GENERAL NOTES

A. SEE ALSO: SPECIFICATIONS, SPECIAL NOTES ON DRAWINGS, AND OTHER CONTRACT DOCUMENTS.

B. DISCREPANCIES - CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AND SHALL REPORT ANY DISCREPANCIES IN WRITING TO ENGINEER OF RECORD BEFORE COMMENCING WORK OR ORDERING MATERIALS.

C. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE.

D. DETAILS SHOWN ON THE DRAWINGS SHALL BE TYPICAL FOR ALL SIMILAR CONDITIONS. MODIFY DETAILS FOR SPECIAL CONDITIONS AS DIRECTED BY THE ENGINEER.

E. SEE ARCHITECTURAL DRAWINGS FOR CHAMFERS, EDGE RADII, DRIPS, REGLETS, FINISHES, AND OTHER NON-STRUCTURAL ITEMS NOT SHOWN OR SPECIFIED ON STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE IN FEET AND INCHES, UNLESS NOTED OTHERWISE.

CONSTRUCTION NOTES

A. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER AT LEAST 48 HOURS IN ADVANCE FOR REVIEW AND OBSERVATION OF REINFORCING AND CONCRETE POURS.

B. CONSTRUCTION LOADING SHALL NOT EXCEED THE DESIGN LIVE LOAD UNLESS SPECIAL SHORING IS PROVIDED. ALLOWABLE LOADS SHALL BE REDUCED IN AREAS WHERE THE STRUCTURE HAS NOT ATTAINED ITS FULL DESIGN STRENGTH.

C. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, WORKMANSHIP AND JOB SAFETY, INCLUDING FALSEWORK, BRACINGS, MUD SILLS, OTHER TEMPORARY ITEMS USED FOR THE CONSTRUCTION OF THE PROJECT AND PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY REGULATORY AGENCIES

EARTHWORK NOTES

A. SHALLOW FOUNDATION DESIGN IS BASED ON A BEARING CAPACITY OF 3,000 PSF FOR TYPICAL FOUNDATIONS FOUNDED ON DENSE FILL.

B. CLEAN AND MOISTEN FOOTING TRENCHES PRIOR TO POURING CONCRETE. WHERE SHRINKAGE CRACKS ARE NOTED AFTER COMPACTION OF THE FOOTING SUBGRADE, THE SOIL SHALL BE MOISTENED TO CLOSE ALL CRACKS.

C. ALL FOOTING EXCAVATIONS, FILL AND BACKFILL OPERATIONS SHALL BE MONITORED BY AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE. CONTRACTOR SHALL MAKE APPROPRIATE ARRANGEMENTS FOR OBSERVATIONS A MINIMUM OF 48 HOURS IN ADVANCE.

STRUCTURAL STEEL NOTES

A. UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL MEMBERS, BOLTS, ANCHOR BOLTS, SHALL CONFORM TO:
1. ANGLES, PLATES, CHANNELS, RODS: ASTM A36
2. BOLTS: ASTM A307
3. ANCHOR BOLTS: ASTM F1554

B. WELDING, WHETHER SHOP OR FIELD, SHALL BE BY CERTIFIED WELDERS ONLY.

C. WELDING ELECTRODES SHALL BE GRADE E-70XX IN ACCORDANCE WITH AWS D1.1.

E. ALL STRUCTURAL STEEL SURFACES SHALL BE HOT-DIP GALVANIZED. UNLESS OTHERWISE SHOWN, ALL EMBEDDED BOLTS, ANCHORS, PLATES, INSERTS, ETC. SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

CONCRETE NOTES

A. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS, AND A MAXIMUM WATER/CEMENT RATIO OF 0.50 AND A MAXIMUM AGGREGATE SIZE OF 3/4".

B. ALL LIGHT-WEIGHT CELLULAR CONCRETE USED FOR BACKFILL SHALL HAVE A MAXIMUM UNIT WEIGHT OF 45 PCF AND MINIMUM COMPRESSIVE STRENGTH OF 80 PSI AT 28 DAYS. USE MIX NUMBER 01IL35CN BY ISLAND READY MIX OR AN APPROVED EQUAL.

C. ADMIXTURES MAY BE USED AS CONTRACTORS OPTION, BUT SUBJECT TO ENGINEERS APPROVAL.

D. THE USE OF ANY CALCIUM CHLORIDE IN ANY CONCRETE IS PROHIBITED.

REINFORCING STEEL NOTES

A. UNLESS OTHERWISE NOTED ON PLANS, ALL REINFORCING BARS SHALL BE ASTM A615, GRADE 60. WHERE WELDING OF REINFORCING STEEL IS REQUIRED, ASTM A706, GRADE 60 SHALL BE USED.

B. SPLICES SHALL BE IN ACCORDANCE WITH ACI 318-14. SPLICE LENGTH SHALL NOT BE LESS THAN 48 BAR DIAM. OR 24", WHICHEVER GREATER. STAGGER SPLICES.

C. MINIMUM CONCRETE CLEAR COVER:
1. CONCRETE POURED AGAINST EARTH ---------- 3"
2. CONCRETE POURED AGAINST FORMS AND LATER EXPOSED TO WEATHER OR GROUND
   a. #5 BAR OR SMALLER ---------- 1 1/2"
   b. #6 BAR OR LARGER ---------- 2"
3. CONCRETE NOT EXPOSED TO WEATHER OR GROUND ---------- 1 1/2"

B. BAR BENDS, HOOKS, AND OFFSETS SHALL BE IN ACCORDANCE WITH THE ACI RECOMMENDATIONS.

CONCRETE MASONRY (CMU) NOTES

A. ALL STANDARD UNITS SHALL BE 2-CELL TYPE UNLESS OTHERWISE SHOWN.

B. UNLESS OTHERWISE SHOWN, REINFORCING STEEL IN CMU WALLS SHALL BE:
1. VERTICAL BARS: #5 AT 16" O.C. WITH ADDED BARS AT WALL ENDS WITH BARS AT ENDS, CORNERS AND INTERSECTIONS.
2. HORIZONTAL BARS: #5 AT 24" O.C. AND ADDED #5 AT TOP OF WALLS REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS AND INTERSECTIONS.

C. ALL CELLS SHALL BE SOLIDLY FILLED WITH GROUT.

D. PROVIDE VERTICAL CONTROL JOINTS IN WALLS AT 60 FEET MAXIMUM O.C. SUBJECT TO ENGINEER'S REVIEW AND APPROVAL.

E. REINFORCEMENT GRADE, BAR BENDS, DETAILS, LAPS, ETC. SHALL BE THE SAME AS FOR CONCRETE.

F. CONCRETE BLOCK UNITS SHALL BE LAID IN RUNNING BOND PATTERN UNLESS OTHERWISE SPECIFIED AND/OR SHOWN.

G. ALL CONCRETE MASONRY UNITS SHALL BE MODULAR, SIZE AS INDICATED ON PLANS, CONFORMING TO ASTM C90, GRADE N1-II AND HAVE AN ULTIMATE COMPRESSIVE STRENGTH, f'm = 2,000 PSI.

H. MORTAR SHALL CONFORM TO ASTM C270, TYPE M, 2,500 PSI.

I. GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM STRENGTH OF 2,000 PSI.

J. FOR PENETRATIONS IN EXISTING CMU WALLS, SEE DETAIL 2/S-004.

TIMBER NOTES

A. STRUCTURAL PLYWOOD SHALL BE DOUGLAS FIR CONFORMING TO COMMERCIAL STANDARDS PSI-95. PLYWOOD SHALL BE:

1. 1/2" ROOF SHT'S . . . . . STRUCTURAL I, 4-PLY, C-C, EXT.
2. 1/2" WALL SHT'S . . . . . STRUCTURAL I, 4-PLY, C-C, EXT.

ALL PLYWOOD SHALL BEAR THE STAMP OF AN APA CERTIFIED MILL PLYWOOD. CLIPS OR EDGE BLOCKING SHALL BE USED WHERE PLYWOOD IS SQUARE EDGED.

B. MINIMUM FASTENER SHALL BE:
1. ROOF PLYWOOD DECKING: #8 AT 6" AT O.C. AT PANEL EDGES AND DIAPHRAGM BOUNDARIES; #8 AT 12" AT O.C. AT INTERMEDIATE FRAMING
2. WALL PLYWOOD SHEATHING: #8 AT 6" AT O.C. AT PANEL EDGES AND DIAPHRAGM BOUNDARIES; #8 AT 12" AT O.C. AT INTERMEDIATE FRAMING

C. PROVIDE MINIMUM OF 1/8" GAP BETWEEN PANEL EDGES.

D. SCREWS SHALL HAVE A MINIMUM OF 3/8" EDGE DISTANCE AND SHALL NOT BE OVER DRIVEN THRU OUTER FACE.

E. LAY ALL ROOF SHEATHING WITH FACE GRAIN PERPENDICULAR TO THE SUPPORTS. ALL PANELS SHALL BE STAGGERED.

F. MAXIMUM MOISTURE CONTENT FOR ALL TIMBER SHALL BE 19 PERCENT.

G. ONE LAYER OF 15 LB ASPHALT SATURATED ROOFING FELT SHALL BE APPLIED TO ISOLATE WOOD FROM CONTACT WITH ALL CONCRETE AND MASONRY SURFACES.

H. ALL TIMBER SHALL BE PRESSURE TREATED.

I. ALL FASTENERS SHALL BE HOT DIP GALVANIZED OR STAINLESS STEEL.

J. TIMBER CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE OR APPROVED EQUAL.

COLD-FORMED METAL FRAMING NOTES

A. LIGHT GAUGE, COLD FORMED STEEL MEMBERS ARE TO BE MANUFACTURED BE A MEMBER OF THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA). ALL MEMBERS ARE DESIGNATED PER SSMA STANDARDS.

B. ALL LIGHT GAGE METAL FRAMING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", AND ASTM A1003, LATEST EDITION.

C. MEMBERS ARE TO COMPLY WITH ICC EVALUATION REPORT NO. 4943P.

D. MEMBERS ARE TO BE GALVANIZED IN ACCORDANCE WITH ASTM A525.

E. SHOP DRAWINGS SUBMITTALS SHALL BE ACCOMPANIED BY MANUFACTURER'S PRODUCT INFORMATION AND OTHER DATA NEEDED TO VERIFY COMPLIANCE WITH THE SPECIFIED REQUIREMENTS.

F. UNLESS OTHERWISE NOTED, ALL LIGHT-GAGE METAL FRAMING SHALL CONFORM WITH THE FOLLOWING:
1. GALVANIZED STUDS (10 - 16 GAUGE) ASTM A653, GRADE 50, G90 COATING
2. GALVANIZED STUDS (18 OR 20 GAUGE) ASTM A653, GRADE 33, G90 COATING
3. GALVANIZED TRACK, END CLOSURES, BRIDGING AND ACCESSORIES ASTM A653, GRADE 50, G90 COATING

G. LIGHT-GAGE FRAMING SHALL BE THE SIZE AND GAUGE INDICATED ON THE DRAWINGS.

H. ALL SHEET METAL SCREWS SHALL PROTRUDE A MINIMUM OF 1/4" THRU METAL FRAMING.

I. SPLICES IN FRAMING MEMBERS SHALL NOT BE PERMITTED.

J. ALL WALL STUDS SHALL HAVE SSMA STANDARD PUNCHOUTS AT 24" SPACING, UNLESS OTHERWISE NOTED.

K. FLAME CUTTING OF THE ENDS OF LOAD BEARING STUDS SHALL NOT BE PERMITTED.

L. ALL DOUBLE STUDS SHALL BE SOLID BLOCKED AT MID HEIGHT.

M. PROVIDE END BLOCKING AT ALL JOIST ENDS.

N. PROVIDE FULL HEIGHT, SQUARE CUT, FULL CONTACT BEARING WEB STIFFENERS, OF THE SAME THICKNESS AND DEPTH AS THE FRAMING MEMBER AT EACH SUPPORT.

O. MEMBERS SHALL BE VISUALLY CHECKED FOR CRACKS IN THE STEEL, MEMBERS WITH CRACKS SHALL NOT BE USED. MEMBERS WITH SURFACE RUST ON THE GALVANIZED FINISH AND/OR SCALING RUST ON THE CUT ENDS OF THE MEMBER SHALL NOT BE USED.

H. ACCESSORIES: PROVIDE ALL ACCESSORIES INCLUDING BUT NOT LIMITED TO TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, RESILIENT CLIPS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED.

EPOXY ANCHOR BOLT ADHESIVE

A. EPOXY ANCHOR BOLT ADHESIVES SHALL BE TWO-COMPONENT HIGH-SOLIDS, EPOXY BASED SYSTEM SUPPLIED SUPPLIED THROUGH A MIXING NOZZLE PROVIDED BY THE MANUFACTURER. THE ADHESIVE ANCHOR SHALL HAVE BEEN TESTED AND QUALIFIED FOR PERFORMANCE IN UNCRACKED CONCRETE, CRACKED CONCRETE OR MASONRY (WHICHEVER IS APPLICABLE) IN ACCORDANCE WITH ICC-ES.

B. THE ADHESIVE SHALL BE DESIGNED FOR SEISMIC APPLICATIONS.

C. ALL MANUFACTURERS PREPARATION, INSTALLATION AND SETTING PROCEDURES SHALL BE FOLLOWED IN STRICT ACCORDANCE.

STATE OF HAWAII 1959

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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04/30/2024
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
DH/AI	DH/AI	KW	

NO.	DATE	REVISIONS

DATE

PROJECT TITLE :

NEW PASS AND ID OFFICE

AT
DANIEL K. INOUYE INTERNATIONAL AIRPORT
HONOLULU, OAHU, HAWAI'I

PROJECT NO.:

CO1322-63

SHEET TITLE:

STRUCTURAL GENERAL NOTES

DATE :
12/21/22
SHEET :
27 OF 100 SHEETS

DWG. NO.
S001

SPECIAL INSPECTION NOTES

A. SPECIAL INSPECTION PROVISIONS OF CHAPTER 17 OF THE 2018 INTERNATIONAL BUILDING CODE GOVERNS PORTIONS OF THE STRUCTURAL WORK AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS. THE SPECIAL INSPECTOR SHALL BE HIRED BY THE OWNER.

B. THE MINIMUM RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE OUTLINED IN THE "SPECIAL INSPECTION RECOMMENDED STANDARD OF PRACTICE", 2ND EDITION, PUBLISHED BY THE STRUCTURAL ENGINEERS ASSOCIATION OF HAWAII.

C. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE SPECIAL INSPECTOR FOR ALL ITEMS REQUIRING SPECIAL INSPECTION A MINIMUM OF 48 HOURS IN ADVANCE.

D. SPECIAL INSPECTIONS DO NOT RELIEVE THE GENERAL CONTRACTOR OF HIS RESPONSIBILITIES TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND TO BE RESPONSIBLE FOR THE SAFETY OF THE JOB SITE.

E. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT TO THE BUILDING DEPARTMENT, ARCHITECT, STRUCTURAL ENGINEER AND OWNER STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF HIS/HER KNOWLEDGE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE BUILDING CODE.

F. THE SPECIAL INSPECTOR SHALL BE CERTIFIED AS A SPECIAL INSPECTOR BY THE BUILDING DEPARTMENT OF THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO).

G. THE FOLLOWING STRUCTURAL WORK FOR THIS PROJECT REQUIRE SPECIAL INSPECTIONS AS NOTED BELOW:
1. CONCRETE AND CONCRETE REINFORCING STEEL FOR:
   a. WALL FOOTINGS
2. BOLTS AND EMBEDS INSTALLED IN CONCRETE
3. REINFORCED CONCRETE MASONRY (CMU BLOCK)
4. EXPANSION ANCHORS AND ADHESIVE BOLT, BAR OR DOWEL INSTALLATION

DESIGN DATA

A. BUILDING RISK CATEGORY----------II

B. LIVE LOADS:
1. OFFICES (50 PSF + 15 PSF PARTIONS)----------65 PSF
2. ROOF LIVE LOAD----------20 PSF

C. SUPERIMPOSED DEAD LOADS:
1. MECHANICAL, ELECTRICAL, PLUMBING----------4 PSF
2. CEILING----------3 PSF

D. SEISMIC LOADS:
1. RISK CATEGORY----------II
2. SEISMIC IMPORTANCE FACTOR----------1.00
3. SEISMIC SITE CLASS----------D (ASSUMED)
4. Ss----------0.571
5. S1----------0.164
6. Sds----------0.511
7. Sd1----------0.249
8. SEISMIC RESISTING SYSTEM: LIGHT FRAME (COLD-FORMED STEEL) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
9. RESPONSE MODIFICATION FACTOR, R----------6.5
10. SYSTEM OVERSTRENGTH FACTOR----------3.0
11. DEFLECTION AMPLIFICATION FACTOR----------4.0
12. SEISMIC DESIGN CATEGORY----------D

E. WIND LOADS:
1. RISK CATEGORY----------II
2. BASIC WIND SPEED----------131 MPH
3. WIND IMPORTANCE FACTOR----------1.0
4. WIND EXPOSURE----------C
5. ENCLOSED BUILDING

F. FOUNDATION PARAMETERS - PER HNL INTERIM CAR RENTAL FACILITY RECORD DRAWINGS DATED APRIL 10, 2017, PER "FOUNDATION INVESTIGATION, CONSOLIDATED RENTAL CAR FACILITY - HONOLULU INTERNATIONAL AIRPORT: HONOLULU, HI" BY HIRATA AND ASSOCIATES, INC. DATED OCTOBER 28, 2010:
1. SHALLOW FOUNDATION BEARING CAPACITY----------3,000 PSF

STANDARDS AND REFERENCES

A. INTERNATIONAL BUILDING CODE, INTERNATIONAL CODE COUNCIL, 2018 EDITION AS AMENDED BY STATE OF HAWAII.

B. ASCE 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.

C. ACI 318-14, AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.

D. AISC 360-16, AMERICAN INSTITUTE OF STEEL CONSTRUCTION, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.

E. AWS D1.1 - 2017, STRUCTURAL WELDING CODE - STEEL

F. TMS 402-16/TMS 602-16, BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES.

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