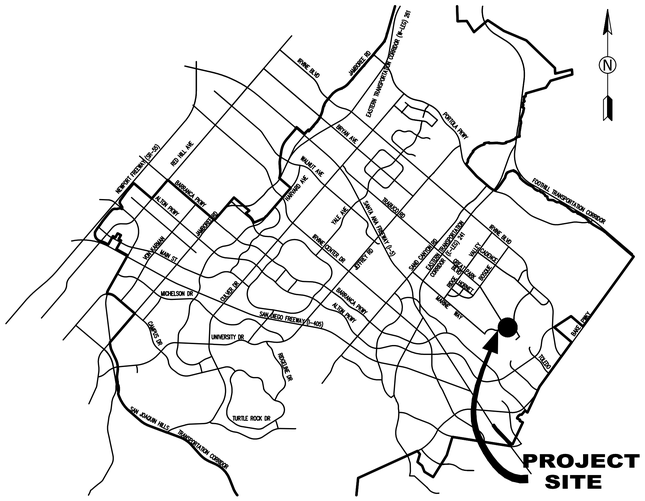


VICINITY MAP

THE CITY OF IRVINE

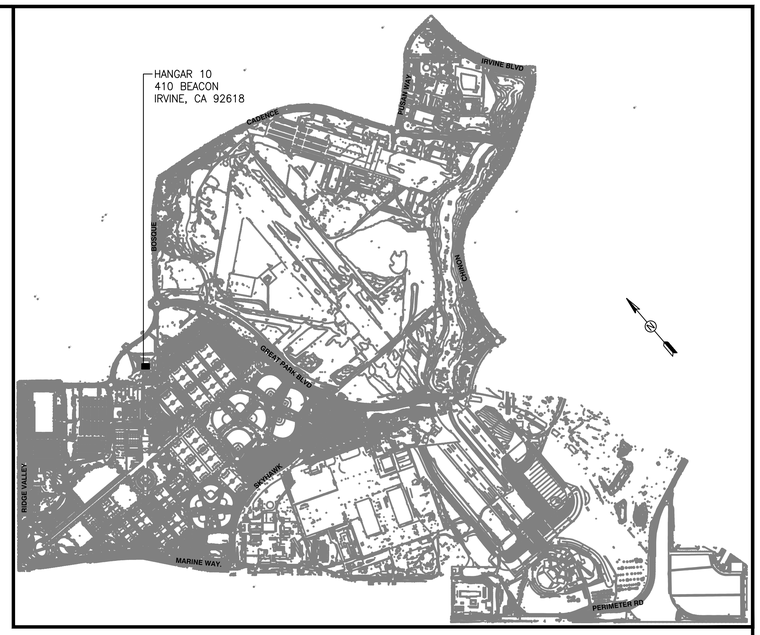
GREAT PARK
IRVINE, CALIFORNIA

GREAT PARK FRAMEWORK PLAN

HANGAR 10 RECONSTRUCTION BUILDING PLAN

CITY CIP NO. 372604

CITY PC NO. 00970420-CNEW



LOCATION MAP

CITY OF IRVINE
COMMUNITY DEVELOPMENT
APPROVED

This set of plans and specification must be kept on the job at all times. It is unlawful to make any changes or alterations on these plans without written permission from the City of Irvine Community Development Department. The stamping of this plan and specification SHALL NOT be held to permit or be an approval of the violation of any provisions of any City Ordinance or State Law, as may be found during field inspection.

APPROVED BY: JOEL B. & VICTOR B.
DATE : 4/9/2026

CITY OF IRVINE
BUILDING AND SAFETY DIVISION
APPROVAL OF HEATING-VENTILATION
AIR CONDITIONING-REFRIGERATION PLANS

The heating and ventilating, air conditioning refrigeration as submitted upon these plans and proposed for installation have been reviewed and found to meet the minimum requirements of applicable California Mechanical Code. This approval does not constitute authority to violate any provisions of said code not does it prevent further corrections of errors, as my be found during field inspection.

APPROVED BY: VICTOR MURO
DATE : 4/9/2026

CITY OF IRVINE
BUILDING AND SAFETY DIVISION
APPROVAL OF ELECTRICAL PLANS

The proposed installation of power and of lighting as submitted upon your plans have been reviewed and found to meet the minimum requirements of the California Electrical Code. This approval does not constitute authority to violate any provision of said code nor does it prevent further corrections of errors, as may be found during field inspection.

APPROVED BY: SETAREH AFSHAR
DATE : 4/9/2026

CITY OF IRVINE
BUILDING AND SAFETY DIVISION
APPROVAL OF PLUMBING PLANS

The plumbing system has been reviewed, and as submitted upon your plans has been determined to meet the minimum requirements of the California Plumbing Code. This approval does not constitute authority to violate any provision of said code nor does it prevent further corrections of errors, as may be found during field inspections.

APPROVED BY: VICTOR MURO
DATE : 4/9/2026

PLAN CHECK NO.: 00970420-CNEW (B2)

NO.	DATE	REVISIONS	ENGR.	APPROV.	DATE
7					
6					
5	05.07.2026	BID SET			
4	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS			
3	11.03.2025	ISSUE FOR PLAN CHECK			
2	10.14.2025	CD CLIENT REVIEW/PRICING			
1	09.03.2025	DESIGN DEVELOPMENT			

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

Gensler
4675 MacArthur Court
Suite 100
Newport Beach, CA 92660
United States
Tel 949.863.9434
Fax 949.553.1676

CITY OF IRVINE
PUBLIC WORKS & SUSTAINABILITY
APPROVED
These plans and/or specifications are signed by the City of Irvine Public Works & Sustainability Director or designee for conformance only as prescribed in California Government Code 830.6 and as delegated by City Council pursuant to Resolution 23-64. The City is not responsible for the design, assumptions, or accuracy. All revisions must receive City approvals prior to construction.
Lincoln Lo, P.E.
City Engineer

4/9/2026 10:40:03 AM
00970420-CNEW
Lincoln Lo - City Engineer

APPROVED BY: CITY ENGINEER	R.C.E. NO. DATE	APPROVED BY: IRWD SANITARY SEWER FACILITIES	R.C.E. NO. DATE
APPROVED BY: ORANGE COUNTY FIRE MARSHALL	DATE	APPROVED BY: IRVINE RANCH WATER FACILITIES	DATE

CITY OF IRVINE
BUILDING & SAFETY DIVISION

TITLESHEET

G0.000

Plotted: May 05, 2026 - 2:05pm by 14369
Drawing Name: \\gensler.com\gdfs\PROJECTS\2025\25016\Drawing Files\Arch Files\Titlesheet File\G0 Title Sheet.dwg

PROJECT INFORMATION REQUIREMENTS

PROJECT LOCATION: HANGAR 10, 410 BEACON; IRVINE, CA 92618; BEACON & HORNET EXTENSION
LEGAL DESCRIPTION FOR NEW TRACTS:
BEING A PORTION OF THAT CERTAIN PARCEL OF LAND LYING WITHIN LOT 279, BLOCK 140 AS SHOWN ON THE MAP OF IRVINE'S SUBDIVISION RECORDED IN BOOK 1, PAGE 88 OF MISCELLANEOUS RECORD MAPS IN THE OFFICE OF THE COUNTY RECORDER OF ORANGE COUNTY

PROJECT DESCRIPTION

MULTI-TENANT COMMERCIAL SHELL BUILDING WITH SWITCHGEAR, PUBLIC RESTROOMS, HVAC UNITS, GREASE INTERCEPTOR AND STANDARD SHELL LIGHTING. BUILDING HAS ALSO BEEN DESIGNED AS RISK CATEGORY III.

NOTE: THIS BUILDING IS DESIGNED AS A CORE AND SHELL BUILDING; SEPARATE BUILDING, MECHANICAL, ELECTRICAL AND PLUMBING PERMITS ARE REQUIRED FOR ALL FUTURE COMMERCIAL TENANT SPACE BUILD-OUTS NOT DETAILED ON THIS PLAN. A CERTIFICATE OF OCCUPANCY (C OF O) WILL NOT BE ISSUED UNTIL COMPLETE TENANT BUILD-OUT HAS BEEN ACHIEVED.

SPECIAL CONDITIONS OF LAND USE APPROVAL

IN ACCORDANCE WITH PLANNING COMMISSION RESOLUTION 11-3109, THE PROPOSED HANGAR 10 BUILDING SUBMITTAL, THAT IS PART OF THE CANOPY PHASE 2 PROJECT SITE, HAS DEMONSTRATED COMPLETE COMPLIANCE WITH ALL ASSOCIATED CONDITIONS OF APPROVAL. THE COMPLIANCE INFORMATION HAS BEEN FULLY REVIEWED AND APPROVED BY THE CITY OF IRVINE COMMUNITY DEVELOPMENT DEPARTMENT. A COMPLETE AND DETAILED COMPLIANCE SUMMARY CAN BE FOUND WITHIN THE DOCUMENT TITLED "HANGAR 10 CONDITIONS OF APPROVAL LETTER".

USE(S), OCCUPANCY (IES), AND FLOOR AREAS(S)

ASSUMED DINING A #101 (A-2 OCCUPANCY):	4,715 SF
ASSUMED KITCHEN A #101A (A-2 OCCUPANCY):	1,805 SF
ASSUMED DINING B #102 (B OCCUPANCY):	533 SF
ASSUMED KITCHEN B #102A (B OCCUPANCY):	289 SF
ASSUMED DINING C #103 (B OCCUPANCY):	508 SF
ASSUMED KITCHEN C #103A (B OCCUPANCY):	275 SF
ASSUMED DINING D #104(B OCCUPANCY):	531 SF
ASSUMED KITCHEN D #104A (B OCCUPANCY):	288 SF
PUBLIC WOMEN'S RESTROOM #108 (A-2 OCCUPANCY):	264 SF
PUBLIC MEN'S RESTROOM #109 (A-2 OCCUPANCY):	191 SF
VESTIBULE #106 (A-2 OCCUPANCY):	84 SF
JANITOR #107(A-2 OCCU0PANCY):	70 SF
ROOF ACCESS #105 (A-2 OCCUPANCY):	18 SF
TOTAL FLOOR AREA:	9,571 SF
TOTAL CONDITIONED FLOOR AREA OF HABITABLE TENANT SPACES:	8,944 SF
TOTAL CONDITIONED FLOOR AREA OF SITE SUPPORTING RESTROOM AND UTILITY SPACES:	543 SF
TOTAL PROPOSED ROOF CANOPIES (A-2 OCCUPANCY):	147 SF
TOTAL PROPOSED ROO FCANOPIES (B OCCUPANCY):	270 SF

REFER TO SHEET G2.002 FOR ADDITIONAL INFORMATION INCLUDING THE LAND USES.

NUMBER OF STORIES 1

TYPE OF CONSTRUCTION V-B SPRINKLERED

SPRINKLERS YES

AN NFPA 13 AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED UNDER SEPARATE APPROVAL THROUGH THE ORANGE COUNTY FIRE AUTHORITY. SPRINKLERS ARE PROVIDED TO COMPLY WITH THE CITY OF IRVINE MUNICIPAL CODE SECTION 5-9-401 FOR BUILDING HAVING A GROSS AREA EXCEEDING 5,000 SQUARE FEET.

ALLOW HEIGHT AND AREA ANALYSIS PER CBC SECTION 503:

(HANGAR 10 AND BUILDING 10 PER CBC 503.1.2 BUILDING ON THE SAME LOT WITH THE NONSEPARATED OCCUPANCIES APPROACH IN ACCORDANCE WITH CBC 508.3. GOVERNING OCCUPANCY IS A OCCUPANCY)

BUILDING HEIGHT: 32'-0" (< ALLOWABLE BUILDING HEIGHT: 40'-0")
STORIES: 1 (< ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE: 1)
FLOOR AREA:
HANGAR 10: 9,571 SF
BUILDING 10: 10,867 SF REFER TO PLAN CHECK 00971615-CNEW
TOTAL: 20,438 SF (< ALLOWABLE AREA OF BUILDING: 24,000 SF)

PARKING SUMMARY

REFER TO SITE PLAN G2.001 FOR PARKING INFORMATION.

APPLICABLE STATE CODES (WITH CITY OF IRVINE AMENDMENTS)

CALIFORNIA BUILDING CODE	2022
CALIFORNIA RESIDENTIAL CODE	2022
CALIFORNIA GREEN BUILDING STANDARDS CODE	2022
CALIFORNIA MECHANICAL CODE	2022
CALIFORNIA ELECTRICAL CODE	2022
CALIFORNIA PLUMBING CODE	2022
CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS	2022
CALIFORNIA FIRE CODE	2022

CALIFORNIA GREEN BUILDING STANDARDS CODE

PROVISIONS OF THE CALIFORNIA GREEN BUILDING STANDARDS CODE APPLY TO ALL NEW RESIDENTIAL BUILDINGS (INCLUDING HOTELS AND MOTELS), RESIDENTIAL PARKING FACILITIES, AND ALL NEW NON-RESIDENTIAL BUILDINGS.

SEE SHEET **G2.100** FOR COMPLETED CITY OF IRVINE GREEN BUILDING STANDARDS NOTES.

CALIFORNIA ENERGY CODE

PROVISIONS OF THE CALIFORNIA ENERGY CODE (CEnC) APPLY TO THIS PROJECT. SEE LIST BELOW FOR COMPLETE COMPLIANCE DOCUMENTATION.

NRCC-CXR-E: E0.006
NRCC-PRF-E: M0.003-M0.004
NRCC-ELC-E: E0.005
NRCC-LTI-E: E0.002
NRCC-LTO-E: E0.003
NRCC-SAB-E: E0.004

SOLAR READY MANDATORY SOLAR READY REQUIREMENTS OF SECTION 110.10:

COMPLIANCE IS ACHIEVED AS FOLLOWS:

SOLAR ZONE
NON-RESIDENTIAL BUILDING:

PURSUANT TO SECTION 110.10(b)1.B, AN OBSTRUCTION FREE SOLAR ZONE IS LOCATED ON **THE BUILDING ROOF** WITH A TOTAL AREA OF **702 SF., NOT LESS THAN 15 PERCENT OF THE TOTAL ROOF AREA OF THE BUILDING EXCLUDING ANY SKYLIGHT AREA,** AS SHOWN ON PLAN SHEET(S) **A1.102 AND E2.102.**

SOLAR ZONE ORIENTATION:
REFER TO ROOF PLAN A1.102

STRUCTURAL DESIGN LIVE AND DEAD LOADS FOR THE SOLAR ZONE ARE **50PSF AND 20PSF (REFER TO LOW ROOF IN SHEET NOTE #2 ON E1.102)** RESPECTIVELY

INTERCONNECTION PATHWAYS

LOCATION FOR INVERTERS AND METERING EQUIPMENT AND A PATHWAY FOR ROUTING OF CONDUIT FROM THE SOLAR ZONE TO THE POINT OF INTERCONNECTION WITH THE MAIN ELECTRICAL SERVICE PANEL ARE SHOWN ON **E2.102**.

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 **S1.004** FOR COMPLETED PROJECT SPECIFIC CITY OF IRVINE SPECIAL INSPECTION PROGRAM FORM.

SEE SHEET **S1.001** 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. 5-9-501 THROUGH 5-9-520]
SEE SHEET **G2.102** FOR APPLICABLE COMPLETED SECURITY CODE PROVISIONS.

ROOFING [IMC 5-9-401 H. & 5-9-402 O.]

ROOF COVERING CLASSIFICATION SHALL MEET MINIMUM CLASS A.

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 ON G2.102. SEE BULLETIN FOR DETAILS AND REQUIRED DOCUMENTATION REQUIRED AT THE RECEIPT OF ANY SHIPMENT OF OFF-SITE FABRICATED ITEMS.

PRE-CONSTRUCTION MEETING REQUIREMENT [IMC 5-9-209A.]

ALL CONSTRUCTION PROJECTS INVOLVING NEW STRUCTURES AND THOSE INVOLVING ADDITIONS TO NON-RESIDENTIAL STRUCTURES OR TENANT IMPROVEMENTS EXCEEDING 5,000 SQUARE FEET OR INVOLVING A NEW RESTAURANT ESTABLISHMENT SHALL NOT COMMENCE UNTIL A PRE-CONSTRUCTION MEETING HAS BEEN HELD. TO SCHEDULE A PRE-CONSTRUCTION MEETING CONTACT EITHER JOEL LYLES, NON-RESIDENTIAL INSPECTIONS SUPERVISOR AT (949)724-6139 OR RESIDENTIAL INSPECTION SUPERVISOR GINA MAURO AT (949)724-6546

CONSTRUCTION SITE SECURITY REQUIREMENTS [IMC SECT 5-9-521]

GENERAL REQUIREMENTS MUNICIPAL CODE SECTIONS 5-9-521.B

FOR THE GENERAL REQUIREMENTS CHECKLIST FOR CONSTRUCTION SITE SECURITY PER THE CITY OF IRVINE CONSTRUCTION SITE SECURITY ORDINANCE, SEE **DEFERRED COMPLIANCE**

SEE SHEET "DEFERRED COMPLIANCE" FOR SITE SPECIFIC CONSTRUCTION SITE SECURITY PLAN.

ACOUSTICAL REPORT:

REPORT NO.: 16924-02
PREPARED BY: URBAN CROSSROADS
DATE: FEBRUARY 27, 2026
BUILDING FEATURES RECOMMENDATIONS: THERE ARE NO SPECIAL SOUND MITIGATIONS REQUIRED FOR THIS BUILDING. REFER TO PLAN SHEETS G2.104-G2.106 FOR PERINENT ACOUSTICAL REPORT INFORMATION.

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.

1. FIRE SPRINKLERS AND SPRINKLER UNDERGROUND
2. FIRE ALARM NOTIFICATION SYSTEM IN ACCORDANCE WITH CBC 907.2.1 & 907.5
3. STOREFRONT SYSTEMS
4. UTILITY AVAILABLE FAULT REPORT
5. OCFA APPROVED FIRE MASTER PLAN (MUST BE PROVIDED PRIOR TO PERMIT ISSUANCE) (CITY RESPONSIBILITY)
6. IRWD RECYCLED WATER USE WAIVER (MUST BE PROVIDED PRIOR TO PERMIT ISSUANCE) (CITY RESPONSIBILITY)
7. CONSTRUCTION SITE SECURITY (MUST BE SUBMITTED AND APPROVED PRIOR TO PRE-CONSTRUCTION MEETING.)
8. APPROVED WAYFINDING (MUST BE PROVIDED PRIOR TO PERMIT ISSUANCE) (CITY RESPONSIBILITY)
9. METALWERKS WALL CLADDING SYSTEM

SHEET INDEX:

SEE SHEET **G0.002** FOR SHEET INDEX.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT:

BE ADVISED, SOUTH COAST AIR QUALITY MANAGEMENT (SCAQMD) RULE 1403 GOVERNS WORK PRACTICE REQUIREMENTS FOR ASBESTOS IN ALL RENOVATION AND DEMOLITION ACTIVITIES. PLEASE REFER TO RULE 1403 (http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1403.pdf) FOR ALL CURRENT REQUIREMENTS.

CALIFORNIA HEALTH AND SAFETY CODE 19827.5 REQUIRES THAT EVIDENCE OF DEMOLITION NOTIFICATION SUBMITTED TO THE SOUTH COAST AQMD BE PROVIDED TO CITY OF IRVINE BUILDING AND SAFETY PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT INCLUDING DEMOLITION WORK.

SPECIAL VERY HIGH FIRE HAZARD SEVERITY ZONE (CBC CHAPTER 7A AND CRC SECTION R337)

THE FOLLOWING REQUIREMENTS ARE NOT APPLICABLE AS THE PROJECT IS NOT WITHIN A VERY HIGH FIRE HAZARD SEVERITY ZONE.

EROSION AND SEDIMENT CONTROL

AN EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED AT ALL TIMES. **REFER TO PROJECT GRADING PLANS UNDER SEPARATE PERMIT FOR COMPLETE DETAILS.**

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.

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.

EMERGENCY RESPONDER RADIO SYSTEM

EXEMPT: THIS BUILDING IS EXEMPT FROM EMERGENCY RESPONDER RADIO SYSTEM COVERAGE REQUIREMENTS PER CFC 510.1.
STRUCTURE THREE STORIES OR LESS AND DO NOT HAVE A SUBTERRANEAN STORAGE OR PARKING AND DO NOT EXCEED 50,000 SQUARE FEET ON ANY SINGLE STORY.

RELATED CASES

1. PLANNING CASES / RESOLUTION NUMBERS: 11-3109
2. IRWD APPROVAL: TBD
3. FOG APPROVAL: FOG-2147
4. OCFA FIRE UNDERGROUND: SR26000381
5. OCFA FIRE MASTER PLAN: SR26000052
6. PRECISE GRADING: 00974484-PARK
7. ROUGH GRADING: 00968277-GPLM
8. EV CHARGING ELECTRICAL: 00974484-PARK
9. SITE LIGHTING: 00974484-PARK
10. LANDSCAPE & IRRIGATION: 00974484-PARK
11. WAYFINDING PPA NUMBER: TBD
12. EMERGENCY ACCESS PPA NUMBER: TBD
13. BUILDING 10 PC NUMBER: 00917615-CNEW
14. BUILDING 11 PC NUMBER: 00971633-CNEW
15. BUILDING 12 PC NUMBER: 00971641-CNEW
16. WHOLE BUILDING DEMO: 00963930-CDRD

CITY OF IRVINE BUILDING & SAFETY DIVISION

NO.	DATE	REVISIONS	ENGR.	APPROV.	DATE
7					
6					
5	05.07.2026	BID SET			
4	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS			
3	11.03.2025	ISSUE FOR PLAN CHECK			
2	10.14.2025	CD CLIENT REVIEW/PRICING			
1	09.03.2025	DESIGN DEVELOPMENT			

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

NICHOLAS JAMES ACEVEDO	C-32405	08.29.2025
PROJECT ENGINEER	LICENCE #	DATE
IRVINE CITY ENGINEERING		DATE

LICENSED ARCHITECT NICHOLAS JAMES ACEVEDO NO. C-32405 REN: 3-31-2027 STATE OF CALIFORNIA

Gensler
4675 MacArthur Court
Suite 100
Newport Beach, CA 92660
United States
Tel 949.863.9434
Fax 949.553.1676

DRAWN BY: GENSLER	DATE
DESIGNED BY: GENSLER	DATE
CHECKED BY: GENSLER	DATE
RECOMMENDED BY:	DATE

CITY NOTES
HANGAR 10
GREAT PARK, IRVINE, CALIFORNIA

G0.001

DATE
DATE
DATE

Plotted: May 05, 2026 - 4:55pm by MSilva
Drafting Room Workstation Path: M:\Projects\Projects\Irvine\Canopy Phase 2\Hangar 10\Bldg Plan Check\Bldg Plan Check.rvt

GENERAL NOTES

1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR.
THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONTRACT DOCUMENTS WITH EACH OTHER AND WITH AS-BUILT DRAWINGS PROVIDED BY THE OWNER AND SHALL AT ONCE REPORT TO THE ARCHITECT ERRORS, INCONSISTENCIES, OR OMISSIONS. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR AND HAS CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES, AND FOR COORDINATING ALL PORTIONS OF THE WORK.

2 INTENT OF CONTRACT DOCUMENTS.
THE INTENT OF THE CONTRACT DOCUMENTS IS TO ALLOW FOR THE PERFORMANCE OF THE WORK. EVERY ITEM NECESSARILY REQUIRED MAY NOT BE SPECIFICALLY MENTIONED OR SHOWN. UNLESS EXPRESSLY STATED, ALL SYSTEMS AND EQUIPMENT SHALL BE COMPLETED AND APPROPRIATELY OPERABLE. FURNISH AND INSTALL ALL SPECIFIED AND APPROPRIATE ITEMS, AND ALL INCIDENTAL, ACCESSORY, AND OTHER ITEMS NOT SPECIFIED BUT REQUIRED FOR A COMPLETE AND FINISHED ASSEMBLY.

3 DEFECTIVE WORK.
NO WORK DEFECTIVE IN WORKMANSHIP OR QUALITY OR DEFICIENT IN ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS WILL BE ACCEPTABLE DESPITE THE ARCHITECT'S FAILURE TO DISCOVER OR POINT OUT DEFECTS OR DEFICIENCIES DURING CONSTRUCTION. DEFECTIVE WORK REVEALED WITHIN THE TIME REQUIRED BY GUARANTEES SHALL BE REPLACED BY WORK CONFORMING TO THE INTENT OF THE CONTRACT. NO PAYMENT, EITHER PARTIAL OR FINAL, SHALL BE CONSTRUED AS AN ACCEPTANCE OF DEFECTIVE WORK OR IMPROPER MATERIALS.

4 FIREPROOFING.
PATCH AND REPAIR ALL FIREPROOFING DAMAGE INCURRED DURING DEMOLITION AND/OR CONSTRUCTION. FIREPROOF AS REQUIRED BY CODE ALL NEW PENETRATIONS GENERATED BY THE WORK DESCRIBED IN THESE DOCUMENTS.

5 AS-BUILT DRAWINGS.
DURING THE COURSE OF CONSTRUCTION, ACTUAL LOCATIONS OF CONSTRUCTION ITEMS DENOTED IN THE CONSTRUCTION DOCUMENTS SHALL BE INDICATED TO SCALE IN CONTRASTING INK ON THE DRAWINGS FOR ALL RUNS OF MECHANICAL, SPRINKLER, PLUMBING, AND ELECTRICAL WORK, INCLUDING SITE UTILITIES AND CONCEALED DEVIATIONS FROM THE DRAWINGS. UPON COMPLETION OF THE PROJECT, THE ARCHITECT WILL PROVIDE THE CONTRACTOR WITH A REPRODUCIBLE SET OF ORIGINAL DOCUMENTS FOR "AS-BUILT" DOCUMENTATION. THIS SET SHALL BE CONSPICUOUSLY MARKED "AS-BUILTS" AND DELIVERED TO THE ARCHITECT.

6 CONTRACTOR RESPONSIBILITY.
IT IS INTENDED THAT THE CONTRACTOR PROVIDE A COMPLETE JOB AND ANY OMISSIONS IN THESE NOTES OR IN THE OUTLINE OF WORK SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF SUCH RESPONSIBILITIES IMPLIED BY SCOPE OF WORK EXCEPT FOR ITEMS SPECIFICALLY NOTED.

7 UNENFORCEABLE WORK.
SHOULD ANY PORTION OF THE CONTRACT DOCUMENTS PROVE TO BE, FOR WHATEVER REASONS, UNENFORCEABLE, SUCH UNENFORCEABILITY SHALL NOT EXTEND TO THE REMAINDER OF THE CONTRACT NOR SHALL IT VOID ANY OTHER PROVISIONS OF THE CONTRACT.

8 LIENS.
THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL REFRAIN FROM ACTIONS THAT COULD LEAD TO THE FILING OF CLAIMS OF LIEN BY SUBCONTRACTORS, SUPPLIERS OF MATERIALS, LABOR, SERVICE, EQUIPMENT, OR ANY OTHER INDIVIDUAL OR COMPANY SO ENTITLED UNDER GOVERNING LAWS AND REGULATIONS, UNLESS REASONABLE AND JUSTIFIABLE CAUSE CAN BE SHOWN. APPROVAL FOR PAYMENT SHALL BE CONTINGENT UPON THE CONTRACTOR'S OBTAINING AND FURNISHING TO THE ARCHITECT SIGNED RELEASES FROM SUCH INDIVIDUALS OR COMPANIES.

9 COORDINATION OF THE WORK.
THE CONTRACTOR IS RESPONSIBLE FOR REVIEW AND VERIFICATION OF CONTRACT DOCUMENTS, FIELD CONDITIONS, AND DIMENSIONS FOR ACCURACY AND CONFIRMING THAT WORK IS BUILDABLE AS SHOWN BEFORE PROCEEDING WITH CONSTRUCTION. IF THERE ARE ANY QUESTIONS REGARDING THESE OR OTHER COORDINATION ISSUES, THE CONTRACTOR SHALL SUBMIT THEM IN WRITING TO THE ARCHITECT AND IS RESPONSIBLE FOR OBTAINING A WRITTEN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH WORK IN QUESTION, OR RELATED WORK.

10 WORK SHOULD COMPLY WITH APPLICABLE CODES.
EXECUTE WORK IN ACCORDANCE WITH ANY AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES, MANUFACTURER'S RECOMMENDATIONS, AND TRADE AND REFERENCE STANDARDS, INCLUDING BUT NOT LIMITED TO: FEDERAL, STATE, LOCAL/MUNICIPAL CODES, IBC, UBC, SEISMIC CODES, NEC, NFPA, ASMC, AND UMC (LATEST ENFORCED EDITIONS).

11 DIMENSIONS.
DO NOT SCALE DRAWINGS; DIMENSIONS SHALL GOVERN. DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS. WRITTEN SPECIFICATIONS SHALL GOVERN OVER ALL.

12 CLARIFICATIONS.
CLARIFY ALL DISCREPANCIES RELATIVE TO CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND FIELD CONDITIONS PRIOR TO SUBMITTING BIDS AND COMMENCING WORK.

13 SUBSTITUTIONS.
THERE SHALL BE NO SUBSTITUTION OF MATERIALS WHERE A MANUFACTURER IS SPECIFIED. WHERE THE TERM "OR EQUAL" IS USED, THE ARCHITECT ALONE SHALL DETERMINE EQUALITY BASED UPON INFORMATION SUBMITTED BY THE CONTRACTOR, CLEARLY IDENTIFIED AS A "REQUEST FOR SUBSTITUTION". CONTRACTOR SHALL ALSO LIST CREDIT TO THE CLIENT FOR USE OF SUBSTITUTION. CONSENT OF THE ARCHITECT/OWNER.

14 DRAWING DISTRIBUTION.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISTRIBUTION OF DRAWINGS TO ALL TRADES UNDER THEIR JURISDICTION.

15 CHANGES IN THE WORK.
DO NOT PROCEED WITH ANY WORK REQUIRING ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER. FAILURE TO OBTAIN AUTHORIZATION SHALL INVALIDATE ANY CLAIM FOR EXTRA COMPENSATION.

16 EXISTING WORK.
ALL INSTALLED PLUMBING, MECHANICAL, AND ELECTRICAL EQUIPMENT SHALL OPERATE QUIETLY AND FREE OF VIBRATION.

17 PUNCH LIST.
UPON COMPLETION OF THE WORK BY THE CONTRACTOR, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF SUCH COMPLETION. THE ARCHITECT SHALL ATTEND THE PUNCH LIST WALK THROUGH CONDUCTED BY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL PREPARE AND DISTRIBUTE A LIST OF ITEMS TO BE FINISHED OR COMPLETED PRIOR TO THIS WALK THROUGH. THE GENERAL CONTRACTOR SHALL TAKE NOTES AND PREPARE A LIST OF FINAL PUNCH ITEMS TO BE COMPLETED OR CORRECTED AS A RESULT OF THIS WALK THROUGH. THIS PUNCH LIST IS TO BE PROMPTLY DISTRIBUTED BY THE GENERAL CONTRACTOR TO THE TENANT, OWNER AND ARCHITECT.

18 MATERIALS.
ALL MATERIALS SHALL BE NEW, UNUSED, AND OF THE HIGHEST QUALITY IN EVERY RESPECT, UNLESS NOTED OTHERWISE. MANUFACTURED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS, UNLESS NOTED OTHERWISE.

19 INSURANCE.
THE CONTRACTOR AND SUBCONTRACTORS SHALL PURCHASE AND MAINTAIN CERTIFICATIONS OF INSURANCE WITH RESPECT TO WORKERS COMPENSATION, PUBLIC LIABILITY, AND PROPERTY DAMAGE FOR THE LIMITS AS REQUIRED BY LAW, IN ADDITION TO THE TERMS OF THE OWNER'S CONTRACT, WHICHEVER IS GREATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS IN CONNECTION WITH THE WORK.

20 EXISTING TENANTS.
COORDINATE ALL WORK WITH BUILDING OWNER SO AS NOT TO DISTURB OR CAUSE DAMAGE TO ANY TENANT

21 COORDINATION.
VERIFY IN THE FIELD THAT NO CONFLICTS EXIST WHICH WOULD PROHIBIT THE LOCATION OF ANY AND ALL MECHANICAL, TELEPHONE, ELECTRICAL, LIGHTING, PLUMBING, AND SPRINKLER EQUIPMENT (TO INCLUDE ALL REQUIRED PIPING, DUCTWORK, AND CONDUIT), AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF ABOVE EQUIPMENT ARE PROVIDED.

22 PROTECTION OF EXISTING WORK.
PROVIDE PROTECTION TO ALL EXISTING FINISHES IN ALL SPACES WITHIN OR ADJACENT TO THE SCOPE OF WORK AND THE TENANT'S SPACE. THE CONTRACTOR SHALL PATCH, REFINISH, AND REPAIR ANY DAMAGE CAUSED BY HIM OR HIS SUBCONTRACTORS. MATCH EXISTING ADJACENT FINISH, OR AS NOTED HEREIN.

23 EXISTING DEFECTS.
CORRECT ANY DEFECTS FOUND IN EXISTING BUILDING CONSTRUCTION WHICH AFFECTS THE SCOPE OF WORK. THIS INCLUDES BUT IS NOT LIMITED TO UNEVEN SURFACES AND FINISHES AT GYPSUM BOARD OR DAMAGED FIREPROOFING. PATCH AND REPAIR SURFACES TO MATCH ADJACENT, ADJOINING SURFACES.

24 TERMINOLOGY.
TYPICAL OR TYP MEANS IDENTICAL FOR ALL SIMILAR CONDITIONS, UNLESS NOTED OTHERWISE. SIMILAR OR SIM MEANS COMPARABLE CHARACTERISTICS TO THE CONDITION NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLAN. VERIFY OR VER MEANS TO ASCERTAIN AND CONFIRM APPLICATION WITH ARCHITECT.

25 FURNITURE.
FURNITURE SHOWN IS FOR REFERENCE ONLY AND INSTALLED BY OTHERS, UNLESS NOTED OTHERWISE.

26 FILE CABINETS.
FILE CABINETS, AS SHOWN ON DRAWINGS, ARE SUPPLIED BY OTHERS. COORDINATE FILE SIZE(S) WITH FURNITURE INSTALLER FOR REQUIRED CLEARANCES.

27 CLEANING.
PROVIDE STRICT CONTROL OF JOB CLEANING AND PREVENT DUST AND DEBRIS FROM MIGRATING FROM CONSTRUCTION AREA.

28 ADJACENT SPACES.
CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING OF ACCESS INTO ADJACENT TENANT SPACES WITH THE BUILDING MANAGEMENT AS REQUIRED FOR PRICING AND EXECUTION OF THE WORK.

29 EXISTING CONDITIONS.
CONTRACTOR SHALL THOROUGHLY EXAMINE THE PREMISES AND SHALL BASE HIS BID ON THE EXISTING CONDITIONS, NOTWITHSTANDING ANY INFORMATION SHOWN OR NOT INDICATED ON THE CONTRACT DOCUMENTS.

30 CONTRACT DOCUMENTS.
ALL CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS CALLED FOR BY ANY WILL BE AS BINDING AS IF CALLED FOR BY ALL. ALL WORK SHOWN OR REFERRED TO ON ANY CONTRACT DOCUMENT SHALL BE PROVIDED AS THOUGH THEY ARE ON ALL RELATED DOCUMENTS.

31 CONTRACTOR RESPONSIBILITY TO NOTIFY ARCHITECT.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT OF ANY CONFLICTS HEREIN - EITHER APPARENT OR OBVIOUS - PRIOR TO THE START OF NEW WORK ON THAT ITEM, OR BEAR THE RESPONSIBILITY OF CORRECTING SUCH WORK AS DIRECTED BY THE ARCHITECT.

32 DUPLICATION OF DOCUMENTS.
ALL DRAWINGS AND WRITTEN MATERIAL HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF THE ARCHITECT/OWNER AND THE SAME MAY NOT BE DUPLICATED, USED, OR DISCLOSED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT/OWNER.

33 DETAIL REFERENCE.
REFER TO A12 SHEETS SERIES FOR DETAILS NOT CROSS REFERENCED FOR ALL THE CONDITIONS OF PENETRATION THROUGH FIRE RATED ASSEMBLIES AND ACOUSTICAL PARTITIONS.

34 EXISTING PENETRATIONS.
ALL PENETRATIONS TO THE FLOOR/CEILING ASSEMBLY SHALL BE GROUTED SOLID WITH A QUICK-SET CONCRETE FILLER. THE SLAB BETWEEN THE MECHANICAL EQUIPMENT ROOM AND THE TENANT SPACE SHALL BE ACOUSTICALLY SEALED AIRTIGHT.

35 SHOP DRAWINGS AND SUBMITTALS.
IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REVIEW ALL SUBMITTALS AND SHOP DRAWINGS FOR APPROPRIATENESS AND COMPLIANCE WITH THE CONTRACT DOCUMENTS PRIOR TO SENDING SHOP DRAWINGS TO THE ARCHITECT OR ENGINEER FOR REVIEW. A STAMP OR STATEMENT TESTIFYING THE CONTRACTOR HAS REVIEWED THE SHOP DRAWINGS, INCLUDING THE DATE REVIEWED, MUST BE AFFIXED TO THE FIRST PAGE OF EACH SUBMITTAL.

36 IF ANY WORK IS PERFORMED PRIOR TO PROPER CLARIFICATION, CONTRACTOR SHALL CORRECT CONFLICTING WORK AT CONTRACTORS EXPENSE AT NO ADDITIONAL COST TO THE OWNER, TENANT OR ARCHITECT.

HAZARDOUS MATERIALS NOTES

1 OWNER ACKNOWLEDGES THAT GENSLER SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE HANDLING, REMOVAL, DISPOSAL, OR EXPOSURE OF PERSONS TO HAZARDOUS SUBSTANCES, MATERIALS, AND WASTES IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO: ASBESTOS, ASBESTOS PRODUCTS, PCB MOLD, OR OTHER TOXIC SUBSTANCES.

2 THE OWNER ACKNOWLEDGES THAT IT ACCEPTS RESPONSIBILITY FOR NOTIFYING THE APPROPRIATE FEDERAL, STATE, AND AUTHORITIES HAVING JURISDICTION FOR ANY DEMOLITION, CONSTRUCTION, OR REPAIR WORK.

3 ANY QUESTIONS THAT ARISE RELATED TO ASBESTOS SHALL BE REFERRED TO THE OWNER FOR RESOLUTION. GENSLER SHALL NOT BE REQUIRED TO DO ANY WORK NO RENDER ANY OPINIONS RELATED TO ASBESTOS.

4 THE OWNER SHALL RETAIN AN INDEPENDENT CONSULTANT WHO IS TRAINED AND EXPERIENCED IN IDENTIFICATION AND SURVEY OR EXISTING SITES PRIOR TO START OF DEMOLITION CONSTRUCTION.

5 ALL CONTRACTORS AND SUBCONTRACTORS SHALL REPORT THE PRESENCE OF ANY MATERIAL OR ASSEMBLY SUSPECTED TO CONTAIN ASBESTOS UPON DISCOVERY. THE WORK SHALL BE CARRIED OUT PER THE CONSULTANTS RECOMMENDATIONS.

FIRE DEPT SUBMITTALS & PERMITS

1 IT IS UNDERSTOOD THAT PLANS FOR THE PROJECT HAVE, AT THIS TIME, BEEN REVIEWED FOR COMPLIANCE WITH ALL APPLICABLE STATE AND CITY REGULATIONS, AND THAT THE PROJECT AS A WHOLE HAS BEEN APPROVED BY THE CITY, WITH THE EXCEPTION OF THE DEFERRED ITEMS LISTED.

2 I/WE UNDERSTAND THAT I/WE WILL NOT BE AUTHORIZED ANY INSPECTION OF THE DEFERRED ITEMS PROPOSED PRIOR TO THE SUBMITTAL AND APPROVAL OF PLANS AND/OR CALCULATIONS FOR THOSE DEFERRED ITEMS.

3 COMPLETE PLANS AND SPECIFICATIONS FOR ALL FIRE EXTINGUISHING SYSTEMS, INCLUDING AUTOMATIC SPRINKLER AND STANDPIPE SYSTEMS AND OTHER SPECIAL FIRE EXTINGUISHING SYSTEMS AND RELATED APPURTENANCES SHALL BE SUBMITTED TO THE CITY OF IRVINE FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION

4 COMPLETE PLANS AND SPECIFICIATIONS FOR ALL FIRE ALARM SYSTEMS SHALL BE SUBMITTED TO THE CITY OF IRVINE DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

PROJECT TEAM

BUILDING OWNER — CITY OF IRVINE COMMUNITY DEVELOPMENT
ADDRESS: ONE CIVIC CENTER PLAZA; P.O. BOX 19575; IRVINE, CA 92623
TELEPHONE/FAX: 949.724.3453
CONTACT: BRIAN POLIVKA / DENICE BAILEY
EMAIL: BPOLIVKA@CITYOFIRVINE.ORG / DBAILEY@CITYOFIRVINE.ORG

DEVELOPER — ALMQUIST
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TELEPHONE/FAX: 949.393.0853
CONTACT: TOM CARPENTER
EMAIL: TCARPENTER@ALMQUIST.COM

PROJECT MANAGER — CITY OF IRVINE COMMUNITY DEVELOPMENT
ADDRESS: ONE CIVIC CENTER PLAZA; P.O. BOX 19575; IRVINE, CA 92623
TELEPHONE/FAX: 949.724.3453
CONTACT: DENICE BAILEY
EMAIL: DBAILEY@CITYOFIRVINE.ORG

CONSTRUCTION MANAGER — PSOMAS
ADDRESS: 5 HUTTON CENTER DR. #300; SANTA ANA, CA 92707
TELEPHONE/FAX: 571.722.2277
CONTACT: DJ KELLY
EMAIL: DAVID.KELLY@PSOMAS.COM

ARCHITECT — G E N S L E R
ADDRESS: 4675 MacArthur Court, Suite 100 Newport Beach, CA. 92660
TELEPHONE/FAX: 949.260.8542 / 949.553.1676 (Fax)
CONTACT: CINDY TAYLOR
EMAIL: CINDY_TAYLOR@GENSLER.COM

STRUCTURAL — STRUCTURAL FOCUS
ADDRESS: 19210 S. VERMONT AVE., BLDG. B, SUITE 210; GARDENA, CA 90248
TELEPHONE/FAX: 310.323.9924
CONTACT: BRENDAN RAMOS
EMAIL: BRAMOS@STRUCTURALFOCUS.COM

MEP — MA ENGINEERS
ADDRESS: 5160 CARROLL CANYON RD, SUITE 200; SAN DIEGO, CA 92121
TELEPHONE/FAX: 858.200.0030
CONTACT: BRIAN HAHNLEN
EMAIL: BHAHNLEN@MA-ENGR.COM

VICINITY MAP

410 BEACON
IRVINE, CA 92618

Ref. North

LOCATION MAP

410 BEACON
IRVINE, CA 92618

Ref. North

SHEET INDEX - ARCHITECTURAL

SHEET NUMBER	SHEET NAME	SCHEMATIC DESIGN	DESIGN DEVELOPMENT	08.29.2025	CD CLIENT REVIEW/PRICING	ISSUE FOR PLAN CHECK	ADDENDUM A - PC COMMENTS	BID SET
01 - Architectural								
G0.000	TITLE SHEET			●	●	●	●	●
G0.001	NOTES			●	●	●	●	●
G0.002	GENERAL PROJECT INFORMATION & SHEET INDEX	●	●	●	●	●	●	●
G0.003	SYMBOLS & ABBREVIATIONS	●	●	●	●	●	●	●
G1.020	ACCESSIBILITY REQUIREMENTS & DETAILS	●	●	●	●	●	●	●
G1.021	ACCESSIBILITY REQUIREMENTS	●	●	●	●	●	●	●
G2.001	SITE LIFE SAFETY PLANS	●	●	●	●	●	●	●
G2.002	ENLARGED LIFE SAFETY / EGRESS PLAN				●	●	●	●
G2.100	STANDARD NOTES NON-RESIDENTIAL CONSTRUCTION 2022 CALGREEN			●	●	●	●	●
G2.101	STANDARD NON-RESIDENTIAL SECURITY CODE PROVIDISONS			●	●	●	●	●
G2.102	SECURITY CODE DEFINITIONS, CONSTRUCTION SITE SECURITY & FABRICATION, ROOF AND ROOF DRAIN			●	●	●	●	●
G2.104	CANOPY PHASE 2 NOISE ANALYSIS						●	●
G2.105	CANOPY PHASE 2 NOISE ANALYSIS						●	●
G2.106	CANOPY PHASE 2 NOISE ANALYSIS						●	●
G5.000	PARTITION DETAILS		●	●	●	●	●	●
G5.001	PARTITION DETAILS		●	●	●	●	●	●
G6.000	DOOR SCHEDULE & DETAILS			●	●	●	●	●
G8.000	SCHEDULES	●	●	●	●	●	●	●
A1.100	CONSTRUCTION AND FINISH PLAN	●	●	●	●	●	●	●
A1.101	SLAB EDGE PLAN	●	●	●	●	●	●	●
A1.102	ROOF PLAN	●	●	●	●	●	●	●
A1.200	REFLECTED CEILING PLAN	●	●	●	●	●	●	●
A2.000	EXTERIOR ELEVATIONS	●	●	●	●	●	●	●
A3.000	BUILDING SECTIONS	●	●	●	●	●	●	●
A3.001	BUILDING SECTIONS	●	●	●	●	●	●	●
A4.000	WALL SECTIONS	●	●		●	●	●	●
A4.001	WALL SECTIONS				●	●	●	●
A4.002	WALL SECTIONS					●	●	●
A5.000	RESTROOM PLANS	●	●	●	●	●	●	●
A5.001	RESTROOM PLAN						●	●
A5.010	RESTROOM ELEVATIONS		●	●	●	●	●	●
A5.011	RESTROOM AND JANITOR ELEVATIONS				●	●	●	●
A6.000	EXTERIOR WALL DETAILS				●	●	●	●
A6.001	ENLARGED STOREFRONT ELEVATIONS & DETAILS			●	●	●	●	●
A6.002	STOREFRONT DETAILS	●	●	●	●	●	●	●
A6.100	ROOF DETAILS				●	●	●	●
A6.101	ROOF DETAILS				●	●	●	●
A6.301	BASE, TRANSITIONS AND CEILING DETAILS		●	●	●	●	●	●
02 - Structural								
S1.001	GENERAL STRUCTURAL NOTES AND DRAWING INDEX				●	●	●	●
S1.002	GENERAL STRUCTURAL NOTES CONTINUED				●	●	●	●
S1.003	GENERAL STRUCTURAL NOTES CONTINUED				●	●	●	●
S1.004	SPECIAL INSPECTIONS				●	●	●	●
S1.005	SYMBOLS AND ABBREVIATIONS				●	●	●	●
S1.010	TYPICAL CONCRETE DETAILS				●	●	●	●
S1.011	TYPICAL CONCRETE DETAILS					●	●	●
S1.020	TYPICAL STEEL DETAILS				●	●	●	●
S1.030	TYPICAL WOOD DETAILS				●	●	●	●
S1.031	TYPICAL WOOD DETAILS				●	●	●	●
S1.100	CONSTRUCTION PLAN				●	●	●	●
S1.102	ROOF PLAN				●	●	●	●
S4.001	ELEVATIONS					●	●	●
S5.001	CONCRETE DETAILS					●	●	●
S7.001	STEEL DETAILS					●	●	●
S8.001	WOOD DETAILS					●	●	●
YL-1	YIELD-LINK CONNECTION					●	●	●
YLMC1	YIELD-LINK MOMENT CONNECTION					●	●	●
YLMC2	YIELD-LINK MOMENT CONNECTION					●	●	●
YLMC3	YIELD-LINK MOMENT CONNECTION					●	●	●
03 - Mechanical								
M0.001	MECHANICAL LEGENDS AND GENERAL NOTES				●	●	●	●
M0.002	MECHANICAL SCHEDULES				●	●	●	●
M0.003	MECHANICAL TITLE-24						●	●
M0.004	MECHANICAL TITLE-24						●	●
M0.005	MECHANICAL TITLE-24							●
M1.200	MECHANICAL ZONING PLAN - LEVEL 01				●	●	●	●
M1.201	MECHANICAL CONSTRUCTION PLAN - LEVEL 01				●	●	●	●
M1.202	MECHANICAL ROOF PLAN				●	●	●	●
M1.203	MECHANICAL PIPING PLAN				●	●	●	●
M5.101	MECHANICAL DETAILS				●	●	●	●
M6.101	MECHANICAL CONTROLS						●	●
M6.102	MECHANICAL CONTROLS						●	●
04 - Electrical								
E0.000	ELECTRICAL TITLE SHEET				●	●	●	●
E0.001	LIGHTING FIXTURE SCHEDULE & LCD				●	●	●	●
E0.002	TITLE 24					●	●	●
E0.003	TITLE 24					●	●	●
E0.004	TITLE 24					●	●	●
E0.005	TITLE 24							●
E0.006	TITLE 24							●
E1.101	ELECTRICAL SITE PLAN				●	●	●	●
E2.101	LEVEL 01 - POWER PLAN				●	●	●	●
E2.102	LEVEL 01 - ROOF PLAN				●	●	●	●
E3.101	LEVEL 01 - LIGHTING PLAN				●	●	●	●
E3.102	LEVEL 01 - EGRESS PHOTO METRIC PLAN				●	●	●	●
E5.101	SINGLE-LINE DIAGRAM				●	●	●	●
E7.101	ELECTRICAL DETAILS				●	●	●	●
05 - Plumbing								
P0.001	PLUMBING LEGENDS AND GENERAL NOTES				●	●	●	●
P0.002	PLUMBING SCHEDULES				●	●	●	●
P1.003	PLUMBING CONSTRUCTION PLAN - PARTIAL SITE PLAN						●	●
P1.200	PLUMBING CONSTRUCTION PLAN - UNDERGROUND PLAN				●	●	●	●
P1.201	PLUMBING CONSTRUCTION PLAN - LEVEL 01				●	●	●	●
P1.202	PLUMBING ROOF PLAN				●	●	●	●
P1.301	ENLARGED PLANS				●	●	●	●
P1.302	ENLARGED PLANS				●	●	●	●
P1.303	ENLARGED PLANS					●	●	●
P4.101	PLUMBING RISER DIAGRAM					●	●	●

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
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Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

Project Name
HANGAR 10 RECONSTRUCTION

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Description
GENERAL PROJECT INFORMATION & SHEET INDEX

Scale

CITY OF IRVINE BUILDING & SAFETY DIVISION

G0.002

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SYMBOLS

REFLECTED CLG

- ACOUS CLG AND GRID
- XX'-XX" / XX'-XX" — CLG HEIGHT CHANGE
- X'-X" — FIN CLG HEIGHT SYMBOL
- GRID STARTPOINT SYMBOL
- AT1 — CLG FINISH TAG
- MS — MOTION SENSOR
- XX — CLG MTD SPEAKER
- XX — CLG MTD CAMERA
- CLG MTD SPRINKLER HEAD
- XX" - XX" — CLG MTD SMOKE DETECTOR
- XX" - XX" — CLG MTD STROBE LT
- CLG MTD EXIT SIGNS
- WALL MTD EXIT SIGNS - PARALLEL
- WALL MTD EXIT SIGNS -
- E — DENOTES EXISTING TO REMAIN
- R — DENOTES EXIST TO BE RELOCATED
- ACCESS DOOR

LT FXTRS

- FLORESCENT LT FXTR
- FLORESCENT LT FXTR / EMERGENCY CIRCUIT
- EXIST LT FXTR TO BE REMOVED
- UNDER CAB FLORESCENT FXTR
- FLORESCENT STRIP FXTR
- FLORESCENT PENDANT FXTR
- RECES DOWNLT
- RECES ADJUSTABLE DN LT
- RECES WALL WASHER
- TRACK LTING
- SURFACE MTD LT FXTR
- WALL SCONCE
- $ — LT SWITCH
- D $ — DIMMER SWITCH

MECHANICAL FXTRS

- RETURN AIR
- SUPPLY AIR
- CIRCULAR DIFFUSER
- LINEAR DIFFUSER
- EXHAUST FAN

POWER & COMM.

LEGEND OF COMMON SYMBOL MODIFIERS

- SURF FLR MTD, POKE THRU DEVICES
- FURN SYS MTD DEVICES
- FLUSH FLR MTD DEVICES
- FLUSH FLR MTD, POKE THRU, DEVICES
- SURF FLR MTD DEVICES

LEGEND OF COMMON SYMBOLS

- SINGLE RECPT
- DUPLEX RECPT
- QUADRAPLEX RECPT
- SINGLE RECPT & USB-C
- COMBINATION DUPLEX & VOICE/DATA RECPT
- COMBINATION QUADRAPLEX & VOICE/DATA RECPTS
- AV — COMBINATION DUPLEX, AUDIO VISUAL AND VOICE/DATA RECPTS
- AV — COMBINATION QUADRAPLEX, AV & VOICE/DATA RECPTS
- V — VOICE/DATA RECPT
- DATA RECPT
- VOICE RECPT
- AV — AV RECPT
- P — SYS WORKSTATION PANEL POWER INFEED
- V — SYS WORKSTATION PANEL VOICE INFEED
- SINGLE RECPT
- DUPLEX RECPT
- QUADRAPLEX RECPT
- VOICE/DATA RECPT
- DATA RECPT
- VOICE RECPT
- FURN SYSTEM ELECTRIC PIGTAIL
- PP — FURN MTD, POWER POLE
- SINGLE RECPT
- DUPLEX RECPT
- QUADRAPLEX RECEPT
- COMBINATION DUPLEX & VOICE/DATA RECPT
- COMBINATION QUADRAPLEX & VOICE/DATA RECPTS
- AV — COMBINATION DUPLEX, AUDIO VISUAL AND VOICE/DATA RECPTS
- AV — COMBINATION QUADRAPLEX, AV & VOICE/DATA RECPTS
- PVD — COMBINATION POWER, VOICE/DATA
- PVA — RAISED FLR BOX, COMBINATION POWER, VOICE/DATA, A/V
- AV — RAISED FLR BOX, AV
- CONDUIT STUB UP, AV
- CONDUIT STUB UP, POWER
- CONDUIT STUB UP, VOICE/DATA

SECTION INDICATIONS

- ACOUSTICAL CEILING TILE
- ALUMINUM
- BRICK
- CARPET
- CONCRETE
- CONCRETE MASONRY UNIT
- CUT STONE
- EARTH
- FABRIC WRAPPED PANEL
- GLASS
- GRAVEL
- GYPSUM PLASTER
- INSULTATION (LOOSE OR BATT)
- INSULATION (RIGID)
- METAL
- PLASTIC
- PLYWOOD
- PRE-CAST PANELS
- SAND OR GROUT
- STONE
- WOOD (FINISHED)
- WOOD (CONTINUOUS MEMBER)
- WOOD (INTERRUPTED MEMBER

ELEVATION INDICATION

- GLASS SYMBOL
- MASONRY COURSING
- WOOD VENEER
- STONE

CONSTRUCTION

- 1 — COLUMN GRID REFERENCE NUMBER
- COLUMN GRID LINES AND REFERENCE NUMBER
- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE DEMOLISHED
- NEW PARTITION
- 1 HR. RATED PARTITION
- 2 HR. RATED PARTITION
- 3 HR. RATED PARTITION
- 4 HR. RATED PARTITION
- SMOKE PARTITION
- EGRESS PATH PRIMARY
- EGRESS PATH SECONDARY
- MILLWORK
- MILLWORK ABOVE
- DETAIL NUMBER
- XX / XX.XXX / SIM — SHEET NUMBER, DESCRIPTION OF SIMILAR OR OPPOSITE
- AREA TO BE DETAILED LOCATION ON SHEET WHERE ELEVATION IS SHOWN
- 1 / 2 / A11.XX — DIRECTION OF ELEVATION, SHEET NUMBER WHERE ELEVATION IS SHOWN, INTERIOR AND EXTERIOR ELEVATION MARKER
- 1 — REVISION REFERENCE NUMBER
- REVISION CLOUD DEPICTING AREA REVISED
- NAME / 1234 — ROOM NAME, ROOM NUMBER
- 01 — SHEETNOTE REFERENCE
- 1 / A3A — WALL TYPE REFERENCE, FIRE RATING
- XXX — DOOR REFERENCE NUMBER (REFER TO DOOR SCHEDULE)
- XX / XX — DOOR NUMBER, DOOR TYPE
- XXX / X X — DOOR NUMBER, DOOR TYPE | HARDWARE TYPE
- XX — WINDOW REFERENCE NUMBER (REFER TO WINDOW SCHEDULE)
- MW01 — MILLWORK REFERENCE NUMBER (REFER TO MILLWORK SCHEDULE)
- +6" / 0" — ELEVATION DATUM REFERENCE, FLOOR ELEVATION TRANSITION
- MATCH LINE SEE XX/XX — MATCH LINE SYMBOL
- ALIGN — ALIGN WITH ESTABLISHED / EXISTING SURFACES

WALL MOUNTED LIFE SAFETY EQUIPMENT AND DEVICES

- FIRE WARDEN STATION
- SYMBOL
- WALL MOUNTED FIRE ALARM STROBE SYMBOL
- FEC — FIRE ALARM PULL SYMBOL
- WALL MOUNTED, FIRE EXTINGUISHER CABINET
- WALL MOUNTED FIRE EXTINGUISHER
- WALL MOUNTED FIRE HOSE CABINET
- WALL MOUNTED FIRE VALVE
- WALL MOUNTED FIRE VALVE CABINET

WALL MTD DEVICES

- EQUIP TAG (REFER TO EQUIP SCHEDULE)
- ST — WALL MTD FIRE ALARM STROBE
- FA — FIRE ALARM PULL
- FW — FIRE WARDEN STATION
- T — THERMOSTAT
- CTV — CABLE TV RECPT
- AV — AV RECPT
- AVT — AV TROUGH
- ELECTRICAL JUNCTION BOX
- VOICE/DATA JUNCTION BOX
- P — SYS WORKSTATION PANEL POWER INFEED
- V — SYS WORKSTATION PANEL VOICE/DATA INFEED
- CONDUIT STUB-OUT POWER
- CONDUIT STUB-OUT VOICE AND DATA
- CONDUIT STUB-OUT A/V
- PLUG MOLD

SECURITY DEVICES

- CAMERA
- CR — CARD READER
- B — ELECTRIC DOOR BELL PUSH
- B — ELECTRIC DOOR BELL
- IC — INTERCOM
- DR — REMOTE DOOR RELEASE BUTTON
- MS — MOTION SENSOR
- IA — INTRUSION ALARM
- EH — ELECTRIC DOOR HINGE
- H — ELECTRICAL DOOR HOLD OPEN
- DR — ELECTRICAL DOOR RELEASE
- DC — ELECTRICAL DOOR MONITOR CONTACT
- DDC — DOUBLE DOOR MONITOR CONTACT
- EL — ELECTRIC LOCKSET
- KS — ELECTRIC KEY SWITCH
- ES — ELECTRIC STRIKE
- ML — MAGNETIC LOCKSET
- PB — PANIC BUTTON

FINISH

- XXXX / XXXX — WALL FINISH TAG, BASE FINISH TAG
- EXTENT OF FINISH TYP.
- XXXX — WALL FINISH TAG
- XXXX — SPECIAL FINISH TAG
- XXXX — FLOOR FINISH TAG
- XXXX — CEILING FINISH TAG
- CHANGE IN FLOOR FINISH

ABBREVIATIONS

&	AND
(D)	DEMOLISHED
(E)	EXISTING
(N)	NEW
(R)	RELOCATED
A	
ABV	ABOVE
ACC	ACCESSORY
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE, ALTERATION, ALTITUDE
ALUM	ALUMINUM
AMT	AMOUNT
ANCH	ANCHOR, ANCHORAGE
ANOD	ANODIZED
APPL	APPLIANCE
APPROX	APPROXIMATE
ARCH	ARCHITECT, ARCHITECTURAL
ASPH	ASPHALT
ASSOC	ASSOCIATE, ASSOCIATED, ASSOCIATION
ASY	ASSEMBLY
AUTH	AUTHORITY, AUTHORIZED, AUTHORIZATION
AUTO	AUTOMATIC
AVG	AVERAGE
B	
B/	BOTTOM (OF)
BD	BOARD
BET	BETWEEN
BEV	BEVEL, BEVELED
BLDG	BUILDING
BLK	BLOCK
BM	BEAM, BENCH MARK
BOL	BOLLARD
BRDG	BRIDGE, BRIDGING
BRDLM	BROADLOOM
BRKT	BRACKET
BRZ	BRONZE
BTB	BACK TO BACK
BU	BUILT-UP
C	
C/	CENTER (OF)
CAB	CABINET
CAP	CAPACITY
CCTV	CLOSED CIRCUIT TV
CEM	CEMENT, CEMENTITIOUS
CER	CERAMIC
CF	CUBIC FEET
CFL	COUNTERFLASHING
CHAM	CHAMFER
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CIR	CIRCLE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CND	CONDITION
COEF	COEFFICIENT
COL	COLUMN
COMB	COMBINATION
COMM	COMMUNICATION(S)
COMP	COMPRESSED
CONC	CONCRETE
COND	CONDITION, CONDENSER, CONDUIT
CONFIG	CONFIGURE, CONFIGURATION
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS, CONTINUATION
CONT'D	CONTINUED
CONTR	CONTRACTOR
CONV	CONVECTOR
COR	CORNER, CORRIDOR, CORRUGATE, CORRUGATED
CPR	COPPER
CPT	CARPET
CR	CARD READER
CRS	COURSE, COLD ROLLED STEEL
CT	CERAMIC TILE, CORK TILE
CTC	CENTER TO CENTER
CU FT	CUBIC FEET
CU YD	CUBIC YARD
CURR	CURRENT
CW	COLD WATER
CWP	CIRCULATING WATER PUMP
CWR	CONDENSATE WASTE RETURN
CWS	CONDENSATE WASTE SUPPLY
CYL	CYLINDER
D	
DB	DECIBEL
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DMT	DEMOUNTABLE
DN	DOWN
DPR	DAMPER
DR	DOOR
DSCON	DISCONNECT
DSP	DRY STANDPIPE
DWG	DRAWING, DRAWINGS
DWR	DRAWER
E	
EA	EACH
ECC	ECCENTRIC
EJ	EXPANSION JOINT
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR, ELEVATION
ENCL	ENCLOSURE
ENGR	ENGINEER, ENGINEERED, ENGINEERING
ENT	ENTRANCE
EOS	EDGE OF SLAB
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL, EQUIVALENT
EQUIP	EQUIPMENT
EST	ESTIMATE
EVAP	EVAPORATOR
EWH	ELECTRIC WATER HEATER
EX	EXISTING
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR
F	
F/	FACE (OF)
FA	FIRE ALARM, FRESH AIR
FAB	FABRICATE, FABRICATION
FAR	FLOOR AREA RATIO
FC	FOOT CANDLE
FD	FIRE DEPARTMENT
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET, FIRE EXTINGUISHER AND CABINET
FFE	FIXTURES, FURNISHINGS AND EQUIPMENT
FGR	FIBERGLASS REINFORCED
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH, FINISHED
FL	FLOOR, FLOOR LINE
FLEX	FLEXIBLE
FLG	FLOORING
FLS	FIRE AND LIFE SAFETY
FLUOR	FLUORESCENT
FM	FACTORY MUTUAL, FACTORY MUTUAL COMPANY, FM GLOBAL
FP	FIREPROOF, FIREPROOFING, FIRE PROTECTION
FPM	FEET PER MINUTE
FR	FIRE RATED, FIRE RATING
FSCW	FLUSH SOLID CORE WOOD
FT	FOOT
FTG	FITTING
FURN	FURNITURE
FURR	FURRING
FUT	FUTURE
FVC	FIRE VALVE CABINET
FWC	FABRIC WALL COVERING
FXD	FIXED
FXTR	FIXTURE
G	
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GFRP	GLASS FIBER REINFORCED PLASTER
GL	GLASS, GLAZE, GLAZED, GLAZING
GND	GROUND
GOVT	GOVERNMENT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GRADE
GRAN	GRANITE
GT	GROUT
GYP	GYPSUM
GYP BD	GYPSUM BOARD
H	
HB	HOSE BIB
HC	HOLLOW CORE
HD	HEAD, HEADER, HEAVY DUTY
HDWD	HARDWOOD
HDWR	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HH	MAGNETIC HOLD OPEN
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HS	HEAT STRENGTHENED
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HTW	HIGH TEMPERATURE WATER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HVY	HEAVY
HW	HOT WATER, HEAVY WALL
HWC	HOT WATER CIRCULATING, HEAVY WALL CONDUIT
HWH	HOT WATER HEATER
HWR	HOT WATER RECIRCULATING RETURN
HWS	HOT WATER SUPPLY
HWY	HIGHWAY
HYD	HYDRAULIC
HYDRO	HYDROSTATIC
I	
ID	INSIDE DIAMETER
IM	INTERMEDIATE
IN.	INCH, INCHES
INCAND	INCANDESCENT
INCL	INCLUDE, INCLUDING
INCR	INCREASE, INCREMENT
INFIL	INFILTRATION
INFO	INFORMATION
INSP	INSPECT, INSPECTION
INSUL	INSULATION
INT	INTERIOR
INTLK	INTERLOCK, INTERLOCKING
IW	INDIRECT WASTE
J	
J-BOX	JUNCTION BOX
JAN	JANITOR
JCT	JUNCTION
JST	JOIST
JT	JOINT
K	
KG	KILOGRAM
KIP	KILOPOUND (1000 POUNDS)
KIT	KITCHEN
KM	KILOMETER
KO	KNOCKOUT
KPL	KICKPLATE
KVA	KILOVOLT-AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
L	
LA	LANDSCAPE ARCHITECT
LAB	LABORATORY, LABOR
LAD	LADDER
LAM	LAMINATE, LAMINATED
LAT	LATERAL
LAV	LAVATORY
LB	POUND (WEIGHT)
LCD	LIQUID CRYSTAL DIODE
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET, LINEAR FOOT
LH	LEFT HAND
LL	LIVE LOAD
LOC	LOCATE, LOCATION
LT	LIGHT
LT WT	LIGHTWEIGHT
LTG	LIGHTING
LV	LOW VOLTAGE
LVLG	LEVELING
LVR	LOUVER
LVT	LUXURY VINYL TILE
LWC	LIGHT WEIGHT CONCRETE
M	
M.	METER
MACH	MACHINE
MAINT	MAINTENANCE
MAN	MANUAL
MARB	MARBLE
MAS	MASONRY
MAT	MATERIAL
MATL	MATERIAL
MAX	MAXIMUM
MD	MEDIUM
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFD	MANUFACTURED
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MK	MARK
MM	MILLIMETER
MO	MASONRY OPENING
MOD	MODULE
MOT	MOTORIZED)
MOV	MOVABLE
MP	METAL PANEL
MT	METAL
MTD	MOUNTED
MTL	METAL
MTR	MOTOR
MUL	MULLION
N	
NIC	NOT IN CONTRACT
NMT	NON-METALLIC
NO.	NUMBER
NOM	NOMINAL
NR	NOISE REDUCTION
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
O	
O.C.	ON CENTER
O.F.	OUTSIDE FACE
O/	OVER
OA	OVERALL
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OHD	OVERHEAD DOOR
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPR	OPERABLE
ORN	ORNAMENTAL
OSD	OPEN SIGHT DRAIN
OTO	OUT TO OUT
OVFL	OVERFLOW
OVHD	OVERHEAD
OZ	OUNCE
P	
P SL	PIPE SLEEVE
PA	PUBLIC ADDRESS
PAV	PAVEMENT, PAVING, PAVERS
PB	PULL BOX
PBD	PARTICLE BOARD
PCF	POUNDS PER CUBIC FOOT
PD	PLAZA DRAIN
PED	PEDESTAL, PEDESTRIAN
PERF	PERFORATE, PERFORATED
PERIM	PERIMETER
PKG	PARKING
PKWY	PARKWAY
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLF	POUNDS PER LINEAL FOOT
PNL	PANEL
POL	POLISH, POLISHED
PORT	PORTABLE
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PRTN	PARTITION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT, PAINTED
PTC	POST-TENSIONED CONCRETE
PTD	PAINTED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PVF	POLYVINYLIDENE FINISH
PVT	PRIVATE
PWR	POWER
Q	
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R	
RA	RETURN AIR
RAD	RADIUS
RB	RUBBER BASE
RBT	RABBET
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REBAR	REINFORCING BAR
REC	RECEIVER
RECEP	RECEPTACLE
RECES	RECESSED
RED	REDUCER
REF	REFER (TO), REFERENCE
REFR	REFRIGERATOR
REG	REGULAR, REGULATION, REGULATING, REGULATORY
REINF	REINFORCEMENT
REM	REMOVE
REQ	REQUIRE, REQUIRED, REQUIREMENTS
RESIL	RESILIENT
RESIS	RESIST, RESISTANT, RESISTIVE
RET	RETURN, RETAINING
REV	REVERSE, REVISE, REVISION
RFG	ROOFING
RGH	ROUGH
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RPT	REPEAT (LIKE "DITTO")
RR	RAILROAD
RSF	RENTABLE SQUARE FEET
S	
S4S	SURFACED ALL FOUR SIDES
SAN	SANITARY
SC	SOLID CORE
SCHED	SCHEDULE
SCUP	SCUPPER
SCWD	SOLID CORE WOOD
SECT	SECTION
SED	SEWAGE EJECTOR DISCHARGE
SEL	SELECT
SERV	SERVICE
SEV	SEWAGE EJECTOR VENT
SF	SQUARE FOOT, SQUARE FEET
SFGL	SAFETY GLASS
SGG	STRUCTURAL GLAZING GASKET
SGL	SINGLE
SGS	SILICONE GLAZING SEALANT
SHT	SHEET
SIM	SIMILAR
SP	SOIL PIPE
SPEC	SPECIFICATION, SPECIFICATIONS
SPK	SPEAKER
SPL	SPECIAL
SPLR	SPRINKLER
SQ	SQUARE
SQ YD	SQUARE YARD
SS	SOLID SURFACE
SSD	SUB-SOIL DRAIN
SSGS	SILICONE STRUCTURAL GLAZING SEALANT
SST	STAINLESS STEEL
ST	STAIN, STAINED
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STG	SEATING
STGG	STRUCTURAL GLAZING GASKET
STL	STEEL
STRUCT	STRUCTURAL
SUPP	SUPPLEMENTARY, SUPPLEMENT
SURF	SURFACE
SUSP	SUSPEND, SUSPENDED
SYM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
T	
T&G	TONGUE & GROOVE
T/	TOP (OF)
T/CONC	TOP OF CONCRETE
T/CURB	TOP OF CURB
T/PAV	TOP OF PAVEMENT
T/SLAB	TOP OF SLAB
T/STL	TOP OF STEEL
T/WALL	TOP OF WALL
TAN	TANGENT
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPERED, TEMPERATURE, TEMPORARY
TERR	TERRAZZO
THK	THICK
THRU	THROUGH
TL	TILE
TOL	TOLERANCE
TRANS	TRANSPARENT
TRAV	TRAVERTINE
TRD	TREAD
TRTD	TREATED
TSTAT	THERMOSTAT
TV	TELEVISION
TYP	TYPICAL
U	
UL	UL (FORMERLY UNDERWRITERS LABORATORIES)
UNO	UNLESS NOTED OTHERWISE
USF	USABLE SQUARE FEET
USS	UNITED STATES STANDARD
UTIL	UTILITY
V	
VAC	VACUUM
VAR	VARIES, VARIABLE
VB	VAPOR BARRIER
VBC	VINYL BASE (COVED)
VBS	VINYL BASE (STRAIGHT)
VCT	VINYL COMPOSITION TILE
VEH	VEHICLE
VENT	VENT, VENTILATE, VENTING
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VIT	VITREOUS
VLT	VAULT
VOL	VOLUME
VP	VENT PIPE
VR	VAPOR RETARDER
VS	VENT STACK
VWC	VINYL WALL COVERING
W	
W/	WITH
W/O	WITHOUT
WB	WOOD BASE
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE (STRUCTURAL STEEL)
WH	WATER HEATER
WLD	WELD
WM	WIRE MESH
WP	WATERPROOFING
WPT	WORKING POINT
WR	WATER RESISTANT, WATER REPELLANT
WT	WEIGHT
WTRPRF	WATERPROOFING
WV	WOOD VENEER
WWF	WELDED WIRE FABRIC
X	
XHVY	EXTRA HEAVY
XSTR	EXTRA STRONG
Y	
YD	YARD
YR	YEAR

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HANGAR 10 RECONSTRUCTION

Project Number

007.03945.000

Description

SYMBOLS & ABBREVIATIONS

Scale

CITY OF IRVINE BUILDING & SAFETY DIVISION

G0.003

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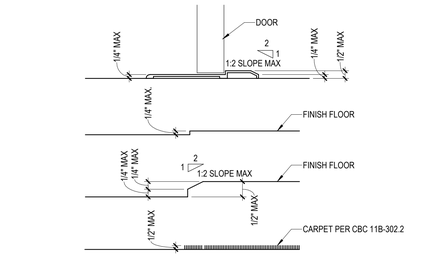
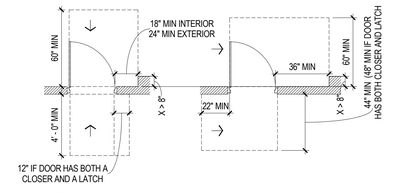
ACCESSIBILITY NOTES (CBC CH. 11B)

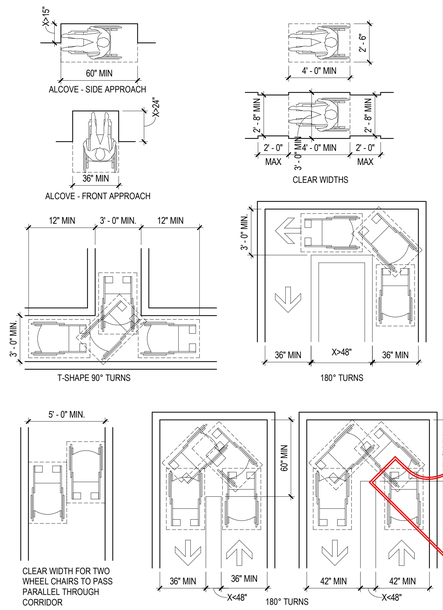
1. THE AMERICAN WITH DISABILITIES ACT (A.D.A) PROVIDES THAT ALL ALTERATIONS TO A FACILITY MUST BE MADE IN SUCH A MANNER THAT, TO THE MAXIMUM EXTENT FEASIBLE, THE ALTERED PORTIONS OF THE FACILITY ARE READILY ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES. BANK OF AMERICA AND THE GENERAL CONTRACTOR ACKNOWLEDGE THAT THE REQUIREMENTS OF A.D.A. WILL BE SUBJECT TO VARIOUS AND POSSIBLY CONTRADICTORY INTERPRETATIONS. THE ARCHITECT THEREFORE, WILL USE HIS/ HER BEST PROFESSIONAL EFFORTS TO INTERPRET A.D.A. REQUIREMENTS AND OTHER FEDERAL, STATE AND LOCAL LAWS, RULES, CODE ORDINANCES AND REGULATIONS AS THEY APPLY TO THE PROJECT. THE ARCHITECT, HOWEVER, CANNOT AND DOES NOT WARRANT OR GUARANTEE THAT BANK OF AMERICA WILL COMPLY WITH ALL INTERPRETATIONS OF THE A.D.A. REQUIREMENTS AND/ OR THE REQUIREMENTS OF OTHER FEDERAL, STATE AND LOCAL LAWS, RULES, CODES, ORDINANCES AND REGULATIONS AS THEY APPLY TO THE PROJECT.
2. THE SCOPE OF WORK INDICATED IN THESE DRAWINGS IS FOR SPECIFIC ITEMS SELECTED BY BANK OF AMERICA FOR CUSTOMER ACCESS TO GOODS AND SERVICES. NOTE THAT SOME AREAS OF ACCESS HAVE NOT BEEN MODIFIED TO MEET A.D.A. REQUIREMENTS. ALL OTHER AREAS OF A.D.A. UPGRADE THAT MAY BE REQUIRED AT THIS TIME ARE NOT IN THIS CONTRACT AND ARE NOT INDICATED ON THESE DOCUMENTS. SEE BANK OF AMERICA FOR ADDITIONAL INFORMATION CONCERNING OTHER AREAS OF A.D.A. SCOPE OF WORK.
3. FLOOR SURFACES SHALL BE STABLE, FIRM, AND SLIP-RESISTANT.
4. 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.
5. OPENINGS IN FLOOR OR GROUND SURFACES SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2 INCH DIAMETER. ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
6. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2 INCH IN HEIGHT. CHANGES IN LEVEL OF 1/4 INCH HIGH MAXIMUM SHALL BE PERMITTED TO BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4 INCH AND 1/2 INCH HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2.
7. CHANGES IN LEVEL GREATER THAN 1/2 INCH HIGH SHALL BE RAMPED.
8. ABRUPT CHANGES IN LEVEL EXCEEDING 4 INCHES IN A VERTICAL DIMENSION BETWEEN WALKS, SIDEWALKS OR OTHER PEDESTRIAN WAYS AND ADJACENT SURFACES OR FEATURES SHALL BE IDENTIFIED BY WARNING CURBS AT LEAST 6 INCHES IN HEIGHT ABOVE THE WALK OR SIDEWALK SURFACE. A WARNING CURB IS NOT REQUIRED WHEN A GUARD OR HANDRAIL IS PROVIDED WITH A GUIDE RAIL CENTERED 2 INCHES MINIMUM AND 4 INCHES MAXIMUM ABOVE THE SURFACE OF THE WALK OR SIDEWALK.
9. CHANGES IN LEVEL, SLOPES EXCEEDING 1:48, AND DETECTABLE WARNINGS SHALL NOT BE PERMITTED IN FLOOR OR GROUND SURFACES OF A TURNING SPACE. TURNING SPACE INCLUDES CIRCULAR SPACE AND T-SHAPED SPACE. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE.
10. CLEAR FLOOR OR GROUND SPACE SHALL BE 30 INCHES MINIMUM BY 48 INCHES MINIMUM. CHANGES IN LEVEL, SLOPES EXCEEDING 1:48, AND DETECTABLE WARNINGS SHALL NOT BE PERMITTED. CLEAR FLOOR OR GROUND SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE.
11. PROTRUSION LIMITS: OBJECTS WITH LEADING EDGES MORE THAN 27 INCHES AND NOT MORE THAN 80 INCHES ABOVE THE FINISH FLOOR OR GROUND SHALL PROTRUDE 4 INCHES MAXIMUM HORIZONTALLY INTO THE CIRCULATION PATH. HANDRAILS SHALL BE PERMITTED TO PROTRUDE 4 1/2 INCHES MAXIMUM.
12. POST-MOUNTED OBJECTS: FREE-STANDING OBJECTS MOUNTED ON POSTS OR PYLONS SHALL OVERHANG CIRCULATION PATHS 12 INCHES MAXIMUM WHEN LOCATED 27 INCHES MINIMUM AND 80 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE A SIGN OR OTHER OBSTRUCTION IS MOUNTED BETWEEN POSTS OR PYLONS AND THE CLEAR DISTANCE BETWEEN THE POSTS OR PYLONS IS GREATER THAN 12 INCHES, THE LOWEST EDGE OF SUCH SIGN OR OBSTRUCTION SHALL BE 27 INCHES MAXIMUM OR 80 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND. THE SLOPING PORTIONS OF HANDRAILS SERVING STAIRS AND RAMPS SHALL NOT BE REQUIRED TO COMPLY.
13. POST-MOUNTED OBJECTS EDGES AND CORNERS: WHERE SIGNS OR OTHER OBJECGTS ARE MOUNTED ON POSTS OR PYLONS, AND THEIR EDGES ARE LESS THAN 80 INCHES ABOVE THE FLOOR OR GROUND SURFACE, THE EDGE OF SUCH SIGNS AND OBJECTS SHALL BE ROUNDED OR EASED AND THE CORNERS SHALL HAVE A MINIMUM RADIUS OF 1/8 INCH.
14. VERTICAL CLEARANCE: VERTICAL CLEARNCE SHALL BE 80 INCHES HIGH MINIMUM. GUARDRAILS OR OTHER BARRIERS SHALL BE PROVIDED WHERE THE VERTICAL CLEARANCE IS LESS THAN 80 INCHES HIGH. THE LEADING EDGE OF SUCH GUARDRAIL OR BARRIER SHALL BE LOCATED 27 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. DOOR CLOSERS AND DOOR STOPS SHALL BE PERMITTED TO BE 78 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
15. PROTRUDING OBJECTS SHALL NOT REDUCE THE CLEAR WIDTH REQUIRED FOR ACCESSIBLE ROUTES.
16. OPERABLE PARTS SHALL BE PLACED WITHIN ONE OR MORE OF THE REACH RANGES, COMPLIANT WITH CBC 11B-308. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWIESTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
17. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48. THE RUNNING SLOPE OF SIDEWALKS SHALL NOT EXCEED THE GENERAL GRADE ESTABLISHED FOR THE ADJACENT STREET OR HIGHWAY.
18. ALL WALKS WITH CONTINUOUS GRADIENTS SHALL HAVE RESTING AREAS, 60 INCHES IN LENGTH, AT INTERVALS OF 400 FEET MAXIMUM. THE RESTING AREA SHALL BE AT LEAST AS WIDE AS THE WALK. THE SLOPE OF THE RESTING AREA IN ALL DIRECTIONS SHALL BE 1:48 MAXIMUM.
19. MANEUVERING CLEARANCES AT DOORS SHALL COMPLY WITH CBC TABLE 11B-404.2.4.1. CHANGES IN LEVEL, SLOPES EXCEEDING 1:48, AND DETECTABLE WARNINGS SHALL NOT BE PERMITTED.
20. 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.
21. IDENTIFY ACCESSIBLE ENTRANCES WITH INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, VISIBLE FROM APPROACHING PEDESTRIAN WAYS.
22. THE FLOOR OR LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL BE AT LEAST 60" LONG IN THE DIRECTION OF THE DOOR SWING AND 48" CLEAR IN THE DIRECTION OPPOSITE THE DOOR SWING MEASURED IN RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION.



01 THRESHOLDS
SCALE: 3" = 1'-0"



02 DOOR CLEARANCES
SCALE: 1/4" = 1'-0"



04 ACCESSIBILITY PLAN CLEARANCES
SCALE: 1/4" = 1'-0"

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.3945.000

Description

ACCESSIBILITY REQUIREMENTS & DETAILS

Scale

As indicated

G1.020

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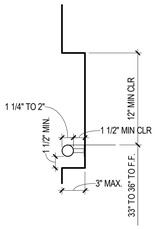
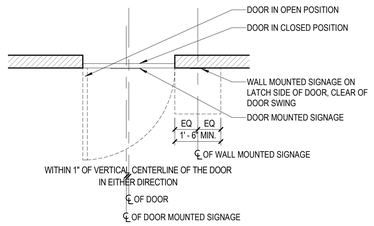
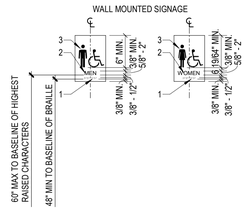


NOTE (REFER TO CBC 11B-609):
1. MOUNTING HEIGHT IS 33"-36" TO TOP OF GRIPPING SURFACE ABOVE FINISH FLOOR.
2. SURFACE OF HANDRAIL SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS.
3. EDGES OF HANDRAILS HAVE BE ROUNDED WITH A MINIMUM RADIUS OF 1/8".
4. HANDRAIL GRIPPING SURFACES WITH NON-CIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4" MIN AND 4.8" MAX. AND A CROSS-SECTION DIMENSION OF 2" MAX.
5. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
6. ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHEN A VERTICAL OR HORIZONTAL FORCE OF 250 LB IS APPLIED TO ANY POINT ON THE GRAB, FASTENER, MOUTING DEVICE OR SUPPORTING STRUCTURE.

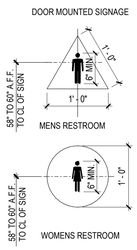
13 GRAB BAR
SCALE: 1 1/2" = 1'-0"



SIGNAGE (SCALE: 1/2" = 1' - 0")

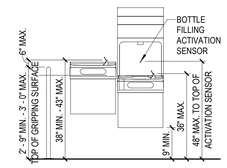


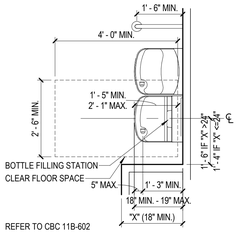
NOTE:
1. BRAILLE SHALL BE CONTRACTED (GRADE 2) TYP AND SHALL COMPLY WITH SECTION 11B-703.3 AND 11B-703.4. BRAILLE SHALL BE POSITIONED BELOW THE CORRESPONDING TEXT IN A HORIZONTAL FORMAT, FLUSH LEFT OR CENTERED. IF TEXT IS MULTILINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8" MIN. AND 1/2" MAX. FROM ANY OTHER TACTILE CHARACTERS AND 3/8" MIN. FROM RAISED BORDERS AND DECORATIVE ELEMENTS.
2. RAISED CHARACTERS SHALL BE UPPERCASE AND 1/32" MIN ABOVE THEIR BACKGROUND. CHARACTERS SHALL BE SANS SERIF. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, STRIPT, HIGHLY DECORATIVE OR OF OTHER UNUSUAL FORMS. COMPLY WITH CBC 11B-703.2.
3. PICTOGRAMS SHALL COMPLY WITH CBC SECTION 11B-703.6. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6" MIN. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD. PICTOGRAMS AND THEIR FIELD SHALL HAVE A NON-GLARE FINISH. PICTOGRAMS SHALL CONTRAST WITH THEIR FIELD WITH EITHER A LIGHT PICTOGRAM ON A DARK FIELD OR DARK PICTOGRAM ON A LIGHT FIELD. PICTOGRAM SHALL HAVE TEXT DESCRIPTORS LOCATED DIRECTLY BELOW THE PICTOGRAM FIELD. TEXT DESCRIPTORS SHALL COMPLY WITH CBC SECTIONS 11B-703.2, 11B-703.3 AND 11B-703.4.
4. WHEN A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MINIMUM BY 18" MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. WHERE PROVIDED, SIGNS IDENTIFYING PERMANENT ROOMS AND SPACES SHALL BE LOCATED AT THE ENTRANCE TO, AND OUTSIDE OF THE ROOM OR SPACE. WHERE PROVIDED, SIGNS IDENTIFYING EXITS SHALL BE LOCATED AT THE EXIT DOOR WHEN APPROACHED IN THE DIRECTION OF EGRESS TRAVEL.



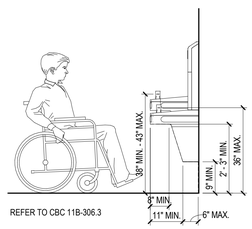
NOTE:
1. 1/4" THICK SIGNAGE PLATE
2. SYMBOLS CENTERED ON DOOR AT 58"- 60" HIGH
3. COLOR AND CONTRAST DISTINCTLY DIFFERENT FROM COLOR AND CONTRAST OF DOOR
4. EDGES SHALL BE EASED OR ROUNDED AT 1/16" MIN., OR CHAMFERED AT 1/8" MAX. VERTICES SHALL BE RADIUSED BETWEEN 1/8" MIN. AND 1/4" MAX.

15 RESTROOM SIGNAGE
SCALE: 1" = 1'-0"



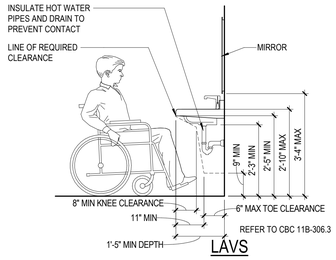


REFER TO CBC 11B-602



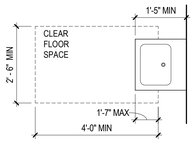
REFER TO CBC 11B-306.3

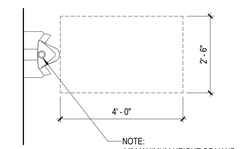
DRINKING FOUNTAIN

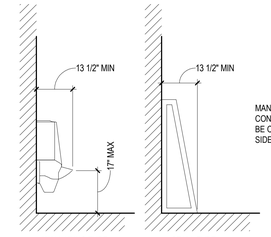


REFER TO CBC 11B-306.3

LAVS

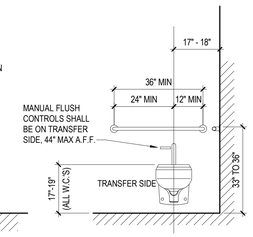


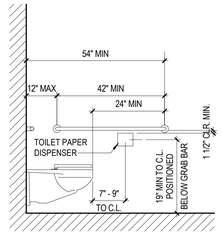




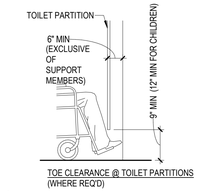
WALL HUNG TYPE STALL TYPE

ACCESSIBLE URINALS

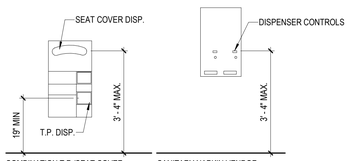




ACCESSIBLE WATER CLOSETS



TOE CLEARANCE @ TOILET PARTITIONS (WHERE REQ'D)



TYPICAL MOUNTING HEIGHTS

REFER TO CBC 11B-602

REFER TO CBC 11B-306.3

DRINKING FOUNTAIN

REFER TO CBC 11B-306.3

LAVS

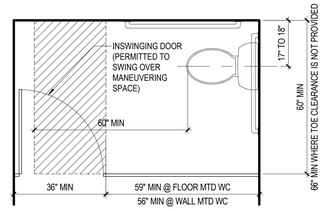
WALL HUNG TYPE STALL TYPE

ACCESSIBLE URINALS

ACCESSIBLE WATER CLOSETS

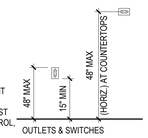
TOE CLEARANCE @ TOILET PARTITIONS (WHERE REQ'D)

TYPICAL MOUNTING HEIGHTS

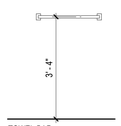


SIDE-OPENING STALLS

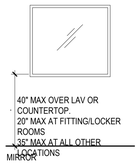
NOTE: MOUNTING HEIGHT FROM FINISHED FLOOR TO HIGHEST OPERABLE CONTROL, TYPICAL.



OUTLETS & SWITCHES



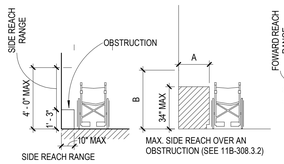
TOWEL BAR

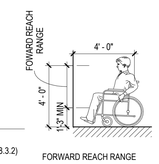


MIRROR

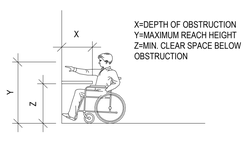
01 TYPICAL ACCESSIBILITY REQUIREMENTS FOR RESTROOMS
SCALE: 1/2" = 1'-0"

NOTE: "B" IS 48" MAX. WHEN "A" IS 10" MAX. "B" IS 46" MAX. WHEN "A" IS MORE THAN 10" AND 24" MAX.



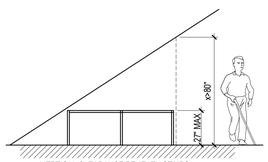


NOTE: MAXIMUM DEPTH OF OBSTRUCTION ALLOWED IS 25", WHEN DEPTH OF OBSTRUCTION IS MORE THAN 20" AND 25" MAX. THE MAXIMUM FORWARD REACH HEIGHT FROM THE FLOOR SURFACE IS 44". WHEN DEPTH OF OBSTRUCTION IS 20" MAX. THE MAXIMUM FORWARD REACH HEIGHT FROM THE FLOOR SURFACE IS 48"

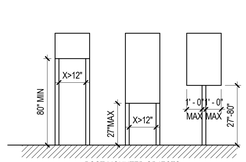


X=DEPTH OF OBSTRUCTION
Y=MAXIMUM REACH HEIGHT
Z=MIN. CLEAR SPACE BELOW OBSTRUCTION

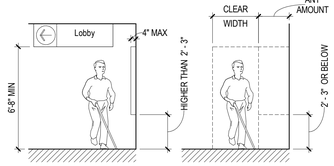
11 REACH RANGES
SCALE: 1/4" = 1'-0"



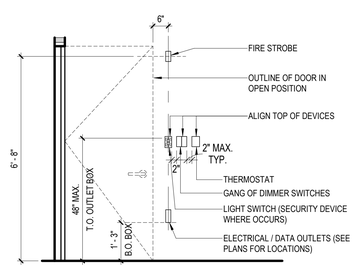
VERTICAL CLEARANCE BENEATH STAIRS



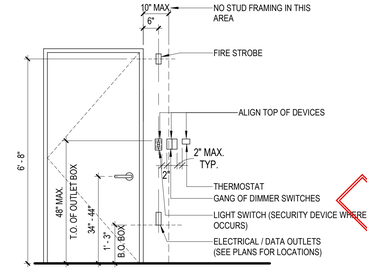
POST-MOUNTED OBJECTS



03 PROTRUDING OBJECTS
SCALE: 1/4" = 1'-0"



DEVICES AT DOOR IN OPEN POSITION



DEVICES AT DOOR IN CLOSED POSITION

NOTE: ALL DIMENSIONS TO CENTER LINE OF DEVICES U.O.N.; SECURITY CARD READER, KEY PAD AND OTHER DEVICES SHALL BE MOUNTED @ 3'-2" AFF; INTERCOM TO BE MOUNTED @ 3'-9" AFF.U.O.N.; FIRE ALARM BOXES TO BE MOUNTED BETWEEN 42" MIN. AND 48" MAX. AFF OUTLET OF THE BOX.; CENTER ALL DEVICES BELOW SWITCH.

04 TYPICAL ACCESSIBLE MOUNTING DIAGRAM @ DOOR
SCALE: 1/2" = 1'-0"

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△	Date	Description
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	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
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Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN: 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
ACCESSIBILITY REQUIREMENTS

Scale
As indicated

G1.021

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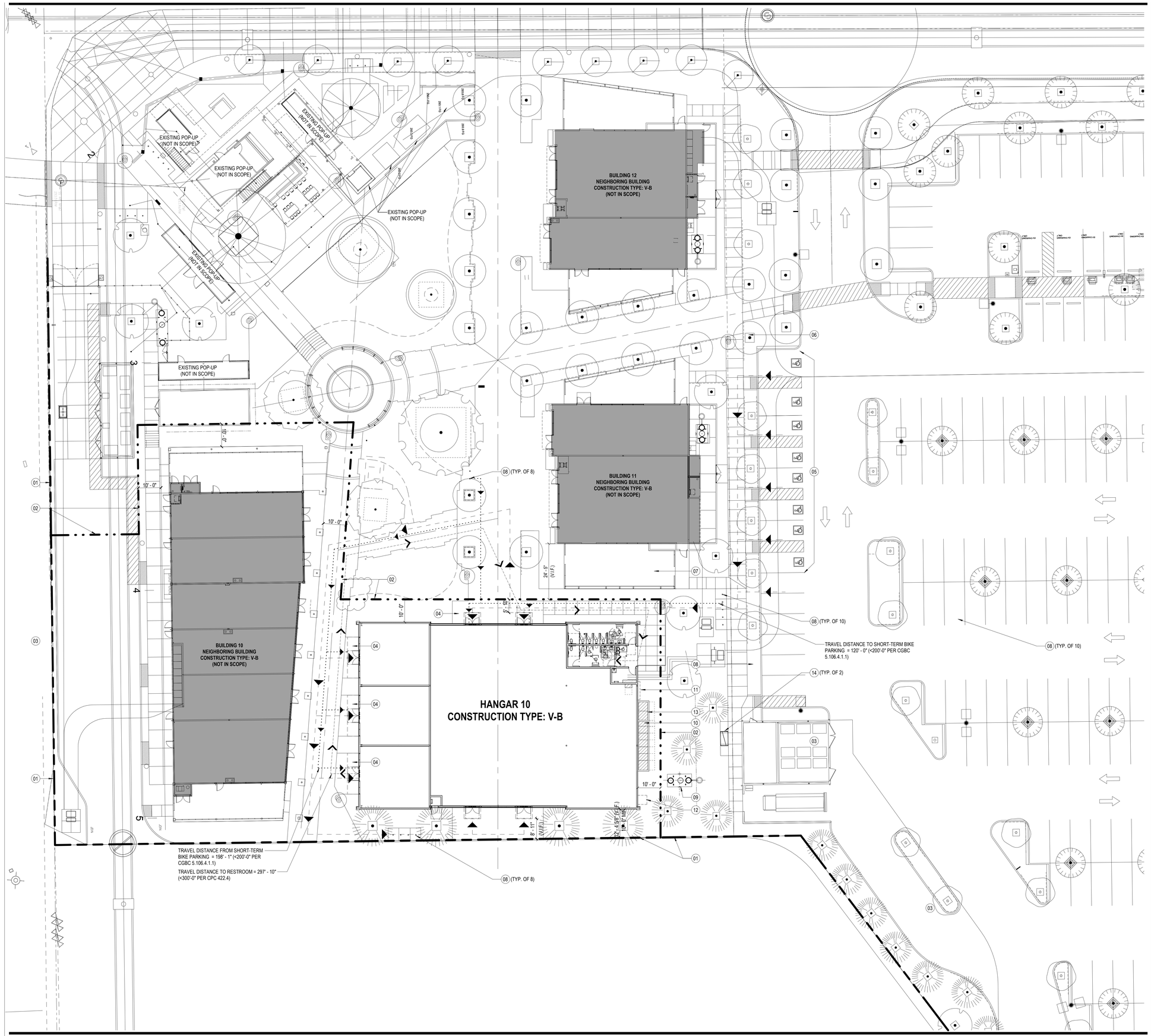

1 LIFE SAFETY PLAN - LEVEL 01
SCALE: 1/16" = 1'-0"

SHEET NOTES

01 PROPERTY LINE. REFER TO CIVIL DRAWINGS UNDER SEPARATE PERMIT. REFER TO G0.000 SEPARATE SITE SUBMITTALS.
02 ASSUMED PROPERTY LINE.
03 TRASH ENCLOSURE UNDER SEPARATE PERMIT. REFER TO G0.000 SEPARATE SITE SUBMITTALS.
04 PRE-CAST CONCRETE PAVING PER LANDSCAPE DRAWINGS UNDER SEPARATE PERMIT.
05 ACCESSIBLE PARKING STALLS, ACCESS AISLE, INTERNATIONAL SYMBOL OF ACCESSIBILITY, "NO PARKING" LETTERING, ACCESSIBLE PARKING SIGN AND CURB RAMP UNDER SEPARATE PERMIT. REFER TO G0.000 SEPARATE SITE SUBMITTALS.
06 ACCESSIBLE PATH OF TRAVEL FROM ACCESSIBLE PARKING STALLS TO ACCESSIBLE ENTRANCES.
07 OPEN TRELLIS NOT IN SCOPE AND UNDER SEPARATE PERMIT. REFER TO G0.000 SEPARATE SITE SUBMITTALS.
08 SHORT-TERM BICYCLE PARKING (BICYCLE RACKS) PER CIVIL UNDER SEPARATE PERMIT. REFER TO G0.000 SEPARATE SITE SUBMITTALS.
09 GREASE INTERCEPTOR. REFER TO PLUMBING DRAWINGS.
10 SWITCHGREAR IN NEMA 3R ENCLOSURE (1-800AMP, 3-400AMP, 1-200AMP, TELEBOARD) ON 6" CONCRETE PAD. REFER TO STRUCTURAL AND ELECTRICAL DRAWINGS.
11 LOCATION FOR GAS MANIFOLD AND FUTURE GAS METER. GAS MANIFOLD AND GAS MAIN FEEDING GAS MANIFOLD ARE BY OTHERS UNDER SEPARATE PERMIT. FUTURE GAS METERS BY FUTURE TENANTS. REFER TO PLUMBING DRAWINGS.
12 4'-0" X 4'-0" ESTIMATED FIRE RISER LOCATION AT EXTERIOR OF THE BUILDING. FIRE RISER BY APPROVED FIRE UNDERGROUND PLANS UNDER SEPARATE SUBMITTAL. PROVIDE HUB DRAIN, ELECTRONIC TRAP PRIMER AND ITS COLD WATER LINE, TRAP, AND CONNECT TO VENT FOR FIRE RISER. REFER TO PLUMBING DRAWINGS. LOCATE HUB DRAIN CLOSE TO FIRE RISER LOCATION AND LOCATE ELECTRONIC TRAP PRIMER WITHIN WALL.
13 NEMA ENCLOSURE. REFER TO ELECTRICAL DRAWINGS.
14 LONG-TERM STACKED BICYCLE LOCKERS PER CIVIL UNDER SEPARATE PERMIT. REFER TO G0.000 SEPARATE SITE SUBMITTALS.

PARKING CALCS

(APPROVED UNDER 00974484-PARK)

VEHICULAR PARKING SUMMARY:

PARKING SUMMARY:
PER CITY OF IRVINE ZONING ORDINANCE DIVISION 4, CHAPTER 4-3, SECTION 4-3-4 (AUTOMOBILE PARKING MATRIX), BELOW IS A SUMMARY OF THE REQUIRED PARKING STALLS FOR THE PROJECT.

BUILDING	SQ. FT.	PARKING RATIO	REQ. STALLS
BLDG #10	6,920	1/222 SF	32
PATIO	1,120+720	1/350 SF	13
BLDG #11	3,747	1/222 SF	17
PATIO	751+929	1/350 SF	12
BLDG #12	3,759	1/222 SF	18
PATIO	907+686	1/350 SF	11
HANGAR	9,571	1/222 SF	44
EX. POP-UPS			8
TOTAL REQUIRED STALLS			155 SPACES
TOTAL STALLS PROVIDED			349 SPACES

ACCESSIBLE PARKING SUMMARY:
(CBC11B-208.2 & 208.2.4)

TOTAL REQUIRED: *8 SPACES*
TOTAL PROVIDED: *8 SPACES (6 STANDARD & 2 VANS)*

ELECTRIC VEHICLE (EV) PARKING SUMMARY:
PER CALGREEN 5.106.5.3.6 POWER ALLOCATION METHOD:
REQUIRED: 208 OF 349 X 6.6 = 461 KVA
PROVIDED: 24 X 90KW DCFC X1.25= 2,587.5 KVA

ACCESSIBLE EV SPACES: *2 SPACES (1 VAN & 1 STANDARD)*
(CBC11B-228.3.2.1)
EV CHARGING SYSTEM AND ASSOCIATED ELECTRICAL WORK TO BE PERMITTED SEPARATELY.

BICYCLE PARKING SUMMARY:

BICYCLE PARKING SUMMARY:
PER CALGREEN SECTION 5.106.4 STANDARDS, BELOW IS A SUMMARY OF THE PROPOSED SHORT-TERM AND LONG-TERM BICYCLE PARKING PROVIDED FOR THE PROJECT.

REQUIRED SHORT-TERM (5% OF THE TOTAL VEHICULAR PARKING)
349 (PROVIDED PARKING) X 5% = 18 (SHORT-TERM BIKE PARKING
PROVIDED SHORT-TERM
46 SPACES

REQUIRED LONG-TERM (5% OF THE TENANT-OCCUPANT PARKING)
38 (TENANT-OCCUPANT) X 5% = 1.9 (LONG-TERM BIKE PARKING)
PROVIDED LONG-TERM
2 SPACES

LEGEND

- ACCESSIBLE PATH OF TRAVEL
- PATH OF TRAVEL TO RESTROOMS
- PATH OF TRAVEL FROM SHORT-TERM BICYCLE PARKING TO ENTRANCE
- PROPERTY LINE
- ASSUMED PROPERTY LINE

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Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.03945.000

Description
SITE LIFE SAFETY PLANS

Scale
As indicated

True North

G2.001

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01 ENLARGED LIFE SAFETY & EGRESS PLAN
SCALE: 1/8" = 1'-0"

OCCUPANCY & EXIT CALCULATIONS

Number	Name	Occupancy Classification	Use Classification	Area	Load Factor	Occupant Load	Exit Width Required (CBC 1005.3.2)
101	ASSUMED DINING A	A-2 (ASSEMBLY UNCONCENTRATED)	RESTAURANT	4,715 SF	15 SF	314.36	3' - 11 1/4"
101A	ASSUMED KITCHEN A	A-2 (ASSEMBLY UNCONCENTRATED)	RESTAURANT	1,805 SF	200 SF	9.03	0' - 1 1/4"
102	ASSUMED DINING B	B (BUSINESS)*	RESTAURANT	533 SF	15 SF	35.54	0' - 5 1/4"
102A	ASSUMED KITCHEN B	B (BUSINESS)	RESTAURANT	289 SF	200 SF	1.44	0' - 0 1/4"
103	ASSUMED DINING C	B (BUSINESS)*	RESTAURANT	508 SF	15 SF	33.86	0' - 5"
103A	ASSUMED KITCHEN C	B (BUSINESS)	RESTAURANT	275 SF	200 SF	1.38	0' - 0 1/4"
104	ASSUMED DINING D	B (BUSINESS)*	RESTAURANT	531 SF	15 SF	35.41	0' - 5 1/4"
104A	ASSUMED KITCHEN D	B (BUSINESS)	RESTAURANT	288 SF	200 SF	1.44	0' - 0 1/4"
105	ROOF ACCESS	A-2 ACCESSORY** ***	ACCESSORY USE	18 SF	0 SF	0.00	0' - 0"
106	VESTIBULE	A-2 ACCESSORY** ***	ACCESSORY USE	84 SF	0 SF	0.00	0' - 0"
107	JANITOR	A-2 ACCESSORY**	ACCESSORY USE	70 SF	0 SF	0.00	0' - 0"
108	WOMEN'S RESTROOM	A-2 ACCESSORY**	ACCESSORY USE	264 SF	0 SF	0.00	0' - 0"
109	MEN'S RESTROOM	A-2 ACCESSORY**	ACCESSORY USE	191 SF	0 SF	0.00	0' - 0"
				9,571 SF		432.46	5' - 4 3/4"

NOTES:
* SPACES CLASSIFIED AS B OCCUPANCY IN ACCORDANCE WITH CBC 303.1.1: A BUILDING OR TENANT SPACE USED FOR ASSEMBLY PURPOSES WITH AN OCCUPANT LOAD OF LESS THAN 50 PERSONS SHALL BE CLASSIFIED AS A GROUP B OCCUPANCY.
** ACCESSORY SPACE TO A-2 OCCUPANCY IN ACCORDANCE WITH CBC 311.1.1: A ROOM OR SPACE USED FOR STORAGE PURPOSES THAT IS ACCESSORY TO ANOTHER OCCUPANCY SHALL BE CLASSIFIED AS PART OF THAT OCCUPANCY.
*** UNCONDITIONED SPACE.

NUMBER OF EXITS @ #101 SUITE A / FUTURE TENANT

TOTAL EXITS REQUIRED: 2
TOTAL EXITS PROVIDED: 4

EXIT DOOR WIDTH

REQUIRED: 324 OCCUPANTS X 0.2" = 64.80"
PROVIDED: 4 DOORS X 68.00" EACH = 272.00"

NUMBER OF EXITS @ #102 SUITE B / FUTURE TENANT

TOTAL EXITS REQUIRED: 1
TOTAL EXITS PROVIDED: 1

EXIT DOOR WIDTH

REQUIRED: 37 OCCUPANTS X 0.2" = 7.40"
PROVIDED: 1 DOORS X 68.00" EACH = 68.00"

NUMBER OF EXITS @ #103 SUITE C / FUTURE TENANT

TOTAL EXITS REQUIRED: 1
TOTAL EXITS PROVIDED: 1

EXIT DOOR WIDTH

REQUIRED: 36 OCCUPANTS X 0.2" = 7.20"
PROVIDED: 1 DOORS X 68.00" EACH = 68.00"

NUMBER OF EXITS @ #104 SUITE D / FUTURE TENANT

TOTAL EXITS REQUIRED: 1
TOTAL EXITS PROVIDED: 1

EXIT DOOR WIDTH

REQUIRED: 37 OCCUPANTS X 0.2" = 7.40"
PROVIDED: 1 DOORS X 68.00" EACH = 68.00"

PLUMBING CALCULATIONS

LOCATION PER OCCUPANCY	AREA (SF)	LOAD FACTOR TABLE 1004.5	OCCUPANT LOAD		WATER CLOSET		URINALS	LAVATORIES		DRINKING FOUNTAIN	SERVICE SINK
			MALE	FEMALE	MALE	FEMALE		MALE	FEMALE		
PROPOSED LEVEL 01											
RESTAURANT DINING	6,288	30	132	132	2.00	4.00	1.00	1.00	1.00	1.00	1.00
RESTAURANT KITCHEN	2,657	50									
TOTAL AREAS AND REQUIRED FIXTURES	**8,945**				**2.00**	**4.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
TOTAL PROVIDED					**2**	**5**	**2**	**2**	**2**	**2 ***	**1**

NOTE:
* PLUS BOTTLE FILLER

NOTE:
THE PROPOSED PUBLIC RESTROOM PLUMBING FIXTURE QUANTITIES ARE BASED ON FUTURE ASSUMED WORST CASE OCCUPANT LOADING FOR HANGAR 10 ONLY. EACH INDEPENDENT TI PERMIT SUBMITTAL WILL BE REQUIRED TO DEMONSTRATE THAT THE MINIMUM NUMBER OF PLUMBING FIXTURES HAVE BEEN PROVIDED BASED ON THE ACTUAL USE AND OCCUPANT LOADING. IF AT ANY POINT, THE PUBLIC RESTROOM FIXTURE COUNTS BECOME INSUFFICIENT TO SERVE A SPECIFIC SUITE, IT IS THE RESPONSIBILITY OF THE TENANT OR BUILDING OWNER TO PROVIDE SUPPLEMENTAL RESTROOM FACILITIES TO MEET THE DEMAND IN ACCORDANCE WITH CPC 422.

SHEET NOTES

01 TACTILE EXIT SIGN, ILLUMINATED EXIT SIGNAGE, MAXIMUM OCCUPANT SIGNAGE, AND FIRE EXTINGUISHER ARE DEFERRED TO TI SCOPE.
02 GREASE INTERCEPTOR. REFER TO PLUMBING DRAWINGS.

LEGEND

COMMON PATH OF EGRESS TRAVEL WITH SPRINKLER:
A-2: 75' MAX.
B: 100' MAX.
TRAVEL DISTANCE WITH SPRINKLER:
A-2: 250' MAX.
B: 300' MAX.

PF PANIC & FIRE EXIT HARDWARE

CLEAR EXIT WIDTH AT DOOR

0 0 0 MAXIMUM EGRESS CAPACITY AT DOOR [1005.1]

ACTUAL EGRESS COUNT AT THIS DOOR

OCCUPANCY SYMBOLOGY

AREA
201 SF
1/100
2

FUNCTION
AREA
OCCUPANT LOAD FACTOR
OCCUPANT LOAD

INDICATES AREA NOT IN CONTRACT

INDICATES BUILT-IN MILLWORK

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LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.00945.000

Description
ENLARGED LIFE SAFETY / EGRESS PLAN

Scale
1/8" = 1'-0"

True North

G2.002

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COMMUNITY DEVELOPMENT
Building and Safety

STANDARD NOTES NON-RESIDENTIAL CONSTRUCTION 2022 CALIFORNIA GREEN BUILDING STANDARDS (4.1)

[Effective July 1, 2024]
Applies to ***Newly Constructed Non-residential Buildings and associated site development, initial tenant improvements regardless of valuation, and any subsequent addition of 1,000 square feet or more, or tenant improvement having a valuation of $200,000 and associated site development.*** The following standard notes shall be completed and incorporated into the approved plans and all effected design features and specifications shall be made to conform.

INSTRUCTIONS: Designer to place an "**X**" preceding each applicable section and complete the notes or indicate "**N/A**" if not applicable. Building plan check shall be responsible for verification except for those items preceded by a **[P]** which will be verified by Planning. All provisions generally apply to new construction and additions of 1,000 square feet or more, or tenant improvements having a valuation of $200,000. An **[N]**, however, indicates a provision applies only to new construction, an **[E]** indicates a provision that applies to new construction and provides additional qualifiers for when the provision applies to an addition or tenant improvement.

STANDARDS

BICYCLE PARKING CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSC) Section 5.106.4

[E] Short term bicycle parking applies to new or existing facilities if the project is expected to generate visitor traffic and adds 10 or more vehicular parking spaces.
Check the appropriate box and provide complete input for each selection as applicable:

X **[P]** Short-term bicycle parking (bicycle racks) are provided to accommodate anticipated visitor traffic. The total number provided is: SEE NOTE . These racks are located within 200 feet of the visitor's entrance as depicted on plan sheet: G2.001 . SEE NOTES ON SHEET G2.001.

[E] Long term bicycle parking applies to new shell buildings, and to existing facilities if the project adds 10 or more vehicular parking spaces.

X This project will accommodate over 10 tenant-occupants, therefore long term bicycle parking is provided. The total number (minimum one) provided equal to 5% of vehicular parking spaces: 2 . The method(s) selected to satisfy this requirement is (are):

_____ Covered, lockable enclosures with permanently anchored racks for bicycles, the total number provided is:_____ , see plan sheet:_____ .

_____ Lockable bicycle rooms with permanently anchored racks, the total number provided is:_____, see plan sheet: _____.

X Lockable, permanently anchored bicycle lockers, the total number provided is: SEE NOTE , see plan sheet: G2.001 . SEE NOTES ON SHEET G2.001.

ELECTRIC VEHICLE (EV) CHARGING (CGBSC 5.106.5.3)

[E] The following applies to this project:

X New construction where the total number of parking spaces is 10 or more.

N/A Addition or alteration to existing parking facility being modified by one of the following:

_____ Increase in power supply to an electric service panel as part of a parking facility addition or alteration.

_____ New Photovoltaic system is installed covering existing parking spaces.

_____ Scope of work is triggered per CGBC section 301.3 and includes increase in power supply to an electric service panel.

EV Charging Space Calculation (CGBSC 5.106.5.3.3)

X Total parking spaces for the project or total parking spaces added/altered is SEE NOTE , therefore pursuant to Table 5.106.5.3.1 a total of SEE NOTE EV charging space(s) and a total of SEE NOTE EV Capable space(s) are provided. See plan sheet: G2.001 . THE CALCULATION IS UNDER SEPARATE PERMIT. REFER TO G0.000 FOR SEPARATE SITE SUBMITTALS.

N/A Project has parkings spaces accessible by automated car parking system. This provision is not applicable.

N/A Project is an existing remote parking facility that do not have access to the building service panel. This provision is not applicable.

N/A Project is for an existing parking area lighting upgrades with no trenching. This provision is not applicable.

1. EV Capable Spaces:
   - A parking stall width of 108 inches and a length as required by the City of Irvine Zoning Code.
   - A listed raceway not less than 1 inch diameter to accommodate a future dedicated 208/240-volt branch circuit originating at the main service or subpanel, and terminating in a listed cabinet, box, or other enclosure in close proximity to the proposed EV capable space. A common raceway may be used to serve multiple EV capable spaces.
   - Service panel or subpanel sized to accommodate original design load plus an added dedicated 40 amp minimum branch circuit for each EV capable space with delivery of 30 amp minimum to an installed EV supply equipment (EVSE).
   - The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.
   - The service panel or subpanel circuit directory shall identify the reserved overcurrent protective device space(s) as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".
2. Electric Vehicle Charging Stations (EVCS):
   - EVCS can be any combination of Level 2 and Direct Current Fast Charging (DCFC), except that at least one Level 2 charger shall be provided.
   - One EV charger with multiple connectors capable of charging multiple EVs simultaneously shall be permitted if the electrical load capacity required for each EV capable space is accumulatively supplied to the EV charger.
   - The installation of each DCFC EVSE shall be permitted to reduced the minimum number of required EV capable spaces without EVSE by five and reduced proportionally the required electrical load capacity to he service panel or subpanel.
   - When EV chargers are installed, accessible EVCS shall be provided.
   - Accessible EVCS shall be located either on an accessible route or adjacent to an accessible parking space to allow use of the EV charger from the accessible parking.
   - EV space serving an accessible EVCS shall be 18 feet minimum length
   - EV space serving an accessible EVCS shall be 9 feet wide for standard accessible and 12 ft. wide for van accessible. A 5-foot aisle shall be provided on the side of the vehicle space.
   - Surface slope for EV space and the aisle shall not exceed 1:48 in any direction.
   - Refer to California Building Code Chapter 11B for applicable requirements to EV space serving accessible EVCS.

Electric Vehicle (EV) Charging: Medium-Duty and Heavy-Duty (CGBC 5.106.5.4)

[N] The following is applicable to construction of new warehouses, grocery stores, office buildings, manufacturing facilities, and retail stores with planned off-street loading spaces.

N/A EV supply and distribution equipment, spare raceway(s)or busway(s) and adequate capacity for transformer(s), service panel(s) or subpanel (s) for medium and heavy duty is provided. See_____ plan sheet.

LIGHT POLLUTION REDUCTION [N](CGBSC Section 5.106.8)

X **[P]** Outdoor lighting designed to comply with the City of Irvine Security Code, Section 3-16-1 of the City of Irvine Zoning Code, which requires all direct rays to be confined to the site and that adjacent properties are protected from glare, and allowable BUG rating limitations of CGBSC Table 5.106.8 are depicted on plan sheet: E SEE NOTE along with photometrics. THIS REQUIREMENT IS COVERED UNDER A SEPARATE PERMIT # 00974484-PARK, SHEET E

Refer to CGBC Section 5.106.8.1 and 5.106.8.2 for facing requirements and more stringent backlight and glare ratings for luminaries located in proximity to property lines.

WATER EFFICIENCY AND CONSERVATION (CGBSC Section 5.303)

Separate Submeters or metering devices
Applicable to new buildings exceeding 50,000 square feet and **[E]** additions of 50,000 square feet or more made to existing buildings, and to any tenant of a new building or addition, regardless of size, which is projected to consume more than 1,000 gallons/day CGBSC Sections 5.303.1.1and 5.303.1.2.

N/A A separate meter or metering device is provided for the following spaces: _____ . See plan sheet:_____ for details and specifications defining metering design.

N/A This project consists of a single tenant building with a dedicated meter.

X Separate meters or metering devices are not required as the new building or addition is less than 50,000 square feet, and no tenant usage is projected to exceed 1,000 gallons/day.

N/A Separate meters or metering devices are not required as no tenant usage is projected to consume more than 100 gallons/day.

NOTES: (1) Tenants of new multi-tenant buildings or additions exceeding 50,000 square feet and that are not provided with a separate metering device must be shown to use less than 100 gallons/day via worksheet WS-1 found in chapter 8 of the CGBSC and any necessary addendum worksheet to reflect process water or other uses not represented on the worksheet. (2) For new buildings or additions having a total floor area less than 50,000 square feet, all its spaces not having a separate metering device must be shown to have a projected consumption of less than 1,000 gallons/day via worksheet WS-1 found in chapter 8 of the CGBSC and any necessary addendum worksheet to reflect process water or other uses not represented on the worksheet.

INDOOR WATER USE (CGBSC 5.303.3)

[E] Applicable to any newly installed plumbing fixture within new construction, the area of remodel or addition.

X All new plumbing fixtures meet the requirements of CGBSC Section 5.303.3, see modified table below for flow rates.

TABLE FIXTURE FLOW RATES

FIXTURE TYPES	MAXIMUM FLOW RATE
SHOWERHEADS	1.8 gpm @ 80 psi
LAVATORY FAUCETS	0.5 gpm @ 60 psi
KITCHEN FAUCETS	1.8 gpm @ 60 psi*
WASH FOUNTAIN	1.8[rim space (in.)/20 gpm @ 60 psi]
METERING FAUCET	0.2 gallons/cycle
METERING FAUCET FOR WASH FOUNTAINS	0.2[rim space (in.)/20 gpm @ 60 psi]
WATER CLOSETS	1.28 gallons/flush*
FLOOR-MOUNTED URINAL	0.5 gallons/flush
WALL-MOUNTED URINAL	0.125 gallons/flush

*Includes single and dual flush water closets with an effective flush rate of 1.28 gallons or less:
Dual flush toilets—The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush.

When a pre-rinse spray valve is installed, it shall meet requirements in the California Code of Regulations, Title 20, Section 1605.1(h)(4) Table H-2, Section 1605.3(h)(4)(A), and Section 1607(d)(7), and shall be equipped with an integral automatic shutoff.

NOTE: The combined flow of multiple showerheads serving a single shower shall not exceed maximum allowable flow rate for a single fixture shower or the control valves shall be arranged to only allow one shower head to operate at a time.

OUTDOOR WATER USE- MWELO (CGBSC Section 5.304)

X This project is subject to MWELO requirements. See plan sheet: SEE NOTE for completed City of Irvine Model Water Efficiency Landscape Ordinance work sheet, Form 40-81. THIS REQUIREMENT IS COVERED UNDER A SEPARATE PERMIT # 00974484-PARK, SHEET

WATER RESISTANCE AND MOISTURE MANAGEMENT (CGBSC Section 5.407)

[E] Applicable to any new entry or opening which is part of an addition of 1,000 or more square feet or any tenant improvement having a valuation of $200,000 or more.

ENTRIES

To prevent water intrusion into exterior entries and/or openings subject to foot traffic or wind-driven rain, the following features have been incorporated into the design for **primary exterior entries:**

X Door is protected by an awning or roof overhang 4 feet or more in depth, or is recessed 4 feet or more, see plan sheet: A1.102 .

X Flashings integrated with a drainage plane, see plan sheet: A6.001 .

X Non-absorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings, see plan sheet: G2.001 .

MATERIAL CONSERVATION AND RESOURCE EFFICIENCY - CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING (CGBSC Section 5.408)

Recycling of materials for new construction, additions, and remodels shall conform to the Construction and Demolition Materials Recycling Requirements of the City of Irvine Municipal Code, Sections 6-7-901 through 6-7-912.

LIFE CYCLE ASSESSMENT (CGBC Section 5.409)

[E] Applicable to newly constructed building with floor area of 100,000 square feet or greater or additions/alterations of existing buildings where the combined altered or added floor area is 100,000 square feet or greater. Shall comply with one of the following:

N/A Building reuse analysis for existing buildings (CGBC 5.105.2). See sheet _____ for compliance summary.

N/A Whole Building life cycle assessment (CGB 5409.2). See sheet _____ for summary of the Global Warming Potential (GWP) analysis.

N/A Prescriptive path - Product GWP compliance (CGBC 5.409.3). See sheet _____ for compliance summary.

BUILDING MAINTENANCE AND OPERATION (CGBSC Section 5.410)
RECYCLING BY OCCUPANTS

[E] Applicable to an addition that adds 1,000 square feet or more or has a valuation of $200,000, that **also increases** total floor area by at least 30% of existing floor area.

X **[P]** Designated recycling areas shall be provided as required by City of Irvine Zoning Ordinance (ZO) Sections 3-23-1 through 3-23-4 of the . See plan sheet: G2.001 .

N/A **[N] COMMISSIONING** Building Commissioning is **only** required for new buildings or initial tenant improvements greater than 10,000 square feet. (Exceptions: Unconditioned warehouses of any size, conditioned areas less than 10,000 square feet and accessory to unconditioned warehouses, open parking garages, open parking garage areas associated with a larger structure.)

DESIGN

- Completed and signed Owner's Project Requirements (OPR) including all items as specified in CGBSC section 5.410.2.1, see sheet: _____.

- Completed and signed Basis of Design (BOD) including all items as specified in CGBSC section 5.410.2.2, see sheet: _____.
- Completed and signed Commissioning Plan, as specified in CGBSC section 5.410.2.3, see sheet: _____ .

CONSTRUCTION - PRIOR TO FINAL INSPECTION APPROVAL

- A completed Commissioning Report shall be provided to the City Inspector prior to final inspection approval. Contents, pursuant to CGBSC Section 5.410.2.6, shall include a description of the commissioning process activities undertaken through the design, construction, and reporting recommendations for post construction phases. In addition, all required functional performance testing reports shall be included.
- A completed Systems Manual shall be made available for review by the City Inspector prior to final inspection approval. Contents shall include a completed and signed "Systems Manual" as specified in CGBSC section 5.410.2.5.1.

X **TESTING AND ADJUSTING** For buildings not exceeding 10,000 square feet, **[E]** and any new system serving an addition of 1,000 or more square feet or a tenant improvement having a valuation of $200,000, testing and adjusting are required.

DESIGN

See sheet M0.001 for procedures for testing and adjusting systems, which includes:

- HVAC systems and controls
- HVAC balancing per the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; or Associated Air Balance Council National Standards or approved equal.
- Indoor and outdoor lighting and controls PLEASE REFER TO "TITLE 24 COMPLIANCE" ON E0.001 AND "TITLE 24" ON E0.003.
- Water heating systems
- Renewable energy systems
- Landscape irrigation systems THIS REQUIREMENT IS COVERED UNDER A SEPARATE PERMIT #00974484-PARK, SHEET
- Water reuse systems

CONSTRUCTION - PRIOR TO FINAL INSPECTION APPROVAL

Completed testing, adjusting, and balancing reports shall be provided to the City Inspector prior to final inspection approval. Contents shall match those specified in the procedures section above and be signed by the responsible parties.

ENVIRONMENTAL QUALITY

N/A **FIREPLACES** Wood burning devices including fireplaces are not permitted under SCAQMD Rule 445. Any installed gas fireplace shall be a direct-vent sealed-combustion type. (CGBSC Section 5.503)

MECHANICAL EQUIPMENT AND DUCT PROTECTION

To reduce the amount of dust, water, and debris collected in mechanical equipment and ducts, all duct openings and other related air distribution equipment component openings shall be covered from the time of delivery at the jobsite through the construction until final start up. (CGBSC Section 5.504.3)

FINISH MATERIAL POLLUTANT CONTROL

- **Adhesives, sealants and caulks** shall meet the applicable standards of CGBSC Section 5.504.4.1 and Tables 5.504.4.1 and 5.504.4.2 for VOC limits and content prohibitions.
- **Paints and coatings** shall meet the applicable standards of CGBSC Section 504.4.3 and Table 5.504.4.3 for VOC limits.

- **Aerosol paints and coatings** shall meet the applicable standards of CGBSC Section 5.504.4.3.1.
- **Carpet systems** shall meet the applicable standards of CGBSC Section 5.504.4.4 including CGBSC Section 5.504.4.4.1 for **carpet cushions** and CGBSC Section 5.504.4.4.2 for **carpet adhesives.**
- **Resilient flooring** shall meet the applicable standards of CGBSC Section 5.504.4.6.
- **Composite wood products** shall meet the applicable standards of CGBSC Section 5.504.4.5 and Table 5.504.4.5.

ENVIRONMENTAL TOBACCO SMOKE CONTROL (CGBSC Section 5.504.7)

N/A See plan sheet _____ for designated outdoor smoking area which shows a minimum of 25 feet from building entries, outdoor ventilation intakes, and operable windows.

FILTERS (CGBC Section 5.504.5.3) THE CITY IS SMOKE FREE IN PUBLIC PLACES. SMOKE FREE SIGNAGE SHALL BE PLACED THROUGHOUT THE SITE AS PART OF THE TENANT IMPROVEMENT SCOPE.

X **Ventilation filtration** (CGBSC Section 5.504.5.3) - For new HVAC systems outside and return air shall pass through filtration media having a rating of:

X MERV 13 or better, see plan sheet M0.002 for specifications.

_____ Equipment is existing and exempt from this requirement.

ENVIRONMENTAL COMFORT (CGBSC Section 5.507)

Exterior Noise Wall and roof assemblies making up the building envelope and exposed to the noise source as follows shall meet a composite STC rating of 50 or a composite OITC rating of 40, and exterior windows within said walls shall meet an STC of 40 or an OITC of 30.

Prescriptive Method (Using Sound Transmission Class (STC) Map - 2012 from the City's online form directory.)

N/A 1. A portion or the entire building is within the 65 CNEL contour for a freeway or expressway therefore exterior wall assemblies and roof or roof-ceiling assemblies shall meet the specified exterior wall assemblies and roof or roof-ceiling assemblies requirements stated above. For details and specifications see plan sheets_____ .

N/A 2. A portion or the entire building is within the 65 CNEL contour for John Wayne Airport therefore exterior wall assemblies and roof or roof-ceiling assemblies shall meet the specified exterior wall assemblies and roof or roof-ceiling assemblies requirements stated above. For details and specifications see plan sheets_____ .

N/A 3. The project site fronts a street identified as producing 65 CNEL contours extending beyond the right of way therefore that portion of the building that is the contour shall meet the specified exterior wall assemblies and roof or roof-ceiling assemblies requirements stated above. For details and specifications see plan sheets_____ .

N/A This building is a factory, storage facility, utility building, enclosed parking structure, or stadium therefore no STC assemblies are required.

Performance Method

X Pursuant to CGBSC Section 5.507.4.2, site and building mitigations have been defined based on a noise study prepared by an acoustical engineer. For a summary of features see plan sheets ACOUSTICAL REPORT IS "A" REFERRED COMPLIANCE ITEM. SEE G0.001. For construction details see sheets G5.000 .

Prior to final inspection, an acoustical report shall be provided to the City Inspector which demonstrates complying interior noise sound levels. Said report shall be signed and stamped by an acoustical engineer.

Interior Sound

X Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40. Note: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control at https://www.tsib.org/files/STC_IIC_Ratings.pdf. For details and specifications see plan sheets G5.000 .

N/A No interior walls separate tenant spaces or occupant spaces and public areas.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD — **NRCC-PRF-E**

Nonresidential Performance Compliance Method — **(Page 19 of 19)**

Documentation Author's Declaration Statement

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Hans Marsman LEED AP	Documentation Author Signature:
Company: Marsman Consulting	Signature Date:
Address: 440 N Barranca Ave #5726	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Covina, CA 91723	Phone: (619) 573-6374

Digitally signed by Hans Marsman, LEED AP, CEA
Date: 2026.02.19 15:07:47 -06'00'

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 understand that a registered 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, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name:	Responsible Designer Signature:	
Company: Gensler		
Address: 4675 MacArthur Court Suite 100	Date Signed: 2/19/2026	
City/State/Zip: Newport Beach, CA 92660	License #: C32405	
Phone: 949.863.9434	Title: Architect	Scope: Envelope
Responsible Designer Name: Bojan Lazarevic, PE	Responsible Designer Signature:	
Company: MA Engineers		
Address: 5160 Carroll Canyon Rd, Suite 200	Date Signed: 02/19/2026	
City/State/Zip: San Diego, CA 92121	License #: M41366	
Phone: (858) 200-0030	Title: Engineer	Scope: Mechanical

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance — Report Version: 2022.0.000 — Schema Version: rev 20220601 — Report Generated: 2026-02-19 13:36:10

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

410 BEACON
IRVINE, CA 92618

Gensler

4675 MacArthur Court
Suite 100
Newport Beach, CA 92660
United States

Tel 949.863.9434
Fax 949.553.1676

△	Date	Description
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
STANDARD NOTES
NON-RESIDENTIAL CONSTRUCTION
2022 CALGREEN

Scale
NOT TO SCALE

G2.100

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COMMUNITY DEVELOPMENT
Building and Safety

STANDARD NON-RESIDENTIAL SECURITY CODE PROVISIONS [VERSION 6.0]

[Applies to Applications Made on or After 01/01/2023]
This document shall be completed by the design professional of record. The completed document shall be incorporated, in its entirety, along with the **City of Irvine Standard Security Code Plan Requirements and Definitions** into the plans submitted for approval prior to permit issuance. This document is in 12 point font and may not be reduced in size prior to incorporation.

INSTRUCTIONS:
(1) Those provisions preceded by an asterisk **(*)** shall be completed if applicable and an "**A**" shall be inserted in the space preceding the provision; if not applicable, an "**N/A**" shall be inserted.

(2) Those provisions preceded by a **[P]** shall be depicted in the plans via notes, details, plan, and/or elevation views in a manner that clearly demonstrates compliance to the requirement. Such depictions shall be cross referenced within the brackets ( ) provided or note shall be completed as otherwise instructed.

STANDARDS

KEYING REQUIREMENTS [Ref. Irvine Municipal Code (IMC) Section 5-9-511]

Upon occupancy by the owner or proprietor, each single unit shall have locks using combinations which are interchange free from locks used in all other proprietorships or similar distinct occupancies.

N/A **(*) STANDARDS FOR LOUVERED WINDOWS [Ref. IMC Section 5-9-514]**

[P] Louvered windows shall not be utilized if any portion of it is within 8 feet vertically or 6 feet horizontally from any exterior accessible surface or any adjoining roof, balcony, landing, stair tread, platform, or similar structure. *(Ref. elevation views, window schedule*

A **(*) STANDARDS FOR GARAGE DOORS: ROLLING OVERHEAD, SOLID OVERHEAD [Ref. IMC Section 5-9-515]**

A. **[P]** Wood doors shall have panels a minimum of 5/16 inch in thickness with the locking hardware being attached to the support framing. *(Ref. plans and/or door schedules or note: Not Applicable-*
NOT APPLICABLE

B. **[P]** Aluminum doors shall be a minimum thickness of 0.0215 inches and riveted together a minimum of 18 inches on center along the outside seams. There shall be a full width horizontal beam attached to the main door structure which shall meet the pilot, or pedestrian access, door framing within 3 inches of the strike area of the pilot or pedestrian access door framing within 3 inches of the strike area of the pilot or pedestrian access door. *(Ref. plans and/or door schedules or note: Not Applicable-*
REFER TO DOOR SCHEDULE: G6.000; PLAN: A1.100; DETAILS: A6.002

C. **[P]** Fiberglass doors shall have panels a minimum density of 6 ounces per square foot from the bottom of the door to a height of 7 feet. Panels above 7 feet shall have a density not less than 5 ounces per square foot. *(Ref. plans and/or door schedules or note: Not Applicable-*
NOT APPLICABLE

D. Doors utilizing a cylinder lock shall have a minimum 5 pin tumbler operation with the locking bar or bolt extending into the receiving guide a minimum of 1 inch.

E. Doors that exceed 16 feet in width shall have 2 lock receiving points; or, if the door does not exceed 19 feet, a single bolt may be used if placed in the center of the door with the locking point located either at the floor or door frame header; or, torsion spring counterbalance-type hardware may be used.

F. **[P]** Doors secured by electrical operation shall have a keyed-switch to open the door when in a closed position, or by a signal locking device. *(Ref. plans and applicable notes and/or details or note: Not Applicable-*
REGULAR EGRESS DOORS ARE PROVIDED NEXT TO THE BI-FOLD DOOR. REFER TO A1.100.

G. Doors with slide bolt assemblies shall have frames a minimum of 0.120 inches in thickness, with a minimum bolt diameter of 1/2 inch and protrude at least 1 1/2 inches into the receiving guide. A bolt diameter of 3/8 inch may be used in a residential building. The slide bolt shall be attached to the door with non-removable bolts from the outside. Rivets shall not be used to attach slide bolt assemblies.

STANDARDS FOR EXTERIOR DOORS & OPENINGS [Ref. IMC Section 5-9-517]

A. Swinging exterior glass doors, wood, or metal doors with glass panels, solid wood, or metal doors, and all entrance doors to individual office suites shall be constructed or protected as follows:

1. **[P]** Wood doors shall be of solid core construction with a minimum thickness of 1 3/4 inches. Wood panel doors with panels less than 1 inch thick shall be covered on the inside with a minimum 16 U.S. gauge sheet steel or its equivalent, which is to be attached with screws on minimum 6 inch centers. Hollow steel doors shall be of a minimum 16 U.S. gauge and have sufficient reinforcement to maintain the designated thickness of the door when any locking device is installed; such reinforcement being able to restrict collapsing of the door around any locking device. *(Ref. plans and/or door and window schedules-*
DOOR NOTES #14 ON G6.000.

2. **[P]** Except when double cylinder deadbolts are utilized, any glazing utilized within 40 inches of any door locking mechanism shall be constructed or protected as follows:
   a. Fully tempered glass or rated burglary resistant glazing; or
   b. Iron or steel grills of at least 1/8 inch material with a minimum 2 inch mesh secured on the inside of the glazing may be utilized; or
   c. The glazing shall be covered with iron bars of at least 1/2 inch round or 1 inch by 1/4 inch flat steel material, spaced not more than 5 inches apart, secured on the inside of the glazing.
   d. Items b. and c., above, shall not interfere with the operation of opening windows if such windows are required to be openable by the Uniform Building Code.

   (Ref. plans and/or door and window schedules-
   DOOR NOTES #8 ON G6.000.

3. Doors without mechanical locks may be secured with a magnetic locking device which shall have the minimum holding force of 1600 lbs. and a minimum 12 hour back up battery source.

B. All swinging exterior wood and steel doors shall be equipped as follows:

1. A single or double door shall be equipped with a double or single cylinder deadbolt. The bolt shall have a minimum projection of 1 inch and be constructed so as to repel a cutting tool attack. The deadbolt shall have an embedment of at least 3/4 inch into the strike receiving the projected bolt. The cylinder shall have a cylinder guard, a minimum of 5-pin tumblers, and shall be connected to the inner portion of the lock by connecting screws of at least 1/4 inch in diameter. The provisions of the preceding paragraph do not apply where (1) panic hardware is required, or (2) an equivalent device is approved by the enforcing authority.

2. Double doors shall be equipped as follows:
   a. The inactive leaf of double door(s) shall be equipped with metal flush bolts having a minimum embedment of 5/8 inch into the head and threshold of the doorframe.
   b. Double doors shall have an astragal constructed of steel a minimum of 1/8 inch thick, which will cover the opening between the doors. The astragal shall be a minimum of 2 inches wide, and extend a minimum of 1 inch beyond the edge of the door to which it is attached. The astragal shall be attached to the outside of the active door by means of welding or with nonremovable bolts spaced apart on not more than 10 inches centers. (The door to which such an astragal is attached must be determined by the fire safety codes adopted by the enforcing authority.)

C. Aluminum frame swinging doors shall be equipped as follows:

1. The jamb on all aluminum frame swinging doors shall be so constructed or protected to withstand 1,600 pounds of pressure in both a vertical distance of 3 inches and a horizontal distance of 1 inch each side of the strike, so as to prevent violation of the strike.

2. A single or double door shall be equipped with a double cylinder deadbolt with a bolt projection exceeding 1 inch or a hook-shaped or expanding deadbolt that engages the strike sufficiently to prevent spreading. The deadbolt lock shall have a minimum of 5-pin tumblers and a cylinder guard.

D. Panic hardware, whenever required by the Building Code shall be installed as follows:

1. Panic hardware shall contain a minimum of 2 locking points on each door; or

2. On single doors, panic hardware may have 1 locking point, which is not to be located at either the top or bottom rails of the doorframe. The door shall have an astragal constructed of steel 1/8 inch thick, which shall be attached with nonremovable bolts to the outside of the door. The astragal shall extend a minimum of 6 inches vertically above and below the latch of the panic hardware. The astragal shall be a minimum of 2 inches wide and extend a minimum of 1 inch beyond the edge of the door to which it is attached.

3. Double doors containing panic hardware shall have an astragal attached to the doors at their meeting point, which will close the opening between them, but not interfere with the operation of either door.

E. Horizontal sliding doors shall be equipped with a metal guide track at top and bottom, and a cylinder lock and/or padlock with a hardened steel shackle which locks at both heel and toe, and a minimum 5-pin tumbler operation with nonremovable key when in an unlocked position. The bottom track shall be so designed that the door cannot be lifted from the track when the door is in a locked position.

F. In office buildings (multiple occupancy), all entrance doors to individual office suites shall meet the construction and locking requirements for exterior doors.

G. Glazing shall be deemed accessible, if any portion of it is within 40 inches of any door locking mechanism, and shall be constructed of either two part laminated glazing with a 0.60 .0060 inch inner layer or burglary resistant glazing.

Exception:
Glass doors at least 1/2 inch thick and greater than 2880 square inches.

A **(*) STANDARDS FOR ROOF OPENINGS [Ref. IMC Section 5-9-517]**

[P] Roof openings shall be protected as follows if the roof is accessible via an exterior ladder or the roof is less than 20 feet from ground level or if any portion of it is within 12 feet vertically or 6 feet horizontally from any exterior accessible surface or any adjoining roof, balcony, landing, stair tread, or similar structure:

A. All skylights on the roof of any building used for business purposes shall be provided with:
   1. Rated burglary-resistant glazing; or
   2. Iron bars of at least 1/2 inch round or 1 by 1/4 inch flat steel material, spaced not more than 5 inches apart, under the skylight and securely fastened; or
   3. A steel grill of at least 1/8 inch material with a maximum 2 inch mesh under the skylight and securely fastened.

B. All hatchway openings on the roof of any building or premises used for business purposes shall be secured as follows:
   1. If the hatchway is of wooden material, it shall be covered on the inside with at least 16 U.S. gauge sheet metal, or its equivalent, attached with screws.
   2. The hatchway shall be secured from the inside with a slide bar or slide bolts.
   3. Outside hinges on all hatchway openings shall be provided with nonremovable pins when using pin-type hinges. *(Ref. plans and details-*
      PLAN: A1.102; DETAILS: A6.102

N/A **(*) STANDARDS FOR EXTERIOR LADDERS [Ref. IMC Section 5-9-517]**

[P] Exterior mounted ladders are prohibited except:

A. Ladders with a minimum 1/8 inch thick steel plate, securely attached to the ladder edge on each side and extending to within 2 inches of the wall for a height of 10 feet above ground level. A door or cover shall be securely attached to the front of the ladder and be constructed of a minimum 1/8 inch steel, extending from ground level to at least 10 feet high. The ladder door shall have nonremovable hinge pins and be locked tight against the side wall by a locking mechanism with a minimum 5-pin tumbler operation, and attached with nonremovable bolts from the exterior; or

B. Ladders beginning a height of 10 feet above ground. *(Ref. plans, elevations, and applicable notes and/or details-*

EXTERIOR PHONE PANELS ARE PROHIBITED [Ref. IMC Section 5-9-517]

STANDARDS FOR LIGHTING [Ref. IMC Section 5-9-517]

Note: Performance standards are contained herein for reference. Compliance shall be demonstrated in photometric study preceding plan check approval.

Buildings, open parking lots, walkways, and accesses thereto shall conform to the following light standards and be arranged in such a way so as to conform to California Green Building Standards Code Section 5.106.5.2 and Zoning Code Section 3-16-1 which require that direct rays be confined to the site and that adjoining properties are protected from glare such that at 15 feet beyond site boundaries illumination is less than 0.01 horizontal footcandles.

A. **[P]** All types of exterior doors shall be illuminated with an exterior light fixture, during the hours of darkness, with a minimum maintained 1 foot-candle of light, measured within a 5 foot radius on each side of the door at ground level. The light source shall be controlled by a photocell device or a timeclock with an astronomic clock feature and capable of operating during a power outage. *(Ref. plans, elevations, and applicable notes and/or details-*
E3.102

B. Recessed areas of buildings or fences, which have a minimum depth of 2 feet, a minimum height of 5 feet, and do not exceed 6 feet in width and are capable of human concealment, shall be illuminated with a minimum maintained 0.25 foot-candles of light at ground level during the hours of darkness. This requirement applies to defined recessed areas which are within 6 feet of the edge of a designated walking surface with an unobstructed pathway to it, not hindered by walls or hedge row landscaping a minimum of 2 feet in height.

C. Stairways shall be illuminated with a minimum maintained 1 foot-candle of light on all landings and stair treads, during the hours of operation, including 1 hour thereafter.

D. All interior or exterior corridors, passageways, and walkways in any hotel, motel, or inn shall be illuminated at all times with a minimum maintained 1 foot-candle of light on the walking surface.

E. All exterior pedestrian walkways, interior common corridors, and open parking lots shall be illuminated with a minimum maintained 1 foot-candle of light on the walking, parking, or driving surface during the hours of operation and 1 hour thereafter.

F. **[P]** For buildings required to have 2 or more exits, lighting for landings shall be on an emergency power system consisting of storage batteries or an onsite generator capable of providing power for 90 minutes, installed as required by California Building Code Section 1008.3 *(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable-*
E0.001 LUMINAIRE SPECIFICATIONS

G. The light source utilized to comply with this section to meet parking and drive surface lighting shall have a rated average bulb life of not less than 12,000 hours.

H. Light fixtures for open parking lots may utilize motion sensing devices to raise and lower the light levels based upon the presence of vehicles or people. The light level shall not be less than minimum maintained .25 foot-candles of light at ground level when not occupied. The motion sensing device shall only be used after business hours and shall be adjusted to sense and activate light when a vehicle or person is within 24 feet of the fixture. Areas within a 50 foot radius of an elevator lobby/doors and stairways shall not fall below the required minimum maintained 1.0 foot-candles of light.

I. **[P]** Accessible luminaires utilized to meet the requirements of this section have fully enclosed vandal resistant light fixtures and be not less than 3 feet in height from ground level when used to illuminate walkways and a minimum of 8 feet in height from ground level when illuminating surfaces associated with vehicles. Light fixtures shall be deemed accessible if mounted within 15 feet vertically or 6 feet horizontally from any accessible surface or any adjoining roof, balcony, landing, stair tread, platform, or similar structure. *(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable-*
MOUNTING HEIGHT: A2.000; SCHEDULE: G8.000 & E0.001

J. **[P]** See plan sheet *(Ref. plans or note: This provision is not applicable-*
CANOPY AT GREAT PARK PHASE 2 LANDSCAPE AND ELECTRICAL DRAWINGS UNDER SEPARATE PERMIT. REFER TO PLAN CHECK 00974484-PARK.

showing buildings, parking area, walkways, detailed landscaping with tree legend (if pole lights are used) and shrub legend (if bollards are used), fixture schedule, mounting height, lighting ratio, and a point-by-point photometric calculation of the required light levels. If parking lot is equipped with an occupancy sensor, then a point-by-point photometric calculation is required to show it meets the required minimum level of light. Foot-candles shall be measured at grade on a horizontal plane and conform to a uniformity ratio of 6:1 average/minimum. Landscaping shall not be planted so as to obscure required light levels and with light fixtures exceeding 8 feet in height installed at lease 2 feet from a tree's canopy at 70 percent maturity. Private street, alley, and Fire Department required roadways designed for use in emergency only situations shall be illuminated using the same standards as established for public thoroughfares.

K. Private streets, drive aisles, alleys, and Fire Department required roadways designed for use only in emergency situations shall be illuminated using the same standards as established for public thoroughfares.

STANDARDS FOR ADDRESSING [Ref. IMC Section 5-9-517]

[P] Buildings shall display a street address number conforming to the following specifications:

A. Numerals shall be mounted on the wall or window, not less than 8 feet or higher than 30 feet from ground level and face the street on which the building is addressed. Numerals are to be clearly visible from this same street and not obscured by building landscaping at full maturity. Addressing shall be of a color contrasting to the background to which they are affixed. Method of attachment shall not include the use of two-sided tape or any material not resistant to weather conditions. *(Ref. plans, elevations, and applicable notes and/or details -*
REFER TO ELEVATION ELEVATIONS #01 AND #03 ON A2.000. AND APPROVED WAYFINDING SERIES IN CANOPY AT GREAT PARK PHASE 2 UNDER PLAN CHECK 00974484-PARK

B. Where distance or intervening obstructions impair visibility from the street, addressing shall be mounted on all buildings so as to be visible from the drive aisles and walkways internal to the site, and each such address, or an encompassing range of addresses, shall be displayed on monument signs visible from each site entrance from all approaching directions. In such cases, these signs shall be designed per item E. below. *(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable-*
REFER TO WAYFINDING SERIES IN CANOPY AT GREAT PARK PHASE 2 UNDER PLAN CHECK 00974484-PARK.

C. Numerals shall be no less than 6 inches in height if located less than 100 feet from the center line of the addressed street, or 12 inches in height if placed further than 100 feet from the center line of the

addressed street. The numerals shall be in a Sans Serif font with a stroke weight of medium to bold, or an approved equivalent font which is clearly legible, and illuminated during the hours of darkness with a minimum of 2 foot-candles of light on the numbers, using a light source provided with an uninterruptible A.C. power source or controlled only by a photoelectric device, which may be the common area site lighting. *(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable-*
REFER TO ELEVATION ELEVATIONS #01 AND #03 ON A2.000, AND APPROVED WAYFINDING SERIES IN CANOPY AT GREAT PARK PHASE 2 UNDER PLAN CHECK 00974484-PARK. REFER TO E2.101 AND E5.101.

D. The rear swinging doors of all buildings shall have address numbers not less than 6 inches in height, using a Sans Serif font with a stroke weight of medium to bold, or an approved equivalent font which is clearly legible, and be of a color contrasting to the background to which they are affixed. Method of attachment shall not include the use of two-sided tape or any material not resistant to weather conditions.

Exceptions:
1. Buildings with a single street address and rear building frontage of 300 feet or less, at least one rear door, nearest to the center, is required to have an address sign.
2. Buildings with a rear building frontage greater than 300 feet, but less than 600 feet, at least two rear doors are required to have an address sign, located at the first door at each end of the building.
3. Buildings with a rear building frontage greater than 600 feet, at least three rear doors are required to have an address sign, located at the first door at each end of the building and at a middle door.

(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable-
N/A

E. For sites having multiple buildings for which addressing mounted on building is not clearly visible from the street, or for which drive aisles diverge from a site entrance in a manner such that the direct route to each building is not obvious, vehicle directional signs shall be provided. Vehicle direction signage from the point of site entry to each building entrance shall display building addresses or unit number range, and be located at all turning points along the route to a building entrance. Bottom of the address numbers on the sign copy shall be no less than two feet from ground level and not obstructed by landscaping at full maturity or parked cars. Numerals shall be at least 4 inches in height using a Sans Serif font with a stroke weight of medium to bold or an approved equivalent font which is clearly legible. *(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable-*
REFER TO WAYFINDING SERIES IN CANOPY AT GREAT PARK PHASE 2 UNDER SEPARATE PERMIT. REFER TO PLAN CHECK 00974484-PARK.

F. Buildings, except parking structures, with a total square footage of at least 10,000 square feet shall have rooftop numbers placed parallel to the addressed street, screened from public view and only visible from the air. The numerals are to be white, block lettered, constructed of weather resistant material, and placed against a black background. Address numbers are to be a minimum of 4 feet in height and 18 inches wide. When more than one street address is assigned to a building, the beginning and ending address numbers are to be placed on the rooftop, at opposite ends of the building, reflecting the approximate location of these addresses.

Exceptions:
1. For buildings having white roofing, black lettering shall be used in lieu of white lettering.

2. Buildings providing addressing for a helipad as specified in the California Building Code.

(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable-
NOT APPLICABLE

G. For sites having more than three separately addressed buildings with a common area sidewalk connecting each building, and the primary building entrances are not visible from the street or parking lot, pedestrian directional signage shall be provided. Signs shall be posted at all decision-making points, including walkway entrances and intersections. Bottom of the address numbers on the sign copy shall be no less than two feet from ground level and not obstructed by landscaping at full maturity. Numerals shall be at least three inches in height using a Sans Serif font with a stroke weight of medium to bold, or an approved equivalent font which is clearly legible.

H. A Wayfinding Plan shall be developed indicating the following:
   a. Location and wording of directional signage for vehicles and pedestrians;
   b. Location of building address numbers;
   c. Landscaping details for areas near any signage or address numbers, including elevation showing trees near exterior address numbers;
   d. Required lighting level on address numbers.

The plan shall include design drawings or exhibits that clearly illustrate the intent of the Wayfinding Plan. *(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable-*
REFER TO WAYFINDING SERIES IN CANOPY AT GREAT PARK PHASE 2 UNDER SEPARATE PERMIT. REFER TO PLAN CHECK 00974484-PARK.

N/A **(*) STANDARDS FOR ELEVATOR [Ref. IMC Section 5-9-517]**

Elevators shall be designed as follows:

A. Elevator cabs, the interiors of which are not completely visible when the door is open from a point centered on and 36 inches away from the door, shall have shatter resistant mirrors or other equally reflective material so placed as to make visible the entire elevator cab from this point. The elevator cab shall be illuminated at all times with a minimum maintained 2 foot-candles of light at floor level. *(Ref. plans, elevations, and applicable notes and/or details or note: This provision is not applicable as interior is completely visible per specification above-*

B. Elevator emergency stop buttons shall be so installed and connected as to activate the elevator alarm when utilized.

A **(*) EMERGENCY ACCESS [Ref. IMC Section 5-9-519]**

Private roads and parking areas or parking facilities when controlled by unmanned automated parking gates shall provide for police emergency access, at all individual gates, both ingress and egress, utilizing an approved radio controlled entry system and approved key switch device to be installed and designed as follows:

A. **[P]** The key switch control shall be installed at a height of 42 inches from finished driveway grade and a minimum of 15 feet from the entry/exit gate, and be located on the driver's side of the road or driveway.

The key switch is to be accessible in such a manner as to not require a person to exit their vehicle to reach it; nor to require any back-up movements in order to enter/exit the gate. The key switch may be installed within a visitor telephone/intercom call box if meeting the above criteria. The control housing shall consist of heavy gauge metal, and be vandal- and weather-resistant and be mounted on a substantial structure such as a steel post, concrete, or masonry pedestal.

B. Key switches shall be secured to the control housing, telephone/intercom call box, or parking ticket dispenser utilizing tamper resistant screws.

C. Except for any open surface parking lot with less than 100 spaces, a radio controlled entry system shall be installed per City specifications.

D. **[P]** Vehicle gates shall be designed to open in a power failure. *(Ref. plans, elevations, and applicable notes and/or details-*
REFER TO PLAN CHECK 00974484-PARK.

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	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
STANDARD NON-RESIDENTIAL SECURITY CODE PROVIDISONS

Scale

G2.101

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COMMUNITY DEVELOPMENT
Development Services

STANDARD SECURITY CODE PLAN REQUIREMENTS AND DEFINITIONS

The design professional of record shall complete, as applicable to the project, each of the following:

- Standard Residential Security Code Provisions
- Standard Recreational Spaces Security Code Provisions
- Standard Non-Residential Security Code Provisions
- Standard Parking Facility Security Code Provisions

This document in its entirety, along with each applicable standard shall be incorporated into the plans submitted for approval prior to permit issuance.

DEFINITIONS [Ref. Irvine Municipal Code (IMC) Section 5-9-503]

Alley is any roadway not exceeding 25 feet in width which is primarily used for access to the rear or side entrances of abutting property

Approved means certified as meeting the requirements of this code by the enforcing authority or its authorized agents, or by other officials designated by law to give approval on a particular matter dealt with by the provisions of this code with regard to a given material, mode of construction, piece of equipment or device.

Astragal is a device, either fixed or movable, which eliminates the vertical opening between a pair of doors when in the closed position

Bolt is a metal bar which, when actuated, is projected (or thrown) either horizontally or vertically into a retaining member, such as a strike plate, to prevent a door or window from moving or opening.

Bolt projection or bolt thrown is the distance from the edge of the door, at the bolt center line, to the farthest point on the bolt in the projected position.

Burglary resistant glazing means those materials as defined in Underwriters' Laboratories Bulletin 972.

Common area is an area of space, a building or portion of a building, which is legally accessible to the owners or users of a multi-tenant property.

Cylinder means the subassembly of a lock containing the cylinder core, tumbler mechanism and the keyway. A double cylinder lock is one, which has a key-actuated cylinder on both the exterior and interior of the door

Cylinder guard means a tapered or flush metal ring or plate surrounding the otherwise exposed portion of a cylinder lock to resist cutting, drilling, prying, pulling or wrenching with common tools.

Deadbolt is a lock bolt which does not have a spring action. The bolt must be actuated by a key and a knob or thumb- turn, and when projected becomes locked against return by end pressure.

Dead latch or deadlocking latch bolt means a spring-actuated latch bolt having a beveled end and incorporating a plunger which, when depressed, automatically locks the projected latch bolt against return by end pressure.

STANDARD SECURITY CODE
PLAN REQUIREMENTS AND DEFINITIONS

Double cylinder deadbolt means a deadbolt lock which can be activated only by a key on both the interior and exterior.

Dwelling means a building or portion thereof designed exclusively for residential occupancy, including single-family and multiple-family dwellings.

Enforcing authority is the agency or person having the responsibility for enforcing the provisions of this code.

Flushbolt is a manual, key or turn-operated metal bolt normally used on inactive door(s), and is attached to the top and bottom of the door and engages in the head and threshold of the frame

Fully tempered glass means those materials meeting or exceeding UCB Standard 24-2 for Safety Glazing.

Glazing is all glass, plastics, and fiberglass utilized as an exterior window, vision panel, light, or pane within any type of door.

Hours of operation shall mean the time period when any activity requires the presence of employees or workers within or about the affected business.

Hours of darkness shall mean any time from one-half hour before sunset and one-half hour after sunrise and any other time when the illumination level is less than the required lighting for uses as designated in this code.

Jamb means the vertical members of a door frame to which the door is secured.

Jamb/wall is that component of a door assembly to which a door is attached and secured; the wall and jamb used together are considered a unit.

Latch or latch bolt is a beveled, spring-actuated bolt, which may or may not have a deadlocking device.

Lock (or lockset) is a keyed device (complete with cylinder, latch or deadbolt mechanism, and trim such as knobs, levers, thumb turns, escutcheons, etc.) for securing a door in a closed position against forced entry. For the purposes of this code, a lock does not include the strike plate.

Locking device is a part of a window assembly, which is intended to prevent movement of the moveable sash, which may be the sash lock or sash operator.

Luminaire is a complete lighting device consisting of a light source together with its direct appurtenances, such as globe, reflector refractor, housing and such support as is integral with the housing. The pole, post or bracket is not considered a part of the luminaire.

Minimum maintained foot-candles of light is the amount of light falling on that point of a surface with the least illumination, calculated through application of a maintenance factor, which is a multiplier applied to account for aging of the lamp and for dirt build-up on the luminaire during the period for which a lamp is in place.

Multiple-family dwelling means a building or portion thereof designed for occupancy by two or more families living independently of each other, including hotels, motels, apartments, duplexes and townhouses.

Nonresidential means any building, parking lot and associated areas used for any purpose other than a dwelling.

STANDARD SECURITY CODE
PLAN REQUIREMENTS AND DEFINITIONS

Panic hardware means a latching device on a door assembly for use when emergency egress is required due to fire or other threat to life safety. Devices designed so that they will facilitate the safe egress of people in case of an emergency when a pressure not to exceed 15 pounds is applied to the releasing device in the direction of exit travel. Such releasing devices are bars or panels extending not less than one-half of the width of the door and placed at heights suitable for the service require, not less than 30 nor more than 44 inches above the floor.

Primary locking device means the single locking system on a door or window unit whose primary function is to prevent unauthorized intrusion.

Private or single-family dwelling means a building designed exclusively for occupancy by one family

Rail means the horizontal member of a window or door. A meeting rail is one which mates with a rail of another sash or a framing member of the door or window frame when the sash is in the closed position.

Recreational space means any public or private park, community common open space or paseo, bike trail, community swimming pools and associated sidewalks and parking lots.

Sash is an assembly of stiles, rails, and sometimes, mullions assembled into a single frame, which supports the glazing material. A fixed sash is one which is not intended to be opened. A moveable sash is intended to be opened.

Sill is the lowest horizontal member of a window frame.

Single cylinder deadbolt means a deadbolt lock, which is activated from the outside by a key and from the inside by a knob, thumb-turn, lever, or similar mechanism.

Solid core door means a door composed of solid wood or composed of compressed wood equal in strength to solid wood construction.

Stile is a vertical framing member of a window or door.

Strike is a metal plate attached to or mortised into a door or door jamb to receive and to hold a projected latch bolt and deadbolt in order to secure the door to the jamb

Swinging door means a door hinged at the stile or at the head and threshold

Underwriters' laboratories listed means tested and listed by Underwriters' Laboratory, Inc.

Vandal resistant light fixture has a lens constructed of materials meeting or exceeding U.L. Bulletin 972 (Burglary Resistant Glazing) and a housing meeting or exceeding U.L. Bulletin 1572 (Wet Locations).

Window assembly is a unit, which includes a window and the anchorage between the window and the wall.

Window frame is the part of a window, which surrounds and supports the sashes and is attached to the surrounding wall. The members include side jambs (vertical), head jamb (upper, horizontal), sill and mullions.

INFORMATIONAL BULLETIN

Bulletin No.: 311
Page 1 of 1
Effective: 3/21/2007
Revised: 9/14/2009

Chief Building Official

REQUIREMENTS FOR FABRICATION APPROVAL

Reference: California Building Code (CBC) Appendix Chapter 1 Section 104.1, Section 1704.2 as amended by City of Irvine Municipal Code 5-9-401, item L. and CBC Section 1708.4..

PURPOSE:

To establish a policy for use and acceptance of structural load bearing members and assemblies fabricated offsite and are intended for use in a structure being constructed or modified under a valid building permit. Such members and assemblies include but are not limited to structural steel (including steel stairs) and pre-cast concrete building components.

POLICY:

Fabricator Approval Fabricators for projects within the City of Irvine are required to obtain approval from the Chief Building Official. Approval is generally granted upon verification of a current fabricator listing for the intended work from a recognized agency. Such agencies include the City of Los Angeles and the International Accreditation Services (IAS) for steel fabrication and the Precast Prestressed Concrete Institute (PCI) is acceptable for pre-cast concrete.

Fabricators having a listing with an agency not referenced above may present their credentials to the Chief Building Official for consideration prior to fabrication.

Deliveries to the Jobsite No member or assembly fabricated offsite shall be delivered to the jobsite without required documentation. Required documentation shall be verified to be complete and accurate by the **special inspector** and documented in his daily report. Any exceptions shall be noted and brought to the City inspector's attention.

Documentation requirements are as follows:

- Fabricator's current Certification from a recognized agency.
- Fabricator's Certificate of Compliance. Such certificate shall state "...that the work has been performed in accordance with the approved plans and specifications."
- Any applicable destructive and/or non-destructive testing reports as required by CBC section 1708.4.
- Certified mill test report for all structural steel and reinforcing steel.

INFORMATIONAL BULLETIN

Bulletin No.: 250
Page 1 of 1
Effective: 5/1/95
Revision: 2/20/96
Revision: 6/3/10

Chief Building Official

ROOFS SLOPE AND CERTIFICATION REQUIREMENTS FOR WOOD FRAMED CONSTRUCTION

Reference: California Building Code Sections 1503.4, 1507 and 1611

Minimum Roof Slope:

California Building Code (CBC) Section 1507 requires various minimum slopes for roofs depending on the roofing material. Built-up roofs and thermoplastic roofs may be as little as ¼ inch per foot. This is the minimum allowed for wood framed construction within the City of Irvine unless otherwise approved by the Chief Building Official.

Drainage:

Roof drainage shall conform to CBC Section 1503.4 and the California Plumbing Code using a rainfall rate of 4 inches per hour per **City of Irvine Information Bulletin 299-Roof Drainage System Sizing**.

Accumulated Rainwater Design Load:

CBC Section 1611.1 requires that the roof structure design load include the weight from rainwater accumulation that would occur due to blockage of the primary drainage system including that volume above the inlet of the secondary drainage system at its design flow.

Structural Check for Ponding:

Where the design slope is allowed to be less than ¼ inch per foot, CBC Section 1611.2 requires the design calculations to include verification of adequate stiffness to preclude progressive deflection in accordance with Section 8.4 of ASCE 7.

Certification of Roof Slope:

New roof systems of wood framed construction having a design slope of ¼ inch per foot (2%) or flatter shall be certified upon completion and before building occupancy by a California Registered Engineer or Land Surveyor. Certification shall include a statement that the completed roof system has been verified to be in conformance with the approved plans. Said certification shall be stamped and signed by the registered professional and be retained at the jobsite for collection by the City building inspector.

INFORMATIONAL BULLETIN

Bulletin No.: 299
Page 1 of 1
Effective: 09/25/02
Revised: 01/28/2021

Chief Building Official

ROOF DRAINAGE SYSTEM SIZING

Purpose: To specify the rainfall rate for sizing roof drainage systems in the City of Irvine

References: California Plumbing Code Section 1101.12
California Building Code Section 1502

The rainfall rate of 4 inches per hour shall be used for sizing roof drainage systems for buildings in the City of Irvine.

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A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
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NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

COMMUNITY DEVELOPMENT-BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.8945.000

Description
SECURITY CODE DEFINITIONS, CONSTRUCTION SITE SECURITY & FABRICATION, ROOF AND ROOF DRAIN

Scale
NOT TO SCALE

G2.102

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CANOPY PHASE 2

NOISE ANALYSIS

Prepared By:

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Reference Number	Agency	Date
16924-02	City of Irvine	February 27, 2026

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LIST OF ABBREVIATED TERMS

(1)	Reference
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
Leq	Equivalent continuous (average) sound level
Lmax	Maximum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Canopy Phase 2
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise abatement measures for the Canopy Phase 2 neighborhood ("Project"). The Project site is located at the northeast corner of the Beacon and Hornet Intersection, in the City of Irvine. The Project is to consist of commercial development and includes the construction of four commercial buildings. This noise analysis was prepared to satisfy the City of Irvine Standard Condition 3.5:

Demonstrate that the development will be sound attenuated against present and projected noise levels including stationary, roadway, aircraft, helicopter, and railroad noise to meet City interior and exterior noise standards. The final acoustical report shall include all information required by the City's Acoustical Report Information Sheet (Form 42-48). The report shall be accompanied by a list identifying the sheet(s) of the building plans that include required sound attenuation measures. (1)

Exterior Noise Levels

The future long-range exterior traffic noise analysis calculations show that the unmitigated exterior noise level levels at the building facade will range from 42.5 to 58.4 dBA CNEL.

Interior Noise Abatement

The project interior noise levels are expected to range from 19.1 to 37.0 dBA CNEL with windows/storefronts with a minimum STC rating of 31 . The interior noise level analysis shows that all units will satisfy the City of Irvine's 55 dBA CNEL interior noise standards for Commercial land uses.

1 INTRODUCTION

This Noise Analysis has been completed to determine the noise impacts associated with the development of the Canopy Phase 2 ("Project"). This noise analysis briefly describes the Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for noise analysis, and evaluates the future exterior and interior noise environment.

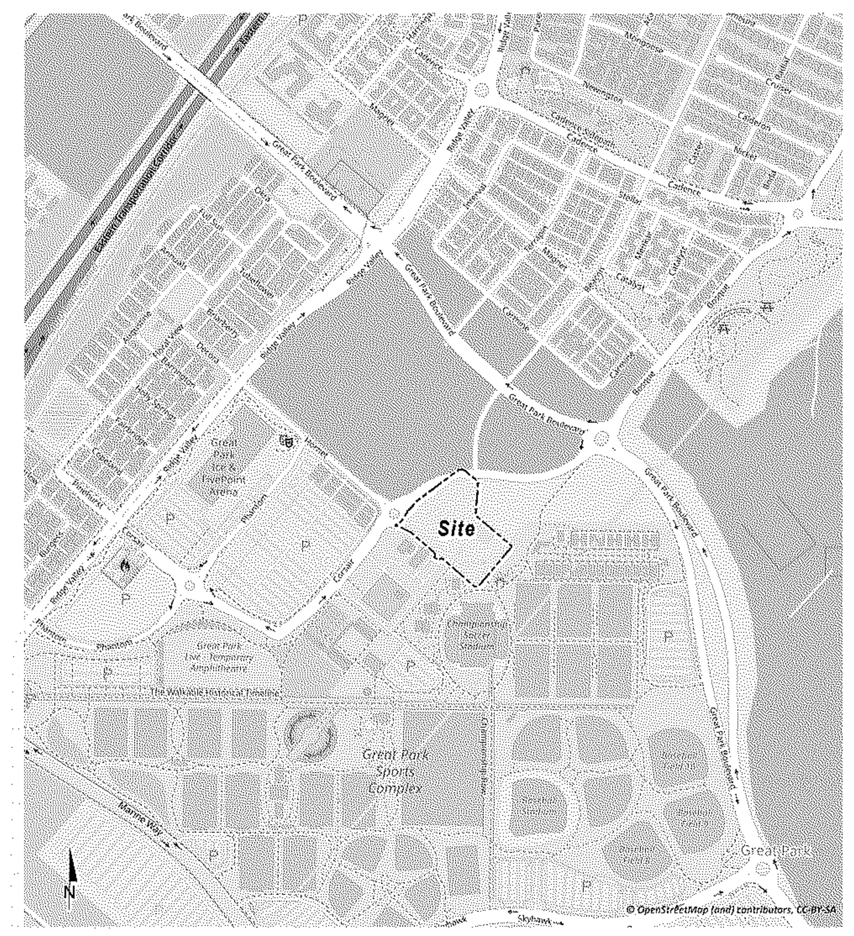
1.1 SITE LOCATION

The Project site is located at the northeast corner of the Bosque and Hornet Intersection, in the City of Irvine. The Project is bounded by park uses to the south and east, and undeveloped uses to the north and west, as shown in Exhibit 1-1. The nearest airport is the John Wayne Airport, 7.3 miles west of the Project site.

1.2 PROJECT DESCRIPTION

The Project will consist of commercial development and includes the construction of four commercial buildings totaling approximately 1,200 square feet. A preliminary site plan is shown in Exhibit 1-2.

EXHIBIT 1-1: PROJECT LOCATION



3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities, are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element, which is to be prepared per guidelines adopted by the Governor's Office of Land Use and Climate Innovation (LCI) (13) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 CITY OF IRVINE STANDARD CONDITION 3.5

As part of the City of Irvine Standard Condition 3.5 the Project is required to submit final acoustical report. As stated in the City of Irvine Standard Condition 3.5 this report is required to "demonstrate that the development will be sound attenuated against present and projected noise levels including stationary, roadway, aircraft, helicopter, and railroad noise to meet City interior and exterior noise standards. The final acoustical report shall include all information required by the City's Acoustical Report Information Sheet (Form 42-48). The report shall be accompanied by a list identifying the sheet(s) of the building plans that include required sound attenuation measures." The City's Acoustical Report information Sheet (Form 42-48) is included in Appendix 3.1.

3.3 CITY OF IRVINE GENERAL PLAN NOISE ELEMENT

The City of Irvine has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of the City of Irvine from excessive exposure to noise. (14) The Noise Element specifies the maximum exterior and interior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies noise policies designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receivers, or degrade the quality of life. To protect the City of Irvine residents from excessive noise, the Noise Element contains the following three objectives:

N-1 Maintain healthy and safe noise environments consistent with the standards in Table 1 through site design and location.
N-2 Reduce noise from nontransportation sources such that City residents are not exposed to stationary noise levels that exceed City Noise Ordinance standards.
N-3 Achieve maximum efficiency in noise abatement efforts through establishing minimum standards, intergovernmental coordination, and public information programs.

The noise policies specified in the City of Irvine Noise Element provide the guidelines necessary to satisfy these three objectives. To prevent exposure to mobile noise levels in excess of the CNEL standards for residents, the City of Irvine General Plan Noise Element identifies an exterior noise level limit of 45 dBA CNEL for residential uses, and identifies interior noise standards of 45 dBA CNEL, for a closed window condition with a means of mechanical ventilation, and 55 dBA CNEL for a windows open condition for residential uses (Table 3) that are impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. The Noise Element also provides several policies to reduce noise impacts from stationary noise sources, including requirements for new developments to propose abatement measures for any potential noise sources known at the time of submittal. To efficiently reduce noise impacts in the City, the Noise Element requires review of the latest noise standards, including the City Noise Ordinance, to continue to be effective in restricting future noise impacts. (14)

3.3.1 Land Use Compatibility

The noise criteria identified in the City of Irvine Noise Element are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown in Exhibit 3-1, provide the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The City's Land Use Noise Compatibility (Table 4 of the Noise Element), presented here as Exhibit 3-1, provides guidelines to evaluate the acceptability of the transportation-related noise level impacts. These guidelines are based on the Governor's Office of Planning and Research and are used to assess the long-term traffic noise impacts on land uses. Land uses such as the commercial units of the Project are considered clearly compatible with exterior noise levels below 65 dBA CNEL and normally compatible with noise levels below 75 dBA CNEL. "For normally compatible land use, new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design." The City uses 65 dBA CNEL as the critical criterion for assessing the compatibility of noise-sensitive land uses with noise sources. The City requires that, for new residential land uses, the noise levels in the exterior areas considered by the City to be noise sensitive not exceed 65 dBA CNEL. In addition, the City requires that commercial developments achieve an indoor noise standard of 55 dBA CNEL and that residential developments achieve an indoor noise standard of 45 dBA CNEL with windows closed, which is based on the California Building Code.

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
CANOPY PHASE 2 NOISE ANALYSIS

Scale

G2.104

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EXHIBIT 3-1: LAND USE NOISE COMPATIBILITY

LAND USE CATEGORIES		ENERGY AVERAGE (CNEL)						
		A	A	B	B	C	D	D
RESIDENTIAL	Single-Family	A	A	B	B	C	D	D
RESIDENTIAL	Mobile Home	A	A	B	B	C	C	D
COMMERCIAL Regional/Community	Hotels, Motels, Transient Lodging	A	A	A	A	B	B	C
COMMERCIAL Community & INSTITUTIONAL	Commercial Retail, Bank, Restaurant, Movie Theatre	A	A	A	A	B	B	C
COMMERCIAL Community & INSTITUTIONAL	Office Building, Research & Development, Professional Offices, City Office Building	A	A	A	A	B	C	D
COMMERCIAL Recreation INSTITUTIONAL Cultural	Amphitheatre, Concert Hall, Auditorium, Meeting Hall	B	B	C	C	D	D	D
COMMERCIAL Recreation	Children's Amusement Park, Miniature Golf, Go-Cart Track, Health Club, Equestrian Center	A	A	A	A	B	D	D
COMMERCIAL Community INDUSTRIAL General	Automobile service station, Auto Dealer, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
INSTITUTIONAL Cultural	Hospital, Church, Library, School Classroom	A	A	B	C	C	D	D
OPEN SPACE	Parks	A	A	A	B	C	D	D
OPEN SPACE	Golf Courses, Nature Centers, Cemeteries, Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
AGRICULTURAL	Agriculture	A	A	A	A	A	A	A

Source: City of Irvine, 2015

Interpretation:
Zone A (Clearly Compatible): Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements. **Zone B (Normally Compatible):** New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice. **Zone C (Normally Incompatible):** New construction or development should normally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made, and needed noise insulation features must be included in the design. **Zone D (Clearly Incompatible):** New construction or development should generally not be undertaken.

Source: City of Irvine General Plan Noise Element, Table 4.

3.3.2 Noise Standards

To control transportation-related noise sources such as arterial roads, freeways, airports, and railroads, the City of Irvine has established the standards provided in Exhibit 3-2 (Table 3 of the Noise Element) for acceptable community noise levels. The City of Irvine Noise Element provides specific noise level standards for all land use categories that are used to regulate traffic-related noise level impacts for noise-sensitive uses; both exterior and interior noise level standards are defined.

Based on the City of Irvine land use compatibility guidelines and noise standards, this noise study has been prepared to satisfy an interior noise level of 55 dBA CNEL for commercial development. This approach is consistent with Table F-1 of the General Plan Noise Element.

EXHIBIT 3-2: INTERIOR AND EXTERIOR NOISE STANDARDS

LAND USE CATEGORIES		ENERGY AVERAGE (CNEL)	
Categories	Uses	Interior[1]	Exterior[2]
Residential	Single-Family, Multiple Family	45[3] 55[4]	65[5]
	Mobile Home	-----	65[5]
Commercial/ Industrial	Hotel, Motel, Transient Lodging	45	65[5]
	Commercial, Retail, Bank, Restaurant	55	----
	Office Building, Professional Office, Research & Development	50	----
	Amphitheater, Concert Hall, Auditorium, Meeting Hall	45	----
	Gymnasiums (Multipurpose)	50	----
	Health Clubs	55	----
	Manufacturing, Warehousing, Wholesale, Utilities	65	----
	Movie Theatre	45	----
Institutional	Hospital, School /Classroom	45	65
	Church, Library	45	----
Open Space	Parks	----	65

Source: City of Irvine, 2015

Notes:
1. Interior environment includes bathrooms, toilets, closets, and corridors. 2. Outdoor environment limited to private yard of single-family or multi-family residences private central which is exposed by a means of exit from inside the unit, mobile home park, hospital patio, park picnic area, school playground, and hotel and motel recreation areas. 3. None level requirement with closed windows, Mechanical ventilating system or other means of natural ventilation shall be provided pursuant to Appendix Chapter 12, Section 1208 of Uniform Building Code. 4. None level requirement with open windows, if they are used to meet natural ventilation requirement. 5. Exterior noise level shall be such that interior noise level will not exceed 45 CNEL. 6. Except for those areas affected by aircraft noise. 7. Multi-family developments with bedrooms that do not meet the 65 CNEL are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

Source: City of Irvine General Plan Noise Element, Table 3.

3.5 AIRPORT LAND USE COMPATIBILITY

John Wayne Airport (JWA) is located approximately 7.3 miles west of the Project site. The Airport Environs Land Use Plan (AELUP) for JWA (15) prepared by the Orange County Airport Land Use Commission (ALUC), identifies noise compatibility policies to safeguard the general welfare of the inhabitants within the vicinity of the airport and to ensure the continued operation of the airport. Specifically, the AELUP plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace.

The basic function of the AELUP is to promote compatibility between the airport and the land uses that surround it. As required by State law, the AELUP provides guidance to affected local jurisdictions regarding airport land use compatibility. The main objective of the AELUP is to avoid future compatibility conflicts rather than to remedy existing incompatibilities. Also, the AELUP is aimed at addressing future land uses and development, not airport activity. The AELUP does not place any restrictions on the present and future role, configuration, or use of the airport. The AELUP establishes aircraft noise exposure exterior noise level compatibility thresholds for new developments by land use category. According to the exterior noise thresholds outlined in Exhibit 3-

3, commercial development is considered normally consistent with exterior noise levels of less than 70 dBA CNEL, and conditionally consistent with exterior noise levels greater than 70 dBA CNEL. As shown in Exhibit 3-4, based on Annual CNEL Noise Contours contained in the City of Irvine General Plan, the Project Site is located beyond the 60 dBA CNEL aircraft noise level contours. (16) Thus, the Project site is exposed to Normally acceptable noise levels from airport operations.

EXHIBIT 3-3: AIRPORT COMPATIBILITY NOISE LEVELS BY LAND USE

AIRPORT LAND USE COMMISSION FOR ORANGE COUNTY
AIRPORT ENVIRONS LAND USE PLAN
LIMITATIONS ON LAND USE DUE TO NOISE
(Applicable to Aircraft Noise Sources)

LAND USE CATEGORY	COMMUNITY NOISE EQUIVALENT LEVEL dB					
	55	60	65	70	75	80
Residential (all types): Single and Multi-Family Residences						
Community Facilities: Churches, Libraries, Schools, Preschools, Day-Care Centers, Hospitals, Nursing/Convalescent Homes, & Other noise sensitive uses						
Commercial: Retail, Office						
Industrial:						

NORMALLY CONSISTENT

Conventional construction methods used. No special noise reduction requirements.

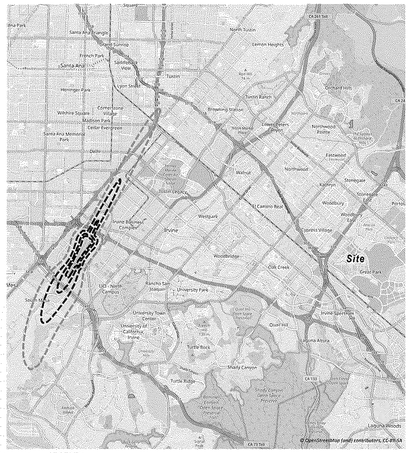
CONDITIONALLY CONSISTENT

Must use sound attenuation as required by the California Noise Insulation Standards, Title 25, California Code of Regulations. Residential use sound attenuation required to ensure that the interior CNEL does not exceed 45 dB. Commercial and industrial structures shall be sound attenuated to meet Noise Impact Zone "1" criteria (refer to Section 3.2.3).

NORMALLY INCONSISTENT

All residential units are inconsistent unless are sound attenuated to ensure that the interior CNEL does not exceed 45 dB. and that all units are indoor oriented so as to preclude noise impingement on outdoor living areas.

EXHIBIT 3-4: JOHN WAYNE AIRPORT NOISE LEVEL CONTOUR BOUNDARIES



LEGEND:
Site Boundary
60 dBA Noise Level Contour
65 dBA Noise Level Contour
70 dBA Noise Level Contour
75 dBA Noise Level Contour

TABLE 5-4: FIRST FLOOR INTERIOR NOISE IMPACTS

Building	Roadway	Noise Level at Façade	Required Interior Noise Reduction[1]	Calculated interior noise reduction[2]	Upgraded Windows[3]	Interior Noise Level[4]	Threshold	Threshold Exceeded?
Hangar	Beacon	43.4	0.0	26.3	No	19.1	55	No
Building 10	Beacon	44.1	0.0	23.4	No	22.7	55	No
Building 11	Beacon	43.2	0.0	25.5	No	19.7	55	No
Building 12	Beacon	42.5	0.0	24.7	No	19.8	55	No
Building 10	Hornet	58.4	13.4	23.4	No	37.0	55	No
Hangar	Hornet	48.4	3.4	25	No	25.4	55	No
Building 12	Hornet	49.7	4.7	25	No	26.7	55	No

[1] Noise level reduction required to satisfy the 45 dBA CNEL interior noise standards.
[2] Calculated exterior to interior noise level reduction shown in Table 5-3.
[3] Does the required interior noise reduction trigger upgraded windows?
[4] Estimated interior noise level with building construction shown in Table 5-2.

7 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (619) 778-1971.

William Maddux, INCE
Senior Associate
URBAN CROSSROADS, INC.
(619) 788-1971
bmaddux@urbanxroads.com

EDUCATION

Bachelor of Science in Urban and Regional Planning
California Polytechnic State University, Pomona • June 2000

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
INCE – Institute of Noise Control Engineers

PROFESSIONAL CERTIFICATIONS

Approved Acoustical Consultant • County of San Diego
FHWA Traffic Noise Model of Training • November 2004
CadnaA Basic and Advanced Training Certificate • October 2008.

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CANOPY PHASE 2 NOISE ANALYSIS

Scale

CITY OF IRVINE BUILDING & SAFETY DIVISION

G2.105

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Sound Insulation Prediction (v10.0.6)

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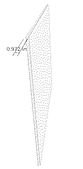
Date: 2/25/2026

Job Name:

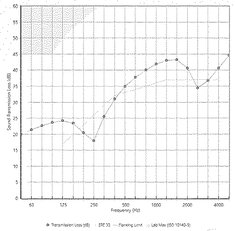


STC 33
OITC 28

System description

Panel 1	1 x 0.626 in Type X Gypsum Board
Cavity	5.5 in
Panel 2	1 x 0.236 in Glass
Details	Energy-based model, Panel Size: 8.9 ft x 13.1 ft, Partition surface mass = 5.97 lb/ft², Mass-air-mass resonant frequency = ; 218 Hz

Freq. (Hz)	TL (dB)	Rtot (dB)
50	26	
63	21	21
80	23	
100	24	
125	24	24
160	23	
200	20	
250	18	20
315	25	
400	31	
500	35	34
630	38	
800	40	
1000	42	41
1250	43	
1600	43	
2000	41	38
2500	34	
3150	37	
4000	41	40
5000	45	



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Sound Insulation Prediction (v10.0.6)

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Date: 2/25/2026

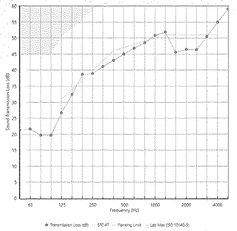
Job Name:

STC 47
OITC 34

System description

Panel 1	1 x 0.626 in Type X Gypsum Board
Frame	Timber stud (5.47 in x 1.85 in.), Stud spacing: 24 in., Cavity Width 5.47 in. + 5.984 in. fiberglass (1.4 lb/ft3)
Panel 2	1 x 0.594 in OSB (Oriented Strand Board) + 1 x 0.866 in Stucco
Details	Panel Size: 8.9 ft x 13.1 ft, Partition surface mass = 12.7 lb/ft², Mass-air-mass resonant frequency = ; 47 Hz

Freq. (Hz)	TL (dB)	Rtot (dB)
50	21	
63	22	21
80	20	
100	20	
125	27	23
160	22	
200	39	
250	39	39
315	41	
400	43	
500	45	45
630	47	
800	49	
1000	51	50
1250	52	
1600	46	
2000	46	46
2500	46	
3150	50	
4000	55	53
5000	59	



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Sound Insulation Prediction (v10.0.6)

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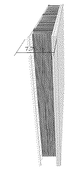
Date: 2/25/2026

Job Name:



STC 47
OITC 34

System description

Panel 1	1 x 0.626 in Type X Gypsum Board
Frame	Timber stud (5.47 in x 1.85 in.), Stud spacing: 24 in., Cavity Width 5.47 in. + 5.984 in. fiberglass (1.4 lb/ft3)
Panel 2	1 x 0.594 in OSB (Oriented Strand Board) + 1 x 0.866 in Stucco
Details	Panel Size: 8.9 ft x 13.1 ft, Partition surface mass = 12.7 lb/ft², Mass-air-mass resonant frequency = ; 47 Hz

Freq. (Hz)	TL (dB)	Rtot (dB)
50	21	
63	21	20
80	19	
100	20	
125	27	24
160	32	
200	39	
250	39	39
315	41	
400	43	
500	45	45
630	47	
800	49	
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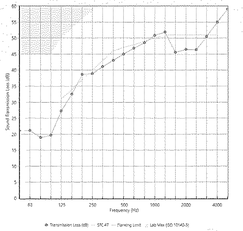
1250	52	
1600	46	
2000	46	46
2500	46	
3150	50	
4000	55	53
5000	59	



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Sound Insulation Prediction (v10.0.6)

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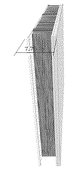
Date: 2/25/2026

Job Name:



STC 47
OITC 34

System description

Panel 1	1 x 0.626 in Type X Gypsum Board
Frame	Timber stud (5.47 in x 1.85 in.), Stud spacing: 24 in., Cavity Width 5.47 in. + 5.984 in. fiberglass (1.4 lb/ft3)
Panel 2	1 x 0.594 in OSB (Oriented Strand Board) + 1 x 0.866 in Stucco
Details	Panel Size: 8.9 ft x 13.1 ft, Partition surface mass = 12.7 lb/ft², Mass-air-mass resonant frequency = ; 47 Hz

Freq. (Hz)	TL (dB)	Rtot (dB)
50	21	
63	21	20
80	19	
100	20	
125	27	24
160	32	
200	39	
250	39	39
315	41	
400	43	
500	45	45
630	47	
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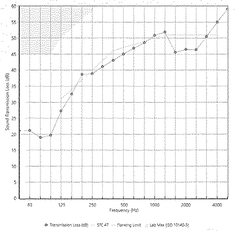
4000	55	53
5000	59	



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Sound Insulation Prediction (v10.0.6)

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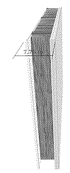
Date: 2/25/2026

Job Name:



STC 47
OITC 34

System description

Panel 1	1 x 0.626 in Type X Gypsum Board
Frame	Timber stud (5.47 in x 1.85 in.), Stud spacing: 24 in., Cavity Width 5.47 in. + 5.984 in. fiberglass (1.4 lb/ft3)
Panel 2	1 x 0.594 in OSB (Oriented Strand Board) + 1 x 0.866 in Stucco
Details	Panel Size: 8.9 ft x 13.1 ft, Partition surface mass = 12.7 lb/ft², Mass-air-mass resonant frequency = ; 47 Hz

Freq. (Hz)	TL (dB)	Rtot (dB)
50	21	
63	21	20
80	19	
100	20	
125	27	24
160	32	
200	39	
250	39	39
315	41	
400	43	
500	45	45
630	47	
800	49	
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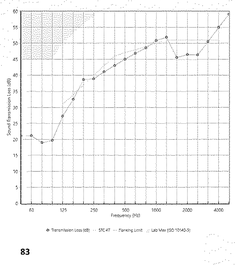
1250	52	
1600	46	
2000	46	46
2500	46	
3150	50	
4000	55	53
5000	59	



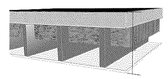
83

Sound Insulation Prediction (v10.0.6)

Program copyright Marshall Day Acoustics 2023 | Margin of error is generally within STC ± 3 dB

Date: 2/25/2026

Job Name:



STC 51
OITC 42

System description

Panel 1	1 x 0.138 in Asphalt Shingles (2.7lb/ft²) + 1 x 4.012 in Kingspan KS42 MF Fire-rated 4" + 1 x 0.469 in Plywood
Frame	Solid Joist (12 in x 1.85 in.), Stud spacing: 16 in., Cavity Width 12 in. + 5.984 in. fiberglass (1.4 lb/ft3))
Panel 2	1 x 0.626 in Type C Gypsum Board
Details	Panel Size: 8.9 ft x 13.1 ft, Partition surface mass = 12 lb/ft², Mass-air-mass resonant frequency = ; 32 Hz

Freq. (Hz)	TL (dB)	Rtot (dB)
50	27	
63	29	28
80	31	
100	32	
125	33	33
160	33	
200	39	
250	42	41
315	45	
400	47	
500	50	49
630	52	
800	53	
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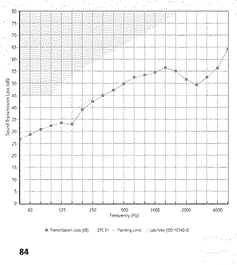
1250	56	
1600	55	
2000	52	51
2500	49	
3150	52	
4000	56	56
5000	64	



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CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.0945.000

Description

CANOPY - PHASE 2 NOISE ANALYSIS

Scale

CITY OF IRVINE
BUILDING & SAFETY DIVISION

G2.106

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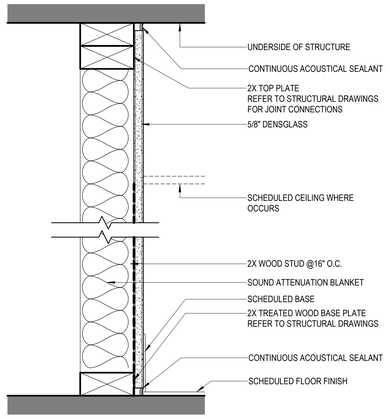
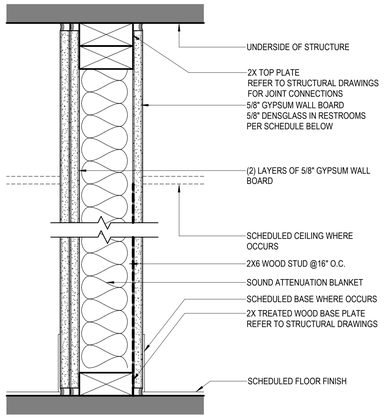


WALL TYPE	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	R VALUE	STC Rating	FIRE RTG	REMARKS
D4A	3 1/2"	16" O.C.	S1.030	S1.030	R19	-		

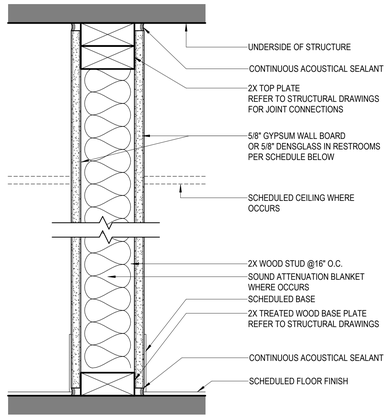
03 PARTITION TYPE 'D'
SCALE: 3" = 1'-0"



WALL TYPE	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	R VALUE	STC Rating	FIRE RTG	REMARKS
C6A	5 1/2"	16" O.C.	S1.030	S1.030	R19	40 *		5/8" DENSGLASS @RESTROOM SIDE

NOTE:
* ACOUSTICAL REPORT IS A DEFERRED COMPLIANCE ITEM. SEE G0.000.

02 PARTITION TYPE 'C'
SCALE: 3" = 1'-0"



WALL TYPE	FRAMING DEPTH	FRAMING SPACING	DETAILS TOP	DETAILS BOT	R VALUE	STC Rating	FIRE RTG	REMARKS
A4A	3 1/2"	16" O.C.	S1.030	S1.030	-	-		5/8" DENSGLASS EACH SIDE OF WALL
A6A	5 1/2"	16" O.C.	S1.030	S1.030	R19	-		5/8" DENSGLASS @RESTROOM SIDE

01 PARTITION TYPE 'A'
SCALE: 3" = 1'-0"

08 EW04 - EXTERIOR FIBER CEMENT BOARD
SCALE: 3" = 1'-0"

07 EW03 - EXTERIOR 4" FIBER CEMENT SIDING
SCALE: 3" = 1'-0"

06 EW02 - EXTERIOR 24"FIBER CEMENT BOARD
SCALE: 3" = 1'-0"

05 EW01 - EXTERIOR METAL PANEL DETAIL
SCALE: 3" = 1'-0"

BASIS OF DESIGN OR APPROVED EQUAL

09 METAL PANEL ATTACHMENT REQUIREMENTS
SCALE: 12" = 1'-0"

SHEET LEGEND

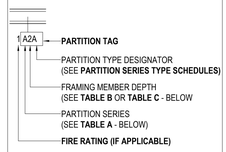


TABLE A- PARTITION SERIES CONSTRUCTION ASSEMBLY

SERIES	SHEATHING	FRAMING MEMBERS	SHEATHING
A	1-LAYER	STUD	1-LAYER
C	1-LAYER	STUD	2-LAYERS
D	1-LAYER	STUD	NONE
E	2-LAYERS	STUD	NONE

TABLE B- FRAMING DEPTH SCHEDULE

TAG NUMBER DESIGNATION	WOOD STUD DEPTH
4	3 1/2"
6	5 1/2"
8	7 1/4"
10	9 1/4"

PARTITION SERIES TYPE SCHEDULES

CONSTRUCTION TYPE	
A	SLAB TO STRCTURE

GN-01. PARTITION TYPES ARE NOT SEQUENTIAL.

GN-02. ALL PARTITION SHEATHING TO BE 5/8" GYPSUM BOARD UNLESS OTHERWISE NOTED.

GN-03. REFER TO G5.000 SERIES FOR TOP OF PARTITION AND G5.000 SERIES FOR BOTTOM OF PARTITION CONDITIONS LISTED IN PARTITION SCHEDULE. REFER TO STRUCTURAL DRAWINGS.

GN-04. ALL PARTITIONS SHALL BE COORDINATED WITH SCHEDULED FINISHES FOR PARTITION LAYOUT AND REQUIRED CLEARANCES.

GN-05. PROVIDE BACKING PER DETAIL IN PARTITIONS FOR ARTWORK HANGING AS INDICATED. SEE CONSTRUCTION PLAN(S) AND/ OR INTERIOR ELEVATIONS FOR LOCATIONS.

GN-06. CONTRACTOR TO RE-CONFIRM STUD SIZING AND SUBMIT SELECTION CRITERIA FOR REVIEW INCLUDING DELINEATION OF SLAB TO UNDERSIDE OF SLAB INFORMATION

FASTENER SPACING FOR DRYWALL AND SHEATHING
8" O.C. AT PANEL EDGES
12" O.C. AT PANEL FIELD
TYPE 'S' SCREWS

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
PARTITION DETAILS

Scale
NOT TO SCALE

G5.000

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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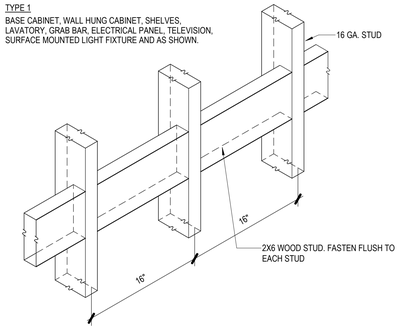
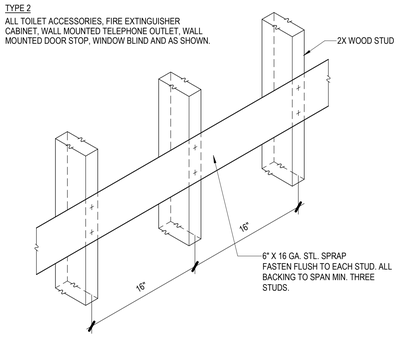
TYPE 1

BASE CABINET, WALL HUNG CABINET, SHELVES, LAVATORY, GRAB BAR, ELECTRICAL PANEL, TELEVISION, SURFACE MOUNTED LIGHT FIXTURE AND AS SHOWN.



TYPE 2

ALL TOILET ACCESSORIES, FIRE EXTINGUISHER CABINET, WALL MOUNTED TELEPHONE OUTLET, WALL MOUNTED DOOR STOP, WINDOW BLIND AND AS SHOWN.



NOTES:

1. EXTEND BACKING PLATES TO LAST STUD BEYOND FACE OF FIXTURE OR ACCESSORY - 3 STUDS MIN.
2. PROVIDE METAL SLEEVES THROUGH WALL FINISH AT FIXTURE FASTENING, TYP.
3. ALL BACKING PLATES SHOWN OR NOT SHALL BE SCREWED TO STUDS, TYP.

02 BACKING PLATE

SCALE: 3" = 1'-0"

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
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	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.3945.000

Description

PARTITION DETAILS

Scale

3" = 1'-0"

G5.001

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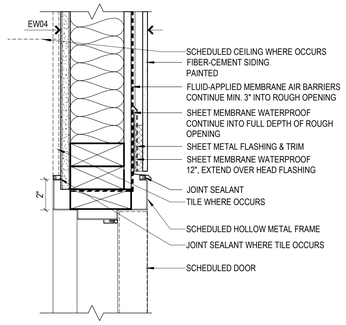
DOOR AND FRAME SCHEDULE

DOOR ASSEMBLY			DOOR				FRAME				
			DIMENSIONS								
NUMBER	LOCATION	TYPE	WIDTH	HEIGHT	THICKNESS	FINISH	MATERIAL	FINISH	FIRE RATING	HARDWARE GROUP	REMARKS
101.1	ASSUMED DINING A	B	6' - 0"	7' - 0"	1/2"	AL / GL	AL	EXPT-04	-	3	
101.2	ASSUMED DINING A	B	6' - 0"	7' - 0"	1/2"	AL / GL	AL	EXPT-04	-	3	
101.3	ASSUMED DINING A	B	6' - 0"	7' - 0"	1/2"	AL / GL	AL	EXPT-04	-	3	
101.4	ASSUMED DINING A	B	6' - 0"	7' - 0"	1/2"	AL / GL	AL	EXPT-04	-	3	
101.5	ASSUMED DINING A	C	15' - 4"	10' -30"	2"	AL / GL	AL	EXPT-04	-		15' - 4" WIDE X 10' - 0" HIGH OPENING. HARDWARE GROUP PER MANUFACTURER AND PROVIDES LOCK FUNCTION. FINISH PER ELEVATION.
101.6	ASSUMED DINING A	C	15' - 4"	10' -30"	2"	AL / GL	AL	EXPT-04	-		15' - 4" WIDE X 10' - 0" HIGH OPENING. HARDWARE GROUP PER MANUFACTURER AND PROVIDES LOCK FUNCTION. FINISH PER ELEVATION.
102.1	ASSUMED DINING B	B	6' - 0"	7' - 0"	1/2"	AL / GL	AL	EXPT-04	-	3	
103.1	ASSUMED DINING C	B	6' - 0"	7' - 0"	1/2"	AL / GL	AL	EXPT-04	-	3	
104.1	ASSUMED DINING D	B	6' - 0"	7' - 0"	1/2"	AL / GL	AL	EXPT-04	-	3	
105A	ROOF ACCESS	A	3' - 0"	7' - 0"	1 3/4"	INSUL HM / EXPT-03	INSUL HM	EXPT-03	-	1	NO LEVER AT EXTERIOR SIDE.
105B	ROOF ACCESS	D	3' - 0"	4' - 0"	1 3/4"	INSUL HM / EXPT-03	INSUL HM	EXPT-03		4	ROOF ACCESS WITH STORROOM LOCK AND 4-SIDED FRAME. BOTTOM FRAME AT 15'-10" ABOVE FINISH FLOOR (FF=297.90).
107	JANITOR	A	3' - 0"	7' - 0"	1 3/4"	INSUL HM / EXPT-03	INSUL HM	EXPT-03	-	1	PROVIDE 3/4" UNDERCUT AT DOOR LEAF.
108	WOMEN'S RESTROOM	A	3' - 0"	7' - 0"	1 3/4"	INSUL HM / EXPT-03	INSUL HM	EXPT-03	-	2	
109	MEN'S RESTROOM	A	3' - 0"	7' - 0"	1 3/4"	INSUL HM / EXPT-03	INSUL HM	EXPT-03	-	2	

NOTE:
1. REFER TO FINISH SCHEDULE ON G8.000 FOR EXTERIOR PAINT (EXPT-0X) FINISHES.

2. ALL GLASS TO BE VITRO INSULATING UNIT, SOLARBAN 60 ON STARPHIRE 6MM(2) | AIR 1/2" | STARPHIRE 6MM
   OUTDOOR LITE: STARPHIRE WITH A SECOND SURFACE SOLARBAN 60;
   1/2" AIR;
   INDOOR LITE: STARPHIRE 6MM (2).
   REFER TO GLASS DATA SHEET ON THIS SHEET.

3. OVERALL U-FACTOR FOR OPAQUE DOORS (DOOR 105A, 105B, 107, 108 AND 109): 0.5 (REFER TO MECHANICAL DRAWINGS).



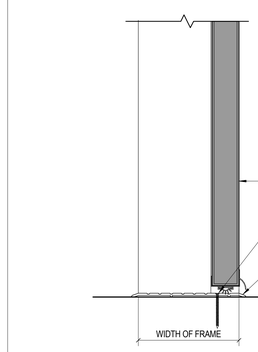
06 DOOR - HOLLOW METAL HEAD EXT.
SCALE: 3" = 1'-0"

GLASS DATA SHEET

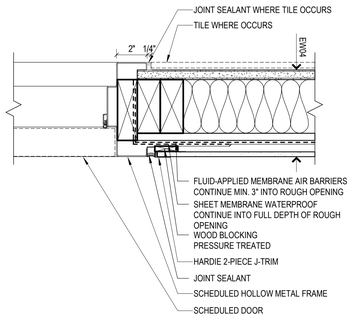
Vitro Architectural Glass

Solarban® 60 on Starphire® 6mm (2) | Air 1/2" (12.7mm) | Starphire® 6mm	Thickness (inches)	Transmittance (T) v%	Reflectance Visible v%	Transmittance Total Solar %	Exterior Solar Reflectance %	Diffuse Visible Reflectance %	Interior Visible Reflectance %	U Value (Winter Nighttime) (Btu/hr-ft²-°F)	U Value (Summer Daytime) (Btu/hr-ft²-°F)	Shading Coefficient	Solar Heat Gain Coefficient (SHGC)	Light To Solar Gain (LSG)	Thermal Stress Risk (Annealed/Heat)
1"	24	74	39	41	11	12	0.29	0.27	0.48	0.41	1.80	Low	

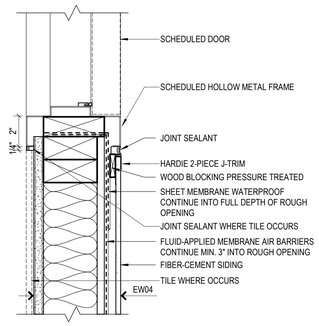
Specifications
Insulating Unit Construction
Solarban® 60 on Starphire® 6mm (2) | Air 1/2" (12.7mm) | Starphire® 6mm
Outdoor Lite: Starphire® with a second surface Solarban® 60
Indoor Lite: Starphire® 6mm
Vitro Approved Manufacturers/Where to Buy Vitro Products: Vitro Certified™Network
Certification: Vitro Ito(s) are Cradle to Cradle certified by McDonough Braungart Design Chemistry, LLC (MBDC www.mbdc.com)



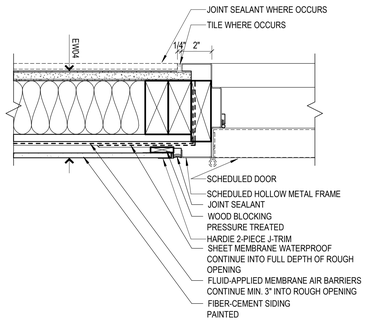
11 DOOR - THRESHOLD
SCALE: 3" = 1'-0"



07 DOOR - HOLLOW METAL JAMB EXT.
SCALE: 3" = 1'-0"



12 DOOR - HOLLOW METAL SILL EXT.
SCALE: 3" = 1'-0"



08 DOOR - HOLLOW METAL HINGE JAMB EXT.
SCALE: 3" = 1'-0"

HARDWARE TYPES

HARDWARE SET 1: SINGLE EXTERIOR LOCKSET

A. SCHLAGE, #L9080-03A-622, STOREROOM LOCKSET. 6 PIN. SAME FINISH BOTH SIDES, 622 MATTE BLACK. 38" A.F.F. TO CENTERLINE OF LEVER.
B. 4 1/2" X 4 1/2" HAGER BB-1279 (STANLEY AND MCKINNEY ARE ACCEPTABLE ALTERNATES), BUTT HINGES TWO PAIR, FLAT BLACK L1.
C. TRIMCO #1211, FLOOR STOP, FINISH TO MATCH LEVER.
D. PEMCO 316AS, PERIMETER GASKET, BSP
E. PEMCO 216AV, DOOR SWEEP, BSP
F. NGP 325, THRESHOLD, MBL

HARDWARE SET 2: SINGLE EXTERIOR LATCHSET

A. SCHLAGE, #L9010-03A-626, LATCHSET. 6 PIN. SAME FINISH BOTH SIDES, 622 MATTE BLACK. 38" A.F.F. TO CENTERLINE OF LEVER.
B. 4 1/2" X 4 1/2" HAGER BB-1279 (STANLEY AND MCKINNEY ARE ACCEPTABLE ALTERNATES), BUTT HINGES TWO PAIR, FLAT BLACK L1.
C. TRIMCO #1211, FLOOR STOP, FINISH TO MATCH LEVER.
D. PEMCO 316AS, PERIMETER GASKET, BSP
E. PEMCO 216AV, DOOR SWEEP, BSP
F. NGP 325, THRESHOLD, MBL

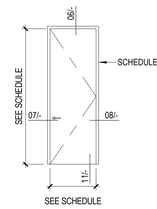
HARDWARE SET 3: DOUBLE GLASS EXTERIOR

A. FLOOR CLOSER: DORMA, BTS-75V-BF, ADJUSTABLE DELAYED ACTION RECESSED 90 DEGREE ROTATION WITH TOP PIVOT, WITH HOLD OPEN FEATURE.
B. (2) CRL PH20ABS BRUSHED STAINLESS TOP DOOR PATCH FITTING WITH 1NT303 INSERT, MATTE BLACK FINISH.
C. (2) CRL PH10CBS BRUSHED STAINLESS BOTTOM DOOR PATCH WITH 1NT 301 INSERT, MATTE BLACK FINISH.
D. (1) CRL PA100J4GKBS BLUMCRAFT BRUSHED STAINLESS LEFT HAND REVERSE GLASS MOUNT KEYED ACCESS "J" EXTERIOR, TOP SECURING PANIC HANDLE, LOCKABLE FROM INTERIOR AND EXTERIOR, MATTE BLACK FINISH.
E. (1) CRL PA100J3GKBS BLUMCRAFT BRUSHED STAINLESS RIGHT HAND REVERSE GLASS MOUNT KEYED ACCESS "J" EXTERIOR, TOP SECURING PANIC HANDLE, LOCKABLE FROM INTERIOR AND EXTERIOR, MATTE BLACK FINISH.
F. TRIMCO #1211 FLOOR STOP, FINISH TO MATCH PULLS @ INSIDE OF ROOM ONLY.

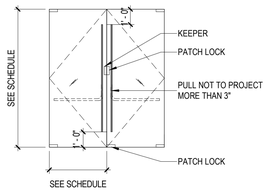
HARDWARE SET 4: SINGLE EXTERIOR ROOF ACCESS

A. SCHLAGE, #L9080-03A-626, STOREROOM LOCKSET. 6 PIN. SAME FINISH BOTH SIDES, 622 MATTE BLACK. 38" A.F.F. TO CENTERLINE OF LEVER.
B. 4 1/2" X 4 1/2" HAGER BB-1279 (STANLEY AND MCKINNEY ARE ACCEPTABLE ALTERNATES), BUTT HINGES ONE PAIR, FLAT BLACK L1.
C. 4-SIDED ACCESS DOOR AND FRAME, HMF EXPRESS, 3'-0" WIDE, PAINTED TO MATCH EXPT-03.
D. PEMCO 316AS, PERIMETER GASKET, BSP

DPPR TYPE

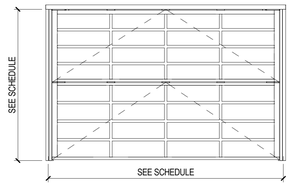


TYPE "A"
FRAMED INSULATED HOLLOW METAL DOOR SINGLE DOOR



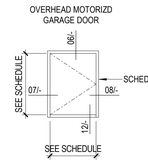
REFER TO A6.001 FOR DETAILS

TYPE 'B'
FRAMELESS GLASS DOUBLE DOOR



REFER TO A6.001 AND A6.002 FOR DETAILS

TYPE "C"
OVERHEAD MOTORIZD GARAGE DOOR



TYPE "D"
FRAMED INSULATED HOLLOW METAL ACCESS SINGLE DOOR

LEGEND

AL	ALUMINUM
EXPT	EXTERIOR PAINT (REFER TO FINISH SCHEDULE ON G8.000)
GL	GLASS
INSUL HM	INSULATED HOLLOW METAL

DOOR NOTES

1. CONTRACTOR TO PROVIDE COMPLETE DOOR/HARDWARE PACKAGE TO FUNCTION AS INDICATED. ALL DOORS AND HARDWARE SHALL BE BUILDING STANDARD, U.O.N. SUBMIT COMPLETE SPECS TO ARCHITECT FOR REVIEW AND APPROVAL.
2. ALL HARDWARE TO MEET TITLE 24 AND ACCESSIBILITY REQUIREMENTS. SEE REQUIRED CLEARANCES AND MOUNTING HEIGHTS ON SHEET G1.021 DETAIL #04. SEE REQUIRED ACCESSIBLE THRESHOLD ON SHEET G1.020 DETAIL #01. SEE REQUIRED DOOR MANEUVERING CLEARANCE ON SHEET G1.020 DETAIL #02.
3. CONTRACTOR TO FIELD VERIFY CONDITION, HAND, THROAT SIZE AND WORKABILITY OF ALL DOORS AND HARDWARE; REPAIR OR REPLACE AS REQUIRED.
4. HINGES AT RATED ASSEMBLIES SHALL BE BALL BEARING.
5. DOOR AND GATE OPENING FORCE. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE OTHER THAN FIRE DOORS SHALL BE AS FOLLOWS (11B-404.2.9):
   1. INTERIOR HINGED DOORS AND GATES: 5 LBS MAX
   2. SLIDING OR FOLDER DOORS: 5 LBS MAX
   3. REQUIRED FIRE DOORS: THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 LBS
   4. EXTERIOR HINGED DOORS: 5 LBS MAX
6. LOCK CYLINDERS AND KEYS SHALL BE COORDINATED WITH TENANT AND BUILDING OWNER.
7. SWINGING DOOR AND GATE SURFACES WITHIN 10 INCHES OF THE FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE (11B-404.2.10)
8. ALL GLAZING SHALL BE TEMPERED, ALL EXPOSED EDGES SHALL BE POLISHED. GLAZING WITHIN A 24" ARC OF EITHER SIDE OF DOORS MUST BE OF SAFETY GLAZING MATERIAL (CBC SEC. 2406).
9. OPERABLE PARTS OF DOOR HARDWARE SHALL BE 34 INCHES MINIMUM AND 44 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 LBS (11B-309.4, 11B-404.2.7)
10. TRIM THE BOTTOMS OF DOORS TO CLEAR THE TOP OF FINISHED FLOOR, AS APPLICABLE, BY 1/4" INCH MINIMUM UON. VERIFY SLAB CONDITIONS. TRIM EACH DOOR TO FIT CONDITION. WHERE VARIATIONS IN FLOOR ELEVATION EXIST, DOORS SHALL BE ORDERED WITH BOTTOM STILE SIZED TO ACCOMMODATE THESE UNDERCUT CONDITIONS.
11. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. SPECIAL LOCKING DEVICES SHALL BE OF AN APPROVED TYPE. ALL NEW DOORS SHALL HAVE APPROVED LEVER HANDLES.
12. DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MAXIMUM.
13. ALL ELECTRIFIED LOCKING HARWARE WILL REQUIRE REQUEST TO EXIST SWITCHES INSIDE THE HARDWARE.
14. HOLLOW METAL DOOR SHALL BE OF A MINIMUM OF 16 U.S. GAUGE AND HAVE SUFFICIENT REINFORCEMENT TO MAINTAIN THE DESIGNATED THICKNESS OF THE DOOR WHEN ANY LOCKING DEVICE IS INSTALLED; SUCH REINFORMCEMENT BEING ABLE TO RESTRICT COLLAPSING OF THE DOOR AROUND ANY LOCKING DEVICE.

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△	Date	Description
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	09.03.2025	DESIGN DEVELOPMENT
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Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

COPY FOR BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.8945.000

Description
DOOR SCHEDULE & DETAILS

Scale
NOT TO SCALE

G6.000

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FINISH SCHEDULE

FINISH CODE	MANUFACTURER	MODEL	DESCRIPTION
ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS			
GL-01	VITRO ARCHITECTEURAL GLASS	OUTDOOR LITE: SOLARBAN 60 ON STARPHIRE 6MM (2); AIR 1/2", INDOOR LITE: STARPHIRE 6MM	EXTERIOR GLAZING
EXTERIOR PAINT			
EXPT-01	SHERWIN WILLIAMS	BASE: SW 9104, FINISH: SW 7033 BRAINSTORM BRONZE	CUSTOM 3-CAT PAINT APPLICATION
EXPT-02	SHERWIN WILLIAMS	SW 9141 WATERLOO	
EXPT-03	SHERWIN WILLIAMS	SW 7075 WEB GRAY	WHERE STRUCTURAL STEEL OR METAL OCCURS, PROVIDE PRIMER FOR STRUCTURAL STEEL AND FINISH COAT TO RESIST EROSION.
EXPT-04	SHERWIN WILLIAMS	SW 7076 CYBERSPACE	WHERE STRUCTURAL STEEL OR METAL OCCURS, PROVIDE PRIMER FOR STRUCTURAL STEEL AND FINISH COAT TO RESIST EROSION.
INTERIOR PAINT			
PT-01	SHERWIN WILLIAMS	WHITE	JANITOR CLOSET WALL
MODIFIED BITUMINOUS MEMBRANE ROOFING			
EXRF-01	SIPLAST	PARADIENE 30; COLOR: STONEGRAY A-877	PLACE OVER RIGID INSULATION. ICC ESR #1713. AN NDL FULL SYSTEM WARRANTY/GUARRANTEE, 20-YEAR MATERIAL AND INSTALLATION WARRANTY REQUIRES A MANUFACTURER APPROVED APPLICATOR FOR INSTALLATION. CUSTOMER SERVICE IN NORTH AMERICA: 800.922.8800
RESILIENT BASE AND ACCESSORIES			
WB-01	TARKETT / JOHNSONITE	BASEWORKS THERMOSET RUBBER WALL BASE, RUBBER, 4" X 1/8"	JANITOR CLOSET WALL BASE
SOLID SURFACE			
SS-01	CORIAN SOLID SURFACE; FINISH: TBD	CORIAN TROUGH SINK	RESTROOM COUNTERTOP
TILING			
TL-01	TILEBAR	CERAMIC SUBWAY TILE; BAYOU WHITE 3X12; MATTE	ON ALL RESTROOM WALLS FROM FLOOR UP TO 5'-0"
TL-02	SPECCERAMICS	2.875" X 9.75" PORCELAIN FIELD TILE; COLOR: DIAS; MATTE	ON RESTROOM FLOOR; REFER TO RESTROOM FINISH PLAN FOR TILE PATTERN.
WALL COVERINGS			
FRP-01	4' HIGH WHITE FRP PANEL	4' HIGH WHITE FRP PANEL	ABOVE JANITOR MOP SINK
WC-01	SPOONFLOWER	SWOOPING SWALLOW WALLPAPER; BLUE ON VANILLA/LARGE BIRDS	ON ALL RESTROOM WALLS FROM 5'-0" A.F.F. UP TO CEILING

TOILET ACCESSORY SCHEDULE

TYPE MARK	DESCRIPTION	MANUFACTURER	MODEL	FINISH	NOTES
TA-01	36" GRAB BAR	BOBRICK	NO. 150C MBLK, 36", MATTE BLACK FINISH		
TA-02	42" GRAB BAR	BOBRICK	NO. 150C MBLK, 42", MATTE BLACK FINISH		
TA-03	TOILET TISSUE DISPENSER	BOBRICK WASHROOM EQUIPMENT, INC.	B-3588		
TA-04	SEAT COVER DISPENSER	BOBRICK WASHROOM EQUIPMENT, INC.	B-221		
TA-05	PIPE PROTECTION				
TA-06	MIRROR	BOBRICK WASHROOM EQUIPMENT, INC.	B-165		
TA-07	RECESSED COMBINATION TOWEL AND WASTE UNIT	BOBRICK WASHROOM EQUIPMENT, INC.	B-36903		
TA-08	LAVATORY MOUNTED SOAP DISPENSER	BOBRICK WASHROOM EQUIPMENT, INC.	B-822		
TA-09	RESTROOM SIGNAGE		RESTROOM SIGNAGE		
TA-10	FINO COLLECTION SURFACE MOUNTED COAT HOOK	BOBRICK	B-9542		
TA-11	TOILET PARTITION	BOBRICK WASHROOM EQUIPMENT, INC.			
TA-12	BABY CHANGING STATION	KOALA KARE	KB310-SSWM		
TA-13	SANITARY NAPKIN DISPOSAL	BOBRICK WASHROOM EQUIPMENT, INC.	B-35139		

NOTE: REFER TO PLUMBING DRAWINGS FOR PLUMBING FIXTURE SCHEDULE.

LIGHT FIXTURE SCHEDULE

ITEM	MANUFACTURER	MODEL	DESCRIPTION
L01E			4' LONG STRIP LIGHT. REFER TO ELECTRICAL DRAWINGS.
L02			4' LONG STRIP LIGHT @JANITOR. REFER TO ELECTRICAL DRAWINGS.
L03			2' LONG STRIP LIGHT, WALL MOUNTED, IN ROOF ACCESS. REFER TO ELECTRICAL DRAWINGS.
L04	Acuity Brands Lighting		WALL MOUNTED EXTERIOR EGRESS LIGHT @SWITCHGEAR. REFER TO ELECTRICAL DRAWINGS.
LT-01	ALVA LIGHTING	TESS 30 3000K WHT	ARCHITECTURAL SCALE, WET-LISTED EXTERIOR WALL SCONCE AT EXTERIOR WALL
LT-02	KLIK USA	LED LEDPOD XL50 FLAT	RECESSED DOWNLIGHT AT EXTERIOR CANOPY
LT-03	LITHONIA LIGHTING	LDN4	RECESSED CAN LIGHT AT RESTROOM CEILING SOFFIT
LT-04	ALORA LIGHTING	KENSINGTON WV361230	WALL SCONCE AT RESTROOMS

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LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
SCHEDULES

Scale

G8.000

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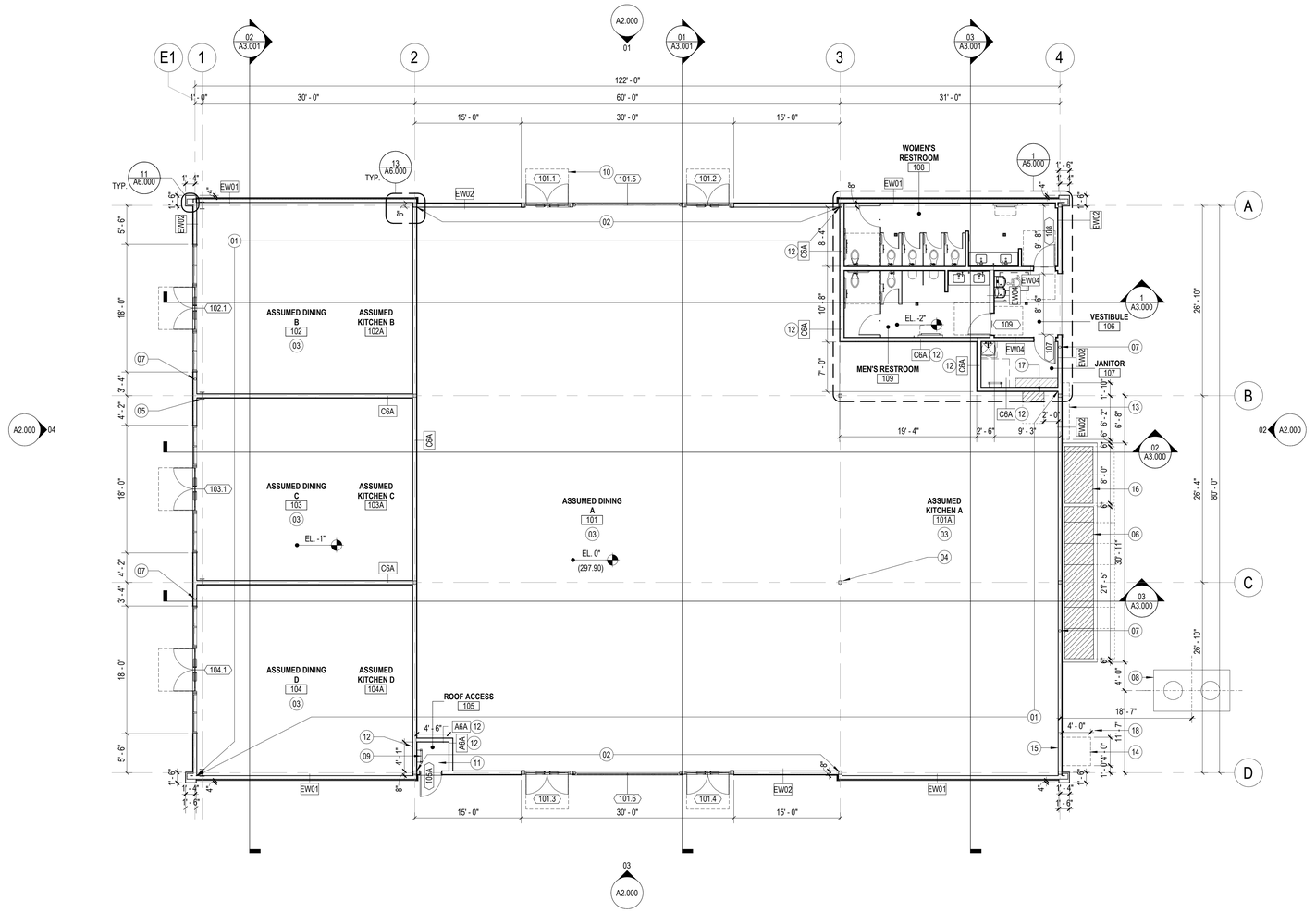

1 CONSTRUCTION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

01 NO GYPSUM WALL BOARD LARYER PROVIDED ON THE INTERIOR SIDE OF EXTERIOR WALL AT LOCATIONS INDICATED.
02 PROVIDE GYPSUM WALL BOARD AT INTERIOR SIDE OF EXTERIOR WALL FROM BOTTOM OF TRUSS UP TO ROOF. REFER TO WALL SECTIONS AND DETAILS.
03 EXPOSED CONCRETE SLAB. NO FLOOR FINISHES UNLESS OTHERWISE NOTED.
04 STRUCTURAL STEEL COLUMN. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
05 MOMENT FRAME. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
06 SWITCHGREAR IN NEMA 3R ENCLOSURE (1-800AMP, 3-400AMP, 1-200AMP, TELEBOARD) ON 6" CONCRETE PAD. REFER TO STRUCTURAL AND ELECTRICAL DRAWINGS.
07 ROOF DRAIN CONNECTION AND OVERFLOW.
08 GREASE INTERCEPTOR. REFER TO PLUMBING DRAWINGS AND CANOPY PHASE 2 CIVIL DRAWINGS (UNDER SEPARATE PERMIT) FOR ADDITIONAL INFORMATION.
09 METAL TABULAR FIXED LADDER WITH FALL PROTECTION TO ROOF HATCH, PRECISION LADDER LLC. FLH-04. REFER TO DETAIL 09/A6.100 FOR ADDITIONAL INFORMATION.
10 DOOR REQUIRED MANEUVERING CLEARANCE SHOWN IN DASH AT DOOR. REFER TO 02/G1.020. TYPICAL THROUGHOUT.
11 BROOM FINISHED CONCRETE FLOOR. PROVIDE GYPSUM WALL BOARD DOWN TO CONCRETE FLOOR. NO WALL BASE REQUIRED.
12 PROVIDE R-19 MIN. INSULATION IN WALL PER TITLE 24 ENVELOPE ANALYSIS. REFER TO PARTITION TYPES ON G5.000 AND MECHANICAL DRAWINGS.
13 LOCATION FOR GAS MANIFOLD AND FUTURE GAS METER. GAS MANIFOLD AND GAS MAIN FEEDING GAS MANIFOLD ARE BY OTHERS UNDER SEPARATE PERMIT. FUTURE GAS METERS BY FUTURE TENANTS. REFER TO PLUMBING DRAWINGS.
14 4'-0" X 4'-0" ESTIMATED FIRE RISER LOCATION AT EXTERIOR OF THE BUILDING. FIRE RISER BY APPROVED FIRE UNDERGROUND PLANS UNDER SEPARATE SUBMITTAL.
15 PROVIDE ELECTRONIC TRAP PRIMER AND ITS COLD WATER LINE, TRAP, AND CONNECT TO VENT. REFER TO PLUMBING DRAWINGS. LOCATE ELECTRONIC TRAP PRIMER WITHIN WALL. PROVIDE 12"X12" ACCESS PANEL ON FINISHED WALL BY FUTURE TENANT DURING TENANT IMPROVEMENT UNDER SEPARATE PERMIT FOR ELECTRONIC TRAP PRIMER.
16 NEMA ENCLOSURE. REFER TO ELECTRICAL DRAWINGS.
17 DISTRIBUTION BOARD. REFER TO ELECTRICAL DRAWINGS.
18 PROVIDE HUB DRAIN FOR FIRE RISER. LOCATE HUB DRAIN CLOSE TO FIRE RISER REFER TO PLUMBING DRAWINGS.

GENERAL NOTES

A REFER TO G0.002 FOR GENERAL NOTES, G0.003 FOR GRAPHIC SYMBOLS AND ABBREVIATIONS, G1.020 AND G1.021 FOR ACCESSIBILITY REQUIREMENTS & DETAILS, CLEARANCES AND MOUNTING HEIGHTS.
B REFER TO SHEET G5.000 FOR PARTITION DETAILS.
C REFER TO G6.000 FOR DOOR SCHEDULE.
D PROVIDE BLOCKING AS REQ AT ALL LOCATIONS INCLUDING, BUT NOT LIMITED TO: GRAB BARS, OVERHEAD CABINETRY, SHELVING, SIGNAGE, TOILET ROOM ACCESSORIES, WALL MOUNTED EQUIPMENT, ETC.
E NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS IN THE LOCATION(S) OF CONSTRUCTION ELEMENTS; ALSO ANY UNFORESEEN JOB CONDITIONS WHICH MIGHT AFFECT PROJECT COSTS. ADDITIONAL WORK AND/OR COSTS MUST BE APPROVED IN WRITING PRIOR TO START OF CONSTRUCTION.
F OBTAIN APPROVAL FROM ARCHITECT PRIOR TO MODIFYING OR ADJUSTING EXISTING BUILDING SYSTEMS, ARCHITECTURAL ELEMENTS, OR FIELD CONDITIONS NOT NOTED ON THE CONSTRUCTION DOCUMENTS REQUIRED TO FIT PLANS.
G ALL PARTITIONS ARE DIMENSIONED FROM FINISHED FACE TO FINISHED FACE U/ON.
H DIMENSIONS NOTED "CLEAR" OR "CLR" MUST ALLOW FOR THICKNESS OF ALL WALL FINISHES, BE ACCURATELY MAINTAINED AND SHALL NOT VARY MORE THAN 1/8" WITHOUT WRITTEN APPROVAL FROM ARCHITECT.
I DIMENSIONS MARKED +/- MEAN A TOLERANCE NOT GREATER NOR SMALLER THAN 2 INCHES FROM INDICATED DIMENSIONS. NOTIFY ARCHITECTS OF ANY DIMENSION EXCEEDING TOLERANCE & OBTAIN WRITTEN APPROVAL FROM ARCHITECT BEFORE PROCEEDING.
J "ALIGN" MEANS TO ACCURATELY LOCATE FINISHED FACES IN THE SAME PLANE.
K DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE DETAILED, WHERE SPECIFIED DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, NOTIFY ARCHITECT BEFORE PROCEEDING WITH CONSTRUCTION.
L INSTALL METAL CORNER BEADS AT ALL EXPOSED WALLBOARD EDGES. INSTALL CASING BEADS WHEREVER WALLBOARD, PLASTER, ETC. ABUTS A DISSIMILAR FINISH MATERIAL & PROVIDE SEALANT AS REQ'D. INSTALL METAL EDGE TRIM AT EXPOSED GYPSUM BOARD EDGE.
M PREP SLAB AS REQUIRED FOR SPECIFIED FINISH REF. FINISH PLAN
N ALL SLAB PENETRATIONS FOR PIPING SHALL BE FULLY PACKED & SEALED WITH FIRE-RATED MATERIALS IN ACCORDANCE WITH APPLICABLE BLDG AND FIRE CODES.
O DOOR JAMB LOCATIONS SHALL BE TYP. 4" FROM ADJ. WALL. REFER TO G1.021 FOR ALL REQUIRED ADA DOOR CLEARANCES.

DEDUCT ALTERNATE

THE LISTED DEDUCTIVE ALTERNATES ARE PROVIDED FOR REFERENCE ONLY FOR PROJECT BIDDING PURPOSE. IF CHOSEN, THE PLANS SHALL BE REVISED TO INCORPORATE ALL CHANGES AND SUBMITTED TO BUILDING & SAFETY FOR REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE OR AS A REVISION POST PERMIT ISSUANCE.

1 EXCLUDING TWO DEMISING WALLS BETWEEN SMALL TENANTS: ONE BETWEEN ASSUMED DINING B AND ASSUMED DINING C, AND THE OTHER BETWEEN ASSUME DINING C AND ASSUMED DINING D.
AIR LEAKAGE: <0.3 CFM/SF
'U' FACTOR: NFRC 100 OR PER TABLE 116-B (E.E.S.)
SHGC: NFRC 200 OR PER TABLE 116-B (E.E.S.)
2 PROVIDE PLUMBING STUB-UPS ONLY. EXCLUDING PLUMBING FIXTURES, PLUMBING ACCESSORIES, RESTROOM FINISHES, CEILING, LIGHTING, AND MECHANICAL DUCTS IN RESTROOMS.
3 NO SLAB DEPRESSION AT SMALL TENANT AREA.

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LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
CONSTRUCTION AND FINISH PLAN

Scale
1/8" = 1'-0"

True North

A1.100

CITY OF IRVINE BUILDING & SAFETY DIVISION

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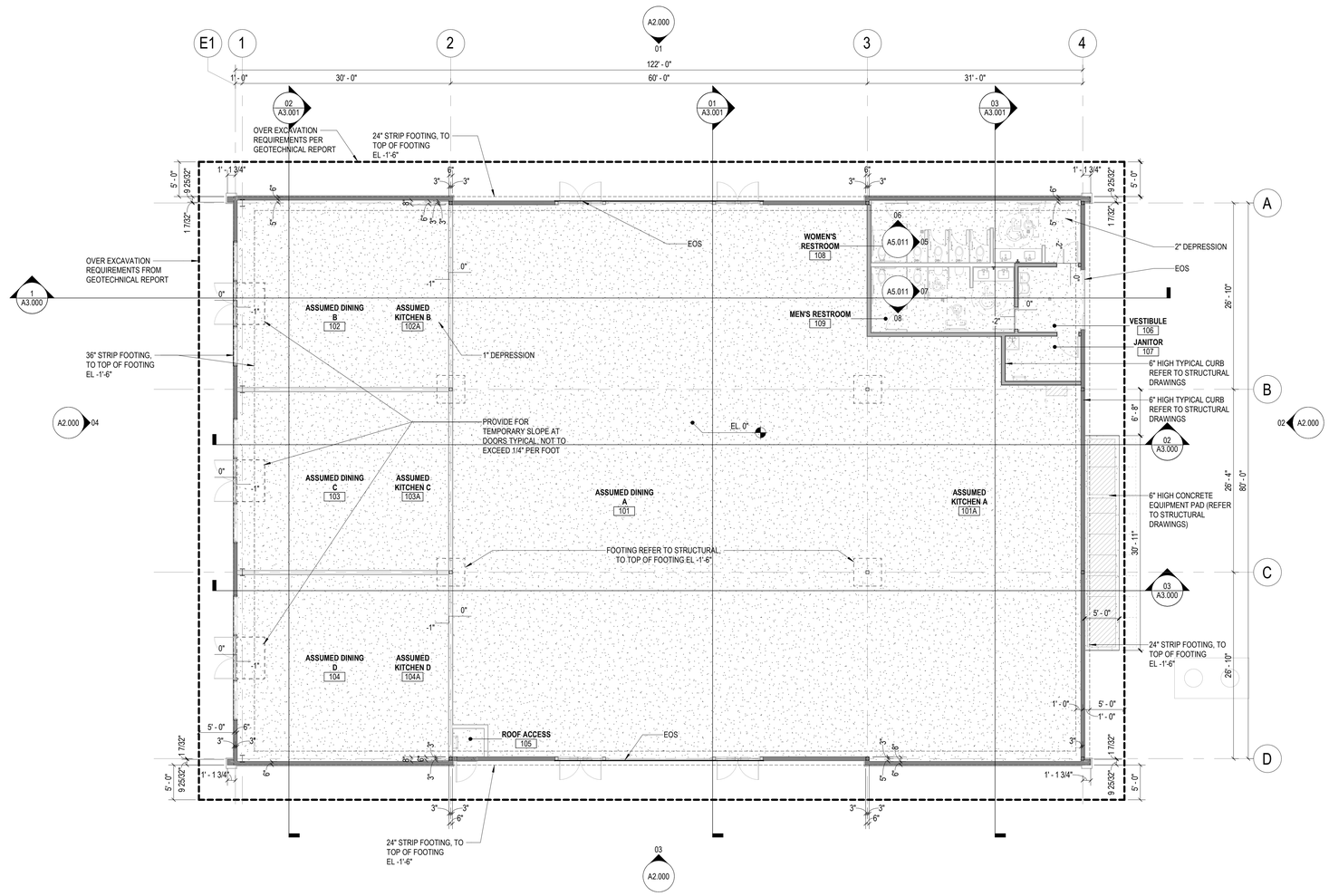

1 SLAB EDGE PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

GENERAL NOTES

A REFER TO G0.002 FOR GENERAL NOTES, G0.003 FOR GRAPHIC SYMBOLS AND ABBREVIATIONS, G1.020 AND G1.021 FOR ACCESSIBILITY REQUIREMENTS & DETAILS, CLEARANCES AND MOUNTING HEIGHTS.
B REFER TO SHEET G5.000 FOR PARTITION DETAILS.
C REFER TO G6.000 FOR DOOR SCHEDULE.
D PROVIDE BLOCKING AS REQ AT ALL LOCATIONS INCLUDING, BUT NOT LIMITED TO: GRAB BARS, OVERHEAD CABINETRY, SHELVING, SIGNAGE, TOILET ROOM ACCESSORIES, WALL MOUNTED EQUIPMENT, ETC.
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L INSTALL METAL CORNER BEADS AT ALL EXPOSED WALLBOARD EDGES. INSTALL CASING BEADS WHEREVER WALLBOARD, PLASTER, ETC. ABUTS A DISSIMILAR FINISH MATERIAL & PROVIDE SEALANT AS REQ'D. INSTALL METAL EDGE TRIM AT EXPOSED GYPSUM BOARD EDGE.
M PREP SLAB AS REQUIRED FOR SPECIFIED FINISH REF. FINISH PLAN
N ALL SLAB PENETRATIONS FOR PIPING SHALL BE FULLY PACKED & SEALED WITH FIRE-RATED MATERIALS IN ACCORDANCE WITH APPLICABLE BLDG AND FIRE CODES.
O DOOR JAMB LOCATIONS SHALL BE TYP. 4" FROM ADJ. WALL. REFER TO G1.021 FOR ALL REQUIRED ADA DOOR CLEARANCES.

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NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
SLAB EDGE PLAN

Scale
1/8" = 1'-0"

True North

A1.101

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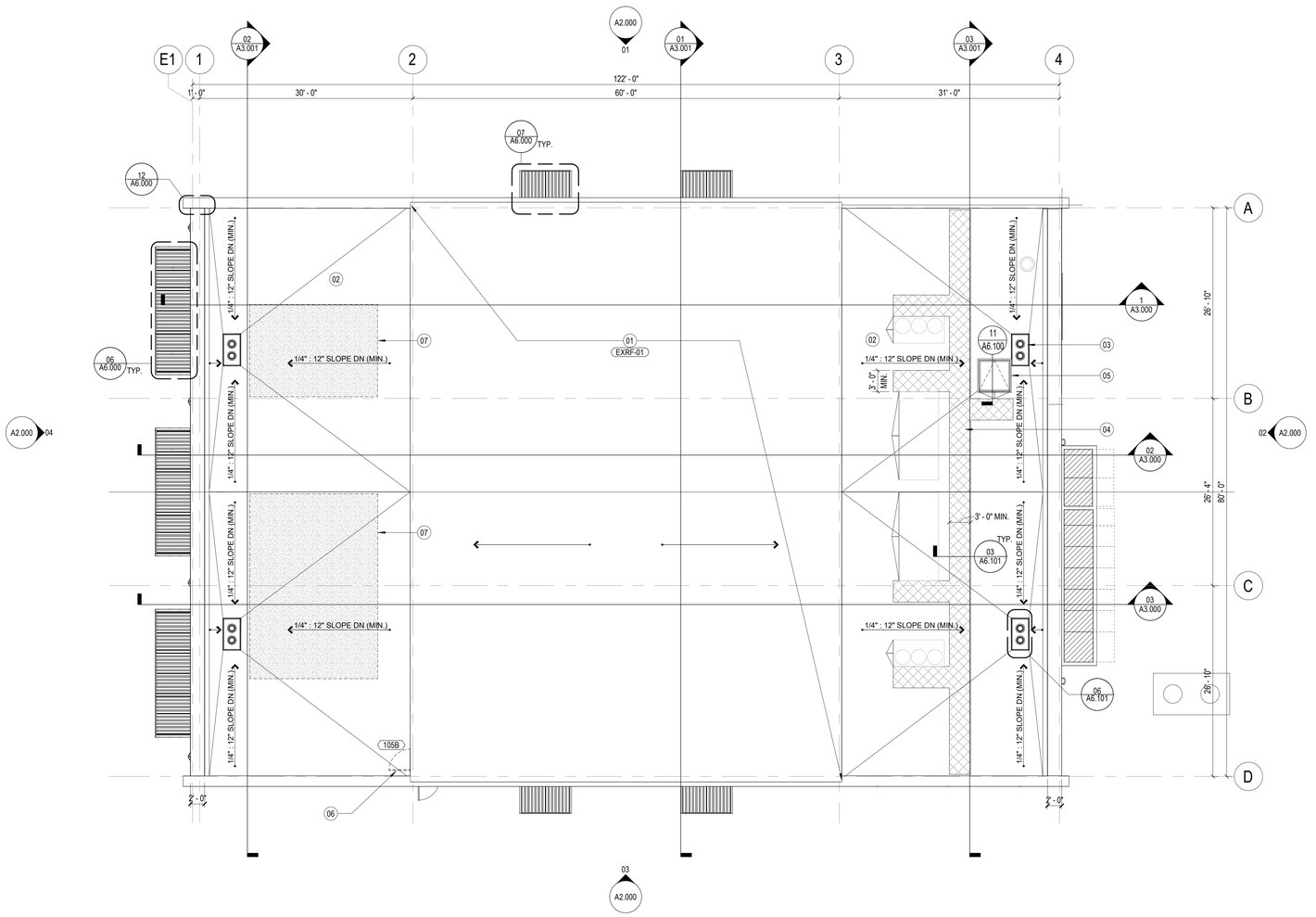

1 ROOF PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

01 TORCH-APPLIED MODIFIED BITUMINOUS PROTECTED MEMBRANE ASPHALT ROOFING. REFER TO RF01 ON A6.100 FOR ROOF ASSEMBLY AND FINISH SCHEDULE ON ROOF MEMBRANE INFORMATION. ROOF TO BE INSTALLED BY AN APPROVED APPLICATOR TO QUALIFY 20-YEAR MATERIAL AND INSTALLATION WARRANTY.
02 SINGLE-PLY ROOF MEMBRANE, WHITE. REFER TO RF02 ON A6.100 FOR ROOF ASSEMBLY.
03 ROOF DRAIN WITH OVERFLOW.
04 PROVIDE 3'-0" MIN. WIDE WALKPAD FOR ROOF UNITS MAINTENANCE TO PROTECT ROOF MEMBRANE.
05 BILCO 4X4 SINGLE LEAF ROOF ACCESS HATCH WITH THERMAL BREAK TYPE F-50TB.
06 3'W X 4'H ROOF ACCESS DOOR, PAINTED WHITE.
07 SOLAR READY AREA. REFER TO ELECTRICAL DRAWINGS.

GENERAL NOTES

A ROOF PLAN HAS INCORPORATED CITY BULLETIN 250 ON ROOF MINIMUM SLOPE AND BULLETIN 299 ON ROOF DRAIN. REFER TO G2.102 FOR INFORMATION ON THESE TWO BULLETINS.
B RIGID INSULATION SHALL COMPLY WITH CBC 2603.6. PACKAGES AND CONTAINERS OF INSULATION COMPONENTS DELIVERED TO THE JOB SITE SHALL BEAR THE LABEL OF AN APPROVED AGENCY SHOWING THE MANUFACTURER'S NAME, PRODUCT LISTING, PRODUCT IDENTIFICATION AND INFORMATION SUFFICIENT TO DETERMINE THAT THE END USE WILL COMPLY WITH THE CODE REQUIREMENTS. (CBC 2603.2)

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HANGAR 10 RECONSTRUCTION

Project Number
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Description
ROOF PLAN

Scale
1/8" = 1'-0"

True North

CITY OF IRVINE
BUILDING & SAFETY DIVISION

A1.102

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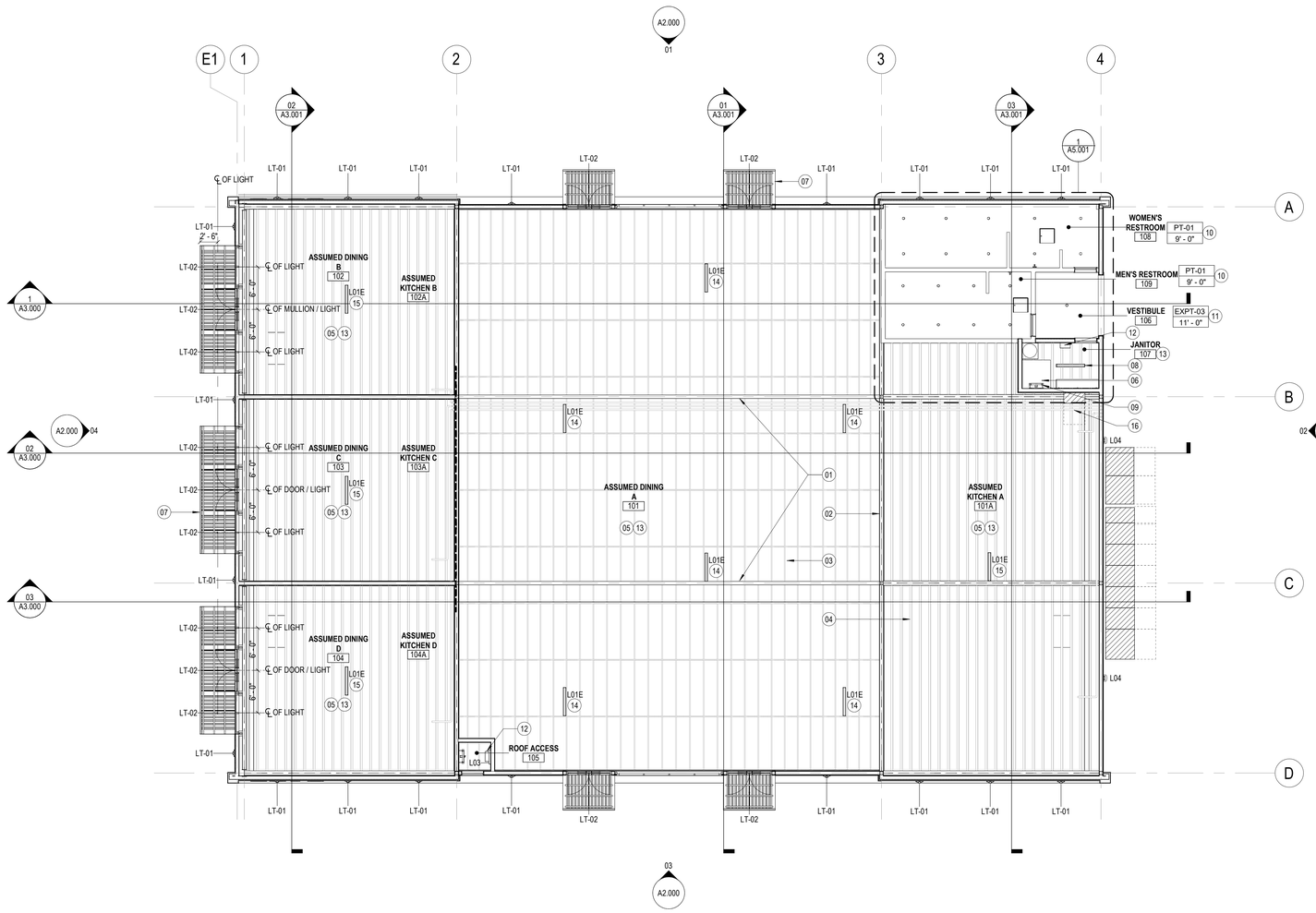

1 REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

01 STEEL TRUSS. REFER TO BUILDING SECTION FOR LOCATION. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
02 STRUCTURAL STEEL BEAMS, TYPICAL. REFER TO STRUCTURAL DRAWINGS.
03 LVL @24" O.C. AT TRUSS AREA, TYPICAL. REFER TO STRUCTURAL DRAWINGS.
04 TJI @16" O.C. AT TRUSS AREA, TYPICAL. REFER TO STRUCTURAL DRAWINGS.
05 EGRESS LIGHTING PER ELECTRICAL DRAWINGS UNLESS OTHERWISE NOTED, TYPICAL THROUGHOUT.
06 BILCO 4X4 SINGLE LEAF ROOF ACCESS HATCH WITH THERMAL BREAK TYPE F-50TB ABOVE.
07 METAL CANOPY ABOVE. TYPICAL.
08 4' LONG STRIP LIGHT PER ELECTRICAL DRAWINGS.
09 METAL TABULAR FIXED LADDER WITH FALL PROTECTION TO ROOF HATCH, PRECISION LADDER LLC. FLH-04. REFER TO DETAIL 09/A6.100 FOR ADDITIONAL INFORMATION.
10 PAINTED GYPSUM WALL BOARD CEILING SOFFIT. REFER TO A6.301 FOR CEILING DETAILS. PAINT COLOR AS INDICATED.
11 PAINTED FIBER CEMENT BOARD. PAINT COLOR AS INDICATED.
12 BI-FOLD DOOR POWER UNIT ON WALL BY MANUFACTURER. PROVIDE 32" CLEAR IN HEIGHT FROM BOTTOM OF THE UNIT UP PER MANUFACTURER REQUIREMENTS.
13 OPEN FRAMING ABOVE.
14 BOTTOM OF EGRESS LIGHT ALIGNS WITH BOTTOM OF TRUSS.
15 BOTTOM OF EGRESS LIGHT ALIGNS WITH BOTTOM OF TJI.
16 GAS LINE FROM GAS MANIFOLD TO EACH TENANT. REFER TO PLUMBING DRAWINGS. PAINT GAS LINE PIPES BLACK, FLAT FINISH.

GENERAL NOTES

A NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL AND ELECTRICAL OR MECHANICAL DRAWINGS AND OBTAIN CLARIFICATION BEFORE COMMENCING CONSTRUCTION.
B LOCATIONS OF CEILING PENETRATIONS, SUCH AS AIR DIFFUSERS, GRILLES, LIGHT FIXTURES, ETC., SHALL BE AS SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS. WHERE DISCREPANCIES IN LOCATION OCCUR, THE ARCHITECTURAL PLAN SHALL GOVERN. NOTIFY ARCHITECT ANY DISCREPANCIES FOR CLARIFICATION.
C ALL CEILING GRILLES TO BE FACTORY FINISHED TO MATCH THE COLOR OF ADJACENT CEILING TILE.
D CONDUIT MUST BE A MINIMUM OF 8" CLEAR ABOVE THE CEILING GRID.
E ALL NEW CIRCUITS SHALL BE LABELED ON THE PROPER BUILDING ELECTRICAL PANEL DIRECTORIES.
F NOTIFY ARCHITECT WHEN A LIGHT FIXTURE CANNOT BE USED DUE TO EXISTING NONE REMOVABLE OBSTRUCTION AND ALTERNATE LOCATION HINDERS LAYOUT, LOW PROFILE LIGHT FIXTURE SHALL BE USED.
G PROVIDE SPRINKLERS THROUGHOUT AS REQUIRED BY CODE. SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION FOR APPROVAL AS DEFERRED SUBMITTAL.
H EXIT ILLUMINATION LEVEL SHALL NOT BE LESS THAN 1 FC AT THE WALKING SURFACE LEVEL (SEC 1006.2). POWER FOR THE MEANS OF EGRESS ILLUMINATION SHALL BE PROVIDED BY THE BUILDING ELECTRICAL SUPPLY. IN THE EVENT OF POWER SUPPLY FAILURE, EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR (SEC 1006.1, 1006.2, 1006.3, 1006.4).
I EXCEPT WHERE RIGID BRACES ARE USED TO LIMIT LATERAL DEFLECTIONS, SPRINKLER HEADS AND OTHER PENETRATION SHALL HAVE A 2" OVERSIZED RING, SLEEVES, OR ADAPTER THROUGH THE CEILING TILE TO ALLOW FOR FREE MOVEMENT OF AT LEAST 1" IN ALL HORIZONTAL DIRECTIONS.
J CHANGES IN CEILING PLAN ELEVATIONS SHALL BE PROVIDED WITH POSITIVE BRACING.
K CABLE TRAY AND ELECTRICAL CONDUITS SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING.

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Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
REFLECTED CEILING PLAN

Scale
1/8" = 1'-0"

True North

A1.200

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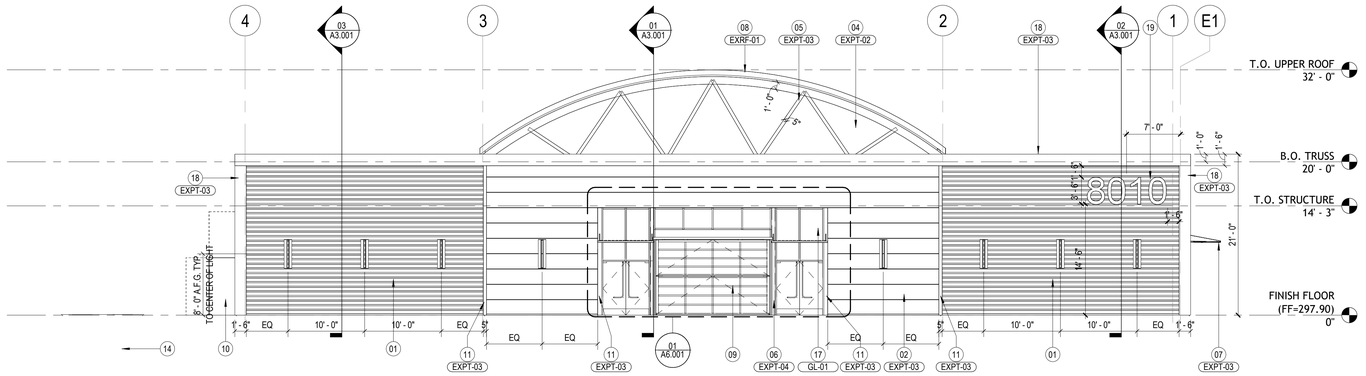
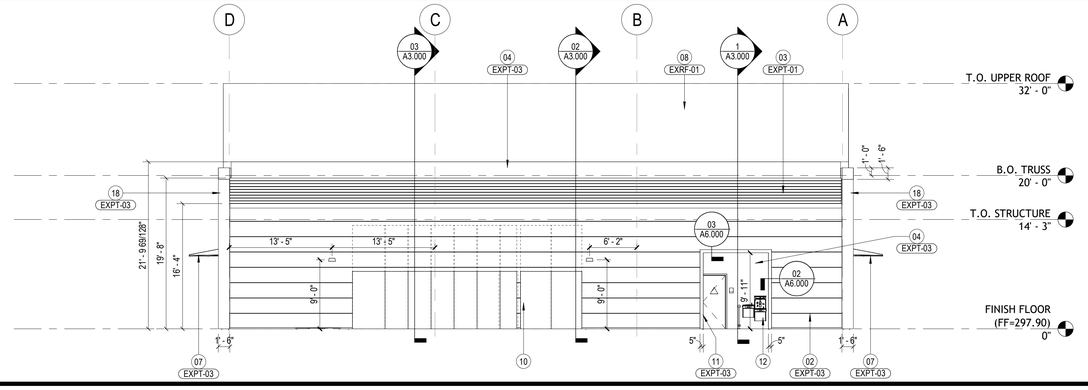


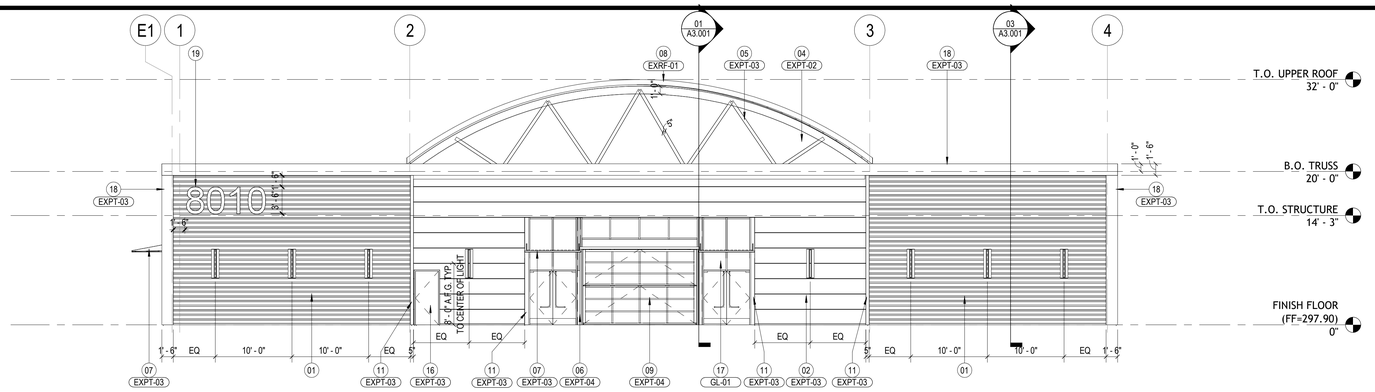
01 EXTERIOR ELEVATION - SOUTH-WEST

SCALE: 1/8" = 1'-0"



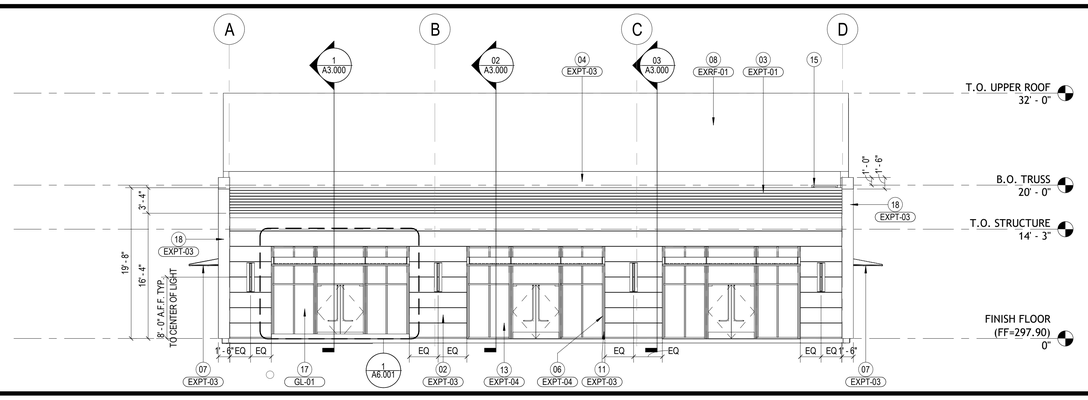
02 EXTERIOR ELEVATION - NORTH-WEST

SCALE: 1/8" = 1'-0"



03 EXTERIOR ELEVATION - NORTH-EAST

SCALE: 1/8" = 1'-0"



04 EXTERIOR ELEVATION - SOUTH-EAST

SCALE: 1/8" = 1'-0"

SHEET NOTES

01 SINGLE SKIN CORRUGATED METAL PANEL, G90 GALVANIZED.
02 PAINTED 24" HIGH FIBER CEMENT BOARD WITH 1/2" REVEAL. PAINT COLOR AS INDICATED.
03 PAINTED 4" HIGH FIBER CEMENT BOARD WITH 1/2" REVEAL. PAINT COLOR AS INDICATED.
04 PAINTED FIBER CEMENT BOARD, INSTALL LENGTH VERTICALLY. PAINT COLOR AS INDICATED.
05 1 1/2" DEEP PAINTED WOOD TRIM ON BOTH SIDES OF EXTERIOR WALL. LAYOUT, WIDTH, AND LOCATION TO MATCH INTERIOR METAL TRUSS.
06 PAINTED METAL FASCIA OVER STEEL MEMBER, COLOR AS INDICATED. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL STEEL MEMBER INFORMATION.
07 PAINTED METAL CUSTOM CANOPY. PAINT COLOR AS INDICATED.
08 TORCH-APPLIED MODIFIED BITUMINOUS PROTECTED MEMBRANE ASPHALT ROOFING. REFER TO RF01 ON A6.100 FOR ROOF ASSEMBLY AND FINISH SCHEDULE ON ROOF MEMBRANE INFORMATION.
09 BIFOLD DOOR BY CROWN DOORS, SST-II HYDRAULIC (TYP.). MULLION COLOR AS INDICATED.
10 ELECTRICAL SWITCHGREAR. REFER TO ELECTRICAL DRAWINGS.
11 PAINTED METAL TRIM. COLOR AS INDICATED.
12 DRINKING FOUNTAIN ELKAY PRO FILTRATION BOTTLE-FILLING STATION & BI-LEVEL ADA COOLER REGRIGERATED TOTAL PFAS + LEAD REDUCTION LZSTL8WSBPRO-FLP4.
13 STOREFRONT SYSTEM. MULLIONS COLOR AS INDICATED.
14 GREASE INTERCEPTOR. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
15 3'W X 4'H ROOF ACCESS DOOR, PAINTED WHITE.
16 HOLLOW METAL DOOR AND FRAME, PAINTED TO MATCH ADJACENT BACKGROUND WALL.
17 EXTERIOR GLAZING TYPICAL.
18 PAINTED FLAT METAL PANEL SIDE AND TOP FRAME. PAINT COLOR AS INDICATED.
19 FUTURE BLACK COLORED BUILDING ADDRESS NUMBERS, SIZE AND LOCATION AS SHOWN. REFER TO STANDARDS FOR ADDRESSING ON FORM 41-31B ON G2.101 FOR ADDITIONAL INFORMATION. REFER TO APPROVED WAYFINDING PLANS FOR ADDITIONAL ADDRESSING AND WAYFINDING REQUIREMENTS.

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
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	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.8945.000

Description
EXTERIOR ELEVATIONS

Scale
1/8" = 1'-0"

A2.000

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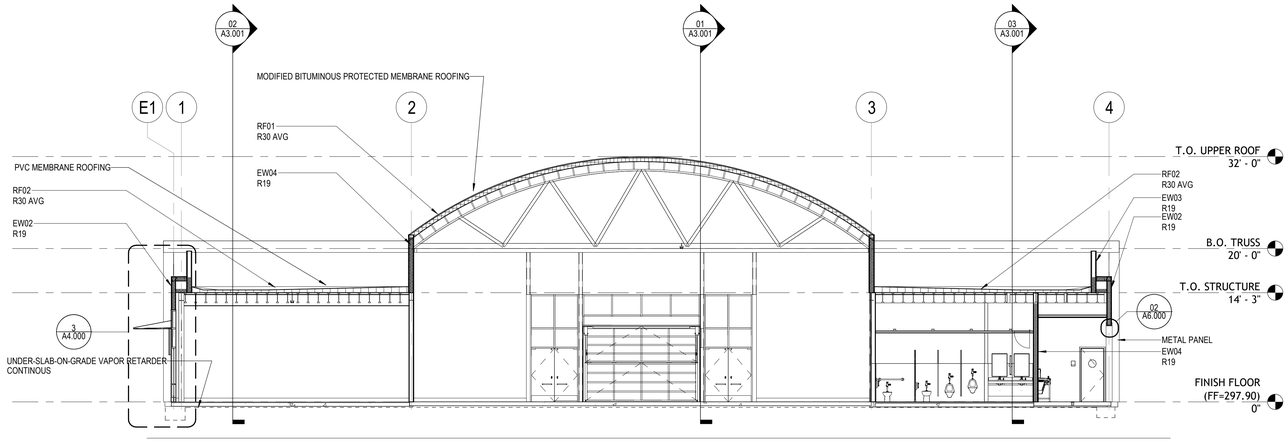
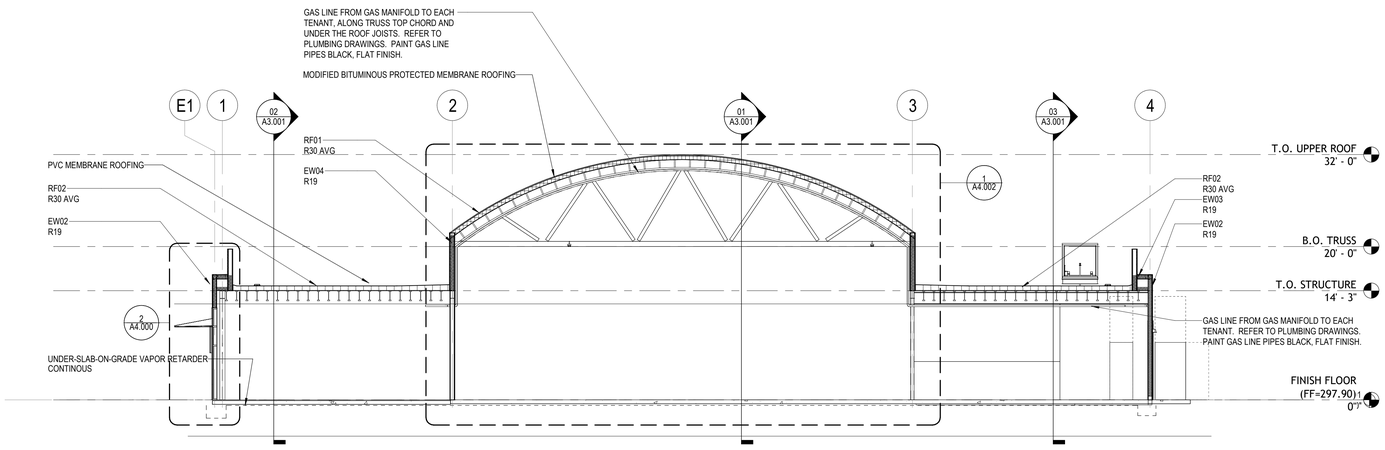


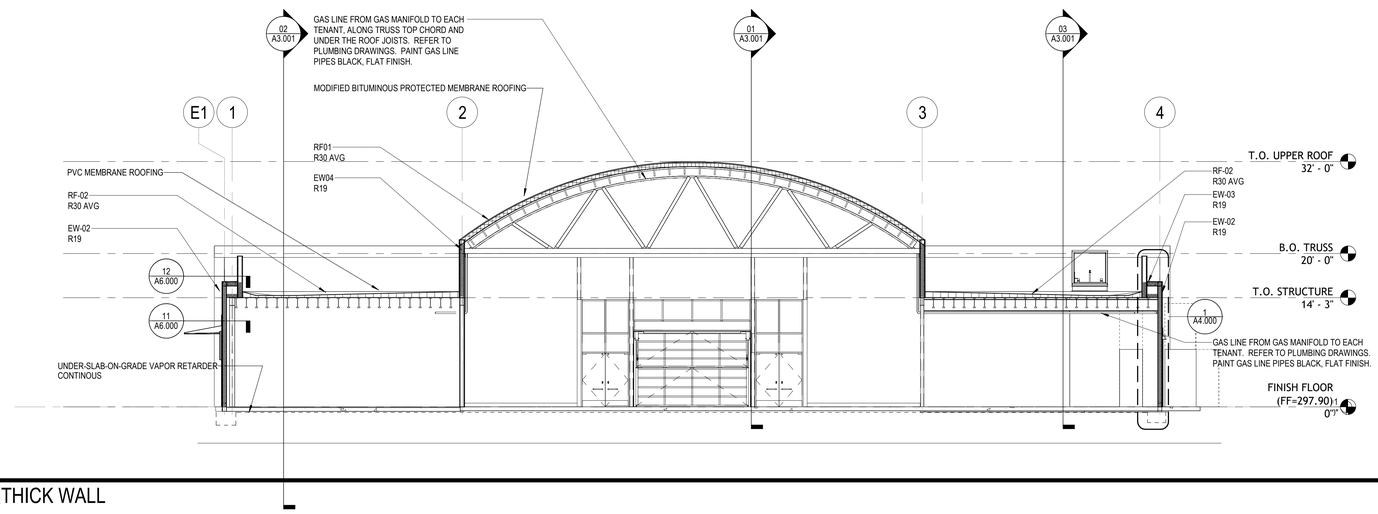
1 BUILDING SECTION - LONGITUDINAL @ RESTROOM

SCALE: 1/8" = 1'-0"



2 BUILDING SECTION - LONGITUDINAL @SWITCHGEAR

SCALE: 1/8" = 1'-0"



3 BUILDING SECTION - LONGITUDINAL @THICK WALL

SCALE: 1/8" = 1'-0"

SHEET NOTES

GENERAL NOTES

A REFER TO G5.000 FOR WALL AND PARTITION TYPE AND DETAILS

B REFER TO A6.100 FOR ROOF ASSEMBLY.

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STATE OF CALIFORNIA

COMPLETENESS REVIEW
BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.02945.000

Description

BUILDING SECTIONS

Scale

1/8" = 1'-0"

A3.000

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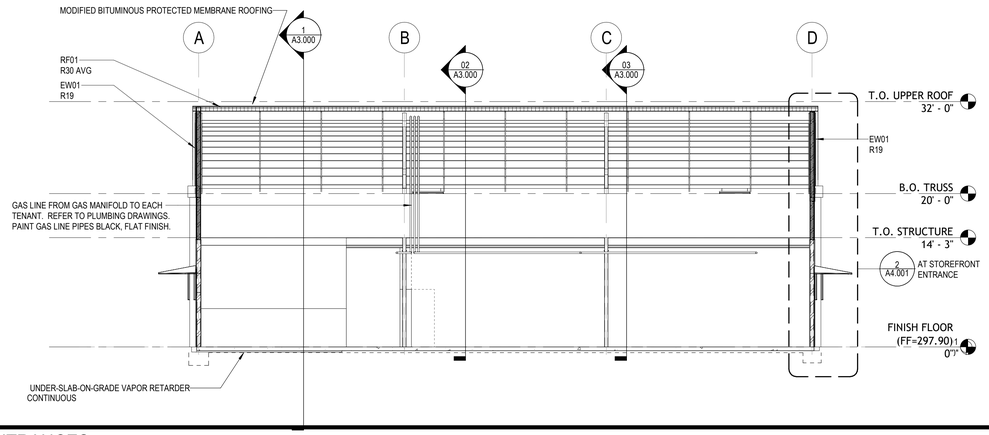
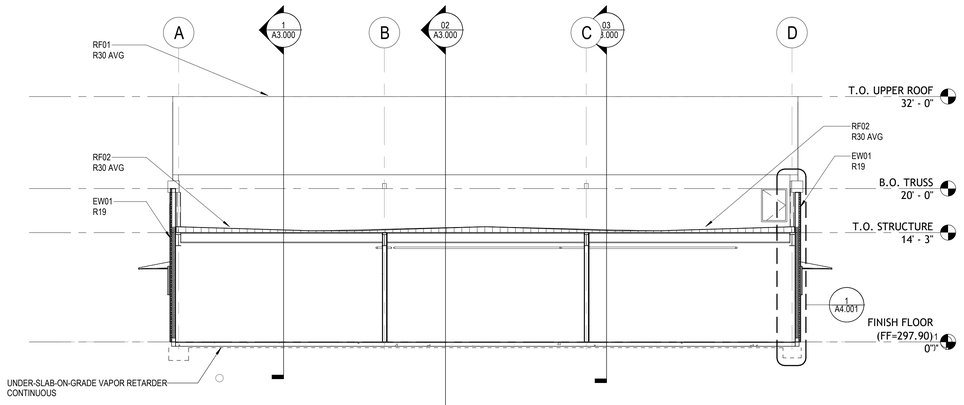


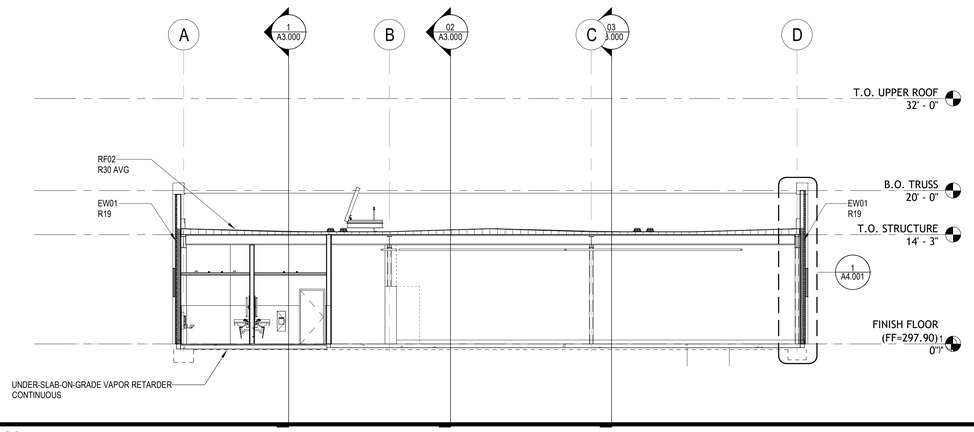
01 BUILDING SECTION - TRANSVERSE @MAIN ENTRANCES

SCALE: 1/8" = 1'-0"



02 BUILDING SECTION - TRANSVERSE @THICK WALL

SCALE: 1/8" = 1'-0"



03 BUILDING SECTION - TRANSVERSE @RESTROOM

SCALE: 1/8" = 1'-0"

SHEET NOTES

GENERAL NOTES

A REFER TO G5.000 FOR WALL AND PARTITION TYPE AND DETAILS

B REFER TO A6.100 FOR ROOF ASSEMBLY.

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STATE OF CALIFORNIA

COPY FOR BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.0945.000

Description

BUILDING SECTIONS

Scale

1/8" = 1'-0"

A3.001

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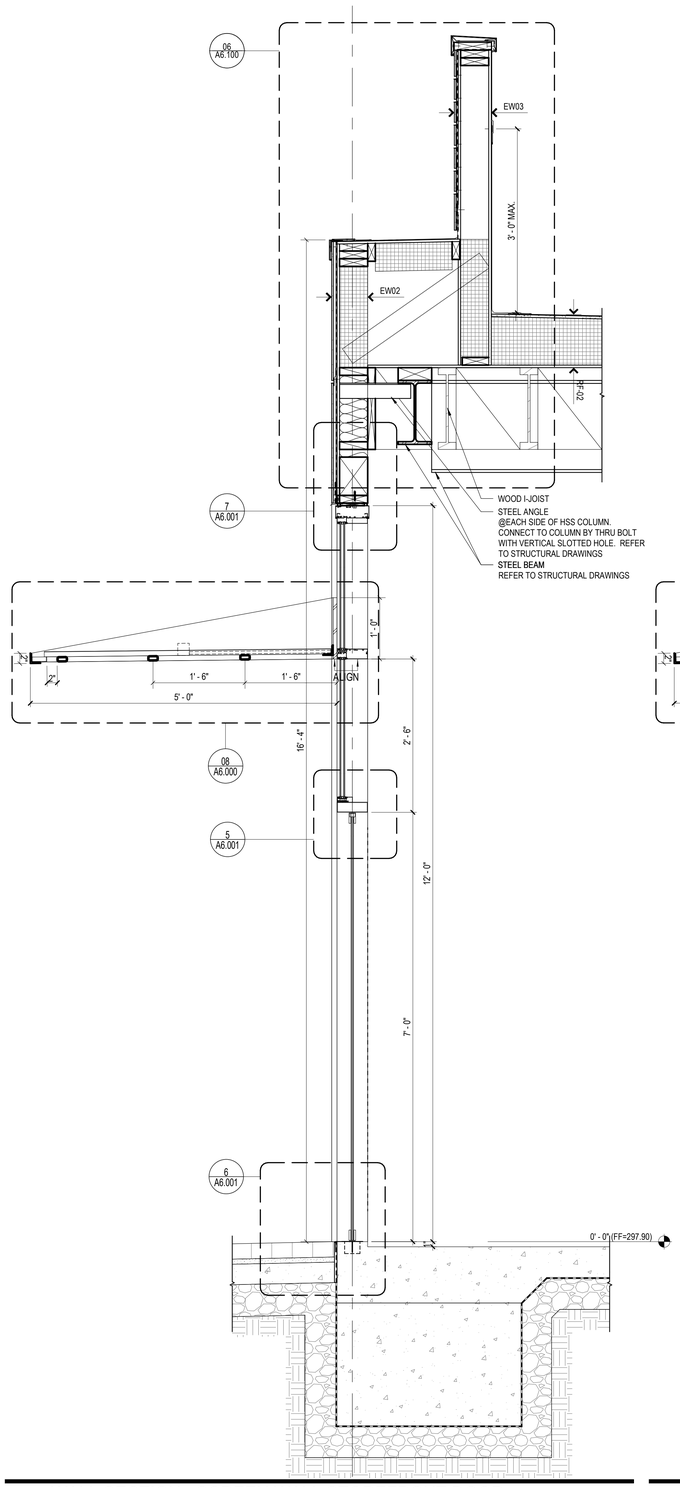
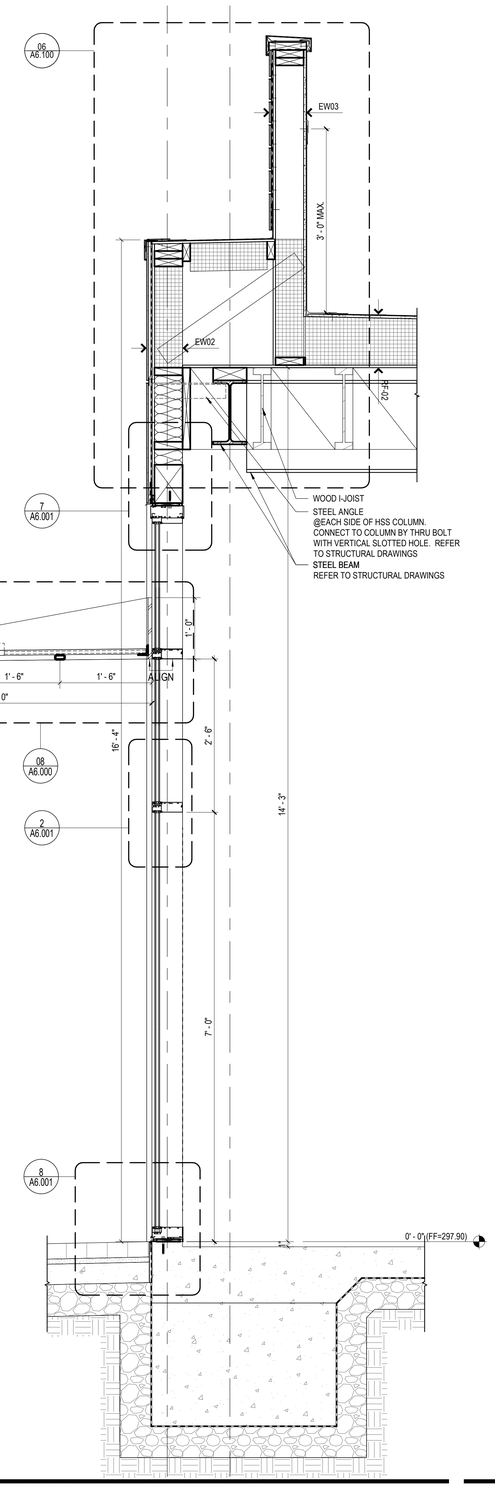
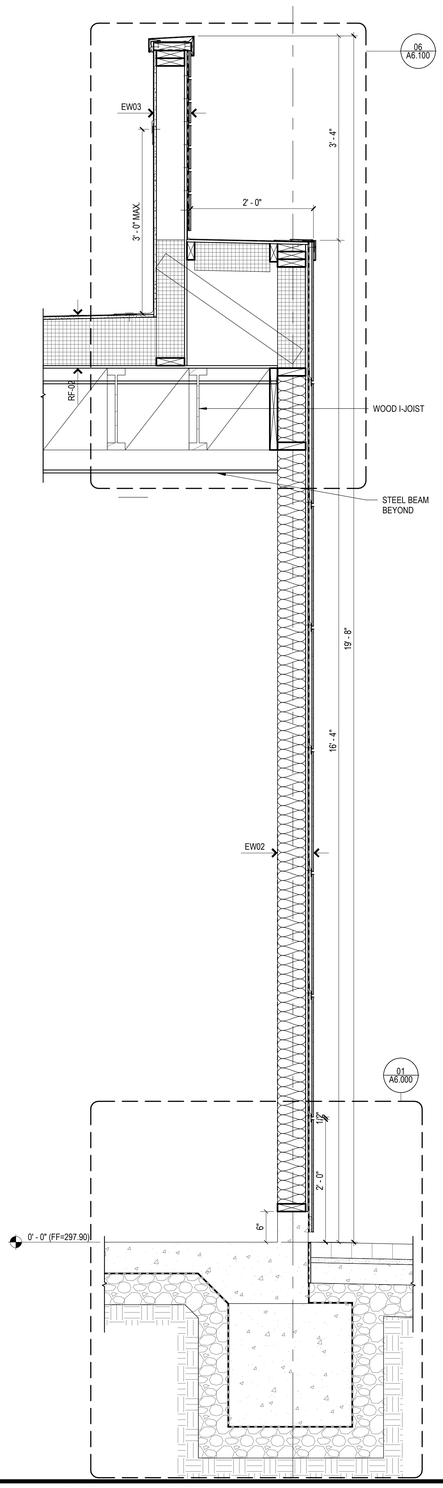


3 WALL SECTION - SCREEN WALL STOREFRONT DOOR
SCALE: 1" = 1'-0"



2 WALL SECTION - SCREEN WALL STOREFRONT
SCALE: 1" = 1'-0"



1 WALL SECTION - SCREEN WALL
SCALE: 1" = 1'-0"

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STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
WALL SECTIONS

Scale
1" = 1'-0"

A4.000

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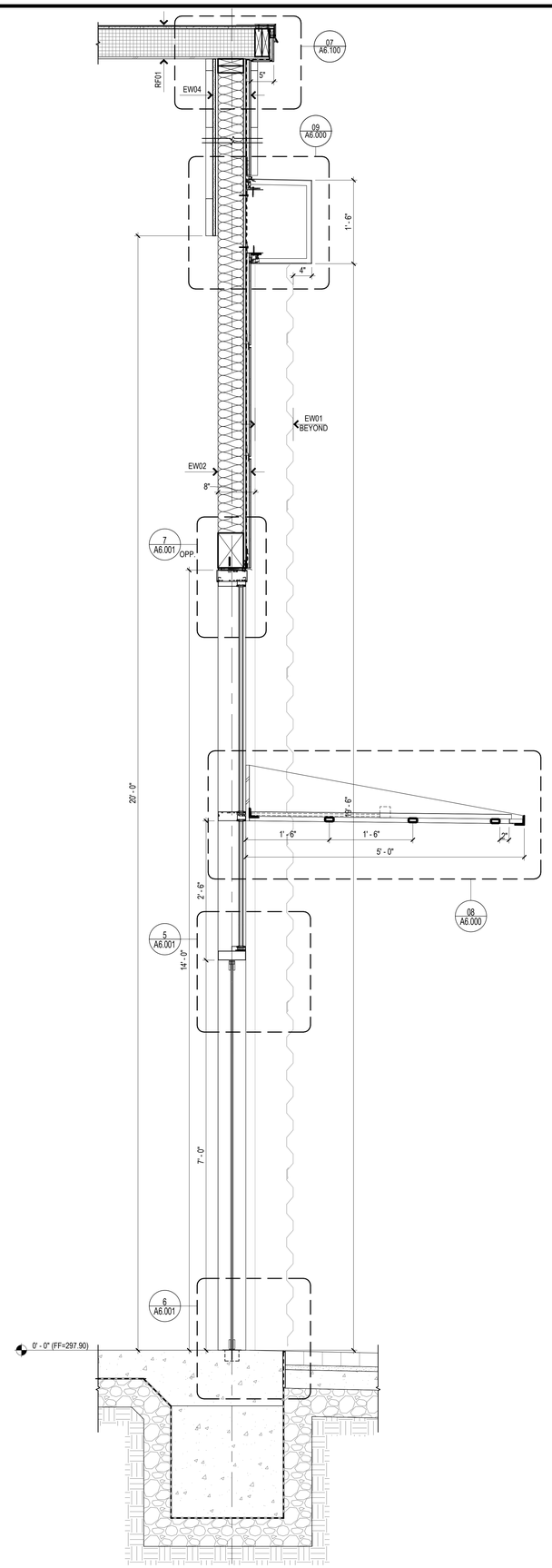
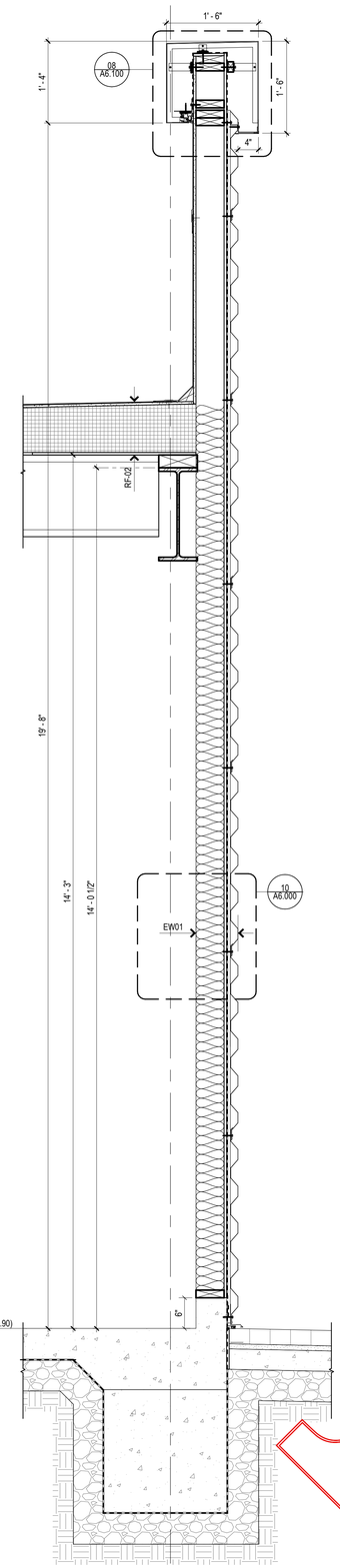


2 WALL SECTION - FRONT FACADE
SCALE: 1" = 1'-0"



1 WALL SECTION - METAL PANEL
SCALE: 1" = 1'-0"

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Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
WALL SECTIONS

Scale
1" = 1'-0"

A4.001

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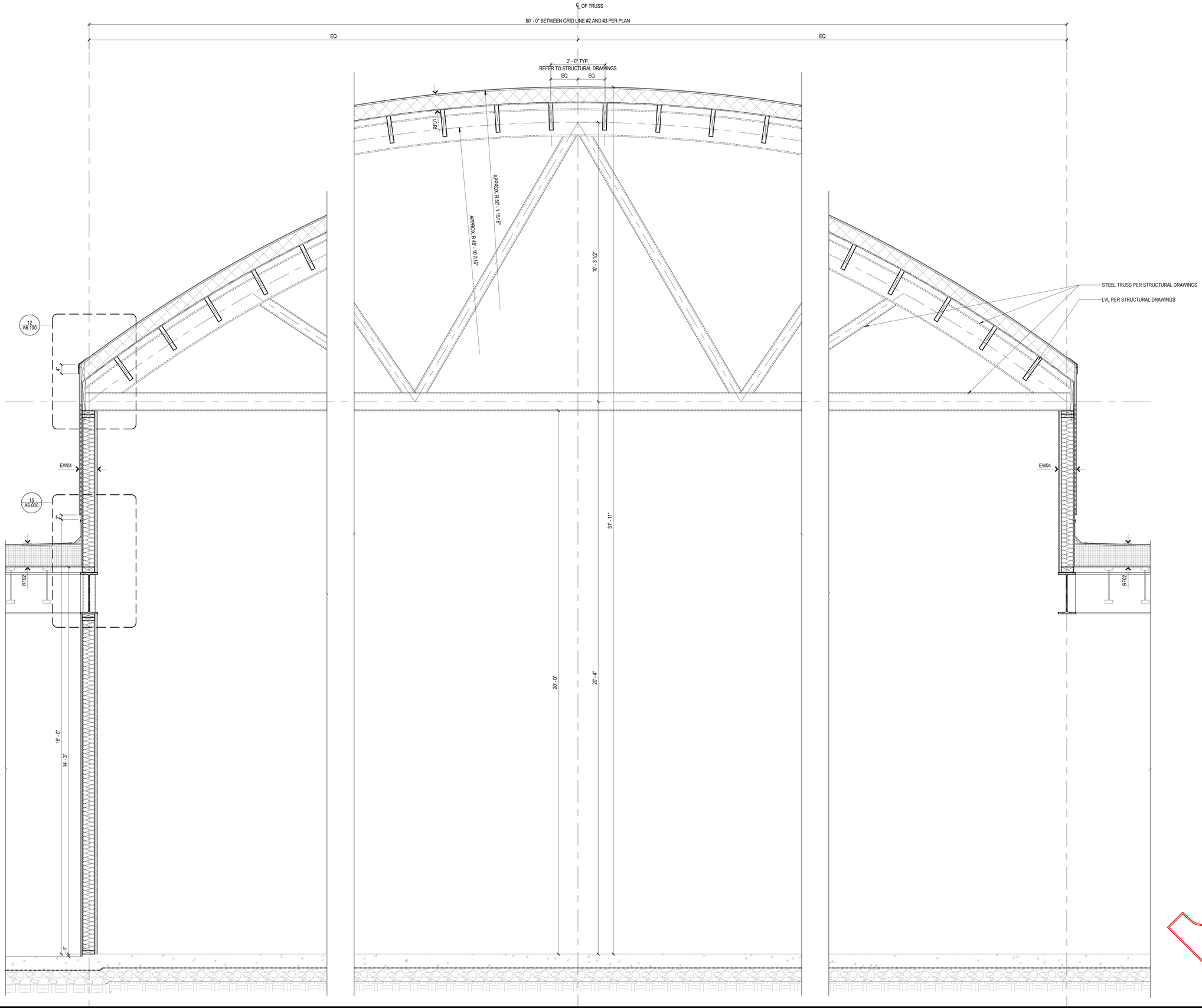

1 WALL SECTION - TRUSS
SCALE: 3/4" = 1'-0"

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NO. C-32405
REN: 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
WALL SECTIONS

Scale
3/4" = 1'-0"

A4.002

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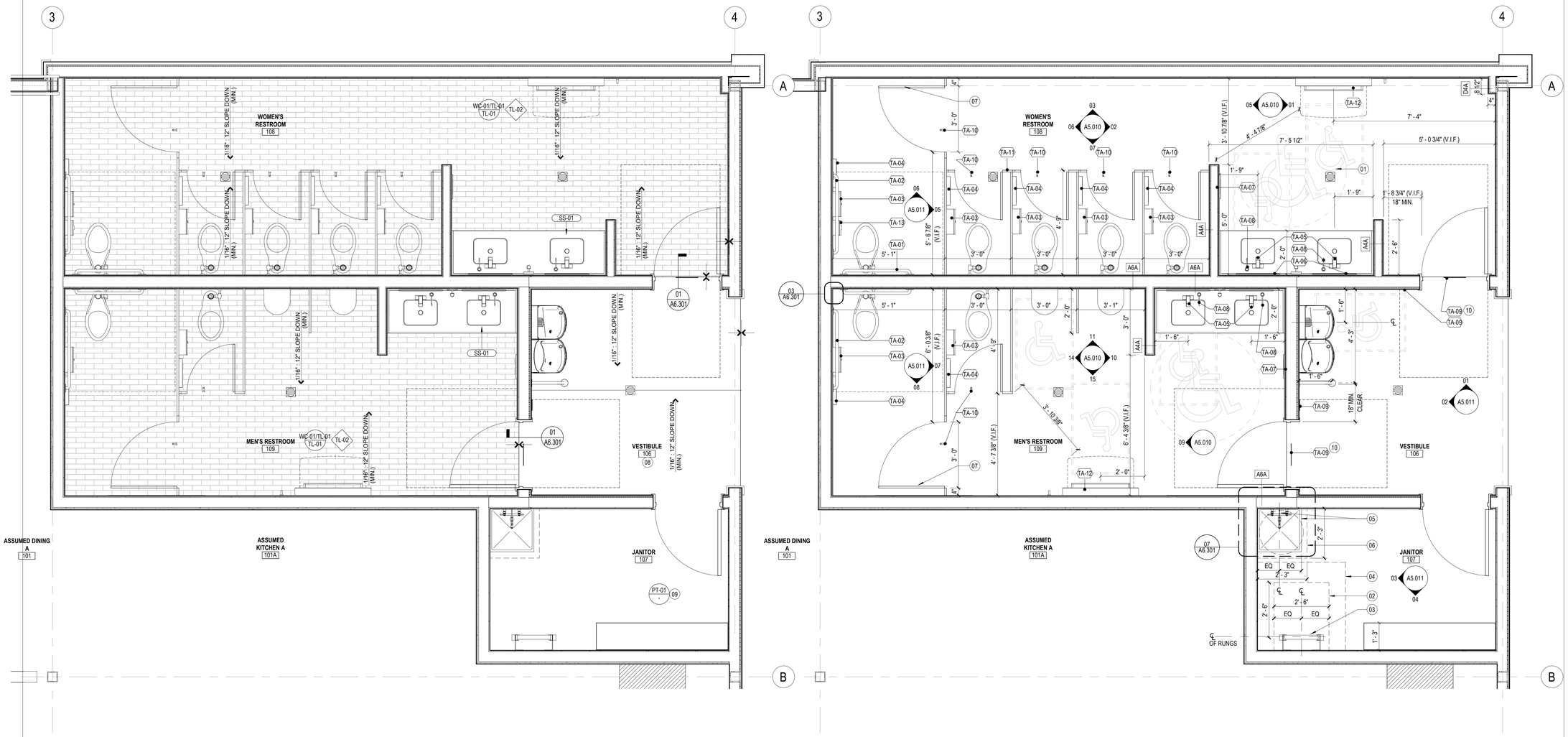

2 FINISH PLAN - ENLARGED RESTROOMS

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

1 CONSTRUCTION PLAN - ENLARGED RESTROOMS

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

SHEET NOTES

01 FLOOR DRAIN (TYPICAL OF 3). REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

02 CLEARANCE REQUIRED AT LADDER FROM FLOOR, PLATFORM, ROOF, OR OTHER OBSTRUCTION.

03 METAL TABULAR FIXED LADDER WITH FALL PROTECTION TO ROOF HATCH, PRECISION LADDER LLC. FLH-04. REFER TO DETAIL 09/A6.100 FOR ADDITIONAL INFORMATION.

04 4'-0" X 4'-0" ROOF OPENING FOR ROOF HATCH ABOVE.

05 2'-0" X 2'-0" MOP SINK AND FAUCET. REFER TO PLUMBING DRAWINGS.

06 WATER HEATER SHELF ABOVE MOP SINK. REFER TO STRUCTURAL AND PLUMBING DRAWINGS.

07 TOILET PARTITION DOOR WITH 34" MIN. CLEAR WIDTH WHEN THE DOOR OPEN 90 DEGREES. PROVIDE DOOR WITH CLOSER, HANDLE AND PRIVACY LATCH. TYPICAL OF 2.

08 BROOM FINISHED CONCRETE SLAB.

09 BROOM FINISHED CONCRETE SLAB. STOP GYPSUM WALL BOARD ON WALL AT TOP OF CONCRETE CURB. NO WALL BASE IS REQUIRED.

10 REFER TO 15/G1.021 FOR ADDITIONAL INFORMATION ON RESTROOM DOOR AND WALL MOUNTED SIGNAGES.

GENERAL NOTES

A REFER TO G0.002 FOR GENERAL NOTES, G0.003 FOR GRAPHIC SYMBOLS AND ABBREVIATIONS, G1.020 AND G1.021 FOR GENERAL ACCESSIBILITY REQUIREMENTS & DETAILS, CLEARANCES AND MOUNTING HEIGHTS.

B REFRE TO 01/G1.021 FOR TYPICAL RESTROOM CLEARANCES AND FIXTURE MOUNTING HEIGHTS.

C REFER TO G8.000 FOR TOILET ACCESSORY AND FINISH SCHEDULES. REFER TO PLUMBING DRAWINGS FOR PLUMBING FXITURE SCHEDULE.

D PROVIDE BLOCKING AS REQ AT ALL LOCATIONS INCLUDING, BUT NOT LIMITED TO; GRAB BARS, OVERHEAD CABINETRY, SHELVING, SIGNAGE, TOILET ROOM ACCESSORIES, WALL MOUNTED EQUIPMENT, ETC.

E USE WATER RESISTANT GYPSUM BOARD BEHIND TOILET AND LAVATORY.

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NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.03945.000

Description

RESTROOM PLANS

Scale

1/2" = 1'-0"

True North

CITY OF IRVINE
BUILDING & SAFETY DIVISION

A5.000

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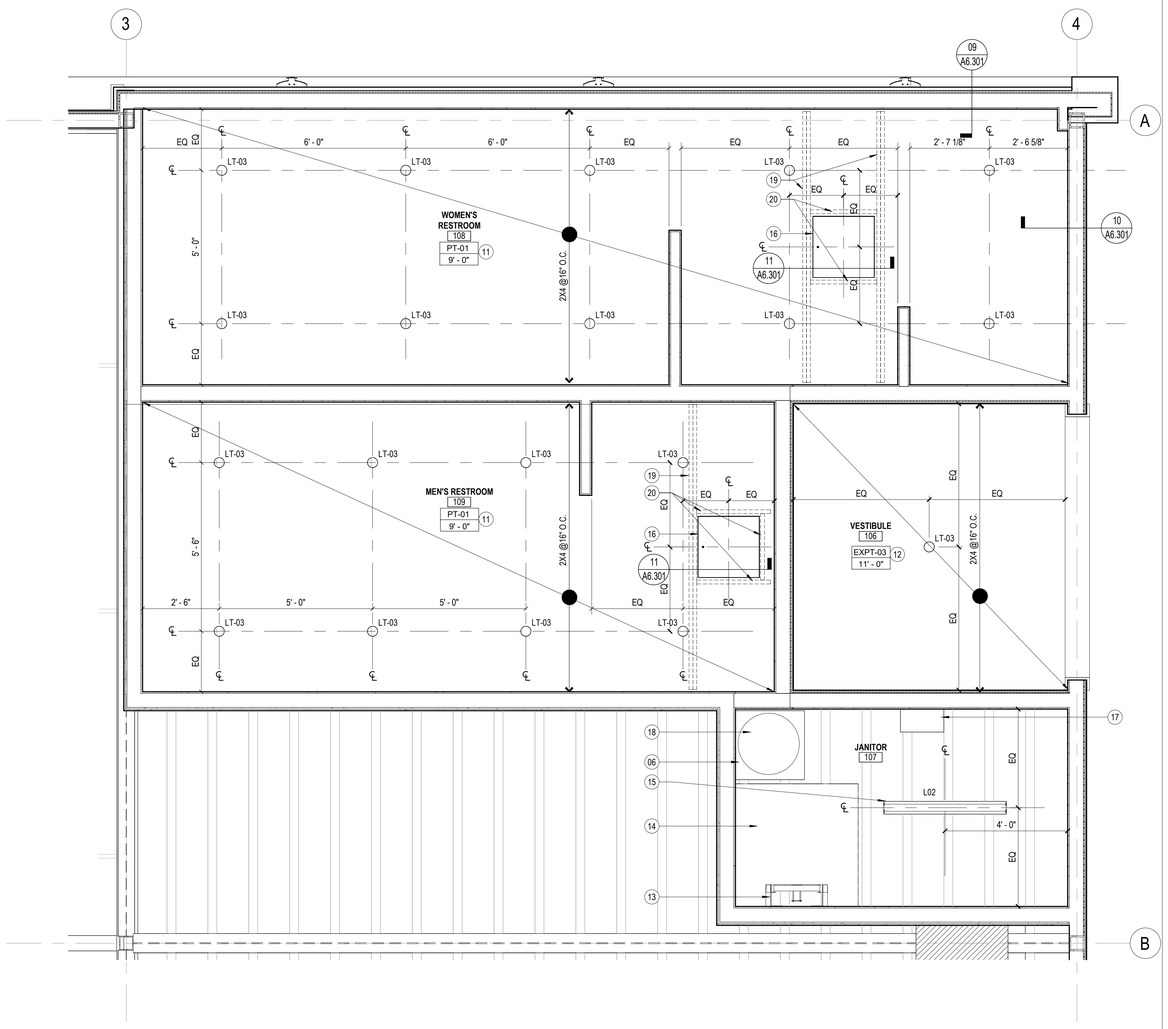

1 REFLECTED CEILING PLAN - ENLARGED RESTROOM

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

SHEET NOTES

06 WATER HEATER SHELF ABOVE MOP SINK. REFER TO STRUCTURAL AND PLUMBING DRAWINGS.
11 PAINTED GYPSUM WALL BOARD CEILING SOFFIT. REFER TO A6.301 FOR CEILING DETAILS. PAINT COLOR AS INDICATED.
12 PAINTED FIBER CEMENT BOARD. PAINT COLOR AS INDICATED.
13 METAL TABULAR FIXED LADDER WITH FALL PROTECTION TO ROOF HATCH, PRECISION LADDER LLC. FLH-04. REFER TO DETAIL 09/A6.100 FOR ADDITIONAL INFORMATION.
14 BILCO 4X4 SINGLE LEAF ROOF ACCESS HATCH WITH THERMAL BREAK TYPE F-50TB ABOVE.
15 4' LONG STRIP LIGHT PER ELECTRICAL DRAWINGS.
16 24"X24" GYPSUM WALL BOARD CEILING ACCESS PANEL ACUDOR FB-5015.
17 BI-FOLD DOOR POWER UNIT ON WALL BY MANUFACTURER. PROVIDE 32" CLEAR IN HEIGHT FROM BOTTOM OF THE UNIT UP PER MANUFACTURER REQUIREMENTS.
18 WATER HEATER TO TOP OF WATER HEATER SHELF. REFER TO STRUCTURAL AND PLUMBING DRAWINGS.
19 DOUBLE 2X4 WOOD CEILING JOISTS AT OPENING.
20 2X4 WOOD FRAMING AT OPENING.

GENERAL NOTES

A NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL AND ELECTRICAL OR MECHANICAL DRAWINGS AND OBTAIN CLARIFICATION BEFORE COMMENCING CONSTRUCTION.
B LOCATIONS OF CEILING PENETRATIONS, SUCH AS AIR DIFFUSERS, GRILLES, LIGHT FIXTURES, ETC., SHALL BE AS SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS. WHERE DISCREPANCIES IN LOCATION OCCUR, THE ARCHITECTURAL PLAN SHALL GOVERN. NOTIFY ARCHITECT ANY DISCREPANCIES FOR CLARIFICATION.
C ALL CEILING GRILLES TO BE FACTORY FINISHED TO MATCH THE COLOR OF ADJACENT CEILING TILE.
D CONDUIT MUST BE A MINIMUM OF 8" CLEAR ABOVE THE CEILING GRID.
E ALL NEW CIRCUITS SHALL BE LABELED ON THE PROPER BUILDING ELECTRICAL PANEL DIRECTORIES.
F NOTIFY ARCHITECT WHEN A LIGHT FIXTURE CANNOT BE USED DUE TO EXISTING NONE REMOVABLE OBSTRUCTION AND ALTERNATE LOCATION HINDERS LAYOUT, LOW PROFILE LIGHT FIXTURE SHALL BE USED.
G PROVIDE SPRINKLERS THROUGHOUT AS REQUIRED BY CODE. SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION FOR APPROVAL AS DEFERRED SUBMITTAL.
H EXIT ILLUMINATION LEVEL SHALL NOT BE LESS THAN 1 FC AT THE WALKING SURFACE LEVEL (SEC 1006.2). POWER FOR THE MEANS OF EGRESS ILLUMINATION SHALL BE PROVIDED BY THE BUILDING ELECTRICAL SUPPLY. IN THE EVENT OF POWER SUPPLY FAILURE, EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR (SEC 1006.1, 1006.2, 1006.3, 1006.4).
I EXCEPT WHERE RIGID BRACES ARE USED TO LIMIT LATERAL DEFLECTIONS, SPRINKLER HEADS AND OTHER PENETRATION SHALL HAVE A 2" OVERSIZED RING, SLEEVES, OR ADAPTER THROUGH THE CEILING TILE TO ALLOW FOR FREE MOVEMENT OF AT LEAST 1" IN ALL HORIZONTAL DIRECTIONS.
J CHANGES IN CEILING PLAN ELEVATIONS SHALL BE PROVIDED WITH POSITIVE BRACING.
K CABLE TRAY AND ELECTRICAL CONDUITS SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING.

KEY PLAN

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Seal / Signature

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NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
RESTROOM PLAN

Scale
1/2" = 1'-0"

True North

A5.001

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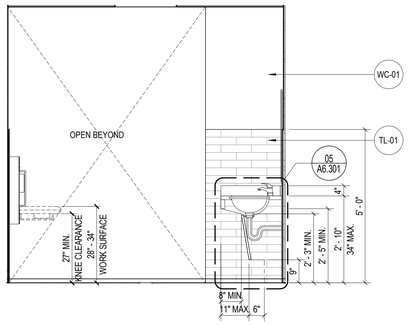
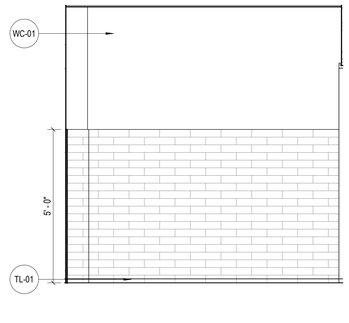
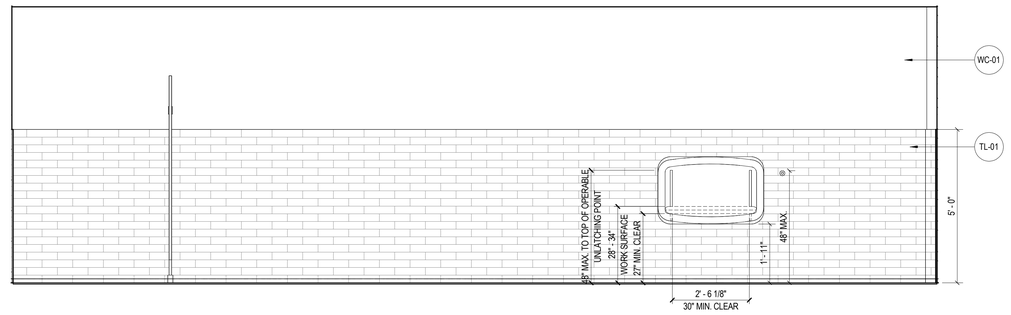


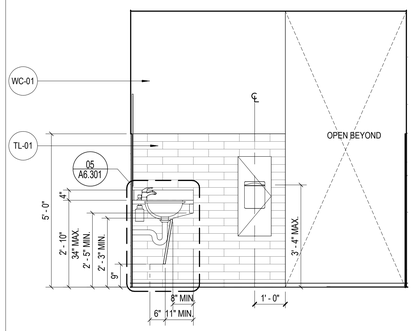
01 WOMEN'S RESTROOM - SINK PLAN EAST
SCALE: 1/2" = 1'-0"



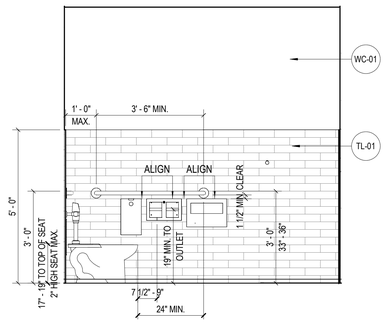
02 WOMEN'S RESTROOM - PLAN EAST
SCALE: 1/2" = 1'-0"



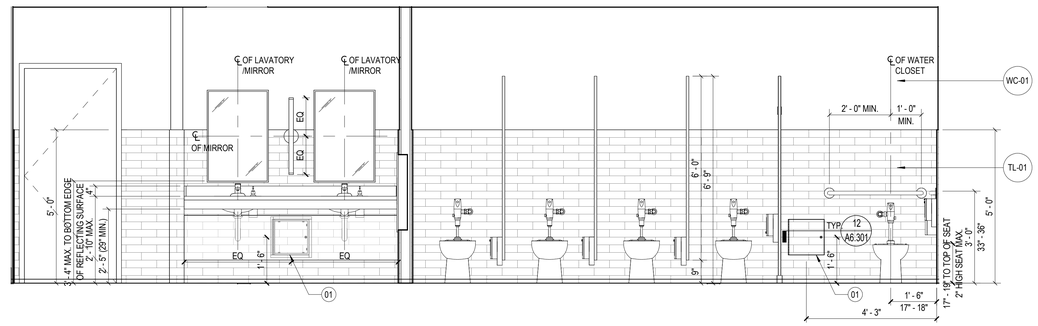
03 WOMEN'S RESTROOM - PLAN NORTH
SCALE: 1/2" = 1'-0"



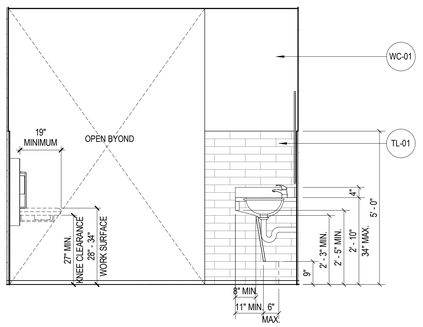
05 WOMEN'S RESTROOM - SINK PLAN WEST
SCALE: 1/2" = 1'-0"



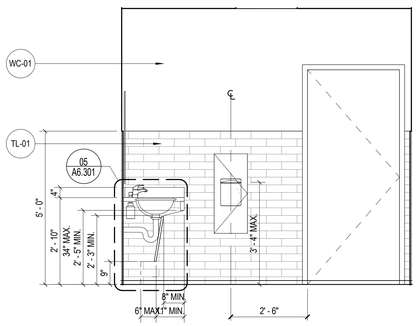
06 WOMEN'S RESTROOM - PLAN WEST
SCALE: 1/2" = 1'-0"



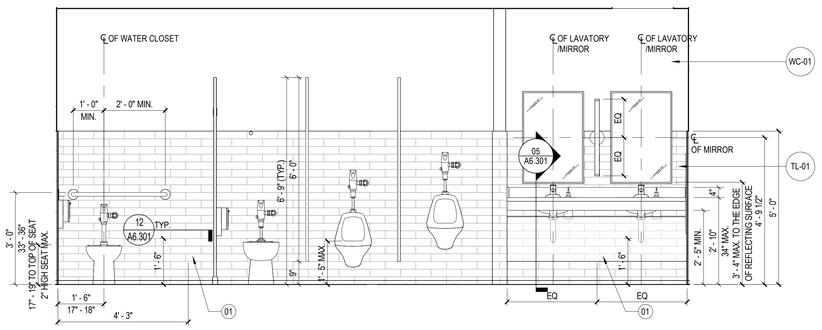
07 WOMEN'S RESTROOM - PLAN SOUTH
SCALE: 1/2" = 1'-0"



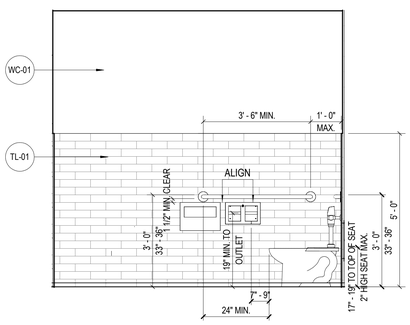
09 MEN'S RESTROOM - SINK PLAN WEST
SCALE: 1/2" = 1'-0"



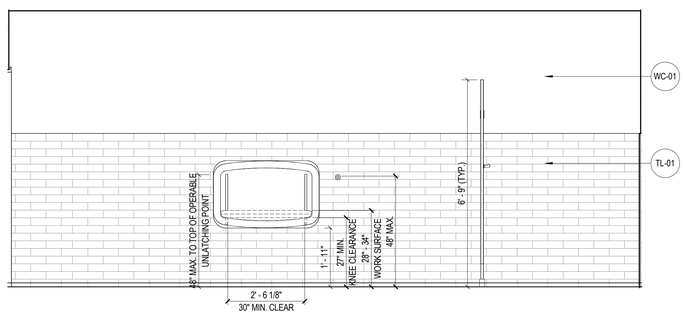
10 MEN'S RESTROOM - PLAN EAST
SCALE: 1/2" = 1'-0"



11 MEN'S RESTROOM - PLAN NORTH
SCALE: 1/2" = 1'-0"



14 MEN'S RESTROOM - PLAN WEST
SCALE: 1/2" = 1'-0"



15 MEN'S RESTROOM - PLAN SOUTH
SCALE: 1/2" = 1'-0"

SHEET NOTES

01 ACCESS PANEL ON TILE WALL: ACUDOR FB-5060-TD WITH TILE IN STALLED ON ACCESS PANEL. TILE GROUTE LOCATION TO MATCH ADJACENT EXISTING.

GENERAL NOTES

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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IRVINE, CA 92618

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4675 MacArthur Court
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Newport Beach, CA 92660
United States

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	Date	Description
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
RESTROOM ELEVATIONS

Scale
1/2" = 1'-0"

A5.010

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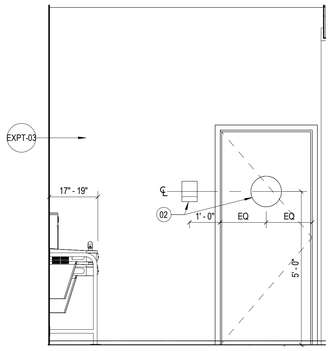
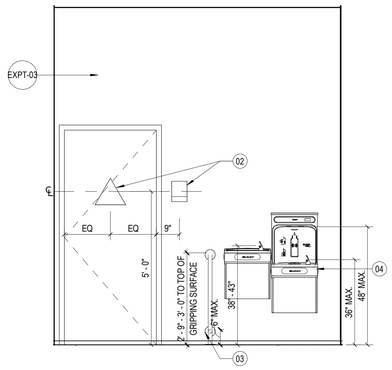
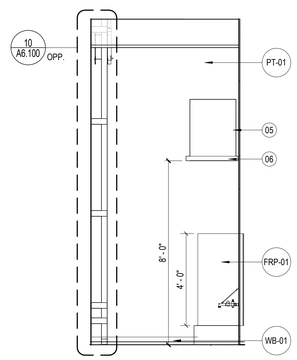


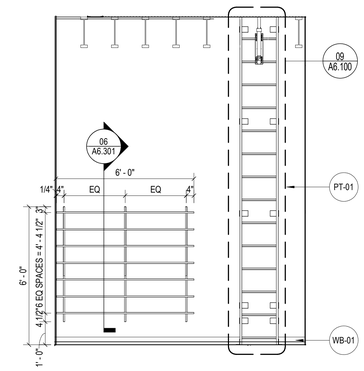
01 VESTIBULE - PLAN NORTH
SCALE: 1/2" = 1'-0"



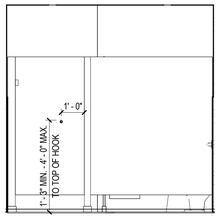
02 VESTIBULE - PLAN WEST
SCALE: 1/2" = 1'-0"



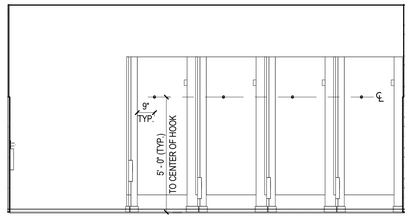
03 JANITOR - PLAN WEST
SCALE: 3/8" = 1'-0"



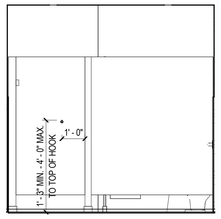
04 JANITOR - PLAN SOUTH
SCALE: 3/8" = 1'-0"



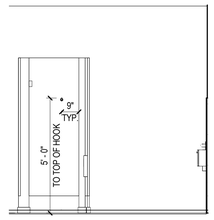
05 WOMEN'S ACCESSIBLE STALL - PLAN EAST
SCALE: 3/8" = 1'-0"



06 WOMEN'S STANDARD STALL - PLAN NORTH
SCALE: 3/8" = 1'-0"



07 MEN'S ACCESSIBLE STALL - PLAN EAST
SCALE: 3/8" = 1'-0"



08 MEN'S STANDARD STALL - PLAN SOUTH
SCALE: 3/8" = 1'-0"

SHEET NOTES

02 RESTROOM SIGNAGE. REFER TO TOILET ROOM ELEVATIONS AND DETAIL 15/G1.021 FOR TYPE, SIZE AND MOUNTING LOCATION REQUIREMENTS.
03 BOTTOM HORIZONTAL RAIL 5" MAX. ABOVE FINISH FLOOR.
04 REFER TO 01/G1.021 FOR ACCESSIBILITY COMPLIANCE DETAILING.
05 WATER HEATER. REFER TO PLUMBING DRAWINGS.
06 WATER HEATER SUPPORT PLATFORM. REFER TO STRUCTURAL AND PLUMBING DRAWINGS.

GENERAL NOTES

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
RESTROOM AND JANITOR ELEVATIONS

Scale
As indicated

A5.011

CITY OF IRVINE BUILDING & SAFETY DIVISION

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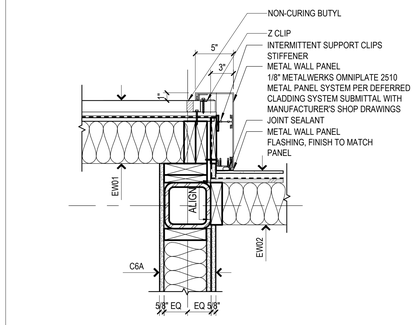
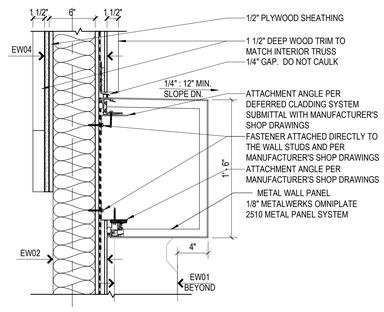


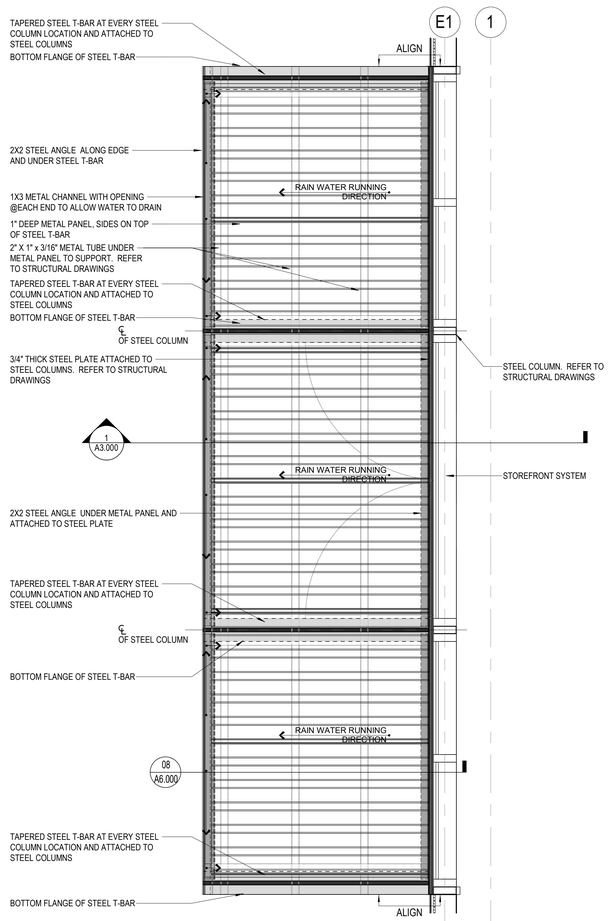
13 WALL DETAIL - METAL PANEL @SHIFT

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



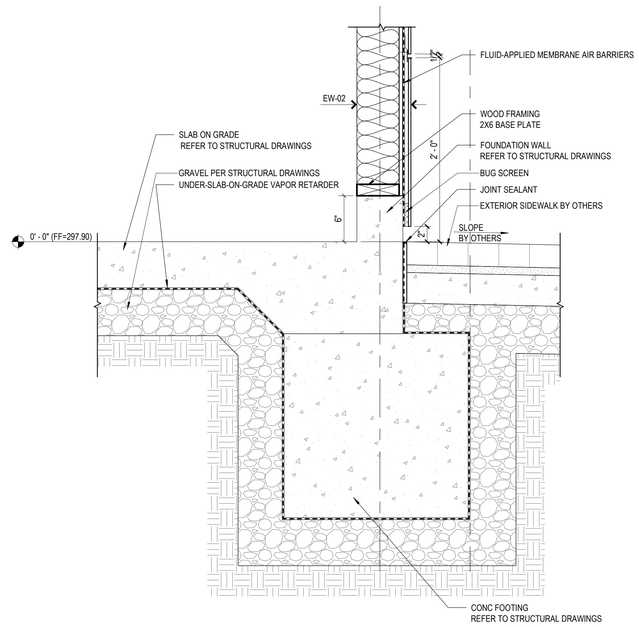
09 WALL DETAIL - EXTERIOR TRUSS

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



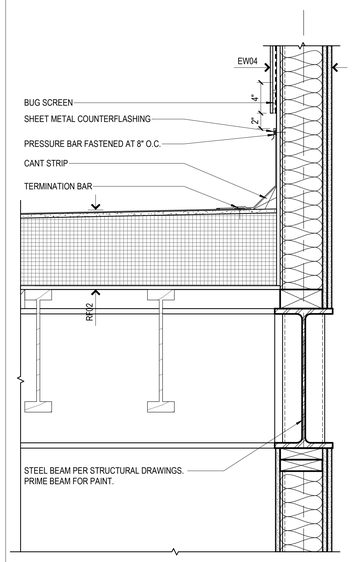
06 STOREFRONT - LARGE TENANT CANOPY PLAN Copy 1

SCALE: 3/4" = 1'-0"



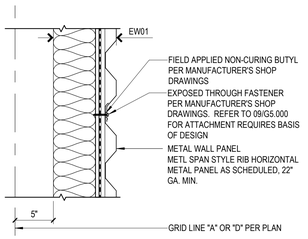
01 FOOTING DETAIL

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



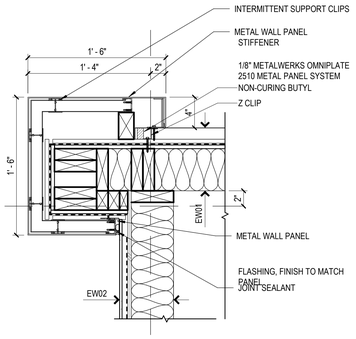
15 WALL DETAIL - TRUSS & FLAT ROOF

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



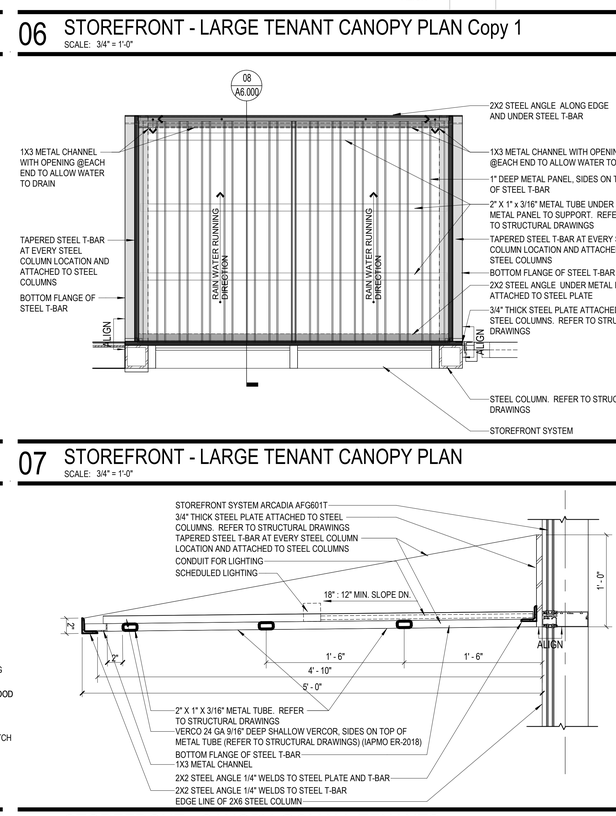
10 WALL DETAIL - METAL PANEL

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



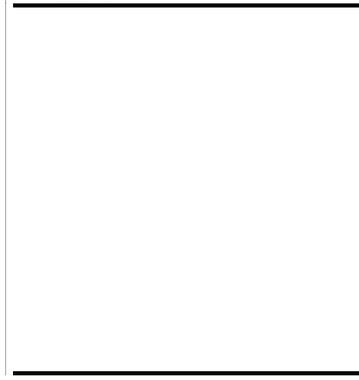
11 WALL DETAIL - METAL PANEL CORNER

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



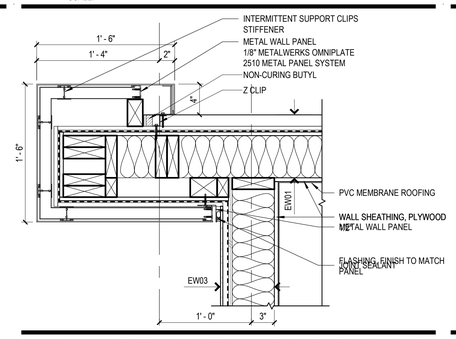
07 STOREFRONT - LARGE TENANT CANOPY PLAN

SCALE: 3/4" = 1'-0"



15 WALL DETAIL - TRUSS & FLAT ROOF

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

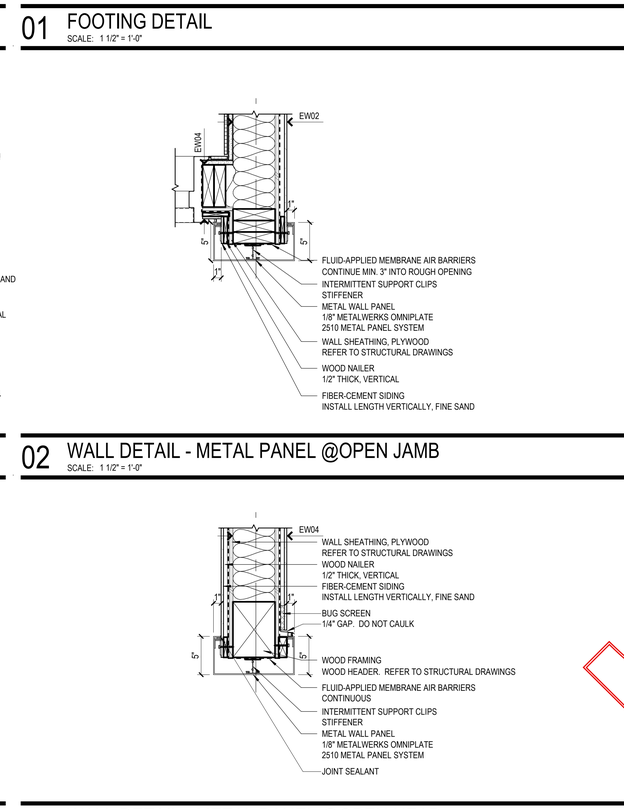


12 WALL DETAIL - MTL PANEL UPPER CORNER

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

08 STOREFRONT - CANOPY @SMALL TENANTS

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



02 WALL DETAIL - METAL PANEL @OPEN JAMB

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

03 WALL DETAIL - METAL PANEL @OPEN HEAD

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

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
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NO. C-32405
REN. 3-31-2027
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CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.03945.000

Description

EXTERIOR WALL DETAILS

Scale

As indicated

A6.000

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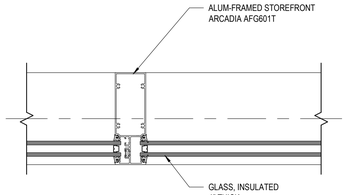
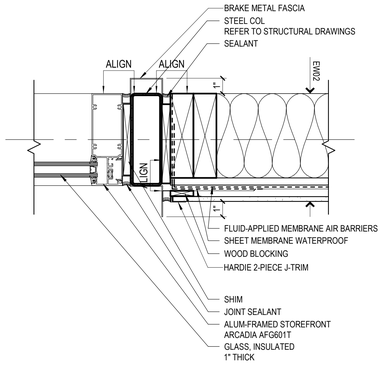
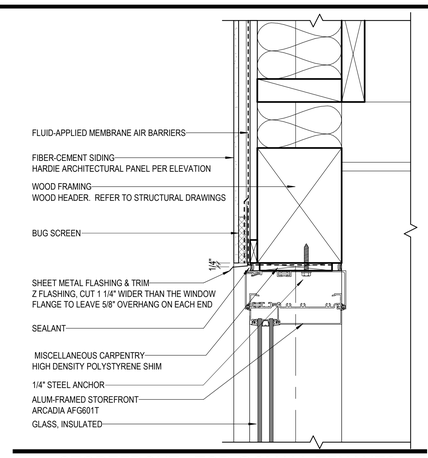


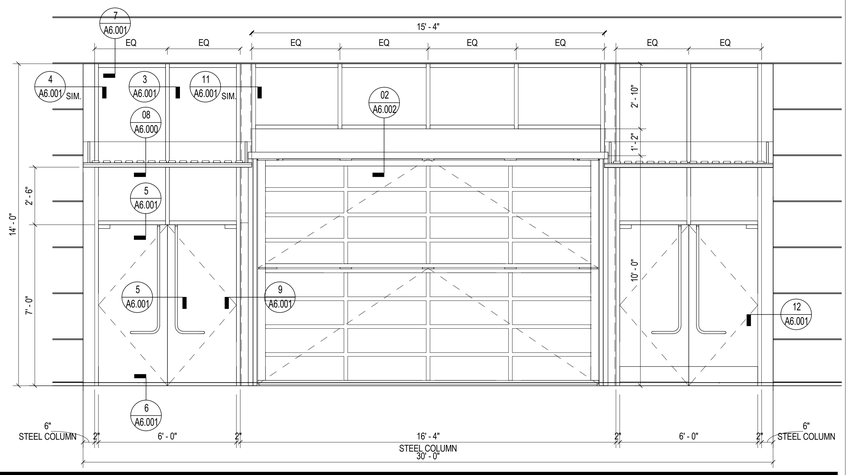
3 STOREFRONT VERTICAL WITH CAP
SCALE: 3" = 1'-0"



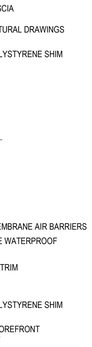
4 STOREFRONT JAMB
SCALE: 3" = 1'-0"



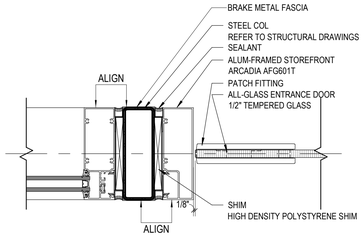
7 STOREFRONT - TOP @SMALL TENANTS
SCALE: 3" = 1'-0"



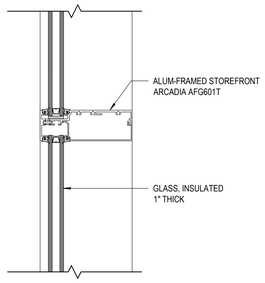
01 ENLARGED STOREFRONT WITH BI-FOLD DOOR
SCALE: 3/8" = 1'-0"



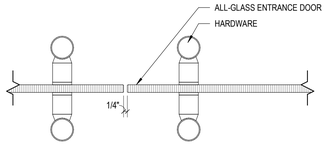
12 STOREFRONT JAMB @6" COLUMN
SCALE: 3" = 1'-0"



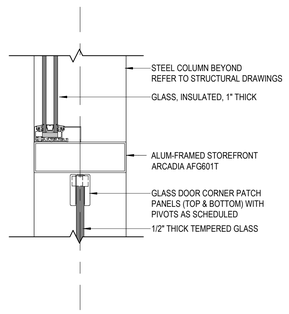
9 STOREFRONT DOOR JAMB
SCALE: 3" = 1'-0"



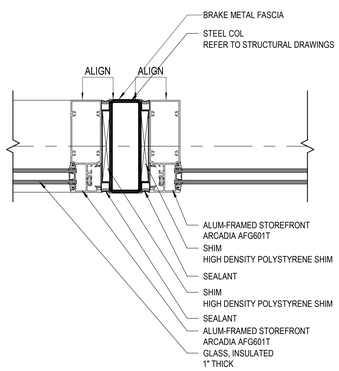
2 STOREFRONT - HORIZONTAL MULLION
SCALE: 3" = 1'-0"



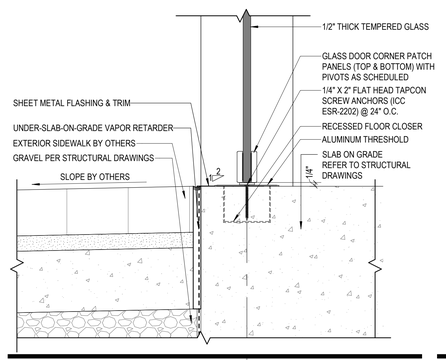
10 STOREFRONT DOOR
SCALE: 3" = 1'-0"



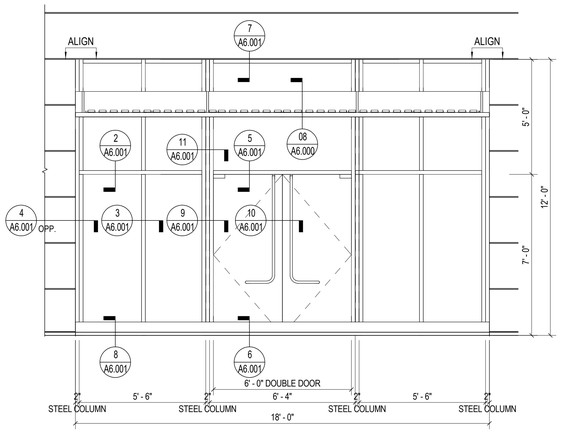
5 STOREFRONT DOOR HEAD
SCALE: 3" = 1'-0"



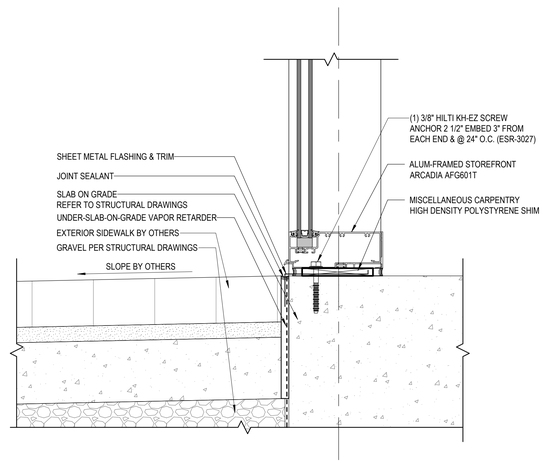
11 STOREFRONT MULLION @COLUMN
SCALE: 3" = 1'-0"



6 STOREFRONT DOOR THRESHOLD
SCALE: 3" = 1'-0"



1 ENLARGED STOREFRONT ELEVATION
SCALE: 3/8" = 1'-0"



8 STOREFRONT - BASE @SMALL TENANTS
SCALE: 3" = 1'-0"

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
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	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

LICENSED ARCHITECT
NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
ENLARGED STOREFRONT ELEVATIONS & DETAILS

Scale
As indicated

A6.001

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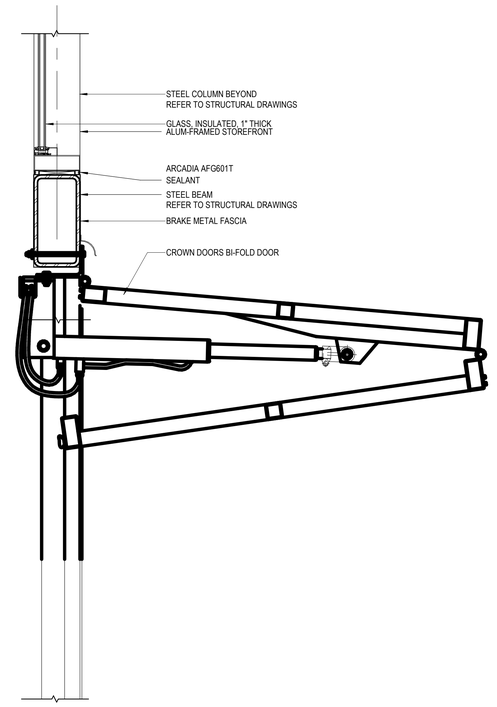
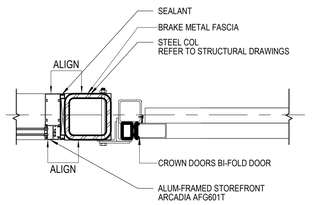


02 STOREFRONT BI-FOLD DOOR HEAD

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



03 STOREFRONT BI-FOLD DOOR JAMB

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

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CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.8945.000

Description

STOREFRONT DETAILS

Scale

1 1/2" = 1'-0"

A6.002

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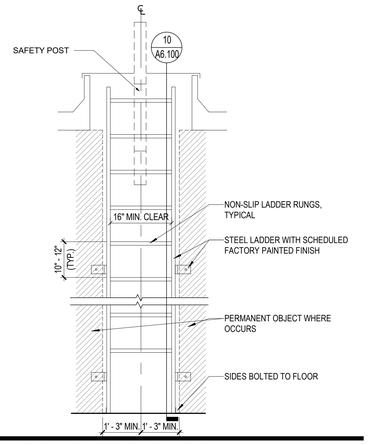
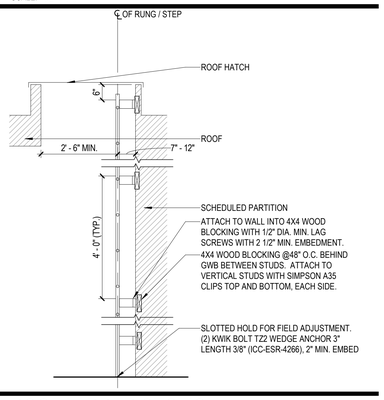


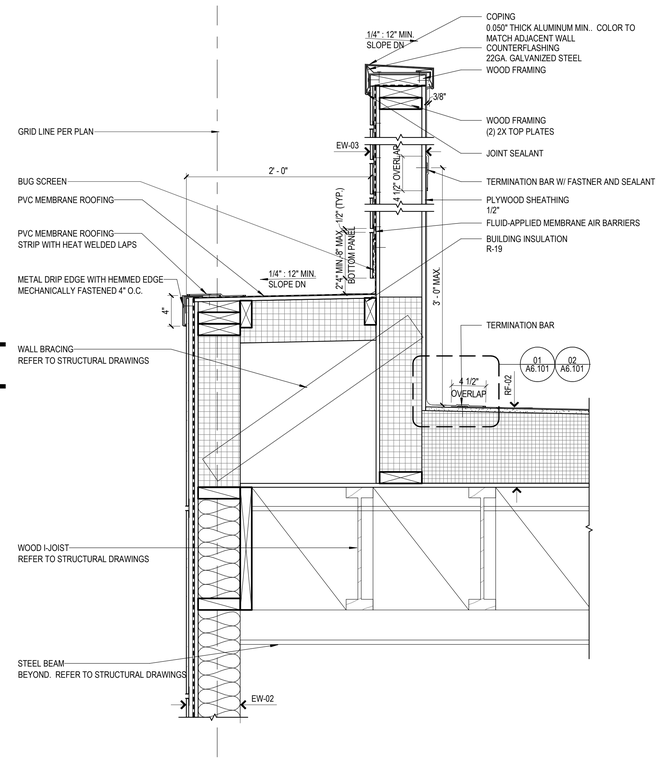
09 ROOF LADDER ELEVATION

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



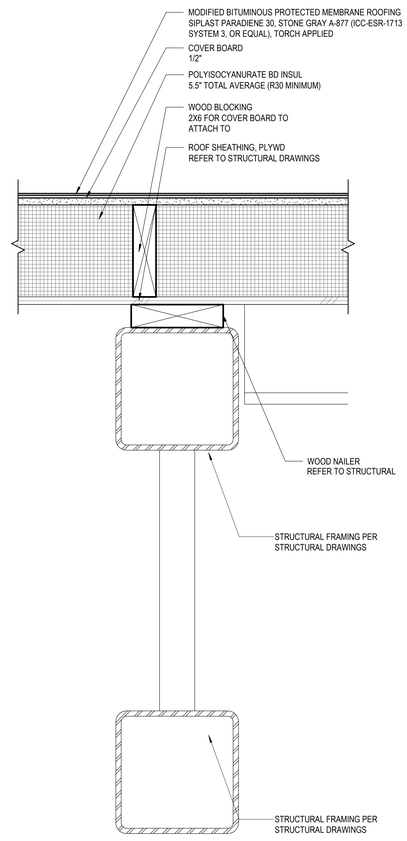
10 ROOF LADDER SECTION

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



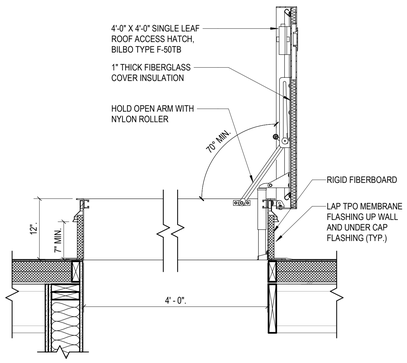
06 ROOF DETAIL - SCREEN WALL

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



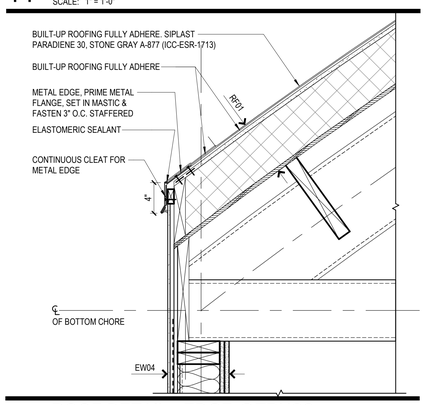
02 RF01 - ROOF ASSEMBLY

SCALE: 3" = 1'-0"



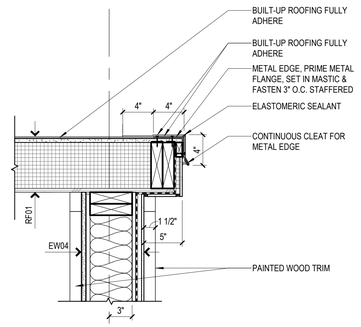
11 ROOF HATCH DETAIL

SCALE: 1" = 1'-0"



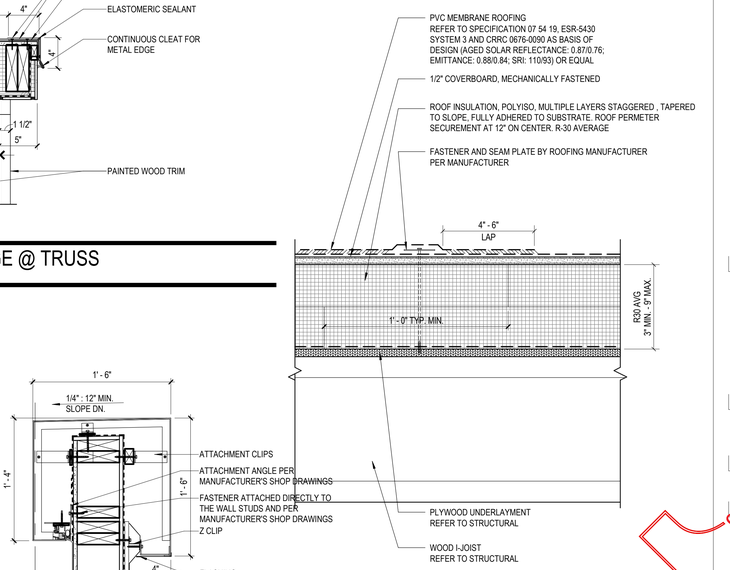
12 ROOF DETAIL - EDGE @TRUSS

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



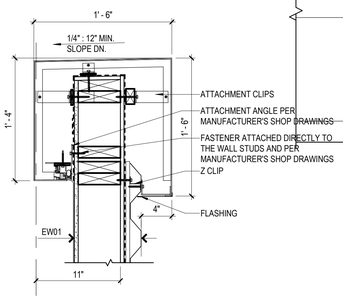
07 ROOF EDGE @ TRUSS

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



04 RF02 - ROOF ASSEMBLY

SCALE: 3" = 1'-0"



08 ROOF @TOP OF METAL PANEL

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

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NICHOLAS JAMES ACEVEDO
NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

COPY FOR BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.8945.000

Description
ROOF DETAILS

Scale
As indicated

A6.100

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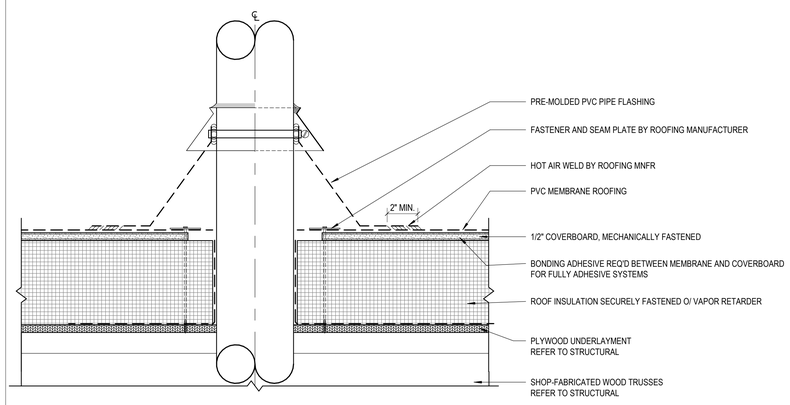
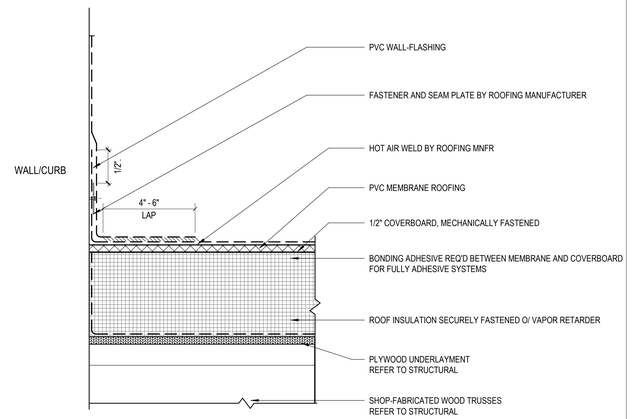
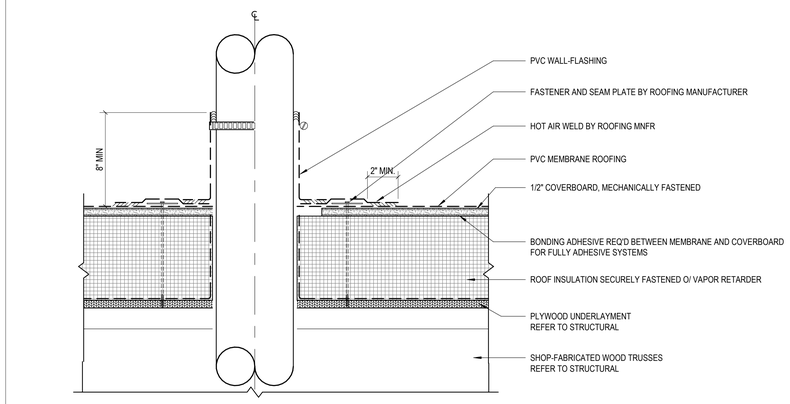


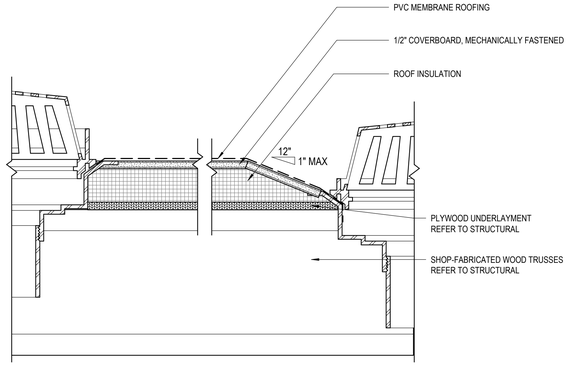
07 PVC LARGE PIPE PENETRATION @ RESTROOM
SCALE: 3" = 1'-0"



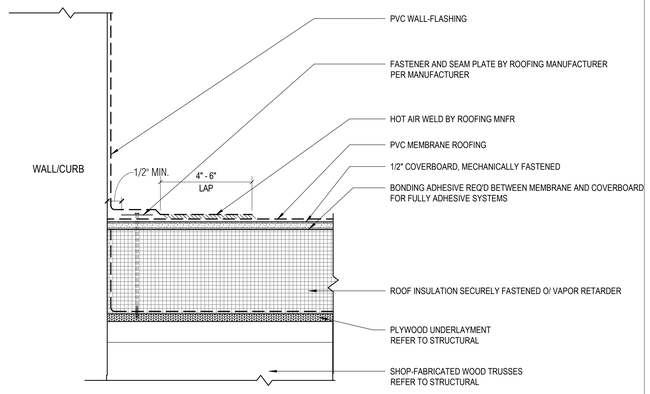
01 PVC PARAPET TO DECK 02
SCALE: 3" = 1'-0"



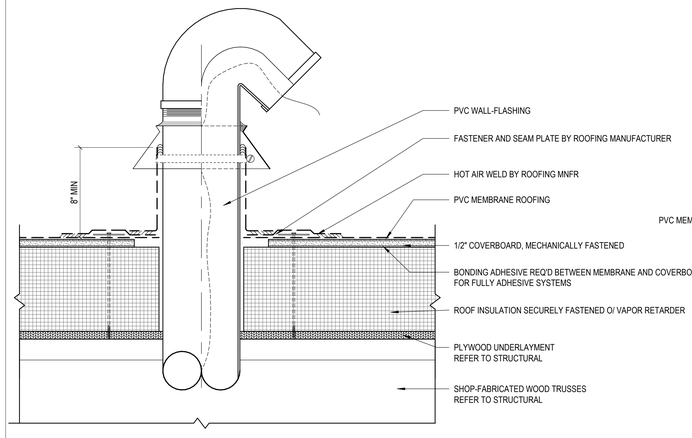
08 PVC PIPE PENETRATION @ RESTROOM
SCALE: 3" = 1'-0"



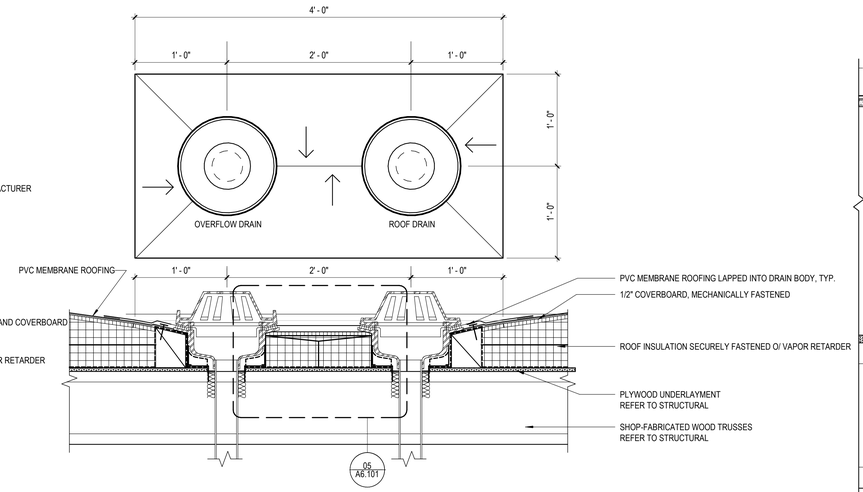
05 PVC ROOF DRAIN W/OVERFLOW
SCALE: 3" = 1'-0"



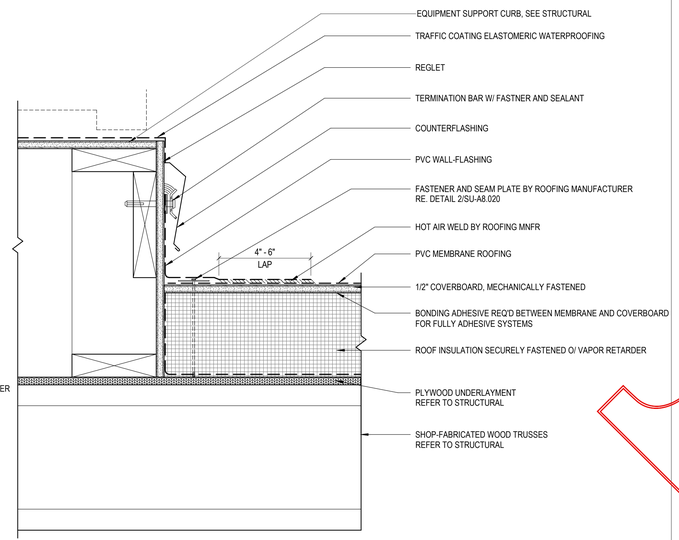
02 PVC PARAPET TO DECK 01
SCALE: 3" = 1'-0"



09 PVC CABLE/WEATHER HEAD ASSEMBLY
SCALE: 3" = 1'-0"



06 PVC ROOF DRAIN W/OVERFLOW
SCALE: 1 1/2" = 1'-0"



03 PVC ROOF EQUIPMENT PAD
SCALE: 3" = 1'-0"

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STATE OF CALIFORNIA

COMMENT
BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.02945.000

Description

ROOF DETAILS

Scale

As indicated

A6.101

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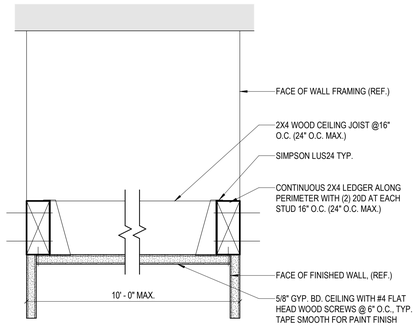
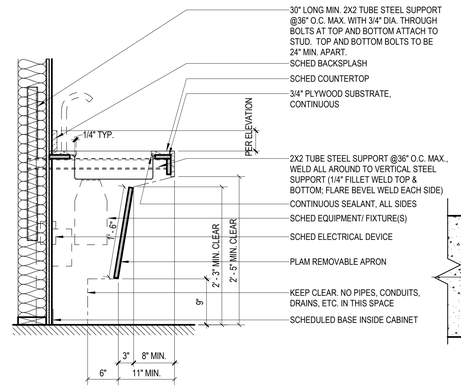


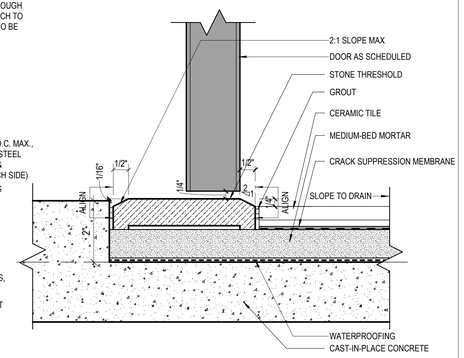
09 CEILING JOIST FRAMING - SHORT SIDE

SCALE: 3" = 1'-0"



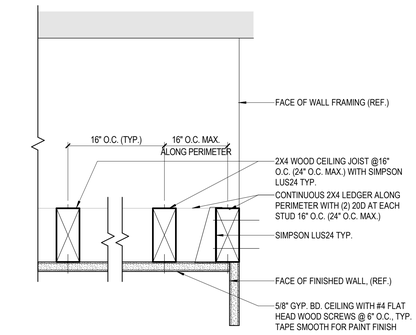
05 BASE/ SINK (ADA)

SCALE: 1" = 1'-0"



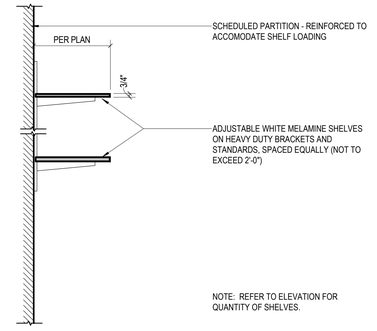
01 CONCRETE TO TILE

SCALE: 6" = 1'-0"



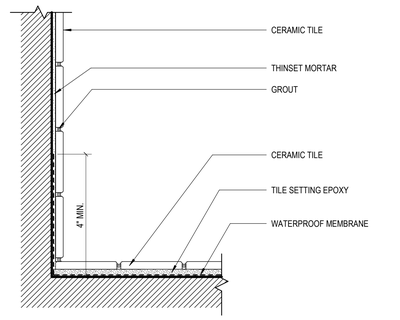
10 CEILING JOIST FRAMING - LONG SIDE

SCALE: 3" = 1'-0"



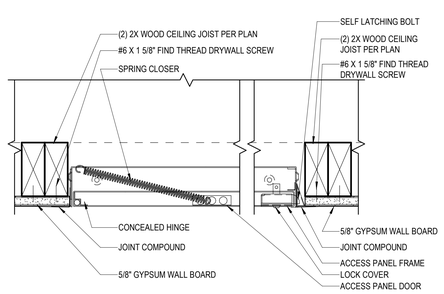
06 SHELF @JANITOR

SCALE: 1" = 1'-0"



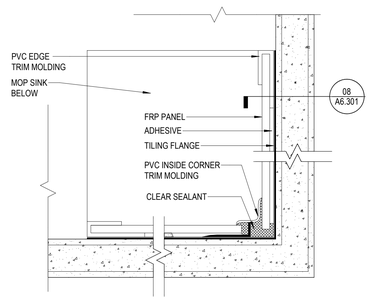
02 CERAMIC TILE - BASE

SCALE: 6" = 1'-0"



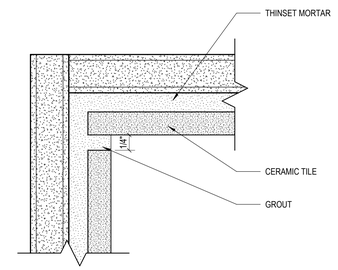
11 ACCESS PANEL DETAIL - CEILING

SCALE: 3" = 1'-0"



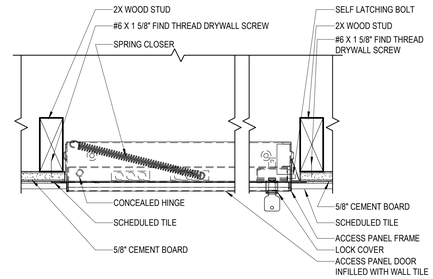
07 ENLARGED PLAN AT MOP SINK

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



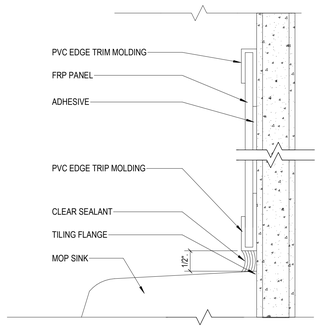
03 INSIDE CORNER TILE DETAIL

SCALE: 12" = 1'-0"



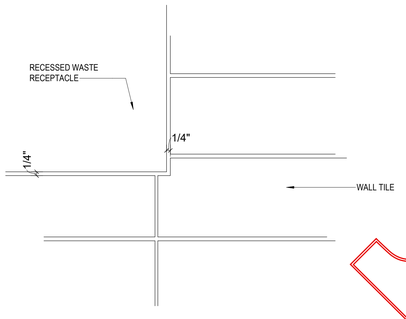
12 ACCESS PANEL DETAIL - TILE WALL

SCALE: 3" = 1'-0"



08 SECTION AT MOP SINK

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



04 TRASH RECEPTACLE DETAIL

SCALE: 3" = 1'-0"

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NO. C-32405
REN. 3-31-2027
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.03945.000

Description

BASE, TRANSITIONS AND CEILING DETAILS

Scale

As indicated

A6.301

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GENERAL STRUCTURAL NOTES

I. GENERAL

1. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE (CBC), WITH CITY OF IRVINE AMENDMENTS AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

2. THESE GENERAL NOTES SUPPLEMENT THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. IN CASE OF CONFLICT BETWEEN THE PLANS AND SPECIFICATIONS, FOLLOW THE MORE STRINGENT OF THE TWO, UNLESS OTHERWISE NOTED BY THE OWNER'S REPRESENTATIVE.

3. REFERENCE TO CODES, RULES, REGULATIONS, STANDARDS, MANUFACTURER'S INSTRUCTIONS OR REQUIREMENTS OF REGULATORY AGENCIES IS TO THE LATEST PRINTED EDITION OF EACH IN EFFECT AT THE DATE OF SUBMISSION OF BID UNLESS THE DOCUMENT DATE IS SHOWN.

4. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.

5. DETAILS AND SHEETS TITLED "TYPICAL" APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. SUCH DETAILS ARE NOT NOTED AT EACH LOCATION THAT THEY OCCUR.

6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND FOR CHECKING DIMENSIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES AND RESOLVE BEFORE PROCEEDING WITH THE WORK.

7. DO NOT SCALE THE DRAWINGS.

8. PROVIDE MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES INCLUDE, BUT MAY NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DURING CONSTRUCTION. RETAIN A REGISTERED CIVIL ENGINEER WHO IS PROPERLY QUALIFIED TO DESIGN BRACING, SHORING, ETC. VISITS TO THE SITE BY THE OWNER'S REPRESENTATIVE WILL NOT INCLUDE OBSERVATION OF THE ABOVE NOTED ITEMS.

9. SEQUENCING OF DEMOLITION AND CONSTRUCTION SHALL BE REVIEWED BY THE SHORING ENGINEER. THE ENGINEER SHALL BE RESPONSIBLE FOR THE DETERMINATION OF LOADING OR DESIGN CRITERIA FOR ELEMENTS THAT ARE REQUIRED FOR SHORING. DESIGN OF BRACING, SHORING, ETC. SHALL BE IN ACCORDANCE WITH THE ASCE STANDARD TITLED ASCE/SEI 37 - DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION PUBLISHED BY THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE).

10. INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.

11. REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF FLOOR, ROOF AND WALL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE THE SIZE AND LOCATION OF OPENINGS ASSOCIATED WITH, BUT NOT LIMITED TO, ELECTRICAL, MECHANICAL AND PLUMBING TRADES. SUBMIT FINAL SIZING AND LOCATION REQUIREMENTS OF OPENINGS TO THE OWNER'S REPRESENTATIVE FOR REVIEW.

12. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK AND MEETING THE REQUIREMENTS OF ALL APPLICABLE JURISDICTIONS. EXECUTE WORK TO ENSURE THE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST DAMAGE BY FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH THIS WORK.

13. COORDINATE THE MECHANICAL EQUIPMENT WITH ALL TRADES BEFORE INSTALLATION.

14. REFERENCE DATUM FOR THE ELEVATIONS IS FINISH FIRST FLOOR, ELEVATION = S.A.D.

15. A COPY OF THE ELEVATION REPORT AND/OR CONDITIONS OF LISTING SHALL BE MADE AVAILABLE ON THE JOB SITE.

16. STRUCTURAL ENGINEER REQUIRES 10 WORKING DAYS TO REVIEW AND RESPOND AFTER RECEIPT OF SHOP DRAWINGS AND CALCULATIONS. SHOP DRAWINGS SHALL NOT BE A REPRODUCTION OF THE STRUCTURAL DRAWINGS. ENVIRONMENTAL PRODUCT DECLARATIONS (EPDs) SHALL BE SUBMITTED WITH ALL SUBMITTALS, IF AVAILABLE. SUBMITTALS SHALL BE PROVIDED FOR THE FOLLOWING:

   A. CONCRETE
      1. REINFORCING LAYOUT, INCLUDE PROPOSED SPLICE LENGTHS AND LOCATIONS
      2. CONCRETE MIX DESIGN

   B. STEEL FRAMING AND CONNECTIONS

   C. TJI JOIST LAYOUT

17. STRUCTURAL ENGINEER REQUIRES 5 WORKING DAYS TO RESPOND AFTER RECEIPT OF REQUEST FOR INFORMATION (RFI).

18. ALL WORK IS NEW (N) UNLESS INDICATED AS EXISTING (E).

19. FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO SHOP DRAWINGS PRODUCTION AND FABRICATION OF STRUCTURAL ELEMENTS.

II. FOUNDATION AND SITE WORK

1. THE DESIGN OF THE FOUNDATION SYSTEM IS BASED UPON THE CRITERIA AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT ENTITLED "THE CANOPY 2 SITE AT THE IRVINE GREAT PARK HORNET & BEACON INTERSECTION" BY GROUP DELTA CONSULTANTS, INC, PROJECT NUMBER IR855, DATED JUNE 5, 2025.

2. THE ABOVE TITLED REPORT IS CONSIDERED PART OF THE CONSTRUCTION DOCUMENTS, AND ALL REQUIREMENTS OF THIS REPORT SHALL BE MET.

3. GROUNDWATER ELEVATION IS ESTIMATED AT APPROXIMATELY ELEVATION 40 FEET. PROVIDE SITE DE-WATERING AS SPECIFIED.

4. LOCATE AND PROTECT EXISTING UTILITIES TO REMAIN DURING AND/OR AFTER CONSTRUCTION.

5. REMOVE ABANDONED FOOTINGS, UTILITIES, ETC. WHICH INTERFERE WITH NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED.

6. NOTIFY THE OWNER'S REPRESENTATIVE IF ANY BURIED STRUCTURES NOT INDICATED, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC., ARE FOUND.

7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION.

8. REMOVE LOOSE SOIL AND STANDING WATER FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE.

9. EXCAVATIONS FOR FOUNDATIONS MUST BE ACCEPTED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING REINFORCING AND CONCRETE. NOTIFY THE GEOTECHNICAL ENGINEER WHEN EXCAVATIONS ARE READY FOR INSPECTION.

10. PLACE BACKFILL BEHIND RETAINING WALLS AFTER CONCRETE OR MASONRY HAS ATTAINED FULL DESIGN STRENGTH. BRACE BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHED FLOORS AND SLABS ON GRADE ARE COMPLETE AND HAVE ATTAINED FULL DESIGN STRENGTH.

11. MECHANICALLY COMPACT EXCAVATION BACKFILLS IN LAYERS. PROVIDE THE FOLLOWING MINIMUM COMPACTION IN ACCORDANCE WITH THE ASTM D1557 TEST METHOD OR AS INDICATED IN GEOTECHNICAL INVESTIGATION REPORT, WHICHEVER IS MORE STRINGENT:.

% OF MAXIMUM DRY DENSITY	LOCATIONS
90%	TRENCH AND WALL BACKFILL
90%	UPPER 6" OF SOIL BENEATH FILL
90%	FILL BENEATH SLAB ON GRADE
95%	FILL BENEATH FOOTINGS
90%	OTHER

IF TEST INDICATE WORK DOES NOT MEET SPECIFIED REQUIREMENTS, REMOVE WORK, REPLACE AND RETEST.

12. SCARIFY SUBGRADE SURFACE TO A DEPTH AS INDICATED IN GEOTECHNICAL INVESTIGATION REPORT TO IDENTIFY SOFT SPOTS. CUT OUT SOFT AREAS OF SUBGRADE NOT CAPABLE OF COMPACTION IN PLACE. BACKFILL WITH GENERAL FILL. COMPACT SUBGRADE TO DENSITY EQUAL OR GREATER THAN REQUIREMENTS FOR SUBSEQUENT FILL MATERIAL. UNTIL READY TO FILL, MAINTAIN EXCAVATIONS AND PREVENT LOOSE SOIL FROM FALLING INTO EXCAVATION.

13. IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, NOTIFY OWNER'S REPRESENTATIVE FOR FURTHER INVESTIGATION.

III. FORMWORK

1. THE DESIGN OF THE FORMWORK, SHORES, AND RE-SHORES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DESIGN FORMWORK UNDER DIRECT SUPERVISION OF A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER EXPERIENCED IN DESIGN OF CONCRETE FORMWORK AND LICENSED IN THE STATE OF THE LOCAL JURISDICTION. COMPLY WITH APPLICABLE STATE AND LOCAL CODES WITH RESPECT TO DESIGN, FABRICATION, ERECTION, AND REMOVAL OF FORMWORK. FORMWORK SHALL BE DESIGNED TO ACHIEVE THE CAMBER SPECIFIED ON THE DRAWINGS.

2. TIMING FOR THE REMOVAL OF THE FORMWORK AND SHORES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH ACI 347 TABLE 5.7.2.3. LOOSEN FORMS CAREFULLY. DO NOT WEDGE PRY BARS, HAMMERS, OR TOOLS AGAINST FINISHED CONCRETE SURFACES SCHEDULED FOR EXPOSURE TO VIEW.

3. AT SUSPENDED SLABS, FORMWORK SHALL NOT BE REMOVED BEFORE THE CONCRETE REACHES 75% OF ITS SPECIFIED 28-DAY COMPRESSIVE STRENGTH AND 75% OF ITS CORRESPONDING 28-DAY MODULUS OF ELASTICITY (E). RE-SHORES SHALL BE PLACED AS SOON AS POSSIBLE AFTER REMOVING FORMWORK AND NO LATER THAN THE END OF THE SAME DAY THE FORMWORK WAS REMOVED. THE RE-SHORES SHALL NOT BE REMOVED BEFORE CONCRETE REACHES ITS SPECIFIED STRENGTH AT 28 DAYS.

4. PROVIDE APPROVED CURING MEASURE WHERE FORMS ARE REMOVED IN LESS THAN 7 DAYS, INCLUDING BUT NOT LIMITED TO WALLS, COLUMNS, AND UNDERSIDE OF ELEVATED SLABS.

5. VERIFY LINES, LEVELS, AND CENTERS BEFORE PROCEEDING WITH FORMWORK. ENSURE THE DIMENSIONS AGREE WITH DRAWINGS.

6. PROVIDE POUR POCKETS IN FORMS AND UNDER EXISTING STRUCTURAL MEMBERS AS REQUIRED TO PREVENT AIR POCKETS AND/OR "HONEYCOMB" UNDER OR AROUND THE EXISTING MEMBERS. CONCRETE CAST WITH AIR POCKETS AND/OR "HONEYCOMB" UNDER OR AROUND THE MEMBERS IS NOT ACCEPTABLE.

7. ERECT FORMWORK, SHORING AND BRACING TO ACHIEVE DESIGN REQUIREMENTS, IN ACCORDANCE WITH REQUIREMENTS OF ACI 301. PROVIDE BRACING TO ENSURE STABILITY OF FORMWORK. SHORE OR STRENGTHEN FORMWORK SUBJECT TO OVERSTRESSING BY CONSTRUCTION LOADS.

8. PROVIDE FORMED OPENINGS WHERE REQUIRED FOR ITEMS TO BE EMBEDDED IN PASSING THROUGH CONCRETE WORK.

9. CLEAN FORMS AS ERECTION PROCEEDS, TO REMOVE FOREIGN MATTER WITHIN FORMS. CLEAN FORMED CAVITIES OF DEBRIS PRIOR TO PLACING CONCRETE.

10. CONSTRUCT FORMWORK TO MAINTAIN TOLERANCES REQUIRED BY ACI 117.

IV. REINFORCING STEEL

1. REINFORCING TO CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:

LOCATION	TYPE
REINFORCING STEEL #7 AND SMALLER	ASTM A615, 60 KSI
REINFORCING STEEL #8 AND LARGER AND REINFORCING STEEL TO BE WELDED	ASTM A706, 60 KSI
1/2 INCH DIAMETER LOW RELAXATION SEVEN WIRE POST-TENSIONING STRAND	ASTM A416, 270 KSI
SMOOTH STEEL WIRE FOR SPIRALS	ASTM A82, 70 KSI
WELDED STEEL WIRE FABRIC	ASTM A185, 70 KSI
SMOOTH DOWELS IN SLAB ON GRADE	ASTM A36, 36 KSI
DEFORMED BAR ANCHORS: NELSON/TRW TYPE "D2L" PER ICC-ESR 2907 OR APPROVED EQUIVALENT	ASTM A496, 70 KSI

2. FABRICATE CONCRETE REINFORCING IN ACCORDANCE WITH CURRENT CRSI (DA4) - MANUAL OF STANDARD PRACTICE AND ACI 318.

3. ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT FROM DISPLACING DUE TO FORMWORK, CONSTRUCTION, OR CONCRETE PLACEMENT OPERATIONS. LOCATE AND SUPPORT REINFORCING BY METAL CHAIRS, RUNNERS, BOLSTERS, SPACERS, AND HANGERS AT A MAXIMUM 3-FOOT SPACING. PLACE REINFORCING BARS IN ACCORDANCE WITH CURRENT CRSI (P1).

4. MECHANICAL COUPLERS: LENTON THREADED OR INTERLOCK COUPLERS BY ERICO, IAPMO ER-0129, OR XTENDER BY HEADED REINFORCEMENT CORPORATION, ICC ESR-2764, OR BAR-LOCK BY DAYTON SUPERIOR CORPORATION, IAPMO ER-319. COUPLERS FOR BEAM AND SLAB BARS AT FORMED CONSTRUCTION JOINTS MAY BE LENTON FORM SAVERS BY ERICO, IAPMO ER-0129.

5. WELD REINFORCING STEEL IN ACCORDANCE WITH AWS D1.4 USING QUALIFIED WELDERS.

6. WELDABILITY TEST OF EXISTING REINFORCING STEEL SHALL BE PERFORMED PRIOR TO WELDING. PROPER WELDING PROCEDURE SHALL BE SELECTED BASED ON THE CHEMICAL COMPOSITION OF EXISTING REINFORCING STEEL AND RECOMMENDATION FROM AWS D1.4.

7. TERMINATE REINFORCING STEEL IN STANDARD HOOKS, UNLESS OTHERWISE SHOWN.

8. PROVIDE REINFORCING SHOWN OR NOTED CONTINUOUS IN LENGTHS AS LONG AS PRACTICAL.

9. TIE WIRE TO BE ANNEALED, MINIMUM 16 GAGE. CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS ARE TO BE SIZED AND SHAPED FOR ADEQUATE SUPPORT OF REINFORCEMENT DURING CONCRETE PLACEMENT.

V. CAST-IN-PLACE CONCRETE

1. CONCRETE IS REINFORCED AND CAST-IN-PLACE UNLESS OTHERWISE NOTED. WHERE REINFORCING IS NOT SPECIFICALLY SHOWN OR WHERE DETAILS ARE NOT GIVEN, PROVIDE REINFORCING SIMILAR TO THAT SHOWN FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.

2. ROUGHEN CONCRETE SURFACES OF CONSTRUCTION JOINTS TO ¼ INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES. LOCATE CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS. SUBMIT ALTERNATE JOINT LOCATIONS OR JOINTS NOT SHOWN TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH THE WORK.

3. AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING CONCRETE, ROUGHEN CONTACT SURFACES TO ¼ INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES.

4. AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING MASONRY, THOROUGHLY ROUGHEN CONTACT SURFACES BY LIGHT SANDBLASTING OR OTHER SUITABLE MEANS AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES.

5. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF ADDITIONAL CONCRETE CURBS AND HOUSEKEEPING PADS NOT SHOWN.

6. CONCRETE CLEAR COVER TO REINFORCING BARS IS AS FOLLOWS, UNLESS OTHERWISE NOTED:

LOCATION	CLEAR COVER
CONCRETE PLACED AGAINST EARTH	3 INCHES
FORMED SURFACES EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: #6 BARS AND LARGER #5 BARS AND SMALLER	 2 INCHES 1 1/2 INCHES
SLABS ON GRADE (TOP CLEARANCE)	1 1/2 INCHES
BEAMS, GIRDERS AND COLUMNS NOT EXPOSED TO WEATHER OR EARTH	1 1/2 INCHES
WALL OR SLAB SURFACES NOT EXPOSED TO WEATHER OR EARTH: #5 & SMALLER #6 & #7 #8,#9, #10 & #11 #14 & #18	 3/4 INCH 1 INCH 1 1/2 INCHES 2 1/2 INCHES

7. CONCRETE TYPES:

CLASS	28-DAY STRENGTH	TYPE	LOCATION
A	3000 PSI	NORMAL WEIGHT	FOUNDATIONS, MISC CURBS, HOUSE-KEEPING PADS, ETC
B	3000 PSI	NORMAL WEIGHT	SLABS ON GRADE

8. CEMENT SHALL CONFORM TO ASTM C150 TYPE IL.

9. FINE AND COARSE AGGREGATES SHALL CONFORM TO ASTM C33. LIGHTWEIGHT AGGREGATE SHALL CONFORM TO ASTM C330.

10. MIXING WATER SHALL BE POTABLE AND CONFORM TO ASTM C1602.

11. FLY ASH USED IN CONCRETE MIX SHALL CONFORM TO ASTM C618 CLASS F, CALCINED POZZOLAN SHALL CONFORM TO ASTM C 618, CLASS N, SILICA FUME SHALL CONFORM TO ASTM C 1240, PROPORTIONED IN ACCORDANCE WITH ACI 211.1, AND AIR ENTRAINMENT ADMIXTURE SHALL CONFORM TO ASTM C 260.

12. FOR EACH CLASS OF CONCRETE, A CONCRETE MIX DESIGN SHALL BE PREPARED BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE TO ACI 211 AND ACI 301.

13. CONCRETE MIX DESIGNS SHALL BE REVIEWED BY THE OWNER'S TESTING AGENCY. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN FOR EACH CLASS OF CONCRETE, INCLUDING LETTER OF CONFORMANCE FROM OWNER'S TESTING AGENCY, TO OWNER'S REPRESENTATIVE FOR REVIEW. AS AN ALTERNATE TO THE LETTER OF CONFORMANCE FROM THE OWNER'S TESTING AGENCY, THE CONCRETE MIX DESIGN MAY BE PREPARED BY A CIVIL ENGINEER LICENSED IN STATE OF CALIFORNIA. THE MIX DESIGN SHALL BEAR THE STAMP AND SIGNATURE OF THE CIVIL ENGINEER.

14. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM C 39/C 39 M.

15. PERFORM WORK IN ACCORDANCE WITH ACI 301 AND ACI 318. FOLLOW RECOMMENDATIONS OF ACI 305R WHEN CONCRETING DURING HOT WEATHER AND ACI 306R WHEN CONCRETING DURING COLD WEATHER.

16. CONTINUOUSLY MOIST CURE CONCRETE SLABS-ON-GRADE FOR 7 DAYS MINIMUM. WATER FOG SPRAYS, PONDING, SATURATED ABSORPTIVE COVERS, MOISTURE RETAINING COVERS OR CURING COMPOUNDS MAY BE USED.

17. VAPOR BARRIER SHALL CONFORM TO ACI 302.

18. REPAIR UNDERSLAB VAPOR RETARDER DAMAGE DURING PLACEMENTS OF CONCRETE REINFORCING. REPAIR ACCORDING TO MANUFACTURER RECOMMENDATIONS.

19. CONCRETE FILL THICKNESS SHOWN ON THE FRAMING PLANS ARE MINIMUM THICKNESSES. NO ALLOWANCES HAVE BEEN SHOWN FOR ADDITIONAL CONCRETE FILL REQUIRED TO COMPENSATE FOR FRAME, DECK, OR FORMWORK DEFLECTIONS TO MAINTAIN SURFACE TOLERANCES SPECIFIED.

20. PLACE CONCRETE IN ACCORDANCE WITH ACI 304R, PLACE CONCRETE FOR FLOOR SLABS IN ACCORDANCE WITH ACI 302.1R, DO NOT INTERRUPT SUCCESSIVE PLACEMENT; DO NOT PERMIT COLD JOINTS TO OCCUR. SAW CUT JOINTS WITHIN 24 HOURS AFTER PLACING.

21. NON-SHRINK GROUT SHALL CONFORM TO ASTM C 1107/C 1107M, 7000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: EUCLID CHEMICAL COMPANY'S "EUCO-NS", L&M CRYSTEX, MASTER BUILDERS' "MASTERFLOW 713", OR FIVE STAR GROUT. WHERE HIGH FLUIDITY OR INCREASED PLACING TIME IS REQUIRED, USE EUCLID CHEMICAL COMPANY'S "EUCO HI-FLOW GROUT" OR MASTER BUILDERS' "MASTERFLOW 928".

22. SEPARATE SLABS ON GRADE FROM VERTICAL SURFACES WITH JOINT FILLER UNLESS OTHERWISE INDICATED IN THE DRAWINGS.

23. PLACE JOINT FILLER IN FLOOR SLAB PATTERN PLACEMENT SEQUENCE. SET TOP TO REQUIRED ELEVATIONS. SECURE TO RESIST MOVEMENT BY WET CONCRETE.

24. EXTEND JOINT FILLER FROM BOTTOM OF SLAB TO WITHIN ½ INCH OF FINISHED SLAB SURFACE.

25. INSTALL JOINT DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

CITY OF IRVINE
COMMUNITY DEVELOPMENT
Building and Safety

Print Form

STRUCTURAL OBSERVATION PROGRAM

PROJECT ADDRESS		PERMIT APPLICATION NUMBER
Hangar 10, Great Park; Irvine, CA 92618		00970420-CNEW
DESCRIPTION OF WORK		
A new shell building for future tenants to replace existing. New building includes (2) restrooms, janitor closet and roof acce		
OWNER	ARCHITECT	ENGINEER
City of Irvine	Gensler	Structural Focus

STRUCTURAL OBSERVATION (ONLY CHECKED ITEMS ARE REQUIRED)

FIRM OR INDIVIDUAL TO BE RESPONSIBLE FOR THE STRUCTURAL OBSERVATION: Structural Focus

NAME	PHONE	CALIFORNIA REGISTRATION
Brendan Ramos	310.323.9924	S6251

FOUNDATION	WALL	FRAME	DIAPHRAGM
☒ FOOTING, STEM WALLS, PIERS	☐ CONCRETE	☒ STEEL MOMENT FRAME	☐ CONCRETE
☐ MAT FOUNDATION	☐ MASONRY	☐ STEEL BRACED FRAME	☐ STEEL DECK
☐ CAISSON, PILES, GRADE BEAM	☒ WOOD	☐ CONCRETE MOMENT FRAME	☒ WOOD
☐ STEPPING/RETAINING FOUNDATION	☐ OTHER:	☐ MASONRY WALL FRAME	☐ OTHER:
☐ OTHER:		☐ OTHER:	

THIS PROJECT IS STRUCTURALLY REPETITIVE IN THE FOLLOWING MANNER:

DUE TO THE REPETITIVE NATURE DESCRIBED ABOVE AND SUBJECT TO THE CONDITIONS OF THE CITY OF IRVINE INFORMATIONAL BULLETIN NO. 251, STRUCTURAL OBSERVATION WILL BE PERFORMED AS FOLLOWS:

DECLARATION BY OWNER: I, THE OWNER OF THE PROJECT, DECLARE THAT THE ABOVE LISTED FIRM OR INDIVIDUAL IS HIRED BY ME TO BE THE STRUCTURAL OBSERVER.

Denica Bailey — SIGNATURE — 2025-10-15 — DATE

ONLY COMPLETE IF DEFERRING SELECTION: IN CONSIDERATION OF DEFERRING THE SELECTION OF THE STRUCTURAL OBSERVER, THE OWNER ACKNOWLEDGES THAT THE PROJECT CAN NOT COMMENCE UNTIL SUCH SELECTION IS MADE AND DOCUMENTED ON A SUPPLEMENTAL CITY OF IRVINE STRUCTURAL OBSERVATION PROGRAM FORM PROVIDED TO THE CITY INSPECTOR AT OR BEFORE THE PRE-CONSTRUCTION MEETING, WHICH SHALL BE ATTENDED BY THE SELECTED STRUCTURAL OBSERVER.

SIGNATURE — DATE

FORM 40-83 REV 1/16

DEFERRED SUBMITTAL

DEFERRED SUBMITTAL AND DESIGN-BUILD SCOPE INCLUDES BUT IS NOT LIMITED TO THE ITEMS LISTED BELOW. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DEFERRED SUBMITTAL OR DESIGN-BUILD SCOPE. ANY INFORMATION CONTAINED IN THESE DRAWINGS PERTAINING TO THE ITEMS LISTED BELOW IS FOR COORDINATION PURPOSES ONLY. MEMBER SIZES AND CONFIGURATIONS SHOWN ON THESE DRAWINGS ARE ADVISORY AND ARE EXCLUDED FROM THE SCOPE FOR WHICH STRUCTURAL FOCUS IS THE ENGINEER-OF-RECORD AS DESIGNATED BY THESE DRAWINGS ONCE SEALED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND COORDINATE ALL DESIGN-BUILD SCOPE, AND TO COORDINATE ALL DEFERRED SUBMITTALS WITH THE INFORMATION AND DESIGN CRITERIA SHOWN ON THESE DRAWINGS. DESIGN SHALL BE PERFORMED, STAMPED AND SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA, AND SUBMITTED TO THE DESIGN TEAM FOR REVIEW AND TO THE [APPROPRIATE JURISDICTION] FOR APPROVAL.

- STOREFRONT AND CURTAIN WALL SYSTEMS & ATTACHMENT

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YLMC1	YIELD-LINK MOMENT CONNECTION
YLMC2	YIELD-LINK MOMENT CONNECTION
YLMC3	YIELD-LINK MOMENT CONNECTION

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

410 BEACON
IRVINE, CA 92618

Gensler

4675 MacArthur Court
Suite 100
Newport Beach, CA 92660
United States

Tel 949.863.9434
Fax 949.553.1676

STRUCTURAL FOCUS

19210 S. Vermont Ave.,
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Gardena, Ca 90248
Tel 310.323.9924

BRENDAN RAMOS No. S6251 Exp. 3/31/26 STRUCTURAL ENGINEER STATE OF CALIFORNIA

△ Date	Description
10/14/2025	CD CLIENT REVIEW/PRICING
11/03/2025	ISSUE FOR PLAN CHECK
01/09/2025	ADDENDUM A/PLAN CHECK COMMENTS
05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
GENERAL STRUCTURAL NOTES AND DRAWING INDEX

Scale
NOT TO SCALE

CITY OF IRVINE BUILDING & SAFETY DIVISION

S1.001

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GENERAL STRUCTURAL NOTES CONTINUED

VI. STRUCTURAL STEEL

1. STRUCTURAL STEEL TO CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:

SECTIONS	TYPE
ROLLED SHAPES WIDE FLANGES CHANNELS, ANGLES, & OTHER	 ASTM A992 (50 KSI) ASTM A36
PLATES COLUMN BASE PLATES BRACE GUSSET PLATES BEAM SHEAR CONNECTION PLATES COLUMN CONTINUITY PLATES BEAM STIFFENER PLATES DECK CLOSURE PLATES OTHER	 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50
STEEL PIPE	ASTM A53 GRADE B
HOLLOW STRUCTURAL SECTION (HSS)	ASTM A500 GRADE C
STAINLESS STEEL SHAPES, PLATES AND BARS	ASTM A276
BOLTS	ASTM F3125 GR A325X
MACHINE BOLTS	ASTM A307
ANCHOR BOLTS AND RODS	ASTM F1554, GR 55
THREADED AND HANGER ROD	ASTM A572, GR 50
WELDED SHEAR CONNECTORS NELSON/TRW PER ICC ESR-2856 OR APPROVED EQUIVALENT	ASTM A108, GRADE 1015 THROUGH 1020 (50 KSI)
WELDED THREADED STUDS NELSON/TRW OR APPROVED EQUIVALENT	ASTM A108, GRADE 1015 THROUGH 1020
NUTS FOR BOLTS AND MACHINE BOLTS	ASTM A563
HARDENED WASHERS	ASTM F436
UNHARDENED	ASTM F844
PLAIN WASHERS	ANSI B18.22.1
BEVELED WASHERS	ANSI B18.23.1

2. HOT DIP GALVANIZE IN ACCORDANCE WITH ASTM A123 AND ASTM A153 STRUCTURAL STEEL AND FASTENERS THAT ARE PERMANENTLY EXPOSED TO THE WEATHER. REPAIR GALVANIZING AFTER WELDING IN ACCORDANCE WITH ASTM A780.

3. STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO VIEW IN THE COMPLETED BUILDING ARE DESIGNATED ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS).

4. ARC-WELDING ELECTRODES/FILLER METALS TO BE LOW HYDROGEN TYPES E7XTX, E7XTXX OR E70XXX MINIMUM AS APPLICABLE. ELECTRODES WITH CHARPY V-NOTCH (CVN) TESTS VALUES OF A MINIMUM 20 FOOT-POUNDS AT -20 DEGREES FAHRENHEIT ARE TO BE USED AT THE FOLLOWING LOCATIONS:

   A. COMPLETE JOINT PENETRATION WELDS
   B. BEAM TO COLUMN MOMENT CONNECTIONS - INCLUDING FLANGE, WEB, AND CONTINUITY PLATE FILLET AND PARTIAL JOINT PENETRATION WELDS
   C. BRACE CONNECTIONS - INCLUDING BRACE, GUSSET, BASE PLATES, BEAM STIFFENER PLATES, AND CONTINUITY PLATE FILLET AND PARTIAL JOINT PENETRATION WELDS
   D. WELDS NOTED "CVN" ON THE DRAWINGS

5. WELDERS TO BE CERTIFIED BY AWS AND THE GOVERNING JURISDICTION.

6. WHERE FIELD WELDING IS NOTED, THE DESIGNATION IS GIVEN AS A SUGGESTED CONSTRUCTION PROCEDURE ONLY.

7. PROVIDE NATURAL CAMBER UP, UNLESS NOTED OTHERWISE, EXCEPT AT CANTILEVERS. AT CANTILEVERS PROVIDE CAMBER SUCH THAT TIP OF CANTILEVER IS ABOVE FINAL ELEVATION.

8. SPLICE MEMBERS ONLY WHERE INDICATED.

9. FIELD WELDING TO BE DONE BY WELDERS CERTIFIED BY THE BUILDING DEPARTMENT FOR STRUCTURAL STEEL AND REINFORCING STEEL. CONTINUOUS INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED.

10. SHOP WELDS MUST BE PERFORMED IN A BUILDING DEPARTMENT LICENSED FABRICATOR'S SHOP.

11. BUILDING DEPARTMENT LICENSED FABRICATOR IS REQUIRED FOR TRUSSES AND STRUCTURAL STEEL.

12. PROVIDE LEAD HOLE 40%-70% OF THREADED SHANK DIAMETER AND FULL DIAMETER FOR SMOOTH SHANK PORTION.

VII. MECHANICAL ANCHORS

1. EXPANSION OR WEDGE ANCHORS INTO CONCRETE: HILTI KWIK BOLT TZ-2 (ICC-ESR 4266), SIMPSON STRONG-BOLT 2 (ICC-ESR-3037), OR APPROVED EQUAL. INSTALL ANCHORS IN ACCORDANCE WITH ICC REPORT. EMBEDMENT DEPTH, MINIMUM EDGE DISTANCE, AND MINIMUM SPACING FOR ANCHORS AND DOWELS ARE AS FOLLOW, UNLESS OTHERWISE NOTED IN DRAWINGS. PROVIDE SPECIAL INSPECTION AS REQUIRED BY THE ICC EVALUATION REPORT:

   EXPANSION ANCHORS INTO CONCRETE:

ANCHOR DIAMETER	ANCHOR EMBEDMENT	ANCHOR EDGE DISTANCE	ANCHOR SPACING	BASE MATERIAL THICKNESS
1/2"	4"	8"	4"	6"
5/8"	4"	9"	5"	8"
3/4"	5"	9"	7"	9"

2. SCREW ANCHORS INTO CONCRETE: SIMPSON TITEN HD (ICC-ESR-2713), HILTI KWIK HUS-EZ (ICC-ESR 3027), OR APPROVED EQUAL. SCREW ANCHORS INTO GROUTED CONCRETE MASONRY UNIT: SIMPSON TITEN HD SCREWS (ICC-ESR 1056), HILTI KWIK HUS-EZ (ICC-ESR 3056) OR APPROVED EQUAL. INSTALL ANCHORS IN ACCORDANCE WITH ICC REPORT. EMBEDMENT DEPTH, MINIMUM EDGE DISTANCE, AND MINIMUM SPACING FOR ANCHORS AND DOWELS ARE AS FOLLOW, UNLESS OTHERWISE NOTED IN DRAWINGS. PROVIDE SPECIAL INSPECTION AS REQUIRED BY THE ICC EVALUATION REPORT:

   SCREW ANCHORS INTO CONCRETE:

ANCHOR DIAMETER	ANCHOR EMBEDMENT	ANCHOR EDGE DISTANCE	ANCHOR SPACING	BASE MATERIAL THICKNESS
3/8"	3"	4"	3"	5"
1/2"	4"	6"	3"	7"
5/8"	5"	7"	4"	9"

   SCREW ANCHORS INTO GROUTED MASONRY UNITS:

ANCHOR DIAMETER	ANCHOR EMBEDMENT	ANCHOR EDGE DISTANCE	ANCHOR SPACING	BASE MATERIAL THICKNESS
3/8"	3"	12"	6"	8" NOMINAL
1/2"	4"	12"	8"	8" NOMINAL
5/8"	5"	12"	10"	8" NOMINAL

   UNLESS OTHERWISE NOTED, LOCATE EXPANSION ANCHORS 1-1/4" MINIMUM FROM THE VERTICAL MORTAR HEAD JOINT.

4. HEAVY DUTY SLEEVE ANCHORS INTO CONCRETE: HILTI HDA-P UNDERCUT ANCHOR (ICC-ESR 1546), HILTI HSL-4 ANCHORS (ICC-ESR 4386) OR APPROVED EQUAL. INSTALL ANCHORS IN ACCORDANCE WITH ICC REPORT. EMBEDMENT DEPTH, MINIMUM EDGE DISTANCE, AND MINIMUM SPACING FOR ANCHORS AND DOWELS ARE AS FOLLOW, UNLESS OTHERWISE NOTED IN DRAWINGS. PROVIDE SPECIAL INSPECTION AS REQUIRED BY THE ICC EVALUATION REPORT:

   SLEEVE ANCHORS INTO CONCRETE:

ANCHOR SIZE	ANCHOR EMBEDMENT	ANCHOR EDGE DISTANCE	ANCHOR SPACING	BASE MATERIAL THICKNESS
M10	4"	5"	10"	8"
M12	5"	5"	11"	8"
M16	8"	6"	13"	11"
M20	10"	9"	14"	14"

5. POWDER-ACTUATED FASTENERS: SIMPSON PDPA .300" HEADED FASTENER WITH 0.157" SHANK DIAMETER (ICC-ESR 2138), HILTI X-U FASTENERS WITH 0.157" SHANK DIAMETER (ICC-ESR 2269), OR APPROVED EQUAL. EMBEDMENT DEPTH, MINIMUM EDGE DISTANCE, AND MINIMUM SPACING FOR ANCHORS AND DOWELS ARE AS FOLLOW, UNLESS OTHERWISE NOTED IN DRAWINGS. INSTALL FASTENERS IN ACCORDANCE WITH ICC REPORT.

   FASTENERS INTO CONCRETE:

ANCHOR SIZE	ANCHOR EMBEDMENT	ANCHOR EDGE DISTANCE	ANCHOR SPACING	BASE MATERIAL THICKNESS
SEE ABOVE	2"	3"	4"	6"

6. PROVIDE STAINLESS STEEL FASTENERS FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.

7. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, NOTIFY THE OWNER'S REPRESENTATIVE FOR FURTHER DIRECTION.

8. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.

9. ANCHORS WILL BE PROOF TESTED BY OWNER'S TESTING AND INSPECTION AGENCY.

10. IF ANY ANCHOR FAILS TESTING, REPLACE ANCHOR AND TEST ADDITIONAL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE PASS, THEN RESUME INITIAL TESTING FREQUENCY.

11. APPLY TEST LOAD BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION ON THE ANCHOR SUCH AS DIRECT PULL WITH A HYDRAULIC JACK, TORQUE WRENCH, OR CALIBRATED SPRING_LOADING DEVICES, ETC.

12. TEST ANCHORS NO SOONER THAN 24 HOURS AFTER INSTALLATION.

13. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY A BASE PLATE OR OTHER FIXTURE. IF RESTRAINT IS FOUND, LOOSEN AND SHIM OR REMOVE THE FIXTURE PRIOR TO TESTING.

14. TEST 10% WEDGE OR SLEEVE ANCHORS PER ONE OF THE FOLLOWING METHODS:

   A. HYDRAULIC RAM METHOD: APPLY PROOF TEST LOAD WITHOUT REMOVING THE NUT. IF IT IS NOT POSSIBLE TO TEST WITH THE NUT INSTALLED, REPLACE THE NUT WITH A THREADED COUPLER TO THE SAME TORQUE MEASURED WITH A TORQUE WRENCH, AND THEN APPLY THE LOAD. ANCHOR IS ACCEPTABLE IF NO MOVEMENT IS OBSERVED AT THE TEST LOAD. MOVEMENT MAY BE DETERMINED WHEN THE WASHER UNDER THE NUT BECOMES LOOSE.

   B. TORQUE WRENCH METHOD: TEST ANCHORS TO THE TORQUE LOAD INDICATED IN THE TABLE BELOW WITHIN THE FOLLOWING LIMITS:

      1. FOR 3/8" SLEEVE ANCHORS, ONE-QUARTER TURN OF THE NUT. FOR OTHER SLEEVE ANCHORS, ONE-HALF TURN OF THE NUT.

      2. FOR WEDGE ANCHORS, ONE-HALF TURN OF THE NUT.

15. TEST SHELL TYPE ANCHORS PER ONE OF THE FOLLOWING METHODS:

   A. VISUALLY INSPECT 25% OF ANCHORS FOR FULL EXPANSION AS EVIDENCED BY THE LOCATION OF THE EXPANSION PLUG IN THE ANCHOR BODY. ACCEPTABLE PLUG LOCATION OF A FULLY EXPANDED ANCHOR IS RECOMMENDED BY THE MANUFACTURER, OR IN THE ABSENCE OF SUCH RECOMMENDATION, WILL BE DETERMINED FOLLOWING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ALSO, PROOF LOAD 5% OF THE ANCHORS TO THE TENSION LOAD VALUES INDICATED IN THE TABLE BELOW, BUT NOT LESS THAN THREE ANCHORS PER DAY FOR EACH DIFFERENT PERSON OR CREW INSTALLING ANCHORS.

   B. TEST 10% OF ANCHORS USING THE HYDRAULIC RAM METHOD. ANCHOR IS ACCEPTABLE IF NO MOVEMENT IS OBSERVED AT THE TEST LOAD. MOVEMENT MAY BE DETERMINED WHEN THE WASHER UNDER THE NUT BECOMES LOOSE.

TEST VALUES: (HARD ROCK CONCRETE)						
ANCHOR DIA (IN)	EXPANSION OR WEDGE		HEAVY DUTY SLEEVE		UNDERCUT	
	TENSION LOAD (LBS)	TORQUE LOAD (FT-LBS)	TENSION LOAD (LBS)	TORQUE LOAD (FT-LBS)	TENSION LOAD (LBS)	TORQUE LOAD (FT-LBS)
3/8"	1640	25	3980	50	6500	37
1/2"	1740	60	4850	80	8120	59
5/8"	3400	60	6790	120	16250	89
3/4"	4920	110	9470	200	24370	221
1"	5800	250	10350	250	-	-

16. TEST 10% OF HSL ANCHORS IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.

VIII. ADHESIVE ANCHORS AND DOWELS

1. ANCHORS AND DOWELS INSTALLED INTO CONCRETE: HILTI HIT-RE 500-V3 (ICC-ESR 3814), HILTI HIT-HY 200 V3 (ICC-ESR 4868), SIMPSON SET-3G (ICC-ESR 4057), OR APPROVED EQUAL. EMBEDMENT DEPTH, MINIMUM EDGE DISTANCE, AND MINIMUM SPACING FOR ANCHORS AND DOWELS ARE AS FOLLOW, UNLESS OTHERWISE NOTED IN DRAWINGS. PROVIDE SPECIAL INSPECTION AS REQUIRED BY THE ICC EVALUATION REPORT:

ROD DIA OR BAR SIZE	EMBEDMENT	MINIMUM EDGE DISTANCE	MINIMUM SPACING	MINIMUM BASE MATERIAL THICKNESS
1/2"	5"	15"	3"	8" NOMINAL
5/8"	6"	18"	3 3/4"	12" NOMINAL
3/4"	7"	21"	4 1/2"	12"
7/8"	9"	27"	5 1/4"	14"
1"	11"	33"	6"	14"
#4	6 1/2"	19 1/2"	3"	14"
#5	8"	24"	3 3/4"	14"
#6	10"	30"	4 1/2"	14"

2. IF FIELD CONDITION DOES NOT MEET THE EMBEDMENT, MINIMUM EDGE DISTANCE, OR MINIMUM SPACING REQUIREMENT AS NOTED IN TABLES ABOVE, NOTIFY THE OWNER'S REPRESENTATIVE FOR FURTHER INSTRUCTIONS.

3. ANCHORS: ASTM A193 GRADE B7 THREADED RODS WITH ASTM A 563 GRADE DH HEAVY HEX NUTS AND ASTM F 436 WASHERS.

4. DOWELS: ASTM A615 GRADE 60 REINFORCING STEEL.

5. REMOVE GREASE, OIL, RUST, AND OTHER LAITANCE FROM RODS AND DOWELS PRIOR TO INSTALLATION.

6. THE DIAMETER OF THE HOLES IS PER THE MANUFACTURER'S INSTRUCTIONS. DRILL HOLES FOR CONCRETE AND FULLY GROUTED CONCRETE MASONRY ANCHORS AND DOWELS WITH CARBIDE-TIPPED DRILL BITS COMPLYING WITH ANSI B212.15-1994. DRILL HOLES FOR ANCHORS AND DOWELS IN UNREINFORCED BRICK MASONRY WITH A NON-IMPACT ROTARY DRILL. PRIOR TO INSTALLING ANCHORS OR DOWELS, WIRE BRUSH HOLES TO REMOVE RESIDUE, BLOW OUT WITH OIL-FREE COMPRESSED AIR, AND ALLOW HOLE TO DRY.

7. PLACE ADHESIVE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION TOOL TO A DEPTH AS SPECIFIED BY THE MANUFACTURER AND TO MINIMIZE THE AMOUNT OF ADHESIVE THAT WILL OVERFLOW OUT OF THE HOLE WHEN THE BAR IS INSERTED. REMOVE EXCESS ADHESIVE ON THE ADJACENT SURFACES.

8. INSERT THE ANCHOR OR DOWEL IN THE HOLE WITH A TWISTING MOTION TO THE REQUIRED EMBEDMENT DEPTH. DO NOT PUMP THE ANCHOR OR DOWEL IN AND OUT OF THE HOLE.

9. WEDGE BARS TIGHT AND CENTERED IN THE HOLE WITH WOODEN WEDGES (GOLF TEES) TO HOLD IT IN PLACE UNTIL THE ADHESIVE SETS.

10. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.

11. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH ADHESIVE ANCHORS.

12. OWNER'S TESTING LABORATORY WILL PERFORM TENSION TESTS ON 25% OF ANCHOR AND DOWELS FOR THE FOLLOWING TEST LOADS. ANCHORS SHALL BE TESTED AFTER ANCHORS HAVE PROPERLY CURED. SEE ICC REPORTS FOR CURE TIME REQUIREMENTS.

ROD DIA OR BAR SIZE	EMBEDMENT	TEST LOAD	BASE MATERIAL
3/8"	4"	1800#	CONCRETE
1/2"	5"	3200#	CONCRETE
5/8"	6"	5000#	CONCRETE
3/4"	7"	7100#	CONCRETE
7/8"	9"	9700#	CONCRETE
1"	11"	12800#	CONCRETE
#3	5"	3000#	CONCRETE
#4	6 1/2"	5400#	CONCRETE
#5	8"	8400#	CONCRETE
#6	10"	11900#	CONCRETE
#7	12"	16200#	CONCRETE
#8	14"	21300#	CONCRETE
3/8"	3 1/2"	3100#	MASONRY
1/2"	4 1/2"	3600#	MASONRY
5/8"	5"	4500#	MASONRY
3/4"	6 5/8"	7500#	MASONRY
5/8"	12"	3000#	URM
3/4"	12"	3000#	URM

13. REPLACE ANCHORS AND DOWELS THAT FAIL DURING TESTING AND RETEST. IF MORE THAN 10% OF THE TESTED DOWELS AND ANCHORS FAIL TO ACHIEVE THE SPECIFIED TEST LOAD, NOTIFY OWNER'S REPRESENTATIVE AND TEST 100% OF THE DOWELS AND ANCHORS INSTALLED IN THE LAST 2 DAYS OF ANCHOR INSTALLATION.

IX. ROUGH CARPENTRY

1. FRAMING LUMBER: DOUGLAS FIR (COAST REGION) GRADED AND MARKED IN ACCORDANCE WITH THE STANDARD GRADING RULES NO. 17 OF THE WEST COAST LUMBER INSPECTION BUREAU (W.C.L.I.B.) OR WESTERN LUMBER GRADING RULES, OF THE WESTERN WOOD PRODUCTS ASSOCIATION (W.W.P.A.). COMPLY WITH PS 20. LUMBER FABRICATED FROM OLD GROWTH TIMBER IS NOT PERMITTED. USE LUMBER OF THE FOLLOWING GRADES:

MEMBER	MOISTURE CONTENT	WOOD/GRADE
SILLS & LUMBER IN CONTACT WITH ROOFING, FLASHING, WATERPROOFING, MASONRY, OR CONCRETE	19%	D.F. #1 PRESSURE OR PRESERVATIVE TREATED OR FOUNDATION GRADE REDWOOD
STUDS	19%	D.F. #2
JOISTS, PLANKS AND PLATES	15%	D.F. #1
BEAMS, 5" & WIDER	GREEN	D.F. SELECT STRUCTURAL
BEAMS, 4" & NARROWER	GREEN	D.F. #1 & BETTER
POSTS, 6X6 & LARGER	GREEN	D.F. SELECT STRUCTURAL
POSTS, 4X6 & SMALLER	19%	D.F. #1
FRAMING, BLOCKING & BRIDGING	15%	D.F. #2
PLYWOOD BLOCKING	19%	D.F. #1
BACKING, STRIPPING AND FURRING	19%	CONSTRUCTION

†/FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD. FIELD-CUT ENDS, NOTCHES, AND DRILLED HOLES OF PRESERVATIVE-TREATED WOOD SHALL BE FIELD-TREATED PER AWPA M4.

2. PANEL SHEATHING: IDENTIFY WOOD STRUCTURAL PANELS WITH THE APPROPRIATE TRADEMARK OF APA-THE ENGINEERED WOOD ASSOCIATION AND MEET THE REQUIREMENTS OF THE VOLUNTARY PRODUCT STANDARD PS-1 OR PS-2 AND APA PRP-108 PERFORMANCE STANDARD.

   A. PANEL SHEATHING TO BE EXPOSURE 1.

   B. PLYWOOD PANELS TO BE 5-PLY MINIMUM, EXCEPT 3/8" PANELS TO BE 3-PLY MINIMUM.

   C. PLYWOOD TO BE CC GRADE AT LOCATIONS EXPOSED TO WEATHER; CD GRADE ELSEWHERE.

   D. PROVIDE THE FOLLOWING GRADE AND SPAN RATINGS:

PANEL THICKNESS	MINIMUM GRADE	ROOF/FLOOR RATING
3/8"	STRUCTURAL 1	24/0
7/16"	STRUCTURAL 1	24/16
15/32"	STRUCTURAL 1	32/16
19/32" AND 5/8"	CD/CC	40/20
3/4"	CD/CC	48/24
7/8" AND 1"	CD/CC	54/32
1 1/8"	CD/CC	60/48

3. ROUGH HARDWARE:

   A. NAILS: COMMON WIRE NAILS, FEDERAL SPECIFICATION FF-N-105B, STANDARD LENGTHS U.O.N. USE HOT-DIPPED ZINC-COATED GALVANIZED NAILS PER ASTM A 153/A 153 M FOR EXTERIOR INSTALLATIONS AND WHEN PENETRATING PRESSURE TREATED OR FIRE-RETARDANT LUMBER IS USED.

   B. BOLTS AND THREADED RODS: ASTM A307, SQUARE OR HEXAGONAL HEAD MACHINE BOLTS WITH ASTM A563 NUTS. USE MALLEABLE IRON WASHERS UNDER HEAD AND NUT WHEN IN CONTACT WITH WOOD. AT SILL PLATES USE 3"X3"X¼" MINIMUM PLATE WASHERS.

      VERIFY PLATE WASHER SIZE PER LOCAL JURISDICTION.

   C. LAG SCREWS: ASTM A307, ANSI/ASME STANDARD B18.2.1. USE ANSI B18.22.1 WASHERS UNDER HEAD WHEN IN CONTACT WITH WOOD.

   D. SCREWS: ASTM A307, ANSI/ASME STANDARD B18.6.1. USE CADMIUM-PLATED PAN OR ROUND HEADED SCREWS AT STEEL TO WOOD AND WOOD TO WOOD CONNECTIONS.

   E. MISCELLANEOUS STEEL: ASTM A36.

   F. BOLTS, NUTS, WASHERS, STRAPS AND OTHER HARDWARE EXPOSED TO THE WEATHER OR IN CONTACT WITH PRESERVATIVE-TREATED WOOD TO BE HOT-DIPPED GALVANIZED PER ASTM A 653/A 653 M OR STAINLESS STEEL.

   G. FRAMING CLIPS, SHEET METAL STRAPS, ETC.: SIMPSON, UNIVERSAL, OR SILVER, WITH ICC REPORTS. DESIGNATIONS ON DRAWINGS ARE BASED ON SIMPSON CATALOGUE NUMBERS.

4. NAILING:

   A. DRIVE NAILS PERPENDICULAR TO THE GRAIN, U.O.N.

   B. PREDRILL HOLES TO 3/4 OF NAIL DIAMETER WHERE SPECIFIED AND WHEN WOOD TENDS TO SPLIT.

   C. AIR-DRIVEN NAILS TO BE FULL-HEADED NAILS. DO NOT OVERDRIVE NAILS.

   D. PANEL SHEATHING:

      1. AT FLOOR AND ROOF SHEATHING, USE RING SHANK NAILS. USE SMOOTH SHANK NAILS AT WALLS.

      2. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND APPROVAL BY THE OWNER'S REPRESENTATIVE. NAILHEADS THAT PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF THE MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE INSTALLATION IS UNSATISFACTORY. MACHINE NAILING IS NOT APPROVED IN 5/16" OR LESS SHEATHING.

      3. GLUE FLOOR SHEATHING AT ALL POINTS OF CONTACT.

   E. MINIMUM NAILING TO BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
JOIST TO JOIST, DOUBLE 2x	16d	16" O.C. FACE NAIL, (2) ROWS STAGGERED
BLOCKING BETWEEN CEILING JOISTS, RAFTERS, OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	(3) 8d	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS, OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	(2) 8d	EACH END, TOENAIL
	(2) 16d	END NAIL
RAFTER OR ROOF TRUSS TO TOP PLATE	(3) 10d	TOENAIL
ROOF RAFTER TO RIDGE VALLEY OR HIP RAFTERS	(2) 16d	END NAIL
	(3) 10d	TOENAIL
STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS	16d	16" O.C. FACE NAIL
CONTINUOUS HEADER TO STUD	(4) 8d	TOENAIL
TOP PLATE TO TOP PLATE	16d	16" O.C. FACE NAIL
TOP PLATE TO TOP PLATE, AT END JOISTS	(8) 16d	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
BOTTOM PLATE TO JOIST, RIM JOIST, OR BLOCKING	(2) 16d	16" O.C. FACE NAIL
STUD TO TOP OR BOTTOM PLATE	(4) 8d	TOENAIL
	(2) 16d	END NAIL
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	(2) 16d	FACE NAIL
JOISTS TO SILL, TOP PLATE, OR GIRDER	(3) 8d	TOENAIL
RIM JOIST OR BLOCKING TO TOP PLATE, SILL, OR OTHERS FRAMING BELOW	8d	6" O.C. TOENAIL

   FOR ADDITIONAL INFORMATION NOT INDICATED, SEE TABLE 2304.10.2 OF THE CALIFORNIA BUILDING CODE.

5. BOLT AND SCREW INSTALLATION:

   A. DRILL BOLT HOLES A MINIMUM OF 1/32 INCH TO A MAXIMUM OF 1/16 INCH LARGER IN DIAMETER THAN THE BOLT NOMINAL DIAMETER.

   B. DRILL PRE-BORED LEAD HOLES FOR WOOD SCREWS AS FOLLOWS.

      1. DRILL LEAD HOLE FOR THE SHANK TO A DEPTH EQUAL TO THE LENGTH OF THE UNTHREADED PORTION IN THE MAIN MEMBER. USE A DRILL BIT 7/8 THE DIAMETER OF THE WOOD SCREW.

      2. EXTEND THE LEAD HOLE FOR THE THREADED PORTION OF THE SCREW WITH A DRILL BIT WHOSE DIAMETER IS 7/8 THE DIAMETER OF THE SCREW AT THE ROOT OF THE THREAD.

      3. INSERT THE SCREW INTO LEAD HOLE BY TURNING. DO NOT DRIVE WITH A HAMMER.

      4. LUBRICATE WITH SOAP OR BEESWAX TO FACILITATE INSTALLATION.

   C. DRILL PRE-BORED LEAD HOLES FOR LAG SCREWS AS FOLLOWS.

      1. DRILL LEAD HOLE FOR THE SHANK TO A DEPTH EQUAL TO THE LENGTH OF THE UNTHREADED PORTION IN THE MAIN MEMBER. USE A DRILL BIT OF THE SAME DIAMETER AS THE LAG SCREW.

      2. EXTEND THE LEAD HOLE FOR THE THREADED PORTION OF THE LAG SCREW WITH A DRILL BIT WHOSE DIAMETER IS 60 PERCENT OF THE NOMINAL LAG SCREW DIAMETER.

      3. INSERT LAG SCREW INTO LEAD HOLE BY TURNING. DO NOT DRIVE WITH A HAMMER.

      4. LUBRICATE WITH SOAP OR BEESWAX TO FACILITATE INSTALLATION.

6. INSTALL SOLID BLOCKING BETWEEN JOISTS AT ENDS AND OVER SUPPORTS. PROVIDE 2 INCH BY 3 INCH CROSS BRIDGING, METAL BRIDGING, OR SOLID BLOCKING BETWEEN JOISTS IN SPANS EQUALLY SPACED 8 FEET ON CENTER MAXIMUM AND WHERE INDICATED.

7. DO NOT USE WOOD SHINGLE SHIMS UNDER STUDS, JOISTS, BEAMS, OR POSTS.

8. FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	10/14/2025	CD CLIENT REVIEW/PRICING
	11/03/2025	ISSUE FOR PLAN CHECK
	01/09/2025	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
GENERAL STRUCTURAL NOTES CONTINUED

Scale
NOT TO SCALE

S1.002

CITY OF IRVINE BUILDING & SAFETY DIVISION

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GENERAL STRUCTURAL NOTES CONTINUED

IX. ROUGH CARPENTRY CONTINUED

9. HOLD-DOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLD-DOWNS SHALL BE FINGER TIGHT AND 1/2 WRENCH TURN JUST PRIOR TO COVERING THE WALL FRAMING. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS ON THE POST ON THE OPPOSITE SIDE OF THE ANCHORAGE DEVICE. PLATE SIZE SHALL BE MINIMUM OF 0.299 INCH BY 3 INCHES BY 3 INCHES.

10. ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE AND GROOVE OR BLOCKED PANEL EDGES. PLYWOOD SPANS SHALL CONFORM WITH TABLE 2304.8(1).

11. ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.

12. HOLD-DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.

X. PREFABRICATED WOOD PRODUCTS

1. ENGINEERED WOOD I-JOISTS & OPEN WEB JOISTS:

   A. PRODUCTS BY TRUS-JOIST CORPORATION OR STANDARD STRUCTURES INCORPORATED. MARK MEMBERS WITH APA PRI TRADEMARK INDICATING CONFORMANCE WITH MANUFACTURING AND QUALITY ASSURANCE OF APA EWS STANDARD PRI-400.

   B. MANUFACTURER TO DESIGN FRAMING AND SUBMIT DRAWINGS AND CALCULATIONS STAMPED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER IN THE STATE OF CALIFORNIA [OREGON] TO THE OWNER'S REPRESENTATIVE AND THE BUILDING DEPARTMENT FOR REVIEW AND APPROVAL.

   C. CONTRACTOR IS RESPONSIBLE FOR ERECTION BRACING TO KEEP JOISTS STRAIGHT AND PLUMB AND PROVIDE ADEQUATE LATERAL SUPPORT FOR THE INDIVIDUAL MEMBERS AND THE ENTIRE SYSTEM UNTIL CONSTRUCTION HAS BEEN COMPLETED.

   D. INSTALL BLOCKING, BRIDGING, STIFFENERS, FILLER BLOCKS AND BACKER BLOCKS IN CONFORMANCE WITH MANUFACTURER'S STANDARDS AND AS DETAILED.

   E. SPACE JOIST BRIDGING EQUALLY ALONG LENGTH OF MEMBERS, AT 16' O.C. MAXIMUM, TYPICAL ALL BAYS.

   F. HEAT RESISTANT ADHESIVE SHALL BE USED FOR ENGINEERED WOOD PRODUCTS IN FRAMING SUPPORTING THE FIRE RATED ASSEMBLY. SUCH MEMBERS SHALL BEAR A STAMP WITH HRA DESIGNATION.

XI. STRUCTURAL TESTS, INSPECTIONS, AND OBSERVATIONS

1. AN INDEPENDENT TESTING AGENCY AND SPECIAL INSPECTORS WILL BE RETAINED BY THE OWNER TO PERFORM THE FOLLOWING TESTS AND INSPECTION. PROVIDE ACCESS AND FURNISH SAMPLES TO THE AGENCY AS REQUIRED BY THE CONTRACT DOCUMENTS.

2. IF INITIAL TESTS OR INSPECTIONS MADE BY THE OWNER'S TESTING AGENCY REVEAL THAT ANY PORTION OF THE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, ADDITIONAL TESTS, INSPECTIONS, AND NECESSARY REPAIRS WILL BE MADE AT THE CONTRACTOR'S EXPENSE.

3. THE FOLLOWING ITEMS REQUIRE TESTS AND INSPECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CHAPTER "STRUCTURAL TESTS AND INSPECTIONS" OF THE CODE OF THE GOVERNING JURISDICTION AS NOTED IN THE GENERAL SECTION OF THESE GENERAL NOTES. ADDITIONAL ITEMS AND REQUIREMENTS FOR TESTS AND INSPECTIONS ARE IDENTIFIED IN THE SPECIFICATIONS.

Continuous	Periodic	STRUCTURAL STEEL
	√	Review Mill Certificates & Test Reports
	√	Identification Markings
		Sample & Test Sections | √ | As Specified
	√	Field Erection Inspection
	√	Fabrication Inspection
	√	Review Welding Procedure Specification & Welder Certifications
√		Welding Inspection - Complete & Partial Joint Penetration Groove
√		Welding Inspection - Multi-Pass Fillet & > 5/16" Fillet
√		Welding Inspection - Plug & Slot
	√	Welding Inspection - Single-Pass & ≤ 5/16" Fillet
	√	Non-Destructive Weld Test | √ | Shop | √ | Field
	√	Review Compliance Certificates for Weld Filler Material
	√	High-Strength Bolts, Nuts & Washer Identification Markings
	√	High-Strength Bolts, Nuts & Washer Manufacturer's Certificate of Compliance
	√	Bolting Inspection - Snug-Tight Joints
	√	Bolting Inspection - Pre-Tensioned & Slip-Critical With Indicator
√		Bolting Inspection - Pre-Tensioned & Slip-Critical Without Indicator
	√	Steel Frame Joint Detail Inspection
Continuous	Periodic	REINFORCING STEEL
	√	Review Mill Certificates & Test Reports
		Sample & Test Reinforcing Bars
		Sample & Test Reinforcing Wire Fabric
	√	Placement Inspection
√		Welding Inspection - Shear Reinforcement
	√	Welding Inspection - Other
	√	Test Existing Reinforcement for Weldability
Continuous	Periodic	STRUCTURAL LUMBER
	√	Review Certificates & Test Reports
		Sample & Test Timber Connectors
	√	Field Erection Inspection
	√	Diaphragm & Shear Wall Nailing
	√	Bolting of Drag Struts & Hold Downs
Continuous	Periodic	FOUNDATIONS/EARTHWORK
		Review of Import Material Test Reports per Geotechnical Report
		Acceptance Tests of Materials
√		Compacted Fill Material Properties & Lift Thickness During Placement
	√	Placement and Excavation
	√	Compaction Test
	√	Bearing Capacity Test
Continuous	Periodic	CONCRETE & SHOTCRETE
	√	Mix Design Review
	√	Batch Plant Inspections
√		Sample & Test (Cast, Pick-Up, & Compression)
√		Slump, Entrained Air, & Temperature Test (At time of Sampling)
		Unit Weight Test | | Wet | | Dry
		Shrinkage Test
	√	Inspection of Framework for Shape, Locations & Dimensions
√		Placement Inspection
√		Inspection for Proper Application Technique
	√	Inspection for Curing Maintenance & Temperature
		Core & Test
√		Cast-in-Place Anchors
	√	Post-Installed Anchors
Continuous	Periodic	GROUT & MORTAR
		Cement Test
		Mix Design Review
	√	In-situ Mix Proportion Review
		Shrinkage Test
		Core & Test

4. THE REQUIREMENTS FOR TESTING AND INSPECTION LISTED ABOVE MAY CHANGE DUE TO THE METHOD OF CONSTRUCTION SELECTED BY THE CONTRACTOR.

5. THE TESTING AGENCY AND SPECIAL INSPECTOR SHALL REVIEW CONSTRUCTION DOCUMENTS AND COORDINATE WITH CONTRACTOR TO DEVELOP A PLAN FOR TESTING AND INSPECTION. SUBMIT THE PLAN FOR TESTING AND INSPECTION TO OWNER'S REPRESENTATIVE FOR REVIEW.

6. THE CONTRACTOR SHALL NOTIFY STRUCTURAL FOCUS AT LEAST THREE BUSINESS DAYS IN ADVANCE OF THE SIGNIFICANT CONSTRUCTION STAGES NOTED BELOW AND PRIOR TO PLACING CONCRETE, APPLYING FIREPROOFING, DRYWALL, OR OTHERWISE COVERING THE STRUCTURAL ELEMENTS, AND SHALL THEN PROVIDE ACCESS FOR STRUCTURAL OBSERVATIONS. THIS NOTIFICATION REQUIREMENT SHALL APPLY TO ANY SITE VISIT OR ON SITE MEETING REQUESTED BY THE CONTRACTOR.
AS REQUIRED BY THE APPLICABLE BUILDING CODE, STRUCTURAL FOCUS WILL PERFORM A VISUAL OBSERVATION OF THE STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS AT SIGNIFICANT STAGES OF CONSTRUCTION. STRUCTURAL FOCUS WILL, BASED ON OUR JUDGMENT AS ENGINEER-OF-RECORD, DETERMINE WHICH STAGES OF CONSTRUCTION ARE SIGNIFICANT, AND COORDINATE STRUCTURAL OBSERVATION OF THOSE STAGES WITH THE GENERAL CONTRACTOR.

   THE LIST OF STAGES OF CONSTRUCTION IDENTIFIED BELOW IS NOT INTENDED TO IMPLY THAT STRUCTURAL FOCUS WILL PROVIDE A STRUCTURAL OBSERVATION AT EACH AND EVERY OCCURRENCE. STRUCTURAL OBSERVATION MAY BE LIMITED TO THE FIRST SIGNIFICANT OCCURRENCE OF A PARTICULAR STAGE OF CONSTRUCTION. SIGNIFICANT STAGES OF CONSTRUCTION MAY INCLUDE THE FOLLOWING:

   A. FOUNDATIONS
      1. FOOTING REINFORCEMENT
      2. GRADE BEAM REINFORCEMENT
      3. ANCHOR BOLT PLACEMENT
      4. SLAB-ON-GRADE REINFORCEMENT

   B. CONCRETE
      1. SLAB REINFORCEMENT

   C. STEEL FRAMING
      1. GENERAL FRAMING
      2. COMPLETED MOMENT FRAME CONNECTIONS

   D. WOOD FRAMING
      1. BEARING WALL FRAMING
      2. FLOOR JOIST FRAMING
      3. COMPLETED SHEAR WALL NAILING
      4. INSTALLED HOLD-DOWN ANCHORS
      5. COMPLETED DIAPHRAGM NAILING
      6. INSTALLED COLLECTOR AND CONTINUITY TIES

7. CONTINUOUS SPECIAL INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR FIELD WELDING, CONCRETE STRENGTH f'c > 2500 PSI, HIGH STRENGTH BOLTING, SPRAYED-ON FIREPROOFING, ENGINEERED MASONRY, HIGH-LIFT GROUTING, PRE-STRESSED CONCRETE, HIGH LOAD DIAPHRAGMS AND SPECIAL MOMENT-RESISTING CONCRETE FRAMES.

8. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS, AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING, AND OTHER FASTENING TO COMPONENTS OF THE SEISMIC FORCE RESISTING SYSTEM. SPECIAL INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED WHERE THE FASTENER SPACING OF THE SHEATHING IS 4 INCHES ON CENTER OR LESS.

9. SPECIAL ACTIVITY INSPECTION IS REQUIRED FOR (BUILDINGS OVER 5 STORIES OR 60' IN HEIGHT) (BUILDINGS OVER 50,000 SQ. FT. OF GROUND FLOOR AREA) (BUILDINGS OVER 200,000 SQ. FT. OF TOTAL FLOOR AREA).

XII. DESIGN CRITERIA

1. APPLICABLE CODE: 2022 EDITION OF THE CALIFORNIA BUILDING CODE.

2. FOUNDATIONS HAVE BEEN DESIGNED WITH THE FOLLOWING CRITERIA:

   INDIVIDUAL SPREAD FOOTINGS:
   ALLOWABLE NET SOIL PRESSURE FOR DL + LL = 3000* PSF
   ALLOWABLE NET SOIL PRESSURE FOR DL + LL + EQ = 3000* PSF
   COEFFICIENT OF FRICTION = 0.57
   PASSIVE RESISTANCE = 360 PCF

   CONTINUOUS STRIP/ WALL FOOTINGS:
   ALLOWABLE NET SOIL PRESSURE FOR DL + LL = 3000* PSF
   ALLOWABLE NET SOIL PRESSURE FOR DL + LL + EQ = 3000* PSF
   COEFFICIENT OF FRICTION = 0.57
   PASSIVE RESISTANCE = 360 PCF

   *ALLOWABLE SOIL BEARING PRESSURES ARE FOR FOOTINGS HAVING A WIDTH AND DEPTH EQUAL TO 24 INCHES. THE ALLOWABLE PRESSURES MAY BE INCREASED BY 1/3 FOR TRANSIENT LOADS UNLESS THOSE LOADS HAVE BEEN FACTORED TO ACCOUNT FOR TRANSIENT CONDITIONS.

3. GRAVITY LOADS:

   A. DEAD LOADS:
      ROOF:

ROOFING + PLYWOOD SHEATHING	4.4 PSF
ENGINEERED WOOD JOISTS	SELF WEIGHT
STEEL TRUSS	SELF WEIGHT
MEP FROM ABOVE	SEE PLANS
MEP SUSPENDED FROM BELOW	3.0 PSF
SUPERIMPOSED DEAD LOAD	4.3 PSF
TOTAL	20 PSF

   B. LIVE LOADS:
      ROOF: 20 PSF (REDUCIBLE)

4. SEISMIC DESIGN:

   DESIGN OF NEW LATERAL FORCE RESISTING SYSTEM ELEMENTS BASED ON CURRENT CODE LEVEL FORCES PER ASCE 7-16

   BASE SHEAR: $V = C_S W = 0.16 W$

   WHERE:
   $C_{SMIN} = 0.037$
   $C_{SMAX} = 0.673$
   $C_S = 0.16$
   R = 6.50 FOR LIGHT FRAME (WOOD) SHEATHED WALLS
   $I_E = 1.25$ FOR RISK CATEGORY III BUILDINGS
   LATITUDE = 33.676442 DEGREES
   LONGITUDE = -117.739263 DEGREES
   SITE CLASS: D PER GEOTECHNICAL REPORT
   SEISMIC DESIGN CATEGORY: D
   ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE (ELF)
   REDUNDANCY FACTOR: 1
   $S_S = 1.248$
   $S_1 = 0.446$
   $S_{DS} = 0.833$
   $S_{D1} = 0.827$

5. WIND DESIGN:

   MAIN WIND FORCE RESISTING SYSTEM (MWFRS):

   WIND SPEED: V = 102 MPH FOR RISK CATEGORY III

   VELOCITY PROCEDURE: $q_h = 0.00256 K_z K_{zt} K_d K_e V^2 = 19.63$ PSF FOR EXPOSURE CATEGORY C

   WHERE
   $K_z = 0.98$ VELOCITY PRESSURE COEFFICIENT
   $K_{zt} = 1$ TOPOGRAPHY FACTOR
   $K_d = 0.85$ WIND DIRECTIONALITY FACTOR
   K_e = GROUND ELEVATION FACTOR

   ASCE 7-16: CHAPTER 27, WIND LOADS ON BUILDINGS - MWFRS (DIRECTIONAL PROCEDURE)

   PRESSURE: $p = q (GC_p) - q_i (GC_{pi}) = 25.94$ PSF ON MWFRS AT [DEFINE MEAN ROOF HEIGHT OF BUILDING] FEET

   WHERE:
   q = 20.72 VELOCITY PRESSURE FOR 21.9 FT EVALUATED AT MEAN ROOF HEIGHT
   $q_i = 21.55$ FOR POSITIVE INTERNAL PRESSURE
   G = 0.85 GUST EFFECT FACTOR [ASCE 7-16 SECTION 26.11]
   $C_p = 0.8$ EXTERNAL PRESSURE COEFFICIENT [ASCE 7-16 FIGURES 27.3-1, 27.3-2, & 27.3-3]
   $GC_{pi} = +/-0.55$ INTERNAL PRESSURE COEFFICIENT [ASCE 7-16 FIGURES 26.13-1]

   ASCE 7-16: CHAPTER 30, WIND LOADS - COMPONENTS AND CLADDING (C&C)

   PRESSURE: $p = q_h[(GC_{pf})-(GC_{pi})] = 29.1$ PSF ON C&C AT 26.5 FEET

   WHERE:
   q_h = VELOCITY PRESSURE EVALUATED AT MEAN ROOF HEIGHT
   $(GC_{pf}) = 0.8$ EXTERNAL PRESSURE COEFFICIENT
   $(GC_{pi}) = +/-0.55$ INTERNAL PRESSURE COEFFICIENT

   VELOCITY PROCEDURE: $q_h = 0.00256 K_z K_{zt} K_d K_e V^2 = 21.5$ PSF FOR EXPOSURE CATEGORY C

   WHERE
   $K_z = 0.95$ VELOCITY PRESSURE COEFFICIENT
   $K_{zt} = 1$ TOPOGRAPHY FACTOR
   $K_d = 0.85$ WIND DIRECTIONALITY FACTOR
   $K_e = 1.0$ GROUND ELEVATION FACTOR
   V = 102 MPH BASIC WIND SPEED FOR RISK CATEGORY III

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LICENSED PROFESSIONAL ENGINEER — STEVEN DAN RAZO — No. 56251 — EXP. 3/31/26 — STRUCTURAL — STATE OF CALIFORNIA

△ Date	Description
10/14/2025	CD CLIENT REVIEW/PRICING
11/03/2025	ISSUE FOR PLAN CHECK
01/09/2025	ADDENDUM A/PLAN CHECK COMMENTS
05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
GENERAL STRUCTURAL NOTES CONTINUED

Scale
NOT TO SCALE

CITY OF IRVINE BUILDING & SAFETY DIVISION

S1.003

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COMMUNITY DEVELOPMENT
Building and Safety

STATEMENT OF SPECIAL INSPECTION

Special Inspections shall be performed in accordance with Chapter 17 of the California Building Code (CBC) and the City of Irvine Special Inspection Manual.

INSTRUCTIONS: Place an **X** preceding each applicable section or indicate **N/A** if not applicable. Provide a complete and detailed description, detail, or plan sheet reference where required to complete an applicable section. Incorporate this completed form in its entirety into the project construction plans for plan check review.

SECTION 1705: SPECIAL INSPECTIONS

1. N/A — **Special Cases, Section 1705.1.1** The following describes additional systems or elements subject to special inspection as required by the Chief Building Official, Engineer of Record, manufacturer's instructions, or Evaluation Report:

2. X — **Structural Steel, Section 1705.2** Special inspections and nondestructive testing of structural steel elements shall be in accordance with AISC 360. Offsite fabrication may only be performed by an approved fabricator. See City of Irvine Informational Bulletin 311.

   Cold-Formed Steel Deck, Section 1705.2.2 Special inspections for cold formed steel floor and roof deck shall be in accordance with the quality assurance inspection requirements of SDI QA/QC.

   Open-Web Steel Joists and Joist Girders, Section 1705.2.3 Special inspections of open-web steel joists and joist girders shall be in accordance with Table 1705.2.3.

3. X — **Concrete Construction, Section 1705.3** All structural concrete is subject to special inspection per CBC Table 1705.3 and City of Irvine Information Bulletin 181.

4. N/A — **Masonry Construction, Section 1705.4** Special inspections and tests of masonry construction shall be performed in accordance with the quality assurance program requirements of TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6 except masonry fireplaces, masonry heaters, or masonry chimneys installed or constructed in accordance with Section 2111, 2112, or 2113, respectively.

5. X — **Wood Construction, Section 1705.5** Special inspections of prefabricated wood structural elements and assemblies shall be in accordance with Section 1704.2.5. Offsite fabrication may only be performed by an approved fabricator. See City of Irvine Informational Bulletin 311.

6. N/A — **Mass Timber Construction, Section 1705.5.3** Special inspections of Mass Timber elements shall be in accordance with Table 1705.5.3. Periodic special inspection will also be required for Mass Timber sealants and adhesives in accordance with Section 1705.20, when required by 703.7.

7. X — **High Load Diaphragms, Section 1705.5.1** The following describes high load diaphragms (diaphragms designed in accordance to CBC Table 2306.2) subject to special inspection requirements as described in Section 1704.2 (plan sheet or detail reference is acceptable):

STATEMENT OF SPECIAL INSPECTION

8. N/A — **Metal-Plate-Connected Wood Trusses, Section 1705.5.2** Special inspection of wood trusses with a clear span greater than or equal to 60 feet is required in accordance with CBC 1705.5.2.

9. X — **Soils, Section 1705.6** Footing excavations are subject to verification that proper depth and bearing material have been reached prior to placement of concrete per CBC Table 1705.6 (**NOTE:** Work performed under a grading permit is subject to separate special inspection requirements.)

10. N/A — **Driven Deep Foundations, Section 1705.7** Driven deep foundations are subject to special inspection per CBC Table 1705.7.

11. N/A — **Cast-in-Place Deep Foundations, Section 1705.8** Cast-in-place deep foundations are subject to special inspection per CBC Table 1705.8.

12. N/A — **Helical Pile Foundation, Section 1705.9** Helical pile foundations are subject to special inspection per CBC Section 1705.9.

13. N/A — **Sprayed Fire-Resistant Materials, Section 1705.15** Special inspections and tests of sprayed fire-resistant materials applied to floor, roof, and wall assemblies and structural members shall be performed in accordance with Sections 1705.15.1 through 1705.15.6.

14. N/A — **Mastic and Intumescent Fire-Resistant Coatings, Section 1705.16** Mastic and intumescent fire-resistant coatings applied to structural elements and decks shall be performed in accordance with Association of the Wall and Ceiling Industry (AWCI) Technical Manual 12-B.

15. X — **Exterior Insulation and Finish Systems (EIFS), Section 1705.17** Exterior insulation and finish systems (EIFS) are subject to special inspection per CBC Section 1705.17.

16. N/A — **Fire-Resistant Penetrations and Joints, Section 1705.18** In high-rise buildings or in buildings assigned to Risk Category III or IV, or in fire areas containing Group R occupancies with an occupant load greater than 250, special inspections for through-penetrations, membrane penetration firestops, fire-resistant joint systems, and perimeter fire barrier systems that are tested and listed in accordance with Sections 714.4.1.2, 714.5.1.2, 715.3.1, and 715.4 shall be in accordance with Section 1705.18.1 or 1705.18.2.

17. N/A — **Smoke Control, Section 1705.19** Via Orange County Fire Authority (OCFA) procedures.

SECTION 1705.13: SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

The following are applicable to specified seismic force-resisting systems, designated seismic systems, and architectural, mechanical, and electrical components. See CBC Sections 1705.13.1 through 1705.13.9 to determine applicability.

Seismic-Force Resisting Systems. The following describes the seismic-force resisting systems(s) subject to special inspection per applicable CBC Sections 1705.13.1 through 1705.13.9 as indicated below:

18. X — **Structural Steel, Section 1705.13.1** Special inspections of structural steel in the seismic force resisting systems of buildings shall be performed in accordance with the quality assurance requirements of American Institute of Steel Construction (AISC) 341.

STATEMENT OF SPECIAL INSPECTION

19. X — **Structural Wood, Section 1705.13.2** For the seismic force-resisting systems:

1. Continuous special inspection shall be required during field gluing operations of elements of the seismic force-resisting system.
2. Periodic special inspection shall be required for nailing, bolting, anchoring, and other fastening of elements of the seismic force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels, and hold-downs.

Exception: Special inspections are not required for wood shear walls, shear panels, and diaphragms, including nailing, bolting, anchoring, and other fastening to other elements of the seismic force-resisting system, where the fastener spacing of the sheathing is more than 4 inches on center.

Provide plan sheet or detail reference where the special inspection is required.

20. N/A — **Cold-Formed Steel Light-Frame Construction, Section 1705.13.3** For the seismic force-resisting systems of structures, periodic special inspection shall be required:

1. For welding operations of elements of the seismic force-resisting system; and
2. For screw attachment, bolting, anchoring, and other fastening of elements of the seismic force-resisting system, including shear walls, braces, diaphragms, collectors (drag struts), and hold-downs.

Provide plan sheet or detail reference where the special inspection is required.

21. N/A — **Designated Seismic Systems, Section 1705.13.4** The special inspector shall examine designated seismic systems requiring seismic qualification in accordance with Section 13.2.2 of ASCE 7 and verify that the label, anchorage and mounting conform to the certificate of compliance.

22. N/A — **Architectural Components, Section 1705.13.5** Periodic special inspection is required during the erection and fastening of:

- ☐ Exterior cladding, and exterior or interior veneer, more than 30 feet in height above grade or walking surface, or weighing more than 5 psf as indicated on plan sheet(s):
- ☐ Non-bearing walls more than 30 feet in height or weighing more than 15 psf as indicated on plan sheet(s):

23. N/A — **Access Floors, Section 1705.13.5.1** Periodic special inspection is required for the anchorage of access floors.

24. X — **Plumbing, Mechanical and Electrical Components, Section 1705.13.6** Periodic special inspection is required during installation and anchorage of:

- ☐ Electrical equipment for emergency or standby power systems.
- ☐ The piping system(s) and associated mechanical units intended to hazardous materials as indicated on plan sheet(s):

STATEMENT OF SPECIAL INSPECTION

- ☐ The HVAC ducts intended to carry hazardous materials as indicated on plan sheet(s):
- ☒ The vibration isolation system as indicated on plan sheet(s) :

25. N/A — **Storage Racks and Access Floors, Section 1705.13.7** Periodic special inspection is required for materials used, fabricated storage rack elements, storage rack anchorage installation, and completed storage rack system of steel storage racks and steel cantilevered storage racks that are 8 feet in height or greater and assigned to Seismic Design Category D, E or F per Table 1705.13.7.

26. N/A — **Seismic Isolation System, Section 1705.13.8** Periodic special inspection is required during the fabrication and installation of ☐ isolator units and ☐ energy dissipation devices.

27. N/A — **Cold-Formed Steel Special Bolted Moment Frames, Section 1705.13.9** Periodic special inspection shall be provided for the installation of cold-formed steel special bolted moment frames.

SECTION 1705.14: TESTING FOR SEISMIC RESISTANCE

28. X — **Structural Steel, Section 1705.14.1** The following describes required testing of welds, base metal, weld tab removal sites, and thermally cut surfaces of beam copes or access holes per CBC Section 1708 and AISC 341. MT= Magnetic Particle Testing per Appendix W of Section W4.2 AISC 341, UT= Ultrasonic Testing per Appendix W, Section 4.1. Testing procedures and acceptance criteria shall conform to AISC 341 and AWS D1.1.

- ☐ K-area welding; web area shall be MT'd for cracks in the k-area base metal within 3 inches minimum of the weld.
- ☐ Complete joint penetration groove welds. All shall be UT'd for materials 5/16 inches or thicker.
- ☐ Complete joint penetration groove welds. 25% of all beam to column connections shall be MT'd.
- ☐ Base metal for lamellar tearing; UT testing for discontinuities behind and adjacent to weld fusion line for all complete joint penetration groove welded connections for tension loading in the through thickness direction of base metal greater than 1 1/2 inch thickness to connected piece greater than 3/4 inch.
- ☐ Flange and web thickness exceeding 1 1/2 inches-___ welded splices and connections, __ thermally cut surfaces of beam copes and access holes shall be MT or penetrant tested.
- ☐ End of welds from which a weld tab has been removed shall be MT'd. (**NOTE:** N/A for continuity plate weld tabs)
- ☐ UT percentage reduction protocol is as follows (**NOTE:** May not exceed that allowed by AISC 341):
- ☐ MT percentage reduction protocol is as follows (**NOTE:** May not exceed that allowed by AISC 341):

29. X — **Nonstructural Components, Section 1705.14.2** The registered design professional shall specify on the approved construction documents the requirements for seismic qualification. Certificate of compliance for the seismic qualification shall be provided to the building official as specified in Section 1704.5.

STATEMENT OF SPECIAL INSPECTION

30. X — **Designated Seismic Systems, Section 1705.14.3** The registered design professional shall specify on the approved construction documents the requirements for seismic qualification. Certificate of compliance for the seismic qualification shall be provided to the building official as specified in Section 1704.5.

SECTION 1705.12: SPECIAL INSPECTIONS FOR WIND RESISTANCE

Special inspections for wind resistance, Section 1705.12 Special inspections for wind resistance specified in Sections 1705.12.1 through 1705.12.3

31. X — **Structural Wood, Section 1705.12.1** Continuous special inspection is required during field gluing operations of elements of the main windforce-resisting system. Periodic special inspection is required for nailing, bolting, anchoring, and other fastening of elements of the main windforce-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, and hold-downs.

Exception: Special inspections are not required for wood shear walls, shear panels, and diaphragms where the fastener spacing of the sheathing is more than 4 inches on center.

32. N/A — **Cold-Formed Steel Light-Frame Construction, Section 1705.12.2** Periodic special inspection is required for welding operations of elements of the main windforce-resisting system. Periodic special inspection is required for screw attachment, bolting, anchoring, and other fastening of elements of the main windforce-resisting system, including shear walls, braces, diaphragms, collectors (drag struts), and hold-downs. See Section 1705.12.2 for exceptions.

33. X — **Wind-Resisting Components, Section 1705.12.3** Periodic special inspection is required for fastening of the following systems and components:

1. Roof covering, roof deck, and roof framing connections.
2. Exterior wall covering and wall connections to roof and floor diaphragms and framing.

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△	Date	Description
	10/14/2025	CD CLIENT REVIEW/PRICING
	11/03/2025	ISSUE FOR PLAN CHECK
	01/09/2026	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
SPECIAL INSPECTIONS

Scale
NOT TO SCALE

CITY OF IRVINE BUILDING & SAFETY DIVISION

S1.004

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ABBREVIATIONS

(E)	EXISTING	K.O.	KNOCK-OUT
(N)	NEW	L	ANGLE
#	NUMBER	ℓd	DEVELOPMENT LENGTH
&	AND	ℓdh	HOOK DEVELOPMENT LENGTH
@	AT	LEV	LEVEL
A.A.	ADHESIVE ANCHOR	LLBB	LONG LEG BACK TO BACK
A.B.	ANCHOR BOLT	LLH	LONG LEG HORIZONTAL
ABV	ABOVE	LLV	LONG LEG VERTICAL
A.C.	ASPHALT CONCRETE	LOC	LOCATION
ADD'L	ADDITIONAL	LONGIT	LONGITUDINAL
ADH	ADHESIVE	L.P.	LOW POINT
ADJ	ADJACENT	ℓs	LAP SPLICE LENGTH
A.F.F.	ABOVE FINISH FLOOR	LSL	TIMBERSTRAND, LAMINATED STRAND LUMBER
AGGR	AGGREGATE		
AL	ALUMINUM	LT	LIGHT
ALT	ALTERNATE	LVL	MICROLLAM, LAMINATED VENEER LUMBER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LWC	LIGHT WEIGHT CONCRETE
APPROX	APPROXIMATE	MAX	MAXIMUM
ARCH	ARCHITECTURAL	M.B.	MACHINE BOLT
ASTM	AMERICAN SOCIETY for TESTING and MATERIALS	MECH	MECHANICAL
		M.E.P.	MECHANICAL, ELECTRICAL, PLUMBING
AWG	AMERICAN WIRE GUAGE		
BLDG	BUILDING	MEZZ	MEZZANINE
BLKG	BLOCKING	MFR	MANUFACTURER
BLW	BELOW	MIN	MINIMUM
BM or BMS	BEAM or BEAMS	MISC	MISCELLANEOUS
B.N.	BOUNDARY NAILING	MTD	MOUNTED
B.O.	BOTTOM OF	MTL	METAL
BOT	BOTTOM	N	NORTH
BP	BASE PLATE	N.A.	NEUTRAL AXIS
BRG	BEARING	N.F.	NEAR FACE
B.S.	BOTH SIDES	N.I.C.	NOT IN CONTRACT
BSMT	BASEMENT	NO. or #	NUMBER
BTWN	BETWEEN	NOM	NOMINAL DIAMETER
C	CHANNEL	N.S.	NEAR SIDE
C.I.P.	CAST IN PLACE	N-S	NORTH-SOUTH
C.J.	CONSTRUCTION JOINT	N.T.S.	NOT TO SCALE
CJP	COMPLETE JOINT PENETRATION	NWC	NORMAL WEIGHT CONCRETE
CL or ℄	CENTERLINE	O.C.	ON CENTER
CLG	CEILING	O.D.	OUTSIDE DIAMETER (DIM)
CLR	CLEAR	O.H.	OPPOSITE HAND
CMU	CONCRETE MASONRY UNIT	OPNG	OPENING
COL	COLUMN	OPP	OPPOSITE
CONC	CONCRETE	O.W.S.G.	OPEN WEB STEEL GIRDER
CONN	CONNECTION	O.W.S.J.	OPEN WEB STEEL JOIST
CONSTR	CONSTRUCTION	PC or PCS	PIECE or PIECES
CONT	CONTINUOUS	PERP	PERPENDICULAR
C.P.	COMPLETE PENETRATION	PL	PLATE
CSK	COUNTERSINK	PLYWD	PLYWOOD
CTR	CENTER	P.P.	PARTIAL PENETRATION
d	PENNY (NAIL SIZE)	PR	PAIR
DBL	DOUBLE	PRCST	PRE CAST
DCW	DEMAND CRITICAL WELD	PSL	PARALLAM, PARALLEL STRAND LUMBER
DEMO	DEMOLITION		
DET or DETS	DETAIL or DETAILS	P.T.	PRESERVATIVE-TREATED
DIAG	DIAGONAL	PT	POINT
DIA or Ø	DIAMETER	PTN	PARTITION
DIM or DIMS	DIMENSION or DIMENSIONS	R or RAD	RADIUS
DIST	DISTANCE	REBAR	REINFORCING BAR
DK or DKG	DECK or DECKING	REF	REFERENCE
DN	DOWN	REINF	REINFORCED or REINFORCING
DO	DITTO	REQ'D	REQUIRED
DWG or DWGS	DRAWING or DRAWINGS	REV	REVISE OR REVISION
DWL or DWLS	DOWEL or DOWELS	RFG	ROOFING
EA	EACH	R.O.	ROUGH OPENING
E.F.	EACH FACE	RSJ	ROLLED STEEL JOIST
E.J.	EXPANSION JOINT	S.A.D.	SEE ARCHITECTURAL DOCUMENTS
EL	ELEVATION	SCHED	SCHEDULE
ELEC	ELECTRICAL	SECT	SECTION
ELEV	ELEVATOR	SHT	SHEET
EMBED	EMBEDMENT	SHTG	SHEATHING
E.N.	EDGE NAILING	SIM	SIMILAR
E.O.S.	EDGE OF SLAB	SL	SLOPE
EQ	EQUAL	S.M.S.	SHEET METAL SCREW
EQUIP	EQUIPMENT	S.O.G.	SLAB ON GRADE
E.S.	EACH SIDE	SPEC	SPECIFICATION or SPECIFICATIONS
EV	EVERY	SQ	SQUARE
E.W.	EACH WAY	S.S. or SST	STAINLESS STEEL
E-W	EAST-WEST	STAG	STAGGER or STAGGERED
EXCAV	EXCAVATE or EXCAVATION	STD	STANDARD
EXP	EXPANSION	STIFF	STIFFENER
EXT	EXTERIOR	STIR	STIRRUP or STIRRUPS
'F'	FULL	STL	STEEL
FDN	FOUNDATION	STRUC	STRUCTURAL
F.F.	FINISH FACE	SUBST	SUBSTITUTE
FIN	FINISH	SUSP	SUSPENDED
FLR or FLRS	FLOOR or FLOORS	SYM	SYMMETRICAL
F.N.	FIELD NAILING	T&B	TOP AND BOTTOM
F.O.	FACE OF	T&G	TONGUE AND GROOVE
FPRF	FIREPROOFING	THK	THICK
F.S.	FAR SIDE	THRD	THREADED
FT	FOOT AND FEET	THRU	THROUGH
FTG or FTGS	FOOTING or FOOTINGS	T.O.	TOP OF
GA	GAUGE	TOT	TOTAL
GALV	GALVANIZED	TRANS	TRANSVERSE
GL	GLASS or GLAZING	TR	TREAD
GLB	GLULAM BEAM	TS	TUBE STEEL
GRND	GROUND	TYP	TYPICAL
GR	GRADE	U.O.N.	UNLESS OTHERWISE NOTED
GYP BD	GYPSUM BOARD	URM	UNREINFORCED MASONRY
HD	HOLDOWN	VENT	VENTILATE
H.D.G.	HOT DIPPED GALVANIZED	VERT or (V)	VERTICAL
HDR	HEADER	V.I.F.	VERIFY IN FIELD
HK or HKS	HOOK or HOOKS	W/	WITH
HORIZ or (H)	HORIZONTAL	W/O	WITHOUT
H.P.	HIGH POINT	W or WF	WIDE FLANGE
H.S.B.	HIGH STRENGTH BOLTS	WD	WOOD
HSS	HOLLOW STRUCTURAL SECTION	W.P.	WORK POINT
HT	HEIGHT	WT	WEIGHT
HVY	HEAVY	W.W.M.	WELDED WIRE MESH
I.D.	INSIDE DIAMETER	X HVY	EXTRA HEAVY
INFO	INFORMATION	XX HVY	DOUBLE EXTRA HEAVY
JST or JSTS	JOIST or JOISTS	XS	EXTRA STRONG
JT	JOINT	XXS	DOUBLE EXTRA STRONG

SYMBOLS

REFERENCE SYMBOLS

DETAIL/SECTION
- 1 / S5.2 — DETAIL NUMBER
- DRAWING SHEET WHERE FOUND, HYPHEN (-) INDICATES SAME SHEET
- LINE OF SECTION CUT
- DIRECTION OF VIEW
- AREA OF DETAIL

DETAIL PLAN OR ELEVATION
- AREA OF ENLARGED PLAN OR ENLARGED ELEVATION
- 1 / S5.2

SINGLE ELEVATION
- DIRECTION OF VIEW
- 1 / S5.2 — ELEVATION NUMBER
- DRAWING WHERE ELEVATION IS FOUND, HYPHEN INDICATES SAME SHEET

GRID LINES
- 1
- A

SHEAR WALL
- XX / XX — INDICATES WALL THICKNESS
- INDICATES WALL REINFORCEMENT

PLYWOOD SHEAR WALL
- INDICATES PLYWOOD SHEAR WALL
- X / XX" MIN — INDICATES PANEL TYPE, SEE SCHEDULE
- INDICATES LENGTH OF PLYWOOD SHEAR WALL, 'F' INDICATES FULL EXTENT AS SHOWN IN DWG
- HDXX — HOLDOWN TYPE

LEVEL LINE
- SECOND FLOOR EL: 123'-0"
- SECOND FLOOR EL: 123'-0"
- INDICATES ELEVATION IN FEET ABOVE DATUM

WORK POINT
- W.P.
- WORK POINT OF CONNECTION; POINT WHERE CENTROID OF MEMBERS INTERSECT

REVISION
- X
- REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH DWG

MATCH LINE
- DRAWING WHERE CONTINUATION IS FOUND
- MATCH LINE SEE SHT. S2.1.0
- DRAWING SIDE

KEY NOTE
- 2 / 3
- SEE LIST OF NOTES ON EACH DWG

CENTER POINT OF CURVE
- CURVE TO BE LOCATED
- RADIUS OF CURVE
- CENTER POINT OF CURVE

REFERENCED ELEVATION
- T.O.W. EL. 98'-0"
- DESCRIPTION OF REFERENCED POINT
- ELEVATION OF POINT IN FEET ABOVE DATUM

PLAN SYMBOLS

METAL DECK AND FILL
- CONCRETE FILL
- ORIENTATION OF METAL DECK
- EXTENT TO EDGE OF DECK, TYP
- SINGLE ARROW INDICATES EDGE OF DECK

CONCRETE
- CONCRETE SLAB OR WALL
- EXTENT TO EDGE OF DECK, TYP
- SINGLE ARROW INDICATES EDGE OF DECK

WOOD
- WOOD SHEATHING
- EXTENT TO EDGE OF SHEATHING, TYP
- SINGLE ARROW INDICATES EDGE OF DECK
- WOOD SHEATHING
- CONCRETE TOPPING
- EXTENT TO EDGE OF SHEATHING, TYP
- SINGLE ARROW INDICATES EDGE OF DECK

METAL DECK ORIENTATION
- ORIENTATION OF METAL DECK

SLAB DEPRESSIONS
- BOUNDARY OF DEPRESSION OR STEP IN SLAB
- CHANGE IN SLAB SLOPE

FLOOR DEPRESSIONS
- 2'-6" — DEPTH OF DEPRESSION OR STEP IN SLAB
- EXTENT OF DEPRESSION IN SLAB. S.A.D. FOR DIMENSIONS

BEAM DESIGNATIONS
- W16X31 (-2") — BEAM SIZE; TOP OF STEEL RELATIVE TO REFERENCED ELEVATION
- <3/4> — BEAM CAMBER IN INCHES
- [13] — NUMBER OF SHEAR STUDS IN LIEU OF TYPICAL
- EMB — ELEVATOR MACHINE BEAM PROVIDED BY ELEVATOR MANUFACTURER
- BU3 — BUILT-UP MEMBERS, SEE DETAILS

BEAM PENETRATIONS
- W16X31 / 02 — WEB OPENING TYPE, SEE DETAILS
- VERT X HORIZ WEB OPENING
- 10"X18" (-8) / TYPE A-1 — CENTER LINE OF OPENING TO TOP OF STEEL
- WEB OPENING TYPE, SEE DETAILS

ELEVATOR MACHINE BEAM REACTION
- A — MARK OF ELEVATOR MACHINE BEAM REACTION. SEE SCHEDULE ON ROOF PLAN
- REACTION LOCATION

PLAN SYMBOLS (CONT'D)

BEAM TO COLUMN MOMENT CONNECTIONS
- MOMENT RESISTING BEAM-COLUMN CONNECTIONS, SEE DETAILS

BEAM TO COLUMN CANTILEVER CONNECTIONS
- CANTILEVER BEAM-COLUMN CONNECTIONS, SEE DETAILS

BEAM-COLUMN COLLECTOR/DRAG CONNECTIONS
- COLLECTOR/DRAG CONNECTION, SEE DETAILS

SHEAR CONNECTIONS
- TYPICAL SHEAR CONNECTION
- FULL DEPTH CONNECTION

BEAM TO BEAM MOMENT CONNECTION
- BEAM TO BEAM MOMENT CONNECTION

WELDED TUBE CONNECTIONS
- HSS / HSS — WELDED TUBE TO TUBE CONNECTION
- WF / HSS — WELDED TUBE TO WIDE-FLANGE CONNECTION

COLUMNS
- WIDE-FLANGE COLUMN, SEE PLAN
- TUBE COLUMN, SEE PLAN

SLAB OR WALL OPENING
- LIMITS OF OPENING

BRACED FRAME
- BF1 — BRACED FRAME TYPE, SEE ELEVATIONS
- DIAGONAL BRACE UP
- DASHED FOR BELOW

DIAGONAL BRACE
- DIAGONAL "KICKER" BRACE OR PARAPET BRACE ABOVE OR BELOW BEAM

SHORING
- SHORE — SHORING REQUIRED

MATERIAL SYMBOLS

- EARTH SHOWN IN SECTION
- COMPACTED EARTH SHOWN IN SECTION
- ROCK FILL, GRAVEL SHOWN IN SECTION
- SAND SHOWN IN SECTION
- NEW CONCRETE PLAN OR SECTION
- EXISTING CONCRETE PLAN OR SECTION
- PRECAST CONCRETE PLAN OR SECTION
- NEW CONCRETE MASONRY PLAN OR SECTION
- EXISTING CONCRETE MASONRY PLAN OR SECTION
- EXISTING BRICK OR STONE PLAN OR SECTION
- STEEL : AS NOTED PLAN OR SECTION
- STEEL : ROLLED SHAPES PLAN OR SECTION
- SHEET METAL : AS NOTED PLAN OR SECTION
- GLU-LAM BEAM IN SECTION
- PLWOOD IN SECTION
- CONTINUOUS WOOD FRAMING IN SECTION
- WOOD BLOCKING IN SECTION

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REGISTERED PROFESSIONAL ENGINEER — STEVEN DAN RAMOS — No. 36251 — Exp. 3/31/26 — STRUCTURAL — STATE OF CALIFORNIA

△	Date	Description
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	01/09/2026	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
SYMBOLS AND ABBREVIATIONS

Scale
NOT TO SCALE

CITY OF IRVINE BUILDING & SAFETY DIVISION

S1.005

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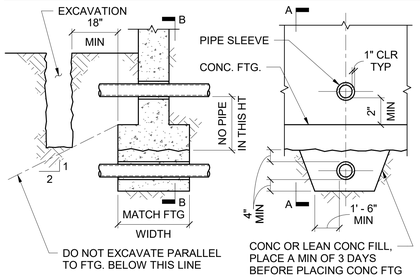
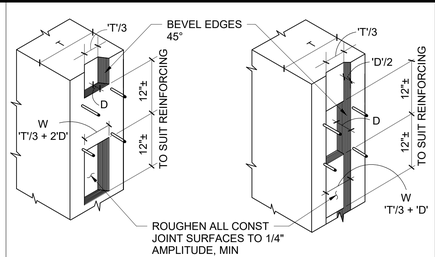


SECTION A-A ELEVATION B-B

NOTES:
1. REINFORCE OPENINGS FOR SLEEVES OR GROUPS OF SLEEVES LARGER THAN 10" PER THE TYPICAL WALL OPENING DETAIL. "GROUPS" OF SLEEVES INCLUDES ALL SLEEVES SPACED CLOSER THAN ONE DIAMETER CLR.
2. SEE MECHANICAL AND CIVIL DRAWINGS FOR ADDITIONAL REQUIREMENTS AT SLEEVES.

17 PIPE SLEEVES THROUGH STRIP FOOTINGS
1/2" = 1'-0"



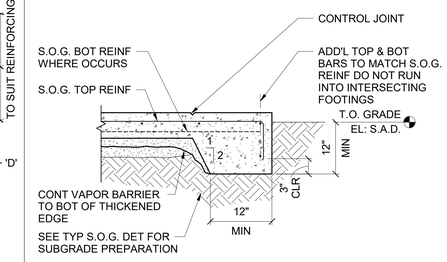
KEY TYPE #1
TYPICAL FOR WALLS

KEY SCHEDULE	
T	D
≤ 8"	3/4"
8"-16"	1 1/2"
> 16"	2 1/2"

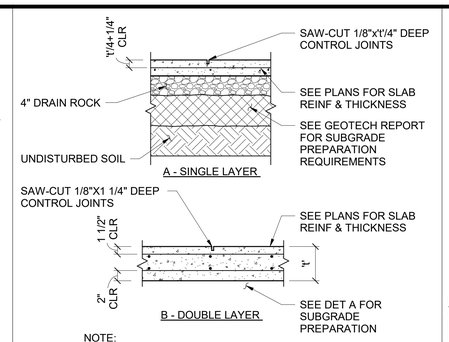
KEY TYPE #2
FOR SLABS, RETAINING WALLS, & EXTERIOR WALLS BELOW GRADE

NOTE:
DETAILS APPLY TO BOTH (H) AND (V) CONSTR JOINTS

13 CONSTRUCTION JOINTS IN CONCRETE WALLS & SLABS
3/4" = 1'-0"

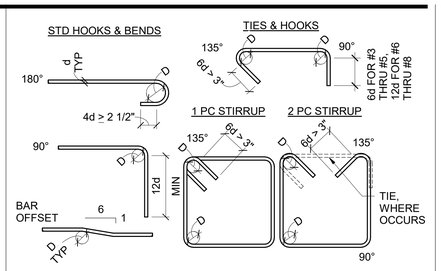


9 FREE EDGE AT SLAB ON GRADE
1" = 1'-0"



NOTE:
SEE GEOTECHNICAL REPORT(S) FOR ADDITIONAL SUBGRADE PREPARATION REQUIREMENTS.

5 SLAB ON GRADE, CONTROL JT & SUBGRADE PREPARATION
1" = 1'-0"

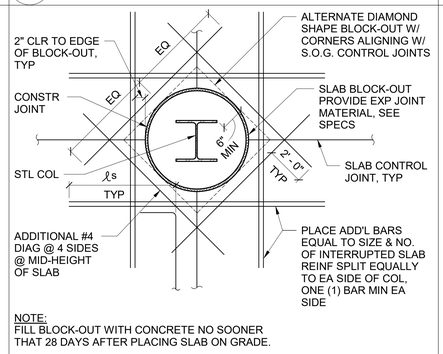


NOTE:
DO NOT FIELD BEND REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE.

BEND DIAMETER, D		
BAR SIZE	STD HOOKS & BENDS	STIRRUPS TIES & HOOPS
#3 THRU #5	6d	4d
#6 THRU #8	6d	6d
#9 THRU #11	8d	NA
#14 THRU #18	10d	NA

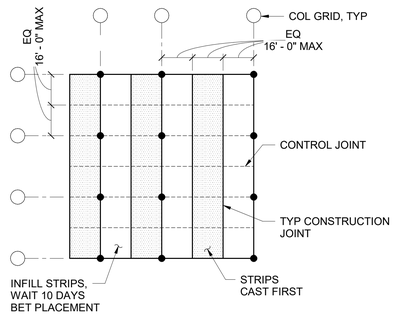
1 HOOKS & BENDS
1" = 1'-0"

18 NOT USED
N.T.S.

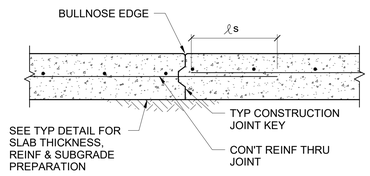


NOTE:
FILL BLOCK-OUT WITH CONCRETE NO SOONER THAT 28 DAYS AFTER PLACING SLAB ON GRADE.

14 BLOCKOUT AT COLUMNS AT SLAB ON GRADE
1" = 1'-0"

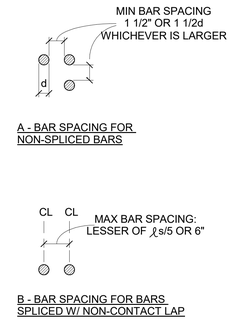


10 CONSTRUCTION JOINTS AT SLAB ON GRADE
1" = 1'-0"

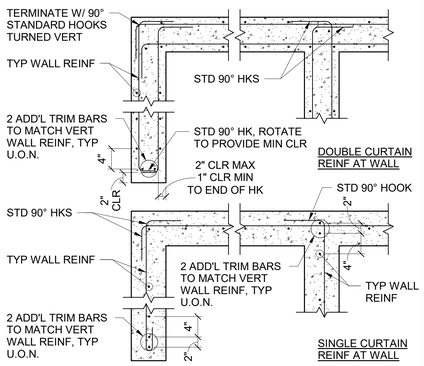


NOTE:
CONSTRUCTION JOINTS TO BE USED ONLY WHERE SHOWN ON PLAN OR SPECIFICALLY APPROVED BY THE OWNER'S REPRESENTATIVE.

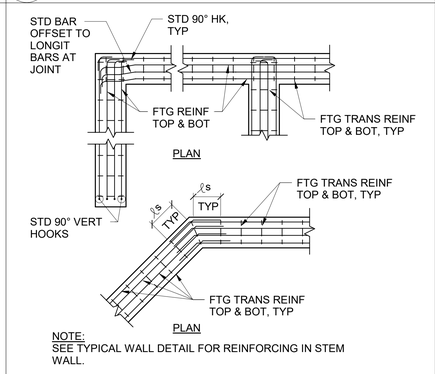
6 CONSTRUCTION JOINTS AT SLAB ON GRADE
1" = 1'-0"



2 BAR SPACING
1" = 1'-0"

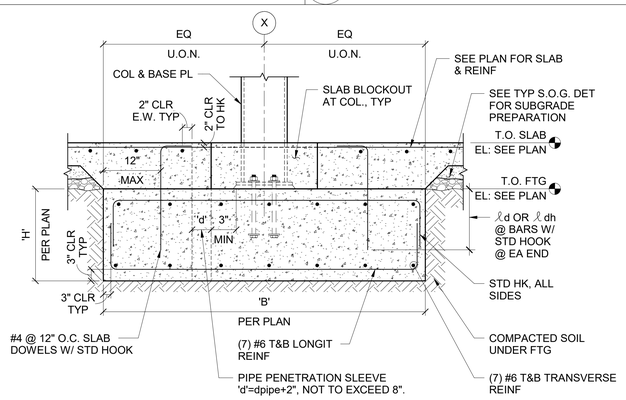


19 PLAN AT CURB AND WALL REINF AT CORNERS AND INTERSECTIONS
1" = 1'-0"



NOTE:
SEE TYPICAL WALL DETAIL FOR REINFORCING IN STEM WALL.

15 FOOTING REINFORCEMENT AT CORNERS AND INTERSECTIONS
1" = 1'-0"

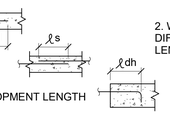


20 SPREAD FOOTING
3/4" = 1'-0"

CONCRETE REINFORCING DEVELOPMENT & SPLICE LENGTHS (INCHES)

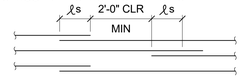
BAR LOCATION	CONCRETE TYPE	CONCRETE STRENGTH	REBAR SPACING, CLEAR	BAR SIZE #3 ℓd	ℓs	ℓdh	#4 ℓd	ℓs	ℓdh	#5 ℓd	ℓs	ℓdh	#6 ℓd	ℓs	ℓdh	#7 ℓd	ℓs	ℓdh	#8 ℓd	ℓs	ℓdh	#9 ℓd	ℓs	ℓdh	#10 ℓd	ℓs	ℓdh	#11 ℓd	ℓs	ℓdh	#14 ℓd	ℓs	ℓdh	#18 ℓd	ℓs	ℓdh
CONC WALL VERT REINF, COLUMNS, BEAM BOT REINF, SLAB-ON-GRADE, FOOTING BOT REINF, FILL ON METAL DECK, SUSPENDED SLAB	NWC	f'c ≥ 3ksi f_y=60ksi	< 6"	16	21	8	22	28	12	27	35	16	33	43	21	53	69	27	66	86	32	75	97	39	84	109	46	93	121	54	112	N/A	71	149	N/A	109
			≥ 6"	16	21	7	22	28	9	27	35	11	32	42	13	44	57	17	48	62	20	51	66	24	63	81	46	75	97	54	72	N/A	71	116	N/A	109
CONC WALL HORIZ REINF, CONC WALL BOUNDARY & TRIM REINF, FTG TOP & SIDE REINF, BEAM TOP & SIDE REINF	NWC	f'c ≥ 3ksi f_y=60ksi	< 6"	21	27	8	28	36	12	35	45	16	43	56	21	69	90	27	86	112	32	97	126	39	109	142	46	121	157	54	145	N/A	71	193	N/A	109
			≥ 6"	21	27	7	28	36	9	35	45	11	42	54	13	57	74	17	62	80	20	66	86	24	81	105	46	97	126	54	93	N/A	71	150	N/A	109
FILL ON METAL DECK	LWC	f'c ≥ 3ksi f_y=60ksi	< 6"	22	28	10	29	37	16	36	46	21	44	57	28	71	92	35	88	114	43	99	129	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			≥ 6"	22	28	9	29	37	12	36	46	15	43	55	18	59	76	22	63	82	27	68	88	32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:
1. ℓd = DEVELOPMENT LENGTH
ℓs = LAP SPLICE LENGTH
ℓdh = HOOK DEVELOPMENT LENGTH



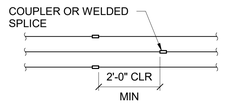
2. WHEN SPLICING BARS OF DIFFERENT SIZE, USE LAP SPLICE LENGTH OF LARGER BAR, U.O.N.

3. STAGGER EA SPACE AS FOLLOWS:



4. MULTIPLY THE TABLE LENGTHS ABOVE BY 1.5 FOR EPOXY COATED REINF.

5. BARS LARGER THAN #9 SHOULD NOT BE USED IN CONCRETE FILL OVER METAL DECK.



12 REINFORCING DEVELOPMENT & SPLICE LENGTHS
1" = 1'-0"

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REGISTERED PROFESSIONAL ENGINEER — STEVEN M. RAMOS — No. 36251 — EXP. 3/31/26 — STRUCTURAL — STATE OF CALIFORNIA

△	Date	Description
	10/14/2025	CD CLIENT REVIEW/PRICING
	11/03/2025	ISSUE FOR PLAN CHECK
	01/09/2025	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
TYPICAL CONCRETE DETAILS

Scale
As indicated

S1.010

CITY OF IRVINE BUILDING & SAFETY DIVISION

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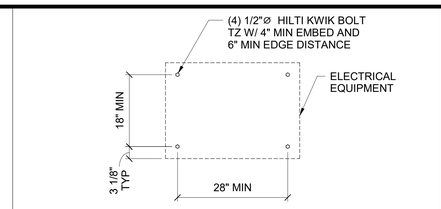
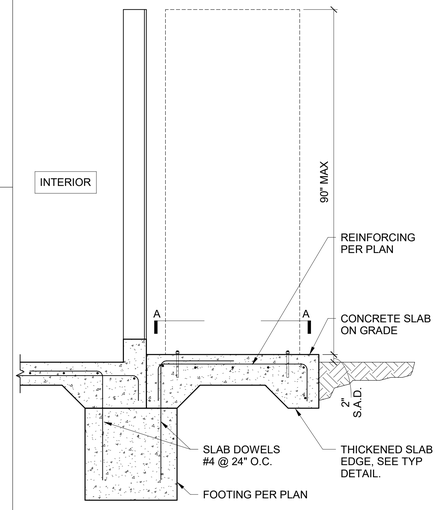


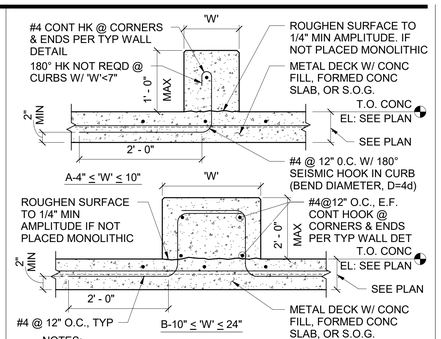
PLAN VIEW A-A



ELEVATION VIEW

6 TYPICAL SWITCHBOARD ANCHORAGE

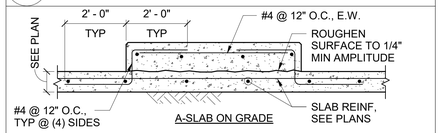
N.T.S.



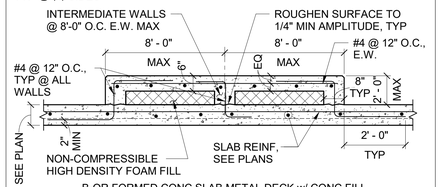
NOTES:
1. SEE ARCH & MECH DWGS FOR CURB LOCATIONS, DIMENSIONS, CHAMFERS & INSERTS.
2. COORDINATE REINF LOCATIONS TO AVOID INTERFERENCE WITH INSTALLATION OF EXPANSION ANCHORS IF USED.

1 CONCRETE CURBS

N.T.S.



A-SLAB ON GRADE

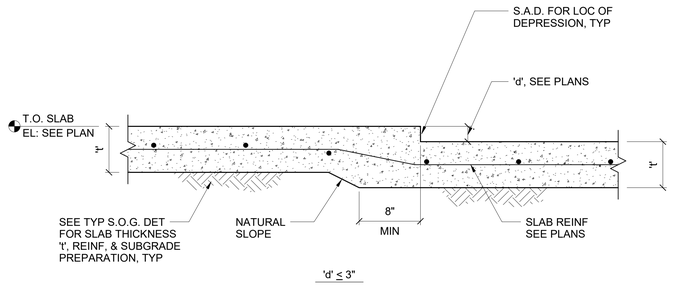


B-OR FORMED CONC SLAB METAL DECK w/ CONC FILL

NOTES:
1. SEE DRAWINGS BY OTHERS FOR HEIGHT, SIZE, CHAMFERS, AND LOCATION OF CONCRETE PADS.
2. COORDINATE REINF LOCATIONS TO AVOID INTERFERENCE WITH INSTALLATION OF EXPANSION ANCHORS IF USED.
3. AT (E) CONC, USE #4 ADHESIVE DWLS @ 12" O.C.

2 HOUSEKEEPING PAD

N.T.S.



'd' ≤ 3"

7 DEPRESSIONS IN SLAB ON GRADE

N.T.S.

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	10/14/2025	CD CLIENT REVIEW/PRICING
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	01/09/2025	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
TYPICAL CONCRETE DETAILS

Scale
As indicated

S1.011

CITY OF IRVINE BUILDING & SAFETY DIVISION

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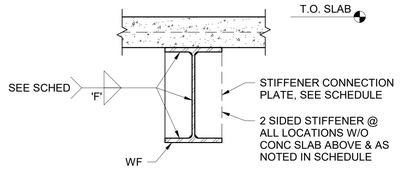


LOCATION	PL SIZE	WELD SIZE 'F'	# OF PL'S
W12x & SMALLER	1/4"	1/8"	1-SIDED
W18x & SMALLER	3/8"	3/16"	2-SIDED
W36x & SMALLER	1/2"	1/4"	2-SIDED
STAIR STRINGER CONNECTIONS	3/8"	3/16"	2-SIDED

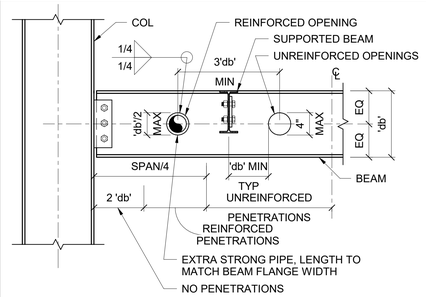
NOTES:
1. USE THIS DETAIL WHERE PL'S OR STIFFENERS ARE SHOWN BUT NOT DETAILED.
2. WELD TO MAXIMUM OF A.W.S. MINIMUM AND SCHEDULE SIZE.
3. COORDINATE LOCATIONS OF PL'S WITH ARCH DRAWINGS.

5 STIFFENER CONNECTION PLATE
N.T.S.

BEAM CONNECTION SCHEDULE					
NOMINAL MEMBER DEPTH	SHEAR PL THICKNESS ('t')	FASTENERS A325-X U.O.N. ('N')	WELD SIZE ('F')	ØVn (K)	REMARKS
HSS LESS THAN 8"	1/2"	2-7/8" Ø	5/16"	54.1	
8", 10"	1/2"	2-7/8" Ø	5/16"	54.1	
12", 14"	1/2"	3-7/8" Ø	5/16"	81.2	
16", 18"	1/2"	4-7/8" Ø	5/16"	108	
21"	1/2"	5-7/8" Ø	5/16"	135	
24"	1/2"	6-7/8" Ø	5/16"	162	
27"	1/2"	7-7/8" Ø	5/16"	189	
30"	1/2"	8-7/8" Ø	5/16"	216	
33"	1/2"	9-7/8" Ø	5/16"	244	
36"	1/2"	10-7/8" Ø	5/16"	263	
40"	1/2"	11-7/8" Ø	5/16"	283	
44"	1/2"	12-7/8" Ø	5/16"	302	

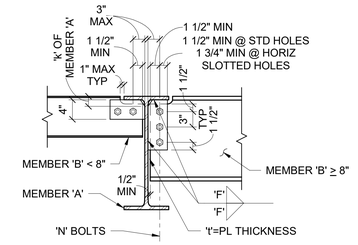
NOTES:
1. BOLT HOLES TO BE STANDARD HOLES 1/16" GREATER THAN BOLT DIAMETER. SHORT SLOTTED HOLES IN SHEAR PL MAY BE USED ONLY WHERE NOTED.
2. BOLTS TO BE FULLY PRETENSIONED A325-X WITH HARDENED WASHERS, U.O.N.
3. SCHEDULE BASED ON NOMINAL DEPTH OF WIDE FLANGE BEAMS, CHANNELS, TUBES & OTHER MISCELLANEOUS SHAPES.

1 BOLTED BEAM CONN SCHEDULE
N.T.S.



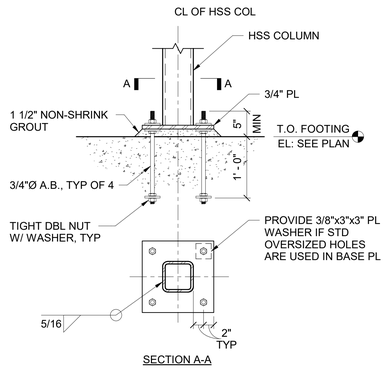
NOTES:
1. COORDINATE BEAM PENETRATION LOCATIONS WITH OTHER DISCIPLINES.
2. SUBMIT BEAM PENETRATIONS NOT SPECIFICALLY LOCATED ON THE STRUCTURAL DRAWINGS FOR APPROVAL

6 TYPICAL ROUND HOLE PENETRATION IN BEAM WEB
N.T.S.

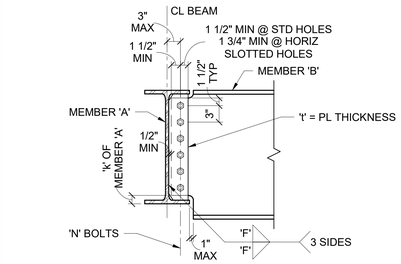


NOTES:
1. FOR WELD 'F', NUMBER OF BOLTS 'N' & PL THICKNESS 't', SEE BOLTED BEAM CONNECTION SCHEDULE.
2. SHORT SLOTTED HOLES IN SHEAR PL MAY BE USED.
3. DETAIL APPLIES TO WIDE FLANGE BEAMS AND CHANNEL.

2 BEAM TO BEAM CONNECTION MEMBER 'A' > MEMBER 'B'
N.T.S.

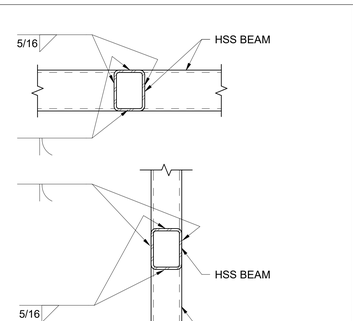


7 HSS COLUMN BASE
N.T.S.

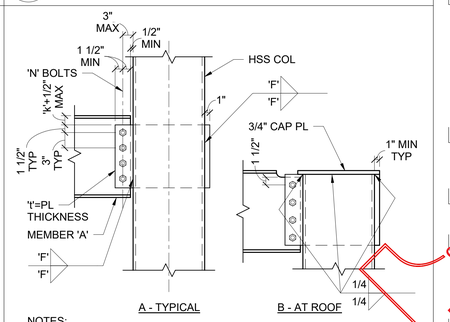


NOTES:
1. SIMILAR CONDITIONS APPLY FOR BEAMS ON BOTH SIDES OF MEMBER 'A'.
2. FOR WELD SIZE 'F' NUMBER OF BOLTS 'N' & PL THICKNESS 't', SEE BOLTED BEAM TO BEAM CONNECTION SCHEDULE.
3. SHORT SLOTTED HOLES IN SHEAR PL MAY BE USED.
4. IF MEMBER 'B' < 8", SEE BEAM TO BEAM CONNECTION - MEMBER 'A' > MEMBER 'B'.
5. SIMILAR CONDITIONS APPLY FOR CHANNELS.

3 BEAM TO BEAM CONNECTION MEMBER 'A' < MEMBER 'B'
N.T.S.



8 TYPICAL HSS TO HSS CONNECTION
N.T.S.



NOTES:
1. SIMILAR CONDITIONS APPLY FOR BEAMS ON BOTH SIDES OF COLUMN.
2. FOR WELD 'F', NUMBER OF BOLTS 'N' & PL THICKNESS 't', SEE BOLTED BEAM CONNECTION SCHEDULE.
3. SIMILAR CONDITIONS APPLY WHEN MEMBER 'A' IS A CHANNEL.

4 WF TO HSS COLUMN OR PIPE COLUMN
N.T.S.

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REGISTERED PROFESSIONAL ENGINEER — STEVEN RAMZI — No. 39251 — Exp. 3/31/26 — STRUCTURAL — STATE OF CALIFORNIA

Date	Description
10/14/2025	CD CLIENT REVIEW/PRICING
11/03/2025	ISSUE FOR PLAN CHECK
01/09/2025	ADDENDUM A/PLAN CHECK COMMENTS
05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
TYPICAL STEEL DETAILS

Scale
N.T.S.

CITY OF IRVINE BUILDING & SAFETY DIVISION

S1.020

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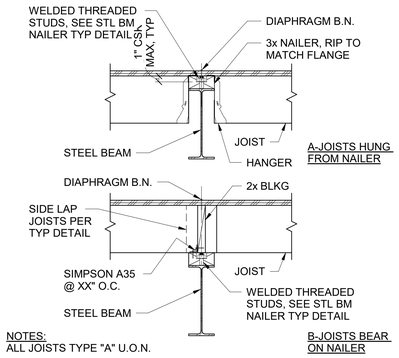
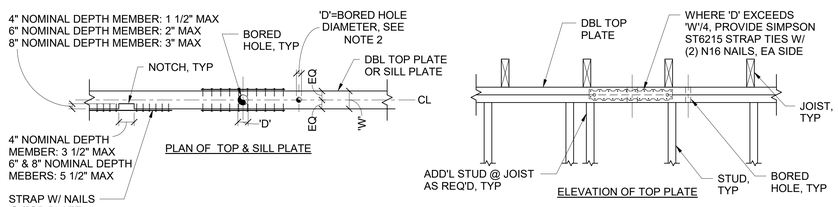


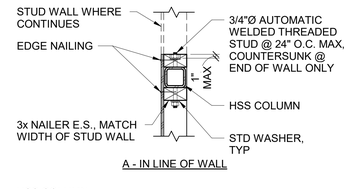
NOTES:
ALL JOISTS TYPE "A" U.O.N.

17 JOISTS PERPENDICULAR TO STEEL BEAM
N.T.S.



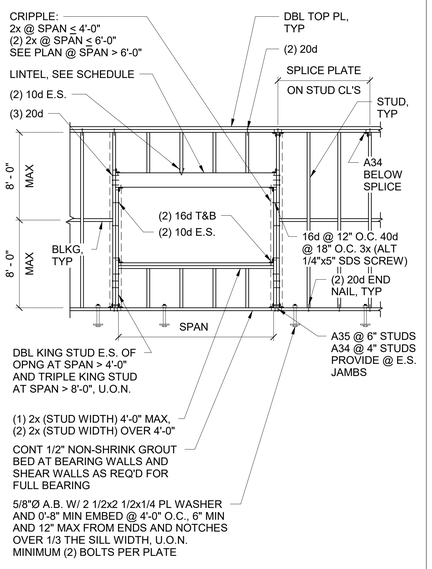
NOTES:
1. SPACE NOTCHES, CUTS, AND BORED HOLES WITH A MINIMUM CLEAR DISTANCE OF 1'-0" AWAY FROM OTHER NOTCHES, CUTS, AND OTHER BORED HOLES. ADDITIONALLY, NOTCHES SHALL BE SPACED A MINIMUM OF 6'-0" APART.
2. MAXIMUM BORED HOLE DIAMETER, 'D', IS 1 1/4"Ø , 2"Ø , & 3"Ø FOR 4", 6", & 8" NOMINAL MEMBER DEPTHS, RESPECTIVELY; UNLESS OTHERWISE NOTED.
3. PROVIDE SIMPSON MSTA30 STRAP CENTERED OVER AND AT EACH NOTCH WITH (22) 10d NAILS. STRAP AT NOTCHES NOT REQUIRED AT SILL PLATES.

13 HOLES IN TOP PLATES
N.T.S.

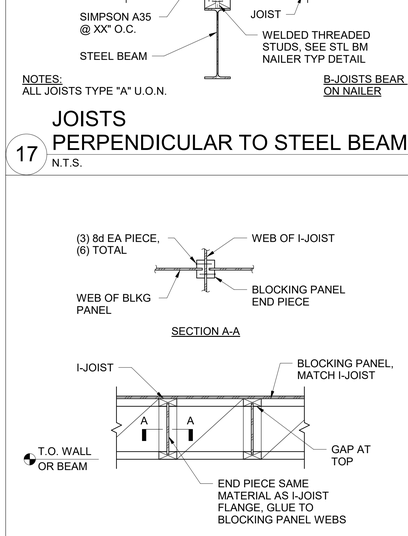


NOTE:
FOR INFO NOT NOTED & SHOWN SEE DETAIL A ABOVE.

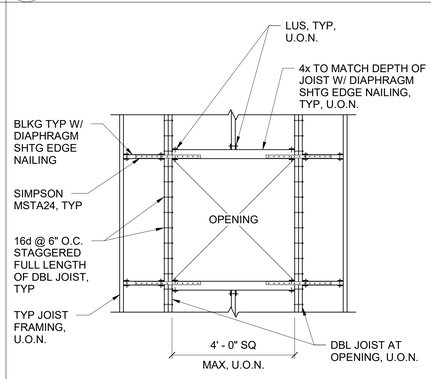
5 HSS COLUMN NAILER
N.T.S.



2 STUD WALL FRAMING
N.T.S.



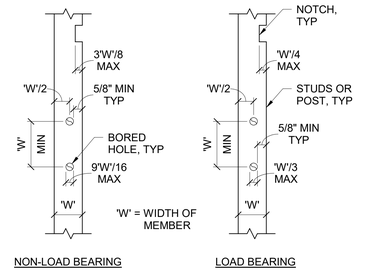
18 BLOCKING PANEL AT TJI JOIST
N.T.S.



14 OPENING IN ROOF/FLOOR
N.T.S.

ROOF AND FLOOR SHEATHING NAILING SCHEDULE	
BOUNDARY	10d @ 2" O.C.
EDGE	10d @ 2" O.C.
FIELD	10d @ 12" O.C.

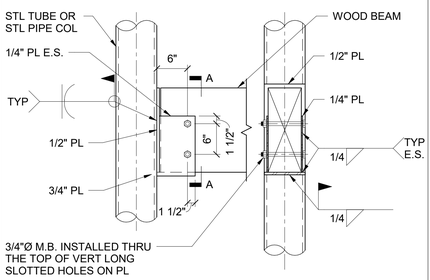
10 NAILING SCHEDULE
N.T.S.



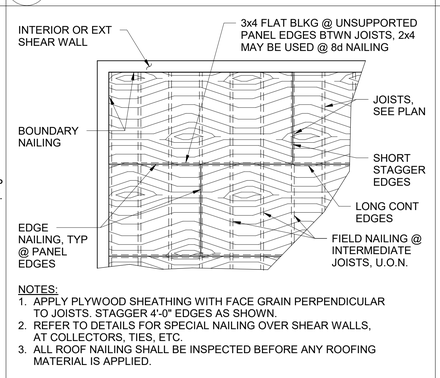
NOTES:
1. NOTCHING OF MEMBERS OR OVERSIZED BORED HOLES IN MEMBERS NOT PERMITTED WITHOUT WRITTEN PERMISSION OF THE OWENER'S REPRESENTATIVE.
2. DO NOT PLACE BORED HOLES IN MEMBERS WITH HOLDOWN ANCHORS.
3. BORED HOLES SHALL BE LOCATED AT A MINIMUM DISTANCE OF 'W' AWAY FROM NOTCHES, CUTS, AND OTHER BORED HOLES.

6 HOLES & NOTCHES IN STUDS OR POSTS
N.T.S.

LINTEL SCHEDULE (U.O.N. ON DWGS)				
	SPAN ≤ 3'-0"	SPAN ≤ 4'-0"	SPAN ≤ 6'-0"	SPAN > 6'-0"
2x4 STUDS	(2) 2x4 OR 4x4	(2) 2x6 OR 4x6	4x8	SEE PLANS
2x6 STUDS	(3) 2x6 OR 4x6 FLAT	6x6 OR 5 1/8"x6" GLB	6x8 OR 5 1/8"x6" GLB	

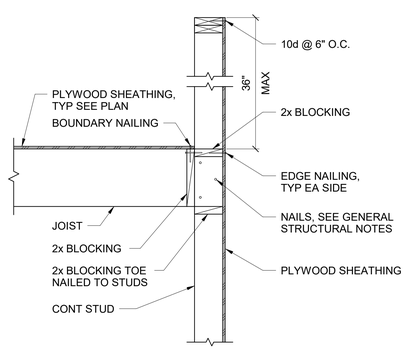


19 WOOD BEAM TO STEEL COLUMN
N.T.S.

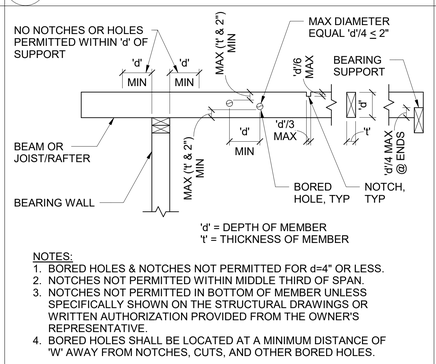


NOTES:
1. APPLY PLYWOOD SHEATHING WITH FACE GRAIN PERPENDICULAR TO JOISTS. STAGGER 4'-0" EDGES AS SHOWN.
2. REFER TO DETAILS FOR SPECIAL NAILING OVER SHEAR WALLS, AT COLLECTORS, TIES, ETC.
3. ALL ROOF NAILING SHALL BE INSPECTED BEFORE ANY ROOFING MATERIAL IS APPLIED.

15 PLAN-ROOF & FLOOR SHEATHING
N.T.S.

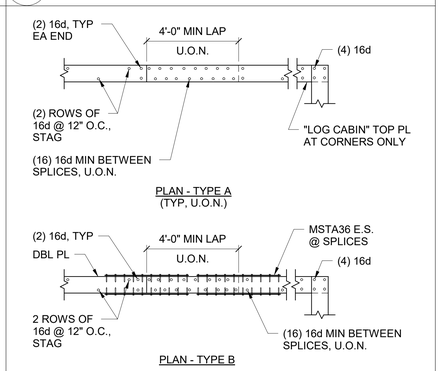


11 EXTERIOR WALL SECTION AT ROOF
N.T.S.

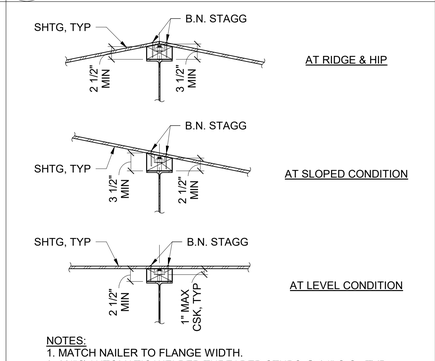


NOTES:
1. BORED HOLES & NOTCHES NOT PERMITTED FOR d=4" OR LESS.
2. NOTCHES NOT PERMITTED WITHIN MIDDLE THIRD OF SPAN.
3. NOTCHES NOT PERMITTED IN BOTTOM OF MEMBER UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR WRITTEN AUTHORIZATION PROVIDED FROM THE OWNER'S REPRESENTATIVE.
4. BORED HOLES SHALL BE LOCATED AT A MINIMUM DISTANCE OF 'W' AWAY FROM NOTCHES, CUTS, AND OTHER BORED HOLES.

7 HOLES & NOTCHES IN BEAMS OR JOISTS
N.T.S.

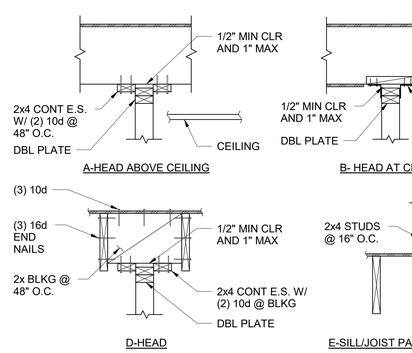


3 TOP PLATE SPLICE
N.T.S.



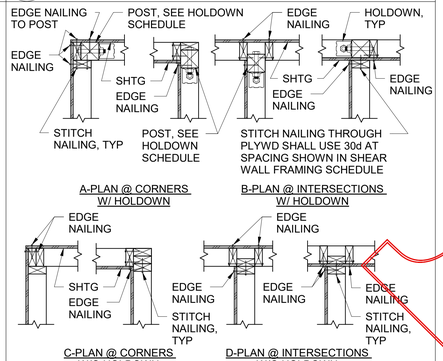
NOTES:
1. MATCH NAILER TO FLANGE WIDTH.
2. 3/4"Ø AUTOMATIC WELDED THREADED STUDS @ 24" O.C., TYP U.O.N. CSK STUDS 1" MAX FOR FLUSH PLYWD CONTACT.

16 STEEL BEAM NAILERS
N.T.S.



NOTE:
1. PARTITIONS CONTAINING PIPING THAT RUNS PARALLEL TO THE FLOOR JOISTS SHALL PROVIDE DOUBLED, SPACED, AND BLOCKED JOISTS UNDERNEATH THE PARTITIONS TO PERMIT THE PASSAGE OF THE PIPES.
2. AT TJI JOISTS, PROVIDE WEB STIFFENERS AS REQUIRED AT BLOCKING LOCATIONS.

12 JOISTS AT NON-BEARING PARTITION
N.T.S.



4 CORNER FRAMING AT SHEAR WALL & SHEATHED STUD WALL
N.T.S.

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05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
TYPICAL WOOD DETAILS

Scale
As indicated

S1.030

CITY OF IRVINE BUILDING & SAFETY DIVISION

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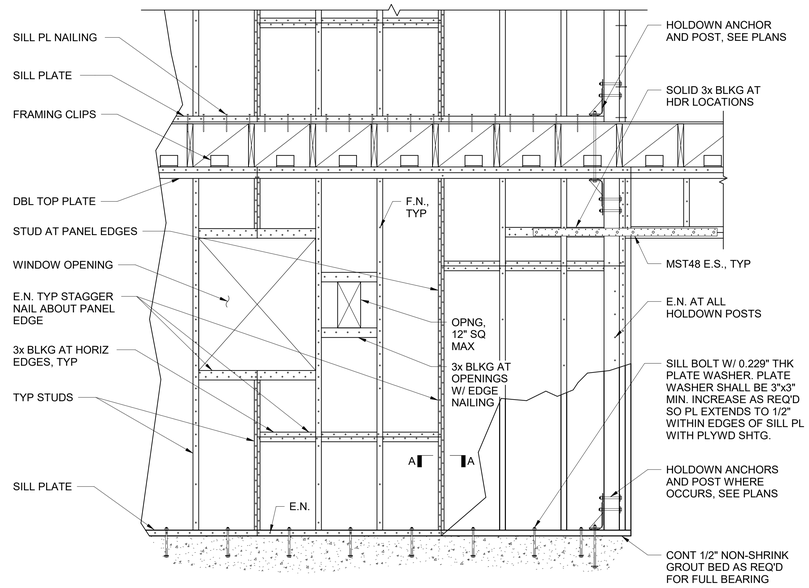
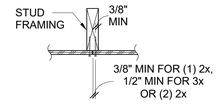


NOTES:
1. INDIVIDUAL PANEL PIECES SHALL NOT BE LESS THAN 2'-0" IN LEAST DIMENSION NOR LESS THAN 8 SQ FEET, U.O.N.
2. 2-SILL BOLTS MIN PER PIECE W/ 6" MIN AND 12" MAX FROM EA END. DO NOT CONSIDER HOLDOWN ANCHOR BOLTS AS SILL BOLTS.
3. PLACE PANELS ON SAME SIDE OF WALL AS SYMBOL SHOWN ON PLAN.
4. FOR WALLS WITH PANELS APPLIED ON BOTH FACES, OFFSET PANEL JOINTS TO FALL ON DIFFERENT FRAMING MEMBERS.
5. MAXIMUM ACCUMULATED LENGTH OF OPENINGS IN A SHEAR WALL SHALL NOT EXCEED MINIMUM OF 12" OR 10% OF SHEAR WALL LENGTH. HEIGHT OF OPENINGS SHALL NOT EXCEED 12".
6. NO CUTS OR HOLES IN SHEATHING WITHIN 16" OF CORNERS.
7. FOR WALLS WITH PANELS APPLIED ON BOTH FACES, SILL BOLT AND SILL PLATE NAILING SPACING SHALL BE HALVED AND FRAMING CLIPS SPACING SHALL BE HALVED OR CLIPS SHALL BE PROVIDED AT SPACING SHOWN IN SCHEDULE ON EACH SIDE OF WALL.

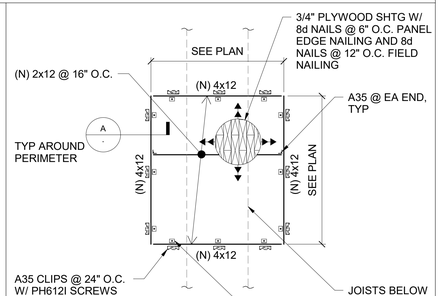


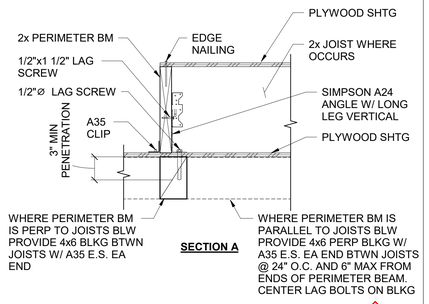
SECTION A-A
N.T.S.

SHEAR PANEL SCHEDULE

PANEL TYPE	SHEATHING	STITCH NAILING	EDGE NAILING	FIELD NAILING	SILL BOLT	SILL PLATE NAILING	SILL PLATE	STUDS AND HORIZ BLKG AT PANEL EDGES	TYP STUDS	FRAMING CLIPS
1	15/32" STRUCT I	16d @ 6" O.C.	10d @ 6" O.C.	10d @ 12" O.C.	1/2"Øx1'-0" @ 32" O.C.	20d @ 4" O.C.	3x6	3x6	2x6 @ 16" O.C.	A35 @ 16" O.C.
2	15/32" STRUCT I	16d @ 6" O.C.	10d @ 4" O.C.	10d @ 12" O.C.	1/2"Øx1'-0" @ 32" O.C.	20d @ 3" O.C.	3x6	3x6	2x6 @ 16" O.C.	A35 @ 12" O.C.

10 SHEAR WALL FRAMING
3/4" = 1'-0"





NOTES:
1. WOOD PAD SHALL BE SUPPORTED ON A MINIMUM (2) EXISTING ROOF JOISTS.
2. RIP (N) WOOD FRAMING TO MATCH ROOF SLOPE. MINIMUM DEPTH OF FRAMING = 8".
3. COORDINATE WITH MECHANICAL UNIT; UNIT SHALL ATTACH TO 4x FRAMING MEMBERS.
4. SLOPE AS REQUIRED, S.A.D. AND PROVIDE ROOFING/WATERPROOFING AS REQUIRED
5. EQUIPMENT ANCHORAGE TO CONTINUE DOWN INTO THE ROOF FRAMING.

4 TYPICAL WOOD PAD
N.T.S.

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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Tel 310.323.9924

△	Date	Description
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	01/09/2025	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
TYPICAL WOOD DETAILS

Scale
As indicated

S1.031

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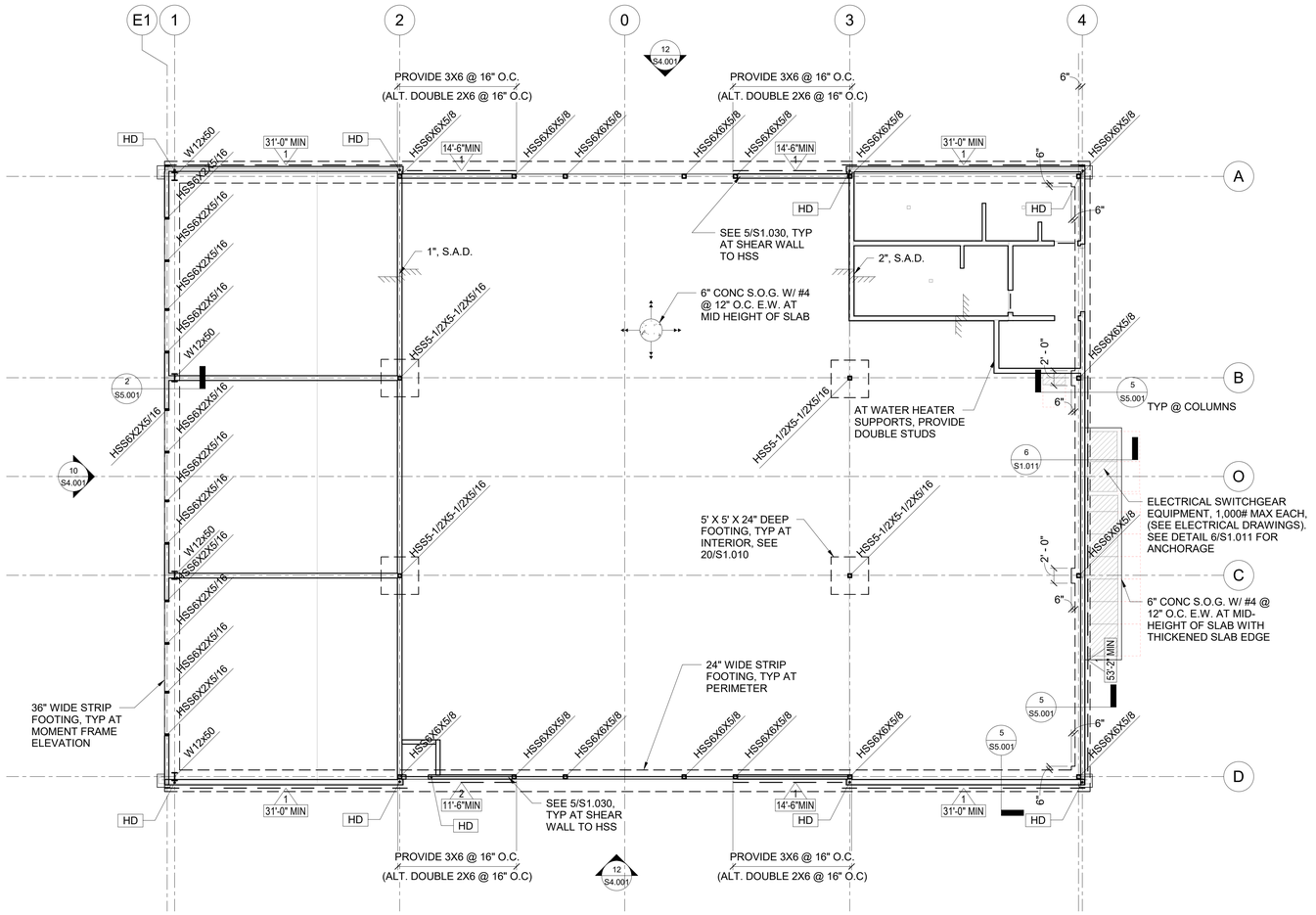

1 CONSTRUCTION PLAN
1/8" = 1'-0"

SHEET NOTES

1. TOP OF SLAB-ON-GRADE = 0'-0" U.O.N.
2. TOP OF FOOTING SHALL BE A MINIMUM OF 1'-0" BELOW LOWEST ADJACENT TOP OF SLAB-ON-GRADE OR LOWEST ADJACENT GRADE U.O.N.
3. FOR DETAILS NOT SPECIFICALLY REFERENCED, SEE TYPICAL DETAILS SHEETS.
4. ALL FOUNDATION EXCAVATIONS SHALL BE OBSERVED AND APPROVED BY THE PROJECT ENGINEER GEOLOGIST AND/OR PROJECT GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF REINFORCING STEEL.
5. COORDINATE THE LOCATION OF SLAB DEPRESSIONS AND OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS.
6. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
7. COLD FORMED STEEL FRAMING FOR INTERIOR PARTITION WALLS & EXTERIOR FAÇADE WALLS ARE A DESIGN-BUILD ITEM BY OTHERS.
8. SEE ARCHITECTURAL DRAWINGS FOR CURB LOCATIONS, DIMENSIONS, AND HEIGHTS. SEE TYPICAL DETAIL ON 1/S1.011.
9. POST-INSTALLED ANCHORS SHALL NOT BE USED AS ALTERNATES UNLESS THEY ARE SPECIFIED ON THE PLANS OR PRE-APPROVED BY THE SEOR AND SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.

PLAN SYMBOLS

FOR ADDITIONAL SYMBOLS NOT SHOWN, SEE SHEET S1.005

- INDICATES PLYWOOD SHEAR WALL
- X / XX' MIN — INDICATES PANEL TYPE, SEE SCHEDULE; INDICATES LENGTH OF PLYWOOD SHEAR WALL, "F" INDICATES FULL EXTENT AS SHOWN IN DWG.
- INDICATES (N) 2X6 WALL STUDS @ 16"O.C. U.O.N. ALL INTERIOR WALLS ARE NON-BEARING PARTITIONS, SEE TYPICAL DETAILS
- HD — INDICATES SIMPSON HDU11 HOLDOWN WITH 6x6 END POST AND 1"⌀. CAST IN PLACE ANCHOR BOLT WITH 14" EMBED INTO STRIP FOOTING

KEY PLAN

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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REGISTERED PROFESSIONAL ENGINEER — STEVEN DAN PARK — No. 36251 — EXP. 3/31/26 — STRUCTURAL — STATE OF CALIFORNIA

Date	Description
10/14/2025	CD CLIENT REVIEW/PRICING
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05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
CONSTRUCTION PLAN

Scale
As indicated

Ref North

CITY OF IRVINE BUILDING & SAFETY DIVISION

S1.100

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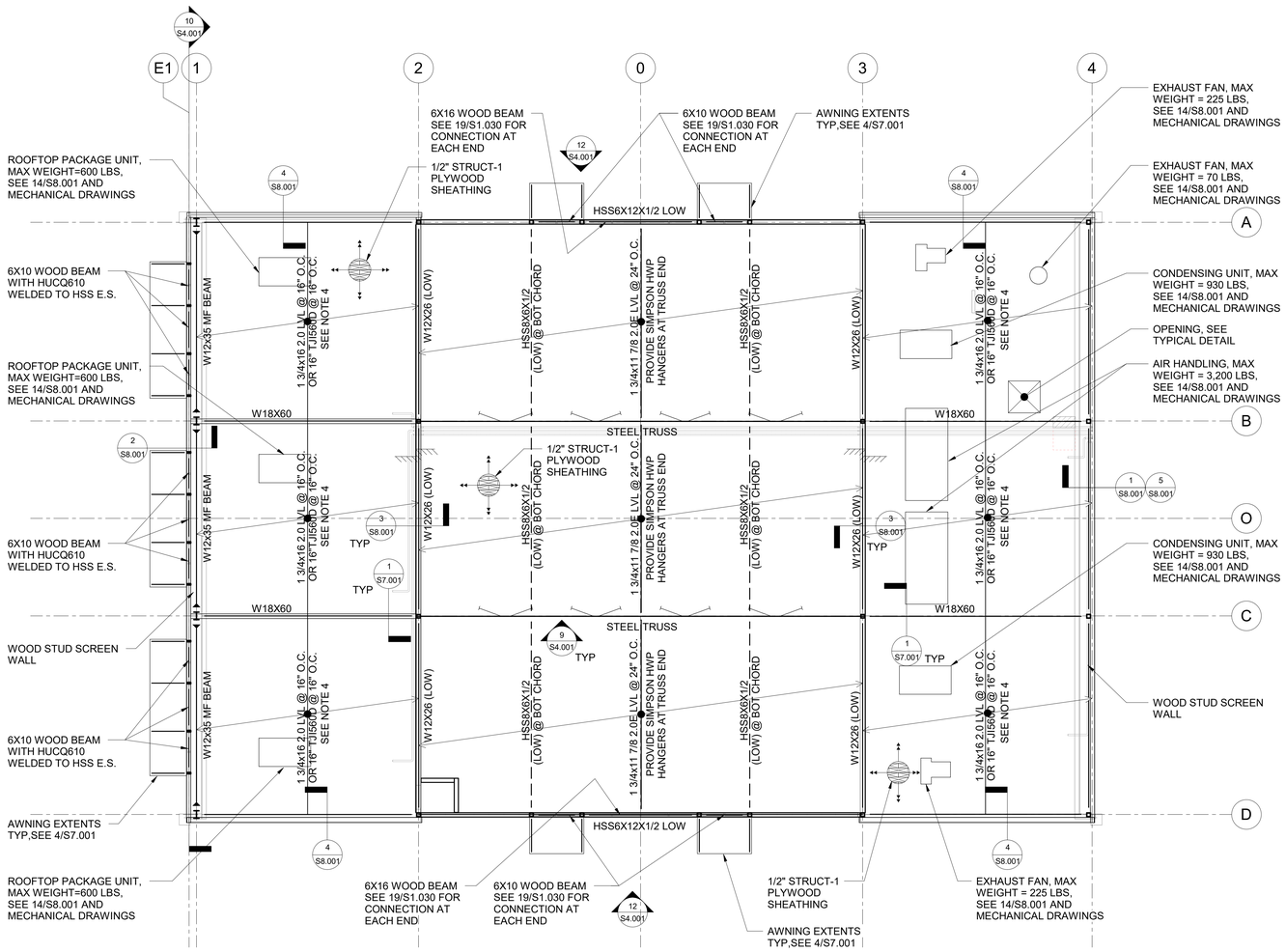

1 ROOF PLAN
1/8" = 1'-0"

SHEET NOTES

1. FOR DETAILS NOT SPECIFICALLY REFERENCED, SEE TYPICAL DETAILS SHEETS.
2. HIGH ROOF :
   DESIGN DEAD LOAD: 20 PSF
   DESIGN ROOF LIVE LOAD: 20 PSF
   LOW ROOF:
   DESIGN DEAD LOAD: 20 PSF
   DESIGN ROOF LIVE LOAD: 50 PSF
3. COORDINATE THE LOCATION OF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS.
4. PROVIDE SIMPSON BA1.81 TOP FLANGE HANGERS AT LVL JOISTS. PROVIDE SIMPSON HWPH3.56 TOP FLANGE HANGERS AT TJI JOISTS.
5. PROVIDE FULL DEPTH BLOCKING AT 1/3 POINTS FOR HIGH ROOF JOISTS.

PLAN SYMBOLS

FOR ADDITIONAL SYMBOLS NOT SHOWN, SEE SHEET S1.005

SIMPSON STRONG-TIE YIELD LINK MOMENT RESISTING BEAM-COLUMN CONNECTIONS, SEE DETAILS

KEY PLAN

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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REGISTERED PROFESSIONAL ENGINEER BRENDAN RAMZI EVANS No. 36251 EXP. 3/31/26 STRUCTURAL STATE OF CALIFORNIA

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Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
ROOF PLAN

Scale
As indicated

CITY OF IRVINE BUILDING & SAFETY DIVISION

S1.102

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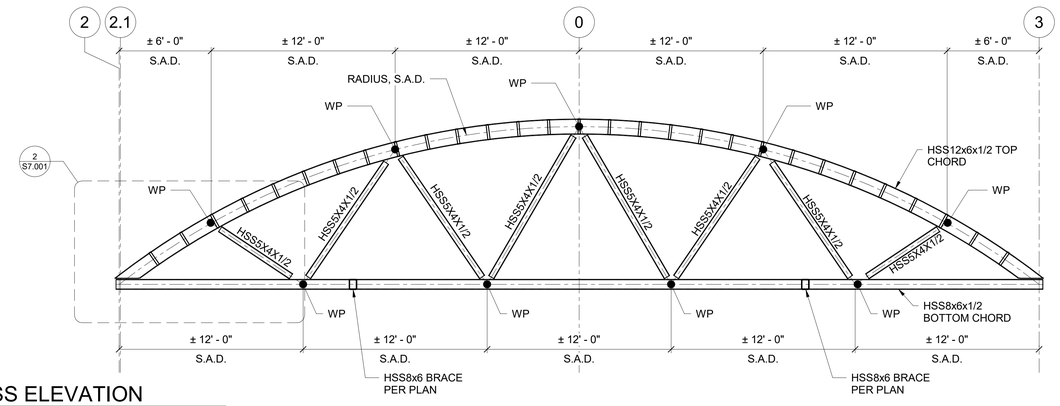
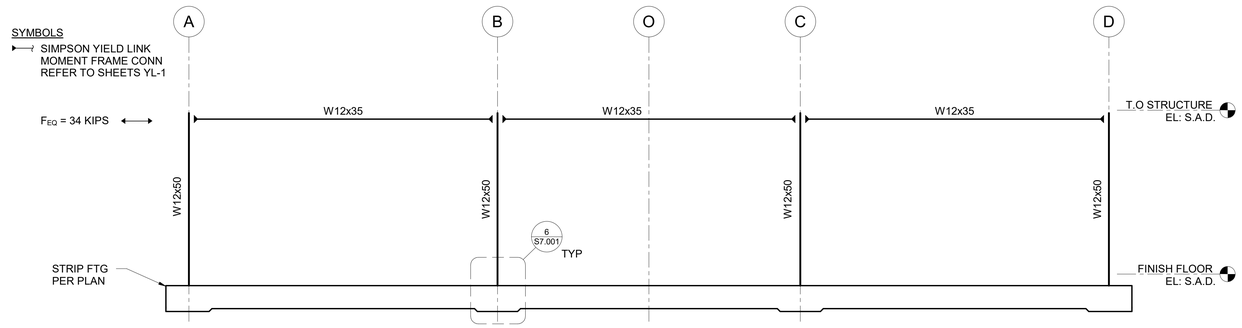
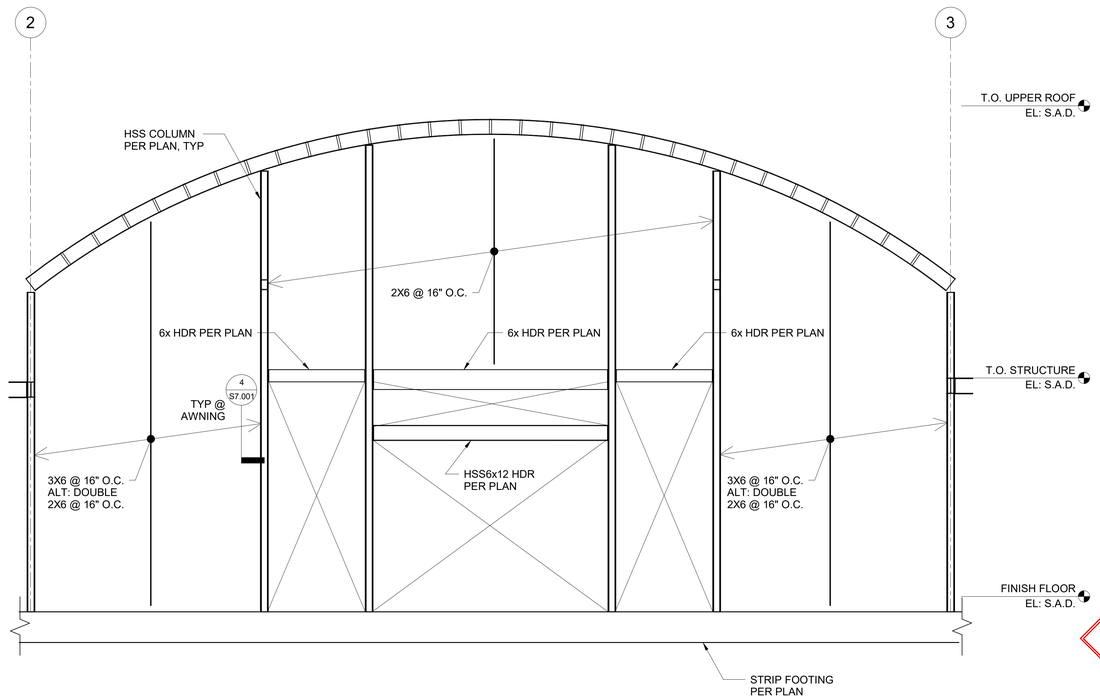


9 TRUSS ELEVATION
1/4" = 1'-0"



10 MOMENT FRAME ELEVATION
3/16" = 1'-0"



12 STOREFRONT STEEL FRAMING AT GL D
1/4" = 1'-0"

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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REGISTERED PROFESSIONAL ENGINEER
BRENDAN RAMEY
No. 36251
EXP. 3/31/26
STRUCTURAL
STATE OF CALIFORNIA

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Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
ELEVATIONS

Scale
As indicated

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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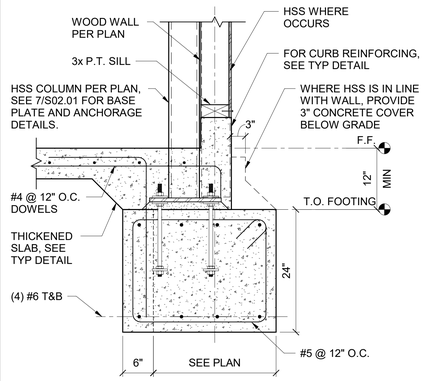
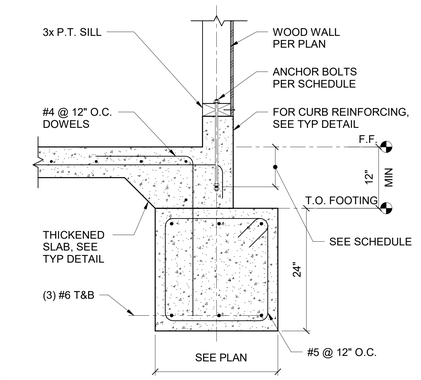
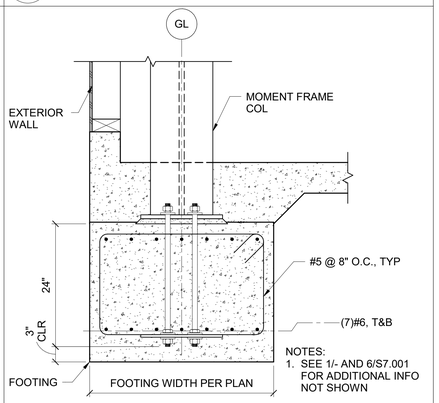


5 STEEL COLUMN AT EXTERIOR WALL
1" = 1'-0"



1 EXTERIOR WALL FOOTING
1" = 1'-0"



2 MOMENT FRAME FOOTING
1" = 1'-0"

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Exp. 3/31/26
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STATE OF CALIFORNIA

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Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
CONCRETE DETAILS

Scale
1" = 1'-0"

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S5.001

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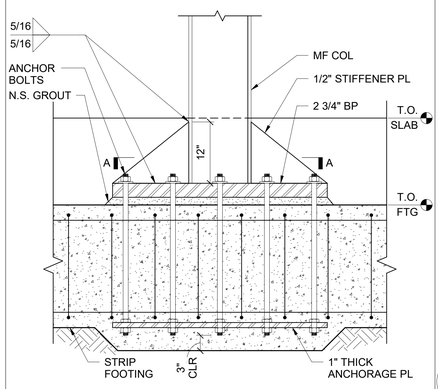
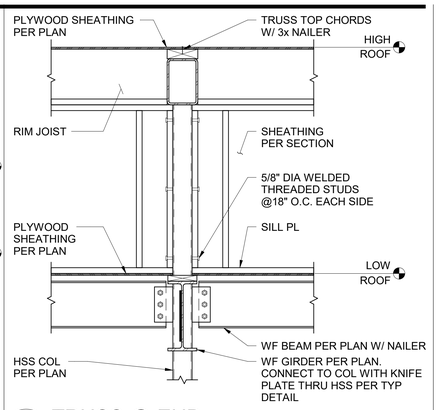
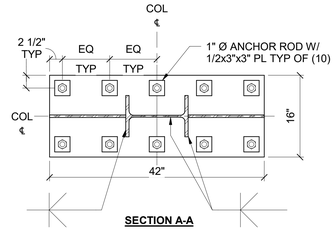


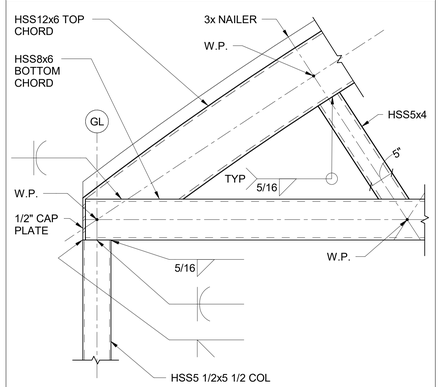


1 TRUSS @ END
N.T.S.

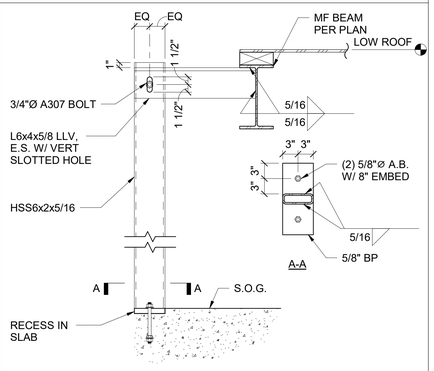


SECTION A-A

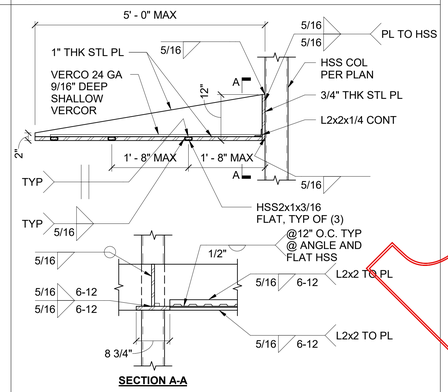
6 MF BASE
N.T.S.



2 STEEL TRUSS
N.T.S.



STOREFRONT STEEL AT MOMENT FRAME
N.T.S.



SECTION A-A

4 AWNING CONN DETAIL
N.T.S.

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Project Name
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Project Number
25236

Description
STEEL DETAILS

Scale
As indicated

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S7.001

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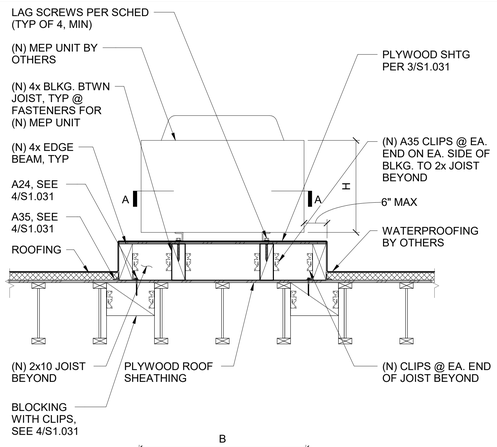
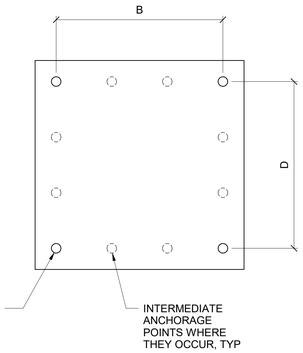
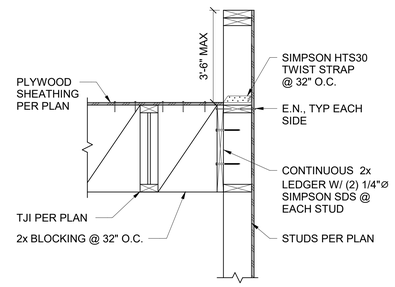




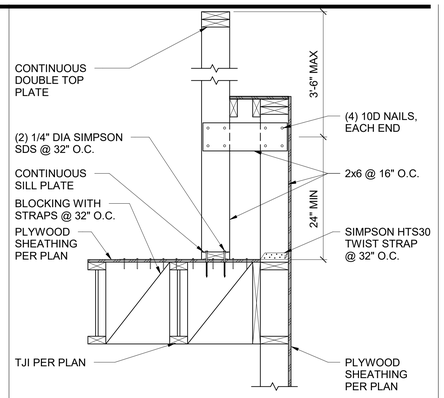
UNIT ID	UNIT MAX WEIGHT [LBS]	B	D	H	ANCHOR REQUIRED
CU-1	930	7'-3"	3'-10"	4'-2"	5/8"Øx 5"
CU-2	930	7'-3"	3'-10"	4'-2"	5/8"Øx 5"
AHU-1	3200	5'-7"	12'-5"	3'-1"	5/8"Øx 6"
AHU-2	3200	5'-7"	12'-5"	3'-1"	5/8"Øx 6"
EF-DX	530	3'-11"	3'-6"	-	5/8"Øx 5"
RTU-B1	600	7'-0"	3'-11"	3'-5"	5/8"Øx 5"
RTU-C1	600	7'-0"	3'-11"	3'-5"	5/8"Øx 5"
RTU-D1	600	7'-0"	3'-11"	3'-5"	5/8"Øx 5"

NOTE:
PROVIDE ANCHORS PER SCHEDULE @ ALL UNIT ANCHOR LOCATIONS, MIN (4) CORNERS.

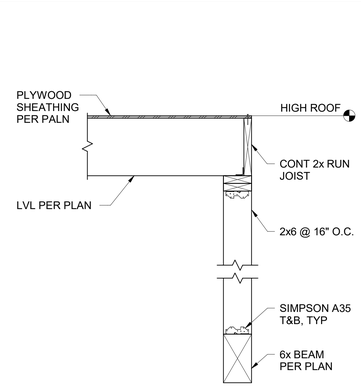
14 WOOD PAD MEP UNIT ANCHORAGE
N.T.S.



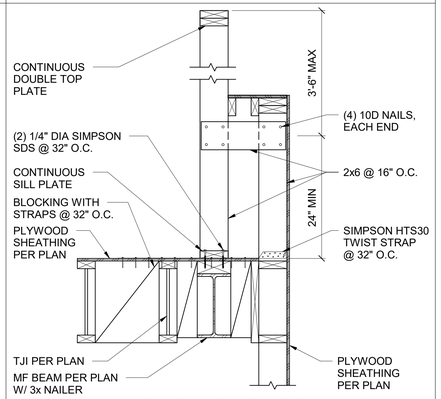
5 JOISTS AT EAST WALL
N.T.S.



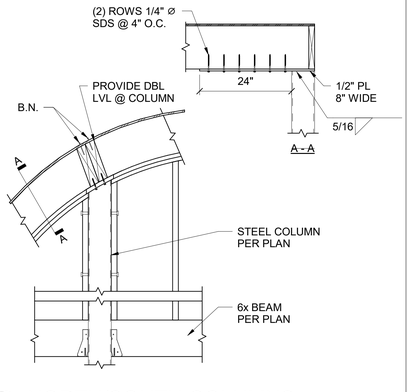
1 PARAPET AT EAST WALL
N.T.S.



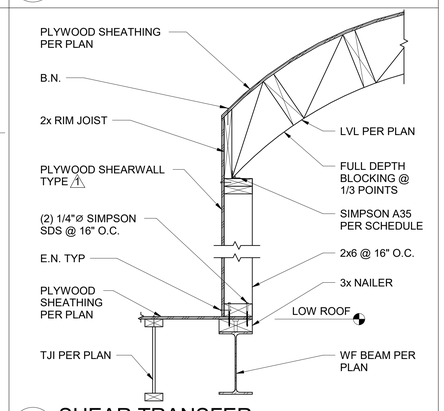
6 HIGH JOISTS AT NORTH/SOUTH
N.T.S.



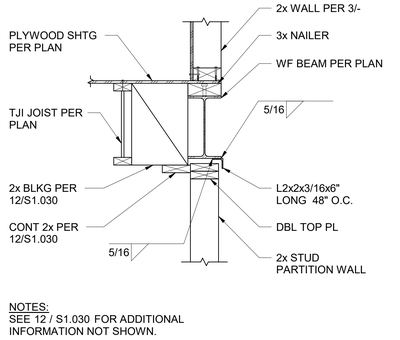
2 PARAPET AT MOMENT FRAMES
N.T.S.



7 NORTH/SOUTH COLUMNS
N.T.S.

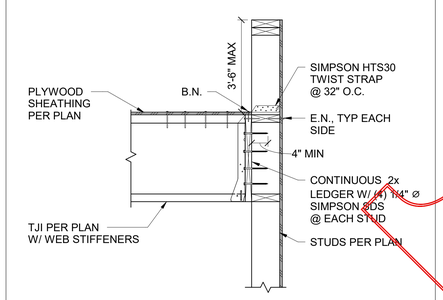


3 SHEAR TRANSFER
N.T.S.



NOTES:
SEE 12 / S1.030 FOR ADDITIONAL INFORMATION NOT SHOWN.

8 NON-BEARING PARTITION WALL AT WF BM
N.T.S.



4 JOISTS AT NORTH/SOUTH WALL
N.T.S.

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REGISTERED PROFESSIONAL ENGINEER
STEVEN DAVID PARKER
No. 38251
Exp. 3/31/26
STRUCTURAL
STATE OF CALIFORNIA

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CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
WOOD DETAILS

Scale
As indicated

S8.001

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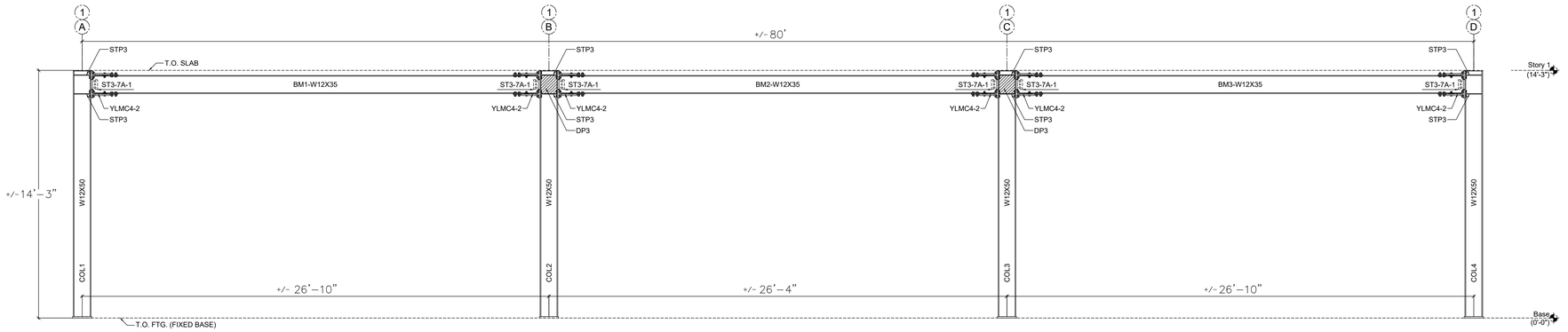

No.	Link Size	Qty (kits)
1	YLMC4-2	6

Elev. ID	Grid ID	Story	Column Size	Left no. ST	Left ST Thk (in)	Right no. ST	Right ST Thk (in)	Cont_PL Thk (in)	Dbl_PL Thk (in)	W1A (in)	N_side of W1A	W1A_PJP (in)	N_side of W1A_PJP	W1B (in)	N_side of W1B	W1B_PJP (in)	N_side of W1B_PJP	W2 (in)	N_side of W2	W3 (in)	N_side of W3	W4 (in)	N_side of W4	W4A Diameter (in)	W4A Depth (in)	WS (in)	N_Side of WS
1	A	Story1	W12X50	-	-	1	3/8	3/8	-	-	-	-	-	1/4	2	-	-	3/16	2	3/16	2	-	-	-	-	-	-
1	B	Story1	W12X50	1	3/8	1	3/8	3/8	3/8	1/4	2	-	-	1/4	2	-	-	3/16	2	3/16	2	3/8	1	-	-	CJP Weld	1
1	C	Story1	W12X50	1	3/8	1	3/8	3/8	3/8	1/4	2	-	-	1/4	2	-	-	3/16	2	3/16	2	3/8	1	-	-	CJP Weld	1
1	D	Story1	W12X50	1	3/8	-	-	3/8	-	1/4	2	-	-	-	-	-	-	3/16	2	3/16	2	-	-	-	-	-	-

1. SEE 19/YLMC1 FOR ADDITIONAL WELDING INFORMATION.
2. SEE 20/YLMC1 FOR ADDITIONAL SHEAR TAB INFORMATION.
3. DIMENSIONS SHOWN ARE FOR DESIGN PURPOSES ONLY AND SHALL BE REVIEWED / ADJUSTED BY OTHERS.
4. SEE YLMC1 FOR GENERAL NOTES AND CONNECTION DETAILING.
5. SEE YLMC2 FOR CONNECTION BOLTING AND PLATE DETAILING REQUIREMENTS FOR FABRICATION.
6. SEE YLMC3 FOR CRUCIFORM COLUMN AND SLOPED BEAM DETAILING.

FRAME ELEVATION

SCALE: 3/8" = 1'-0"

Simpson Strong-Tie® Strong Frame® and the Yield-Link™ structural fuse are protected under one or more of the following US patents and applications: US patent No. 8,001,734 B2, US patent No. 8,375,652 B2, and US patent publication No. 2015/0159362, and must be supplied or licensed through Simpson Strong-tie.

REVISIONS

NO.	DATE

SIMPSON STRONG-TIE CO. INC.
5956 W. Las Positas Blvd.
Pleasanton, CA 94588
Tel: (800) 999-5099
Fax: (925) 847-15977
Web site: www.strongtie.com

SIMPSON Strong-Tie® THERE IS NO EQUAL

THE MOMENT FRAME(S) IS DESIGNED FOLLOWING INFORMATION PROVIDED BY:

DATE OF PLANS (D.O.P.):

PROVIDED TO SIMPSON STRONG-TIE BY:

YIELD-LINK® CONNECTION

FRAME ELEVATION DRAWING
ENGINEERED DESIGN
FRAME YL-1

NAME: G.S.
DATE: 09-11-2025
SCALE: N.T.S.
SHEET:
YL-1
JOB NO. ES-25090431

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

410 BEACON
IRVINE, CA 92618

Gensler

4675 MacArthur Court
Suite 100
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STRUCTURAL FOCUS

19210 S. Vermont Ave.,
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Gardena, Ca 90248
Tel 310.323.9924

LICENSED PROFESSIONAL ENGINEER — STEVEN DAN RAMOS — No. 39251 — EXP. 3/31/26 — STRUCTURAL — STATE OF CALIFORNIA

△	Date	Description
	10/14/2025	CD CLIENT REVIEW/PRICING
	11/03/2025	ISSUE FOR PLAN CHECK
	01/09/2026	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25226

Description
YIELD-LINK CONNECTION

Scale

YL-1

CITY OF IRVINE BUILDING & SAFETY DIVISION

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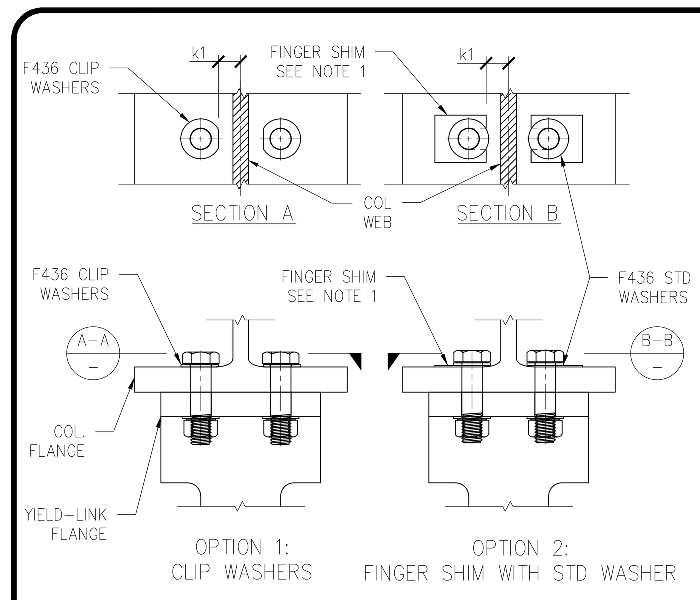
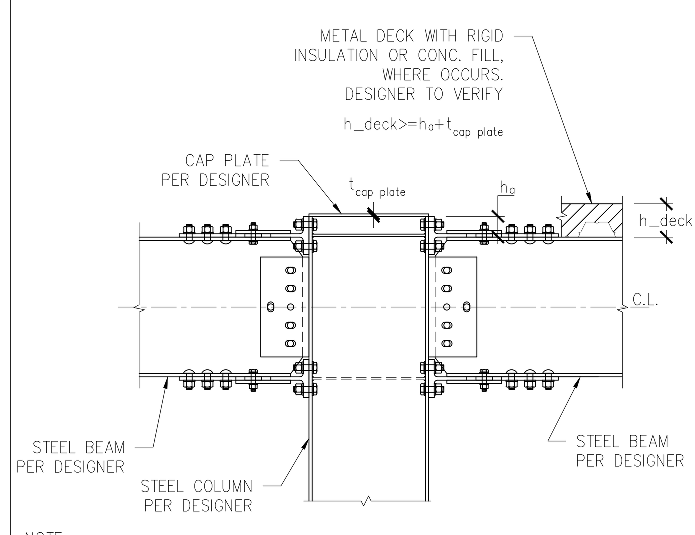


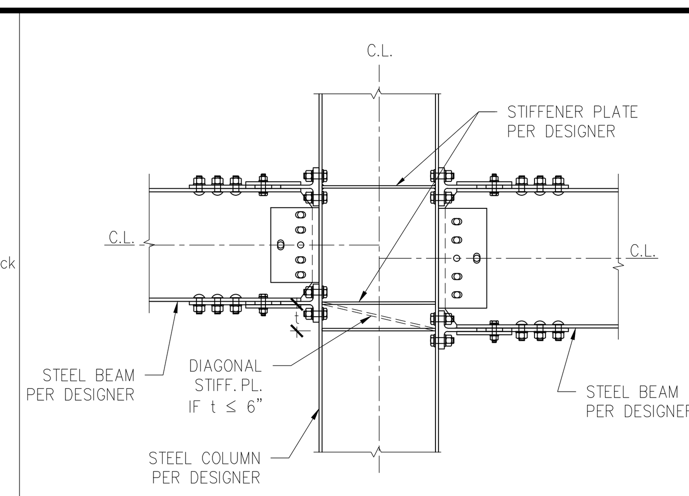
NOTE:
1. FINGER SHIM SHALL BE STRUCTURAL GRADE STEEL MATERIAL. TRIM TO FIT AS REQUIRED.
2. K1 VALUE FOR STEEL SHAPE VARIES. BOLT WASHER/SHIM SHALL BEAR FLAT ON COL. FLANGE.
3. SEE RCSC SPECIFICATION ON USE OF WASHERS ON SLOPING SURFACES.

BOLT BEARING NEAR COLUMN WEB | 17



NOTE:
1. SEE 5/– OR 9/– FOR INFO NOT NOTED.
2. SEE 8/– FOR h_a VALUES FOR DIFFERENT LINK SIZES.

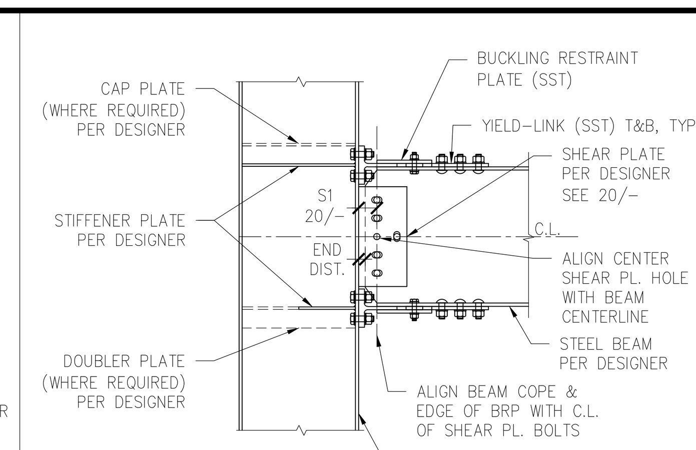
ROOF CONN. W/BEAMS ON EA. SIDE | 13



ID/MODEL	MIN. STIFF. THK
YLMC4	3/8"
YLMC6	1/2"
YLMC8	5/8"

NOTE:
1. SEE 5/– FOR INFO NOT NOTED.
2. FOR STIFFENER PLATE THICKNESS, SEE FRAME ELEVATION DRAWINGS EXPORTED BY YLMC DESIGN SOFTWARE.

2 SIDED CONNECTION | 9

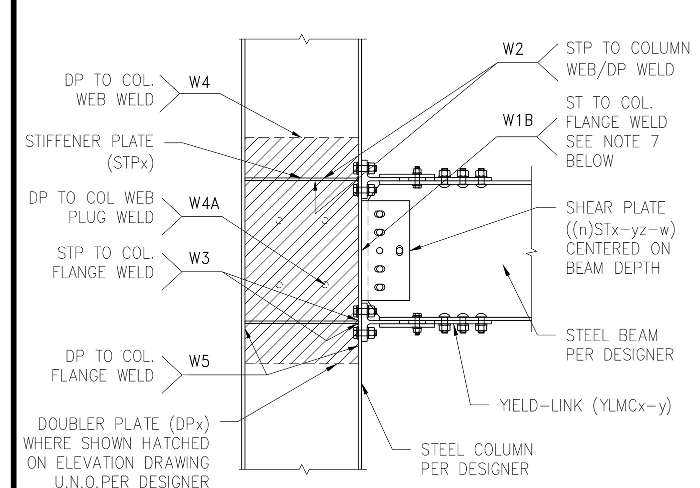


ID/MODEL	MIN. STIFF. THK
YLMC4	1/4"
YLMC6	3/8"
YLMC8	1/2"

ID/MODEL	END DIST.
YLMC4	1.00"
YLMC6	1.75"
YLMC8	2.25"

NOTE:
1. SEE 6/– FOR BOLTING REQUIREMENTS.
2. SEE 7/– FOR PROTECTED ZONE AT YIELD-LINK CONNECTION.
3. FOR STIFFENER PLATE THICKNESS, SEE FRAME ELEVATION DRAWINGS EXPORTED BY YLMC DESIGN SOFTWARE.

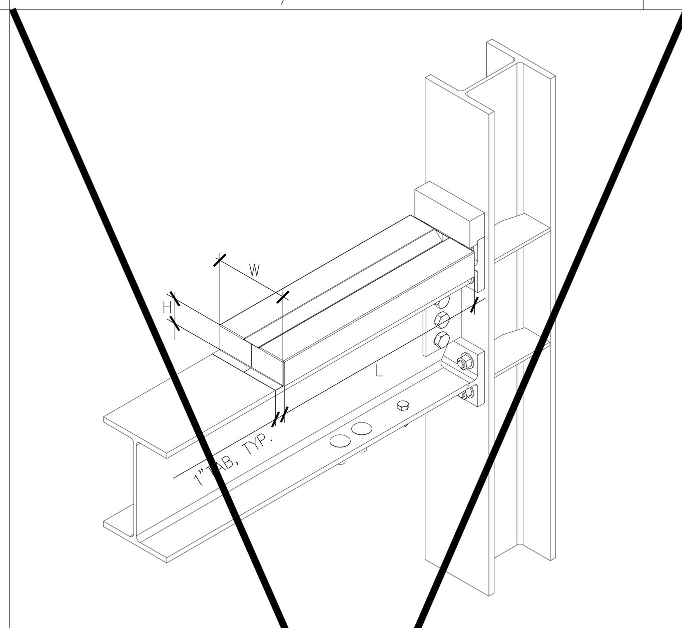
1 SIDED CONNECTION | 5



LEGEND:
DPx: x IS x/8-IN. THICK DOUBLER PLATES (i.e. DP4 IS 1/2" THICK DOUBLER PL.)
STPx: x IS x/8-IN. THICK STIFFENER/CONTINUITY PLATE
YLMCx-y: x IS x/8-IN THICK LINK STEM, y IS THE LINK YIELDING WIDTH
(n)STx-yz-w: n IS THE NUMBER OF SHEAR PLATES WHEN (2) ARE REQUIRED
x IS x/8-IN THICK SHEAR PLATE, y IS y/8-IN DIM. BOLT,
z IS BOLT GR/THREAD COND.: A=A325N, B=A325X, C=A490N, D=A490X
w IS THE NUMBER OF HORIZONTAL BOLTS

NOTES:
1. SEE 20/YLMC1 FOR SHEAR PLATE GEOMETRY DETAILS.
2. SEE 10/YLMC2 FOR DOUBLE SHEAR PLATE DETAIL, (2)STx-yz-w.
3. SEE 11/YLMC2 FOR STIFFENER PLATE DETAILS.
4. SEE 12/YLMC2 FOR DOUBLER PLATE WELDING DETAILS.
5. SEE 17/YLMC2 FOR COLUMN FLANGE HOLE DETAILS.
6. YIELD-LINKS AND BUCKLING RESTRAINT PLATES PROVIDED BY SIMPSON STRONG-TIE. ALL OTHER PLATES, STEEL AND FASTENERS PROVIDED BY OTHERS.
7. W1A IS FOR LEFT ST & W1B IS FOR RIGHT ST. RIGHT SHEAR PLATE SHOWN.

YIELD-LINK CONNECTION LEGEND | 19

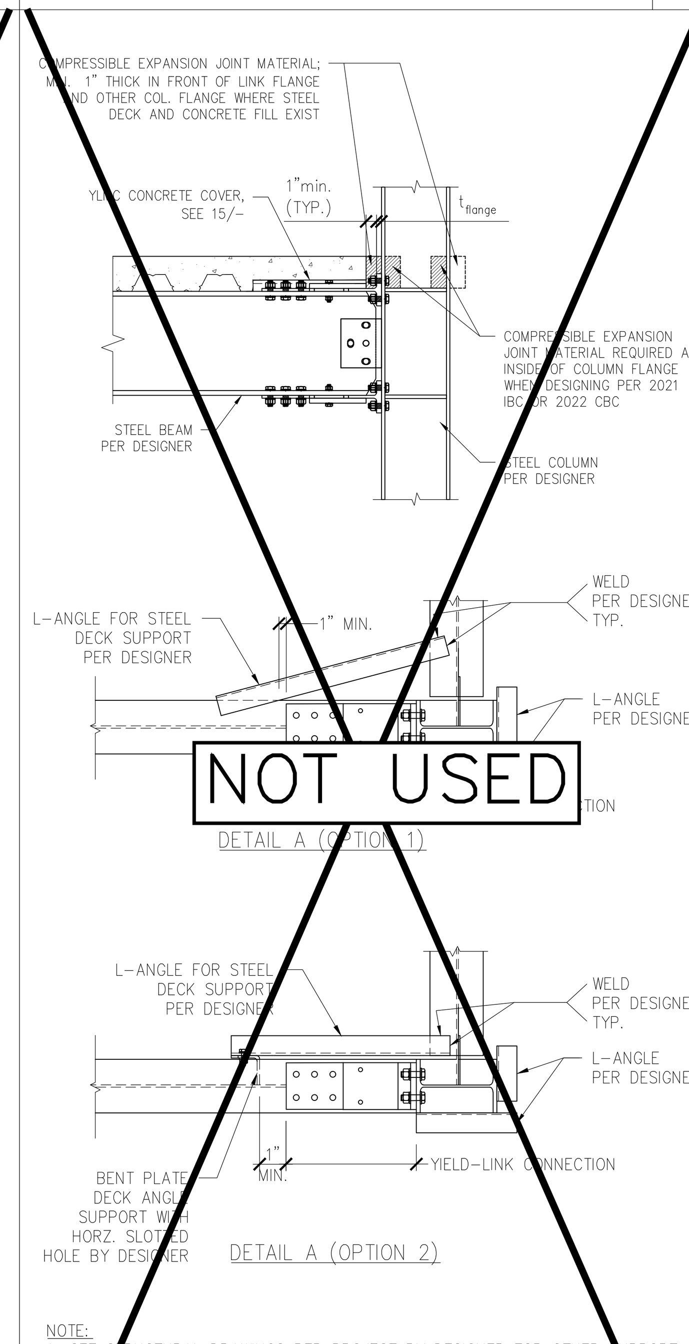


NOT USED

YIELD-LINK® SKU	YIELD-LINK® COVER PLATE ID	DIMENSIONS WIDTH (W)	LENGTH (L)	HEIGHT (H)
YLMC4-2, YLMC4-2.5, YLMC4-3	YLC-4-6	6 5/8"	16 1/8"	2"
YLMC4-2.25, YLMC4-2[illegible]	[illegible]	[illegible]	[illegible]8"	
YLMC4-2.875, YLMC4-[illegible]				
YLMC4-3.375, YLMC4-[illegible]			[illegible]8"	
YLMC4-3.5, YLMC4-3.5-10	YLC-[illegible]8	8 1/8"	21 7/8"	
YLMC4-4, YLMC4-4-10				
YLMC4-5, YLMC4-6	YLC-4-1[illegible]	12 1/8"	21 5/8"	
YLMC6-2.5	YLC-6-6	6 5/8"	24 1/4"	2 3/4"
YLMC6-3, YLMC6-3.5, YLMC6-4	YLC-6-8	8 1/8"	24 1/4"	2 3/4"
YLMC6-3-13, YLMC6-3.5-13, YLMC6-[illegible]13	YLC-6-8A		27 1/4"	3"
YLMC6-4.5, YLMC6-5	YLC-6-10	10 1/8"	24 1/4"	2 3/4"
YLMC6-4.5-13, YLMC6-5-13	YLC-6-10A		27 1/4"	3"
YLMC6-5.5, YLMC6-6	YLC-6-12	12[illegible]8"	24 1/4"	2 3/4"
YLMC6-5.5-13, YLMC6-6-13	YLC-6-12A		27 1/4"	3"
YLMC6-7	YLC-6-14	14 1[illegible]	27 5/8"	2 3/4"
YLMC8-4, YLMC8-4-15	YLC-8-9	9 1/8"	29 5/16"	3"
YLMC8-4.5, YLMC8-4.5-[illegible]5				
YLMC8-5, YLMC8-5-1[illegible]	YLC-8-12	12 1/8"	[illegible] 11/16"	
YLMC8-5.5, YLMC8-[illegible]5-15				
YLMC8-6, YLMC8-[illegible]-15				
YLMC8-7, YLMC[illegible]-7-15	YLC-8-16	16 1/8"	36 1[illegible]"	
YLMC8-8, YL[illegible]8-8-15				

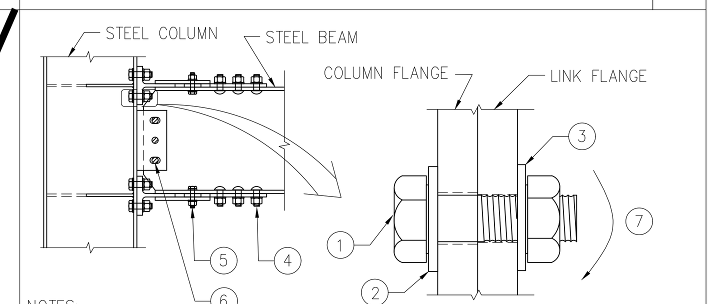
NOTES:
1. [illegible]HICKNESS 54 MIL (16GA), ASTM A653 GRADE 33 STEEL.
2. [illegible]INISH: GALVANIZED/ZMAX COATING.
3. [illegible]ALTERNATE CONCRETE COVER BY OTHERS, SEE DETAIL 20/YLMC2.

YIELD-LINK CONCRETE COVER | 15



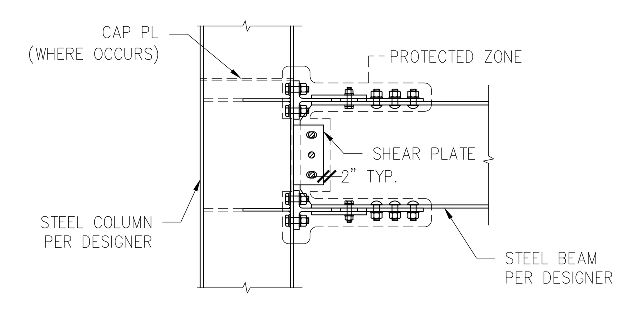
NOTE:
1. SEE STRUCTURAL DRAWINGS PER PROJECT BY DESIGNER FOR OTHER SUPPORT OPTIONS.

STEEL DECK SUPPORT AT CONN. | 11



NOTES:
1. LINK FLANGE-TO-COLUMN FLANGE BOLTS CAN BE SNUG-TIGHT OR PRETENSIONED AND CAN BE INSTALLED FROM LINK SIDE OR COLUMN FLANGE SIDE.
2. AT COL. FLANGE SLOTTED HOLES:
A) SNUG-TIGHT JOINT: USE ASTM F436 WASHER OR 5⁄16 IN. THICK PL WASHER.
B) PRETENSIONED JOINT: USE 5⁄16 IN. THICK PL WASHER OR CONT. BAR PER RCSC.
3. AT LINK FLANGE HOLES:
A) SNUG-TIGHT JOINT: WASHER NOT REQUIRED.
B) PRETENSIONED JOINT: USE ASTM F436 WASHER.
4. LINK STEM-TO-BEAM FLANGE BOLTS SHALL BE PRETENSIONED.
A) USE ASTM F436 WASHER PER PRETENSIONING METHOD
5. BUCKLING RESTRAINT PLATE-TO-BEAM FLANGE BOLTS MUST BE SNUG-TIGHT. NO WASHERS REQUIRED AT THE BEAM FLANGE SIDE. USE ASTM F436 WASHER AT BRP SIDE.
6. SHEAR PLATE TO BEAM WEB BOLTS CAN BE SNUG-TIGHT OR PRETENSIONED.
A) AT SHEAR PLATE SLOTTED HOLES: USE ASTM F436 WASHER OR 5⁄16 IN. THICK PL WASHER FOR SNUG-TIGHT JOINTS.
B) USE 5⁄16 IN. THICK PL WASHER OR CONT. BAR PER RCSC FOR PRETENSIONED JOINTS. AT BEAM WEB STANDARD HOLES: WASHERS NOT REQUIRED FOR SNUG-TIGHT JOINTS. USE ASTM F436 WASHER FOR PRETENSIONED JOINTS.
7. PRETENSIONING METHODS CAN BE: TURN-OF-NUT; CALIBRATED WRENCH; TWISTED OFF TYPE; OR BY USE OF DIRECT TENSION INDICATING WASHERS PER RCSC. WASHER REQUIREMENTS VARY PER PRETENSIONING METHOD.

CONNECTION BOLTING DETAIL | 6



NOTE:
1. PROTECTED ZONE INCLUDES THE FOLLOWING ELEMENTS:
A. LINK FLANGE AND LINK STEM
B. BRP PLATES
C. BEAM FLANGE CONTACT AREAS CONNECTED TO THE LINK STEM
D. COLUMN FLANGE CONTACT AREAS CONNECTED TO THE LINK FLANGE
E. SHEAR PLATE AND BEAM WEB AT 2" AROUND SHEAR PLATE
F. LINK STEM, LINK FLANGE, BRP AND SHEAR PLATE BOLTS.
2. PROTECTED ZONE SHALL BE MARKED BY USING ANY NON-DESTRUCTIVE METHODS PRIOR TO AND AFTER APPLICATION OF SPRAYED ON FIRE-RESISTING MATERIAL.
3. NO ATTACHMENT SHALL BE MADE WITHIN THE PROTECTED ZONE.

PROTECTED ZONE | 7

GENERAL NOTES:
1. SIMPSON STRONG-TIE YIELD-LINK® MOMENT CONNECTION IS PROTECTED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS AND APPLICATIONS: U.S. PATENT NO. 8,001,734 B2, U.S. PATENT NO. 8,375,652 B2, AND U.S. PATENT PUBLICATION NO. 2015/0159362, AND MUST BE SUPPLIED OR LICENSED THROUGH SIMPSON STRONG-TIE. YIELD-LINK MOMENT CONNECTION IS MANUFACTURED AND PROTECTED UNDER U.S. PATENT NO. 10,669,718 B2 AND CANNOT BE DUPLICATED OR FABRICATED WITHOUT EXPRESSED, WRITTEN PERMISSION FROM SIMPSON STRONG-TIE CO., INC.
2. YIELD-LINK MOMENT CONNECTION IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001 REGISTERED COMPANY.
3. SIMPSON STRONG-TIE® COMPANY, INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
4. USE OF A SIMPSON STRONG-TIE PRODUCT DOES NOT IMPLY THAT SIMPSON STRONG-TIE ENDORSES ANY PROJECT, STRUCTURE OR USE. NO LICENSE IS GRANTED WITH RESPECT TO ANY SIMPSON STRONG-TIE TRADEMARK OR OTHER INTELLECTUAL PROPERTY RIGHTS. WRITTEN PERMISSION MUST BE OBTAINED PRIOR TO USING ANY SIMPSON STRONG-TIE TRADEMARKS OR PROPRIETARY DOCUMENTS AND MATERIALS.
5. SIMPSON STRONG-TIE IS NOT AFFILIATED WITH, AND DOES NOT SPONSOR OR ENDORSE, THE ENGINEER OF RECORD (EOR), FABRICATOR, INSTALLER OR USERS OF THIS DRAWING, NOR DOES SIMPSON STRONG-TIE HAVE ANY JOINT VENTURE, PARTNERSHIP, AGENCY, EMPLOYMENT OR FIDUCIARY RELATIONSHIP WITH SUCH PERSONS.
6. INSTALLATION DETAILS PROVIDED ARE FOR REFERENCE ONLY. ENGINEER OF RECORD (EOR) CAN PROVIDE ALTERNATE DETAILING.
7. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE WITH THESE DRAWINGS AND ICC-ES ESR-2802 AND AISC 358. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE RESPONSIBILITY OF THE EOR AND CONTRACTOR.

DESIGN NOTES:
1. DESIGN FOR THE YIELD-LINK SPECIAL MOMENT CONNECTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
- 2015, 2018, 2021 AND 2024 INTERNATIONAL BUILDING CODE (IBC)
- AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (ANSI/AISC 360-16, ANSI/AISC 360-22)
- AISC SEISMIC PROVISIONS (ANSI/AISC 341-16, ANSI/AISC 341-22)
- PREQUALIFIED CONNECTIONS FOR SPECIAL AND INTERMEDIATE STEEL MOMENT FRAMES FOR SEISMIC APPLICATIONS (ANSI/AISC 358-16, ANSI/AISC 358-22)
- ICC-ES ESR-2802
- 2020 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS.
- STRUCTURAL WELDING CODE-STEEL (AWS D1.1-2020)
- STRUCTURAL WELDING CODE-SEISMIC SUPPLEMENT (AWS D1.8-2021)
- AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES (ANSI/AISC 303-22)
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR).
4. THE EOR MUST SPECIFY THE REQUIRED COMPONENTS OF THE COMPLETE LOAD TRANSFER PATH INCLUDING BUT NOT LIMITED TO DIAPHRAGMS, SHEAR TRANSFER, CHORDS AND COLLECTORS AND FOUNDATIONS.
5. ALL CONNECTED MEMBERS AND RELATED ELEMENTS SHALL BE DESIGNED BY THE EOR.
6. THE TERM DESIGNER REFERS TO A LICENSED/CERTIFIED BUILDING DESIGN PROFESSIONAL OR A LICENSED PROFESSIONAL ENGINEER.

MATERIAL:
1. YIELD-LINKS: ASTM A992 (PROVIDED BY SIMPSON STRONG-TIE).
2. BRP: ASTM A572 GR. 50 (PROVIDED BY SIMPSON STRONG-TIE).
3. BEAMS AND COLUMNS MUST BE HOT-ROLLED W SECTIONS (ASTM A992) OR WELDED BUILT-UP I-SHAPE MEMBERS THAT MEET AISC 360 SECTION A3 AND AISC 358 SECTION 2.3.2.
4. SHEAR PLATE, STIFFENER PLATE AND DOUBLER PLATE: ASTM A572 GR. 50 (U.N.O.).
5. LINK STEM-TO-BEAM FLANGE BOLTS SHALL BE ASTM F3125 GRADE A490 OR F2280 (X OR N) (PRETENSIONED).
6. LINK FLANGE-TO-COLUMN FLANGE BOLTS SHALL BE ASTM F3125 GRADE A325-N (SNUG-TIGHT) OR F1852-N (PRETENSIONED).
7. SHEAR PLATE-TO-BEAM WEB BOLTS SHALL BE ASTM F3125 GRADE A325, A490, F1852 OR F2280 (X OR N TYPE PER DESIGN).
8. BRP-TO-BEAM FLANGE BOLTS SHALL BE ASTM F3125 GRADE A325-N (A325-X FOR YLMC8-6, YLMC8-7, YLMC8-8, YLMC8-6-15, YLMC8-7-15 & YLMC8-8-15).
9. COMPRESSIBLE EXPANSION JOINT MATERIAL: SPECIFIED COMPRESSIVE STRENGTH MUST BE NO LESS THAN 10 PSI UNLESS OTHERWISE INDICATED ELSEWHERE FOR THE PROJECT. SPECIFIED COMPRESSIVE STRENGTH MUST BE NO MORE THAN 100 PSI. RECOMMENDED MATERIALS AT NON-FIRE RATED ASSEMBLIES ARE RIGID FOAM TYPE EXPANDED POLYSTYRENE (EPS) OR TYPE EXTRUDED POLYSTYRENE (XPS). RECOMMENDED MATERIALS AT FIRE-RATED ASSEMBLIES ARE SPRAYED FIRE-RESISTIVE MATERIALS (SPRAY-APPLIED FIREPROOFING) WITH FIRE RESISTANCE DESIGN PARAMETERS AS REQUIRED FOR THE PROJECT.
10. UNLESS NOTED OTHERWISE BY THE ENGINEER OF RECORD, ALL WELD FILLER METAL SHALL HAVE CLASSIFICATION STRENGTH (F_{EXX}) OF 70 KSI.
11. FOR NON-DEMAND CRITICAL WELDS (BEAM TO COLUMN SHEAR PLATE AND COLUMN STIFFENER/CONTINUITY PLATE), WELD FILLER METAL SHALL MEET THE AWS D1.1 AND D1.8 MINIMUM CHARPY V-NOTCH REQUIREMENT OF 20 FT*LBS AT 0°(F).
12. FOR DEMAND-CRITICAL WELDS, COLUMN SPLICES, DOUBLER PLATES (CJP WELDS) AND BASE PLATES, WELD FILLER METAL SHALL MEET THE AWS D1.1 AND D1.8 MINIMUM CHARPY V-NOTCH REQUIREMENT OF 20 FT*LBS AT 0°(F) AND 40 FT*LBS AT 70°(F).
13. IN ADDITION TO THE MINIMUM CHARPY V-NOTCH REQUIREMENT, ALL FILLER METAL SHALL MEET THE DIFFUSIBLE HYDROGEN LEVEL AS NOTED IN SECTION 6.1.3 OF AWS D1.8.

YIELD-LINK MOMENT CONNECTION WELDING REQUIREMENTS:
1. ALL SHOP AND FIELD WELDING ON COMPONENTS (SHEAR PLATE, STIFFENER PLATE, DOUBLER PLATE [IF REQUIRED]) OF THE YIELD-LINK CONNECTION SHALL BE DONE BY PERSONNEL QUALIFIED PER AWS D1.1 SECTION 4 PART C, AWS D1.8 ANNEX D (AS REQUIRED), AND AS APPROVED BY AUTHORITIES HAVING JURISDICTION (AHJ).
2. ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS D.1 STANDARD QUALIFICATION TESTING, AND SHALL BE CERTIFIED FOR THE WORK THEY ARE PERFORMING.
3. SPECIFIC WRITTEN WELDING PROCEDURE SPECIFICATIONS (WPS) FOR EVERY WELDING APPLICATION USED FOR THE YIELD-LINK CONNECTIONS IN THE PROJECT SHALL BE SUBMITTED TO THE EOR/ AHJ FOR REVIEW AND APPROVAL PRIOR TO START OF WORK. EACH WPS SHALL REFERENCE THE PREQUALFIED WELDED JOINT DETAIL FROM SECTION 3 OF AWS D1.1.
4. IN LIEU OF ITEM 3, THE STEEL FABRICATOR MAY PROVIDE A PROCEDURE QUALIFICATION RECORD (PQR) FOR THE CONNECTION WELDS USED FOR THE PROJECT. THE PQR SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1 SECTION 4.
5. WPS (OR PQR) SHALL CONTAIN ALL THE ESSENTIAL VARIABLES USED IN THE WELDING PROCEDURE AND SHALL BE STAMPED/APPROVED BY AN AMERICAN WELDING SOCIETY (OR APPROVED EQUIVALENT) CERTIFIED WELDING INSPECTOR.
6. SUBMIT WELDER QUALIFICATION, WPS (OR PQR), AND FILLER METAL CERTIFICATION OF CONFORMANCE PROVIDED BY THE WIRE MANUFACTURER TO THE EOR AND AHJ FOR APPROVAL PRIOR TO FABRICATION.
7. STEEL BASE METAL ON WHICH WELD METAL IS TO BE DEPOSITED SHALL BE FREE OF DUST, MOISTURE, GREASE SLAG, MILL SCALE AND OTHER FOREIGN MATERIAL THAT WOULD PREVENT PROPER WELD DEPOSIT.
8. FOR SHEAR PLATE WELDS, FILLET WELD TERMINATION MAY EXTEND TO THE ENDS OF THE SHEAR PLATE OR MAYBE STOPPED SHORT AT EACH END OF THE SHEAR PLATE FOR A LENGTH THE SAME DIMENSION AS THE WELD SIZE. FILLET WELDS SHALL NOT BE WRAPPED AROUND THE TOP AND BOTTOM EDGES OF THE SHEAR PLATE.
9. FOR COLUMN STIFFENER/CONTINUITY PLATES, FILLET WELDS SHALL TERMINATE A MIN. DISTANCE OF ONE FILLET WELD SIZE FROM THE k DISTANCE + 1-1/2" FROM THE EXTERIOR COLUMN FLANGE, AND k1 DISTANCE + 1/2" FROM THE CENTERLINE OF THE COLUMN WEB.
10. ALL COMPLETE JOINT PENETRATION GROOVE WELDS (CJP) SHALL BE ULTRA-SONIC TESTED PER D1.1 AND D1.8 REQUIREMENTS AS APPLICABLE.
11. WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, THE WEB SHALL BE TESTED FOR CRACKS USING MAGNETIC PARTICLE TESTING. THE MAGNETIC PARTICLE TEST AREA SHALL INCLUDE THE K-AREA BASE METAL WITHIN 3" OF THE WELD.
12. CJP GROOVE WELDS ON BASE METAL THICKER THAN 1-1/2" SHALL BE ULTRASONICALLY TESTED FOR DISCONTINUITIES (LAMELLAR TEARING). ANY BASE METAL DISCONTINUITIES FOUND SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF THE CRITERIA OF AWS D1.1 TABLE 6.3.

YIELD-LINK MOMENT CONNECTION BOLTING REQUIREMENTS:
1. BOLT HOLES SHALL BE MADE BY DRILLING, PUNCHING OR THERMAL CUTTING. MECHANICALLY GUIDED MEANS OF THERMALLY CUT HOLES SHALL HAVE A SURFACE ROUGHNESS PROFILE NOT EXCEEDING 1000 MICRO-INCHES AS DEFINED IN ASME B46.1.
2. FAYING SURFACES ADJACENT TO THE BOLT HEAD AND NUT SHALL BE FREE OF DIRT AND OTHER FOREIGN MATERIAL. BEAM FLANGE SURFACES CONNECTING TO THE YIELD-LINK STEM SHALL BE FREE OF SCALE, COATING OR INADVERTANT OVERSPRAY (SEE DETAIL 1, 2, 5, 6, 9 AND 13 ON YLMC2 SHEET). BURRS LESS THAN OR EQUAL 1/16" IN HEIGHT ARE PERMITTED ON THE FAYING SURFACES OF ALL JOINTS.
3. HIGH STRENGTH BOLTS SHALL HAVE LOT TRACEABILITY, CHEMICAL AND MECHANICAL TEST RESULTS INDICATED ON THE MILL CERTIFICATION/TEST REPORTS.
4. HIGH STRENGTH BOLTS SHALL BE STORED AND PROTECTED FROM MOISTURE AND DIRT IN CLOSED CONTAINERS.
5. TWIST-OFF TYPE BOLTS (F1852 AND F2280) AND ASSEMBLIES (BOLT, WASHER AND NUT) SHALL NOT BE RE-LUBRICATED, EXCEPT BY THE MANUFACTURER.
6. HIGH STRENGTH BOLTS AND F1852 OR F2280 TWIST-OFF TYPE ASSEMBLIES SHALL NOT BE REUSED. TOUCHING UP OR RE-TIGHTENING BOLTS THAT MAY HAVE BEEN LOOSENED BY INSTALLATION OF ADJACENT BOLTS NEED NOT BE CONSIDERED AS REUSE.
7. UP TO 1/4-INCH THICK FINGER SHIMS MAYBE USED WITHOUT RESTRICTION AT THE YIELD-LINK TO COLUMN FLANGE CONNECTION.
8. YIELD-LINK STEM TO BEAM FLANGE BOLTS SHALL BE INSTALLED AS PRETENSIONED. BOLTS MAY BE PRETENSIONED BY TWIST-OFF-TYPE TENSION CONTROLLED BOLTS, DIRECT TENSION INDICATOR (DTI) WASHERS, TURN-OF-NUT METHOD, OR CALIBRATED WRENCH METHOD. SEE RCSC FOR REQUIREMENTS OF PRETENSIONING METHODS.
9. SEE DETAIL 6/YLMC1 FOR LINK FLANGE-TO-COLUMN FLANGE BOLTING, BEAM WEB-TO-SHEAR PLATE BOLTING AND BUCKLING RESTRAINT PLATE-TO BEAM FLANGE BOLTING REQUIREMENTS.
10. FOR PRETENSIONED JOINTS, MINIMUM BOLT PRETENSION VALUE SHALL BE PER TABLE 7.1 OF RCSC.
11. BOLTING PRE-INSTALLATION VERIFICATION SHALL BE CONDUCTED TO VERIFY THE PRETENSIONING METHOD USED FOR THE SPECIFIC PROJECT CAN ACHIEVE THE MINIMUM BOLT TENSION VALUES.
12. BOLTS IN "X" CONNECTIONS SHALL HAVE THE THREADS EXCLUDED FROM THE SHEAR PLANE. BOLTS IN THE "N" CONNECTIONS MAY HAVE THE THREADS INCLUDED IN THE SHEAR PLANE.
13. MINIMUM BOLT LENGTHS USED SHALL BE SUCH THAT BOLT THREAD IS AT LEAST FLUSH WITH THE OUTER FACE OF THE NUT.

INSTALLATION, FIELD MODIFICATIONS AND REPAIRS:
1. THESE GENERAL INSTRUCTIONS FOR THE INSTALLER ARE PROVIDED TO ENSURE PROPER SELECTION AND INSTALLATION OF SIMPSON STRONG-TIE COMPANY INC. PRODUCTS AND MUST BE FOLLOWED CAREFULLY. THESE GENERAL INSTRUCTIONS ARE IN ADDITION TO THE SPECIFIC INSTALLATION INSTRUCTIONS AND NOTES PROVIDED FOR EACH PARTICULAR PRODUCT, ALL OF WHICH SHOULD BE CONSULTED PRIOR TO AND DURING INSTALLATION OF SIMPSON STRONG-TIE COMPANY INC. PRODUCTS.
2. PROPER PRODUCT INSTALLATION REQUIRES CAREFUL ATTENTION TO ALL NOTES AND INSTRUCTIONS. IN ADDITION TO THE NOTES, WARNINGS, AND INSTRUCTIONS PROVIDED INSTALLERS, DESIGNERS, ENGINEERS AND CONSUMERS SHOULD CONSULT THE SIMPSON STRONG-TIE COMPANY INC. WEBSITE AT WWW.STRONGTIE.COM TO OBTAIN ADDITIONAL INFORMATION FOR INSTALLATION, SPECIFICATIONS, CODE REPORTS, TECHNICAL FLIERS AND BULLETINS, FAQS, AND OTHER PERTINENT INFORMATION.
3. FABRICATION AND ERECTION TOLERANCE SHALL BE IN ACCORDANCE WITH AISC 303.
4. ALL SPECIFIED FASTENERS MUST BE INSTALLED ACCORDING TO THE INSTRUCTIONS PROVIDED IN THE CODE REPORT, AND INSTALLATION DETAILS. INCORRECT FASTENER QUANTITY, SIZE, PLACEMENT, TYPE, MATERIAL, OR FINISH MAY CAUSE THE CONNECTION TO FAIL.
5. YIELD-LINKS SHALL NOT BE HOT-DIP GALVANIZED.
6. YIELD-LINKS SHALL BE INSTALLED WITH MATCHING HEAT NUMBER AT EACH CONNECTION (I.E. TOP AND BOTTOM LINKS ON EACH END OF THE BEAM SHALL HAVE THE SAME HEAT #).
7. ALL FIELD MODIFICATIONS AND REPAIRS MUST BE APPROVED BY THE EOR.
8. YIELD-LINK SIZE AND BRP SHALL BE INSTALLED PER MANUFACTURER OR EOR'S FRAME ELEVATION DRAWINGS.
9. DO NOT CUT OR ENLARGE EXISTING HOLES IN THE YIELD-LINK, BRP OR SPACER PLATES.

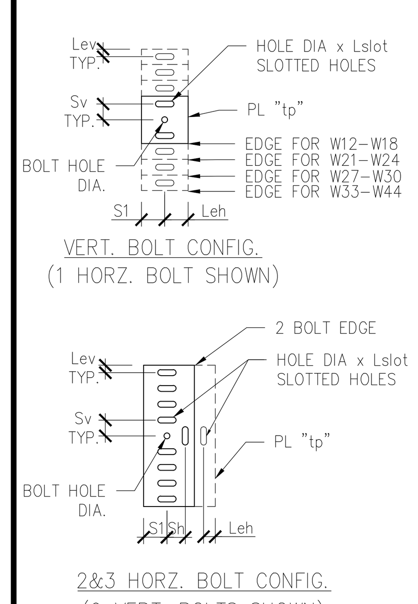
FIREPROOFING:
1. WHEN THE STEEL STRUCTURE IS REQUIRED TO MEET CERTAIN TYPE OF CONSTRUCTION RATING, THE YIELD-LINK MOMENT CONNECTION SHALL HAVE A FIRE RATING SIMILAR TO THAT OF THE PRIMARY STRUCTURAL FRAME.
2. WHERE SPRAY FIRE-RESISTANT MATERIAL (SFRM) IS USED, MINIMUM THICKNESS OF SFRM FOR THE YIELD-LINK FLANGE AND STEM SHALL BE SIMILAR TO THAT OF THE BEAM AND COLUMN SECTIONS.
3. FOR CASES WHEN THE CONCRETE THICKNESS ABOVE THE YIELD-LINK COVER PLATE IS SHALLOWER THAN THE CONCRETE THICKNESS ABOVE THE METAL DECK RIB, YIELD-LINK AND COVER PLATE AT THE BEAM TOP FLANGE CAN BE COVERED WITH FIRE BARRIER PAINT WITH A COATING THICKNESS THAT PROVIDES THE SAME FIRE RATING PROTECTION AS THE PRIMARY STRUCTURAL FRAME. FIRE BARRIER PAINT SHALL BE TESTED AND CERTIFIED TO ASTM E119.

QUALITY CONTROL AND QUALITY ASSURANCE
1. INSPECTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE LOCAL CODE, BASED ON BUILDING OCCUPANCY, REQUIREMENTS OF THE LOCAL BUILDING OFFICIAL, AND OTHER CONSIDERATIONS, AND SHALL BE SPECIFIED BY THE EOR.
2. THE FABRICATOR AND ERECTOR SHALL BE RESPONSIBLE FOR QUALITY CONTROL (Q/C) BY ENSURING WORKMANSHIP MEETS THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE OWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR QUALITY ASSURANCE (Q/A) INSPECTIONS. Q/C AND Q/A REQUIREMENTS SHALL BE IN ACCORDANCE WITH AISC 360 CHAPTER N AND AISC 341 CHAPTER J.
3. CONTACT SIMPSON STRONG-TIE® AT 800-999-5099 TO REQUEST YIELD-LINK MILL CERTIFICATES.
4. STEEL MOMENT FRAME CONNECTIONS UTILIZING THE SIMPSON STRONG-TIE YIELD-LINK CONNECTION SHALL HAVE AN IDENTIFICATION STICKER (PROVIDED BY SIMPSON STRONG-TIE) PLACED NEXT TO THE SHEAR PLATE BETWEEN THE LINKS FOR EACH CONNECTION.

ABBREVIATIONS AND SYMBOLS:

@ = AT	COND.= CONDITION	INFO. = INFORMATION	SMF = SPECIAL MOMENT FRAME
& = AND	CONN.= CONNECTION	MAX. = MAXIMUM	SST = SIMPSON STRONG-TIE
# = NUMBER	DC = DEMAND CRITICAL	MIN. = MINIMUM	ST = SHEAR TAB
ABV. = ABOVE	DIA. = DIAMETER	NS = NEAR SIDE	STD. = STANDARD
ALT. = ALTERNATE	DIR = DIRECTION	O.C. = ON CENTER	STP = STIFFENER PLATE
BM. = BEAM	DIST. = DISTANCE	OPP = OPPOSITE	STIFF. = STIFFENER
BRP = BUCKLING RESTRAINT PLATE	DTL = DETAIL	PJP = PARTIAL JOINT PENETRATION	THK = THICKNESS
CFS = COLD FORMED STEEL	EA = EACH	PL. = PLATE	T.O. = TOP OF
CJP = COMPLETE JOINT PENETRATION	ES = EACH SIDE	REQ'D = REQUIRED	T&B = TOP AND BOTTOM
C.L. = CENTER LINE	EQ = EQUAL	S.A.D. = SEE ARCHITECTURAL DRAWINGS	TYP. = TYPICAL
CLR = CLEAR	EOR = ENGINEER OF RECORD	SC = SLIP-CRITICAL	U.N.O = UNLESS NOTED OTHERWISE
COL. = COLUMN	FLG = FLANGE	SIM. = SIMILAR	VERT. = VERTICAL
CONC. = CONCRETE	FS = FAR SIDE		W/ = WITH
	GR = GRADE		WF = WIDE FLANGE
	HORZ. = HORIZONTAL		YL = YIELD-LINK
			YLMC = YIELD-LINK MOMENT CONNECTION

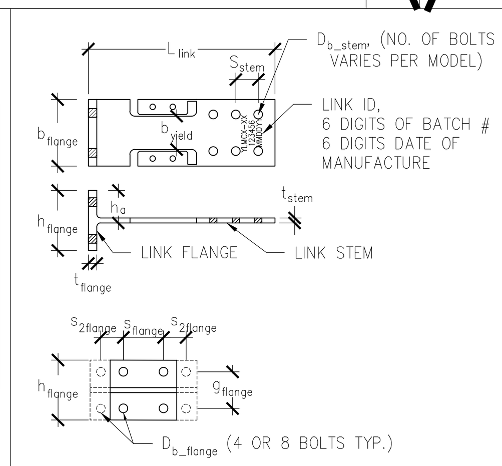
GENERAL NOTES | 4



BEAM SIZE	HOLE DIA.	No. VERT BOLTS	No. HORZ BOLTS	Sv	Sh	Lev	Leh	Lslot	tp
W44	y + 1/16"	9	w	3 1/8"	3 1/8"	1 1/2"	1 3/4"	2 7/8"	x
W40									
W36				2 7/8"	2 3/4"	1 1/4"			
W33				2 1/2"					
W30		7		2 3/4"				2 3/8"	
W27				2 5/16"					
W24	y + 1/16"	5	w	2 3/4"	2 3/4"	1 1/8"	1 3/4"	1 7/8"	x
W21				2 3/8"					
W18		3		3 1/4"				1 1/2"	
W16				2 5/8"					
W14				2 3/4"					
W12				2 3/16"					

1. NUMBER OF VERTICAL AND HORIZONTAL BOLTS SHOWN FOR REFERENCE ONLY. REFER TO STRUCTURAL DRAWINGS FOR PROJECT SPECIFIC REQUIREMENTS.
2. SHEAR PLATE THICKNESS (x), BOLT SIZE (y) AND QUANTITY (w) PER DESIGNER, SEE FRAME ELEVATION SHEETS EXPORTED USING YLMC DESIGN SOFTWARE PER PROJECT.
3. S1=2.75" FOR YLMC4 LINKS; S1= 3.5" FOR YLMC6 LINKS; S1=4.0" FOR YLMC8 LINKS.
4. BOLT HOLES IN THE BEAM FLANGES AND BEAM WEB SHALL BE STANDARD SIZE HOLES.
5. W40 AND W44 BEAMS INCLUDED IN ICC-ES ESR-2802.

TYPICAL SHEAR PLATE DETAIL | 20



TYPE	t_{flange}	t_{stem}	h_{flange}	g_{flange}	h_a
YLMC4-XX	7/8"	1/2"	5 3/4"	3 1/4"	3 1/8"
YLMC4-XX-10; YLMC4-5; YLMC4-6	13/16"				
YLMC6/YLMC6-13	1 1/4"	3/4"	9 1/4"	5 3/4"	5"
YLMC6-7	1 7/16"			5 1/4"	
YLMC8-XX/YLMC8-XX-15	1 13/16"	1"	10 3/4"	7"	5 7/8"
YLMC8-7; YLMC8-8; YLMC8-7-15; YLMC8-8-15	1 3/4"				

STANDARD YIELD-LINK® SKU

LINK ID	L_{LINK}	b_{yield}	b_{flange}	s_{flange}[3]	D_{b_flange}	No. of Flange Bolts	D_{b_stem}	No.of Stem Bolts	BRP Model	No. of BRP Bolts
YLMC4-2	1'-6 5/8"	2"	6 1/4"	3 1/2"	7/8"	4	7/8"	4	BRP4C	2
YLMC4-2.5		2 1/2"								
YLMC4-3		3"	6 1/2"							
YLMC4-2.25		2 1/4"	7"	4 1/2"					BRP4A	
YLMC4-2.875		2 7/8"								
YLMC4-3.375	1'-9 3/8"	3 3/8"						6		
YLMC4-3.5		3 1/2"	8"	5 1/4"					BRP4B	
YLMC4-4		4"								
YLMC4-5	2'-1/8"	5"	12"			8		8	BRP4D	4
YLMC4-6		6"								
YLMC6-2.5	2'-3 1/2"	2 1/2"	6 1/2"	4"	7/8"	4	7/8"	6	BRP6D	4
YLMC6-3		3"	8"	5"	1"		1"		BRP6A	
YLMC6-3.5		3 1/2"								
YLMC6-4		4"			1 1/4"					
YLMC6-4.5		4 1/2"	10"	6"			1 1/4"		BRP6B	
YLMC6-5		5"								
YLMC6-5.5		5 1/2"	12"						BRP6C	
YLMC6-6		6"			1 3/8"					
YLMC6-7	2'-6 7/8"	7"	14"		1"	8		8	BRP6E	
YLMC8-4	2'-7 1/16"	4"	9"	5 1/4"	1 1/4"	4	1 1/4"	6	BRP8A	4
YLMC8-4.5		4 1/2"			1 3/8"					
YLMC8-5	2'-10 7/16"	5"	12"	6"				8	BRP8B	
YLMC8-5.5		5 1/2"			1 1/2"					
YLMC8-6		6"								
YLMC8-7	3'-1 13/16"	7"	16"		1 1/4"	8		10	BRP8C	
YLMC8-8		8"								

EXTENDED YIELD-LINK® SKU

LINK ID	L_{link}	b_{yield}	b_{flange}	s_{flange}[3]	D_{b_flange}	No. of Flange Bolts	D_{b_stem}	No.of Stem Bolts	BRP Model	No. of BRP Bolts
–	–	–	–	–	–	–	–	–	–	–
YLMC4-2.25-10	1'-9 9/16"	2 1/4"	7"	4 1/2"	7/8"	4	7/8"	4	BRP4A-10	4
YLMC4-2.875-10		2 7/8"								
YLMC4-3.375-10	2'-5/16"	3 3/8"						6		
YLMC4-3.5-10		3 1/2"	8"	5 1/4"					BRP4B-10	
YLMC4-4-10		4"								
–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–
YLMC6-3-13	2'-6 1/2"	3"	8"	5"	1"	4	1"	6	BRP6A-13	4
YLMC6-3.5-13		3 1/2"								
YLMC6-4-13		4"			1 1/4"					
YLMC6-4.5-13		4 1/2"	10"	6"			1 1/4"		BRP6B-13	
YLMC6-5-13		5"								
YLMC6-5.5-13		5 1/2"	12"						BRP6C-13	
YLMC6-6-13		6"			1 3/8"					
–	–	–	–	–	–	–	–	–	–	–
YLMC8-4-15	2'-9 1/16"	4"	9"	5 1/4"	1 1/4"	4	1 1/4"	6	BRP8A-15	6
YLMC8-4.5-15		4 1/2"			1 3/8"					
YLMC8-5-15	3'-7/16"	5"	12"	6"				8	BRP8B-15	
YLMC8-5.5-15		5 1/2"			1 1/2"					
YLMC8-6-15		6"								
YLMC8-7-15	3'-3 13/16"	7"	16"		1 1/4"	8		10	BRP8C-15	
YLMC8-8-15		8"								

1. NUMBER OF YIELD-LINK FLANGE BOLTS=4 OR 8 DEPENDING ON LINK ID.
2. BEAM, COLUMN AND HOLE DIMENSIONAL TOLERANCE SHALL BE PER AISC 303.
3. FOR LINKS WITH 8 FLANGE BOLTS, $S_{2flange}$ IS 2-1/4" FOR YLMC4, 2-3/4" FOR YLMC6 AND 3-3/8" FOR YLMC8.
4. DESIGN PROCEDURE FOR YIELD-LINKS WITH (8) FLANGE BOLTS INCLUDED IN ICC-ES ESR-2802.

YIELD-LINK GEOMETRIES | 8

NO.	DATE	REVISIONS

SIMPSON Strong-Tie® THERE IS NO EQUAL
SIMPSON STRONG-TIE, CO. INC.
• 5956 W. Las Positas Blvd. Pleasanton, CA 94588
• Tel: (800) 999-5099
• Fax: (925) 847-15977
• Web site: www.strongtie.com

YIELD-LINK® MOMENT CONNECTION
STEEL SPECIAL MOMENT FRAME
CONNECTION DETAILING INFORMATION

NAME: G.S.
DATE: 09-11-2025
SCALE: N.T.S.
SHEET:
YLMC1
JOB NO. ES-25090431

CITY OF IRVINE HANGAR 10 RECONSTRUCTION
410 BEACON
IRVINE, CA 92618

Gensler
4675 MacArthur Court
Suite 100
Newport Beach, CA 92660
United States
Tel 949.863.9434
Fax 949.553.1676

STRUCTURAL FOCUS
19210 S. Vermont Ave.,
Bldg. B, Suite 210
Gardena, Ca 90248
Tel 310.323.9924

REGISTERED PROFESSIONAL ENGINEER BRENDAN RAMOS No. S6251 Exp. 3/31/28 STRUCTURAL STATE OF CALIFORNIA

Date	Description
10/14/2025	CD CLIENT REVIEW/PRICING
11/03/2025	ISSUE FOR PLAN CHECK
01/09/2025	ADDENDUM A/PLAN CHECK COMMENTS
05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION
Project Number
25236
Description
YIELD-LINK MOMENT CONNECTION
Scale

CITY OF IRVINE BUILDING & SAFETY DIVISION

YLMC1

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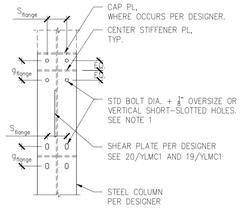
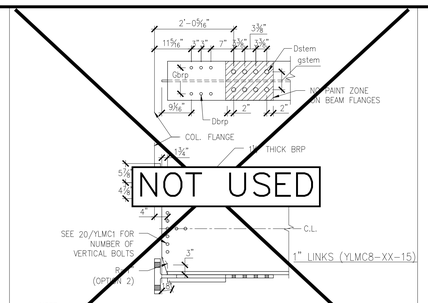


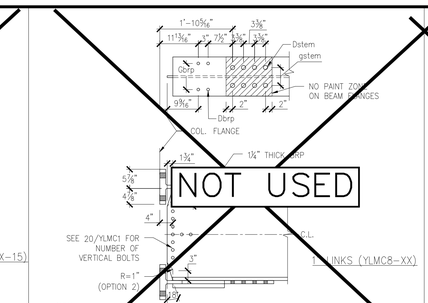
NOTE:
1. REFER TO RCSC SPECIFICATION FOR WASHER REQUIREMENTS ON SLOTTED HOLES AND OVERSIZED HOLES.
2. SEE DETAIL 17/YLMC1 FOR OPTIONS WHEN WASHERS ENCROACH INTO COLUMN K REGION.
3. SEE DETAIL 4/– FOR S_{flange} AND g_{flange} DIMENSIONS.

(4) COLUMN FLANGE HOLES | 17



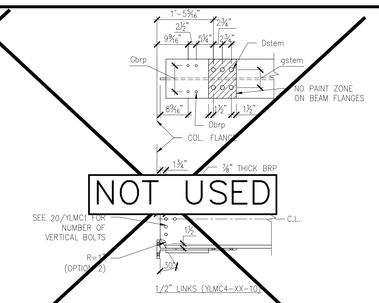
NOTE:
1. YLMC8–XX–15 TO BE USED FOR W30 TO W44 BEAMS.
2. SEE 4/YLMC2 FOR gstem, Dbrp AND Dstem, TYP.

EXTENDED YLMC8 BEAM COPE/HOLE | 13



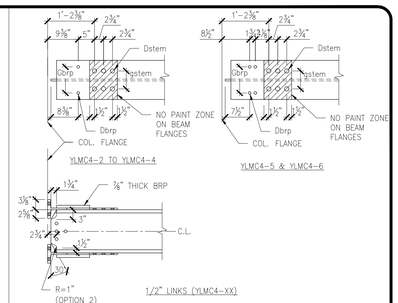
NOTE:
1. YLMC8–XX TO BE USED FOR W24 TO W36 BEAMS.
2. SEE 4/YLMC2 FOR gstem, Dbrp AND Dstem, TYP.

YLMC8 BEAM COPE/HOLE DETAILS | 9



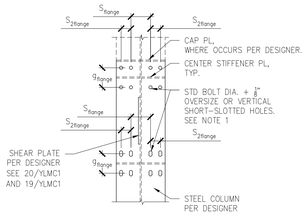
NOTE:
1. YLMC4–XX–10 TO BE USED FOR W21 TO W27 BEAMS.
2. SEE 4/YLMC2 FOR gstem, Dbrp AND Dstem, TYP.

EXTENDED YLMC4 BEAM COPE/HOLE | 5



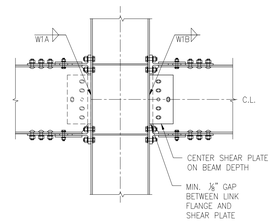
NOTE:
1. YLMC4–XX TO BE USED FOR W12 TO W18 BEAMS.
2. SEE 4/YLMC2 FOR gstem, Dbrp AND Dstem, TYP.

YLMC4 BEAM COPE/HOLE DETAILS | 1



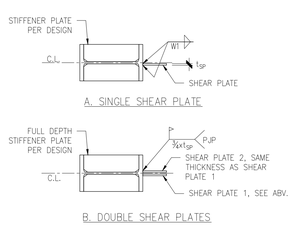
NOTE:
1. REFER TO RCSC FOR WASHER REQUIREMENTS ON SLOTTED HOLES AND OVERSIZED HOLES.
2. SEE DETAIL 17/YLMC1 FOR OPTIONS WHEN WASHERS ENCROACH INTO COLUMN K REGION.
3. SEE DETAIL 4/– FOR S_{flange}, $S_{2flange}$ AND g_{flange} DIMENSIONS.

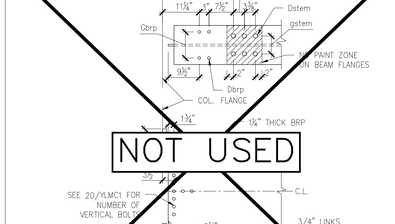
(8) COLUMN FLANGE HOLES | 18



NOTE:
1. WTA & WTB FILLET WELDS SHALL BE MIN. 5/8 X SHEAR PLATE THICKNESS ON E.S. SEE PLATE AND WELD TABLE ON FRAME ELEVATION DRAWINGS U.N.O. BY DESIGNER.
2. SHEAR PLATE GEOMETRY: SEE 20/YLMC1 AND FRAME ELEVATION DRAWINGS.

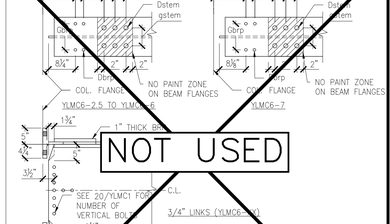
SHEAR TAB DETAILS | 10





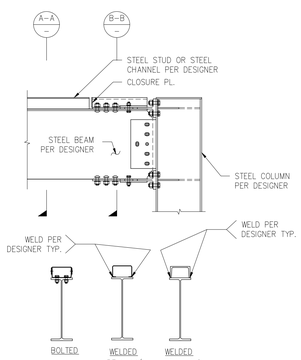
NOTE:
1. YLMC6–XX–13 TO BE USED FOR W30 TO W36 BEAMS.
2. SEE 4/YLMC2 FOR gstem, Dbrp AND Dstem, TYP.

EXTENDED YLMC6 BEAM COPE/HOLE | 6

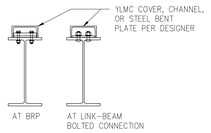


NOTE:
1. YLMC6–XX TO BE USED FOR W16 TO W27 BEAMS.
2. SEE 4/YLMC2 FOR gstem, Dbrp AND Dstem, TYP.

YLMC6 BEAM COPE/HOLE DETAILS | 2

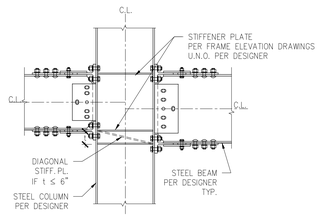


SECTION A–A: BEAM TOP CONNECTION

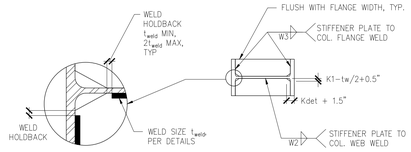


SECTION B–B: BEARING CONNECTION AT LINK REGION

ALT. ATTACHMENTS AT SMF BM FLG | 20

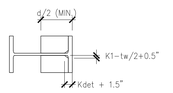


DIAGONAL STIFFENER PLATE



WELD PLACEMENT

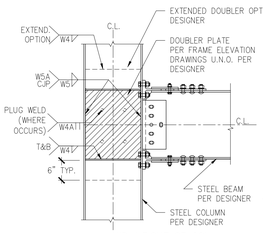
A. FULL DEPTH STIFFENER PLATE



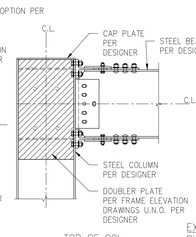
B. PARTIAL DEPTH STIFFENER PLATE

NOTE:
1. W2, W3 WELDS PER DRAWING ELEVATION WELD TABLE, SEE STRUCTURAL DRAWINGS AND 19/YLMC1.
2. FOR STIFFENER PLATE THICKNESS, SEE FRAME ELEVATION DRAWINGS U.N.O PER DESIGNER.

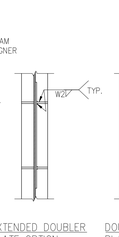
STIFFENER PLATE DETAILS | 11



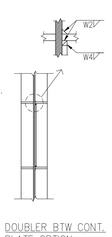
MID–HEIGHT OF COL.



TOP OF COL.



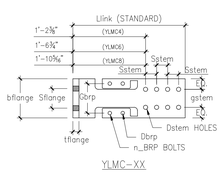
EXTENDED DOUBLER PLATE OPTION



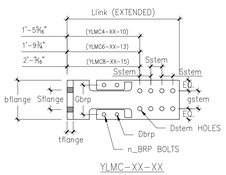
DOUBLER BTW CONT. PLATE OPTION

NOTE:
1. W4, W5 WELDS PER DRAWING ELEVATION WELD TABLE, SEE STRUCTURAL DRAWINGS.
2. WHEN W5 IS A CJP WELD, WELD SHALL MEET D1.8 DC WELD REQUIREMENTS (SEE 19/YLMC1).

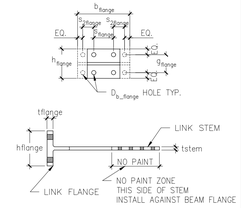
DOUBLER PLATE DETAILS | 12



YLMC–XX



YLMC–XX–XX



STANDARD YIELD–LINK® SKU					EXTENDED YIELD–LINK® SKU					SHARED PARAMETERS									
LINK ID	t_{stem}	t_{flange}	L_{link}	n_BRP Bolts (total)	LINK ID	t_{stem}	t_{flange}	L_{link}	n_BRP Bolts (total)	b_{flange}	h_{flange}	t_{flange} [NOTE 7]	g_{flange}	n_FLANGE Bolts	D_{flange}	n_STEM Bolts	D_{stem} HOLES	D_{BRP}	D_{hp}	t_{stem}
YLMC4–2	1/2"	7/8"	1'–6 5/8"	2	–	–	–	–	–	6 1/4"	5 3/4"	3 1/2"	3 1/4"	4	15/16"	4	15/16"	11/16"	3 3/4"	2 3/4"
YLMC4–2.5																			4 1/4"	
YLMC4–3										6 1/2"									4 3/4"	
YLMC4–2.25					YLMC4–2.25–10	1/2"	7/8"	1'–9 9/16"	4	7"		4 1/2"							4 3/8"	
YLMC4–2.875					YLMC4–2.875–10											6			5"	
YLMC4–3.375			1'–9 3/8"		YLMC4–3.375–10			2'–5/16"		8"		5 1/4"							5"	
YLMC4–3.5					YLMC4–3.5–10														5 5/8"	
YLMC4–4					YLMC4–4–10														6 1/8"	
YLMC4–5[A1]			2"–1/8"	4	–	–	–	–	–	12"				8		8			8 5/8"	
YLMC4–6[A1]																			8 5/8"	
YLMC6–2.5	3/4"	1"	2'–3 1/2"	4	–	–	–	–	–	6 1/2"	9 1/4"	4"	5 3/4"	4	15/16"	6	15/16"	13/16"	4 5/8"	3 3/8"
YLMC6–3					YLMC6–3–13	3/4"	1 1/4"	2'–6 1/2"	4	8"		5"			1 1/16"		1 1/16"		5 1/4"	
YLMC6–3.5					YLMC6–3.5–13														5 3/4"	
YLMC6–4					YLMC6–4–13					10"		6"			1 5/16"				6 1/4"	
YLMC6–4.5					YLMC6–4.5–13														6 3/4"	
YLMC6–5					YLMC6–5–13					12"									7 1/4"	
YLMC6–5.5					YLMC6–5.5–13														7 3/4"	
YLMC6–6					YLMC6–6–13										1 7/16"				8 1/4"	
YLMC6–7[A1]		1–7/16"	2'–6 7/8"		–	–	–	–	–	14"			5 1/4"	8	1 1/16"	8		15/16"	9 7/8"	
YLMC8–4	1"	1–13/16"	2'–7 1/16"	4	YLMC8–4–15	1"	1 13/16"	2'–9 1/16"	6	9"	10 3/4"	5 1/4"	7"	4	1 5/16"	6	1 5/16"	13/16"	6 1/2"	3 3/8"
YLMC8–4.5					YLMC8–4.5–15										1 7/16"				7"	
YLMC8–5			2'–10 7/16"		YLMC8–5–15			3'–7/16"		12"		6"			1 9/16"	8			7 1/2"	
YLMC8–5.5					YLMC8–5.5–15														8"	
YLMC8–6					YLMC8–6–15														8 1/2"	
YLMC8–7[A1, A2]		1–3/4"	3'–1 13/16"		YLMC8–7–15[A1, A2]		1 3/4"	3'–3 13/16"		16"				8	1 5/16"	10		15/16"	9 7/8"	
YLMC8–8[A1, A2]					YLMC8–8–15[A1, A2]														10 7/8"	

NOTES:
1. BEAM, COLUMN AND HOLE DIMENSIONAL TOLERANCE SHALL BE PER AISC 303.
2. HOLES ON BEAM FLANGES (Dstem) ARE PERMITTED TO BE STANDARD SIZE HOLES PER AISC 360–16 TABLE J3.3.
3. ALL LINK HOLE (Dstem HOLES) SIZES SHOWN ARE 1/16" LARGER THAN BOLT DIAMETER.
4. SEE DETAILS 1/–, 2/–, 5/–, 6/–, 9/– AND 13/– FOR BEAM COPE AND BOLT HOLE DETAILS.
5. SEE DETAIL 17/– & 18/– FOR COLUMN FLANGE BOLT HOLE DETAILS.
6. CALIFORNIA OSHPD/HCAI & DSA DESIGN PROJECTS REQUIRE "YL" (YIELD–LINK CONFIGURATION WITH SEPARATE/NON–INTEGRATED SPACER PLATES). ALL YIELD–LINK SKUS ARE OFFERED IN OSHPD/HCAI & DSA COMPLIANT "YL" CONFIGURATIONS, UNLESS NOTED OTHERWISE.
   a. YIELD–LINK SKUS ARE CURRENTLY NOT PRE–QUALIFIED FOR OSHPD/HCAI & DSA DESIGN PROJECTS.
   b. YIELD–LINK SKUS ARE CURRENTLY NOT AVAILABLE IN YIELD–LINK CONFIGURATION WITH INTEGRATED SPACER PLATES.
7. FOR LINKS WITH 8 FLANGE BOLTS: S_{flange} IS 2–1/4" FOR YLMC4, 2–3/4" FOR YLMC6 AND 3–3/8" FOR YLMC8.
8. S_{stem} = 3–1/2" FOR YLMC4–2.25, YLMC4–2.25–10, YLMC4–2.875, YLMC4–2.875–10, YLMC4–3.375 & YLMC4–3.375–10. S_{stem} = s_{flange} FOR ALL OTHER LINKS.

YIELD–LINK DETAILED GEOMETRIES | 4

YIELD-LINK® MOMENT CONNECTION
STEEL SPECIAL MOMENT FRAME
CONNECTION DETAILING INFORMATION

NAME: G.S.
DATE: 09–11–2025
SCALE: N.T.S.
SHEET:
YLMC2
JOB NO. ES–2509043

REVISIONS

NO.	DATE

SIMPSON STRONG–TIE, CO. INC.
5956 W. Las Positas Blvd.
Pleasanton, CA 94588
Tel: (800) 999–5099
Fax: (925) 847–1697
Web Site: www.strongtie.com

SIMPSON StrongTie® THERE IS NO EQUAL

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

410 BEACON
IRVINE, CA 92618

Gensler
4675 MacArthur Court
Suite 100
Newport Beach, CA 92660
United States
Tel 949.863.9434
Fax 949.553.1676

STRUCTURAL FOCUS
19210 S. Vermont Ave.,
Bldg. B, Suite 210
Gardena, Ca 90248
Tel 310.323.9924

REGISTERED PROFESSIONAL ENGINEER — EDWARD RAMOS — No. 39251 — EXP. 3/31/26 — STRUCTURAL — STATE OF CALIFORNIA

△	Date	Description
	10/14/2025	CD CLIENT REVIEW/PRICING
	11/03/2025	ISSUE FOR PLAN CHECK
	01/09/2026	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
YIELD-LINK MOMENT CONNECTION

Scale

YLMC2

CITY OF IRVINE BUILDING & SAFETY DIVISION

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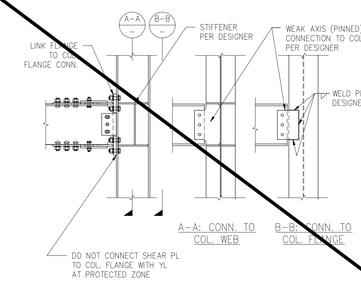
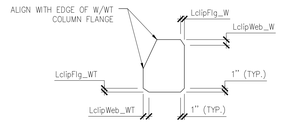
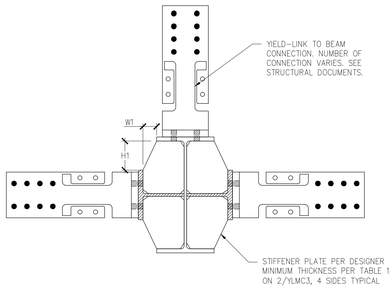


ORTHOGONAL CONN. TO COL. | 17

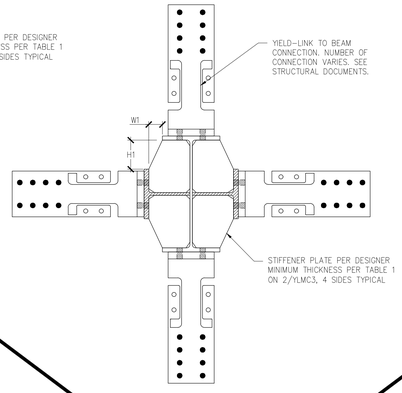


NOTES:
1. WEB COPE AT WT AND W SECTIONS (ClipWeb_WT, ClipWeb_W) = $k+1.5"-t_f$
2. FLANGE COPE AT WT AND W SECTIONS (ClipFlg_WT, ClipFlg_W) = $k_1+0.5"-t_w/2$.
3. SEE AWS D1.8 CHAPTER C–4 FOR MORE INFORMATION.
4. SEE AISC STEEL MANUAL FOR k, k_1, t_f AND t_w VALUES FOR THE COLUMNS.

CRUCIFORM COL. STP CLIP DETAILS | 18



3–SIDED MOMENT CONNECTION

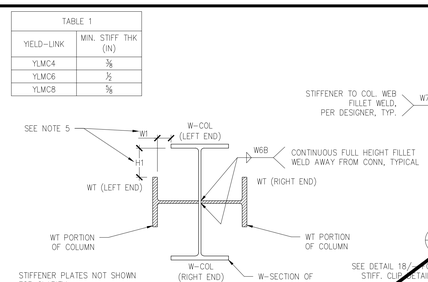


4–SIDED MOMENT CONNECTION

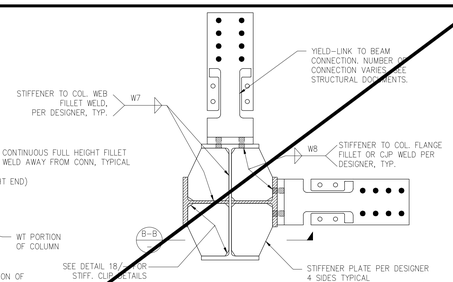
NOTES:
1. SEE 2/– FOR INFO NOT NOTED.

MULTI–DIRECTION MOMENT CONNECTION DETAIL | 10

NOT USED

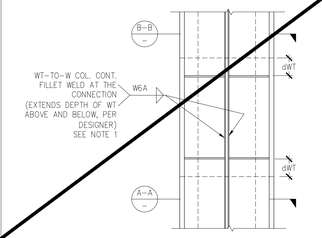


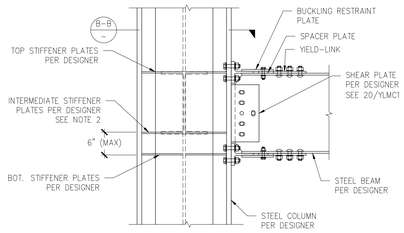
SECTION A–A



SECTION B–B

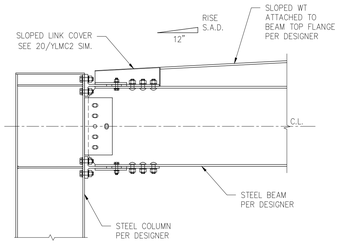
2–SIDED MOMENT CONNECTION

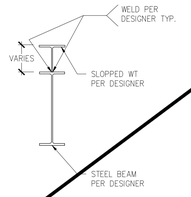




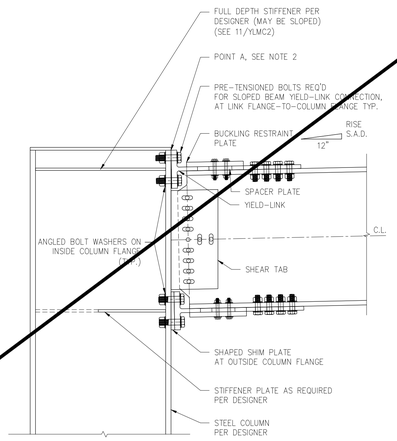
NOTES:
1. DOUBLE SIDED FILLET WELD SHALL DEVELOP SHEAR AT COLUMN FLANGE–TO–WEB CONNECTION STRENGTH. SMALLER OF: (A) NOMINAL SHEAR STRENGTH OF WT COLUMN WEB, (B) MAXIMUM SHEAR FORCE AT PR_LINK OF CONNECTION.
2. INTERMEDIATE STIFFENER REQUIRED IF DIFFERENCE BETWEEN DEPTH OF BEAMS CONNECTING W–COL AND WT SECTION IS GREATER THAN 6".
3. SEE 6/YLMC1 FOR BOLTING REQUIREMENTS.
4. SEE 7/YLMC1 FOR PROTECTED ZONE AT YIELD–LINK CONNECTION.
5. W1 AND H1 ARE DIMENSIONS FOR WELDING CLEARANCE. DESIGNER TO COORDINATE WITH FABRICATOR FOR MINIMUM DIMENSIONS REQUIRED.

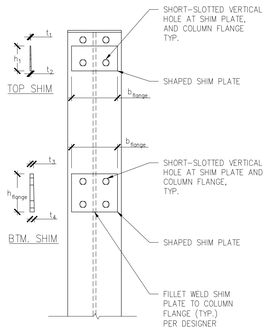
CORNER CONDITION WITH FLANGE CRUCIFORM COLUMN | 2





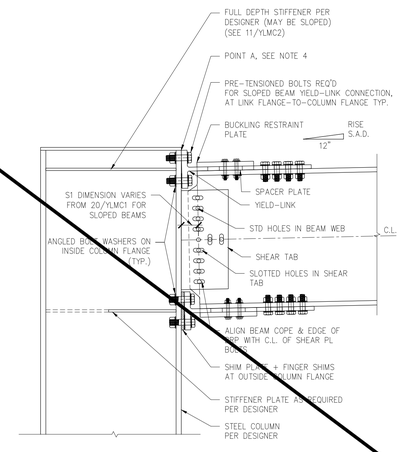
SLOPED BEAM CONN (OPTION 3) | 20

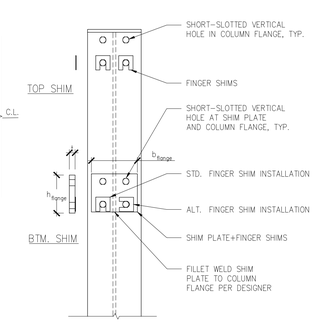




NOTES:
1. SEE 4/– FOR INFO NOT NOTED.
2. THICKNESS OF SHIMS (t_1 t_2, t_3 AND t_4) TO BE DETERMINED BY DESIGNER/DETAILER ASSUMING TOP OF LINK FLANGE IN CONTACT WITH COLUMN FLANGE (POINT A), WITH MINIMUM SHIM THICKNESS OF 1/16" AT (t_1 AND t_3 LOCATIONS).
3. t_1 SHALL BE A MAXIMUM OF 1/8".

SLOPED BEAM YIELD–LINK CONNECTION (OPTION 2) | 12





NOTES:
1. MAXIMUM RISE = 1" PER FOOT. CONTACT SIMPSON STRONG–TIE FOR STEEPER SLOPES.
2. LINK FLANGE–TO–COLUMN FLANGE BOLTS SHALL BE PRE–TENSIONED FOR SLOPED BEAM–TO–COLUMN YIELD–LINK CONNECTIONS.
3. SHIM PLATE SIZE TO MATCH LINK FLANGE LENGTH AND WIDTH DIMENSIONS.
4. THICKNESS OF SHIM TO BE DETERMINED BY DESIGNER/DETAILER ASSUMING TOP OF LINK FLANGE IN CONTACT WITH COLUMN FLANGE (POINT A).
5. SHIM PLATE MATERIAL: A36 OR A572 GR. 50.
6. FINGER SHIM MATERIAL: STRUCTURAL–GRADE STEEL MATERIAL, BUT NEED NOT BE HARDENED.
7. ANGLED BOLT WASHER MATERIAL: F436.
8. BEAM SLOPED DOWN CONDITION SIMILAR.
9. SEE YLMC1 SHEET FOR FURTHER INFORMATION.

SLOPED BEAM YIELD–LINK CONNECTION (OPTION 1) | 1

YIELD-LINK® MOMENT CONNECTION

STEEL SPECIAL MOMENT FRAME
CONNECTION DETAILING INFORMATION

NAME: G.S.
DATE: 09–11–2025
SCALE: N.T.S.
SHEET:

YLMC3

JOB NO. ES–25090431

REVISIONS

NO.	DATE	

SIMPSON STRONG–TIE, CO. INC.
5956 W. Las Positas Blvd.
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Fax: (925) 847–15977
Web site: www.strongtie.com
SIMPSON Strong-Tie® THERE IS NO EQUAL

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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IRVINE, CA 92618

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19210 S. Vermont Ave.,
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Gardena, Ca 90248
Tel 310.323.9924

△	Date	Description
	10/14/2025	CD CLIENT REVIEW/PRICING
	11/03/2025	ISSUE FOR PLAN CHECK
	01/09/2026	ADDENDUM A/PLAN CHECK COMMENTS
	05/07/2026	BID SET

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
25236

Description
YIELD-LINK MOMENT CONNECTION

Scale

YLMC3

CITY OF IRVINE BUILDING & SAFETY DIVISION

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PLAN CHECK NOTES

1. ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTION 110.1-110.3, 110.5, 120.1-120.4 TITLE 24 ENERGY STANDARDS 2022.
2. PROVIDE SMOKE DETECTORS IN MAIN SUPPLY AIR DUCTS OF AIR MOVING SYSTEMS EXCEEDING 2000 CFM PER SECTION 608.0 CMC 2022.
3. EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS PER SEC. 504.0 CMC 2022.
4. A WATERTIGHT PAN OF CORROSION RESISTANT MATERIAL SHALL BE PROVIDED BENEATH HVAC UNITS PER SECTION 310.2 CMC 2022.
5. ROOF ACCESS LADDER SHALL COMPLY WITH SECTION 304 CMC 2022.
6. HVAC DUCT INSULATION SHALL BE R-8 AT EXTERIOR INSTALLED DUCTWORK.
7. FACTORY MADE FLEXIBLE AIR DUCTS AND CONNECTORS SHALL NOT BE MORE THAN 5 FEET IN LENGTH PER SECTION 603.4.1 CMC 2022.

TITLE 24 NOTES

1. HVAC SYSTEMS SHALL MEET THE LATEST CONTROL REQUIREMENTS OF SECTIONS 110.2 & 120.2 TITLE 24 ENERGY STANDARDS 2022.
2. DOORS AND WINDOWS SHALL MEET MINIMUM INFILTRATION REQUIREMENTS OF SECTION 110.6 AND 110.7 TITLE 24 ENERGY STANDARDS 2022.
3. INSULATION AND FLEXIBLE DUCT SHALL COMPLY WITH STATE FIRE MARSHAL CRITERIA AND SHALL NOT EXCEED FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 450 PER ASTM-84, NFPA-225, AND U.L. 723.
4. ALL WORK SHALL BE IN ACCORDANCE WITH CITY CODES, CALIFORNIA ENERGY CONSERVATION STANDARDS, TITLE - 24, AND ALL OTHER APPLICABLE CODES.
5. ALL ENVELOPE AND MECHANICAL CERTIFICATE OF ACCEPTANCE FORMS AND ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED.
6. ALL PIPING AND DUCT WORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 120.3, 120.4 AND 120.7 TITLE 24 ENERGY STANDARDS 2022 AND CHAPTER 6 OF CMC 2022.

CA GREEN BUILDING NOTES

1. IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE OCCUPIED AREAS OF BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDES AT LEAST MERV OF 13, SECTION 5.504.5.3 CGBSC 2022.
2. PROVIDE TESTING AND ADJUSTING OF HVAC SYSTEMS AND CONTROLS PER 5.410.4.3.1 CGBSC 2022.
3. COMMISSIONING IS REQUIRED FOR COMMERCIAL BUILDINGS 10,000 SF AND OVER PER SECTION 5.410.2 CGBSC 2022.
4. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF ADDITION OR ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, RETURN AIR FILTERS WITH A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13, BASED ON ASHRAE 52.2-1999, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1992 SHALL BE USED. ALL FILTERS SHALL BE REPLACED IMMEDIATELY PRIOR TO OCCUPANCY OR AT THE CONCLUSION OF CONSTRUCTION (5.504.1 CGBSC 2022).
5. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM (5.504.3 CGBSC 2022).
6. IN MECHANICALLY VENTILATED BUILDINGS, REGULARLY OCCUPIED AREAS OF THE BUILDING SHALL BE PROVIDED WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL (5.504.5.3 CGBSC 2022).
7. WHERE OUTDOOR AREAS ARE PROVIDED FOR SMOKING, PROHIBIT SMOKING WITHIN THE BUILDING AS ALREADY PROHIBITED BY OTHER LAWS OR REGULATIONS; OR AS ENFORCED BY ORDINANCES, REGULATIONS, OR POLICIES OF ANY CITY, COUNTY, CITY AND COUNTY, CALIFORNIA COMMUNITY COLLEGE, CAMPUS OF THE CALIFORNIA STATE UNIVERSITY, OR CAMPUS OF THE UNIVERSITY OF CALIFORNIA, WHICHEVER ARE MORE STRINGENT. WHEN ORDINANCES, REGULATIONS, OR POLICIES ARE NOT IN PLACE, SIGNAGE SHALL BE POSTED TO INFORM BUILDING OCCUPANTS OF THE PROHIBITIONS.
8. MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS SHALL MEET THE MINIMUM REQUIREMENTS OF SECTION 121 (REQUIREMENTS FOR VENTILATION) OF THE 2022 CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8. (CAL GREEN SECTION 5.506.1)
9. FOR BUILDINGS OR ADDITIONS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 2022 CALIFORNIA ENERGY CODE, SECTION 120.1(C)(4), (5.506.2 CGBSC 2022).
10. BUILDING ASSEMBLIES AND COMPONENTS WITH STC VALUES DETERMINED IN ACCORDANCE WITH ASTM E90 AND ASTM E413 SHALL BE EMPLOYED.
11. WALL AND ROOF-CEILING ASSEMBLIES EXPOSED TO THE NOISE SOURCE MAKING UP THE BUILDING OR ADDITION ENVELOPE OR ALTERED ENVELOPE SHALL MEET A COMPOSITE STC RATING OF AT LEAST 50 OR A COMPOSITE OITC RATING OF NO LESS THAN 40, WITH EXTERIOR WINDOWS OF A MINIMUM STC OF 45 OR OITC OF 30 IF LOCATED WITHIN THE 65 CNEL NOISE INDUSTRIAL SOURCE OR FIXED-GUIDEWAY SOURCE AS DETERMINED BY THE NOISE ELEMENT OF THE GENERAL PLAN. (5.507.4.1 CGBSC) SEE EXCEPTIONS 1&2 ON SEC. 5.507.4.1.
12. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2 CGBSC 2022. HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CHLOROFLUOROCARBONS (CFCs) AND SHALL NOT CONTAIN HALONS (5.508.1 CGBSC 2022).
13. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS, THE NEBB PROCEDURAL STANDARDS; OR AABC NATIONAL STANDARDS.
14. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, 5.410.4.5 CGBSC 2022, AND OTHER RELATED REGULATIONS.

MECHANICAL SCOPE OF WORK

1. THE MECHANICAL SCOPE OF WORK IS AS FOLLOWS:
   A. DESIGN THE MECHANICAL SYSTEMS FOR CORE AND SHELL BASE BUILDING SYSTEM.

GENERAL NOTES

1. THESE DRAWINGS ARE A GENERAL GRAPHIC PRESENTATION OF THE WORK. DUCTWORK, PIPING, AND EQUIPMENT, AS SHOWN, ARE SCHEMATIC. FABRICATE AND INSTALL BASED ON ACTUAL FIELD MEASUREMENT. COORDINATE WITH OTHER TRADES. PROVIDE A COMPLETE SET OF SHOP DRAWINGS REFLECTING ACTUAL INSTALL, ACCESS REQUIREMENTS, AND DETAILS BASED UPON THE ACTUAL EQUIPMENT PROCURED. MAINTAIN AN UP TO DATE SET OF AS-BUILT DRAWINGS AT THE JOB SITE.
2. THESE DRAWINGS ARE TO BE CONSIDERED NOT FOR CONSTRUCTION UNTIL THEY ARE STAMPED, SIGNED, AND PERMITTED. UNTIL THEN THEY ARE SUBJECT TO CHANGE WITHOUT NOTICE.
3. REVIEW ALL DRAWINGS AND SPECIFICATIONS INCLUDING ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL. ANY QUESTIONS SHALL BE BROUGHT UP, IN WRITING, TO THE ATTENTION OF THE ENGINEER BEFORE THE START OF CONSTRUCTION.
4. PROVIDE ACCESS AND CLEARANCE FOR MAINTENANCE FOR MECHANICAL EQUIPMENT AND COMPONENTS AS RECOMMENDED BY EQUIPMENT MANUFACTURER AND APPLICABLE CODES.
5. HANDLE, STORE AND INSTALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.
6. INSTALL VALVES WITH UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT ARRANGED TO ALLOW SERVICE MAINTENANCE, AND EQUIPMENT REMOVAL WITHOUT SYSTEM SHUT-DOWN.
7. BRACE AND SUPPORT PIPES, CONDUIT, AND DUCTWORK IN ACCORDANCE WITH SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL AND PLUMBING PIPING SYSTEM.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF DIFFUSERS, REGISTERS, GRILLES, AND ACCESS PANELS.
9. ALL DUCT DIMENSIONS, AS SHOWN ON MECHANICAL DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
10. COMMISSION AND START-UP THE MECHANICAL SYSTEMS TO ASSURE A COMPLETE AND OPERATIONAL HVAC SYSTEM IN ACCORDANCE WITH ASHRAE AND NEBB.
11. ALL SQUARE ELBOWS IN DUCTWORK SHALL HAVE DOUBLE THICKNESS TURNING VANES. ALL RADIUS ELBOWS IN DUCTWORK SHALL BE MINIMUM 1.5W (1.5xWIDTH) AND HAVE 3 SPLITTER VANES. PROVIDE MANUAL VOLUME DAMPER AT EACH BRANCH DUCT TAKE- OFF SERVING EACH AIR TERMINAL DEVICE. PROVIDE BALANCING DAMPERS FOR EACH MAIN DUCT TAKE-OFF IN ACCORDANCE WITH SMACNA IN ORDER TO ASSURE A COMPLETELY BALANCED SYSTEM.
12. FIRE DAMPER ASSEMBLIES, INCLUDING LOCATION, SLEEVES, AND INSTALLATION PROCEDURES SHALL BE APPROVED BY THE BUILDING INSPECTOR PRIOR TO PROCUREMENT AND INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF FIRE RATED WALLS AND SMOKE SEPARATIONS.
13. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO BID.
14. UPON INSTALLATION OF ALL EQUIPMENT, DEVICES, VIBRATION ISOLATION, ETC., PROVIDE WRITTEN CONFIRMATION BY EQUIPMENT MANUFACTURER'S REPRESENTATIVES TO ENSURE COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS.
15. PROVIDE DETAILS AND SEISMIC CALCULATIONS FOR ALL EQUIPMENT ON VIBRATION ISOLATION. ALL DETAILS SHALL BE STAMPED BY A STRUCTURE ENGINEER FROM VIBRATION ISOLATION MANUFACTURER.
16. THE CONTRACTOR SHALL SELECT ALL CIRCUIT SETTERS/BALANCING VALVES FOR ACTUAL FLOW THROUGH THE PIPE AND THE PROPER PRESSURE DROP TO ENSURE PROPER OPERATION AND NOT BASED ON PIPE SIZES.
17. PROVIDE SALT SPRAY COATING ON CONDENSER COILS WHEN PROJECT IS WITHIN 5 MILES OF THE OCEAN.
18. PROVIDE ALL MULTI-MOTOR EQUIPMENT WITH HIGH SCCR RATING.

PROJECT NOTES

1. CONTRACTOR SHALL COORDINATE ARCHITECTURAL REFLECTED CEILINGS PLANS WITH ALL DISCIPLINES TO VERIFY CLEARANCES BETWEEN HVAC DUCTS, HVAC PIPING, LIGHT FIXTURES, ELECTRICAL DATA CONDUITS, PLUMBING LINES, FIRE PROTECTION LINES, STRUCTURAL MEMBERS, ETC. SPECIAL ATTENTION IS REQUIRED ALONG THE LENGTH OF MAIN MECHANICAL SUPPLY AND RETURN AIR DUCTS WHERE THERE IS LIMITED CLEARANCE FOR PASSAGE OR ROUTING OF UTILITIES.
2. THE SPACE FOR DUCT WORK & MECHANICAL EQUIPMENT FOR THIS PROJECT IS LIMITED. COORDINATION WITH OTHER TRADES IS CRITICAL. PROCEED WITH PREPARATION OF SHOP DRAWINGS IMMEDIATELY UPON RECEIVING AN AUTHORIZATION TO PROCEED FOR THE PROJECT. COMPLETE SHOP DRAWINGS PRIOR TO MATERIAL FABRICATION AND INSTALLATION.
3. PROVIDE ORIGINALLY PREPARED CONTRACTOR'S SHOP DRAWINGS IN ELECTRONIC FORMAT. THE SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING:
   a. DUCT, PIPE AND PLUMBING ELEVATIONS.
   b. DOUBLE LINE DUCTWORK AND PIPING (6" AND LARGER).
   c. ACTUAL SIZE OF PURCHASED EQUIPMENT. PER APPROVED CONTRACTOR'S SHOP DRAWINGS.
   d. ACCESS PANELS INCLUDING CEILING PANELS.
   e. ACCESS CLEARANCES FOR EQUIPMENT.
   f. ACTUAL LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND RETURN REGISTERS.
   g. LOCATIONS OF STRUCTURAL MEMBERS SUCH AS BEAMS.
   h. ACTUAL LOCATIONS OF CONTROL PANELS AND POWER CONNECTIONS TO EQUIPMENT.
   i. COLOR CODED DUCT AND PIPING BASED ON MATERIAL USED.
   j. MINIMUM 1/4"=1'0" SCALE DRAWINGS.
   k. LABEL AND TAG SCHEDULE FOR EQUIPMENT.
   l. DUCT TRANSITIONS TO CLEAR BEAMS OR TIGHT AREAS.
   m. ROOM TEMPERATURE SENSOR LOCATIONS.
   n. POINT OF CONNECTION TO UTILITIES OUTSIDE THE BUILDING.
   o. SECTIONS OR 3-D DRAWINGS OF CONGESTED AREAS.
   p. GRID LINES.
   q. UNDERGROUND PIPING.
4. DO NOT COMMENCE WITH ANY INSTALLATION, ORDERING OF ANY EQUIPMENT OR MATERIAL FABRICATION WITHOUT AN APPROVED SHOP DRAWING SUBMITTAL.
5. FOR EACH SUBMITTAL, THE CONTRACTOR SHALL PROVIDE A LETTER (ON COMPANY LETTERHEAD) AND SIGNED BY THE PROJECT MANAGER INDICATING THE SUBMITTAL HAS BEEN FULLY IN HOUSE REVIEWED TO ENSURE FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND COORDINATION WITH OTHER TRADES. ANY EXCEPTIONS TO THE CONTRACT DOCUMENTS SHALL BE CLEARLY INDICATED ON THIS LETTER.

TESTING AND ADJUSTING

TESTING AND ADJUSTING SHALL BE PERFORMED IN ACCORDANCE WITH THE 2022 CALIFORNIA ENERGY CODE (TITLE 24), SECTION 120.8.

TESTING AND ADJUSTING SHALL SHALL INCLUDE MEASUREMENT AND ADJUSTMENT OF SUPPLY, RETURN, EXHAUST (IF PROVIDED), AND OUTDOOR AIRFLOWS TO DESIGN VALUES; VERIFICATION OF REQUIRED VENTILATION AIR QUANTITIES; AND FUNCTIONAL VERIFICATION OF ECONOMIZER OPERATION.

REQUIRED ACCEPTANCE TESTING AND COMMISSIONING, IF APPLICABLE UNDER TITLE 24 SECTION 120.8, SHALL BE PERFORMED IN ACCORDANCE WITH CODE REQUIREMENTS. REQUIRED DOCUMENTATION SHALL BE COMPLETED AND SUBMITTED PRIOR TO FINAL INSPECTION.

MECHANICAL LEGEND

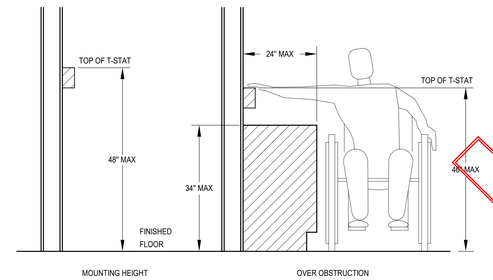
SYMBOL	ABBREV	DESCRIPTION
		REMOVE EXISTING WORK HATCHED AND SHOWN DASHED
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECT
(E)		COORDINATE WITH ELECTRICAL
DS HP-#	DS	DUCT SENSOR (NUMBER INDICATES EQUIPMENT ZONE SERVED)
T AC-#	T'STAT	THERMOSTAT OR TEMPERATURE SENSOR (NUMBER INDICATES EQUIPMENT ZONE SERVED)
H	H'STAT	HUMIDISTAT
CO		CARBON MONOXIDE SENSOR
C2		CARBON DIOXIDE SENSOR
℄	CFM	CUBIC FEET PER MINUTE
ø	DIA	DIAMETER
OR		SYMBOL, SEE EQUIPMENT SCHEDULE
	HHWS	HEATING HOT WATER SUPPLY
	HHWR	HEATING HOT WATER RETURN
	CHW	CHILLED WATER
	CHWR	CHILLED WATER RETURN
	CHWS	CHILLED WATER SUPPLY
	CD	CONDENSATE DRAIN (A.C.)
	CWR	CONDENSER WATER RETURN
	CWS	CONDENSER WATER SUPPLY
	D	DRAIN
	S	STEAM
	LPS	LOW PRESSURE STEAM
	MPS	MEDIUM PRESSURE STEAM
	HPW	HIGH PRESSURE STEAM
	CR	STEAM CONDENSATE RETURN
	RD	REFRIGERANT DISCHARGE
	RL	REFRIGERANT LIQUID
	RS	REFRIGERANT SUCTION
		PIPE UP
		PIPE DOWN
	AV	AIR VENT (VALVE)
	CHV	CHECK VALVE
S	SD	SUCTION DIFFUSER
	CV (2W)	CONTROL VALVE (2-WAY)
	CV (3W)	CONTROL VALVE (3-WAY)
	FCD	AUTOMATIC FLOW CONTROL DEVICE
	SOV	SHUT-OFF VALVE
	BV	COMBINATION BALANCING & SHUT-OFF VALVE
	FEV	FLOW ELEMENT VENTURI
		VALVE ON RISE OR DROP
	STR	STRAINER
	CL	CAPPED LINE
	UP	RISE OR RISER
	DN	DOWN OR DROP
	RV	PRESSURE RELIEF VALVE
	PG	PRESSURE GAUGE WITH BALL VALVE
	FC	FLEXIBLE CONNECTION (PIPE)
	TW	TEST WELL (PETE'S PLUG) - PRESSURE AND/OR TEMPERATURE
	TI	THERMOMETER
	PA	PIPE ANCHOR
	U	UNION

SYMBOL	ABBREV	DESCRIPTION
	CD	CEILING DIFFUSER
	RR	RETURN REGISTER
	ER	EXHAUST REGISTER
	SA	SA DUCT UP (RECTANGULAR)
	SA	SA DUCT DOWN (RECTANGULAR)
	RA/OA	RA/OA DUCT UP (RECTANGULAR)
	RA/OA	RA/OA DUCT DOWN (RECTANGULAR)
	EA	EA DUCT UP (RECTANGULAR)
	EA	EA DUCT DOWN (RECTANGULAR)
	SA	SA DUCT UP (ROUND)
	SA	SA DUCT DOWN (ROUND)
	RA/OA	RA/OA DUCT UP (ROUND)
	RA/OA	RA/OA DUCT DOWN (ROUND)
	EA	EA DUCT UP (ROUND)
	EA	EA DUCT DOWN (ROUND)
24"x12" 18"x12"		RECTANGULAR DUCT TRANSITION
24"ø 18"ø		ROUND DUCT TRANSITION
24"x24" 18"ø		RECTANGULAR TO ROUND DUCT TRANSITION
24"x12"		DUCTWORK (1ST NUMBER INDICATES WIDTH SHOWN), NET INSIDE DIMENSION
	TV	SQUARE ELBOW WITH TURNING VANES
		RADIUS ELBOW
M	MVD	MANUAL VOLUME DAMPER
M	MOD	MOTOR OPERATED DAMPER
BD	BDD	BACKDRAFT DAMPER
FD	FD	FIRE DAMPER
SD	SFD	AUTOMATIC SMOKE AND FIRE DAMPER
SD	SD	DUCT MOUNTED SMOKE DETECTOR
	FLEX	FLEXIBLE CONNECTION (DUCTWORK)
	FLEX	FLEXIBLE CONNECTION OR SEISMIC JOINT
		LINED DUCTWORK (OR PLENUM)

SYMBOL	ABBREV	DESCRIPTION
	AD/AP	ACCESS DOOR / ACCESS PANEL
	AFF	ABOVE FINISHED FLOOR
	AMB	AMBIENT
	AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
	BOD	BOTTOM OF DUCT
	BOP	BOTTOM OF PIPE (AFF)
	BHP	BRAKE HORSE POWER
	CAP	CAPACITY
	CLG	CEILING
	CD	CEILING DIFFUSER
	CONC	CONCRETE
	CONT	CONTINUATION
	°F	DEGREES FAHRENHEIT
	DBA	A-WEIGHTED DECIBELS
	DN	DOWN
	DWGS	DRAWINGS
	DB	DRY BULB
	DTR	DUCT THROUGH ROOF
	EDB	ENTERING DRY BULB
	(E)	EXISTING
	EA	EXHAUST AIR
	ER	EXHAUST REGISTER
	EFF	EFFICIENCY
	ELEV	ELEVATION
	EER	ENERGY EFFICIENCY RATIO
	ESP	EXTERNAL STATIC PRESSURE
	ENT	ENTERING
	EWB	ENTERING WET BULB
	EWT	ENTERING WATER TEMPERATURE
	EXH	EXHAUST
	EXIST	EXISTING
	FF	FINISHED FLOOR
	FIN	FINISH
	FLR	FLOOR
	FT	FEET
	GAL	GALLON
	GPM	GALLONS PER MINUTE
	HOA	HAND-OFF-AUTOMATIC
	HD	HEAD
	Hz	HERTZ
	HP	HORSEPOWER
	IN	INCH
	IEER	INTEGRATED ENERGY EFFICIENCY RATIO
	LVG	LEAVING
	LWT	LEAVING WATER TEMPERATURE
	LD	LINEAR DIFFUSER
	LRA	LOCKED ROTOR AMPS
	MAX	MAXIMUM
	MOCP	MAXIMUM OVERCURRENT PROTECTION
	MBH	ONE THOUSAND B.T.U.'S PER HOUR
	MECH	MECHANICAL
	MIN	MINIMUM
	MCA	MINIMUM CIRCUIT AMPS
	MTD	MOUNTED
	MTG	MOUNTING
	NG	NATURAL GAS
	NC	NORMALLY CLOSED
	NO	NORMALLY OPEN
	OPER	OPERATING
	OA	OUTSIDE AIR
	PH	PHASE
	LBS	POUNDS
	PSIG	POUNDS PER SQUARE INCH GAUGE
	PD	PRESSURE DROP
	RLA	RATED LOAD AMPS
	REF	REFRIGERANT
	REG	REGISTER
	RR	RETURN REGISTER
	RA	RETURN AIR
	RPM	REVOLUTIONS PER MINUTE
	SENS	SENSIBLE
	SS	STAINLESS STEEL
	ST	STEAM
	SA	SUPPLY AIR
	SF	SQUARE FEET
	TEMP	TEMPERATURE
	TYP	TYPICAL
	UNO	UNLESS NOTED OTHERWISE
	UOS	UNLESS OTHERWISE SPECIFIED
	UTR	UP THROUGH ROOF
	VAV	VARIABLE AIR VOLUME
	VFD	VARIABLE FREQUENCY DRIVE
	VTR	VENT THROUGH ROOF
	V	VOLTS
	WG	WATER GAUGE
	WB	WET BULB
	W/	WITH

SHEET LIST

Sheet Number	Sheet Name
M0.001	MECHANICAL LEGENDS AND GENERAL NOTES
M0.002	MECHANICAL SCHEDULES
M0.003	MECHANICAL TITLE-24
M0.004	MECHANICAL TITLE-24
M0.005	MECHANICAL TITLE-24
M1.200	MECHANICAL ZONING PLAN - LEVEL 01
M1.201	MECHANICAL CONSTRUCTION PLAN - LEVEL 01
M1.202	MECHANICAL ROOF PLAN
M1.203	MECHANICAL PIPING PLAN
M5.101	MECHANICAL DETAILS
M6.101	MECHANICAL CONTROLS
M6.102	MECHANICAL CONTROLS



3 MOUNTING HEIGHT OVER OBSTRUCTION
NO SCALE

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

410 BEACON
IRVINE, CA 92618

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
BOJAN LAZAREVIC
M41366
exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
MECHANICAL LEGENDS AND GENERAL NOTES

Scale
NO SCALE

M0.001

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ROOFTOP PACKAGE UNIT SCHEDULE

SYMBOL	MAKE AND MODEL	AREA SERVED	LOCATION	SUPPLY FAN					MIN. OA (CFM)	REFRIGERANT	CAPACITY (MBH)		COOLING COIL					HEATING COIL				FILTERS		ELECTRICAL				OPER. WEIGHT (LBS.)	REMARKS
				CFM	ESP (IN. W.G.)	TYPE	RPM	MAX HP		TYPE	CHARGE	TOTAL	SENS	D.B.	W.B.	AMB. TEMP (°F)	SEER2	CAPACITY (MBH)	AMB (HEATING)	HSPF2	COP	PRE	FINAL	MCA	MOCP	V	PH		
RTU B-1	CARRIER 50GEQM05A3A5-0A0A0	SUITE B	ROOF	1600	1.5	DIRECT	2660	1.11	450	R-454b	11.5	50.1	37.3	55	55	95	16	44.8	46	7.2	3.8	MERV-8	MERV-13	27.0	40	208	3	600	1 2 3 5 6 7
RTU C-1	CARRIER 50GEQM05A3A5-0A0A0	SUITE C	ROOF	1600	1.5	DIRECT	2660	1.11	450	R-454b	11.5	50.1	37.3	55	55	95	16	44.8	46	7.2	3.8	MERV-8	MERV-13	27.0	40	208	3	600	1 2 3 5 6 7
RTU D-1	CARRIER 50GEQM05A3A5-0A0A0	SUITE D	ROOF	1600	1.5	DIRECT	2660	1.11	450	R-454b	11.5	50.1	37.3	55	55	95	16	44.8	46	7.2	3.8	MERV-8	MERV-13	27.0	40	208	3	600	1 2 3 5 6 7

(1) PROVIDE WITH VIBRATION ISOLATION. (2) PROVIDE WITH BACNET INTERFACE. (3) PROVIDE WITH VFD. (4) EQUIPMENT TO BE INSTALLED BY FUTURE TENANT. (5) PROVIDE WITH VIBRATION ISOLATION CURB, CURB APPROXIMATE WEIGHT 425 LBS. (6) UNIT COIL AND CABINET SHALL BE OUTDOOR RATED WITH 3000 HOUR RATED SALT SPRAY FOR MARINE ENVIRONMENTS. (7) PROVIDE WITH DIFFERENTIAL ENTHALPY ECONIMIZER.

AIR HANDLING UNIT SCHEDULE

SYMBOL	MAKE AND MODEL	AREA SERVED	LOCATION	SUPPLY FAN						MIN. OA (CFM)	REFRIGERANT	CAPACITY (MBH)		COOLING COIL				HEATING COIL		FILTERS		ELECTRICAL				OPER. WEIGHT (LBS.)	REMARKS
				CFM	ESP (IN. W.G.)	TYPE	RPM	BHP	SUPPLY FAN MAX HP		TYPE	TOTAL	SENS	D.B.	W.B.	AMB. TEMP (°F)	(MBH)	AMB (HEATING)	PRE	FINAL	MCA	MOCP	V	PH		
AHU A-1	CARRIER 39MW	FUTURE TENANT 1	LOWER ROOF	6000	2.00	DIRECT	1555	4.1	7.5	2000	R-454B	174.3	126.9	60	57	88	181	40	MERV-8	MERV-13	24.2	40	208	3	3,120	1 2 3 4 5 6
AHU A-2	CARRIER 39MW	FUTURE TENANT 1	LOWER ROOF	6000	2.00	DIRECT	1555	4.1	7.5	2000	R-454B	174.3	126.9	60	57	88	181	40	MERV-8	MERV-13	24.2	40	208	3	3,120	1 2 3 4 5 6

(1) PROVIDE WITH VIBRATION ISOLATION. (2) PROVIDE WITH BACNET INTERFACE. (3) PROVIDE WITH VFD. (4) UNIT COIL AND CABINET SHALL BE OUTDOOR RATED WITH 3000 HOUR RATED SALT SPRAY FOR MARINE ENVIRONMENTS. (5) PROVIDE WITH DIFFERENTIAL ENTHALPY ECONIMIZER. (6) PROVIDE WITH DUCT-MOUNTED SMOKE DETECTOR.

CONDENSING UNIT SCHEDULE

SYMBOL	MAKE AND MODEL	AREA SERVED	LOCATION	CAPACITY (MBH)					REFRIGERANT	ELECTRICAL						EFFICIENCY			OPER. WEIGHT (LBS.)	REMARKS
				COOLING			HEATING		TYPE	V	PH	MCA	MOCP	RLA		EER	IEER	COP		
				TOTAL	SENS.	AMB. TEMP (°F)	TOTAL	AMB. TEMP												
CU A-1	CARRIER 38AXQT16A0C	FUTURE TENANT 1	LOWER ROOF	197	148	88	181	40	R-454b	208	3	65.0	90.0	10.9/11.5		10.6	13.6	3.5	922	1 2 3
CU A-2	CARRIER 38AXQT16A0C	FUTURE TENANT 2	LOWER ROOF	197	148	88	181	40	R-454b	208	3	65.0	90.0	10.9/11.5		10.6	13.6	3.5	922	1 2 3

(1) PROVIDE WITH VIBRATION ISOLATION. (2) PROVIDE WITH BACNET INTERFACE. (3) UNIT COIL AND CABINET SHALL BE OUTDOOR RATED WITH 3000 HOUR RATED SALT SPRAY FOR MARINE ENVIRONMENTS.

EXHAUST FAN SCHEDULE

SYMBOL	MAKE AND MODEL	AREA SERVED	LOCATION	CFM	ESP (IN. W.G.)	DRIVE	RPM	MOTOR				OPER WEIGHT (LBS.)	REMARKS
								BHP	MAX HP	V	PH		
EF B	GREENHECK CUE-100HP-VG	BATHROOM EXHAUST	ROOF	600	1.00	DIRECT	2030	0.25	0.50	115	1	70	1 2 3
EF GX-1	GREENHECK USF-15	GENERAL EXHAUST	ROOF	2000	1.00	DIRECT	1684	0.92	1.50	208	3	225	1 2 3
EF GX-2	GREENHECK USF-15	GENERAL EXHAUST	ROOF	2000	1.00	DIRECT	1684	0.92	1.50	208	3	225	1 2 3

(1) PROVIDE WITH VIBRATION ISOLATION. (2) PROVIDE WITH BACNET INTERFACE. (3) PROVIDE WITH VFD.

Zone data				Calculations (Values based off ASHRAE Table 402.1)									
Equipment Type	Equipment Number	Use Type	Area (sf)	ASHRAE Type	Rp (CFM/pp)	Ra (CFM/sf)	Calc Den. (# Occ.)	Occ Den (Occ/1000sf)	CFM	T24 (cfm/sqft)	CFM x 1.3	T24 Min	LARGEST CFM
AHU	A-1	VENT	3000	Cafeteria/fast food dining	7.5	0.18	125	100	1478	0.50	1925	1500	1925
AHU	A-2	VENT	3600	Cafeteria/fast food dining	7.5	0.18	100	100	1398	0.50	1820	1800	1825
RTU	B-1	VENT	825	Cafeteria/fast food dining	7.5	0.18	25	100	336	0.50	440	412.5	450
RTU	C-1	VENT	785	Cafeteria/fast food dining	7.5	0.18	25	100	329	0.50	430	392.5	450
RTU	D-1	VENT	825	Cafeteria/fast food dining	7.5	0.18	25	100	336	0.50	440	412.5	450

1 OUTSIDE AIR CALCULATIONS
NO SCALE

AIR DISTRIBUTION SCHEDULE

SYMBOL	TYPE	INLET SIZE	CFM RANGE	MODEL	ACCESSORIES	STYLE
A	SUPPLY AIR	8"	0-230	FOR INSTALLATION IN LAY-IN CEILING: PRICE PDMC PERFORATED FACE. FOR INSTALLATION IN HARD CEILING, DUCTWORK OR FOR NECK SIZES ABOVE 18x18: PRICE SMCD		MODULAR CORE
		10"	231-350			
		12"	351-500			
		14"	501-680			
		16"	681-840			
		18"	841-960			

SYMBOL	TYPE	INLET SIZE	MAX CFM	MODEL	ACCESSORIES	STYLE
B TG	RETURN, EXHAUST, OR TRANSFER AIR GRILLE	8"	200	FOR INSTALLATION IN LAY-IN CEILING: PRICE PDDR PERFORATED FACE. FOR INSTALLATION IN HARD CEILING, DUCTWORK OR FOR NECK SIZES ABOVE 22x22: PRICE 530		RETURN, EXHAUST, OR TRANSFER AIR GRILLE
		10"	300			
		12"	450			
		14"	600			
		16"	800			
		18"	1000			
		20"	1200			
		22"	1400			
C	SUPPLY AIR	SEE PLANS	SEE PLANS	FOR SIDEWALL-MOUNTED PRICE MODEL 520D S STANDARD FRAME STEEL CONSTRUCTION		SUPPLY REGISTER
D	RETURN AIR OR EXHAUST	SEE PLANS	SEE PLANS	FOR SIDEWALL-MOUNTED PRICE MODEL 535 45° DEFLECTION STEEL CONSTRUCTION		RETURN OR EXHAUST REGISTER

NOTE:
FINAL COLOR, FINISH, AND BORDER TYPE TO BE COORDINATED WITH ARCHITECT.

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
ROMAN LAZARETTI
M41366
exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

COMPLETE FOR PERMIT
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.03945.000

Description
MECHANICAL SCHEDULES

Scale
12" = 1'-0"

M0.002

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 1 of 19)**
Project Name: City Of Irvine Hangar 10 Rehab	**Date Prepared:** 2026-02-19

A. General Information

1	Project Name	City Of Irvine Hangar 10 Rehab			
2	Run Title	90% CDs			
3	Project Location	Hangar 10, Great Park			
4	City	Irvine	5	Standards Version	Compliance 2022
6	Zip code	92618	7	Compliance Software (version)	CBECC 2022.3.2-SP1 (1369)
8	Climate Zone	8	9	Building Orientation (deg)	210
10	Building Type(s)	• Nonresidential	11	Weather File	FULLERTON_STYP20.epw
12	Project Scope	• New envelope and mechanical	13	Number of Dwelling Units	0
14	Total Conditioned Floor Area in Scope (ft²)	9587.0	15	Total # of hotel/motel rooms	0
16	Total Unconditioned Floor Area (ft²)	0	17	Fuel Type	Natural gas
18	Nonresidential Conditioned Floor Area	9587.0	19	Total # of Stories (Habitable Above Grade)	1
20	Residential Conditioned Floor Area	0			

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 2 of 19)**

B. PROJECT SUMMARY

Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.

Building Components Complying via Performance						Building Components Complying Prescriptively	
Envelope (See Table G)	Nonres	Performance	Solar Thermal Water Heating (See Table I3)	☐	Performance	The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).	
	MultiFam	Not Included		☒	Not Included		
Mechanical (See Table H)	Nonres	Performance	Covered Process: Commercial Kitchens (see Table J)	☐	Performance	Indoor Lighting (Unconditioned) 140.6 & 170.2(e)	NRCC-LTI-E is required
	MultiFam	Not Included		☒	Not Included	Outdoor Lighting 140.7 & 170.2(e)	NRCC-LTO-E is required
Domestic Hot Water (See Table I)	Nonres	Performance	Covered Process: Laboratory Exhaust (see Table J)	☐	Performance	Sign Lighting 140.8 & 170.2(e)	NRCC-LTS-E is required
	MultiFam	Not Included		☒	Not Included	**Building Components Complying with Mandatory Measures**	
Lighting (Indoor Conditioned, see Table K)	Nonres	Not Included	Photovoltaics (see Table F)	☐	Performance	Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)	
	MultiFam	Not Included		☒	Not Included	Electrical Power Distribution 110.11	NRCC-ELC-E is required
			Battery (see Table F)	☐	Performance	Commissioning 120.8	NRCC-CXR-E is required
				☒	Not Included	Solar and Battery 110.10	NRCC-SAB-E is required

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 3 of 19)**

C1. COMPLIANCE SUMMARY

	COMPLIES[1]		
	Time Dependent Valuaton (TDV)		Source Energy Use
	Efficiency[1] (kBtu/ft² - yr)	Total[2] (kBtu/ft² - yr)	Total[2] (kBtu/ft² - yr)
Standard Design	329.22	329.22	38.3
Proposed Design	314.96	314.96	26.19
Compliance Margins	**14.26**	**14.26**	**12.11**
	Pass	**Pass**	**Pass**

[1] Efficiency measures include improvements like a better building envelope and more efficient equipment
[2] Compliance Totals include efficiency, photovoltaics and batteries
[3] New Construction, Complete Addition Scope: Building complies when all efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded
Existing, Addition and Alteration Scope: Building complies when efficiency compliance margin is greater than or equal to zero and unmet load hour limits are not exceeded

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 4 of 19)**

C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft² - yr)

	COMPLIES[2]		
Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	46.32	41.97	4.35
Space Cooling	101.68	139.45	-37.77
Indoor Fans	105.03	60.68	44.35
Heat Rejection	0	0	0
Pumps & Misc.	0	0	0
Domestic Hot Water	12.38	12.6	-0.22
Indoor Lighting	63.81	60.26	3.55
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**329.22**	**314.96**	**14.26 (4.3%)**
Photovoltaics	---	---	---
Batteries	---	---	---
TOTAL COMPLIANCE	**329.22**	**314.96**	**14.26 (4.3%)**

[1] Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 5 of 19)**

C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	203.38	203.38	---
Process	---	---	---
Other Ltg	---	---	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**532.6**	**518.34**	**14.26 (2.7%)**

[1] Notes: This table is not used for Energy Code Compliance.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 6 of 19)**

C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kBtu/ft² /yr)

	COMPLIES[2]		
Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE)[1]
Space Heating	14.97	6.25	8.72
Space Cooling	4.81	6.19	-1.38
Indoor Fans	10.61	6	4.61
Heat Rejection	0	0	0
Pumps & Misc.	0	0	0
Domestic Hot Water	1.25	1.27	-0.02
Indoor Lighting	6.66	6.48	0.18
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**38.3**	**26.19**	**12.11 (31.6%)**
Photovoltaics	---	---	---
Batteries	---	---	---
TOTAL COMPLIANCE	**38.3**	**26.19**	**12.11 (31.6%)**

[1] Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 7 of 19)**

C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE)[1]
Receptacle	18.77	18.77	---
Process	---	---	---
Other Ltg	---	---	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**57.07**	**44.96**	**12.11 (21.2%)**

[1] Notes: This table is not used for Energy Code Compliance.

C6. 'ABOVE CODE' QUALIFICATIONS

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 8 of 19)**

C7. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	---	13.5	---	156.3	---	---
Space Cooling	25.7	33.8	-8.1	---	---	---
Indoor Fans	35.3	20	15.3	---	---	---
Heat Rejection	---	---	---	---	---	---
Pumps & Misc.	---	---	---	---	---	---
Domestic Hot Water	4.2	4.2	0	---	---	---
Indoor Lighting	20.8	19.6	1.2	---	---	---
Flexibility	---	---	---	---	---	---
EFFICIENCY TOTAL	**86**	**91.1**	**-5.1**	**156.3**	**0**	**156.3**
Photovoltaics	---	---	---	---	---	---
Batteries	---	---	---	---	---	---
ENERGY USE SUBTOTAL	**86**	**91.1**	**-5.1**	**156.3**	**0**	**156.3**
Receptacle	68.6	68.6	0	---	---	---
Process	---	---	---	---	---	---
Other Ltg	---	---	---	---	---	---
Process Motors	---	---	---	---	---	---
ENERGY USE TOTAL	**154.6**	**159.7**	**-5.1**	**156.3**	**0**	**156.3**

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	**(Page 9 of 19)**

C8. ENERGY USE INTENSITY (EUI)

	Standard Design (kBtu/ft² / yr)	Proposed Design (kBtu/ft² / yr)	Margin (kBtu/ft² / yr)	Margin Percentage
GROSS EUI[1]	71.32	56.84	14.48	20.3
NET EUI[1]	71.32	56.84	14.48	20.3

[1] Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.

D1. EXCEPTIONAL CONDITIONS

• The aged solar reflectance and aged thermal emittance must be listed in the Cool Roof Rating Council database of certified products. For projects where initial reflectance is used, the initial reflectance must be listed, and the aged reflectance is calculated by the software program and used in the compliance model.
• Project is claiming Exception 5 to Section 140.10(a). Multitenant buildings in areas where a load-serving entity does not provide either a virtual net metering (VNEM) or community solar program.
• Project is claiming Exception 2 to Section 140.10(b): No battery storage system is required in buildings with battery storage system requirements with less than 10 kWh rated capacity.

E4. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

No PV required - SARA is below 4 kW DC

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

01	02	03	04
Opaque Surfaces & Orientation	**Total Gross Surface Area (ft²)**	**Total Fenestration Area (ft²)**	**Window to Wall Ratio (%)**
North-Facing[1]	2765.04	696	25.17

Notes
[1]North-Facing is oriented to within 45 degrees of true north, including 4500'00" east of north (NE), but excluding 4500'00" west of north (NW),
[2]East-Facing is oriented to within 45 degrees of true east, including 4500'00" south of east (SE), but excluding 4500'00" north of east (NE),
[3]South-Facing is oriented to within 45 degrees of true south, including 4500'00" west of south (SW), but excluding 4500'00" east of south (SE),
[4]West-Facing is oriented to within 45 degrees of true west, including 4500'00" north of west (NW), but excluding 4500'00" south of west (SW),

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
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	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER BOJAN LAZAREVIC M41366 Exp. 12/31/26 MECHANICAL STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
MECHANICAL TITLE-24

Scale

M0.003

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G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

01	02	03	04
Opaque Surfaces & Orientation	Total Gross Surface Area (ft²)	Total Fenestration Area (ft²)	Window to Wall Ratio (%)
East-Facing[2]	1507.17	537	35.63
South-Facing[3]	2765.04	696	25.17
West-Facing[4]	1507.17	166.14	11.02
Total	**8544.42**	**2095.14**	**24.52**
Roof	9732.56	0	0

Notes
[1] North-Facing is oriented to within 45 degrees of true north, including 4500'00" east of north (NE), but excluding 4500'00" west of north (NW),
[2] East-Facing is oriented to within 45 degrees of true east, including 4500'00" south of east (SE), but excluding 4500'00" north of east (NE),
[3] South-Facing is oriented to within 45 degrees of true south, including 4500'00" west of south (SW), but excluding 4500'00" east of south (SE),
[4] West-Facing is oriented to within 45 degrees of true west, including 4500'00" north of west (NW), but excluding 4500'00" south of west (SW),

G2A. ROOFING PRODUCT SUMMARY (NONRESIDENTIAL)

01	02	03	04	05	06
Assembly Name	Roof Pitch	Roof Rise (x in 12)	Aged Solar Reflectance	Thermal Emittance	SRI
Flat Roof	LowAndSteepSlope	N/A	0.63	0.87	75

G4. NONRESIDENTIAL AIR BARRIER

01	02
Building Story Name	Air Barrier
L01	No air barrier

G5. OPAQUE SURFACE ASSEMBLY SUMMARY

01	02	03	04	05	06		07	08	09	10
Surface Name	Construction Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value		Units	Value	Description of Assembly Layers	Status[1]
					Interior	Exterior				
Ext Wall 1 & 2	Exterior Wall	8,217.64	Wood	19	N/A	N/A	U-factor	0.0631	Metal Siding - 1/16 in. Air - Wall - 1/2 in. Plywood - 3/4 in. Wood Framed Wall + R-19 Gypsum Board - 5/8 in.	N
Ext Wall 4	Exterior Wall	326.78	Wood	19	N/A	N/A	U-factor	0.0662	Stucco - 7/8 in. Plywood - 3/4 in. Wood Framed Wall + R-19 Gypsum Board - 5/8 in.	N
Int Wall	Interior Wall	4,003.31	Wood	19	N/A	N/A	U-factor	0.0665	Gypsum Board - 5/8 in. Wood Framed Wall + R-19 Gypsum Board - 5/8 in.	N
Roof over Truss	Roof	4,878.1	N/A	0	N/A	30	U-factor	0.0308	Single Ply Roofing - 1/4 in. Fiberboard sheathing - 1/2 in. Compliance Insulation R30.00 Plywood - 1/2 in.	N
Flat Roof	Roof	4,854.46	N/A	0	N/A	30	U-factor	0.0318	Building Paper - 1/16 in. Compliance Insulation R30.00 Plywood - 1/2 in.	N
Slab on Grade	Underground Floor	9,587.0	N/A	0	N/A	N/A	F-factor	0.73	Slab Type =Unheated slab on grade Insulation Orientation =None Insulation R-Value =none	N

[1] Status: N - New, A - Altered, E - Existing

G6A. OPAQUE DOOR SUMMARY (NONRESIDENTIAL)

01	02	03	04
Assembly Name	Area (ft²)	Overall U-factor	Status[1]
Door	96.0	0.5	N

[1] Status: N - New, A - Altered, E - Existing

G7A. FENESTRATION ASSEMBLY SUMMARY (NONRESIDENTIAL)

01	02	03	04	05	06	07	08	09
Fenestration Assembly Name	Fenestration Type/ Product Type / Frame Type	Certification Method[1]	Assembly Method	Area (ft²)	Overall U-factor	Overall SHGC	Overall VT	Status[2]
Window Vitro Solarban 60 on Starphire	Vertical fenestration Curtain Wall N/A	NFRC	Manufactured	1,495.14	0.55	0.43	0.74	N
Door Vitro Solarban 60 on Starphire	Vertical fenestration Glazed door Metal	Default 110.6	Manufactured	600	0.77	0.59	0.53	N

[1] Notes: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.
[2] Status: N - New, A - Altered, E - Existing

G8. OVERHANG DETAILS

01	02	03	04	05	06	07
Fenestration Tag/ ID	Azimuth	Depth (ft)	Height from Top of Sill to Overhang (ft)	Right Extent (ft)	Left Extent (ft)	Flap Height
L01 Suite A 101 N Window 1	0.01	7	6	0	0	N/A
L01 Suite A 101 S Window 2	180	1	6	0	0	N/A

H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)

01	02	03	04	05	06	07	08	09	10	11	12
Equipment Name	Equipment Type	Qty	Heating				Cooling			Economizer Type (if present)	Status[1]
			Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency		
AHU-1	Package SZ VAV Heat Pump Air System	1	181	0	COP	3.5	197	EER	10.6	Differential Enthalpy	N
AHU-2	Package SZ VAV Heat Pump Air System	1	181	0	COP	3.5	197	EER	10.6	Differential Enthalpy	N
RTU B-1	Package SZ VAV Heat Pump Air System	1	44.8	0	COP HSPF2	3.8 7.2	50.1	EER2 SEER2	11.5 16	Differential Enthalpy	N
RTU C-1	Package SZ VAV Heat Pump Air System	1	44.8	0	COP HSPF2	3.8 7.2	50.1	EER2 SEER2	11.5 16	Differential Enthalpy	N
RTU D-1	Package SZ VAV Heat Pump Air System	1	44.8	0	COP HSPF2	3.8 7.2	50.1	EER2 SEER2	11.5 16	Differential Enthalpy	N

[1] Status: N - New, A - Altered, E - Existing

H3. NONRESIDENTIAL / COMMON USE AREA FAN SYSTEMS SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12	13
Name or Item Tag	Qty	Design OA CFM	Supply Fan				Return / Relief Fan					Status[1]
			CFM	Power	Power Units	Control	Fan Type	CFM	Power	Power Units	Control	
AHU-1	1	2000	6,000	4.75	BHP	VSD	N/A	N/A	N/A	N/A	N/A	N
AHU-2	1	2000	6,000	4.75	BHP	VSD	N/A	N/A	N/A	N/A	N/A	N
RTU B-1	1	450	1,600	1.11	BHP	VSD	N/A	N/A	N/A	N/A	N/A	N
RTU C-1	1	450	1,600	1.11	BHP	VSD	N/A	N/A	N/A	N/A	N/A	N
RTU D-1	1	450	1,600	1.11	BHP	VSD	N/A	N/A	N/A	N/A	N/A	N

[1] Status: N - New, A - Altered, E - Existing

H5. GENERAL EXHAUST FAN SUMMARY

01	02	03	04	05	06	07	08
System ID	Zone Name	Qty	CFM	Power	Power Units	Continuous Operation?	Status[1]
EF GX-1 & EF-B Combined	Zn AHU-1	1	2600.09	1.42	BHP	No	N
EF GX-2	Zn AHU-2	1	2000	0.95	BHP	No	N

[1] Status: N - New, A - Altered, E - Existing

H8. SYSTEM SPECIAL FEATURES

01	02	03	04
System Name	Equipment Type	Interlocks per 140.4(n)[1]	Other Special Features and Controls
AHU-1	Package SZ VAV Heat Pump Air System	No	Differential Enthalpy
AHU-2	Package SZ VAV Heat Pump Air System	No	Differential Enthalpy

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

[1] Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.

H8. SYSTEM SPECIAL FEATURES

01	02	03	04
System Name	Equipment Type	Interlocks per 140.4(n)[1]	Other Special Features and Controls
RTU B-1	Package SZ VAV Heat Pump Air System	N/A	Differential Enthalpy
RTU C-1	Package SZ VAV Heat Pump Air System	N/A	Differential Enthalpy
RTU D-1	Package SZ VAV Heat Pump Air System	N/A	Differential Enthalpy
Non-Res WH	Service Hot Water	N/A	Fixed Temperature Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

[1] Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.

H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

01	02	03	04	05	06	07
Zone Name	Mechanical Ventilation				Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# of People	Supply OA CFM	Exhaust CFM		
Zn AHU-1	Exhaust - Janitor closets, trash rooms, recycling Exhaust - Toilets, public Food Service - Cafeteria/fast-food dining	16.69	2000	2600.09	3424.59	N/A
Zn AHU-2	NA Food Service - Cafeteria/fast-food dining	18.31	2000	2000	3679.2	N/A
Zn RTU B-1	Food Service - Cafeteria/fast-food dining	4.01	450	0	802.29	N/A
Zn RTU C-1	Food Service - Cafeteria/fast-food dining	4.13	450	0	826.55	N/A

H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

01	02	03	04	05	06	07
Zone Name	Mechanical Ventilation				Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# of People	Supply OA CFM	Exhaust CFM		
Zn RTU D-1	Food Service - Cafeteria/fast-food dining	4.27	450	0	854.5	N/A

H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12
System ID	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			VSD
			Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	
AHU-1_TU	Variable Air Volume No Reheat Box	1	N/A	N/A	6,000	2,000	0.33	N/A	N/A	N/A	☐
AHU-2_TU	Variable Air Volume No Reheat Box	1	N/A	N/A	6,000	2,000	0.33	N/A	N/A	N/A	☐
RTU B-1_TU	Variable Air Volume No Reheat Box	1	N/A	N/A	1,500	421.88	0.28	N/A	N/A	N/A	☐
RTU C-1_TU	Variable Air Volume No Reheat Box	1	N/A	N/A	1,500	421.88	0.28	N/A	N/A	N/A	☐
RTU D-1_TU	Variable Air Volume No Reheat Box	1	N/A	N/A	1,500	421.88	0.28	N/A	N/A	N/A	☐

I1. WATER HEATER EQUIPMENT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value Int/Ext	Standby Loss Fraction	1st Hr. Rating or Flow Rate (gal)	Heat Pump Type	Tank Location or Ambient Condition
EWH-1	Electricity	Storage	1	33	4.5	kW	0.92	UEF	N/A	N/A	60	N/A	N/A

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections made by Documentation Author indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online

Building Component	Form/Title
Envelope	NRCI-ENV-E - Envelope (for all buildings)
Mechanical	NRCI-MCH-E - For all buildings with Mechanical Systems
Plumbing	NRCI-PLB-E - For all buildings with Plumbing Systems
Indoor Lighting	NRCI-LTI-E - Indoor Lighting (for all buildings)

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections made by Documentation Author indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction. Lighting controls and mechanical NRCAs must be completed through an Acceptance Test Technician Certification Provider (ATTCP).

Building Component[1]	Form/Title & System Name(s)
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Indoor Lighting	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls.
Indoor Lighting	NRCA-LTI-03-A - Automatic Daylight Controls.
Mechanical	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap
	AHU-1, AHU-2, RTU B-1, RTU C-1 and RTU D-1.
Mechanical	NRCA-MCH-05-A - Air Economizer Controls
	AHU-1, AHU-2, RTU B-1, RTU C-1 and RTU D-1.
Mechanical	NRCA-MCH-07-A Supply Fan Variable Flow Controls
	AHU-1, AHU-2, RTU B-1, RTU C-1 and RTU D-1.
Mechanical	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units
	AHU-1, AHU-2, RTU B-1, RTU C-1 and RTU D-1.

N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Selections made by Documentation Author indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online

There are no Certificates of Verification applicable to this project

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	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER BOJAN LAZAREVIC M41366 Exp. 12/31/26 MECHANICAL STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
MECHANICAL TITLE-24

Scale

M0.004

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 19 of 19)

Documentation Author's Declaration Statement

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Hans Marsman LEED AP	Documentation Author Signature:
Company: Marsman Consulting	Signature Date:
Address: 440 N Barranca Ave #5726	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Covina, CA 91723	Phone: (619) 573-6374

CEA Hans Marsman R19-20-0003 MECH-ENV-20012

Digitally signed by Hans Marsman, LEED AP, CEA
Date: 2026.02.19 15:07:47-06'00'

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 understand that a registered 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, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name:	Responsible Designer Signature: REFER TO G2.100.	
Company: Gensler		
Address: 4675 MacArthur Court Suite 100	Date Signed:	
City/State/Zip: Newport Beach, CA 92660	License #: C32405	
Phone: 949.863.9434	Title: Architect	Scope: Envelope
Responsible Designer Name: Bojan Lazarevic, PE	Responsible Designer Signature:	
Company: MA Engineers		
Address: 5160 Carroll Canyon Rd, Suite 200	Date Signed: 2/19/2026	
City/State/Zip: San Diego, CA 92121	License #: M41366	
Phone: (858) 200-0030	Title: Engineer	Scope: Mechanical

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	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
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Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name

HANGAR 10
RECONSTRUCTION

Project Number

007.3945.000

Description

MECHANICAL TITLE-24

Scale

M0.005

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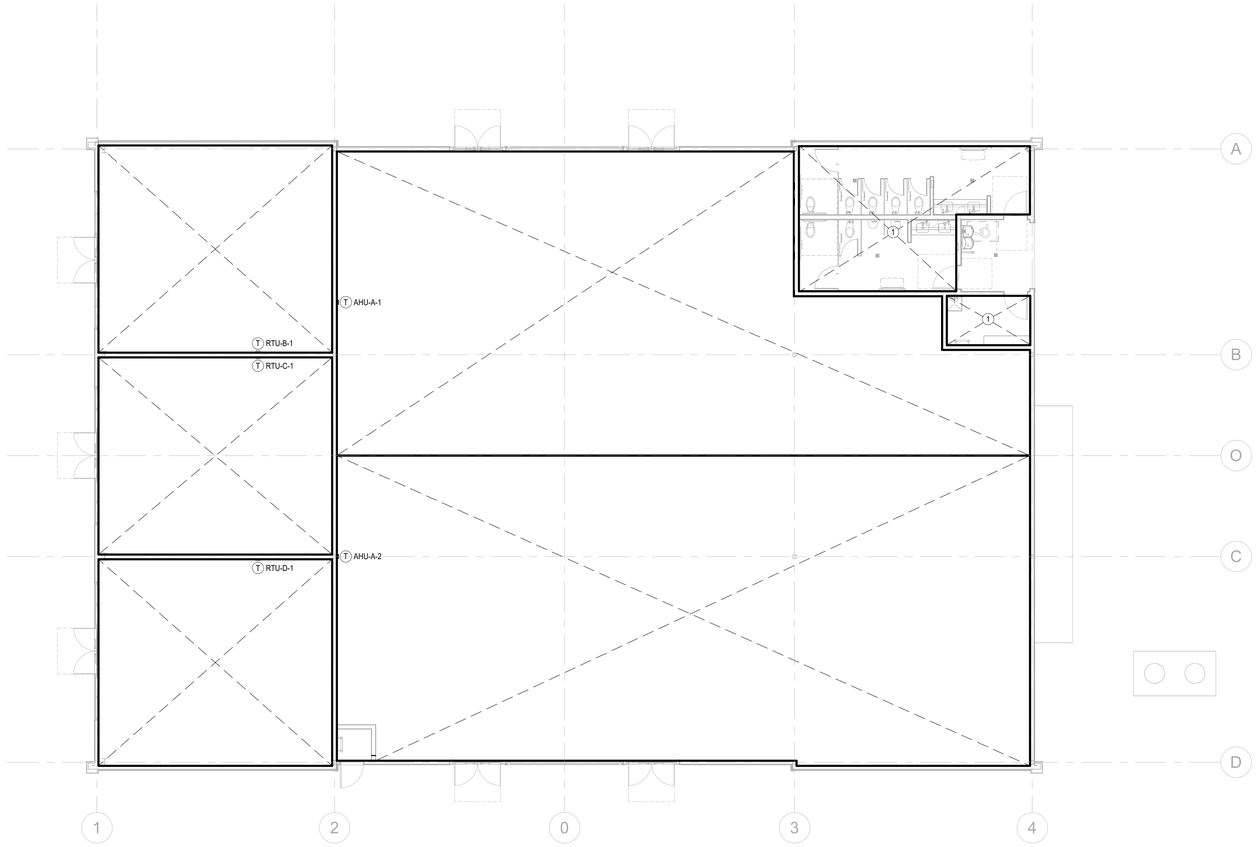

SHEET NOTES

1 EXHAUST ONLY.

GENERAL NOTES

A. ALL EXPOSED DUCTWORK TO BE INTERNALLY LINED.

B. BALANCE RETURN GRILLES TO ENSURE +0.05 IN WG. BUILDING PRESSURE.

C. ALL FLEXIBLE DUCTWORK SHALL BE ACOUSTICALLY RATED.

D. ALL SUPPLY DUCTWORK TO BE EXTERNALLY WRAPPED UNLESS NOTED OTHERWISE.

E. ENSURE ALL RETURN PATHS ARE MAINTAINED BACK TO THE RETURN MAIN.

F. CONTRACTOR TO FIELD VERIFY ALL AS-BUILT CONDITIONS BEFORE COMMENCING WORK.

G. CONTRACTOR TO PROVIDE PRE-TAB OF ALL SPACES BEFORE DEMOLITION.

H. ALL EXISTING PIPE AND DUCT INSULATION TO BE MAINTAINED. NEW INSULATION TO ONLY BE PROVIDED ON NEW OR DAMAGED WORK.

I. ALL EQUIPMENT AND DUCTWORK INDICATED TO REMAIN SHALL BE PROTECTED IN PLACE BY CONTRACTOR.

J. MATERIALS EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2 CMC 2022.

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STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.0945.000

Description

MECHANICAL ZONING PLAN - LEVEL 01

Scale

1/8" = 1'-0"

Ref North

M1.200

1 MECHANICAL ZONING PLAN - LEVEL 01
SCALE: 1/8" = 1'-0"

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SHEET NOTES

1. DUCT COMING DOWN FROM RTU-B-1 ON ROOF TO BE CAPPED AND PROTECTED IN PLACE FOR FUTURE TENANT IMPROVEMENT.
2. DUCT COMING DOWN FROM RTU-C-1 ON ROOF TO BE CAPPED AND PROTECTED IN PLACE FOR FUTURE TENANT IMPROVEMENT.
3. DUCT COMING DOWN FROM RTU-D-1 ON ROOF TO BE CAPPED AND PROTECTED IN PLACE FOR FUTURE TENANT IMPROVEMENT.
4. 12"x12" EXHAUST AIR RISER FOR TOILET EXHAUST GOING DOWN.
5. PROVIDE LOUVER WITH 0.5 SQUARE FEET OF FREE AREA 18 FOOT ABOVE FINISHED FLOOR.
6. PROVDE LOUVER WITH 0.5 SQUARE FEET OF FREE AREA 1 FOOT ABOVE FINISHED FLOOR.

GENERAL NOTES

A. ALL EXPOSED DUCTWORK TO BE INTERNALLY LINED.

B. BALANCE RETURN GRILLES TO ENSURE +0.05 IN WG. BUILDING PRESSURE.

C. ALL FLEXIBLE DUCTWORK SHALL BE ACOUSTICALLY RATED.

D. ALL SUPPLY DUCTWORK TO BE EXTERNALLY WRAPPED UNLESS NOTED OTHERWISE.

E. ENSURE ALL RETURN PATHS ARE MAINTAINED BACK TO THE RETURN MAIN.

F. CONTRACTOR TO FIELD VERIFY ALL AS-BUILT CONDITIONS BEFORE COMMENCING WORK.

G. CONTRACTOR TO PROVIDE PRE-TAB OF ALL SPACES BEFORE DEMOLITION.

H. ALL EXISTING PIPE AND DUCT INSULATION TO BE MAINTAINED. NEW INSULATION TO ONLY BE PROVIDED ON NEW OR DAMAGED WORK.

I. ALL EQUIPMENT AND DUCTWORK INDICATED TO REMAIN SHALL BE PROTECTED IN PLACE BY CONTRACTOR.

J. MATERIALS EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2 CMC 2022.

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BUILDING SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
MECHANICAL CONSTRUCTION PLAN - LEVEL 01

Scale
1/8" = 1'-0"

Ref North

M1.201

1 MECHANICAL CONSTRUCTION PLAN - LEVEL 01
SCALE: 1/8" = 1'-0"

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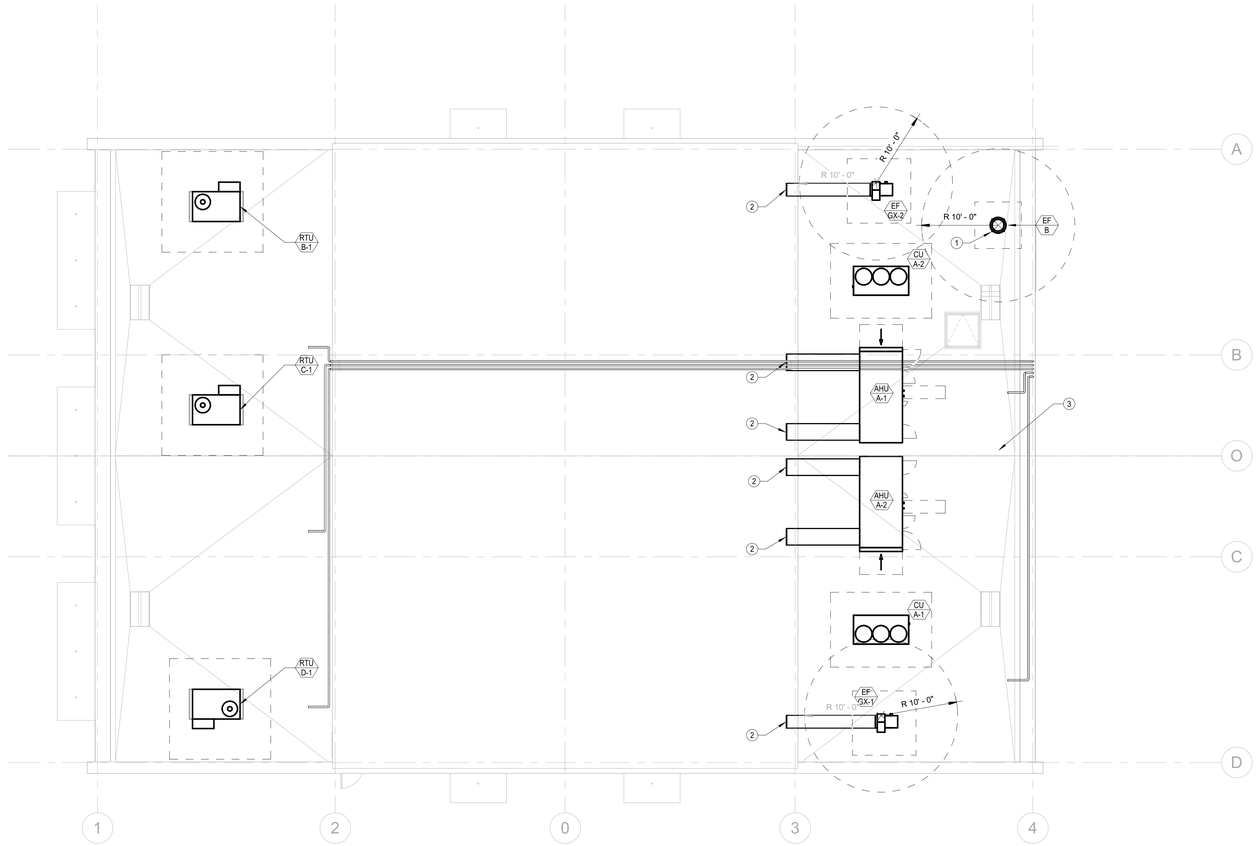

1 MECHANICAL ROOF PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. 12"x12" EXHAUST AIR RISER FOR TOILET EXHAUST GOING DOWN.
2. DUCT TO BE CAPPED AND PROTECTED IN PLACE FOR FUTURE TENANT IMPROVEMENT.
3. PER SECTION 3-20-1.B OF THE ZONING ORDINANCE, SCREENING SHALL BE PROVIDED SO THAT MATERIALS STORED IN ANY OUTDOOR STORAGE AREA AND/OR EQUIPMENT AT GRADE OR ON THE ROOF AREA SCREENED FROM ADJACENT STREETS, NO MATTER THE STREET GRADE, AND ALL PROPERTIES AT THE SAME GRADE.

GENERAL NOTES

A. ALL EXPOSED DUCTWORK TO BE INTERNALLY LINED.

B. BALANCE RETURN GRILLES TO ENSURE +0.05 IN WG. BUILDING PRESSURE.

C. ALL FLEXIBLE DUCTWORK SHALL BE ACOUSTICALLY RATED.

D. ALL SUPPLY DUCTWORK TO BE EXTERNALLY WRAPPED UNLESS NOTED OTHERWISE.

E. ENSURE ALL RETURN PATHS ARE MAINTAINED BACK TO THE RETURN MAIN.

F. CONTRACTOR TO FIELD VERIFY ALL AS-BUILT CONDITIONS BEFORE COMMENCING WORK.

G. CONTRACTOR TO PROVIDE PRE-TAB OF ALL SPACES BEFORE DEMOLITION.

H. ALL EXISTING PIPE AND DUCT INSULATION TO BE MAINTAINED. NEW INSULATION TO ONLY BE PROVIDED ON NEW OR DAMAGED WORK.

I. ALL EQUIPMENT AND DUCTWORK INDICATED TO REMAIN SHALL BE PROTECTED IN PLACE BY CONTRACTOR.

J. MATERIALS EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2 CMC 2022.

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BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
MECHANICAL ROOF PLAN

Scale
1/8" = 1'-0"

Ref North

M1.202

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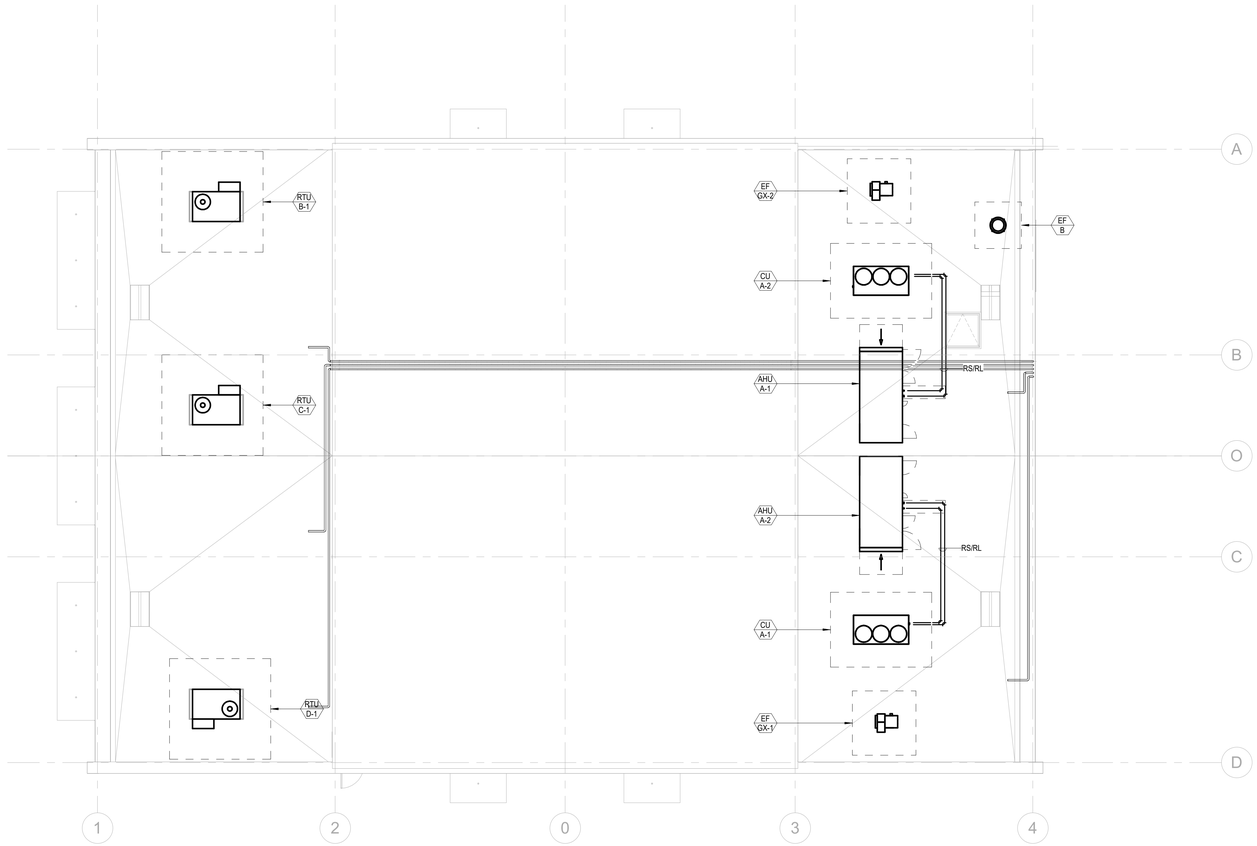

1 MECHANICAL PIPING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

GENERAL NOTES

A. ALL EXPOSED DUCTWORK TO BE INTERNALLY LINED.

B. BALANCE RETURN GRILLES TO ENSURE +0.05 IN WG. BUILDING PRESSURE.

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Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
MECHANICAL PIPING PLAN

Scale
1/8" = 1'-0"

Ref North

M1.203

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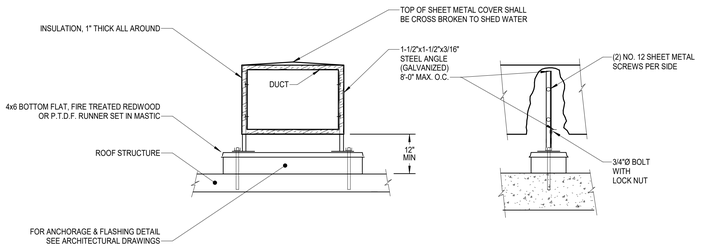
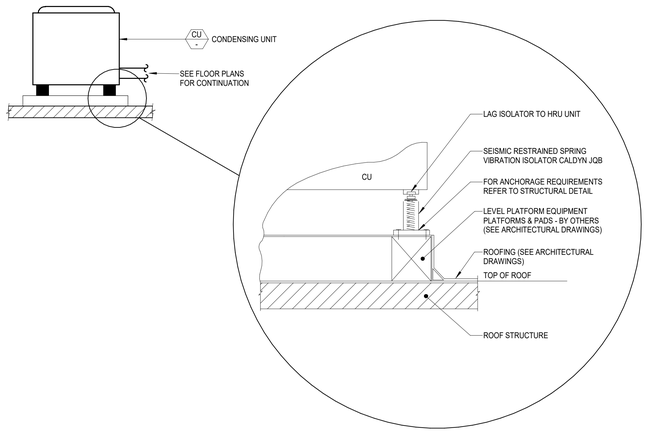
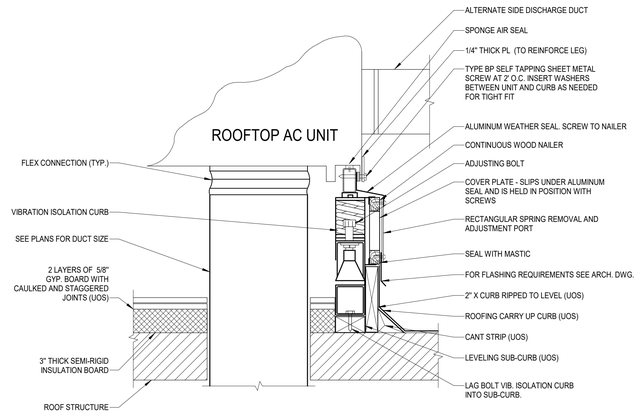


7 RECTANGULAR DUCT ROOF MOUNTED DETAIL
NO SCALE



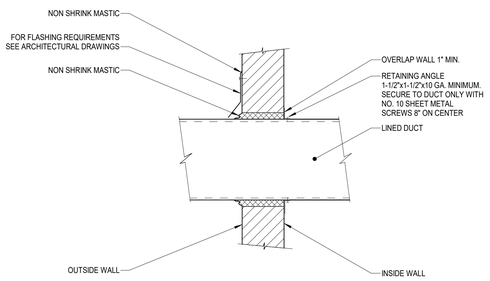
4 FUTURE CONDENSING UNIT MOUNTING DETAIL
NO SCALE



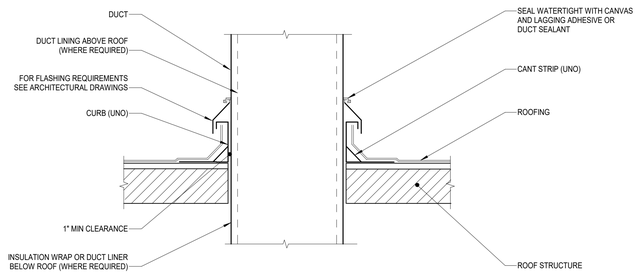
NOTES:

1. COORDINATE EXACT LOCATION AND FRAMING OF ROOF OPENING WITH GENERAL CONTRACTOR.
2. PROVIDE ACOUSTICAL LINING IN THE SUPPLY AND RETURN AIR PLENUMS AND THE FIRST 10 FEET OF SUPPLY AND RETURN AIR DUCT.

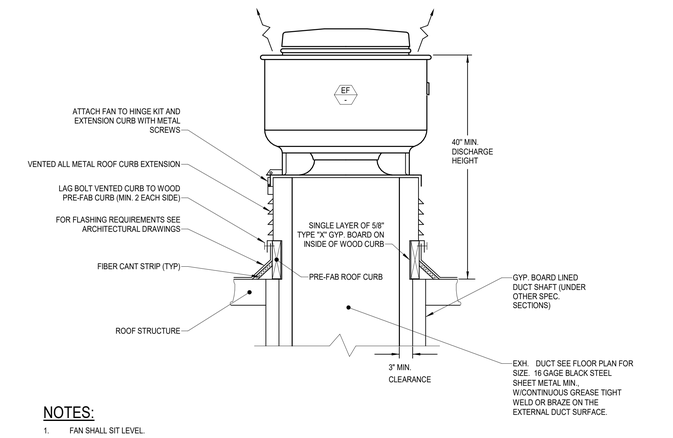
1 FUTURE AIR CONDITIONING UNIT MOUNTING DETAIL W/FACTORY CURB
NO SCALE



8 DUCT THROUGH EXTERIOR WALL DETAIL
NO SCALE



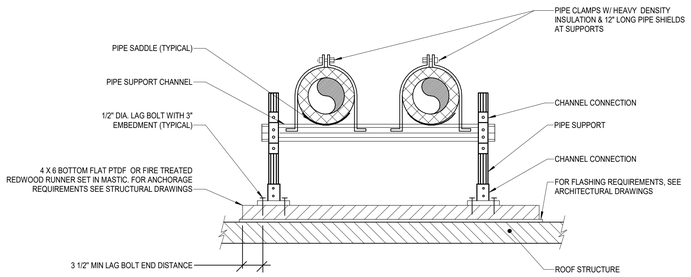
5 DUCT THROUGH ROOF DETAIL
NO SCALE



NOTES:

1. FAN SHALL SIT LEVEL.

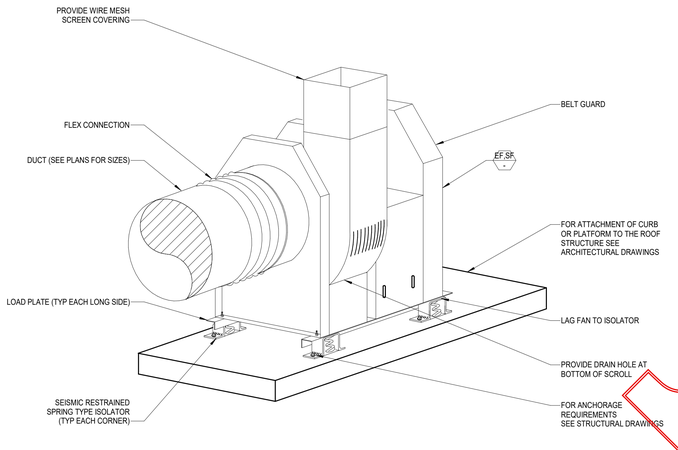
2 FUTURE KITCHEN EXHAUST FAN MOUNTING DETAIL
NO SCALE



NOTES:

1. PLACE VERTICAL SUPPORTS WITHIN 24" OF ELBOWS & T-JOINTS
2. ALL PARTS SHALL BE STAINLESS STEEL OR GALVANIZED FOR EXTERIOR USE.
3. PIPE CLAMPS SECURED TIGHT AT ANCHOR SUPPORTS.
4. PIPE CLAMPS SECURED WITH 1/8" SPACING AT OTHER SUPPORTS.

6 ROOF MOUNTED PIPING SUPPORT DETAIL
NO SCALE



NOTES:

1. INSTALL UNIT ON LEVEL CURB OR PLATFORM.

3 FUTURE UTILITY FAN MOUNTING DETAIL
NO SCALE

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Seal / Signature

REGISTERED PROFESSIONAL ENGINEER BOJAN LAZAREVIC M41366 Exp. 12/31/26 MECHANICAL STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
MECHANICAL DETAILS

Scale
12" = 1'-0"

M5.101

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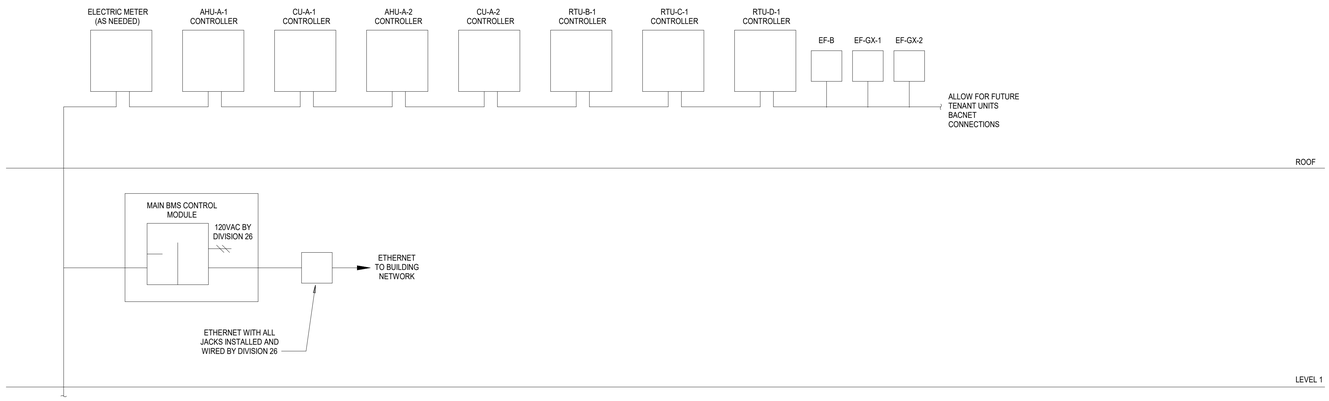
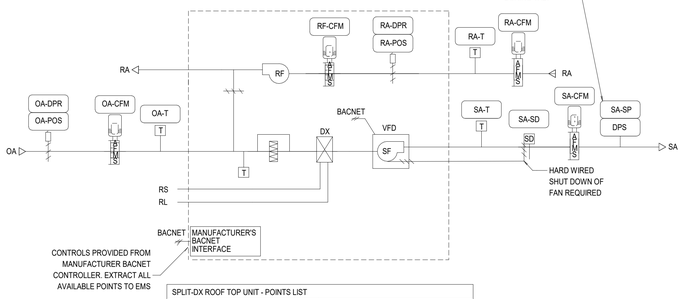


2 BAS ARCHITECTURE
NO SCALE

CONTROLS LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AI	DDC ANALOG INPUT POINT W/ ADJUSTABLE PID GAIN CONTROL	P	ROOM PRESSURE SENSOR
AO	DDC ANALOG OUTPUT POINT W/ ADJUSTABLE PID GAIN CONTROL	LAN	LOCAL AREA NETWORK
DI	DDC DIGITAL INPUT POINT W/ INDICATING LIGHT ON DDC PANEL	DDC	DIRECT DIGITAL CONTROL
DO	DDC DIGITAL OUTPUT POINT W/ MANUAL OVERIDE AND INDICATING LIGHT ON DDC PANEL	PID	PROPORTIONAL, INTEGRAL, DIRIVITIVE
T	TEMPERATURE SENSOR	TSP	TWISTED SHIELDED PAIR
T	TEMPERATURE SENSOR W/ PIPING WELL	DP	DIFFERENTIAL PRESSURE
F	FLOW METER	E	COORDINATE WITH ELECTRICAL
FS	FLOW SWITCH - PROVIDE DIRECT HARDWARE CONNECTION TO BOILER, CHILLER OR ASSOCIATED EQUIPMENT	CFM	AIR FLOW SENSOR
P	PRESSURE SENSOR		
DPS	DIFFERENTIAL PRESSURE SENSOR		
CSR	CURRENT SENSING RELAY		
S.D.	DUCT SMOKE DETECTOR - COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER SUPPLY		
	DAMPER ACTUATOR		
HPS	HIGH LIMIT STATIC PRESSURE SWITCH WITH MANUAL RESET HARD WIRE DIRECTLY TO VFD SAFETY CIRCUIT AND PROVIDE DI POINT		
LPS	LOW LIMIT STATIC PRESSURE SWITCH WITH MANUAL RESET HARD WIRE DIRECTLY TO VFD SAFETY CIRCUIT AND PROVIDE DI POINT		
SP	STATIC PRESSURE SENSOR		
AF	AIR FLOW SENSOR - PARAGON MODEL NO. FE-1050 WITH FIT-1001M OR EQUAL		
	TWO-WAY CONTROL VALVE - VERIFY & PROVIDE A VALVE SCHEDULE		
	THREE-WAY CONTROL VALVE - VERIFY & PROVIDE A VALVE SCHEDULE		
VPS	VELOCITY PRESSURE SENSOR		

1 CONTROLS LEGEND
NO SCALE



SPLIT-DX ROOF TOP UNIT - POINTS LIST					
OBJECT DESCRIPTION	OBJECT NAME	OBJECT TYPE			
		AI	AO	DI	DO
SUPPLY AIR AIRFLOW	SA-CFM	X			
SUPPLY AIR SMOKE DETECTOR ALARM	SA-SD			X	
OUTSIDE AIR AIRFLOW	OA-CFM	X			
OUTSIDE AIR TEMPERATURE	OA-T	X			
SUPPLY AIR TEMPERATURE	SA-T	X			
RETURN AIR AIRFLOW	RF-CFM	X			
RETURN AIR TEMPERATURE	RA-T	X			
SUPPLY AIR STATIC PRESSURE	SA-SP	X			
RETURN FAN AIRFLOW	RA-CFM	X			
CONDENSER WATER VALVE	CDG-VLV		X		
OUTSIDE AIR DAMPER	OA-DPR				X
OUTSIDE AIR DAMPER POSITION	OA-POS			X	
RETURN AIR DAMPER	RA-DPR				X
RETURN AIR DAMPER POSITION	RA-POS			X	

ROOFTOP SPLIT-DX (RTU)
(SPLIT-DX WILL OPERATE BASED ON THEIR INTERNAL CONTROL SET UP - EMS WILL PROVIDE THE UNIT WITH SCHEDULE, SETPOINT, AND OVERRIDE MINIMUM OUTSIDE DAMPER IN HIGH LEVEL OF CO2)

A. OPERATION:
1. THE OCCUPIED PERIOD WILL BE SCHEDULED THROUGH THE ENERGY MANAGEMENT SYSTEM (EMS). PROVIDED ALL THE SAFETY ALARMS ARE FALSE, THE EMS WILL COMMAND THE WSHP TO START UNDER ITS OWN CONTROLS. WHEN THE EXHAUST AND MINIMUM OUTSIDE AIR DAMPERS, AND CONTROL VALVE ARE OPEN, THE SUPPLY FAN SHALL START.

B. SF VFD CONTROL:
1. THE SUPPLY FAN VFD WILL BE MODULATED TO MAINTAIN A MINIMUM DISCHARGE STATIC PRESSURE SETPOINT AS DETERMINED DURING AIR BALANCE.

C. RF VFD CONTROL:
1. THE EMS SHALL POLE THE SUPPLY AND RETURN AIR FLOW MONITORING STATION AND SET THE RETURN FAN SPEED ACCORDINGLY TO PROVIDE A MINIMUM SPACE PRESSURE OF 0.05 IN WG.

D. SUPPLY AIR DUCT STATIC PRESSURE CONTROL:
1. THE CONTROLLER WILL MEASURE DUCT STATIC PRESSURE AND MODULATE THE SUPPLY FAN VFD SPEED TO MAINTAIN A DUCT STATIC PRESSURE SETPOINT. THE SPEED WILL NOT DROP BELOW 30 HZ (ADJ.). THE STATIC PRESSURE SETPOINT WILL BE RESET BASED UPON THE POSITION OF THE ZONE DAMPERS, WITH A GOAL OF REDUCING THE STATIC PRESSURE UNTIL AT LEAST ONE ZONE DAMPER IS 90% OPEN.
   a) THE INITIAL DUCT STATIC PRESSURE SETPOINT WILL BE 2.5 IN H2O (ADJ.).
   b) IF NO ZONE DAMPER IS NEARLY WIDE OPEN, THE SETPOINT WILL INCREMENTALLY RESET DOWN TO A MINIMUM OF 1.3 IN H2O (ADJ.).
   c) AS ONE OR MORE DAMPERS NEARS THE WIDE-OPEN POSITION, THE SETPOINT WILL INCREMENTALLY RESET UP TO A MAXIMUM OF 4.0 IN H2O (ADJ.).

E. COOLING CONTROL:
1. THE CONTROLLER WILL MEASURE THE SUPPLY AIR TEMPERATURE AND VARY THE COMPRESSOR SPEED TO MAINTAIN ITS COOLING SETPOINT. THIS SUPPLY AIR TEMPERATURE SETPOINT WILL RESET IN A STRAIGHT-LINE RELATIONSHIP THROUGH A RANGE OF 53°F TO 65°F.

F. HEATING CONTROL:
1. WHEN SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT (68°F), UNIT SHALL OPERATE IN THE HEATING MODE. UNIT SHALL STAGE AVAILABLE HEAT STAGES TO SATISFY DEMAND IN THE OCCUPIED SPACE.

G. PRE-OCCUPANCY PURGE/WARM-UP/COOLDOWN:
1. THE EMS WILL START WSHP AS DETERMINED NECESSARY PRIOR TO SCHEDULED OCCUPANCY AS REQUIRED FOR PROVIDING PRE-OCCUPANCY PURGE, WARM-UP, AND COOL DOWN.

H. ECONOMIZER:
1. THE ECONOMIZER CONTROL SHALL ACCOMMODATE FULL CONTROL. WHEN THE OUTDOOR AIR TEMPERATURE IS 65°F OR LESS, THE ECONOMIZER DAMPERS SHALL BE AT THEIR MINIMUM POSITION. SHOULD THE OUTDOOR ENTHALPY BE AT ACCEPTABLE LEVELS THE ECONOMIZER SHALL BE ENABLED. IF THE OA RH IS 35% AND BELOW, ECONOMIZER WILL BE DISABLED.
2. THE OUTSIDE AND EXHAUST AIR DAMPERS WILL CLOSE WHEN THE UNIT IS OFF.

I. MINIMUM OUTSIDE AIR VENTILATION:
1. WHEN IN THE OCCUPIED MODE, THE CONTROLLER WILL MEASURE THE OUTSIDE AIRFLOW AND MODULATE THE OUTSIDE AIR DAMPERS TO MAINTAIN THE PROPER MINIMUM OUTSIDE AIR VENTILATION, OVERRIDING NORMAL DAMPER CONTROL. ON DROPPING OUTSIDE AIRFLOW, THE CONTROLLER WILL MODULATE THE OUTSIDE AIR DAMPERS OPEN TO MAINTAIN THE OUTSIDE AIRFLOW SETPOINT (ADJ.).

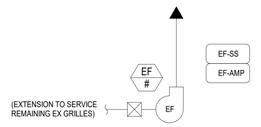
J. TEMPORARY OCCUPANCY
1. TEMPORARY OCCUPANCY WILL BE MADE AVAILABLE BY PRESSING THE OVERRIDE PUSH BUTTON. THE WSHP WILL BE ENABLED FOR AN EXTENDED PERIOD OF 2 HOUR (ADJ.).

K. UNOCCUPIED MODE:
1. DURING THE UNOCCUPIED MODE, THE FANS WILL REMAIN OFF, THE OUTSIDE AIR AND EXHAUST AIR DAMPERS WILL REMAIN CLOSED, AND CONTROL VALVE WILL CLOSE.

L. NIGHT SETBACK:
1. THE ROOFTOP UNIT WILL BE INDEXED TO THE OCCUPIED MODE IF ZONE TEMPERATURE IS GREATER THAN THE UNOCCUPIED COOLING SETPOINT OF 85°F, OR LOWER THAN THE UNOCCUPIED HEATING SETPOINT OF 55°F.

M. ALARM CONDITIONS:
1. THE FOLLOWING ALARMS WILL BE DISPLAYED AT THE EMS:
   a) SUPPLY AIR SMOKE DETECTION: THE SUPPLY AIR DUCT SMOKE DETECTOR WILL SHUTDOWN THE SUPPLY FAN AND RETURN FAN UPON DETECTION OF SMOKE.
   b) SF RUN STATUS: THE SUPPLY FAN COMMANDED ON AND THE STATUS IS OFF AFTER 2 MINUTES (ADJUSTABLE).
   c) RF RUN STATUS: THE RETURN FAN IS COMMANDED ON AND THE STATUS IS OFF AFTER 2 MINUTES (ADJUSTABLE).
   d) HIGH PRESSURE SWITCH: THE HIGH-PRESSURE SWITCH WILL SHUTDOWN THE SUPPLY FAN VFD ONCE SETPOINT HAS BEEN REACHED THREE INCHES OF WATER.
   e) LOW SUPPLY AIR STATIC PRESSURE FALLS BELOW 0.5 FOR FIVE (5) MINUTES.
   f) OUTSIDE AIR DAMPER FAILURE

4 PACKAGED ROOF TOP UNIT (RTU)
NO SCALE



SEQUENCE OF OPERATIONS - EXHAUST FAN:

NORMAL OPERATION:
EXHAUST FANS WILL OPERATE IN TANDEM WITH THE OUTSIDE AIR FLOW FROM THE AHUs TO MAINTAIN A NEUTRAL VENTILATION PRESSURIZATION.

ALARM CONDITIONS:
THE BMS SHALL GENERATE AN ALARM IF ANY OF THE FILLOWING CONDITIONS OCCUR:
1. WHEN THE COMMANDED CONDITION (EF-SS) OF AN EXHAUST FAN DOES NOT MATCH ITS MONITORED (EF-AMP) CONDITION

CONSTANT VOLUME EXHAUST FAN - POINTS LIST					
OBJECT DESCRIPTION	OBJECT NAME	OBJECT TYPE			
		AI	AO	DI	DO
EXHAUST FAN START/STOP	EF-SS				X
EXHAUST FAN CURRENT	EF-AMP	X			

3 CONSTANT VOLUME EXHAUST FAN CONTROLS
NO SCALE

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Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
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M41366
Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
MECHANICAL CONTROLS

Scale
NO SCALE

M6.101

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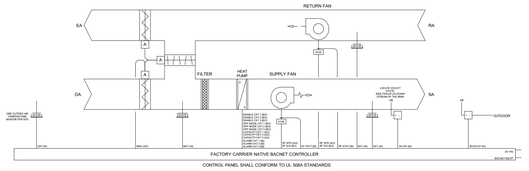

Sequences of Operation

RUN CONDITIONS – REQUESTED:
THE UNIT SHALL RUN WHENEVER:
- ANY ZONE IS OCCUPIED.
- DEFINABLE NUMBER OF UNOCCUPIED ZONES NEED HEATING OR COOLING.
- OPTIMAL START FROM ZONES.

WARM-UP:
A ONE-TIME MORNING WARM UP WILL BE INITIATED ON STARTUP LOCKING OUT ECONOMIZER AND MECHANICAL COOLING UNTIL AVERAGE SPACE TEMPERATURE IS > (68°F) OR TIME EXCEEDS (120MIN).

SUPPLY FAN:
THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES. TO PREVENT SHORT CYCLING, THE SUPPLY FAN SHALL HAVE A USER DEFINABLE MINIMUM RUNTIME.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- SUPPLY FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT.
- SUPPLY FAN VFD FAULT.

SUPPLY AIR DUCT STATIC PRESSURE CONTROL:
THE CONTROLLER WILL MEASURE DUCT STATIC PRESSURE AND MODULATE THE SUPPLY FAN VFD SPEED TO MAINTAIN A DUCT STATIC PRESSURE SETPOINT. THE SPEED WILL NOT DROP BELOW (20%).

THE STATIC PRESSURE SETPOINT WILL BE RESET BASED UPON THE POSITION OF THE ZONE DAMPERS > (95%), WITH A GOAL OF REDUCING THE STATIC PRESSURE UNTIL AT LEAST 90% OF ZONES DAMPERS IS NEARLY WIDE OPEN.
- THE INITIAL DUCT STATIC PRESSURE SETPOINT WILL BE (1.5IN H2O).
- THEN IF < (5) ZONES DAMPERS ARE > 95% OPEN, THE SETPOINT WILL INCREMENTALLY RESET (0.05 IN H2O) DOWN EVERY (2MIN) TO A MINIMUM OF (1.3IN H2O).
- THEN IF > (10) ZONES DAMPERS ARE > 95% OPEN, THE SETPOINT WILL INCREMENTALLY RESET (0.05 IN H2O) UP EVERY (2MIN) UP TO A MAXIMUM OF (1.8IN H2O).

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS (25%) GREATER THAN SETPOINT.
- LOW SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS (25%) LESS THAN SETPOINT.
- SUPPLY FAN VFD FAULT.

SUPPLY AIR TEMPERATURE SETPOINT - RESET:
THE CONTROLLER WILL MONITOR THE SUPPLY AIR TEMPERATURE AND WILL MAINTAIN A SUPPLY AIR TEMPERATURE SETPOINT RESET BASED ON ZONE COOLING & HEATING REQUESTS.

THE SUPPLY AIR TEMPERATURE SETPOINT WILL BE RESET BASED ON ZONE COOLING REQUIREMENTS AS FOLLOWS:
- THE INITIAL SUPPLY AIR TEMPERATURE SETPOINT WILL BE (55°F).
- AS COOLING DEMAND INCREASES, THE SETPOINT WILL INCREMENTALLY RESET (0.3°F) TIMES COOLING REQUEST NOT TO EXCEED (1°F) DOWN EVERY (2MIN) DOWN TO A MINIMUM OF (52°F).
- AS COOLING DEMAND DECREASES, THE SETPOINT WILL INCREMENTALLY RESET (0.3°F) TIMES COOLING REQUEST NOT TO EXCEED (1°F) UP EVERY (2MIN) UP TO A MAXIMUM OF (55°F).

THE SUPPLY AIR TEMPERATURE SETPOINT WILL BE RESET BASED ON ZONE HEATING REQUIREMENTS AS FOLLOWS:
- THE INITIAL SUPPLY AIR TEMPERATURE SETPOINT WILL BE (55°F).
- AS COOLING DEMAND INCREASES, THE SETPOINT WILL INCREMENTALLY RESET (0.3°F) TIMES COOLING REQUEST NOT TO EXCEED (1°F) DOWN EVERY (2MIN) DOWN TO A MINIMUM OF (52°F).
- AS COOLING DEMAND DECREASES, THE SETPOINT WILL INCREMENTALLY RESET (0.3°F) TIMES COOLING REQUEST NOT TO EXCEED (1°F) UP EVERY (2MIN) UP TO A MAXIMUM OF (55°F).

OPERATION MODE (PMV KIT)
IF THE OPERATOR CONTACT IS CLOSED, SYSTEM WILL OPERATE IN HEAT MODE. IF THE CONTACT IS OPEN, SYSTEM WILL OPERATE IN COOL MODE.

HEATING MODE (PMV KIT)
WHEN THE UNIT IS IN HEATING MODE THE CONTROLLER SHALL ENABLE THE OUTDOOR UNIT AND PUT IT IN THE HEATING MODE. THE CONTROLLER SHALL MODULATE THE HEATING CAPACITY TO MAINTAIN THE HEATING SETPOINT (0-10V SIGNAL, 4V MINIMUM AT START OF HEATING CONTROL.)

COOLING MODE (PMV KIT)
WHEN THE UNIT IS IN COOLING MODE THE CONTROLLER SHALL ENABLE THE OUTDOOR UNIT AND PUT IT IN THE COOLING MODE. CONTROLLER SHALL MODULATE THE COOLING CAPACITY TO MAINTAIN THE COOLING SETPOINT (0-10V SIGNAL, 4V MINIMUM AT START OF COOLING CONTROL.)

BUILDING STATIC PRESSURE CONTROL:
THE CONTROLLER WILL MEASURE BUILDING STATIC PRESSURE AND MODULATE THE RETURN FAN VFD SPEED TO MAINTAIN A BUILDING STATIC PRESSURE SETPOINT OF (0.05IN H2O). THE RETURN FAN VFD SPEED WILL NOT DROP BELOW (20%). THE CONTROLLER WILL HAVE AN OPTION SWITCH TO ENABLE FAN TRACKING TO THE SUPPLY FAN TO (80%) OF SUPPLY FAN SPEED.

ALARMS WILL BE PROVIDED AS FOLLOWS:
- HIGH BUILDING STATIC PRESSURE: IF THE BUILDING AIR STATIC PRESSURE IS (0.02IN H2O) GREATER THAN SETPOINT.
- LOW BUILDING STATIC PRESSURE: IF THE BUILDING AIR STATIC PRESSURE IS (0.02IN H2O) LESS THAN SETPOINT.

RETURN FAN:
THE RETURN FAN WILL RUN WHENEVER THE SUPPLY FAN RUNS.

ALARMS WILL BE PROVIDED AS FOLLOWS:
- RETURN FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- RETURN FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- RETURN FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT.
- RETURN FAN VFD FAULT.

ECONOMIZER:
THE CONTROLLER WILL MEASURE THE MIXED AIR TEMPERATURE AND MODULATE THE ECONOMIZER DAMPERS IN SEQUENCE TO MAINTAIN A SETPOINT (2°F) LESS THAN THE SUPPLY AIR TEMPERATURE SETPOINT. THE OUTSIDE AIR DAMPERS WILL MAINTAIN A MINIMUM CFM FOR VENTILATION WHENEVER OCCUPIED.

THE ECONOMIZER WILL BE ENABLED WHENEVER:
- NOT IN MORNING WARM-UP
- AND THE OUTSIDE AIR TEMPERATURE IS (2°F) LESS THAN THE RETURN AIR TEMPERATURE.
- AND THE SUPPLY FAN IS COMMANDED ON.
- AND AT LEAST (1) COOLING REQUEST.

THE OUTSIDE AND EXHAUST AIR DAMPERS WILL CLOSE AND THE RETURN AIR DAMPER WILL OPEN WHEN THE UNIT IS OFF.

MIXED AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE MIXED AIR TEMPERATURE AND USE AS REQUIRED FOR SETPOINT CONTROL OR ECONOMIZER CONTROL (IF PRESENT).

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS GREATER THAN (90°F).
- LOW RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS LESS THAN (45°F).

RETURN AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE RETURN AIR TEMPERATURE AND USE AS REQUIRED FOR SETPOINT CONTROL OR ECONOMIZER CONTROL (IF PRESENT).

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS GREATER THAN (90°F).
- LOW RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS LESS THAN (45°F).

SUPPLY AIR TEMPERATURE MONITOR:
THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS GREATER THAN (120°F) FOR MORE THAN (5 MIN).
- LOW SUPPLY AIR TEMP: IF REHEAT IS ENABLED AND THE SUPPLY AIR TEMPERATURE IS LESS THAN (60°F) FOR MORE THAN (5 MIN).

(**NOTE:** ALL NUMERICAL VALUES IN PARENTHESES ARE ADJUSTABLE UNLESS OTHERWISE NOTED)

1 SPLIT-DX HEAT PUMP UNIT (AHU)
NO SCALE

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CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.03945.000

Description
MECHANICAL CONTROLS

Scale
NO SCALE

M6.102

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Electrical Abbreviations

1P	1 Pole (2P, 3P, 4P, ETC.)	M	Meter
A, Amp	Ampere	M/M	Meter / Main
AC	Above Counter	MAX	Maximum
ADA	Americans with Disabilities Act	MC	Mechanical Contact
ADO	Automatic Door Opener	MC	Mechanical Contractor
AF	Amp Frame, Amp Fuse	MCB	Main Circuit Breaker
AF/AT	Amp Frame, Amp Trip	MDF	Main Distribution Frame
AFF	Above Finished Floor	MCC	Motor Control Center
AFG	Above Finished Grade	MFR	Manufacturer
AFI	Arc Fault Circuit Interrupter	MH	Manhole
AHU	Air Handling Unit	MIC	Microphone
AHJ	Authority Having Jurisdiction	MIN	Minimum
AIC	Amperes Interrupting Capacity	MCA	Minimum Circuit Amps
AL	Aluminum	MISC	Miscellaneous
ALT	Alternate	MLO	Main Lugs Only
ANN/UN	Annunciator	MOCP	Maximum Overcurrent Protection
APPROX	Approximately	MT	Mount
ARCH	Architect, Architectural	MTD	Mounted
AS	Amp Switch	MTS	Manual Transfer Switch
AS/AF	Amp Switch, Amp Frame	MTR	Motor, Motorized
AT	Amp Trip	MW	Microwave
ATS	Automatic Transfer Switch	N.C.	Normally Closed
AUTO	Automatic	NEC	National Electrical Code
AUX	Auxiliary	NEMA	National Electrical Manufacturer's Association
AV	Audio Visual	NIC	Not In Contract
AVG	Average	NL	Night Light
AWG	American Wire Gauge	N.O.	Normally Open
BATT	Battery	NTS	Not To Scale
BD	Board	OC	On Center
BLDG	Building	OFCI	Owner Furnished, Contractor Installed
BMS	Building Management System	OH	Overhead
C	Conduit	OL	Overloads
CAB	Cabinet	PS	Pull Section
CATV	Cable Television	PA	Public Address
CB	Circuit Breaker	PB	Pull Box Or Pushbutton
CCTV	Closed Circuit Television	PC	Photocell
CEC	California Electrical Code	PF	Power Factor
CFCI	Contractor Furnished, Contractor Installed	PH	Phase
CKT	Circuit	PIV	Post Indicating Valve
CLG	Ceiling	PNL	Panel
COMB	Combination	PP	Power Pole
CMPR	Compressor	PR	Pair
CONN	Connection	PRI	Primary
CONST	Construction	PROJ	Projection
CONT	Continuation Or Continuous	PT	Potential Transformer
CO	Conduit Only	PVC	Polyvinyl Chloride (Conduit)
CPT	Control Power Transformer	PWR	Power
CT	Current Transformer	REC	Receptacle
CU	Copper	REF	Refrigerator
DEPT	Department	RGS	Rigid Galvanized Steel (Conduit)
DET	Detail	RM	Room
DIA	Diameter	RSC	Rigid Steel Conduit
DISC	Disconnect	RTU	Roof Top Unit
DIST	Distribution	SC	Surface Conduit
DS	Safety Disconnect Switch	SCCR	Short Circuit Current Rating
DWG	Drawing	SEC	Secondary
E	Existing	SFD	Smoke Fire Damper
EB	Emergency Battery	SHT	Sheet
EC	Electrical Contractor	SIM	Similar
EG	Emergency Generator	SLD	Single-Line Diagram
EGC	Equipment Grounding Conductor	SPD	Surge Protective Device
EI	Emergency Inverter	SPEC	Specification
EL	Existing To Be Relocated	SS	Stainless Steel
ELEC	Electric, Electrical	STD	Standard
ELEV	Elevator	SW	Switch
ELU	Emergency Lighting Unit	SWBD	Switchboard
EM	Emergency	SYS	System
EMS	Energy Management System	TEL	Telephone
EMT	Electrical Metallic Tubing	TR	Tamper Resistant
EN	New Location Of Relocated	TV	Television
EPO	Emergency Power Off	TYP	Typical
EQUIP	Equipment	UC	Under Counter
ER	Existing To Be Removed	UG	Underground
EV	Electric Vehicle	UGPS	Underground Pull Section
EVCS	Electric Vehicle Charging Station	UNO	Unless Noted Otherwise (or UON Unless Otherwise Noted)
FA	Fire Alarm		
FABP	Fire Alarm Booster Power Supply Panel	UPS	Uninterruptible Power Supply
FACP	Fire Alarm Control Panel	UT	Underground Telephone
FC	Footcandle	UTIL	Utility
FCU	Fan Coil Unit	V	Volt
FLA	Full Load Amps	VA	Volt-Amperes
FLR	Floor	VD	Voltage Drop
GA	Gauge	VFD	Variable Frequency Drive
GAL	Gallon	W	Watt
GALV	Galvanized	W/	With
GC	General Contractor	WH	Water Heater
G/D	Garbage Disposal	W/O	Without
GEN	Generator	WP	Weatherproof
GEC	Grounding Electrode Conductor	XFMR	Transformer
GFI	Ground Fault Circuit Interrupter		
GFP	Ground Fault Protector		
GND	Ground	∠	Angle
GRS	Galvanized Rigid Steel (Conduit)	@	At
GYP	Gypsum Board	Δ	Delta
HOA	Hands-Off-Automatic Switch	'	Feet
HP	Horsepower	"	Inches
HT	Height	#	Number
HTR	Heater	Ø	Phase
HV	High Voltage		
HVAC	Heating, Ventilating And Air Conditioning		
DF	Intermediate Distribution Frame		
IG	Isolated Ground		
IMC	Intermediate Metal Conduit		
INV	Inverter		
J-BOX	Junction Box		
KCMIL	Thousand Circular Mils		
KV	Kilovolt		
KVA	Kilovolt-Ampere		
KW	Kilowatt		
KWH	Kilowatt Hour		
LCL	Long Continuous Load		
LTG	Lighting		
LV	Low Voltage		
LVL	Level		

Electrical Symbol Legend

Lighting Symbols

- Lighting Fixtures, Typical, Rectangular (Various Symbols) Filled circles indicate recessed. Open circles indicate surface-mounted. Diagonal line indicates lensed. Outer dots indicate suspended.
- Lighting Fixtures, Typical, Round (Various Symbols) Center dot indicates pendant. Diagonal line indicates lensed. Chevron indicates wall wash.
- Wall-mounted fixtures, Typical (Various Symbols)
- Strip Fixture
- Directional Light, Track Light, Flood Light
- Linear Light, Tape Light
- Emergency Lighting Unit, Ceiling-Mounted, Integral Battery
- Emergency Lighting Unit, Ceiling-Mounted, Remote Battery
- Emergency Lighting Unit, Wall-Mounted, Integral Battery
- Emergency Lighting Unit, Wall-Mounted, Remote Battery
- Exit Light, Ceiling-Mounted. Shading and arrows indicate faces and directional chevrons.
- Exit Light, Wall-Mounted. Shading and arrows indicate faces and directional chevrons.
- Exit/ELU Combo
- Pole/Area Lights
- Post-Top Area Light
- Bollard Light
- Diagonal hatch indicates light on a critical circuit.
- Solid hatch indicates light on an emergency or life safety circuit.
- Single-Pole Switch (for lighting) Switch Modifiers:
  - 3: 3-Way
  - 4: 4-Way
  - K: Keyed
  - D: Dimming
  - T: Timer
  - OS: Occupancy Sensor
  - VS: Vacancy Sensor
  - AC: Above-Counter
  - LV: Low-Voltage
  - M: Motor-Rated
- OS Occupancy Sensor
- DL Daylight Harvesting Sensor
- SD 1 Button Dimming Switch, With Occupancy Sensor
- DC1 / DC2 / DC3 0-10V Dimming Controller With Integral Relays
- ELCU Emergency Lighting Control Unit
- S# Low Voltage Wall Switch With Dimming Zones
  # = Zone

Lighting Tags

- Top Value: Fixture Type ID (Underlined)
- Bottom Value, Lowercase Letter: Switch ID
- Bottom Value, Number(s): Circuit Number
- Bottom Value, Uppercase Letter(s): Panel ID

Indicates Source of Emergency Power:
EG: Emergency Generator
EB: Emergency Battery
EI: Emergency Inverter

Absence of a switch designation on a lighting fixture indicates fixture is controlled by the only switch in the space. An "x" in place of the switch designation indicates unswitched.

- Switch ID indicated by a lowercase letter. Switch IDs are unique per space. A switch with an ID "a" controls all devices within the space in which it is located tagged with "a". A switch without a tagged ID controls all lighting fixtures within a space. ID tags may be used on control devices other than switches, such as occupancy sensors or contactors.

Telecom Symbols

Wall / Ceiling / Floor

- Data Outlet
- Telephone Outlet
- Data/Telephone Outlet

Outlet Modifiers:
##": Height AFF OC
AC: Above Counter

- Wireless Access Point
- TV Outlet
- CS Communication System Call Station

Power Symbols

Wall / Ceiling / Floor

- Simplex Receptacle
- Duplex Receptacle
- Quadruplex Receptacle
- Special Receptacle, Type as Indicated

Receptacle Modifiers:
##": Height AFF OC
AC: Above Counter
GFI: Ground-Fault Circuit Interrupter
WP: Weatherproof In-Use Cover

- Half shading indicates split (typically switched)
- Outside shading indicates emergency circuit
- Title-24 Compliant Controlled Receptacle

Poke-Thru Flush	Poke-Thru Surface	Slab Flush	Slab Recessed
4DV	4DV	4DV	4DV
3DV	3DV	3DV	3DV
2DV	2DV	2DV	2DV
AV	AV	AV	AV
FF	FF	FF	FF

- $ Single-Pole Switch (for power) Switch Modifiers:
  K: Keyed
  T: Timer
  AC: Above-Counter
  M: Motor-Rated
- Multioutlet Assembly. Filled squares indicate 120V outlet. Open squares indicate with USB
- Cord Reel, Device Varies
- Drop Cord, Device Varies
- FF Furniture Feed Ceiling
- FFF Furniture Feed Wall
- FFF Furniture Feed Floor Box
- J Junction Box Ceiling
- J Junction Box Wall
- SS Seismic Sensor
- PP Power Pack Ceiling
- Emergency Power Off
- DO Door Opener Push Plate
- M Power Meter
- Safety Switch, Fused
- Safety Switch, Unfused
- Motor Starter
- Combination Starter/Disconnect
- Contactor
- SFD Smoke Fire Damper (Provide With Motor Rated Switch)
- MD Motorized Damper (Provide With Motor Rated Switch)
- PL Plug Load Controller
- MP Media Panel
- S EVCS / D EVCS Single Or Dual Electric Vehicle Charging Station - Installed Complete With Wiring
- S EVCA / D EVCA Single Or Dual Electric Vehicle Charging Station - Provide J-Box With 1"C.O.
- EVR Low Power Level 2 Electric Vehicle Charger Station - Provide Level 2 Outlet By Orange Charger (or Equal)

Power Device and Equipment Tags

- a Electrical DeviceTags: Uppercase letter(s) indicates Panel ID and circuit number. Lowercase letter indicates designation of controlling switch (where applicable).
- XX-1 Equipment Tags: Equipment ID is indicated by an underlined tag adjacent to the equipment. See the equipment connection schedule for description, electrical requirements, and panel and circuit number. Symbols/graphic appearance of equipment varies.

Wiring

- Wiring Turned Up
- Wiring Turned Down
- Concealed EMT conduit with wire 2#12AWG and 1#12AWG green ground, 3/4"C. minimum.
- Concealed EMT conduit with wire 3#12AWG and 1#12AWG green ground, 3/4"C. minimum.
- #10 Concealed EMT conduit with wire 3#10AWG and 1#10AWG green ground, 3/4"C. minimum.
- Underground conduit and #10 wire, unless noted otherwise 3/4" PVC minimum.
- Home run to branch circuit panelboard. The equipment name and circuit number(s) are indicated, separated by a hyphen. Homeruns are only intended to indicate panel and circuit number. Actual homerun location shall be field-determined by the contractor.

Power Distribution Equipment

SB1, MDP, HP1A, LP1A

- T-XX / T Dry Type Transformer: See Single-Line Diagram for description and requirements.

Security Symbols

- Security Camera
  PTZ: Pan/Tilt/Zoom
  360°: 360 Degree. Provide J-Box with 3/4"C. and CAT-5E back to closest IDF Room.
  180°: 180 Degree. Provide J-Box with 3/4"C. and CAT-5E back to closest IDF Room.
- CR Card Reader
- CK Card Reader with Keypad
- K Security Keypad
- LD Lockdown Button
- CC Closed Circuit TV Outlet
- DC Door Contact
- ES Electric Strike
- IC Intercom
- ML Magnetic Lock
- REX Request to Exit Button
- REX Request to Exit Sensor
- MD Motion Detector
- XXX Security Control Unit
  SCP: Security Control Panel
  SPS: Security Power Supply Unit
- ON / L On-Line Lock. Locks shall be Salto. Provide complete system.
- OFL Off-Line Lock. Locks shall be Salto. Provide compleete System.

Fire Alarm Symbols

- DH Door Holder
- SD Smoke Detector
- CTS Combination Smoke and CO2 Sensor
- XXXX Fire Alarm Control Unit
  EVAC: Voice Evacuation Control Panel
  FAA: Fire Alarm Annunciator
  FACP: Fire Alarm Control Panel
  FATC: Fire Alarm Terminal Cabinet
  NACP: Notification Appliance Circuit Panel
  FAMN: Fire Alarm Mass Notification Control Panel

Construction Phasing

(Typical All Symbols and Equipment)

- (E) Existing
- (EL) Existing to Be Relocated
- (EN) New Location Of Relocated
- (ER) Existing to Be Removed
- Existing to Be Demolished

Miscellaneous

- Area Not in Contract
- # or # Keynote
- Underground Line Type

Singleline Symbols and Descriptions

- TFL Through Feed Lugs
- PANEL Panelboard
- Transformer
- Grounding Electrode and Conductor
- Circuit Breaker
- M Utility Meter with C.T.S.
- ATS Automatic Transfer Switch
- ALSIG / LSIG / LSI Circuit Breaker with Electronic Sensing, Timing and Tripping Control with Field Interchangeable with Descrete Field Adjustable Setting Independant of Other Adjustments
  A. Arch Flash Reduction
  L. Lone Time Trip
  S. Short Time Overcurrent Trip
  I. InstantaneousTrip
  G. Ground Fault Trip, Ground Fault Sensing Integral with Circuit Breaker
- SPD Surge Protective Device
- DM Digital Submeter Revenue Grade
- ST Shunt Trip

APPLICABLE CODES

ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, GUIDELINES, STANDARDS, REGULATIONS AND ORDINANCES INCLUDING:

CALIFORNIA BUILDING STANDARD CODE:

2022 CALIFORNIA BUILDING CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 2

2022 CALIFORNIA ELECTRICAL CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 3

2022 CALIFORNIA ENERGY CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 6

2022 CALIFORNIA FIRE CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 9

2022 'CALGREEN' CALIFORNIA GREEN BUILDING CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 11

NATIONAL AND LOCAL CODES:

ASME A17.1/CSA B44-2019, SAFETY CODE FOR ELEVATORS AND ESCALATORS

GENERAL PROJECT NOTES

1. PROVIDE SUPPORTS FOR ALL CONDUCTORS IN VERTICAL RACEWAYS PER CEC 300.19.
2. ALL ENCLOSURES AND EMERGENCY EQUIPMENT FOR EMERGENCY CIRCUITS SHALL BE PERMANENTLY MARKED SO THEY ARE READILY IDENTIFIED AS A COMPONENT OF AN EMERGENCY SYSTEM OR CIRCUIT PER CEC 700.10(A).
3. TERMINALS/LUGS SHALL BE RATED FOR COPPER/ALUMINUM WITH 75°C MIN RATING.
4. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, CALIFORNIA ELECTRICAL CODE, STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS AND ALL REQUIREMENT OF THE AUTHORITY HAVING JURISDICTION (AHJ).
5. CONTRACTORS SHALL COORDINATE ALL EQUIPMENT LOCATIONS WITH ARCHITECTURAL, MECHANICAL, STRUCTURAL, PLUMBING AND ALL APPROPRIATE DISCIPLINES.
6. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM AND/OR ENGINEER PRIOR TO THE START OF CONSTRUCTION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF THE EXISTING SURFACES, AREAS, AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF ANY ELECTRICAL DEMOLITION AND/OR NEW WORK.
8. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE ELECTRICAL INSTALLATION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THE ABOVE ITEMS.
9. ALL CONDUITS SHALL BE EMT (INSTALLED IN INTERIOR CONCEALED SPACES) OR SCHEDULE-40 PVC (INSTALLED UNDERGROUND) UNLESS OTHERWISE NOTED.
10. ALL AMPACITIES ARE BASED UPON TABLE 310.15(B)16 OF THE 2022 C.E.C.
11. FEEDER SCHEDULES INDICATE DATA FOR COPPER CONDUCTORS RATED UP TO 600V AT 75°C.
12. PROVIDE WEATHERPROOF (NEMA 3R) JUNCTION BOXES, CONDUIT, FITTINGS AND ALL ENCLOSURES AT ALL EXTERIOR LOCATIONS AND ALL WET OR DAMP INTERIOR LOCATIONS. ALL EXTERIOR LIGHTING FIXTURES SHALL BE UL LISTED FOR WET OR DAMP LOCATIONS AS APPROPRIATE FOR THE LOCATION.
13. VERIFY EXISTING CONDITIONS PRIOR TO BID AND INCLUDE ALL COSTS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION.
14. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE REASONABLY POSSIBLE.
15. CONTRACTOR SHALL ENSURE THAT ALL CONDUIT, FIXTURES, FITTINGS, AND DEVICES LOCATED IN PUBLIC AREAS ARE TAMPERPROOF AND PROTECTED FROM PHYSICAL DAMAGE.

SCOPE OF WORK

NEW HANGAR BUILDING WITH 9700 SF. BUILDING TO BE SERVICED BY NEW 2500A 208Y/120V 3PH 4W SWITCHBOARD.

WORK CONSISTS OF:
1. LIGHTING
2. POWER

SCE SERVICE REPORT INCLUDING AVAILABLE FAULT CURRENT, VOLTAGE, AMPERES, AND PHASE AT THE SERVICE TO BE A DIFFERED SUBMITTAL AND WILL BE PROVIDED WHEN OBTAINED FROM SCE.

Electrical Sheet Schedule

E0.000	ELECTRICAL TITLE SHEET
E0.001	LIGHTING FIXTURE SCHEDULE & LCD
E0.002	TITLE 24
E0.003	TITLE 24
E0.004	TITLE 24
E0.005	TITLE 24
E0.006	TITLE 24
E1.101	ELECTRICAL SITE PLAN
E2.101	LEVEL 01 - POWER PLAN
E2.102	LEVEL 01 - ROOF PLAN
E3.101	LEVEL 01 - LIGHTING PLAN
E3.102	LEVEL 01 - EGRESS PHOTOMETRIC PLAN
E5.101	SINGLE-LINE DIAGRAM
E7.101	ELECTRICAL DETAILS

600V 3PH CU FEEDER SCHEDULE (XXXXX)

Feeder Designation	Feeder Ampacity	Sets	Conduit Size	Conductor Quantity and size per conduit
203	20	1	3/4"	3 #12, 1 #12 G
204	20	1	3/4"	3 #12, 1#12 N, 1 #12 G
303	30	1	3/4"	3 #10, 1 #10 G
304	30	1	3/4"	3 #10, 1 #10 N, 1 #10 G
403	40	1	1"	3 #8, 1 #10 G
404	40	1	1"	3 #8, 1#8 N, 1 #10 G
503	50	1	1"	3 #6, 1 #10 G
504	50	1	1"	3 #6, 1 #6 N, 1 #10 G
603	60	1	1-1/4"	3 #4, 1 #10 G
604	60	1	1-1/4"	3 #4, 1#4 N, 1 #10 G
703	70	1	1-1/4"	3 #4, 1 #8 G
704	70	1	1-1/4"	3 #4, 1#4 N, 1 #8 G
803	80	1	1-1/4"	3 #2, 1 #8 G
804	80	1	1-1/4"	3 #2, 1 #2 N 1 #8 G
903	90	1	1-1/4"	3 #2, 1 #8 G
904	90	1	1-1/4"	3 #2, 1 #2 N, 1 #8 G
1003	100	1	1-1/2"	3 #1, 1 #8 G
1004	100	1	1-1/2"	3 #1, 1 #1 N, 1 #8 G
1253	125	1	1-1/2"	3 #1, 1 #6 G
1254	125	1	1-1/2"	3 #1, 1 #1 N, 1 #6 G
1503	150	1	1-1/2"	3 #1/0, 1 #6 G
1504	150	1	1-1/2"	3 #1/0, 1 #1/0 N, 1 #6 G
1753	175	1	2"	3 #2/0, 1 #6 G
1754	175	1	2"	3 #2/0, 1 #2/0 N, 1 #6 G
2003	200	1	2"	3 #3/0, 1 #6 G
2004	200	1	2"	3 #3/0, 1 #3/0 N, 1 #6 G
2253	225	1	2-1/2"	3 #4/0, 1 #4 G
2254	225	1	2-1/2"	3 #4/0, 1 #4/0 N, 1 #4 G
2503	250	1	2-1/2"	3 #250KCMIL, 1 #4 G
2504	250	1	2-1/2"	3 #250KCMIL, 1 #250KCMIL N, 1 #4 G
3003	300	1	3"	3 #350KCMIL, 1 #4 G
3004	300	1	3"	3 #350KCMIL, 1 #350KCMIL N, 1 #4 G
3503	350	1	4"	3 #500KCMIL, 1 #2 G
3504	350	1	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #2 G
4003	400	1	4"	3 #600KCMIL, 1 #2 G
4004	400	1	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #2 G
4503	450	2	3"	3 #4/0, 1 #2 G
4504	450	2	3"	3 #4/0, 1 #4/0 N, 1 #2 G
5003	500	2	3"	3 #250KCMIL, 1 #2 G
5004	500	2	3"	3 #250KCMIL, 1 #250KCMIL N, 1 #2 G
6003	600	2	4"	3 #350KCMIL, 1 #1 G
6004	600	2	4"	3 #350KCMIL, 1 #350KCMIL N, 1 #1 G
7003	700	2	4"	3 #500KCMIL, 1 #1/0 G
7004	700	2	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #1/0 G
8003	800	2	4"	3 #600KCMIL, 1 #1/0 G
8004	800	2	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #1/0 G
10003	1000	3	4"	3 #500KCMIL, 1 #2/0 G
10004	1000	3	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #2/0 G
12003	1200	3	4"	3 #600KCMIL, 1 #3/0 G
12004	1200	3	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #3/0 G
16003	1600	4	4"	3 #600KCMIL, 1 #4/0 G
16004	1600	4	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #4/0 G
20003	2000	5	4"	3 #600KCMIL, 1 #250KCMIL G
20004	2000	5	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #250KCMIL G
25003	2500	6	4"	3 #600KCMIL, 1 #350KCMIL G
25004	2500	6	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #350KCMIL G
30003	3000	8	4"	3 #500KCMIL, 1 #500KCMIL G
30004	3000	8	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #500KCMIL G
40003	4000	10	4"	3 #600KCMIL, 1 #500KCMIL G
40004	4000	10	4"	3 #600KCMIL, 1#600KCMIL N, 1 #500KCMIL G

600V 1PH CU FEEDER SCHEDULE (XXXX)

Feeder Designation	Feeder Ampacity	Sets	Conduit Size	Conductor Quantity and size per conduit
201	20	1	3/4"	2 #12, 1 #12 G
301	30	1	3/4"	2 #10, 1 #10 G
401	40	1	3/4"	2 #8, 1 #10 G
501	50	1	3/4"	2 #6, 1 #10 G
601	60	1	1"	2 #4, 1 #10 G
701	70	1	1"	2 #4, 1 #8 G
801	80	1	1-1/4"	2 #2, 1 #8 G
901	90	1	1-1/4"	2 #2, 1 #8 G
1001	100	1	1-1/4"	2 #1, 1 #8 G
1251	125	1	1-1/4"	2 #1, 1 #6 G
1501	150	1	1-1/4"	2 #1/0, 1 #6 G
1751	175	1	1-1/2"	2 #2/0, 1 #6 G
2001	200	1	2"	2 #3/0, 1 #6 G

600V CU TRANSFORMER SECONDARY FEEDER SCHEDULE (XXXXX)

Feeder Designation	Feeder Ampacity	Sets	Conduit Size	Conductor Quantity and size per conduit
50T	50	1	1"	3 #6, 1 #6 N, 1 #8 G
100T	100	1	1-1/2"	3 #1, 1 #1 N, 1 #8 G
150T	150	1	1-1/2"	3 #1/0, 1 #1/0 N, 1 #6 G
250T	250	1	1-1/2"	3 #250KCMIL, 1 #250KCMIL N, 1 #2 G
400T	400	1	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #1/0 G
500T	500	2	3"	3 #250KCMIL, 1 #250KCMIL N, 1 #2/0 G
800T	800	2	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #3/0 G
1000T	1000	3	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #3/0 G
1600T	1600	4	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #3/0 G
2500T	2500	6	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #3/0 G

600V 1PH + N CU FEEDER SCHEDULE (XXXX)

Feeder Designation	Feeder Ampacity	Sets	Conduit Size	Conductor Quantity and size per conduit
202	20	1	3/4"	2 #12, 1 #12 N, 1 #12 G
302	30	1	3/4"	2 #10, 1 #10 N, 1 #10 G
402	40	1	1"	2 #8, 1 #8 N, 1 #10 G
502	50	1	1"	2 #6, 1 #6 N, 1 #10 G
602	60	1	1-1/4"	2 #4, 1 #4 N, 1 #10 G
702	70	1	1-1/4"	2 #4, 1 #4 N, 1 #8 G
802	80	1	1-1/4"	2 #2, 1 #2 N, 1 #8 G
902	90	1	1-1/4"	2 #2, 1 #2 N, 1 #8 G
1002	100	1	1-1/2"	2 #1, 1 #1 N, 1 #8 G
1252	125	1	1-1/2"	2 #1, 1 #1 N, 1 #6 G
1502	150	1	1-1/2"	2 #1/0, 1 #1/0 N, 1 #6 G
1752	175	1	2"	2 #2/0, 1 #2/0 N, 1 #6 G
2002	200	1	2"	2 #3/0, 1 #3/0 N, 1 #6 G

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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IRVINE, CA 92618

Gensler

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	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER — JOSEPH SALERNO — E18803 — EXP. 6/30/2027 — ELECTRICAL — STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.3945.000

Description

ELECTRICAL TITLE SHEET

Scale

As indicated

E0.000

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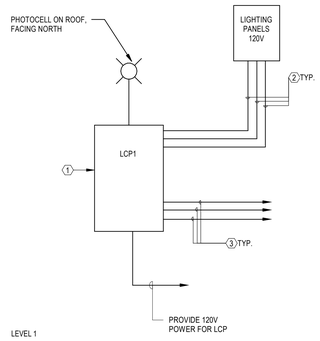
LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER NAME	MANUFACTURER CATALOG NO.	LAMP TYPE	LAMP LUMENS	LAMP CCT	LAMP CRI (MIN)	POWER VOLTAGE	POWER INPUT WATTAGE	POWER DRIVER TYPE	POWER DRIVER DIM TYPE	MOUNTING TYPE	MOUNTING DEPTH	NOTES
L01E	4' LED LOW BAY LUMINAIRE WITH PREPAINT WHITE ROLLED STEEL HOUSING AND FROST DIFFUSE LENS.PROVIDE WIITH INTEGRAL 90-MINUTE BACKUP BATTERY.	METALUX	4LBLED.LD4.8.SYMF.UNV.EL7W.L835.CD1.U	LED	8000	3500	80	120	56	INTEGRAL DRIVER / POWER SUPPLY	0-10V	PENDANT		REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT.
		LITHONIA LIGHTING	APPROVED ALTERNATIVE											
		DAYBRIGHT	APPROVED ALTERNATIVE											
L02	4' INDUSTRIAL LUMINAIRE WITH PREPAINT WHITE ROLLED STEEL HOUSING AND ACRYLIC LENS.	METALUX	4SNLED.LD5.23SL.SLN.UNV.L835.CD1.U	LED	2300	3500	80	120	16	INTEGRAL DRIVER / POWER SUPPLY	0-10V	UNIVERSAL		REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT.
		LITHONIA LIGHTING	APPROVED ALTERNATIVE											
		DAYBRIGHT	APPROVED ALTERNATIVE											
L03	2' WALL MOUNTED INDUSTRIAL LUMINAIRE WITH PREPAINT WHITE ROLLED STEEL HOUSING AND ACRYLIC LENS.	METALUX	2BCLED.LD4.8SL.F.UNV.L835.CD1.U	LED	900	3500	80	120	7	INTEGRAL DRIVER / POWER SUPPLY	0-10V	WALL		REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT.
		LITHONIA LIGHTING	APPROVED ALTERNATIVE											
		DAYBRIGHT	APPROVED ALTERNATIVE											
L04	EXTERIOR WALL PACK.	LITHONIA LIGHTING	ARC1 LED.P1.30K.MVOLT.[FINISH]	LED	1500	3500	80	120	11	INTEGRAL DRIVER / POWER SUPPLY	0-10V	WALL		REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT. CONFIRM FINISH WITH ARCHITECT.
		OR APPROVED ALTERNATIVE	APPROVED ALTERNATIVE											
LT-01	EXTERIOR WALL SCONCE.	ALVALIGHT	TESS.30.[TRIM].3000	LED	750	3000	80	120	23	INTEGRAL DRIVER / POWER SUPPLY	0-10V	WALL		REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT. CONFIRM FINISH WITH ARCHITECT.
		OR APPROVED ALTERNATIVE	APPROVED ALTERNATIVE											
			APPROVED ALTERNATIVE											
LT-02	EXTERIOR RECESSED DOWNLIGHT	KLIK USA	XL50F00.30K.500.S.FLD.CLR	LED	700	3000	80	120	6	REMOTE DRIVER / POWER SUPPLY	0-10V	RECESSED		CONFIRM FINISH WITH ARCHITECT.
		OR APPROVED ALTERNATIVE	APPROVED ALTERNATIVE											
-	EMERGENCY BATTERY PACK WITH MINIMUMN 90-MINUTE RUNTIME.	ISOLITE	E3U.36	-	-	-	-	120	-	-	-	-		PROVIDE FOR FIXTURES INDICATED AS EMERGENCY ON PLANS.
		BODINE	APPROVED ALTERNATIVE											
		MEYERS	APPROVED ALTERNATIVE											
LT-03	INTERIOR RECESSED DOWNLIGHT	LITHONIA LIGHTING	LDN4.30/.10.L04.[TRIM].LSS.[COLOR].MVOLT.GZ10	LED	1000	3000	80	120	11	INTEGRAL DRIVER / POWER SUPPLY	0-10V	RECESSED		CONFIRM FINISH WITH ARCHITECT.
		PORTFOLIO	APPROVED ALTERNATIVE											
		CALCULITE	APPROVED ALTERNATIVE											
LT-03E	SIMILAR TO FIXTURE TYPE 'L01' BUT WITH INTEGRAL 90-MINUTE BACKUP BATTERY.	LITHONIA LIGHTING	LDN4.30/.10.L04.[TRIM].LSS.[COLOR].MVOLT.GZ10.E10WCP	LED	1000	3000	80	120	11	INTEGRAL DRIVER / POWER SUPPLY	0-10V	RECESSED		CONFIRM FINISH WITH ARCHITECT.
		PORTFOLIO	APPROVED ALTERNATIVE											
		CALCULITE	APPROVED ALTERNATIVE											
LT-04	INTERIOR WALL SCONCE	ALORA LIGHTING	WV361230	LED	3000	2700	90	120	36	REMOTE DRIVER / POWER SUPPLY	ELV	WALL		REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT. CONFIRM FINISH WITH ARCHITECT.
		OR APPROVED ALTERNATIVE	APPROVED ALTERNATIVE											

ROOM TYPE	OCCUPANCY SENSOR: OCCUPANCY MODE (AUTO ON)	OCCUPANCY SENSOR: VACANCY MODE	OCCUPANCY SENSOR: DUAL TECHNOLOGY*	OCCUPIED LEVEL (%)	PARTIAL OFF: TIME OF LAST DETECTED OCCUPANCY (MINUTES)	PARTIAL OFF: UNOCCUPIED DIM LEVEL(%)	OCCUPANCY TIME DELAY (MINUTES)	TIME CLOCK: SCHEDULE ON TIME	TIME CLOCK: SCHEDULE OFF TIME	TIME CLOCK: SCHEDULE OVERRIDE SWITCH	WALL SWITCH: MANUAL (ON/OFF)	WALL SWITCH: MANUAL DIMMING	WALL SWITCH: KEY SWITCH	SCENE CONTROL	DAYLIGHT SENSOR: DIMMING (IF APPLICABLE)	OTHER: PLUG LOAD CONTROL (IF APPLICABLE)	NOTES
SHELL SPACE	X			100	7.5	50	10				X	X			X		
RESTROOMS	X		X	70	7.5	10	10				X	X	X		X		

1 SEQUENCE OF OPERATION - BASIS OF DESIGN TABLE

SCALE: NO SCALE



LEVEL 1

GENERAL NOTES:

1. PROVIDE BARRIER SEPARATION FROM NORMAL AND EMERGENCY CIRCUITS.
2. ALL EXTERIOR LIGHTING SHALL BE TOUTED THROUGH LIGHTING CONTROL PANEL. SEE DRAWINGS FOR LIGHTING CIRCUITS.

KEY NOTES: (X)

1. RELAY LIGHTING CONTROL PANEL.
2. 120V LIGHTING CIRCUITS, QUANTITIES PER PLAN.
3. 120V LIGHTING CIRCUITS TO LIGHT FIXTURES, QUANTITIES PER PLANS.

EXTERIOR LIGHTING ZONING SCHEDULE - LCP1

RELAY	ZONE	AREA CONTROLLED	PANEL	CKT#	CONTROLS	NOTES
1	A	CANOPY DOWN LIGHTS	H1	5	PHOTOCELL 'ON' TIME LOCK 'OFF'	
2	A	WALL SCONCE	H1	5	PHOTOCELL 'ON' TIME LOCK 'OFF'	
3	A	RESTROOM CANOPY	H1	5	PHOTOCELL 'ON' TIME LOCK 'OFF'	
4	A	EQUIPMENT YARD	H1	5	PHOTOCELL 'ON' TIME LOCK 'OFF'	
5	A	FUTURE ILLUMINATED SIGNAGE	H1	16	PHOTOCELL 'ON' TIME LOCK 'OFF'	

2 EXTERIOR LIGHTING CONTROL DIAGRAM

SCALE: NO SCALE

GENERAL NOTES:

1. DETAILS AND DESIGN IS BASED ON AN LUTRON LIGHTING CONTROLS SYSTEM OR APPROVED ALTERNATIVE.
2. DETAILS ARE DIAGRAMMATIC AND FOR REFERENCE OF SYSTEM AND ROOM TYPE REQUIREMENTS TO MEET BASIS OF DESIGN. REFER TO MANUFACTURERS SHOP DRAWINGS FOR QUANTITIES AND DEVICES USED FOR EACH SPACE AND NETWORK.
3. LIGHTING CONTROL SUBMITTALS FOR NETWORKED SYSTEM SHALL INCLUDE THE FOLLOWING DOCUMENTS(NOT LIMITED TO FOLLOWING):
   - 3.1. SHOP DRAWINGS SHOWING QUANTITY AND LOCATION OF ALL DEVICES.
   - 3.2. STANDALONE/NETWORK SINGLE LINE DIAGRAM.
   - 3.3. BASIS OF DESIGN PROGRAMMING OPERATION FOR EACH ROOM TYPE.
   - 3.4. DEVICE CUTSHEETS.
4. MANUFACTURER OR FACTORY REPRESENTATIVE TO INCLUDE STARTUP AND COMMISSIONING OF THE LIGHTING CONTROL SYSTEM. MUST INCLUDE A SITE VISIT FOR THE FOLLOWING:
   - 4.1. A PRE-CONSTRUCTION MEETING TO CONFIRM DESIGN AND FIELD INSTALLATION REQUIREMENTS.
   - 4.2. PROGRAMMING AND COMMISSIONING OF THE LIGHTING CONTROL SYSTEM TO MEET THE BASIS OF DESIGN AND TITLE 24 REQUIREMENTS.
   - 4.3. MAINTENANCE / OWNER WALK THROUGH FOR MAKING FINAL ADJUSTMENTS TO PROGRAMMING.
5. CONTRACTOR SHALL FURNISH AND INSTALL ALL LIGHTING CONTROL DEVICES, CABLES, ACCESSORIES AS REQUIRED BY MANUFACTURER'S RECOMMENDATION TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL COMPLIANT TITLE 24 SYSTEM.
6. ALL DEVICES SHALL BE MOUNTED AND INSTALLED IN ACCESSIBLE CEILING LOCATIONS. CONTRACTOR WILL VERIFY BEST FIT LOCATIONS IN THE FIELD.
7. CONTRACTOR TO VERIFY COMPATIBILITY BETWEEN DIMMING POWERPACKS AND INSTALLED FIXTURES.
8. CONTACT SDLA FOR COMPLETE nLIGHT LIGHTING CONTROLS BOM, CONTROLS@SDLTG.COM - PHONE # 858-505-1055.

TITLE 24 COMPLIANCE:

1. MANUAL AREA CONTROLS, SECTION 130.1(a)
2. MULTI-LEVEL LIGHTING CONTROLS,SECTION 130.1(b)
3. SHUT-OFF CONTROLS,SECTION 130.1(c)
4. AUTOMATIC DAYLIGHTING CONTROLS, SECTION 130.1(d)
5. DEMAND RESPONSE CONTROLS, SECTION 130.1(e) AND SEDCTION 110.2(c)
6. CONTROLS INTERACTIONS,SECTION 130.1(f)
7. CIRCUIT CONTROLS FOR 120-VOLT CONTROLLED RECEPTACLES, SECTION 130.5(d)
8. INDOOR LIGHTING CONTROLS BASIS OF DESIGN SECTION 120.8(c)
9. CONTACT SDLA FOR COMPLETE nLIGHT LIGHTING CONTROLS BOM, CONTROLS@SDLTG.COM - PHONE # 858-505-1055.

SYSTEM OPERATIONS TRAINING OPTIONS, PER SECTION 120.8(h):

1. 2-HOUR ONSITE OR REMOTE TRAINING.
2. 2-DAY IN PERSON OR REMOTE TRAINING @ SDLA, AT CUSTOMER LOCATION, OR VIDEOCONFERENCING SOFTWARE.
3. VIDEO TRAINING GIVEN TO EVERYONE WHO PARTICIPATES IN THE 2-DAY IN PERSON OR REMOTE TRAINING.
4. CONTACT SDLA FOR TRAINING, CONTROLS@SDLTG.COM - PHONE # 858-505-1055.

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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5160 Carroll Canyon Rd, Suite 200
San Diego, California 92121
Consulting Engineers
Ⓟ858.200-0030 Ⓕ858 200-0037
www.ma-engr.com

△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER — JOHN GALEN — E18803 — EXP. 6/30/2027 — ELECTRICAL — STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
LIGHTING FIXTURE SCHEDULE & LCD

Scale
12" = 1'-0"

E0.001

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U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Whole Building EMCS; JANITOR;
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	Whole Building Demand Response;

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Pass	Fail
Required >= 4,000W subject to multilevel	Whole Building EMCS	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
RESTROOM	Restroom	Readily Accessible	NA: Restrooms	See Building Level	NA: General Ltg < 120W	NA: General Ltg < 120W	No	☐	☐
JANITOR	Electrical Mechancial Telephone Room	Readily Accessible	NA: Enclosed area <100SF	Occupancy Sensor	NA: General Ltg < 120W	NA: General Ltg < 120W	No	☐	☐
FUTURE TENANT	All Other Space Types	Readily Accessible	Dimmer	See Building Level	NA: General Ltg < 120W	NA: General Ltg < 120W	No	☐	☐
							13		
							Plan Sheet Showing Daylit Zones:		

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06

This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

A. GENERAL INFORMATION

01	Project Location (city)	Irvine	04	Total Conditioned Floor Area (ft²)	9,469
02	Climate Zone	8	05	Total Unconditioned Floor Area (ft²)	18
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Support Areas ◆ All Other Occupancies

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	Area Category Method	9469	Area Category Method	18
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	9469		18	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Shahab Salehi	Documentation Author Signature: Shahab Salehi
Company:	Signature Date: 2026-02-12
Address: 5160 Carroll Canyon Rd, Ste 200	CEA/ HERS Certification Identification (if applicable): E18803
City/State/Zip: San Diego CA 92121	Phone: 858-200-0030

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: Shahab Salehi	Responsible Designer Signature: Shahab Salehi
Company: M.A. Engineers, Inc.	Date Signed: 2026-02-12
Address: 5160 Carroll Canyon Rd, Ste 200	License: E18803
City/State/Zip: San Diego CA 92121	Phone: 858-200-0030

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
RESTROOM	Restroom	0.65	455	295.8	No	No
SUPPORT	Electrical Mechancial Telephone Room	0.4	70	28	No	No
FUTURE TENANT	All Other Space Types	0.75	8,944	6,708	No	No
		TOTALS:	9,469	7,031.8	See Tables J, or P for detail	

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
SUPPORT	Electrical Mechancial Telephone Room	0.4	18	7.2	No	No
		TOTALS:	18	7.2	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)				Compliance Results
	01	02	03	04	05		06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)			Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)		Total Adjusted (Watts) *Includes Adjustments	
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)			
Conditioned		7,031.8	0		=	7,032	≥ 846	0	=	846	COMPLIES
Unconditioned		7.2	0		=	7	≥ 7	0	=	7	COMPLIES
								Controls Compliance (See Table H for Details)			COMPLIES
								Rated Power Reduction Compliance (See Table Q for Details)			

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
L01E	L01E	No	NA	56	Mfr. Spec	10	No	560	☐	☐
L02	L02	No	NA	16	Mfr. Spec	1	No	16	☐	☐
LT-03	LT-03	No	NA	11	Mfr. Spec	18	No	198	☐	☐
LT-04	LT-04	No	NA	36	Mfr. Spec	2	No	72	☐	☐
						Total Designed Watts: CONDITIONED SPACES		846		

Designed Wattage: Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
L03	L03	No	NA	7	Mfr. Spec	1	No	7	☐	☐
						Total Designed Watts: UNCONDITIONED SPACES		7		

[1] *FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2] *Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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IRVINE, CA 92618

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Consulting Engineers
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www.ma-engr.com

△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER SHAHAB SALEHI E18803 EXP. 6/30/2027 ELECTRICAL STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
TITLE 24

Scale

E0.002

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STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 7 of 7)**
Project Address: Hangar 10, Great Park	**Date Prepared:**	2/12/2026

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Shahab Salehi	Documentation Author Signature: Shahab Salehi
Company:	Signature Date:
Address: 5160 Carroll Canyon Rd, Ste 200	CEA/ HERS Certification Identification (if applicable): E18803
City/State/Zip: San Diego CA 92121	Phone: 858-200-0030

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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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: Shahab Salehi	Responsible Designer Signature: Shahab Salehi
Company: M.A. Engineers, Inc.	Date Signed: 2026-02-12
Address: 5160 Carroll Canyon Rd, Ste 200	License: E18803
City/State/Zip: San Diego CA 92121	Phone: 858-200-0030

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

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G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
EXTERIOR	Photocontrol	Provided - EMCS	NA: Each Luminaire <= 40 Watts	☐	☐

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*
[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*
[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

01				
	"Use it or lose it" Allowance (select all that apply) (select all that apply)			
☐ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☒ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

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J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

The table includes areas using wattage allowance for Outdoor Sales Frontage from Table-140.7-B. This allowance may be used for one or two frontage sides per site.

01	02	03	04	05	06	07	08	09
Area Description	CALCULATED ALLOWANCE(Watts)			DESIGN WATTS				Additional Allowance (Watts)
	Linear ft. of Sales Frontage (lf)	Allowed Density (W/lf)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	
EXTERIOR	412	11	4,532	LT-01	23	20	460	571
				LT-02	6	13	78	
				LT-03	11	1	11	
				L04	11	2	22	
						Total Design Watts for this Area:	571	
						Total Allowance (Watts) All Areas:		571

[1] *FOOTNOTES: For luminaires indicated in Table F as linear, wattage in column 06 is W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 07 instead of number of luminaires.*

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

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N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	EXTERIOR;

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CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.		
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 1 of 7)**
Project Address: Hangar 10, Great Park	**Date Prepared:**	2/12/2026

A. GENERAL INFORMATION

01	Project Location (city)	Irvine	04	Total Illuminated Hardscape Area (ft²)	0
02	Climate Zone	8			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐ LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval			
☐ LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas				
05	Occupancy Types within Project				
● Support Areas ● Warehouse					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02		
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6		
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes	○ No
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%			

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv												Compliance Results			
01		02		03		04		05		06		07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
0	+	---	+	571	+	---	+	---	OR	---	=	571	≥	571	COMPLIES
Shielding Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

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F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
L04	L04	☐ Linear	11	Mfr. Spec	2	New	☐	22	NA: < 6200 lumens	☐	☐
LT-01	LT-01	☐ Linear	23	Mfr. Spec	20	New	☐	460	NA: < 6200 lumens	☐	☐
LT-02	LT-02	☐ Linear	6	Mfr. Spec	13	New	☐	78	NA: < 6200 lumens	☐	☐
LT-03	LT-03	☐ Linear	11	Mfr. Spec	1	New	☐	11	NA: < 6200 lumens	☐	☐
							Total Design Watts:	571			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
(EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

410 BEACON
IRVINE, CA 92618

Gensler
4675 MacArthur Court
Suite 100
Newport Beach, CA 92660
United States
Tel 949.863.9434
Fax 949.553.1676

MA ENGINEERS
5160 Carroll Canyon Rd, Suite 200
San Diego, California 92121
Consulting Engineers
ⓟ858 200-0030 ⓕ858 200-0037
www.ma-engr.com

△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER — STRUCTURAL — SAFETY — E18803 — EXP. 6/30/2027 — ELECTRICAL — STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
TITLE 24

Scale

E0.003

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STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 7 of 7)**
Project Address:	**Date Prepared:**	2026-02-12T19:32:44-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Gilberto Medina	Documentation Author Signature:
Company: M.A. Engineers, Inc.	Signature Date: 2026-02-12
Address: 5160 Carroll Canyon Rd, Ste 200	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: San Diego, CA 92121	Phone: 858-200-0030
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: Shahab Salehi	Responsible Designer Signature:
Company: M.A. Engineers, Inc.	Date Signed: 2026-02-12
Address: 5160 Carroll Canyon Rd, Ste 200	License: E18803
City/State/Zip: San Diego, CA 92121	Phone: 858-200-0030

NOTE:

1. THE UNCONDITIONED UTILITY SPACES HAVE BEEN EXCLUDED FROM THE CONDITIONED FLOOR AREA.
2. THE CONDITIONED SITE SUPPORTING RESTROOM AND UTILITY SPACES HAVE BEEN EXCLUDED FROM THE CONDITIONED FLOOR AREA AS THERE SPACE TYPE IS NOT LISTED IN CEnC TABLE 140.10-A.

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F. ALLOCATED SOLAR ZONE

This table is completed if the project is designating a solar zone to comply with §110.10(b)1B. New construction consider the total roof area; Additions consider newly added roof area. This table demonstrates that the project has designated the minimum area required for the Allocated Solar Zone, and also that the requirements for Solar Zone Subareas have been met. Each subarea must be shown on a roof plan or documented in construction documents. The solar zones must also comply with fire code requirements, including, but not limited to, setback and pathway requirements. Requirements for interconnection pathways must also be included in construction documents, and the location is specified in this table.

Required Minimum Solar Zone

01	02	03	04	05	06			07	08
					Potential Solar Zone Areas: Roof areas with >= 70% Solar Access				
Minimum Solar Zone Area Calculation Method	Total New or Added Roof Area (ft²)	Total New or Added Roof Area Covered with Skylights (ft²)	Minimum Solar Zone Based on Total or Added Roof Area (0.15 x (Roof-Skylt)) (ft²)	Method/ Tools Used to Determine Annual Solar Access for Potential Zones[1]	Low-Sloped Area (<= 2:12 pitch) (ft²)	Steep-Sloped Area (> 2:12 pitch) Oriented 90° - 300 ° (ft²)	Total Potential Solar Zone Area (ft²)	Minimum Solar Zone Based on Potential Zone (0.5 x (Total Potential Zone)) (ft²)	Required Minimum Solar Zone Area (ft²)
Total New or Added Roof Area	4600	0	690						690

Designated Solar Zone Subareas

09	10	11	12	13	14	15	16	17	18	19
Subarea Name or Tag	Building Plan Reference	Roof or Overhang Slope (Low <= 2:12 pitch) (Steep > 2:12 pitch)	Is Steep-Sloped Roof or Overhang between 90 and 300 degrees?	Subarea Complies with Title 24, Part 9	Solar Zone Subarea Free of Obstructions per §110.10(b)3 A	Subarea is Required Distance from Potential Obstructions per §110.10(b)3 B	Is the Smallest Dimension 5 feet or greater?	Min. Area Required per Subarea (ft²)	Designated Area (ft²)	Subarea Complies?
A	E2.102	Low slope		Yes	Yes	Yes	Yes	80	234	COMPLIES
B	E2.102	Low slope		Yes	Yes	Yes	Yes	80	468	COMPLIES

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Interconnection Pathways	
Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/ plumbing to the electrical service/ water heating system per §110.10(c).	E2.102

[1]FOOTNOTE: This field is used to document how the percentage of annual solar access was determined per §110.10(b)1B. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

G. PERMANENTLY INSTALLED SOLAR PV FOR SOLAR READY EXCEPTION

This section does not apply to this project.

H. PERMANENTLY INSTALLED SOLAR HOT WATER SYSTEMS

This section does not apply to this project.

I. SMART THERMOSTATS AND ALTERNATIVE EFFICIENCY MEASURE FOR SOLAR READY EXCEPTION

This section does not apply to this project.

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J. PHOTOVOLTAIC (PV) AND BATTERY SYSTEMS

This table documents compliance with prescriptive photovoltaic and battery system requirements in 140.10/ 170.2(g and h). Unless the project meets one of the listed exceptions, or trades-off PV in an energy model using performance path, 140.10/ 170.2(g and h) requires installed photovoltaic and battery systems for newly constructed buildings. The installed PV systems must meet the minimum requirements in Joint Appendix 11.

Photovoltaic (PV) System

01	02	03	04	05	06	07	08
Occupancy	Conditioned Floor Area (ft²)	Area of New Roof[1] (ft²)	Roof Area < 70% Solar Access[2] (ft²)	Plansheet or Document showing Solar Access Calculations	Occupied Roof Area[3] (ft²)	Solar Access Roof Area (SARA) (ft²)	Min Size of PV System Required (kWdc)
Restaurant	8,944	4,600	0	N/A	0	4,600	3.94
					Total Min Size PV System Required for all Spaces (kWdc):		64
					Total Size PV System in Design (kWdc):		0

[1]FOOTNOTES: Includes the area of the building's roof space capable of structurally supporting a PV system and the area of all roof space on covered parking areas, carports, and all other newly constructed structures on the site that are compatible with supporting a PV system per Title 24, Part 2 Section 1511.2.
[2]Solar access must be determined using CEC approved solar access calculation tools found at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/solar-assessment-tools.
[3]As specified by CBC Section 503.1.4.

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included Table E. Additional Remarks and ExceptionalConditionMessageCCSABE += UserChangedSelectionInCI. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-SAB-01-E - Must be submitted for all buildings that must comply with solar readiness or PV/Battery requirements.

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

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This document is used to demonstrate compliance with prescriptive PV and battery requirements in 140.10/170.2 for nonresidential, multifamily and mixed-use buildings and prescriptive solar thermal requirements in 170.2(d)3C for multifamily and hotel/ motel occupancies. When PV/battery/solar thermal requirements don't apply or are traded using the performance approach, this document demonstrates compliance with mandatory solar readiness requirements in 110.10/ 160.8 for newly constructed buildings which are either multifamily ten stories or fewer, hotel/motel ten stories or fewer or all other nonresidential buildings three stories or fewer. It is also used to demonstrate compliance with solar readiness in 110.10/ 160.8 for additions to nonresidential, multifamily or hotel/motel building types which add more than 2,000 ft² of roof area. Alterations, or additions of less than 2,000 ft² of roof area, are not required to comply with solar readiness, solar PV and battery requirements and do not need to complete this document.

A. GENERAL INFORMATION

01	Project Location (city)	Irvine	04	Building Occupancies	Restaurant
02	Climate Zone	8	05	Construction Type	New construction
03	Conditioned Floor Area (ft²)	9469	06	Number of Stories	Bldg <= 3 stories

B. PROJECT SCOPE

The compliance path the project is using to comply per 110.10(b)1B/ 140.10/ 170.2(g and h) is indicated below.

Compliance with Solar Readiness Requirements in 110.10(b)1B		
	01	
☒	Provide Solar Ready Area no exceptions	The project has allocated a solar zone on the roof plan per requirements in §110.10(b), as documented in Table F.
☐	Exception to Solar Ready Area: Installed Solar Photovoltaic System	The project includes a permanently installed solar electric system having a nameplate DC power rating, measured under Standard Test Conditions, of no less than one watt per square foot of roof area as documented in Table G.
☐	Exception to Solar Ready Area: Installed Solar Water Heating System	The project is a hotel/motel or high-rise multifamily occupancy and includes a permanently installed domestic solar water-heating system complying with 170.2(d)3C and Reference Residential Appendix RA4, as documented in Table H.
☐	Exception to Solar Ready Area: Smart Thermostat and Alternative Energy Efficiency Measure	The project is a multifamily occupancy where all thermostats in each dwelling unit comply with §110.12(a) AND at least one additional measure listed in Exception 4 to §110.10(b)1B is installed, as documented in Table I.
☐	Exception to Solar Ready Area: Roof is designed for vehicular traffic, parking or for heliport	Plan sheet showing roof designed for vehicular traffic, parking or heliport
☐	Exception to Solar Ready Area: Roof too small	The project is new construction and has a total roof area <= 533 square feet [1]
☐	Exception to Solar Ready Area: Number of building stories	The project is nonresidential > 3 stories or multifamily/ hotel/motel > 10 stories.

[1]FOOTNOTE: Buildings with roof area <=533 ft² would have a required solar zone < 80 ft² and are therefore exempt per 110.10(b)1.

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Compliance with Solar Photovoltaic (PV) and Battery Requirements in 140.10/ 170.2(g and h)		
	01	
☐	Provided PV system and battery storage sized per 140.10/ 170.2 (g and h)	The project has included an installed PV system and battery storage system per requirements in 140.10/ 170.2(g and h) as documented in Table J.
☐	Exception to PV and Battery: Not enough Solar Access Roof Area	The total of all available Solar Access Roof Area(s) of the project site is less than three percent of the conditioned floor area as documented in Table J.
☒	Exception to PV and Battery: Required PV < 4kW	The required PV system size is less than 4 kW dc as documented in Table J..
☐	Exception to PV and Battery: No contiguous Solar Access Roof Area	The Solar Access Roof Area(s) of the project site contains less than 80 contiguous square feet as documented in Table J.
☐	Exception to PV and Battery: Can't meet snow load	The project has a roof design where the enforcement authority has verified it is not possible for the PV system, including panels, modules, components, supports, and attachments to the roof structure, to meet ASCE 7-16 Chapter 7, Snow Loads.
☐	Exception to PV and Battery: Multi-tenant without VNEM or Community Solar	The project is a multi-tenant building in an area where a load serving entity does not provide either a Virtual Net Metering (VNEM) or community solar program.
☐	The prescriptive PV/battery requirement has been traded off using the performance compliance approach as documented on the PRF Certificate of Compliance form.	

Compliance with Solar Thermal Water Heating Requirements in 170.2(d)3C (Multifamily and hotel/ motel occupancies only)		
	01	
☐	The project includes a hotel/motel or multifamily occupancy with a gas or propane central water-heating system (serves 2+ dwelling units) and includes a permanently installed domestic solar water-heating system to comply with 170.2(d)3C and Reference Residential Appendix RA4, as documented in Table H. Compliance meets Exception 2 to solar ready requirements in 110.10(b).	

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101 | Documentation Software: Energy Code Ace Compliance ID: 348982-0226-0011 Report Generated: 2026-02-12 16:32:47

STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 3 of 7)**
	Date Prepared:	2026-02-12T19:32:44-05:00

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance or see the applicable Table referenced below.

Allocated Solar Zone				Installed PV System				Installed SWH System				Smart Tstat and Alternative EE Measure		Compliance Results
01		02		03		04		05		06		07	08	
Required Minimum Area (ft²)	<=	Designated Area (ft²)	OR	Required Minimum DC Power Rating (Watts)	<=	Designed DC Power Rating (Watts)	OR	Required Minimum Solar Savings Fraction	<=	Designed/Rated Solar Savings Fraction	OR	JA5 Compliant Thermostat Specified?	Alternative Energy Efficiency Measure	COMPLIES
(See Table F)				(See Tables G or J)				(See Table H)				(See Table I)		
690	<=	702	OR	0	<=	0	OR		<=		OR			
E2.102				Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/ plumbing to the electrical service/ water heating system per §110.10(c).										COMPLIES
Battery storage system design meets the minimum requirements in Joint Appendix JA12 and the minimum energy (kWh)/ power (kW) capacity per Table J.														Not Applicable

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Table F indicates a subarea that is not in compliance with the requirements. Please revisit Table F

E. ADDITIONAL REMARKS

This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101 | Documentation Software: Energy Code Ace Compliance ID: 348982-0226-0011 Report Generated: 2026-02-12 16:32:47

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
SHAHAB SALEHI
E18803
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
TITLE 24

Scale

CITY OF IRVINE BUILDING & SAFETY DIVISION

E0.004

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STATE OF CALIFORNIA
Electrical Power Distribution CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 4 of 6)**
	Date Prepared:	11/24/2025

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/ 160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail

** NOTES: If "Other*" is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

[1] FOOTNOTES: For each separate load type, up to 10% of the connected load may be of any type.
[2] Method 1: Switchboards/ motor control centers/ panelboard loads disaggregated for each load type.
Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type.
Method 3: Branch circuits serve load types individually and provisions for adding future branch circuit monitoring.
Method 4: Complete metering system measures and reports loads by type.
See Chapter 8 of the Nonresidential Compliance Manual for more detail on Compliance Methods.

H. VOLTAGE DROP

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with 130.5(c)/ 160.6(c). For alterations, only the altered circuits must demonstrate compliance per 141.0(b)2Piii/ 180.2(b)4Bviic.

01	02			03	04	05	
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method			Location of Voltage Drop Calculations[1]	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector	
						Pass	Fail
MSA	☒	Voltage drop less than 5%	☐	Permitted by CA Elec Code (Exception to 130.5(c))*	In construction documents	E5.101	☐	☐

** NOTES: If "Permitted by CA Elec Code *" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*

[1] FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(d)/ 160.6(d).. Both controlled and uncontrolled receptacles must be provided in office areas, lobbies, conference rooms, kitchen areas in office spaces, copy rooms and hotel/motel guest rooms.

STATE OF CALIFORNIA
Electrical Power Distribution CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 5 of 6)**
	Date Prepared:	11/24/2025

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

01	02	03	04	05	06	07	
Room name or Description	Location/ Type of Controlled Receptacles[1]	Shut-Off Controls	Demand Responsive Controls	Permanent Durable Marking Will be Used	Location of Requirements in Construction Documents	Field Inspector	
						Pass	Fail

** NOTES: If "Other*" is selected under Shut-Off Controls above, please indicate how compliance has been achieved in the space provided below.*

[1] FOOTNOTES: Receptacles dedicated to refrigerators and water dispensers in kitchens, located a minimum of 6ft above the floor specifically for clocks, network copiers, fax machines, A/V and data equipment other than personal computers in copy rooms, circuits rated more than 20 Amps, or connected to a UPS that are intended to be in continuous use and are marked to differentiate them from other receptacles or circuits are excepted from the requirements. .

J. ELECTRIC READY BUILDINGS

This section does not apply to this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ELC-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Electrical Power Distribution CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 6 of 6)**
Project Address: Hangar 10, Great Park	**Date Prepared:**	11/24/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Shahab Salehi	Documentation Author Signature: Shahab Salehi
Company:	Signature Date:
Address: 5160 Carroll Canyon Rd.	CEA/ HERS Certification Identification (if applicable): E18803
City/State/Zip: San Diego CA 92121	Phone: 858-200-0030

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: Shahab Salehi	Responsible Designer Signature: Shahab Salehi
Company: M.A. Engineers, Inc.	Date Signed: 2025-11-24
Address: 5160 Carroll Canyon Rd.	License: E18803
City/State/Zip: San Diego CA 92121	Phone: 858-200-0030

STATE OF CALIFORNIA
Electrical Power Distribution CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 1 of 6)**
Project Address: Hangar 10, Great Park	**Date Prepared:**	11/24/2025

This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.0(b)2P for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)4Bvii

A. GENERAL INFORMATION

01	Project Location (city)	Irvine	02	Climate Zone	8
			03	Occupancy Types Within Project:	All Other OccupanciesSupport Areas

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/ Description	Scope of Work[1]	Rating[2] (kVA)	Utility Provided Metering System Exception to 130.5(a)/ 160.6(a)[3]	System subject to CA Elec Code Article 517 Exception to 130.5(a)and (b)	Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
MSA	New electrical service equipment and meter	900	☐	☐	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/ 160.3, 130.1/ 160.5, and 130.3/ 160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	☐

[1]FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.
[2] If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.
[3] Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

STATE OF CALIFORNIA
Electrical Power Distribution CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 2 of 6)**
	Date Prepared:	11/24/2025

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through J. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01		02		03		04	05	06
Service Electrical Metering 130.5(a)/ 160.6(a) (See Table F)	AND	Separation for Monitoring 130.5(b)/ 160.6(b) (See Table G)	AND	Voltage Drop 130.5(c)/ 160.6(c) (See Table H)	AND	Controlled Receptacles 130.5(d)/ 160.6(d) (See Table I)	Electric Ready 160.9 (See Table J)	**Compliance Results**
Yes	AND	Yes	AND	Yes	AND	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. SERVICE ELECTRICAL METERING

This table includes new or replacement electrical service systems OR equipment to demonstrate compliance with 130.5(a) / 160.6(a). For multifamily occupancies, submetered systems that provide power to common use areas must meet the following metering requirements. Submetered systems providing power to dwelling units do not.

01	02	03				04	05	
Electrical Service Designation/ Description	Rating[1] (kVA)	Required Metering Capabilities per Table 130.5-A				Location of Requirements in Construction Documents	Field Inspector	
		Instantaneous Demand (kW)	Historical Peak Demand (kW)	Tracking kWh for user-defined period	kWh per rate period		Pass	Fail
MSA	900	☒	☒	☒	☐	E5.101	☐	☐

[1] FOOTNOTES: If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.

STATE OF CALIFORNIA
Electrical Power Distribution CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name: City of Irvine Hangar 10 Rehab	**Report Page:**	**(Page 3 of 6)**
	Date Prepared:	11/24/2025

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/ 160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail
MSA					
Lighting including exit, egress and exterior	All lighting disaggregated by floor, type or area	Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring	E5.101	☐	☐
HVAC systems and components	All HVAC in aggregate and each HVAC load rated at least 50 kVA	Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring	E5.101	☐	☐
Domestic and service water systems	All loads in aggregate	Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring	E5.101	☐	☐
Plug Loads and appliances less than 25kVA	All plug loads separated by floor, type or area Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring	E5.101	☐	☐

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
SHAHAB SALEHI
E18803
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.2945.000

Description
TITLE 24

Scale

E0.005

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STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Hangar 10	**Report Page:**	**(Page 4 of 6)**
	Date Prepared:	2026-02-12T18:45:35-05:00

F. DESIGN REVIEW KICKOFF MEETING		
14	Envelope Goals	Goals are for energy and code compliance
15	HVAC System Goals	none other than code and energy compliance using typical schedules and setpoints
16	Indoor Lighting System Goals	Project is core shell, most indoor lighting provided during TI phase
17	Outdoor Lighting System Goals	Goal is to meet energy and code compliance
18	Water Heating System Goals	none other than code and energy compliance
19	Equipment and System Specifications	Systems that are efficient and maintainable with widely available, non-proprietary parts
20	Operations and Maintenance	Appropriate training from contractor and equipment specialists for effective operation and maintenance over equipment life.

G. OWNER'S PROJECT REQUIREMENTS (OPR)
This section does not apply to this project.

H. BASIS OF DESIGN (BOD)
This section does not apply to this project.

I. CONSTRUCTION DOCUMENT DESIGN REVIEW CHECKLIST

This table is only completed if a design review document is not attached to permit application to demonstrate compliance with 120.8(b) and 120.8(e). For buildings with >= 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the Owner's Project Requirements (Table G.) and the Basis of Design Documents (Table H.). For buildings with < 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the goals documented in Table F. during the Design Review Kickoff.

		YES	NO
01	Attaching Completed Design Review Documentation?	○	●
Design Review Checklist			
02	Envelope Design	No issues identified	
03	HVAC System Design	Project is core and shell, no issues were identified.	
04	HVAC Controls Design	Project is core and shell, majority of controls will be provided during tenant improvement. No issues identified.	
05	Indoor Lighting System Design	Project is core and shell. No issues identified.	
06	Indoor Lighting Controls Design	Project is core and shell. Most lighting controls to be defined during TI phase.	

STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Hangar 10	**Report Page:**	**(Page 5 of 6)**
	Date Prepared:	2026-02-12T18:45:35-05:00

I. CONSTRUCTION DOCUMENT DESIGN REVIEW CHECKLIST		
07	Outdoor Lighting System and Controls Design	No issues identified.
08	Water Heating System Design	No issues identified.
09	Other Systems and Features	No issues were identified

J. COMMISSIONING PLAN
This section does not apply to this project.

K. FUNCTIONAL PERFORMANCE TESTING
This section does not apply to this project.

L. DOCUMENTATION AND TRAINING
This section does not apply to this project.

M. COMMISSIONING REPORT
This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
There are no forms required for this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no forms required for this project.

STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Hangar 10	**Report Page:**	**(Page 6 of 6)**
Project Address:	**Date Prepared:**	2026-02-12T18:45:35-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Tom Lunneberg, P.E.	Documentation Author Signature:
Company: MA Engineers	Signature Date: 02/12/2026
Address: 5160 Carroll Canyon Road, Suite 200	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: San Diego, CA 92121	Phone: 858-200-0030

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: Shahab Salehi	Responsible Designer Signature:
Company: M.A. Engineers, Inc.	Date Signed: 2026-02-12
Address: 5160 Carroll Canyon Rd, Ste 200	License: E18803
City/State/Zip: San Diego, CA 92121	Phone: 858-200-0030

STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
This document is used to demonstrate compliance with mandatory commissioning requirements in 120.8 for nonresidential buildings and hotel/motel or mixed-use buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.		
Project Name: Hangar 10	**Report Page:**	**(Page 1 of 6)**
Project Address:	**Date Prepared:**	2026-02-12T18:45:35-05:00

A. GENERAL INFORMATION					
01	Project Location (city)	Irvine	04	Building Size (ft²)	9571
02	Occupancy Type	Nonresidential	05		< 10,000 ft²
03	Project Type	Core & shell only	06		Unitary or packaged equipment each serving one zone
			07	Climate Zone	8

B. PROJECT SCOPE

Based on project information provided in Table A, Table B indicates which commissioning related requirements apply per 120.8. Table B is not editable by the user.

Commissioning Requirements per 120.8			
01	Table F: Design Review Kickoff	120.8(d)1 and 120.8(d)2	The design review kickoff meeting establishes who will play the role of the design reviewer, the project schedule and identify owner's requirements. This meeting should be conducted during schematic design.
02	Table G: Owner's Project Requirements (OPR)	120.8(b)	This requirement does not apply.
03	Table H: Basis of Design (BOD)	120.8(c)	This requirement does not apply.
04	Table I: Design Review	120.8(d) and 120.8(e)	The design reviewer(s) reviews the construction documents for clarity, completeness, and adherence to the owner's goals. Commissioning measures must be included in the construction documents to facilitate the design review and commissioning process. For projects with >= 10,000 ft² of nonresidential conditioned floor area, the design review is for adherence with the Owner's Project Requirements (OPR) and Basis of Design (BOD). This should be conducted during design.
05	Table J: Commissioning Plan	120.8(f)	This requirement does not apply.
06	Table K: Functional Performance Testing	120.8(g)	This requirement does not apply.
07	Table L: Documentation and Training	120.8(h)	This requirement does not apply.
08	Table M: Commissioning Report	120.8(i)	This requirement does not apply.

STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Hangar 10	**Report Page:**	**(Page 2 of 6)**
	Date Prepared:	2026-02-12T18:45:35-05:00

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with commissioning requirements per 120.8. This table is not editable by the user. If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01	02	03	04	05	06	07	08	09
Design Kickoff Review	Owner's Project Requirements	Basis of Design	Design Review	Commissioning Plan	Functional Performance Testing	Documentation and Training	Commissioning Report	
Table F	Table G	Table H	Table I	Table J	Table K	Table L	Table M	
Yes			Yes					COMPLIES
10				Brian Hahnlen				COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Either Core and Shell or Tenant fit out has been indicated in Table A. Please note commissioning may be completed for the entire building prior to tenant improvements, or for each individual tenant improvement. The local enforcement agency may have commissioning policies for multi-tenant buildings.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Hangar 10	**Report Page:**	**(Page 3 of 6)**
	Date Prepared:	2026-02-12T18:45:35-05:00

F. DESIGN REVIEW KICKOFF MEETING

This table indicates that the design reviewer meets the qualification requirements per Title 24, Part 1 Section 10-103(a)1 and demonstrates compliance with design review kickoff requirements per 120.8(d)2. This meeting should occur during the Schematic Design phase of the project.

Design Review Kickoff Meeting Details				
01	Date of Design Review Kickoff Meeting		2025-07-14	
02	Meeting Attendees: (one person may play multiple roles)			
☐	Owner/Facility Manager:		☐ Design Reviewer(s)	
☒	Project Manager:	Cindy Taylor	☒ Design Architect/ Engineer(s):	Brian Hahnlen
☐	Contractor:		☐ Certified Acceptance Test Tech(s):	
☐	Commissioning Provider:		☐ Energy/ T24 Part 6 Consultant:	

Design Reviewer Qualifications per Title 24 Part 1 Section 10-103(a)1				
The design reviewer(s) must be licensed professional engineers or licensed architects, or licensed contractors representing services performed by or under the direct supervision of a licensed engineer or architect, as specified in the provisions of Division 3 of the Business and Professions Code.			Do the Design Reviewer(s) meet these qualifications?	
03	In addition, for buildings with < 10,000 ft², the design reviewer(s) may be the engineer or architect of record. The design reviewer(s) may also be a qualified in-house engineer or architect with no other project involvement or a third party engineer, architect or contractor.		Yes ●	No ○
04	The design reviewer(s) for this project will be:	Brian Hahnlen		

Preliminary Construction Schedule			
		Start Date	Completion Date
05	Schematic Design	2025-07-14	2025-08-08
06	Design Development	2025-08-11	2025-08-29
07	Construction Documents	2025-09-01	2026-02-20
08	Construction	2026-07-06	2026-12-31
09	Building Turnover	2027-01-01	2027-01-01
Project Goals Related to Energy Efficiency			
10	Operational Costs	Minimize operational costs through effective, code-compliant design strategies.	
11	Desired Building Lifespan	50-60 years	
12	Equipment Lifecycle	Make appropriate decisions in design that will minimize total cost of ownership.	
13	Project Energy Efficiency Goals	Meet a local jurisdiction's stretch goal for efficiency	

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
SHAHAB SALEHI
E18803
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
TITLE 24

Scale

E0.006

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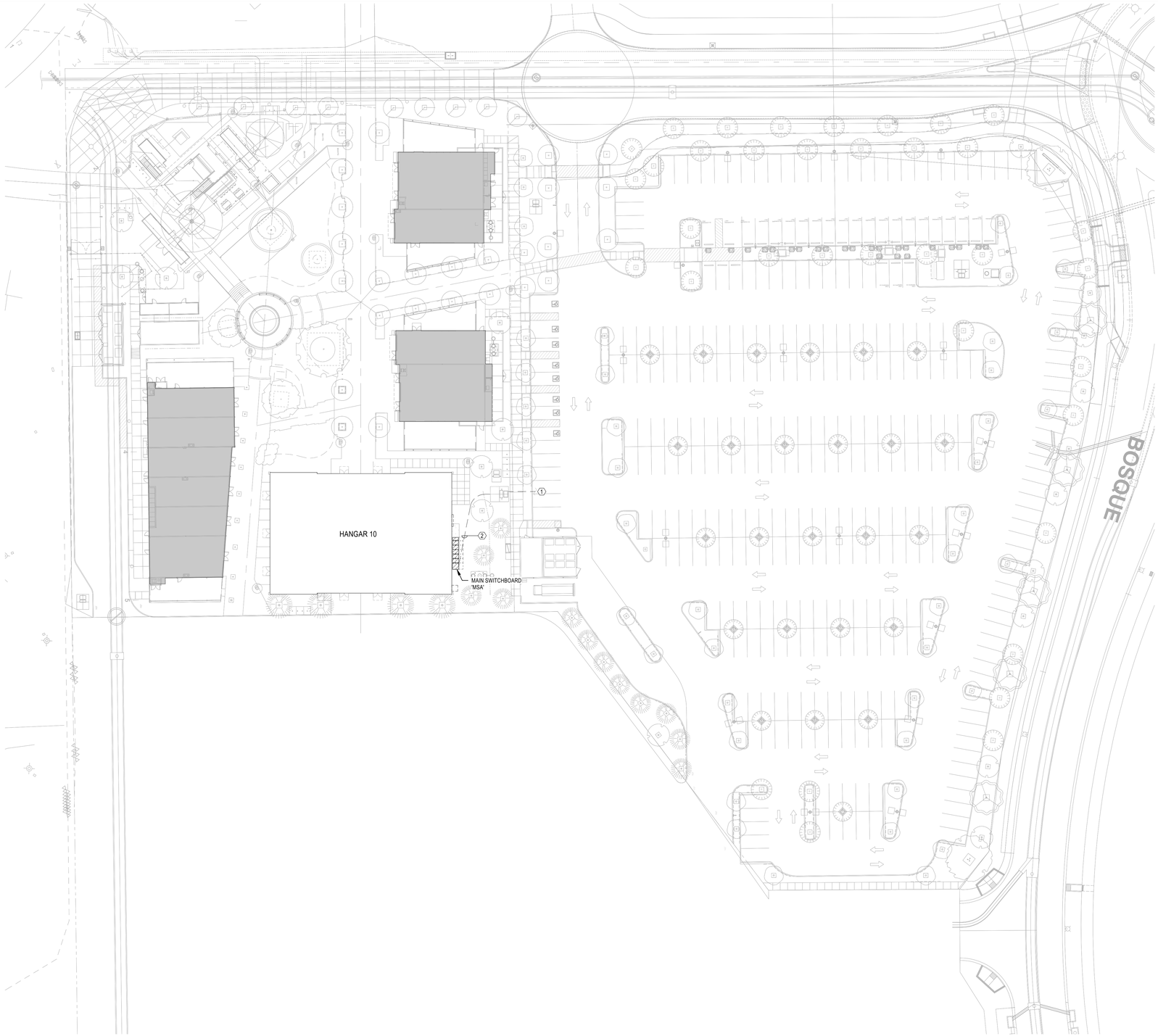

1 ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"

SHEET NOTES

1. UTILITY TRANSFORMER AND CONNECTION TO UTILITY BY THE DRY UTILITY CONSULTANT AS PART OF THE CAMPUS PROJECT UNDER SEPARATE SCOPE.
2. NEW CONDUIT AND WIRING FROM NEW UTILITY TRANSFORMER TO NEW SERVICE ENTRANCE POINT. COORDINATE ROUTING WITH CIVIL. REFER TO SINGLE-LINE DIAGRAM ON SHEET E5.01 FOR MORE INFORMATION.

GENERAL NOTES

1. CONTRACTOR SHALL INSPECT AND VERIFY ALL FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2. COORDINATE TRENCH ROUTING AND EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS AND NEW WORK.
3. EXTERIOR RECEPTACLES SHALL BE GFI TYPE AND INCLUDE WEATHERPROOF IN-USE COVERS.
4. SITE BRANCH CIRCUITING SHALL BE IN MINIMUM 1" CONDUITS WITH #10 COPPER WIRE MINIMUM UNLESS OTHERWISE NOTED.
5. ALL CONDUIT STUBS SHALL BE CAPPED, MARKED, LOCATED, AND LABELED.
6. PROVIDE WEATHERPROOF JUNCTION BOXES, CONDUIT, FITTINGS, ENCLOSURES, ETC. AT ALL EXTERIOR LOCATIONS

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
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	09.03.2025	DESIGN DEVELOPMENT
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Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
STEVEN SALEH
E18803
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
ELECTRICAL SITE PLAN

Scale
1" = 30'-0"

Ref North

E1.101

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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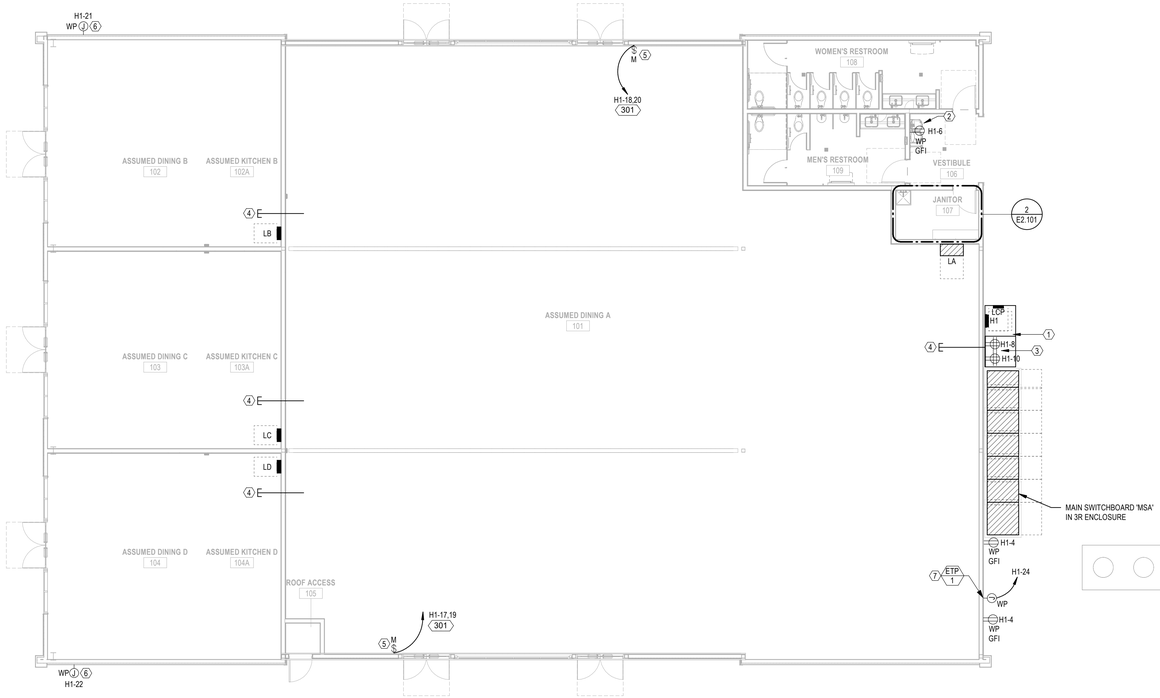

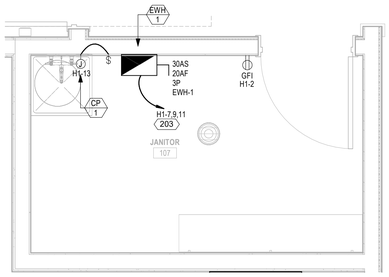

2 ENLARGED PLAN - JANITOR 107

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

1 POWER PLAN - LEVEL 01

SCALE: 1/8" = 1'-0"

SHEET NOTES

1. PROVIDE MINIMUM OF 4' X 8' NEMA 3R ENCLOSURE FOR HOUSE PANEL, LCP, AND TELCO MPOE.
2. PROVIDE WEATHERPROOF DUPLEX RECEPTACLE FOR DRINKING FOUNTAIN. COORDINATE POWER REQUIREMENTS WITH EQUIPMENT VENDOR.
3. 8'X4' FIRE RETARDANT WHITE PAINTED BACKBOARD. PROVIDE (2) QUAD RECEPTACLES FED FROM PANEL H1.
4. PROVIDE (1) 4" CONDUIT STUBBED INTO TENANT SPACE ROUTED BACK TO MPOE.
5. PROVIDE MOTOR RATED SWITCH FOR MOTORIZED DOOR. COORDINATE REQUIREMENTS WITH EQUIPMENT VENDOR.
6. PROVIDE POWER CONNECTION TO FUTURE ILLUMINATED SIGNAGE. COORDINATE POWER REQUIREMENTS WITH SIGNAGE VENDOR PRIOR TO ROUGH-IN.
7. PROVIDE 120V POWER FOR ELECTRONIC TRAP PRIMER. COORDINATE REQUIREMENTS WITH PLUMBING AND EQUIPMENT MANUFACTURER.

GENERAL NOTES

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	02.06.2025	SCHEMATIC DESIGN/PRICING
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	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
DENNIS SALEK
E18803
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name

HANGAR 10
RECONSTRUCTION

Project Number

007.8945.000

Description

LEVEL 01 - POWER PLAN

Scale

As indicated

Ref North

E2.101

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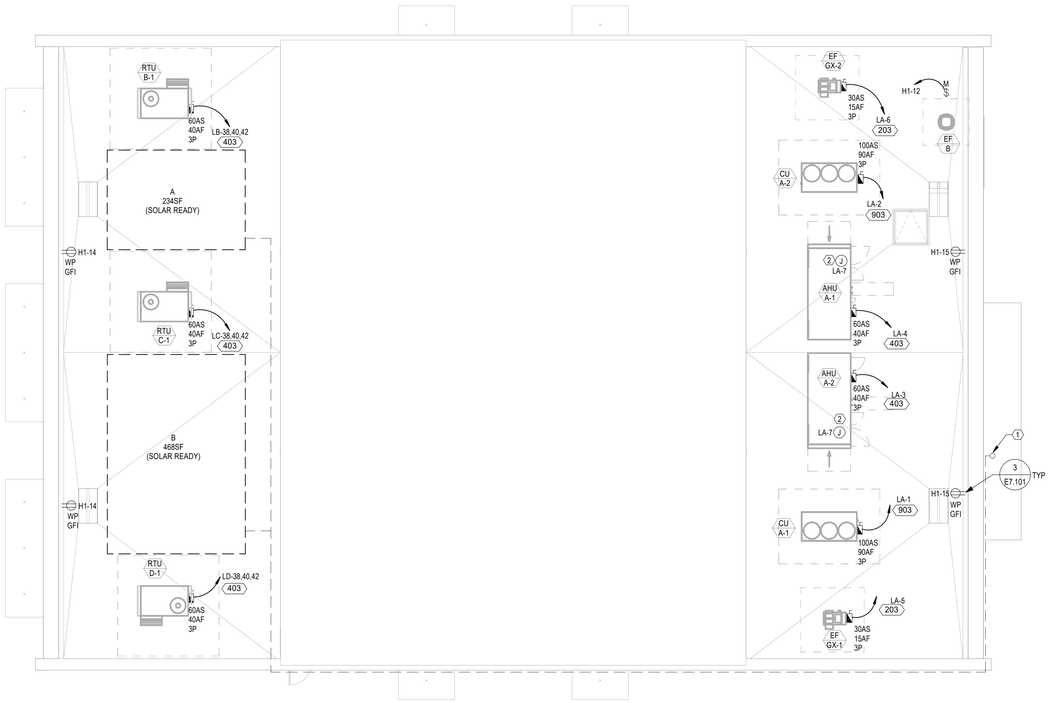

(TRA) TOTAL ROOF AREA = 4600SF
MINIMUM (SRA) SOLAR READY AREA = 15% X TRA = 690SF
SRA PROVIDED = 468SF + 234SF = 702SF

1 ROOF PLAN - LEVEL 01
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. INTERCONNECTION PATHWAY FOR FUTURE SOLAR CONDUIT INDICATED PER TITLE 24. PATHWAY TO BE ROUTED DOWN TO EXTERIOR SWITCHBOARD.
2. PROVIDE 120V CONNECTION TO DUCT MOUNTED SMOKE DETECTOR. COORDINATE REQUIREMENTS WITH MECHANICAL.

GENERAL NOTES

1. CONDUIT PENETRATIONS SHALL BE THROUGH MECHANICAL EQUIPMENT CURBS, NO INDIVIDUAL CONDUIT ROOF JACKS, UNLESS NOTED OTHERWISE.
2. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT LOCATIONS OF HVAC & PLUMBING EQUIPMENT & RELATED DEVICES, AND COORDINATE POWER AND CONTROL CONNECTIONS PRIOR TO ROUGH-IN.
3. THE CONTRACTOR SHALL REVIEW EQUIPMENT MANUFACTURER'S REQUIREMENTS AND PROVIDE FUSE SIZES AS INDICATED, RELAYS, CONNECTIONS, OR OTHER RELATED WORK TO COMPLETE THE ELECTRICAL SYSTEM.
4. BRANCH CIRCUIT CONDUITS SHALL ROUTE BELOW STRUCTURE THEN UP TO UNIT EQUIPMENT OR RECEPTACLE CONDUITS SHALL NOT BE ROUTED EXPOSED ON ROOF.
5. ALL ELECTRICAL EQUIPMENT ON ROOF SHALL BE NEMA 3R

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Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
E18803
EXP. 6/30/2027
ELECTRICAL

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
LEVEL 01 - ROOF PLAN

Scale
1/8" = 1'-0"

COPY OF IRVINE BUILDING & SAFETY DIVISION

E2.102

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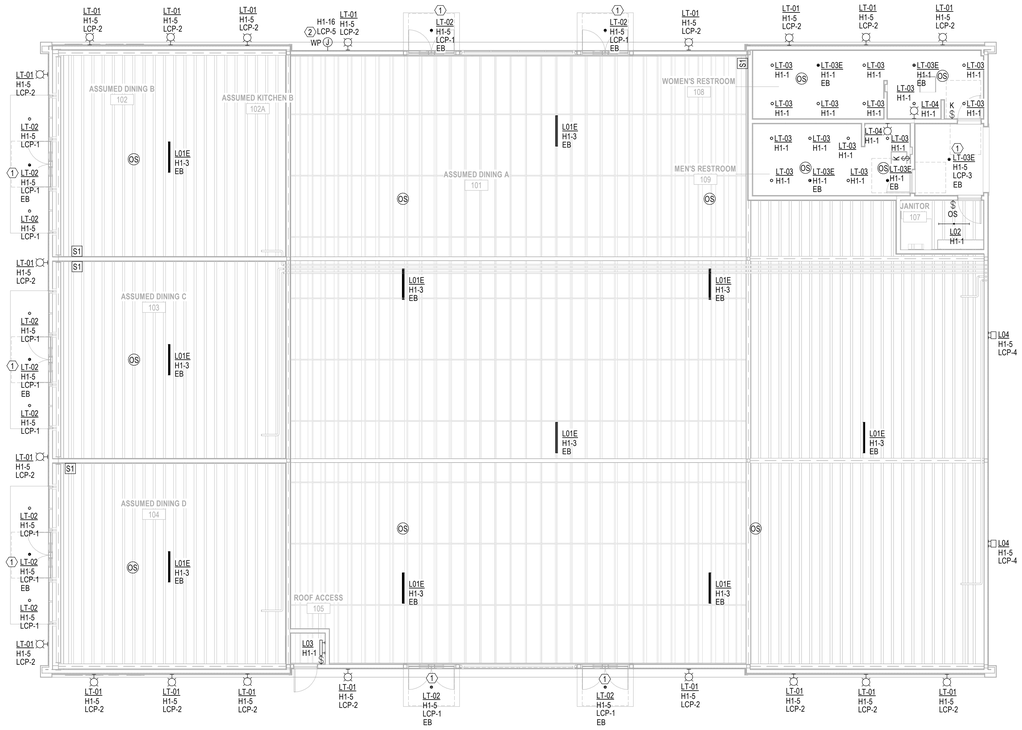

1 LIGHTING PLAN - LEVEL 01
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. PROVIDE EMERGENCY BATTERY PACK WITH MINIMUM 90-MINUTE RUNTIME FOR FIXTURES INDICATED.
2. PROVIDE POWER FOR FUTURE ILLUMINATED SIGNAGE. COORDINATE LOCATION AND POWER REQUIREMENTS WITH OWNER. SIGN TO BE CONTROLLED VIA LIGHTING CONTROL PANEL.

GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, FLOOR PLANS, AND ELEVATIONS FOR EXACT LIGHTING FIXTURE & CONTROL DEVICE LOCATIONS, CEILING TYPES AND MOUNTING HEIGHTS.
2. LIGHT FIXTURES SHOWN CIRCUITED DIRECTLY FROM LIGHTING BRANCH PANELBOARDS VIA ROOM CONTROLLERS AND/OR LIGHTING CONTROL PANELS. REFER TO LIGHTING CONTROL DIAGRAM, CONTROL PANEL SCHEDULES, AND SEQUENCE OF OPERATIONS FOR ADDITIONAL INFORMATION.
3. EXIT SIGNS AND HATCHED EGRESS LIGHTING FIXTURES CIRCUITED VIA EMERGENCY INTEGRAL BATTERY. REFER TO SEQUENCE OF OPERATIONS FOR CONTROLS AND USE OF UL924 DEVICE.
4. PROVIDE TYPES AND QUANTITIES OF OCCUPANCY SENSORS AS REQUIRED FOR ROOM/AREA COVERAGE PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE WIRING, DEVICES, ETC. AS NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.

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Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. SALEH
E18803
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
LEVEL 01 - LIGHTING PLAN

Scale
1/8" = 1'-0"

E3.101

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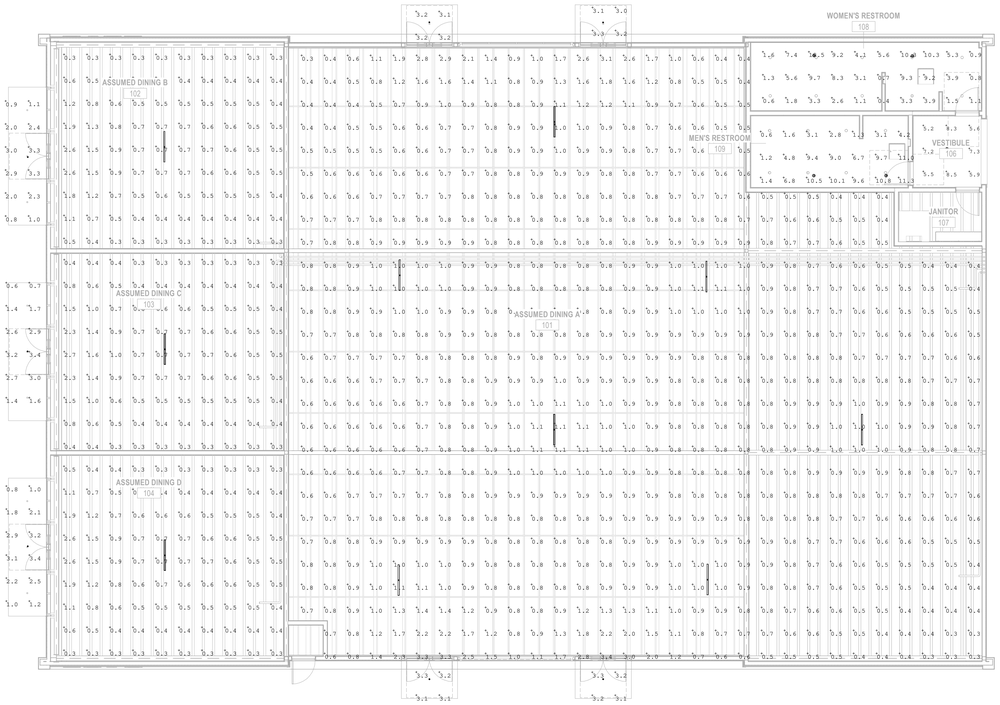
Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
MENS RR 109_Floor	Fc	6.14	11.3	0.6	10.23	18.83
RR EXIT	Fc	6.98	9.3	5.2	1.34	1.79
SUITE A 101_EXIT 1	Fc	3.18	3.3	3.1	1.03	1.06
SUITE A 101_EXIT 2	Fc	3.20	3.3	3.1	1.03	1.06
SUITE A 101_EXIT 3	Fc	3.18	3.2	3.1	1.03	1.03
SUITE A 101_EXIT 4	Fc	3.15	3.3	3.0	1.05	1.10
SUITE A 101_Floor	Fc	0.84	3.4	0.3	2.80	11.33
SUITE B 102_EXTERIOR	Fc	2.08	3.3	0.8	2.60	4.13
SUITE B 102_Floor	Fc	0.62	2.6	0.3	2.07	8.67
SUITE C 103_EXTERIOR	Fc	2.10	3.4	0.6	3.50	5.67
SUITE C 103_Floor	Fc	0.63	2.7	0.3	2.10	9.00
SUITE D 104_EXTERIOR	Fc	2.10	3.4	0.8	2.63	4.25
SUITE D 104_Floor	Fc	0.62	2.6	0.3	2.07	8.67
WOMENS RR 108_Floor	Fc	4.56	10.5	0.4	11.40	26.25



1 EGRESS PHOTOMETRIC PLAN - LEVEL 01
SCALE: 1/8" = 1'-0"

SHEET NOTES

GENERAL NOTES

1. VALUES ILLUSTRATED ARE IN FOOTCANDLES MEASURED AT GRADE THROUGHOUT.
2. LIGHT LOSS FACTOR AT 0.855.
3. REFLECTANCE VALUES UTILIZED ARE INDUSTRY STANDARD 80/50/20.

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	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. SALERNO
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EXP. 6/30/2027
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STATE OF CALIFORNIA

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
LEVEL 01 - EGRESS PHOTOMETRIC PLAN

Scale
1/8" = 1'-0"

E3.102

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PANELBOARD: LB

LOCATION: ASSUMED KITCHEN B 102A
SUPPLY: MSA
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 400A
MAINS FN/NOTE: -
SCCR: 22,000 A
AVAILABLE FAULT: 13,279 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	2
3	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	4
5	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	6
7	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	8
9	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	10
11	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	12
13	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	14
15	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	16
17	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	18
19	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	20
21	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	22
23	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	26
27	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	30
31	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--	3240									38
39	PROVISIONS	--	1	--			--	3240				3	40	RTU B-1	40
41	PROVISIONS	--	1	--					--	3240					42
				CONNECTED LOAD:	3 kVA		3 kVA		3 kVA						
				CONNECTED CURRENT:	27 A		27 A		27 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	9720 VA	100.00%	9720 VA

PANEL TOTALS	
CONNECTED LOAD:	10 kVA
CONNECTED CURRENT:	27 A
DEMAND LOAD:	10 kVA
DEMAND CURRENT:	27 A

NOTES:

PANELBOARD: LC

LOCATION: ASSUMED KITCHEN C 103A
SUPPLY: MSA
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 400A
MAINS FN/NOTE: -
SCCR: 22,000 A
AVAILABLE FAULT: 15,282 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	2
3	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	4
5	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	6
7	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	8
9	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	10
11	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	12
13	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	14
15	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	16
17	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	18
19	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	20
21	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	22
23	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	26
27	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	30
31	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--	3240									38
39	PROVISIONS	--	1	--			--	3240				3	40	RTU C-1	40
41	PROVISIONS	--	1	--					--	3240					42
				CONNECTED LOAD:	3 kVA		3 kVA		3 kVA						
				CONNECTED CURRENT:	27 A		27 A		27 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	9720 VA	100.00%	9720 VA

PANEL TOTALS	
CONNECTED LOAD:	10 kVA
CONNECTED CURRENT:	27 A
DEMAND LOAD:	10 kVA
DEMAND CURRENT:	27 A

NOTES:

PANELBOARD: LD

LOCATION: ASSUMED KITCHEN D 104A
SUPPLY: MSA
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

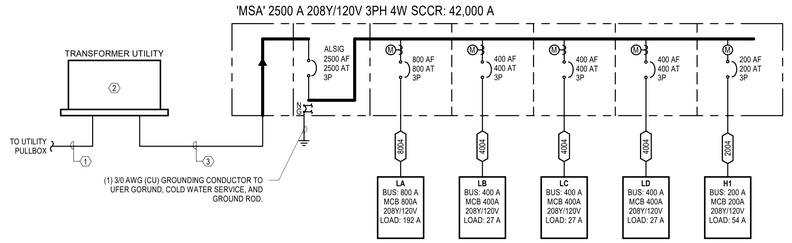
MAINS TYPE: MCB 400A
MAINS FN/NOTE: -
SCCR: 22,000 A
AVAILABLE FAULT: 15,650 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	2
3	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	4
5	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	6
7	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	8
9	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	10
11	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	12
13	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	14
15	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	16
17	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	18
19	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	20
21	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	22
23	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	26
27	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	30
31	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--	3240									38
39	PROVISIONS	--	1	--			--	3240				3	40	RTU D-1	40
41	PROVISIONS	--	1	--					--	3240					42
				CONNECTED LOAD:	3 kVA		3 kVA		3 kVA						
				CONNECTED CURRENT:	27 A		27 A		27 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	9720 VA	100.00%	9720 VA

PANEL TOTALS	
CONNECTED LOAD:	10 kVA
CONNECTED CURRENT:	27 A
DEMAND LOAD:	10 kVA
DEMAND CURRENT:	27 A

NOTES:



1 SINGLE-LINE DIAGRAM

SCALE: NONE

SWITCHBOARD: MSA

LOCATION:
SUPPLY: UTILITY
MOUNTING: FLOOR
ENCLOSURE: NEMA 3R
FEATURES & MODIFICATIONS

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 2500 A
NEUTRAL: 100%
MAINS TYPE: MCB 2500A
MAINS FN/NOTE:
SCCR: 42,000 A
AVAILABLE FAULT: 42,000 A

CKT	DESCRIPTION:	FRAME (A)	TRIP (A)	POLES	FN/NOTE	LOAD
1	DIST. BRD. LA (SUITE A)	800	800	3		69076
2	PANEL LB (SUITE B)	400	400	3		9720
3	PANEL LC (SUITE C)	400	400	3		9720
4	PANEL LD (SUITE D)	400	400	3		9720
5	PANEL H1	200	200	3		18871

LOAD SUMMARY

LOAD CLASSIFICATION	Connected	FACTOR	DEMAND	PANEL TOTALS	
LIGHTING	2515 VA	125.00%	3144 VA	CONNECTED LOAD:	117 kVA
MOTOR	103472 VA	100.00%	103472 VA	CONNECTED...	325 A
POWER	9680 VA	100.00%	9680 VA	DEMAND LOAD:	118 kVA
RECEPTACLE	1440 VA	100.00%	1440 VA	DEMAND CURRENT:	327 A

NOTES:

PANELBOARD: H1

LOCATION:
SUPPLY: MSA
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 200 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 200A
MAINS FN/NOTE: -
SCCR: 42,000 A
AVAILABLE FAULT: 22,082 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	A		B		C		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	LTG_RR	20	1		303	180						1	20	REC_RRJAN	2
3	LTG_SHELL	20	1				560	360				1	20	REC_EXT	4
5	LTG_EXT	20	1						392	180		1	20	REC_DF	6
7	EWH-1	20	3		1500	360						1	20	REC_MPOE	8
9							1500	360				1	20	REC_MPOE	10
11									1500	1176		1	20	EF-B	12
13	CP-1	20	1		100	360						1	20	REC_ROOF	14
15	REC_ROOF	20	1				360	180				1	20	FUTURE ILLUM SIGN	16
17	DOOR MOTOR	30	2						2080	2080		2	30	DOOR MOTOR	18
19					2080	2080									20
21	ILLUMINATED SIGN	20	1				540	540				1	20	ILLUMINATED SIGN	22
23	SPARE	20	1	--					0	100		1	20	ETP-1	24
25	SPARE	20	1	--	0	0					--	1	20	SPARE	26
27	SPARE	20	1	--			0	0			--	1	20	SPARE	28
29	SPARE	20	1	--					0	0	--	1	20	SPARE	30
31	SPARE	20	1	--	0	0					--	1	20	SPARE	32
33	SPARE	20	1	--			0	0			--	1	20	SPARE	34
35	SPARE	20	1	--					0	0	--	1	20	SPARE	36
37	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	38
39	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	40
41	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	42
				CONNECTED LOAD:	7 kVA		4 kVA		8 kVA						
				CONNECTED CURRENT:	61 A		37 A		66 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
LIGHTING	2515 VA	125.00%	3144 VA
MOTOR	5336 VA	100.00%	5336 VA
POWER	9680 VA	100.00%	9680 VA
RECEPTACLE	1440 VA	100.00%	1440 VA

PANEL TOTALS	
CONNECTED LOAD:	19 kVA
CONNECTED CURRENT:	52 A
DEMAND LOAD:	19 kVA
DEMAND CURRENT:	54 A

NOTES:

SWITCHBOARD: LA

LOCATION:
SUPPLY: MSA
MOUNTING: FLOOR
ENCLOSURE: NEMA 1
FEATURES & MODIFICATIONS

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 800 A
NEUTRAL: 100%
MAINS TYPE: MCB 800A
MAINS FN/NOTE:
SCCR: 42,000 A
AVAILABLE FAULT: 30,393 A

CKT	DESCRIPTION:	FRAME (A)	TRIP (A)	POLES	FN/NOTE	LOAD
1	CU-1	100	90	3		23400
2	CU-2	100	90	3		23400
3	AHU-1	100	40	3		8712
4	AHU-2	100	40	3		8712
5	EF GX-1	100	15	3		2376
6	EF GX-2	100	15	3		2376
7	SMOKE DUCT DET	100	15	1		100
8	PROVISIONS	--	--	3	--	--
9	PROVISIONS	--	--	3	--	--
10	PROVISIONS	--	--	3	--	--

LOAD SUMMARY

LOAD CLASSIFICATION	Connected	FACTOR	DEMAND	PANEL TOTALS	
MOTOR	68976 VA	100.00%	68976 VA	CONNECTED LOAD:	69 kVA
POWER	100 VA	100.00%	100 VA	CONNECTED...	192 A
				DEMAND LOAD:	69 kVA
				DEMAND CURRENT:	192 A

NOTES:

FAULT CURRENT SCHEDULE

DEVICE	FAULT AT DEVICE	AIC RATING	VOLTAGE	FEEDER SIZE	FEEDER LENGTH	TRANSFORMER KVA	TRANSFORMER Z%	TRANSFORMER FAULT AT PRIMARY	CONNECTED MOTOR FAULT	TOTAL MOTOR CONTRIBUTION
MSA	42,000	42,000	208V	(6)600kcmil	89'				0	0
H1	22,082	42,000	208V	3/0	36'				0	0
LA	30,393	42,000	208V	(2)600kcmil	50'				0	-0
LB	13,279	22,000	208V	600kcmil	139'				0	0
LC	15,282	22,000	208V	600kcmil	113'				0	0
LD	15,650	22,000	208V	600kcmil	109'				0	0

VOLTAGE DROP SCHEDULE

DEVICE	FEEDER VOLTAGE DROP	FEEDER WIRE SIZE	FEEDER LENGTH	BRANCH CIRCUIT MAX VOLTAGE DROP	BRANCH CIRCUIT CIRCUIT NUMBER	BRANCH CIRCUIT WIRE SIZE	TOTAL VOLTAGE DROP
MSA	0.09%	(6)600kcmil	89'				0.09%
H1	0.22%	3/0	36'	2.87%	17,19	#10	3.09%
LA	0.19%	(2)600kcmil	50'	0.84%	5	#12	1.02%
LB	0.16%	600kcmil	139'	0.76%	38,40,42	#8	0.92%
LC	0.15%	600kcmil	113'	0.75%	38,40,42	#8	0.90%
LD	0.15%	600kcmil	109'	0.75%	38,40,42	#8	0.90%

LB	MSA
LC	H1
LD	LA

SHEET NOTES

1. CONDUIT PER SCE REQUIREMENTS.
2. NEW UTILITY TRANSFORMER WITH TRANSFORMER PAD AND VAULT AT LOCATION PER SCE.
3. PROVIDE (6) 4"C. COORDINATE CONDUIT AND CONDUCTORS FROM UTILITY TRANSFORMER TO NEW UGPS PER SCE REQUIREMENTS.

GENERAL NOTES

1. ALL PANELBOARDS TO BE PROVISIONED WITH SUITABLE GUTTER SPACE FOR FUTURE CT MONITORING FOR DISAGGREGATED LOADS.

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△	Date	Description
	02.06.2025	SCHEMATIC DESIGN/PRICING
	05.02.2025	DESIGN DEVELOPMENT
	09.03.2025	DESIGN DEVELOPMENT
	10.14.2025	CD CLIENT REVIEW/PRICING
	11.03.2025	ISSUE FOR PLAN CHECK
A	01.09.2026	ADDENDUM A / PLAN CHECK COMMENTS
	05.07.2026	BID SET

Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
JAMES SALEH
E18803
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.2945.000

Description
SINGLE-LINE DIAGRAM

Scale
NONE

COMMENTS BUILDING & SAFETY DIVISION

E5.101

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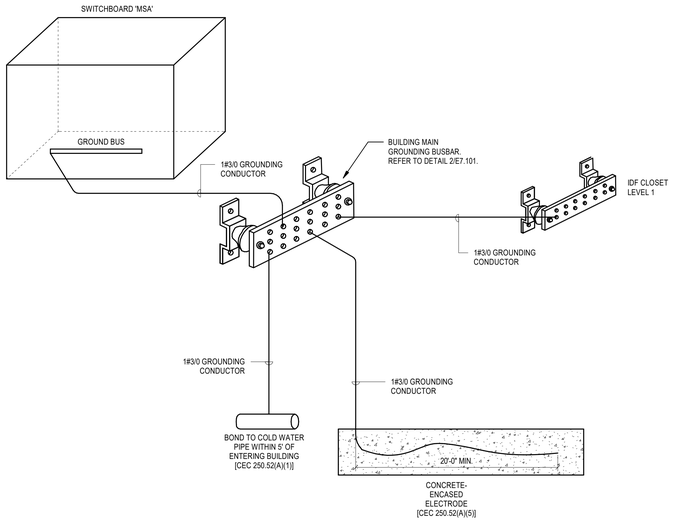
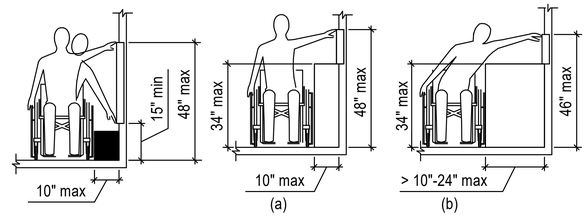
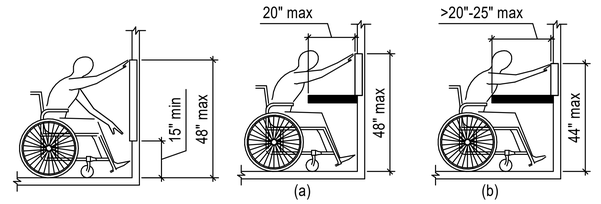


4 GROUNDING/BONDING BACKBONE DIAGRAM

SCALE: NO SCALE



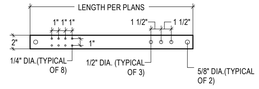
SIDE REACH DEVICE MOUNTING REQUIREMENTS



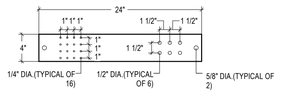
SIDE REACH DEVICE MOUNTING REQUIREMENTS

1 REACH DEVICE MOUNTING REQUIREMENTS

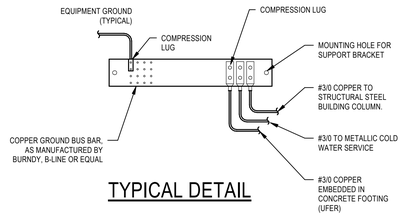
SCALE: NO SCALE



TYPICAL GROUND BUS BAR (TGB)



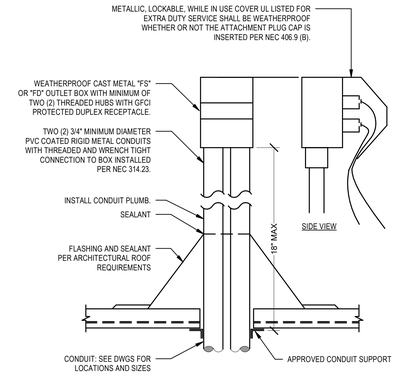
MAIN GROUND BUS BAR



TYPICAL DETAIL

2 TYPICAL GROUND BUS BAR DETAIL

SCALE: NO SCALE



3 ROOF PENETRATION AND RECEPTACLE DETAIL

SCALE: NO SCALE

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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Seal / Signature

REGISTERED PROFESSIONAL ENGINEER
STEPHEN SALEH
E18803
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA

COMMENTS
BUILDING & SAFETY DIVISION

Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.0945.000

Description

ELECTRICAL DETAILS

Scale

NO SCALE

E7.101

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WATER CALCULATION

PRESSURE AVAILABLE			
STATIC PRESSURE IN MAIN	=	+52.05	PSI
ESTIMATED PRESSURE LOSS THRU METER	=	-3	PSI
MINIMUM PRESSURE REQUIRED AT LAST FIXTURE	=	-30	PSI
STATIC HEAD LOSS (17 FEET x .43)	=	-7.31	PSI
TOTAL	=	+11.74	PSI
TOTAL DEVELOPED LENGTH (TDL)	=	300	FEET
TOTAL EQUIVALENT LENGTH (TDLx1.5)	=	450	FEET

(11.74X100) / 452 = 2.597 PSI ALLOWABLE LOSS PER 100 FT

PIPE SIZING CHART BASED ON 2 PSI/100FT LOSS.

CW PIPING SIZING CHART 2 psi / 100 ft

SIZE	GPM	FIXTURE UNITS		VELOCITY (FPS)
		FLUSH TANK	FLUSH VALVE	
1/2"	1.5	---	---	1.8
3/4"	3.8	3	---	2.5
1"	7.5	8	---	2.8
1 1/4"	14	20	---	3.4
1 1/2"	22	34	5	3.8
2"	45	107	37	4.8
2 1/2"	80	275	148	5.5
3"	150	638	559	6.2
4"	270	1500	1500	6.8

HW PIPING SIZING CHART 2 psi / 100 ft

SIZE	GPM	FIXTURE UNITS		VELOCITY (FPS)
		FLUSH TANK	FLUSH VALVE	
1/2"	1.5	---	---	1.8
3/4"	3.8	3	---	2.5
1"	7.5	8	---	2.8
1 1/4"	14	20	---	3.4
1 1/2"	22	34	---	3.8
2"	45	107	---	4.8
2 1/2"	72	236	---	5
3"	113	455	---	5
4"	180	809	---	5
			---	5

PLUMBING LEGEND AND ABBREVIATIONS

SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION
	POC	POINT OF CONNECTION		ABV	ABOVE
W	W	WASTE OR SEWER ABOVE SLAB		A/C	ABOVE CEILING
GW	GW	GREASE WASTE		A.F.F.	ABOVE FINISH FLOOR
V	V	SANITARY VENT		A.F.G.	ABOVE FINISH GRADE
CW	CW	COLD WATER		A/G	ABOVE GRADE
HW	HW	HOT WATER		A.P.	ACCESS PANEL
HWR	HWR	HOT WATER RETURN		B/F	BELOW FLOOR
G	G	LOW PRESSURE GAS		B/G	BELOW GRADE
SD	SD	STORM DRAIN		DWGS.	DRAWINGS
OSD	OSD	STORM DRAIN OVERFLOW		EA.	EACH
SOV	SOV	SHUT OFF VALVE		EXIST.	EXISTING
BLV	BLV	BALANCING VALVE		(E)	EXISTING
PRV	PRV	PRESSURE REDUCING VALVE		FT.	FEET OR FOOT
FS	FS	FLOOR SINK		FLR.	FLOOR
FD	FD	FLOOR DRAIN		G.P.F.	GALLONS PER FLUSH
FCO	FCO	FLOOR CLEAN-OUT		G.P.H.	GALLONS PER HOUR
WCO	WCO	WALL CLEAN-OUT		G.P.M.	GALLONS PER MINUTE
GCO	GCO	GRADE CLEAN-OUT		I.E.	INVERT ELEVATION
DN	DN	DOWN OR DROP		NTS	NOT TO SCALE
UP	UP	RISE OR RISER		ORD	OVERFLOW ROOF DRAIN
HB	HB	HOSE BIBB		LB	POUNDS
		VALVE ON RISE OR DROP		PSI	POUNDS PER SQUARE INCH
U	U	UNION		RD	ROOF DRAIN
RV	RV	TEMPERATURE & PRESSURE RELIEF VALVE		RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
				SF	SQUARE FEET
				T.D.H.	TOTAL DEVELOPED HEAD
CD	CD	CONDENSATE DRAIN PIPING		TP	TRAP PRIMER
CP	CP	CIRCULATING PUMP		V.T.R.	VENT THROUGH ROOF
CV	CV	CHECK VALVE		W.C.	WATER COLUMN
TP	TP	TRAP PRIMER		WHA	WATER HAMMER ARRESTOR
WHA	WHA	WATER HAMMER ARRESTOR		COP	CLEAN OUT PLUG
				WSFU	WATER SUPPLY FIXTURE UNITS
RPBP	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER		DFU	DRAINAGE FIXTURE UNITS
ICW	ICW	INDUSTRIAL COLD WATER			

PIPE MATERIALS

1. WATER ABOVE GRADE: COPPER TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER JOINT FITTINGS.
2. WATER BELOW GRADE: COPPER TYPE "K" WITH CAST SOLDER JOINT FITTINGS. ROUGH SOLDER JOINT FITTINGS, OR FLARED JOINT FITTINGS. PROVIDE POLYETHYLENE SLEEVE.
3. SOIL/WASTE AND VENT ABOVE GRADE: HUBLESS CAST IRON PIPE AND FITTINGS. HEAVY DUTY COUPLINGS.
4. SOIL/WASTE AND VENT BELOW GRADE: SOLID WALL POLYVINYL CHOLRIDE (PVC) PIE AND FITTINGS PER ASTM D2665.
5. GREASE WASTE AND VENT ABOVE GRADE: HUBLESS CAST IRON PIPE AND FITTINGS. HEAVY DUTY COUPLINGS.
6. GREASE WASTE AND VENT BELOW GRADE: HUBLESS CAST IRON PIPE AND FITTINGS. HEAVY DUTY COUPLINGS. PROVIDE WITH POLYETHYLENE SLEEVE.
7. STORM DRAIN ABOVE GRADE: HUBLESS CAST IRON PIPE AND FITTINGS. HEAVY DUTY COUPLINGS.
8. STORM DRAIN BELOW GRADE: SCHEDULE 40 POLYVINYL CHLORIDE (PVC) AND FITTINGS PER ASTM D2665.
9. CONDENSATE DRAIN: COPPER TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER JOINT FITTINGS.
10. NATURAL GAS ABOVE GRADE: BLACK STEEL, SCHEDULE 40 WITH MALLEABLE IRON-THREADED FITTINGS.

GENERAL NOTES

1. NO PLUMBING SHALL BE INSTALLED UNTIL ALL REQUIRED PLUMBING PLAN CHECK PERMITS AND APPROVALS HAVE BEEN OBTAINED FROM ALL REQUIRED AGENCIES.
2. LAVATORY FAUCETS, SINK FAUCETS (NOT INCLUDING SERVICE SINK FAUCETS OR FAUCETS DESIGNATED AS INSTITUTIONAL) SHALL MEET THE FLOW REQUIREMENTS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS.
3. COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES AND DRAINS.
4. HOSE BIBBS SHALL BE PROTECTED BY AN APPROVED NON-REMOVABLE TYPE BACKFLOW PROTECTION DEVICE. HOSE BIBBS SHALL BE MOUNTED AT +18" ABOVE FLOOR UNLESS OTHERWISE NOTED.
5. PROVIDE ALL TAILPIECES, TRAPS, STOPS, SUPPLY PIPES TO LAVATORIES DESIGNED AS ACCESSIBLE, WITH PREFORMED INSULATION JACKET.
6. COORDINATE AND VERIFY SIZES, LOCATIONS, DEPTHS AND PRESSURIZED PIPING PRESSURES OF ALL BUILDING UTILITIES WITH CIVIL.
7. COORDINATE AND SCHEDULE TIMING FOR UTILITY SERVICE CONNECTION.
8. ALL LINES BELOW SLAB ON GRADE TO BE LOCATED AWAY FROM ALL LOAD BEARING FOOTINGS.
9. FOR PIPE PENETRATION THROUGH STRUCTURAL MEMBERS, SEE STRUCTURAL DRAWINGS FOR CONSTRUCTION.
10. ALL VENTS THRU ROOF SHALL BE MINIMUM OF 18 INCHES VERTICAL AND FIFTEEN FEET HORIZONTAL AWAY FROM ALL AIR CONDITIONING FRESH AIR INTAKES AND PROVIDED WITH VANDAL PROOF HOODS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, ROOFS, FOOTINGS, FLOORS, INCLUDING ALL SAW CUTTING AND CORE DRILLING. COORDINATE ALL SAW CUTTING AND CORE DRILLING WITH STRUCTRUAL DRAWINGS. ANY CUTTING AND DRILLING REQUIRED OF STRUCTURAL ELEMENTS THAT IS NOT SPECIFICALLY SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO CUTTING AND DRILLING. CONTRACTOR SHALL SUBMIT PROPOSED LOCATION AND SIZES OF SUCH CUTTING AND DRILLING FOR THE ARCHITECTS AND STRUCTURAL ENGINEERS APPROVAL.
12. COORDINATE ALL EQUIPMENT LOCATIONS, PIPE PENETRATIONS AND EQUIPMENT PAD LOCATIONS WITH STRUCTURAL DRAWINGS PRIOR TO WORK.
13. COORDINATE INSTALLATION OF ALL EQUIPMENT AND PIPING WITH OTHER TRADES PRIOR TO INSTALLATION. ENSURE THAT ALL CONTROL DEVICES, SHUT-OFF VALVES, ETC. ARE ACCESSIBLE FOR MAINTENANCE. WHERE ACCESS PANELS IN FINISHED SPACES, OTHER THAN THAT SHOWN, CONTRACTOR SHALL PROVIDE AND COORDINATE EXACT LOCATION OF PANELS WITH ARCHITECT PRIOR TO INSTALLATION.
14. INSTALL VALVES WITH UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT ARRANGED TO ALLOW SERVICE, MAINTENANCE, AND EQUIPMENT REMOVAL WITHOUT SYSTEM SHUT-DOWN.
15. ANY STRUCTURAL FIREPROOFING DAMAGED DURING INSTALLATION OF PLUMBING EQUIPMENT, PIPING, ETC. SHALL BE REPAIRED AT NO COST TO THE OWNER. REPAIRS SHALL BE AS DIRECTED BY THE ARCHITECT.
16. PROVIDE VACUUM BREAKERS AT HOSE BIBBS.
17. FAUCETS, OTHER THAN LAVATORIES, SHALL BE 1.8 GPM MAXIMUM.
18. WATER HEATER TO BE USED SHALL BE ON CALIFORNIA ENERGY COMMISSION (CEC) LIST.
19. PROVIDE EXPANSION TANK OR OTHER APPROVED METHOD OF RELIEVING PRESSURE (SECTION 608.3 CPC).
20. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT.
21. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO BID.
22. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO ORDERING ANY EQUIPMENT.
23. UPON INSTALLATION OF ALL EQUIPMENT, DEVICES, VIBRATION ISOLATION, ETC., PROVIDE WRITTEN CONFIRMATION BY EQUIPMENT MANUFACTURER'S REPRESENTATIVES TO ENSURE COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS.
24. PROVIDE DETAILS AND SEISMIC CALCULATIONS FOR ALL EQUIPMENT ON VIBRATION ISOLATION. ALL DETAILS SHALL BE STAMPED BY A STRUCTURAL ENGINEER FROM VIBRATION ISOLATIONS MANUFACTURER.
25. FOR EACH SUBMITTAL, THE CONTRACTOR SHALL PROVIDE A LETTER (ON COMPANY LETTERHEAD) AND SIGNED BY THE PROJECT MANAGER INDICATING THE SUBMITTAL HAS BEEN FULLY IN HOUSE REVIEWED TO ENSURE FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND COORDINATION WITH OTHER TRADES. ANY EXCEPTIONS TO THE CONTRACT DOCUMENTS SHALL BE CLEARLY INDICATED ON THIS LETTER. ANY DISCREPANCIES/EXCEPTIONS NOT IDENTIFIED IN WRITING SHALL BE CORRECTED AT THE SOLE EXPENSE OF THE CONTRACTOR AND AT NO EXPENSE TO THE OWNER AND ENGINEER.
26. THE CONTRACTOR SHALL SELECT ALL CIRCUIT SETTERS/BALANCING VALVES FOR ACTUAL FLOW THROUGH THE PIPE AND THE PROPER PRESSURE DROP TO ENSURE PROPER OPERATION AND NOT BASED ON PIPE SIZES.
27. SLOPE OF PIPING SYSTEMS:
    - A. NORMAL SANITARY SEWER:
      A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT OR 1 PERCENT IS PROVIDED FOR DRAINAGE PIPING 4 INCHES OR LARGER ONLY WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER, TO THE STRUCTURAL FEATURES, OR TO THE ARRANGEMENT OF A BUILDING OR STRUCTURE TO OBTAIN A SLOPE OF 1/4 INCH PER FOOT OR 2 PERCENT AND THAT IS SUBJECT TO THE PLUMBING FIELD INSPECTOR'S APPROVAL.
    - B. GREASE SANITARY SEWER:
      SLOPE OF 1/4 INCH PER FOOT OR 2 PERCENT.
    - C. ROOF DRAIN & OVERFLOW DRAIN PIPING: 1% UNLESS NOTED OTHERWISE.
    - D. INDIRECT WASTE PIPING: 1% UNLESS NOTED OTHERWISE.
    - E. CONDENSATE DRAIN PIPING: 1% UNLESS NOTED OTHERWISE.
28. ALL STORM DRAINAGE SIZING SHALL BE BASED ON 2" / HOUR RAINFALL RATE.
29. TESTING, ADJUSTING, AND BALANCING OF PLUMBING SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE 2022 CALIFORNIA ENERGY CODE (TITLE 24) SECTION 120.8. TAB SHALL INCLUDE MEASUREMENT AND ADJUSTMENT OF HOT WATER SUPPLY AND RETURN TO DESIGN VALUES; VERIFICATION OF REQUIRED HOT WATER TEMPERATURE AND CONFIRMATION OF PROPER SYSTEM OPERATION WHERE APPLICABLE. A COMPLETED TAB REPORT DOCUMENTING MEASURED AND FINAL ADJUSTED VALUES SHALL BE PROVIDED TO THE CITY PRIOR TO FINAL INSPECTION APPROVAL.

SCOPE OF WORK

A NEW HANGAR BUILDING WITH 9700 SF. BUILDING TO BE SERVICED FOR FUTURE TENANTS AND RESTROOMS BY PROVIDING GREASE WASTE, SANITARY WASTE, VENT, DOMESTIC WATER, GAS, AND STORM DRAINAGE.

TABLE 1014.3.6
GRAVITY GREASE INTERCEPTOR SIZING

DRAINAGE FIXTURE UNITS[1, 3] (DFUs)	INTERCEPTOR VOLUME[2] (gallons)
8	500
21	750
35	1000
90	1250
172	1500
216	2000
307	2500
342	3000
428	4000
576	5000
720	7500
2112	10 000
2640	15 000

Irvine Ranch Water District

February 18, 2026

Nicholas Balagtas
Hangar 10 (Rehab)
Hangar 10
Irvine, CA 92618

RE: 1st Submittal – Plan Approval
FOG-2147 –Hangar 10 (Rehab) – Hangar 10, Irvine, CA 92618

Dear Nicholas Balagtas:

The submitted plans for Hangar 10 (Rehab) located at Hangar 10, in Irvine, CA, have been reviewed. Per IRWD's FOG Control Program Rules and Regulations, the identified FOG control issues have been adequately addressed. The plans, as submitted, have been approved.

- Prior to any food service establishment tenant **additions or modifications,** plans for the tenant facility must be submitted to IRWD for FOG Program review, showing connection to this grease interceptor and referencing this Shell plan approval.

Note:

Elevated dissolved sulfide in wastewater can cause sewer system corrosion, nuisance odors from the generation of hydrogen sulfide (H2S), and potential health risks. The allowable discharge limit for dissolved sulfides is 0.50 milligrams per liter (mg/L). When sulfide levels in excess of 0.50 mg/L are detected, the owner/operator of the wastewater system is required to reduce the level below the allowable discharge limit. In order to do this, you may incur added cost in having to pump the interceptor more frequently, costs from potential treatment of the interceptor effluent and other costs associated with addressing wastewater issues, including fines, if dissolved sulfide levels are continually above the discharge limit.

Detailed information of IRWD's Fats, Oils, and Grease Program (FOG) including IRWD's Rules and Regulations is available at IRWD's website: http://www.irwd.com/fats-oils-greases-program. If you have any questions, please call me at 949-453-5665.

Sincerely,

Jim Kolk
FOG Program

This approval is specifically for the IRWD FOG control program. It should not be interpreted as approval of work within IRWD easements or connections to IRWD public facilities. Please submit to IRWD's Development Services at plancheck@IRWD.com. It is also the applicant's responsibility to submit to the respective agency/building/planning department in order to meet any agency requirements.

THERMAL EXPANSION TANK SIZING

Residential • Commercial

Domestic Hot Water Volume	50	Gallons *(Range: 10 - 10,000)*
Water Heater Temperature	140	°F
Relief Pressure	150	PSI
Supply Pressure	80	PSI

START

RECOMMENDED MODELS:

440-450 Series:	**ST-447-C**
CL Series:	**ST-35-CL**
STC Series:	**ST-5C-DD**

Acceptance Volume: 0.75 gal

Tank Volume: 1.8 gal

IRVINE RANCH WATER DISTRICT 15600 Sand Canyon Ave., P.O. Box 57000, Irvine, CA 92619-7000 (949) 453-5300

Water Flow Test Results

Location: Great Park & Turnpin

Test Date: 10/12/2021
SERVOPRO RC TEST OR HYDRANTS FLOWED
Total # 1

HGL	436
Differential psi	9
Outlet Size (inches)	4
Outlet Coefficient	0.9
Pitot Reading	30
Flow - GPM	2813

IRWD Static PSI and Residual PSI Calculation
HGL = 436; Differential psi = 9psi; Building Pad Elevation = 295

1)436 – 295 = 141
2)141 x 0.433 = 61.05
3)Theoretical static psi at building site = 61.05
4)61.05 – 9 = 52.05
5)Theoretical residual psi = 52.05

The Hydrant Flow Test Calculator measures the rated capacity at 20 psi of a fire hydrant. The rated capacity calculation is based on the hydrant's flow test data and the hydraulic model of the IRWD water system. For more information about the information from the test flow by itself and is used by insurance underwriters, For more information see NFPA 291, Manual M-17, or our web page on Hydrant Flow Testing.

Static Pressure (PSI): 436
Residual Pressure (PSI): 52.05
Total Test Flow Rate (GPM): 2813
CALCULATE

GPM at 20 psi: 2828
Class: AA
Marking color: Light Blue
% Pressure Drop: 12%

5160 Carroll Canyon Rd, Suite 200
San Diego, California 92121
Fax. (858) 200-0037
(858) 200-0030

Project Name: Hangar 10
MA Job #: 8702

Hot Water Calculation

Quantity	Fixture Description	Symbol	GPH	TOTAL GPH
4	Lavatory	L	6	24
1	Service Sink	SS	20	20
0	Clotheswasher Box	CWB	14.8	0
0	Shower	SH	75	0
0	-	-	0	0
0	-	-	0	0
0	-	-	0	0
0	-	-	0	0
	Based on ASHRAE HW Table 9		Total	44

Demand Factor	0.3
Storage Factor	2
Maximum Possible Demand (GPH)	44
Probable maximum demand (GPH)	13.2
Storage tank (gallons)	26.4

Hot Water Heater Selection

Recovery Flow Rate (GPH)	13.2
Temp Rise (F)	90
Heater Efficiency	99
Heater Input (BTU/h)	99.96

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△ Date	Description
05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
JOHN LAZARETTO
M41366
Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
PLUMBING LEGENDS AND GENERAL NOTES

Scale
NO SCALE

P0.001

ONLY FOR PLANNING
BUILDING & SAFETY DIVISION

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PLUMBING EQUIPMENT SCHEDULE

SYMBOL	TYPE	ELECTRICAL DATA				CAPACITY		STORAGE VOLUME (GALLON)	WEIGHT (LBS)	DESCRIPTION	LOCATION
		POWER (HP)	VOLTS (V)	PHASE (PH)	HERTZ (HZ)	INPUT (MBH)	OUTPUT (MBH)				
GI 1	GREASE INTERCEPTOR	--	--	--	--	--	--	1,500	20,000	JENSEN PRECAST JP-1500-ECE-G, SINGLE BAFFLE, TRAFFIC RATED.	EXTERIOR
SX 1	SAMPLE PORT	--	--	--	--	--	--	--	1,700	JENSEN PRECAST EV200, TRAFFIC RATED.	EXTERIOR
EWH 1	ELECTRIC WATER HEATER	4.5 KW	208	3	60	--	--	33	500	AO SMITH DURA-POWER DEL-30, 20 GALLONS PER HOUR RECOVERY RATE @ 90°F TEMPERATURE RISE, 0.92 UEF, GLASSLINED TANK, PROVIDE TEMPERATURE AND PRESSURE RELIEF PIPING.	--
ET 1	EXPANSION TANK	--	--	--	--	--	--	6.4	80	AMTROL THERM-X-TROL ST-12C-DD, 3.2 GALLON MAX ACCEPTANCE VOLUME, STAINLESS STEEL SYSTEM CONNECTION, DEEP DRAWN DIAPHRAGM.	--
TMX 1	THERMOSTATIC MIXING VALVE	--	--	--	--	--	--	--	--	LEONARD ECO-MIX LV-20-E-LF, 1 GPM MINIMUM FLOW CAPACITY, 7 GPM @ 9 PSI PRESSURE DROP.	--
CP 1	CIRCULATION PUMP	0.0778 HP	115	1	60	--	--	--	--	GRUNDFOS UPS 15-55 SFC, THREE SPEED, CORROSION-FREE, STAINLESS STEEL HOUSING, 3.21 GPM @ 11.52 FT OF HEAD.	--
WM 1	WATER METER	--	--	--	--	--	--	--	--	NEPTUNE T10.	--
RPBP 1	REDUCED PRESSURE BACKFLOW PREVENTER	--	--	--	--	--	--	--	--	ZURN 975XL2	--

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	ROUGH-IN					VALVE/FAUCET TYPE					REMARKS
		HW	CW	W	TRAP	V	MANUAL	PUSH BUTTON	BATTERY	ELECTRIC	FLOW	
WC 1	WATER CLOSET	--	1"	4"	INTEGRAL	2"	--	--	X	--	1.28 GPF	AMERICAN STANDARD MADERA FLOWISE 2234.001, FLOOR MOUNTED @ 15 INCHES, WHITE VITREOUS CHINA, ELONGATED BOWL, SIPHON JET, TOP SPUD, WATER SENSE LABELED. SLOAN ROYAL 111 SFSM-1.28-TMO, POLISHED CHROME FINISH, TOP SPUD, TRUE MECHANICAL OVERRIDE, EXPOSED, DIAPHRAGM, WATER SENSE LABELED. BEMIS 2155SSCT, HEAVY-DUTY, PLASTIC, ELONGATED, OPEN FRONT LESS COVER, ANTIMICROBIAL, SELF-SUSTAINING CHECK HINGES, NON-CORRODING 300 SERIES STAINLESS STEEL POSTS AND PINTLES.
WC 2	WATER CLOSET - ACCESSIBLE	--	1"	4"	INTEGRAL	2"	--	--	X	--	1.28 GPF	AMERICAN STANDARD MADERA FLOWISE 3461.001, FLOOR MOUNTED @ 16-1/2 INCHES, WHITE VITREOUS CHINA, ELONGATED BOWL, SIPHON JET, TOP SPUD, WATER SENSE LABELED. SLOAN ROYAL 111 SFSM-1.28-TMO, POLISHED CHROME FINISH, TOP SPUD, TRUE MECHANICAL OVERRIDE, EXPOSED, DIAPHRAGM, WATER SENSE LABELED. BEMIS 2155SSCT, HEAVY-DUTY, PLASTIC, ELONGATED, OPEN FRONT LESS COVER, ANTIMICROBIAL, SELF-SUSTAINING CHECK HINGES, NON-CORRODING 300 SERIES STAINLESS STEEL POSTS AND PINTLES.
UR 1	URINAL	--	3/4"	2"	2"	1 1/2"	--	--	X	--	0.125 GPF	AMERICAN STANDARD ALLBROOK FLOWISE 0.5 6550.005, WALL MOUNTED @ ACCESSIBLE HEIGHT, WHITE VITREOUS CHINA, FLUSHING RIM, SIPHON JET, TOP SPUD. SLOAN ROYAL 186 SFSM-0.125-TMO, POLISHED CHROME FINISH, TOP SPUD, TRUE MECHANICAL OVERRIDE, EXPOSED, DIAPHRAGM, WATER SENSE LABELED.
UR 2	URINAL - ACCESSIBLE	--	3/4"	2"	2"	1 1/2"	--	--	X	--	0.125 GPF	KOHLER TEND K-20713-ETSS, WALL MOUNTED @ STANDARD HEIGHT, TOP SPUD, WASHOUT, ANTIMICROBIAL FINISH, EXTENDED LIP, WHITE VITREOUS CHINA, WATER SENSE LABELED. SLOAN ROYAL 186 SFSM-0.125-TMO, POLISHED CHROME FINISH, TOP SPUD, TRUE MECHANICAL OVERRIDE, EXPOSED, DIAPHRAGM, WATER SENSE LABELED.
L 1	LAVATORY	1/2"	1/2"	2"	1 1/2"	1 1/2"	--	--	X	--	0.5 GPM	KOHLER VERTICYL K-2882, UNDERMOUNT, 19-3/4" RECTANGULAR, OVERFLOW DRAIN, WHITE VITREOUS CHINA. AMERICAN STANDARD 4THG4 6055105.002.
L 2	LAVATORY - ACCESSIBLE	1/2"	1/2"	2"	1 1/2"	1 1/2"	--	--	X	--	0.5 GPM	KOHLER VERTICYL K-2882, UNDERMOUNT, 19-3/4" RECTANGULAR, OVERFLOW DRAIN, WHITE VITREOUS CHINA. AMERICAN STANDARD 4THG4 6055105.002.
MS 1	MOP SINK	3/4"	3/4"	3"	3"	1 1/2"	--	--	--	--	--	KOHLER WHITBY K-6710, ENAMELED CAST IRON, CORNER TYPE, 28"X28" DIM. T&S B-0665-BSTR, WALL MOUNTED, VACUUM BREAKER, PAIL HOOK.
EWC 1	ELECTRIC WATER COOLER - ACCESSIBLE	--	3/4"	2"	1 1/2"	1 1/2"	--	--	--	115 V 60 HZ	8.0 GPH	ELKAY PRO FILTRATION LZSTL8WSBPRO-FLP4, ON-WALL MOUNTED, BI-LEVEL, BOTTLE FILLING STATION, REFRIGERATED, FILTERED, ELECTRONIC BOTTLE FILLER SENSOR, ELECTRONIC FRONT & SIDE BUBBLER PUSHBAR.
FD 1	FLOOR DRAIN	--	--	3"	3"	1 1/2"	--	--	--	--	--	JAY R. SMITH 2005Y, ROUND TOP, DUCO CAST IRON BODY, FLASHING COLLAR, ADJUSTABLE NICKEL BRONZE STRAINER HEAD, TRAP PRIMER CONNECTION, HEELPROOF GRATE.
TP 1	TRAP PRIMER	--	1/2"	--	--	--	--	--	--	--	--	MIFAB M2-500-NPB, PRESSURE DROP ACTIVATED, 3 PSI DROP ACTIVATION, 3 DRAINS SERVE MAXIMUM.
HB 1	HOSE BIBB	--	3/4"	--	--	--	--	--	--	--	--	ACORN 8151-SSLF, VACUUM BREAKER, STAINLESS STEEL RECESSEED HOSE BOX, WALL FLANGE, 18 GAGE, 304 STAINLESS STEEL.
WHA 1	WATER HAMMER ARRESTOR	--	--	--	--	--	--	--	--	--	--	PLUMBING PRECISION PRODUCTS, THREADED, SEE DETAIL.
RD 1	ROOF DRAIN	--	--	--	--	--	--	--	--	--	--	JAY R. SMITH 1010Y, NO-HUB OUTLET, LOW PROFILE DOME, DUCO CAST IRON BODY, FLASHING CLAMP, GRAVEL STOP, CAST IRON DOME, UNDERDECK CLAMP, SEE PLANS FOR SIZE.
ORD 1	OVERFLOW ROOF DRAIN	--	--	--	--	--	--	--	--	--	--	JAY R. SMITH 1080Y, NO-HUB OUTLET, DUCO CAST IRON DOME, FLASHING CLAMP, GRAVEL STOP, CAST IRON DOME, CAST IRON WATER DAM, UNDERDECK CLAMP, SEE PLANS FOR SIZE.
DN 1	DOWNSPOUT NOZZLE	--	--	--	--	--	--	--	--	--	--	JAY R. SMITH 1770Y, NO-HUB OUTLET, CAST BRONZE NOZZLE & FLANGE.
AD 1	AREA DRAIN	--	--	--	--	--	--	--	--	--	--	JAY R. SMITH 2005Y, ROUND TOP, DUCO CAST IRON BODY, FLASHING COLLAR, ADJUSTABLE NICKEL BRONZE STRAINER HEAD, TRAP PRIMER CONNECTION, HEELPROOF GRATE.
DR 1	DRAIN RECEPTOR	--	--	3"	3"	2"	--	--	--	--	--	JAY R. SMITH 3960, DUCO CAST IRON RECEPTOR, SOLID WATER DAM, SECURED CAST IRON DOME BOTTOM STRAINER.
ETP 1	ELECTRONIC TRAP PRIMER	--	1/2"	--	--	--	--	--	--	115 V 60 HZ	--	PLUMBING PRECISION PRODUCTS MIP-500, PROVIDE WITH ACCESS DOOR.

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
BOJAN LAZAREVIC
M41366
Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

Seal / Signature

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
PLUMBING SCHEDULES

Scale
NO SCALE

P0.002

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1 PLUMBING CONSTRUCTION PLAN - PARTIAL SITE PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

1 1" ICW CONNECTTION FOR KOI POND. SEE SHEET P1.003.
2 SEE SHEET P1.200 FOR CONTINUATION.

GENERAL NOTES

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Description
PLUMBING CONSTRUCTION PLAN - PARTIAL SITE PLAN

Scale
1/8" = 1'-0"

P1.003

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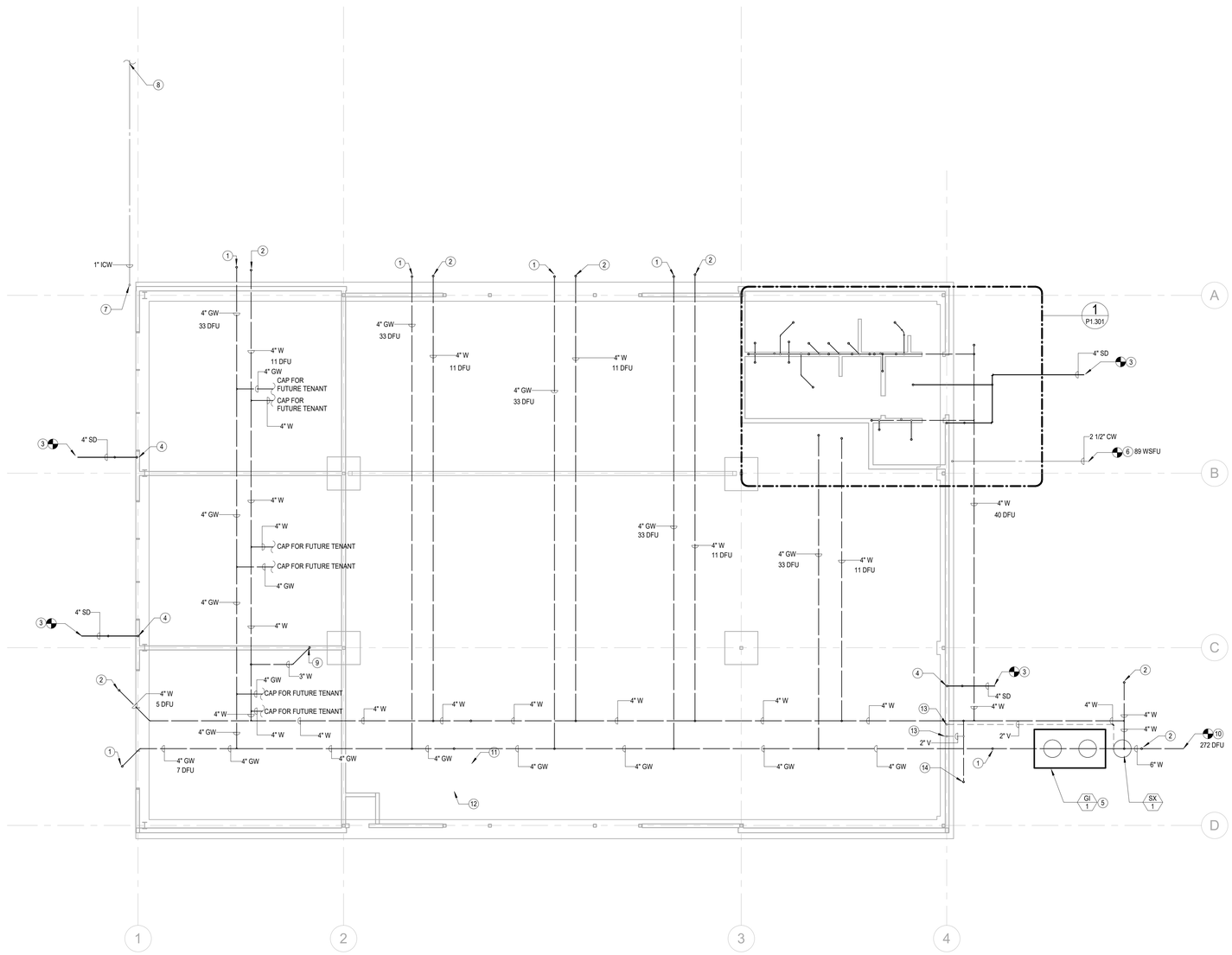

SHEET NOTES

1. 4" GREASE WASTE UP TO GRADE CLEANOUT.
2. 4" WASTE UP TO GRADE CLEANOUT.
3. 4" STORM DRAIN BELOW FINISHED GRADE. POC TO CITY STORM (4" OR LARGER). INVERT -3'-0" BELOW FINISHED GRADE. SEE CIVIL DRAWINGS FOR CONTINUATION.
4. 4" STORM DRAIN UP TO CEILING
5. FOR MORE INFORMATION ON THE GREASE INTERCEPTOR SEE DETAIL.
6. 2-1/2" CW BELOW FINISHED GRADE. POC TO CITY WATER (2 1/2" OR LARGER). INVERT -3'-0" BELOW FINISHED GRADE. SEE CIVIL DRAWINGS FOR CONTINUATION.
7. 1" ICW UP TO REDUCED PRESSURE BACKFLOW PREVENTER.
8. 1" ICW OUT TO SITE TO FEED KOI POND.
9. 3" WASTE UP TO CEILING.
10. 6" WASTE BELOW FINISHED GRADE. POC TO CITY WASTE. INVERT -7'-0" BELOW FINISHED GRADE.
11. 4" WASTE UP TO FLOOR CLEANOUT.
12. 4" GREASE WASTE UP TO FLOOR CLEANOUT.
13. 2" VENT UP TO CEILING.
14. 4" WASTE UP TO HUB DRAIN.

GENERAL NOTES

A. A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT OR 1 PERCENT IS PROVIDED FOR NORMAL DRAINAGE PIPING 4 INCHES OR LARGER ONLY WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER, TO THE STRUCTURAL FEATURES, OR TO THE ARRANGEMENT OF A BUILDING OR STRUCTURE TO OBTAIN A SLOPE 1/4 INCH PER FOOT OR 2 PERCENT AND THAT IS SUBJECT TO THE PLUMBING FIELD INSPECTOR'S APPROVAL.

B. ALL GREASE WASTE SHALL SLOPE AT 2 PERCENT SLOPE OR 1/4 INCH PER FOOT.

C. ALL FLOOR DRAINS SHALL RECEIVE A TRAP PRIMER CONNECTION.

D. EACH TENANT SHALL BE PROVIDED 11 DFU.

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BIJAN LAZAREVIC
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Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

Seal / Signature

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
PLUMBING CONSTRUCTION PLAN - UNDERGROUND PLAN

Scale
1/8" = 1'-0"

P1.200

1 PLUMBING CONSTRUCTION PLAN - UNDERGROUND PLAN
SCALE: 1/8" = 1'-0"

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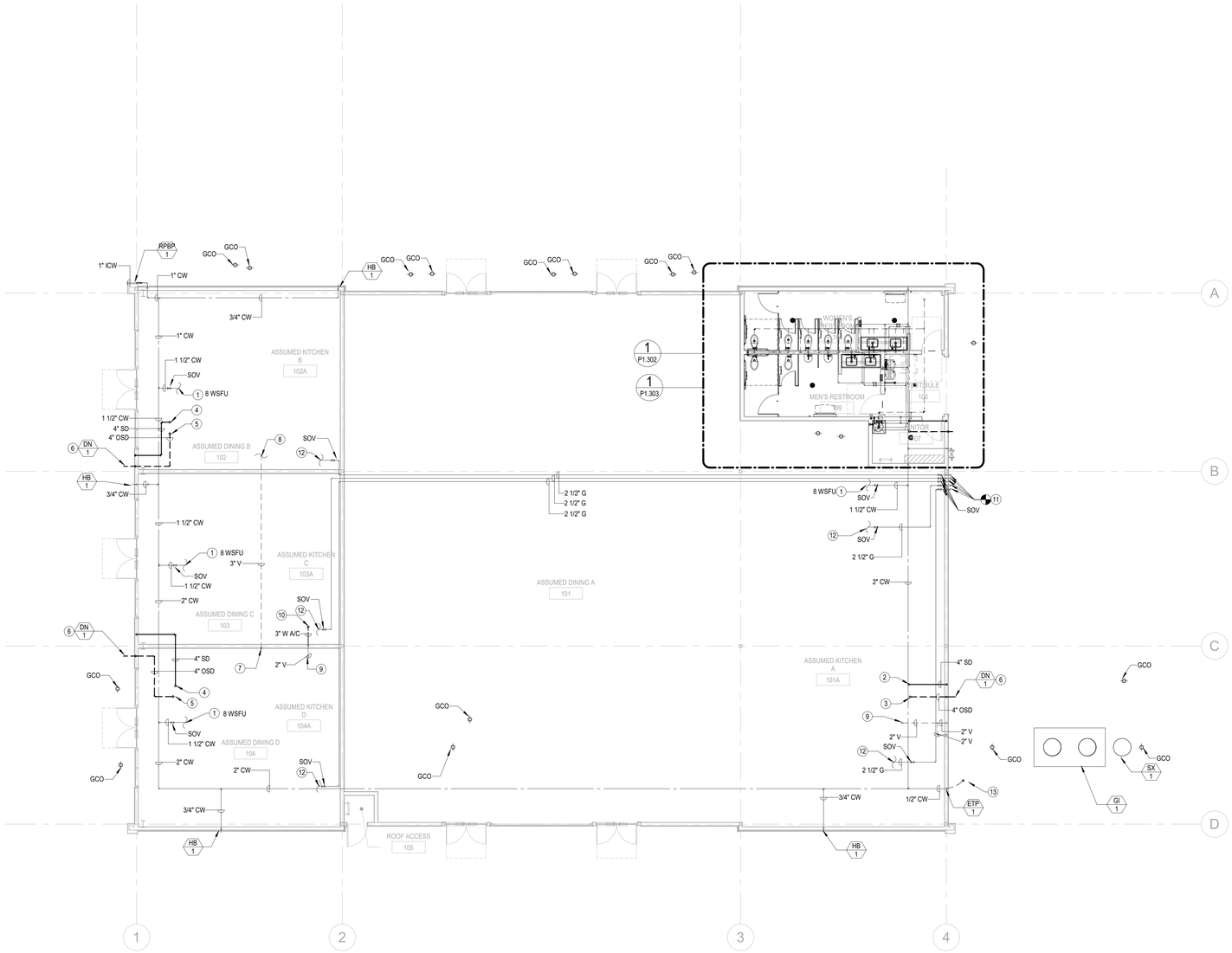

1 PLUMBING CONSTRUCTION PLAN - LEVEL 01
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. 1-1/2" CW STUB OUT FOR FUTURE TENANT. CAP FOR FUTURE.
2. 4" STORM DRAIN UP TO ROOF DRAIN.
3. 4" OVERFLOW STORM DRAIN UP TO OVERFLOW ROOF DRAIN.
4. 6" STORM DRAIN UP TO ROOF DRAIN.
5. 6" OVERFLOW STORM DRAIN UP TO OVERFLOW ROOF DRAIN.
6. DAYLIGHT 4" OVERFLOW STORM DRAIN AT PLUS 6 INCHES ABOVE FINISHED GRADE.
7. 3" VTR.
8. 3" VENT STUB OUT FOR FUTURE TENANT. CAP FOR FUTURE.
9. 2" VTR.
10. 3" WASTE UP TO DRAIN RECEPTOR.
11. POINT OF CONNECTION TO GAS MANIFOLD. THE GAS MANIFOLD AND ALL GAS UPSTREAM OF THE GAS MANIFOLD SHALL BE PROVIDED BY THE DRY UTILITY CONSULTANT.
12. 2-1/2" GAS STUB OUT FOR FUTURE TENANT. FUTURE TENANT SHALL PROVIDE THEIR OWN GAS METER. 1,100 CFH GAS LOAD.
13. HUB DRAIN SEE DETAIL.

GENERAL NOTES

A. ALL FAN COIL UNITS SHALL HAVE A CONDENSATE CONNECTION AND SHALL DRAIN TO AN APPROVED RECEPTOR.

B. ALL FLOOR DRAINS SHALL RECEIVE A TRAP PRIMER CONNECTION.

C. EACH TENANT SHALL BE PROVIDED 8 WSFU.

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
ROLAN LAZAREJO
M41366
Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
PLUMBING CONSTRUCTION PLAN - LEVEL 01

Scale
1/8" = 1'-0"

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P1.201

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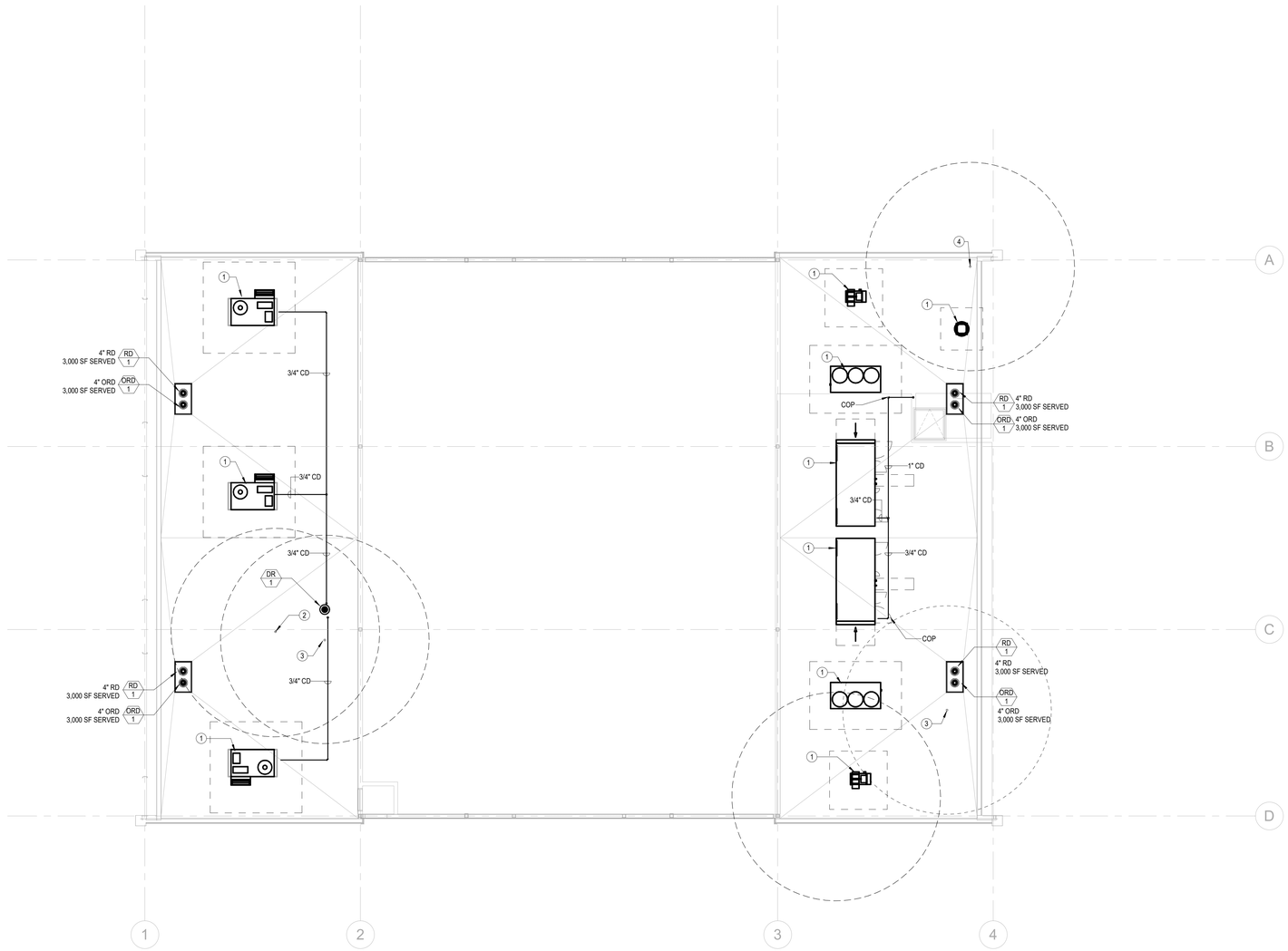

1 PLUMBING ROOF PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

1 MECHANICAL EQUIPMENT SHOWN FOR REFERENCE ONLY. SEE MECHANICAL DRAWINGS.
2 3" VTR PROVIDE AT MINIMUM A 15 FOOT CLEARANCE FROM ANY MECHANICAL INTAKE OR OPERABLE WINDOW.
3 2" VTR. PROVIDE AT MINIMUM A 15 FOOT CLEARANCE FROM ANY MECHANICAL INTAKE OR OPERABLE WINDOW.
4 4" VTR PROVIDE AT MINIMUM A 15 FOOT CLEARANCE FROM ANY MECHANICAL INTAKE OR OPERABLE WINDOW.

GENERAL NOTES

A. ALL SANITARY VENTS SHALL HAVE AT MINIMUM A 15 FOOT CLEARANCE FROM ANY OPERABLE WINDOW OR MECHANICAL INTAKE.

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
BRIAN LAZAFEVITCH
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Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

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CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
PLUMBING ROOF PLAN

Scale
1/8" = 1'-0"

P1.202

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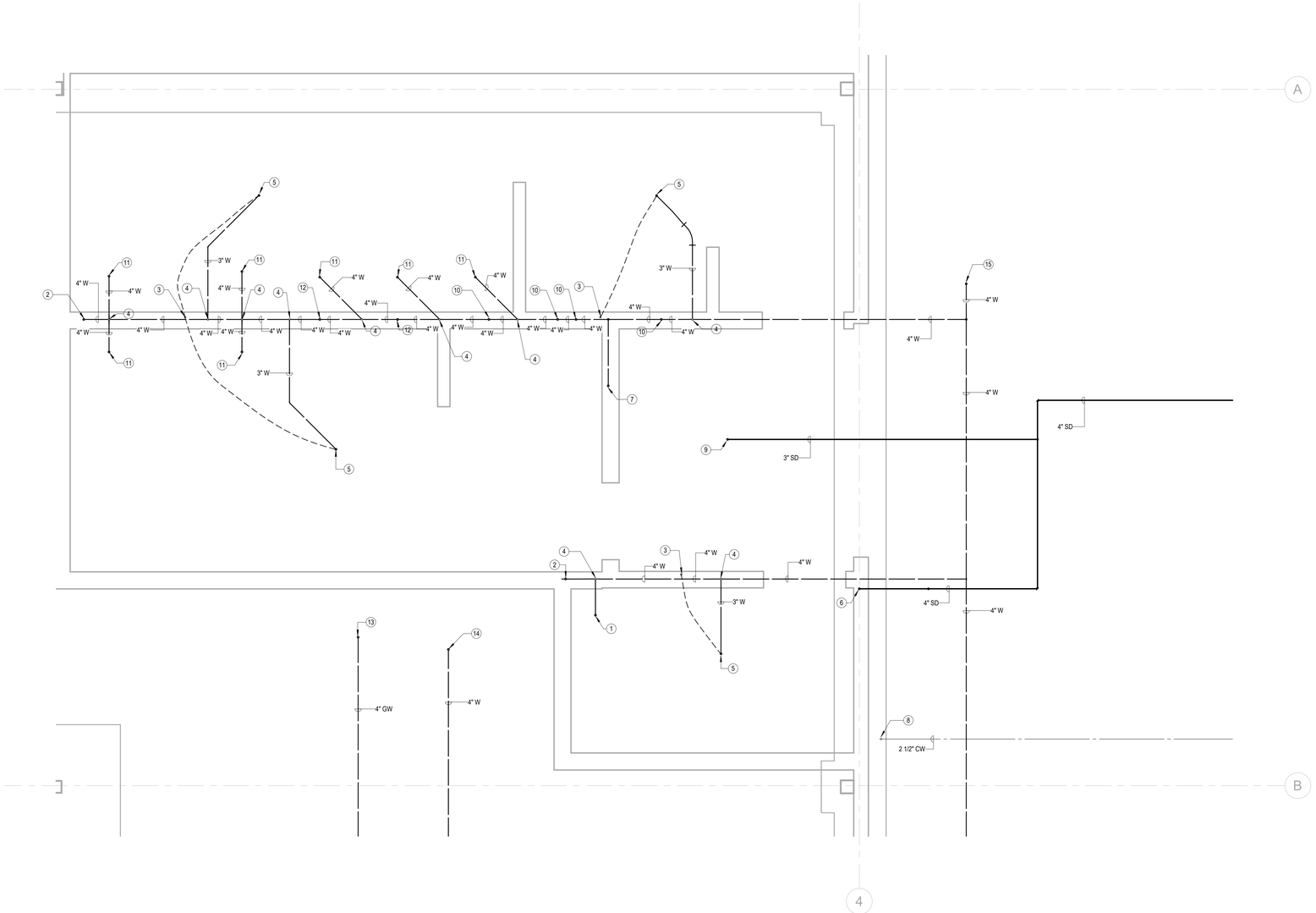

1 ENLARGED PLAN - UNDERGROUND PLAN - BATHROOM AREA
1/2" = 1'-0"

SHEET NOTES

1 3" WASTE UP TO MOP SINK.
2 4" WASTE UP TO WALL CLEANOUT.
3 1/2" CW UP TO TRAP PRIMER.
4 2" VENT UP TO CEILING.
5 3" WASTE UP TO FLOOR DRAIN.
6 4" STORM DRAIN UP TO CEILING
7 2" WASTE UP TO ELECTRIC WATER COOLER.
8 2-1/2" CW UP TO BUILDING MAIN SOV & PRESSURE REGULATOR.
9 3" STORM DRAIN UP TO AREA DRAIN.
10 2" WASTE UP TO LAVATORY.
11 4" WASTE UP TO WATER CLOSET.
12 2" WASTE UP TO URINAL.
13 4" GREASE WASTE UP TO FLOOR CLEANOUT.
14 4" WASTE UP TO FLOOR CLEANOUT.
15 4" WASTE UP TO GRADE CLEANOUT.

GENERAL NOTES

A. A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT OR 1 PERCENT IS PROVIDED FOR DRAINAGE PIPING 4 INCHES OR LARGER ONLY WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER, TO THE STRUCTURAL FEATURES, OR TO THE ARRANGEMENT OF A BUILDING OR STRUCTURE TO OBTAIN A SLOPE 1/4 INCH PER FOOT OR 2 PERCENT AND THAT IS SUBJECT TO THE PLUMBING FIELD INSPECTOR'S APPROVAL.

B. ALL GREASE WASTE SHALL SLOPE AT 2 PERCENT SLOPE OR 1/4 INCH PER FOOT.

C. ALL FLOOR DRAINS SHALL RECEIVE A TRAP PRIMER CONNECTION.

KEY PLAN

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
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Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

Seal / Signature

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
ENLARGED PLANS

Scale
1/2" = 1'-0"

P1.301

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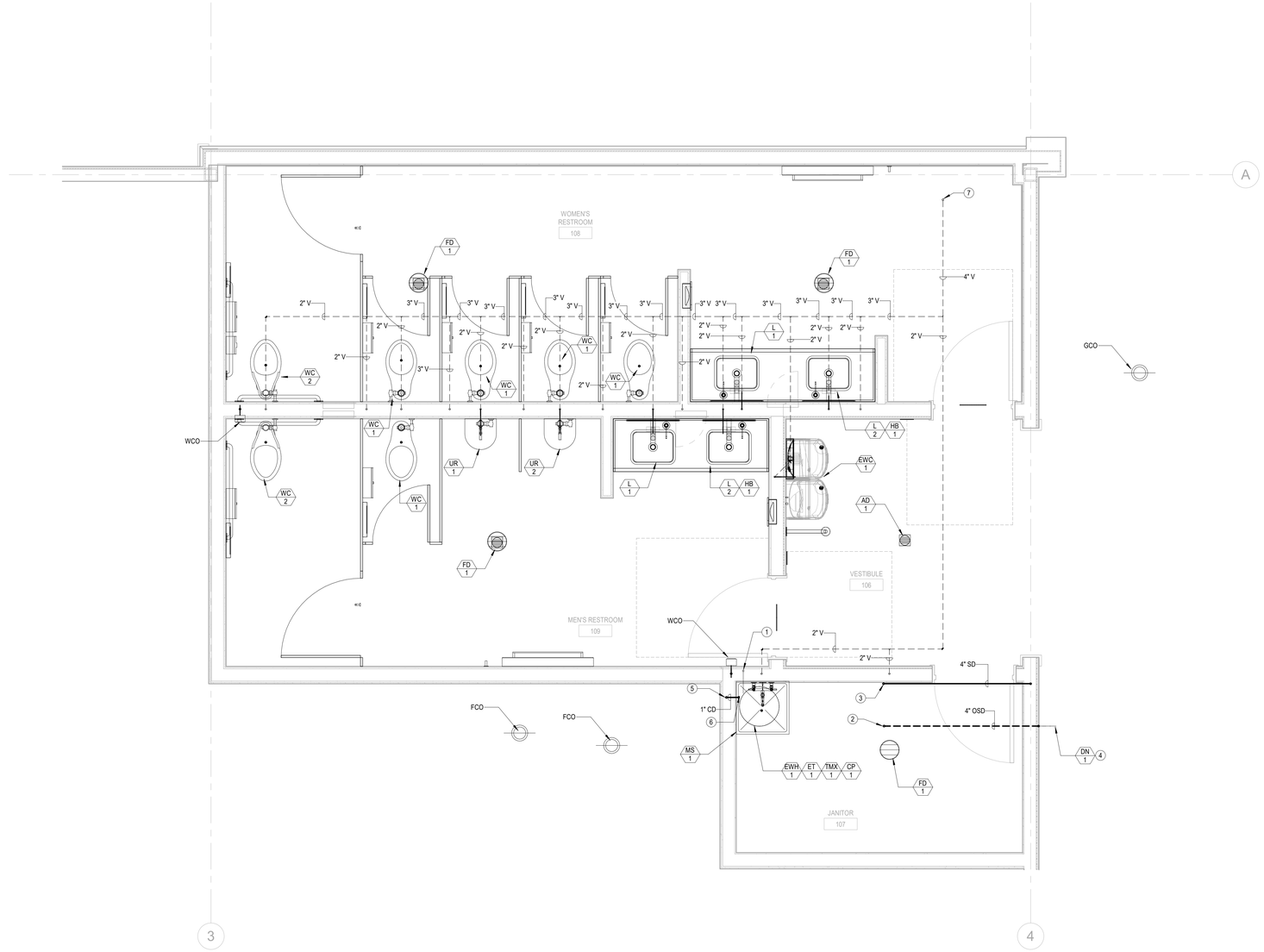

1 PLUMBING CONSTRUCTION PLAN - LEVEL 01 - BATHROOM AREA - WASTE & VENT
1/2" = 1'-0"

SHEET NOTES

1. TEMPERATURE AND PRESSURE RELIEF VALVE. DRAIN TO MOP SINK.
2. 4" OVERFLOW STORM DRAIN UP TO OVERFLOW ROOF DRAIN.
3. 4" STORM DRAIN UP TO ROOF DRAIN.
4. DAYLIGHT 4" OVERFLOW STORM DRAIN AT PLUS 6 INCHES ABOVE FINISHED GRADE.
5. 1" CONDENSATE DRAIN UP TO ROOF.
6. 1" CONDENSATE DRAIN DRAIN INDIRECT TO MOP SINK.
7. 4" VTR.

GENERAL NOTES

A. PROVIDE A WATER HAMMER ARRESTOR PRIOR TO THE LAST FLUSH VALVE.

B. PROVIDE A TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS.

C. ALL RESTROOMS SHALL BE PROVIDED THEIR OWN SET OF SHUT OFF VALVES FOR ISOLATION OF THE WATER SYSTEM.

KEY PLAN

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
ENLARGED PLANS

Scale
1/2" = 1'-0"

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P1.302

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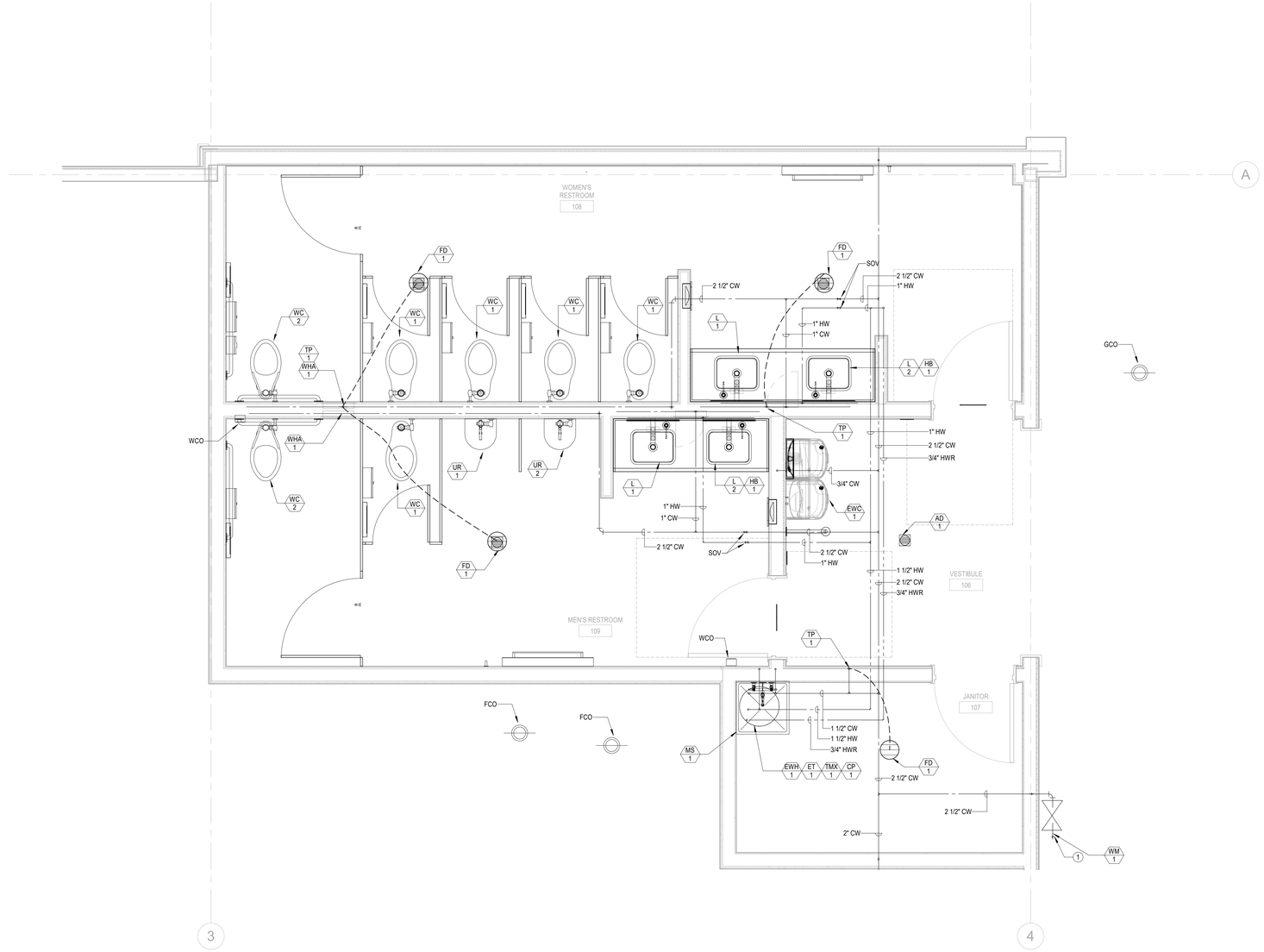

1 PLUMBING CONSTRUCTION PLAN - LEVEL 01 - BATHROOM AREA - DOMESTIC WATER
1/2" = 1'-0"

SHEET NOTES

1 BUILDING MAIN SOV AND PRESSURE REGULATOR.

GENERAL NOTES

A. PROVIDE A WATER HAMMER ARRESTOR PRIOR TO THE LAST FLUSH VALVE.

B. PROVIDE A TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS.

C. ALL RESTROOMS SHALL BE PROVIDED THEIR OWN SET OF SHUT OFF VALVES FOR ISOLATION OF THE WATER SYSTEM.

D. RESTROOM SHUT OFF VALVES SHALL BE READILY ACCESSIBLE FOR OPERATION AND INSTALLED AS TO BE PROTECTED FROM PHYSICAL DAMAGE.

KEY PLAN

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
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M41366
Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

Seal / Signature

CITY OF IRVINE BUILDING & SAFETY DIVISION

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
ENLARGED PLANS

Scale
1/2" = 1'-0"

P1.303

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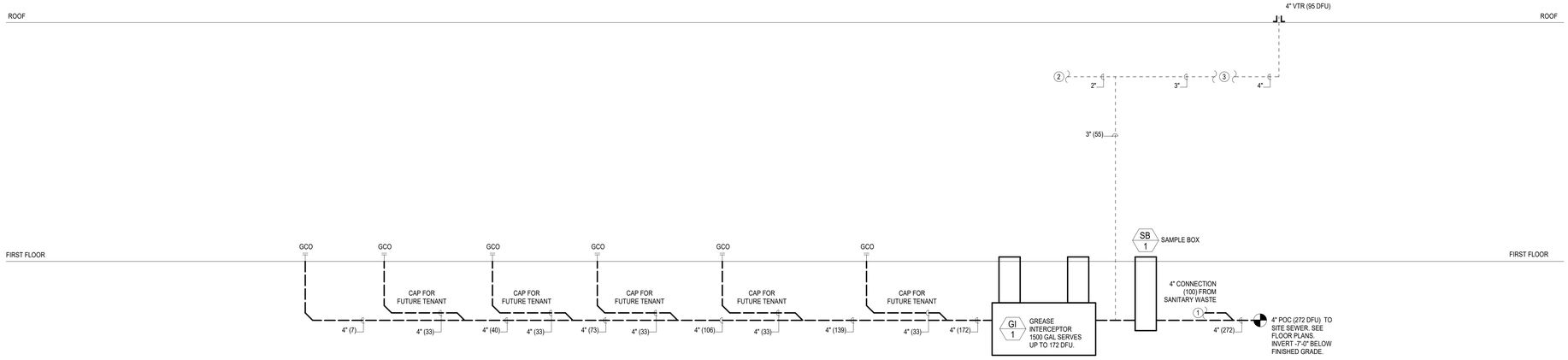
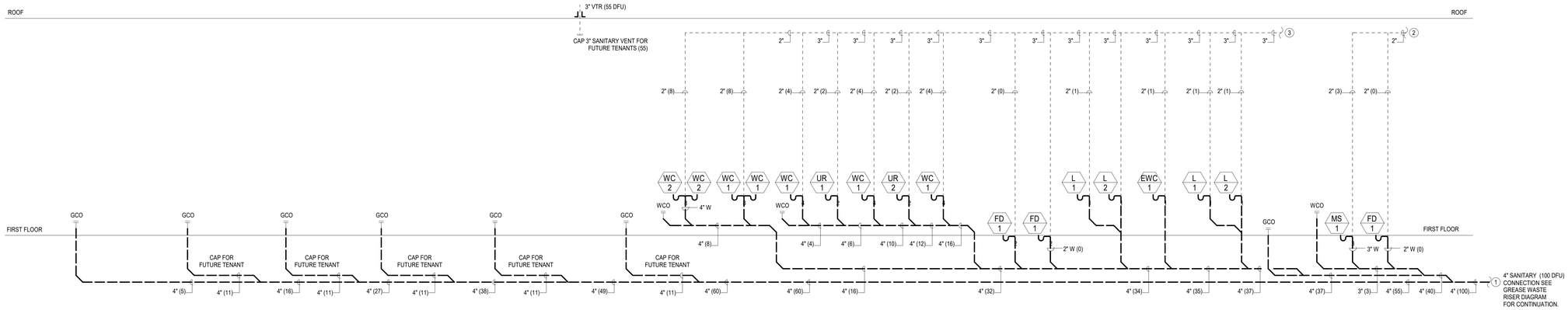


GREASE WASTE RISER DIAGRAM



SANITARY WASTE RISER DIAGRAM

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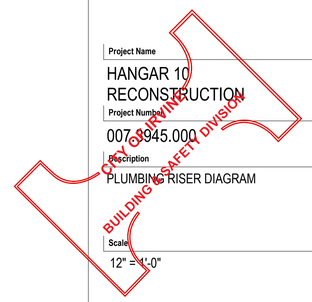
△	Date	Description
	05.07.2026	BID SET

Seal / Signature



Project Name

HANGAR 10 RECONSTRUCTION

Project Number

007.03945.000

Description

PLUMBING RISER DIAGRAM

Scale

12" = 1'-0"

P4.101

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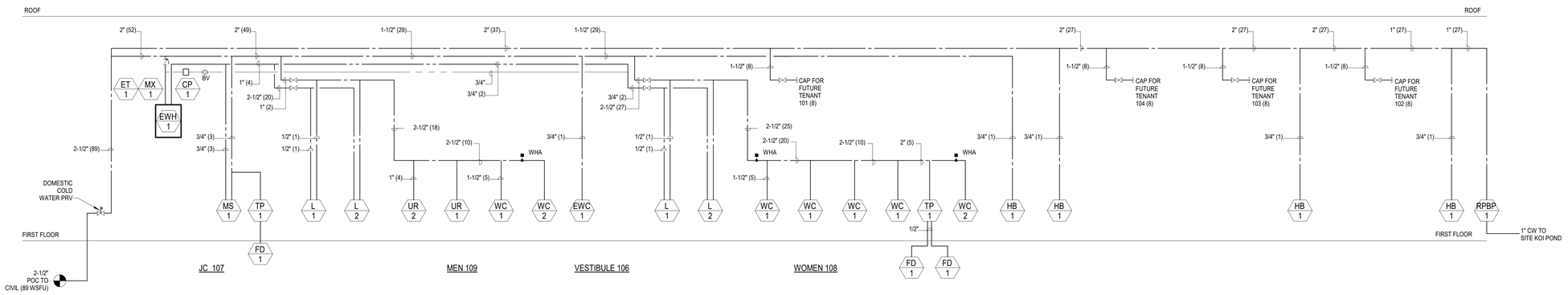

DOMESTIC WATER RISER DIAGRAM

COLD	PIPING SIZING CHART			2 psi
SIZE	GPM	FIXTURE UNITS		VELOCITY (FPS)
		FLUSH TANK	FLUSH VALVE	
1/2"	1.5	---	---	1.8
3/4"	3.8	3	---	2.5
1"	7.5	7	---	2.8
1 1/4"	14	18	---	3.4
1 1/2"	22	34	5	3.8
2"	45	86	28	4.8
2 1/2"	82	236	116	5.5
3"	110	533	430	6.2
4"	270	1355	1355	6.8

HOT	PIPING SIZING CHART			2 psi
SIZE	GPM	FIXTURE UNITS		VELOCITY (FPS)
		FLUSH TANK	FLUSH VALVE	
1/2"	1.5	---	---	1.8
3/4"	3.8	3	---	2.5
1"	7.5	7	---	2.8
1 1/4"	14	18	---	3.4
1 1/2"	22	34	---	3.8
2"	45	86	---	4.8
2 1/2"	82	284	---	5.0
3"	140	585	---	5.0
4"	180	255	---	5.0

GAS RISER DIAGRAM

GAS LOAD SUMMARY 14" W.C.	
SPACE	TOTAL CFH
TENANT 101 (A)	1,100
TENANT 101 (A)	1,100
TENANT 102 (B)	1,100
TENANT 103 (C)	1,100
TENANT 104 (D)	1,100
TOTAL CFH	5,500

PIPE SIZING BASED ON 225 FT TOTAL DEVELOPED LENGTH, TABLE 1208.4, 2025 CPC

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△ Date	Description
05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
BIJAN LAZARIAN
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Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.3945.000

Description
PLUMBING RISER DIAGRAM

Scale
12" = 1'-0"

CITY OF IRVINE
BUILDING & SAFETY DIVISION

P4.102

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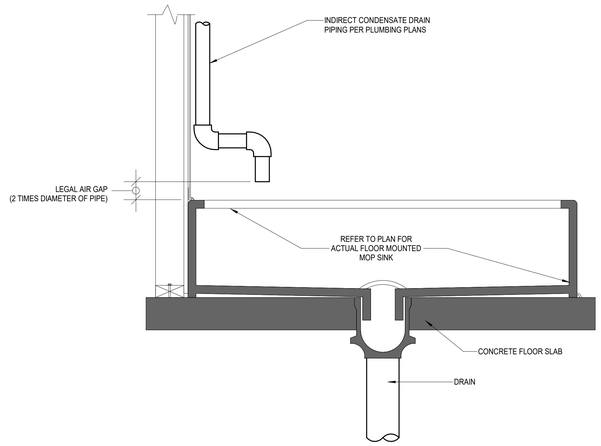
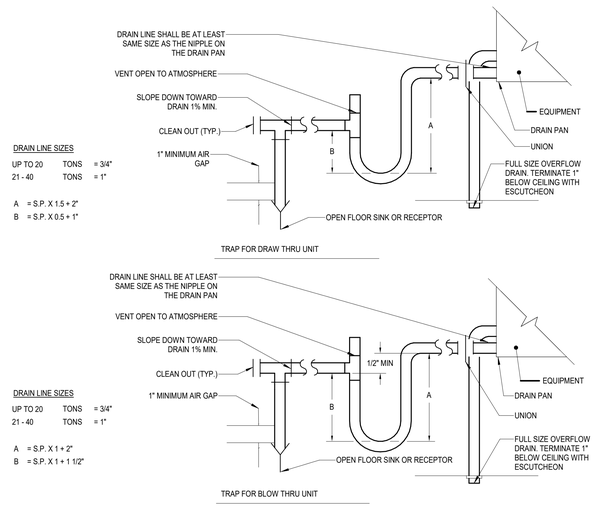
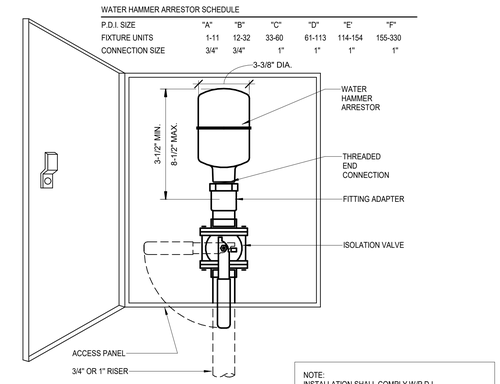


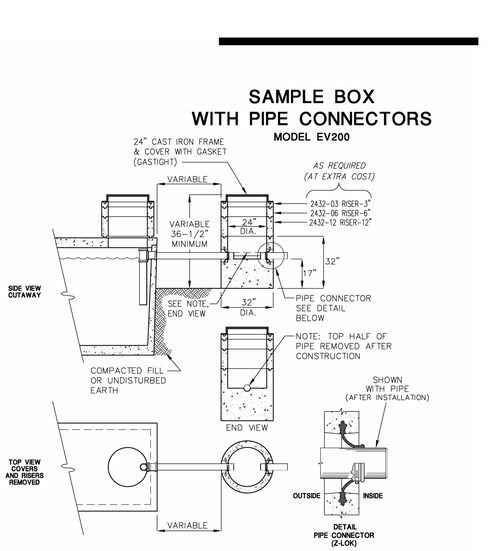
5 CONDENSATE DRAIN DISCHARGED INTO MOP SINK DETAIL
NO SCALE



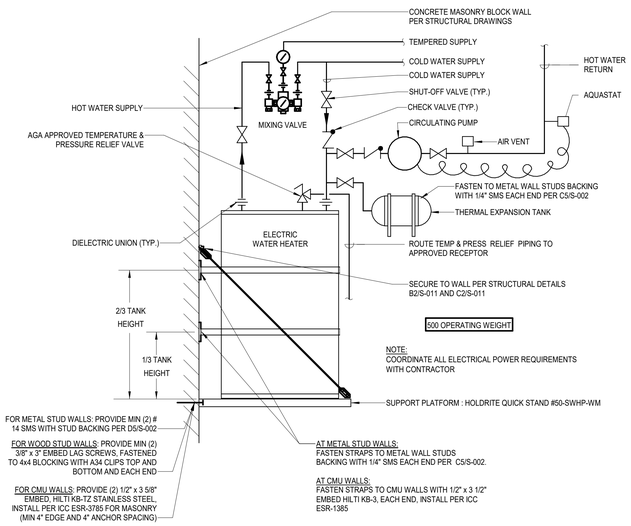
3 TYPICAL CONDENSATE DRAIN DETAIL
NO SCALE



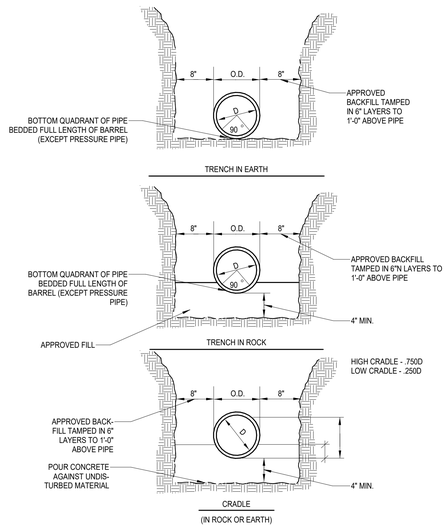
1 WATER HAMMER ARRESTOR ASSEMBLY DETAIL
NO SCALE



6 SAMPLE PORT DETAIL
NO SCALE



4 ELECTRIC WATER HEATER ON PLATFORM
NO SCALE



2 PIPE TRENCH BEDDING DETAIL
NO SCALE

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
JOHN LAZARETTO
M41366
Exp. 12/31/26
MECHANICAL
STATE OF CALIFORNIA

Seal / Signature

Project Name
HANGAR 10
RECONSTRUCTION

Project Number
007.0945.000

Description
PLUMBING DETAILS

Scale
12" = 1'-0"

CITY OF IRVINE BUILDING & SAFETY DIVISION

P5.101

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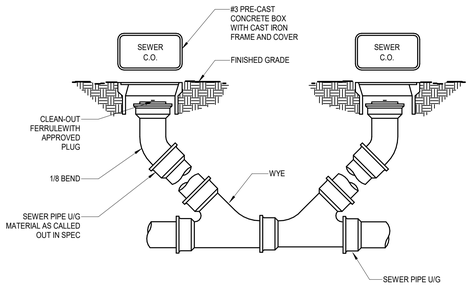
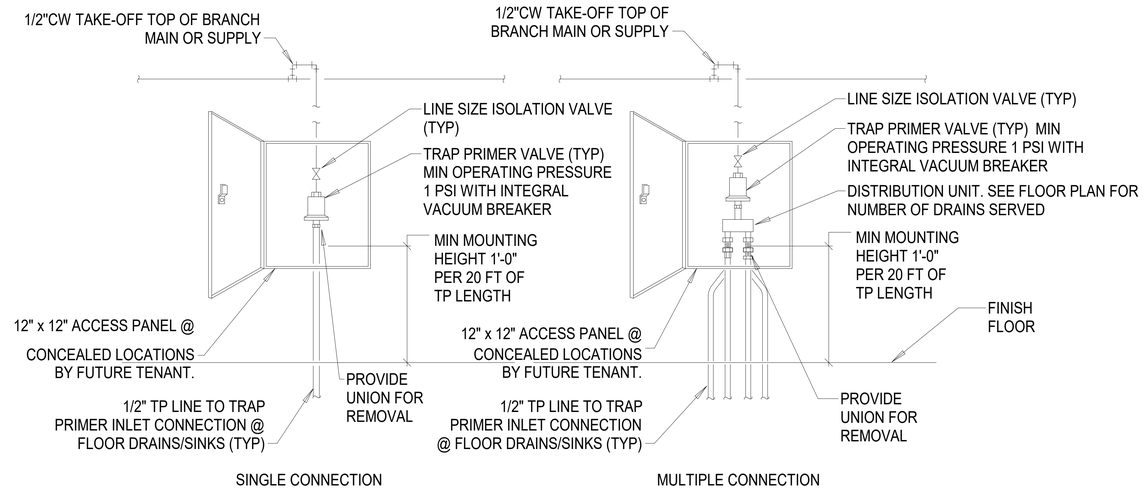
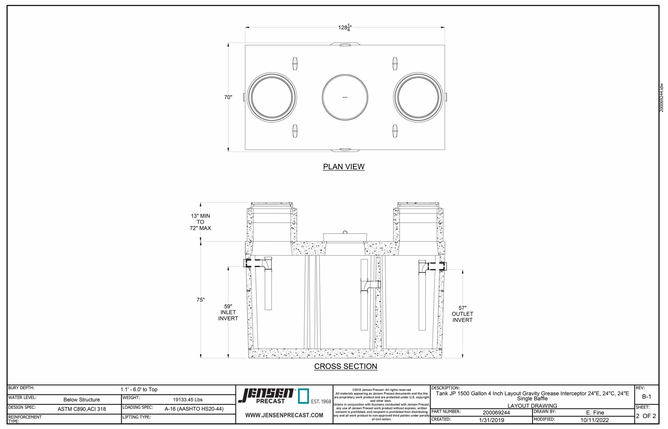


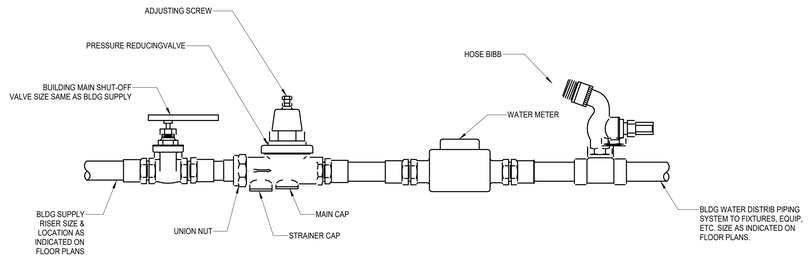
3 TWO-WAY GRADE CLEAN OUT DETAIL
NO SCALE



1 TRAP PRIMER IN ACCESS PANEL DETAIL
NO SCALE



4 GREASE INTERCEPTOR DETAIL
NO SCALE



2 BUILDING MAIN WATER SHUT OFF VALVE, WATER METER AND PRESSURE REGULATOR DETAIL
NO SCALE

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER — ROJAN LAZAREVIC — M41366 — Exp. 12/31/26 — MECHANICAL — STATE OF CALIFORNIA

Seal / Signature

Project Name
HANGAR 10 RECONSTRUCTION

Project Number
007.0945.000

Description
PLUMBING DETAILS

Scale
NO SCALE

CITY OF IRVINE BUILDING & SAFETY DIVISION

P5.102

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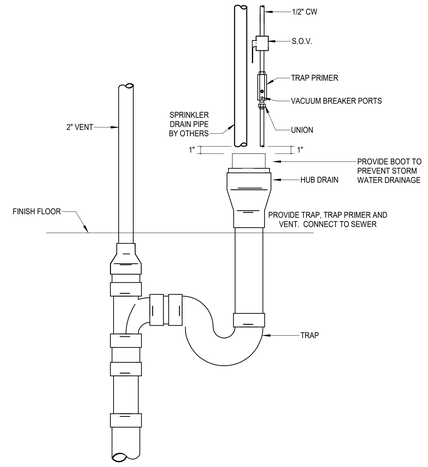

1 HUB DRAIN DETAIL
NO SCALE

CITY OF IRVINE HANGAR 10 RECONSTRUCTION

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△	Date	Description
	05.07.2026	BID SET

REGISTERED PROFESSIONAL ENGINEER
JOJAN LAZARE
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Seal / Signature

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Project Name
HANGAR 10
RECONSTRUCTION

Project Number
007.03945.000

Description
PLUMBING DETAILS

Scale
12" = 1'-0"

P5.103

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