project improvements within Irvine would include one new CCTV camera, one controller upgrade and detection system upgrades.

MEASURE M2 COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM GRANT APPLICATIONS



VICINITY MAP

ATTACHMENT 4

PROJECT REVIEW SUMMARY						
Project	**Phase**	**Estimated Score (100 Max)** [1]	**Total Cost for Project Phase**	**Proposed Grant Request**	**Proposed City Matching Funds**	**Probable Source of Matching Funds**
Arterial and Intersection Capacity Enhancements						
University Drive Widening	Construction	83	$3,000,000	$2,250,000	$750,000 (25%)	Local Funds
		Subtotal	**$3,000,000**	**$2,250,000**	**$750,000**	
Traffic Signal Synchronization						
MacArthur Boulevard	Implementation and Maintenance	66	$1,510,000	$1,208,000	$168,000[2]	Local Funds
Red Hill Avenue	Implementation and Maintenance	56	$2,100,000	$1,700,000	$110,000[2]	Local Funds
Lake Forest Drive (Lake Forest as Lead)	Implementation and Maintenance	N/A[3]	N/A[3]	N/A[3]	$30,000[2]	Local Funds
		Subtotal	**$3,610,000**	**$2,908,000**	**$308,000**	
		Total	**$6,610,000**	**$5,158,000**	**$1,058,000**	

Note:

1. Estimated Scores are subject to change as applications are completed
2. City matching funds equal 20% of improvements located within the City of Irvine. Other participating agencies would similarly contribute local matching funds.
3. City of Lake Forest is leading this application and are still developing the application and project scope.

CITY COUNCIL RESOLUTION NO. ___

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, APPROVING THE SUBMITTAL OF GRANT APPLICATIONS TO THE ORANGE COUNTY TRANSPORTATION AUTHORITY FOR FUNDING UNDER THE COMPREHENSIVE TRANSPORTATION FUNDING PROGRAM

THE CITY COUNCIL OF THE CITY OF IRVINE HEREBY RESOLVES, DETERMINES, AND ORDERS AS FOLLOWS THAT:

WHEREAS, the City of Irvine desires to implement the transportation improvements listed below; and

WHEREAS, the City of Irvine has been declared by the Orange County Transportation Authority to meet the eligibility requirements to receive M2 “Fair Share” funds; and

WHEREAS, the City of Irvine’s Circulation Element is consistent with the County of Orange Master Plan of Arterial Highways; and

WHEREAS, the City of Irvine will provide matching funds for each project as required by the Orange County Comprehensive Transportation Funding Program Guidelines; and

WHEREAS, the Orange County Transportation Authority intends to allocate funds for transportation improvement projects within the incorporated cities and the County of Orange; and

WHEREAS, the City of Irvine will not use Measure M2 funds to supplant Developer Fees or other commitments; and

WHEREAS, the City of Irvine will include all projects funded by Net Revenues in the seven-year Capital Improvement Program as part of the Measure M2 Ordinance eligibility requirement; and

WHEREAS, the City of Irvine will process a formal amendment to the seven-year Capital Improvement Program to add projects approved for funding upon approval from the Orange County Transportation Authority Board of Directors; and

WHEREAS, the City of Irvine has adopted a Local Signal Synchronization Plan consistent with the Regional Traffic Signal Synchronization Master Plan as a key component of local agencies’ efforts to synchronizing traffic signals across local agencies’ boundaries; and

ATTACHMENT 6

WHEREAS, the City of Irvine supports the City of Lake Forest in the submittal of the Rockfield Boulevard Signal Synchronization project.

NOW, THEREFORE, the City Council of the City of Irvine DOES HEREBY RESOLVE as follows:

SECTION 1. The Director of Transportation is hereby authorized to submit or support applications to the Orange County Transportation Authority to allocate funds in the amounts specified in the City's applications from the Comprehensive Transportation Funding Program. Said funds shall be matched by funds from the City of Irvine as required and shall be used as supplemental funding to aid the City of Irvine in the implementation of the following improvement projects:

- University Drive Widening From Ridgeline Drive to Interstate-405
- MacArthur Boulevard/Talbert Avenue Traffic Signal Synchronization
- Redhill Avenue Traffic Signal Synchronization
- Lake Forest Drive Traffic Signal Synchronization

SECTION 2. The City Council of the City of Irvine delegates signature authority to the Director of Transportation or his designee to facilitate the delivery of the projects.

PASSED AND ADOPTED by the City Council of the City of Irvine at a regular meeting held on the 9th day of October 2018.

_____
MAYOR OF THE CITY OF IRVINE

ATTEST:

_____
CITY CLERK OF THE CITY OF IRVINE

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF IRVINE)

I, MOLLY MCLAUGHLIN, City Clerk of the City of Irvine, HEREBY DO CERTIFY that the foregoing resolution was duly adopted at a regular meeting of the City Council of the City of Irvine, held on 9th day of October 2018.

AYES: COUNCILMEMBERS:
NOES: COUNCILMEMBERS:
ABSENT: COUNCILMEMBERS:

_____
CITY CLERK OF THE CITY OF IRVINE

Potential Projects for CTFP Funding Grants

Intersection	Mitigation - CTFP as previously identified IBC - as identified in 2015 Study NITM - as identified in 2013 Great Park Fee Reallocation Study	Source	Phase Request	Phase Funding Necessary (estimated)	Fair Share / Request (not covered by fee program share)	Total Improvements / Mitigation Cost (thousands)	*MPAH NB*	*MPAH SB*	*Studied LOS**	*Actual LOS*	*Apply?*	Notes
University Roadway Segment (Ridgeline Dr to I-405)	Widen eastbound direction to add additional through lane (Currently in Engineering Phase)	Previous CTFP	Construction	$ 3,000,000	75%	$ 3,000	M / P	n/a	F	F	**YES**	
Culver Dr & Barranca Pkwy	Convert westbound defacto RT to third through lane	NITM	PE (Preliminary Engineering and Design)	$ 250,400	95%	$ 1,252	M	M	D/C	C / B	**No**	Existing LOS
Jeffrey Rd & Barranca Pkwy	Add NB & SB de facto RT lanes	NITM	PE (Preliminary Engineering and Design)	$ 120,000	87%	$ 800	M	P	D/C	C / C	**No**	Existing LOS
Von Karman Avenue at Alton Parkway	Add third northbound through lane	IBC	PE (Preliminary Engineering and Design)	$ 380,000	50%	$ 3,800	P	P	C/D	n/a	**No**	Mitigation outdated. Feasibility Study for Von Karman planned for FY 18/19.
Alton Pkwy & Irvine Center Dr	Convert NB right turn to free right, add fourth NB through lane, and restrip westbound approach to provide two LT, 2.5 through and 1.5 right turn lanes	NITM	PE (Preliminary Engineering and Design)	$ 400,000	95%	$ 4,000	P	M	B/B	A / A	**No**	Existing LOS
Culver Drive at Michelson Drive	Restripe eastbound leg to provide two left turn lanes and two through lanes (no dedicated right turn lane)	IBC	PE (Preliminary Engineering and Design)	$ 250,000	50%	n/a	M	P	A/D	n/a	**No**	to be re-evaluated as a part of the 2018 traffic study
Alton Pkwy & Technology Dr West	East/West Split Phase. Restripe WB to provide 2.5 LT, 1.5 Through and no RT lanes. Restripe EB to provide 2 LT, 2.5 through and 1.5 RT lanes	NITM	PE (Design, no PE necessary)	$ 25,000	88%	$ 25	M	C	A/D	n/a	**No**	modified earlier this year, mitigation outdated. Further analysis needed
Barranca Pkwy & Technology Dr	Add 2nd SB left turn lane, restripe eastbound approach to provide 1 left turn lanee, 1.5 through lanes and 1.5 right turn lanes	NITM	PE (Preliminary Engineering and Design)	$ 237,000	92%	$ 1,185	P	S	A/C	A / B	**No**	Existing LOS
Jamboree Rd Northbound Ramps at Warner Avenue	Widen to provide two left and two through lanes	IBC	PE (Preliminary Engineering and Design)	$ 390,000	50%	$ 2,600	M	M	A/A	n/a	**No**	Existing LOS
Gillette Avenue at Alton Parkway	Add new traffic signal	IBC			50%	$ 490	n/a	P	n/a	n/a	**No**	No benefit to MPAH roadway, won't score well, may not qualify

note: IBC fair share request at 50%, as none of these locations were identified in original 2011 Study. Per 2017-18 Harvard/Michelson grant award

* Existing LOS calculated in 2015 for IBC and 2015 year calculated in 2013 for NITM

ATTACHMENT 7