

DESIGN LOAD SCHEDULE		REVIEWED FOR COMPLIANCE		SHOW LOADS	
LIVE LOADS		WIND DESIGN DATA		EARTHQUAKE DESIGN DATA	
AMENITY/DINING AREA	0 PSF	ULTIMATE DESIGN WIND SPEED (3 SECOND GUST)	108 MPH	SEISMIC IMPORTANCE FACTOR (I)	1.0
MEZZANINE LEVEL	0 PSF	NOMINAL DESIGN WIND SPEED (V ₅₀)	108 MPH	WIND EXPOSURE CATEGORY	II
NOTES: 1. GC TO COORDINATE AND PROVIDE ANY HEAVY KITCHEN EQUIPMENT.		RISK CATEGORY	II	MAPPED SPECTRAL RESPONSE ACCELERATIONS	
PERFORMANCE OF THIS REVIEW DOES NOT BELIEVE THE APPLICANT FROM FULL RESPONSIBILITY TO COMPLY WITH ALL APPLICABLE ORDINANCES AND REGULATIONS.		WIND EXPOSURE CATEGORY	B	I. AT SHORT PERIODS (S _s)	0.071
		INTERNAL PRESSURE COEFFICIENT (GC _p)	+0.18 / -0.18 (SEE NOTE 1) +0.55 / -0.55 (SEE NOTE 2)	II. AT A PERIOD OF 1 SEC (S ₁)	0.038
		COMPONENTS AND CLADDING	PER ASCE/SEI 7-10	I. AT SHORT PERIODS (S _s)	0.076
				II. AT A PERIOD OF 1 SEC (S ₁)	0.061
				SEISMIC DESIGN CATEGORY	A
NOTES: 1. FOR ENCLOSED BUILDINGS 2. FOR PARTIALLY ENCLOSED BUILDING					

WARNING: THE STRUCTURAL INTEGRITY OF THE BUILDING SHOWN IN THESE PLANS DEPENDS ON COMPLETION ACCORDING TO THE PLANS AND SPECIFICATIONS. STRUCTURAL MEMBERS ARE NOT SELF-BRACING UNTIL PERMANENTLY AFFIXED TO THE STRUCTURE. THE STRUCTURAL ENGINEERS ASSUME NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION.

I. GENERAL

- DESIGN BUILDING CODES: INTERNATIONAL BUILDING CODE 2012
- THE CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE ARCHITECTURAL AND OTHER TRADES DRAWINGS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR OMISSIONS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY BRACING AND SHORING, AS REQUIRED, TO INSURE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE OR PORTION THEREOF DURING CONSTRUCTION. THE DESIGN PROCEDURES SHALL CONFORM TO ALL GOVERNING CODES AND SAFETY REQUIREMENTS. TEMPORARY BRACING AND SHORING SHALL BE IN CONFORMANCE WITH OSHA REGULATIONS.
- ALL VERTICAL ELEMENTS (WALLS, COLUMNS) ARE DESIGNED AS Laterally Braced by the Floor and Roof Systems. CONTRACTOR SHALL ENSURE THAT WALLS ARE ADEQUATELY BRACED DURING CONSTRUCTION.
- SUBMITTALS
 - SUBMITTALS SHALL BE PROVIDED TO THE CONTRACTOR, ARCHITECT, STRUCTURAL ENGINEER, AND THE OWNER. THE GENERAL CONTRACTOR SHALL REVIEW AND SUBMITTALS TO INDICATE A STATEMENT OF COMPLIANCE OR NON-COMPLIANCE WITH THE CONTRACT DOCUMENTS. SUBMITTALS WITHOUT THIS STATEMENT MAY BE RETURNED FOR RESUBMITTAL.
 - SUBMITTALS SHALL CLEARLY INDICATE THE REFERENCE CONTRACT DOCUMENTS WITH REVISION AND THE GENERAL CONTRACTOR SHALL VERIFY THAT THE LATEST CONTRACT DOCUMENTS HAVE BEEN USED FOR THE SUBMITTALS.
 - SUBMITTALS REQUIRING A REGISTERED PROFESSIONAL ENGINEER'S SEAL OR REQUIRING SUPERVISION BY A REGISTERED PROFESSIONAL ENGINEER: THE ENGINEER SHALL HAVE AN ACTIVE REGISTRATION IN THE STATE IN WHICH THE PROJECT IS LOCATED.
 - CONTRACT DRAWINGS SHALL NOT BE REPRODUCED FOR ANY SUBMITTAL.

II. SITE WORK

- ASSUMED DESIGN ALLOWABLE SOIL BEARING PRESSURE IS 3,300 PSF (UNDER SUSTAINED LOAD) AND 5,000 PSF (UNDER TOTAL LOAD - DEAD AND LIVE LOAD), AS REFERENCED IN BUILDING STRUCTURAL DRAWING SHEET G S.01.
- BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
- VERIFY EXISTING UTILITIES PRIOR TO START OF ANY EXCAVATION WORKS. COORDINATE WITH CIVIL DRAWINGS FOR WORKS RELATED TO UTILITIES. DO NOT PLACE UTILITY LINES THROUGH OR BELOW ANY FOUNDATIONS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
- ALL FOOTINGS SHALL PROJECT AT LEAST 1 FT INTO UNDISTURBED NATURAL SOIL OR COMPACTED STRUCTURAL FILL. ALL BEARING STRATA SHALL BE ADEQUATELY DRILLED AND FOUNDATION CONCRETE IS POURED. NO EXCAVATION SHALL BE CLOSER THAN AT A SLOPE OF 1:1 (ONE HORIZONTAL TO ONE VERTICAL). FOOTINGS SHALL NOT BE FOUND ON EXISTING FILL, LOOSE OR WET SOIL. STEP FOOTINGS WITH A RATIO OF 2 HORIZONTAL TO 1 VERTICAL.
- PRIOR TO THE START OF ANY CONSTRUCTION, ALL VEGETATION, TOPSOIL, ORGANIC SOILS, SOIL MIXED WITH EXCESSIVE AMOUNTS OF ROOTS, STUMPS, ASPHALT OR OTHER DELETERIOUS MATERIALS, BUILDING DEBRIS, INACTIVE EXISTING UTILITY LINES AND BACKFILL SHALL BE REMOVED FROM ALL BUILDING AND PAVEMENT AREAS INCLUDING AT LEAST 5 FT OFFSETS OUTSIDE ALL BUILDING AND PAVEMENT LINES. SOFT, VERY WET AND LOOSE SOILS SHALL ALSO BE REMOVED FROM BUILDING AREAS. THE CLEARED AREAS SHALL BE PROOF-ROLLED PRIOR TO THE PLACEMENT OF FILL. PROOF-ROLLING SHALL BE CARRIED OUT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER. IF PUMPING OR RUTTING IS OBSERVED, THE SOFT OR WET MATERIAL SHALL BE REMOVED DOWN TO FIRM SUBGRADE AND REPLACED WITH SUITABLE FILL. ALL POTENTIALLY EXPANSIVE CLAY (CL-CH) SOILS BELOW FOOTINGS, BELOW SLABS AND PAVEMENTS SHALL BE REMOVED AND REPLACED WITH SUITABLE FILL MATERIALS. SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR TO PROVIDE A DEWATERING SYSTEM (IF REQUIRED) TO PREVENT SOFTENING OF SUBGRADE, FACILITATE CONTROL OF GROUND WATER AND ALLOW CONSTRUCTION IN DRY CONDITIONS. IF THE SOIL SUBGRADE BECOMES WET, THEN CONSTRUCTION SHOULD BE STOPPED AND DEWATERING MUST BE PERFORMED TO LOWER THE WATER LEVEL. RESUME EXCAVATION ONLY AFTER THE GEOTECHNICAL ENGINEER HAS EXAMINED THE CONDITION AND HAS APPROVED THE RESTART OF ANY EXCAVATION WORK.
- DESIGN, INSTALL AND MONITOR EARTH RETENTION AND UNDERPINNING SYSTEMS. COORDINATE ELEMENTS OF EARTH RETENTION SYSTEMS WITH PERMANENT BUILDING ELEMENTS. DESIGN OF EARTH RETENTIONS SYSTEM SHALL BE UNDER DIRECT SUPERVISION OF THE ENGINEER REGISTERED IN THE PROJECT JURISDICTION. ANY EARTH RETENTION AND UNDERPINNING DESIGN SHALL BE REVIEWED AND APPROVED BY THE ARCHITECTURAL ENGINEER OF RECORD AND SUBMITTED TO THE COUNTY FOR REVIEW UNDER A SEPARATE PERMIT PRIOR TO THE CONSTRUCTION.
- SUBMIT DESIGN, SHOP DRAWINGS WITH SEQUENCE OF CONSTRUCTION BEARING ENGINEERS SEAL AND SIGNATURE.
- ALL SOIL FILL MATERIAL SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. COMPACTED CONTROLLED FILL SHALL CONSIST OF CLEAN SOIL OR BANK RUN SAND AND GRAVEL BUT EXCLUDING PLASTIC CLAYS CONTAINING NO ORGANIC, ROOTED PLASTIC CLAYS, DELETERIOUS MATERIALS, FROZEN SOILS OR STONES LARGER THAN 3 IN IN SIZE. THE FILL MATERIAL FOR FOOTINGS AND SLAB ON GRADE SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- PROVIDE 2 TO 3 IN OF MIDSLAB (1000 PSI LEAN CONCRETE) UNDER ALL FOUNDATIONS WHERE REQUIRED BY GEOTECHNICAL ENGINEER.

III. CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI -301, ACI-318 AND ACI -302.
- REINFORCING STEEL
 - DEFORMED BILLET STEEL: ASTM A615 - GRADE 60
 - WELDED WIRE FABRIC (WWF): ASTM A185
- ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI-315). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI 318, ACI 315 AND CRSI STANDARDS.
- REINFORCEMENT SPLICES SHALL BE LAP SPLICES WITH A MINIMUM LAP OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
- CAST-IN PLACE CONCRETE SHALL BE READY-MIX PER ASTM C94. THE MIX SHALL BE PROPORTIONED WITH:
 - PORTLAND CEMENT: ASTM C150
 - AGGREGATES (3/4 IN MAXIMUM SIZE): ASTM C33
 - NO CALCIUM CHLORIDE SHALL BE PERMITTED
 - AIR ENTRAINMENT: ASTM C260
 - WATER REDUCING ADMIXTURE: ASTM C494
 - FLYASH CLASS F: 20% MAXIMUM BY WEIGHT: ASTM C618
 - WATER, CLEAN AND POTABLE
- RESTRICT THE ADDITION OF WATER AT THE JOB SITE. DO NOT ADD WATER WITHOUT THE APPROVAL OF THE GENERAL CONTRACTOR AND DO NOT EXCEED SLUMP LIMITATIONS. USE COLD WATER FROM THE TRUCK TANK AND REMIX TO ACHIEVE CONSISTENCY. THE REPORTS SHALL INDICATE HOW MUCH WATER WAS ADDED AT THE JOB SITE. CONCRETE SHALL BE PLACED WITHIN 90 MINUTES OF BATCH TIME.
- PROVIDE LEAN CONCRETE UNDER FOUNDATIONS FOR ACCIDENTAL OVER EXCAVATIONS OF SOFT SPOTS AND TRENCHES.
- PROVIDE CONTINUOUS MOISTURE TO CONCRETE IN ACCORDANCE WITH ACI 301 AND ACI 308. APPLY A 30% SOLIDS LIQUID MEMBRANE FORMING CHEMICAL CURING COMPOUND IN ACCORDANCE WITH ASTM C-309. LIQUID MEMBRANE MUST NOT ADVERSELY AFFECT SURFACE FOR BONDING OF FUTURE FINISHES.
- CONCRETE COMPRESSIVE STRENGTH AT 28 DAY CURE.
 - FOUNDATIONS AND SLAB ON GRADE, F_c = 3,500 PSI
 - CONCRETE ON METAL DECK, F_c = 3,500 PSI (NW)
- SLABS ON GRADE (REINFORCED) SHALL BE MIN 4 IN THICK WITH 6 x 6 x W 1.4 x 1.4 WWF
- LAP REIN # 6 IN AT EACH DIRECTION. PLACE CONCRETE OVER VAPOR BARRIER WITH MINIMUM 12 IN OVERLAP AND MINIMUM 4 IN OF COARSE AGGREGATE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. THE AGGREGATE LAYER SHALL BE PLACED OVER FIRM NATURAL SUBGRADE OR ON COMPACTED AND CONTROLLED FILL. USE AIR ENTRAINMENT AT ALL EXTERIOR SLABS. PROVIDE CONTROL AND CONSTRUCTION JOINTS AT BREEZEWAYS AS REQUIRED TO PREVENT UNCONTROLLED CRACKING PER ACI REQUIREMENTS.
- SLUMP: 4 IN PLUS OR MINUS 1 IN AT THE POINT OF DISCHARGE INTO THE FORMS.
- WATER CEMENT RATIO SHALL NOT EXCEED 0.45 FOR ALL.
- VAPOR BARRIER SHALL BE ASTM E 1745, CLASS A, 10 MIL POLYETHYLENE MINIMUM.
- CONCRETE COVER BETWEEN FACE OF REINFORCING BAR AND FACE OF CONCRETE SHALL BE ACCORDING TO THE FOLLOWING MINIMUM DIMENSIONS (TOLERANCES) UNLESS NOTED OTHERWISE:
 - CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 IN (-1/8", +1")
 - FORMED AND EXPOSED TO WEATHER OR EARTH:
 - NO. 5 AND SMALLER BARS 1 1/2 IN (-1/4", +1/2")
 - NO. 6 AND LARGER BARS 2 IN (-1/4", +1/2")
 - FORMED AND NOT EXPOSED TO WEATHER OR EARTH:
 - SLABS & WALLS: 3/4 IN (-1/4", +3/8")
 - BEAMS AND COLUMNS: 1-1/2 IN (-1/4", +1/2")
- ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM AIR ENTRAINMENT OF 6% ±1.5 PER ACI-318 CLAUSE 4.4.1.
- PROVIDE CORNER BARS 3 FT x 3 FT AT ALL WALL AND FOOTING INTERSECTIONS TO MATCH CONTINUOUS REINFORCING. ALL LAPS SHALL BE A MINIMUM OF 30 BAR DIAMETER.
- PROVIDE PROPERLY TIED SPACERS, CHAIRS, BOLSTERS, ETC. AS REQUIRED AND NECESSARY TO ASSEMBLE, PLACE AND SUPPORT ALL REINFORCING IN PLACE. USE WIRE BAR TYPE SUPPORTS COMPLYING WITH CRSI RECOMMENDATIONS. USE PLASTIC TYP LEGS ON ALL EXPOSED SURFACES.
- CONTRACTOR SHALL VERIFY EMBEDDED ITEMS, INCLUDING BUT NOT LIMITED TO ANCHOR BOLTS, BOLT CLUSTERS, WELD PLATES, ETC., BEFORE PLACING CONCRETE. NOTIFY ENGINEER OF ANY CONFLICTS WITH REBAR. ANCHORS INSTALLED IN CAST-IN-PLACE CONCRETE SHALL BE SECURED IN PLACE. USE SETTING DRAWINGS, TEMPLATES AND DIAGRAMS. ALL POST INSTALLED ANCHORS IN HARDENED CONCRETE SHALL FULLY COMPLY WITH MANUFACTURER'S RECOMMENDATIONS.
- ALL BEAMS, SPANDRELS, AND SLABS SHALL BE POURED MONOLITHICALLY EXCEPT FOR REQUIRED CONSTRUCTION JOINTS. PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS. PROVIDE FORMED OPENINGS OR PIPE SLEEVES WHEN POURING CONCRETE.
 - PIPE SLEEVES AND OPENINGS SHALL NOT BE LOCATED CLOSER THAN 18 IN CLEAR FROM ANY FACE OF COLUMN WITHOUT APPROVAL OF THE ENGINEER UNLESS NOTED ON DRAWINGS.
 - IF CUTTING OR DRILLING OF CONCRETE SLAB IS REQUIRED, ALL MEANS OF AVOIDING DAMAGE TO SLAB REINFORCEMENT SHALL BE UTILIZED, INCLUDING VERIFYING LOCATION OF REBARS.
 - ARRANGE REINFORCING AROUND OPENINGS AS SHOWN IN TYPICAL DETAILS. EMBEDDED PIPES OR CONDUITS SHALL BE SPACED AT LEAST THREE DIAMETERS ON CENTERS, UNLESS NOTED OTHERWISE.
 - PLACE SLAB BARS TO CLEAR SLEEVES AND MAINTAIN 1 1/2 IN CLEAR SPACING BETWEEN BARS. WHERE SLEEVES ARE CLOSELY SPACED IN A GROUP, THE GROUP SHALL BE TREATED AS AN OPENING AND REINFORCED ACCORDINGLY.
- PROVIDE KEVED JOINTS BETWEEN ALL NON-MONOLITHIC INTERSECTING CONCRETE WALLS AND AT ALL CONCRETE JOINTS.

- SEE ARCHITECTURAL DRAWINGS FOR REQUIRED CONCRETE FINISHES.
- STEP AND SLOPE ALL BALCONIES AND WALKWAYS AWAY FROM THE BUILDING.

SUBMITTALS:

- SUBMIT PROPOSED CONCRETE MIX DESIGN PRIOR TO CONSTRUCTION, INCLUDING BACKUP DATA IN ACCORDANCE WITH ACI 301 CHAPTER 3, METHOD 1 OR 2 FOR ENGINEER OF RECORD'S APPROVAL. THE PROPOSED MIX DESIGN SHALL BE SIGNED AND SEALED BY THE CONCRETE CONTRACTOR'S ENGINEER REGISTERED PROFESSIONAL ENGINEER. THE SIGNED AND SEALED CONCRETE DESIGN MIX REVIEWED AND APPROVED BY THE ENGINEER OF RECORD SHALL BE AVAILABLE AT THE SITE AT ALL TIMES FOR THE BUILDING INSPECTOR.
- SUBMIT DETAILED SHOP DRAWINGS OF REINFORCING BARS SHOWING NUMBER, SIZE, AND LOCATION. INCLUDE BAR LISTS AND BEND DIAGRAMS.
- SUBMIT DETAILED SHOP DRAWINGS OF ALL SLAB PENETRATIONS PRIOR TO POURING CONCRETE FOR REVIEW AND APPROVAL OF ARCHITECT, MEP ENGINEER AND STRUCTURAL ENGINEER.

IV. STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION, EXCEPT CHAPTER 4.2.1, CODE OF STANDARD PRACTICE.
- ALL STRUCTURAL STEEL SHALL BE
 - W SHAPES: ASTM 992 (WHERE AVAILABLE) OR ASTM A572 (GRADE 50)
 - PLATES, CHANNELS AND ANGLES: ASTM A572 (GRADE 50) OR A36
 - STRUCTURAL TUBES (HSS): ASTM A500 (GRADE B)
 - PIPE SECTIONS: ASTM A53 (STANDARD PIPE U.I.N.O.)
 - BOLTS: ASTM A325 OR A490 BOLTS
 - ANCHOR BOLTS: ASTM F1554 GRADE 55
- NON-SHRINK GROUT SHALL BE NONMETALLIC SHRINKAGE-RESISTANT GROUT, PREMIXED, NONMETALLIC, NON-CORROSIVE, NON-STAINING PRODUCT CONTAINING SELECTED SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING AND WATER REDUCING AGENTS, COMPLYING WITH ACI-308.2.
- WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISED CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.1. ALL WELDING SHALL BE PERFORMED USING E70XX, LOW HYDROGEN ELECTRODES, U.I.N.O. ELECTRODES ARE TO BE PROTECTED FROM MOISTURE.
- BOLTS AND BOLTED CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR STRUCTURAL JOINTS" AS SHEAR PLATE. SIZE AND USE OF HOLES: SEE AISC TABLE J3.1 (U.N.O.)
- ALL MISCELLANEOUS STEEL CONNECTIONS SHALL BE WELDED ALL AROUND WITH 1/4 IN FILLET WELD UNLESS OTHERWISE NOTED, EXCEPT FOR SLOTTED CONNECTIONS.
- COMPOSITE BEAM SHEAR CONNECTIONS SHALL BE NELSON STUD TYPE S3L AS MANUFACTURED BY THE NELSON STUD WELDING COMPANY OR AN ACCEPTABLE EQUAL. STUDS SHALL BE MANUFACTURED OF COLD-DRAWN STEEL CONFORMING TO ASTM A108. STUDS SHALL BE 3/4 IN DIAMETER BY 4 IN LONG. CONNECTOR QUANTITIES INDICATED ON THE DRAWINGS ARE BASED ON A SHEAR CAPACITY OF 5.89 KIIPS PER STUD.
- SHEAR CONNECTIONS SHALL BE PLACED IN A SINGLE ROW, IF POSSIBLE, AT 12 IN ON CENTER (MAX.) CENTERED OVER THE BEAM WEB.
- EXPANSION ANCHORS SHALL BE INSTALLED SUCH THAT THE APPLIED SHEAR FORCES ACT THROUGH THE BOLT SHAFT, NOT THE THREADS.
- EXPANSION BOLTS: EXPANSION BOLTS SHALL BE GALVANIZED CARBON STEEL COMPONENTS, ZINC-PLATED TO COMPLY WITH ASTM B633, AND FF-S-325, GROUP II, TYPE 4, CLASS 1.
 - FOR 5/8 IN DIAMETER EXPANSION BOLTS, ALLOWABLE SHEAR SHALL NOT BE LESS THAN 3000 LBS. AND ALLOWABLE TENSION SHALL NOT BE LESS THAN 2000 LBS FOR 3500 PSI CONCRETE.
 - FOR 1 IN DIAMETER EXPANSION BOLTS, ALLOWABLE SHEAR SHALL NOT BE LESS THAN 7500 LBS. AND ALLOWABLE TENSION SHALL NOT BE LESS THAN 4000 LBS FOR 3500 PSI CONCRETE.
- ALL STEEL MEMBERS EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED AND MEMBERS LOCATED WITHIN 4" OF THE OUTSIDE FACE OF EXTERIOR WALL SHALL BE HOT-DIPPED GALVANIZED IN THEIR ENTIRETY.
- FULL PENETRATION WELDS SHALL BE MADE AGAINST A 1/8 IN X 1 IN BAKER PLATE TACK WELDED IN PLACE BEFORE FEEDING THE WELD. PENETRATION WELDS SHALL BE EQUIVALENT IN DEPTH AND LENGTH TO THE PARTS JOINED.
- COLUMN SPLICES SHALL BE DESIGNED IN ACCORDANCE TO THE AISC "STRUCTURAL STEEL DETAILING" MANUAL.
- NO SPLICES OR PENETRATIONS SHALL BE PERMITTED IN ANY STRUCTURAL STEEL MEMBER UNLESS SHOWN ON APPROVED SHOP DRAWINGS.
- NO FIELD WELDING OF GALVANIZED MEMBERS IS PERMITTED.
- PAINTING: ONE COAT OF SHOP PAINT SHALL BE APPLIED TO ALL STRUCTURAL STEEL WITH THE EXCEPTION OF AREAS TO BE WELDED.
- FABRICATION SHALL NOT PROCEED PRIOR TO SHOP DRAWINGS APPROVAL.
- TESTING:
 - QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO VISUALLY INSPECT ALL STEEL MEMBERS AND CONNECTIONS AND ULTRASONIC TEST (UT) 50 PERCENT OF FULL PENETRATION WELDS. VISUAL WELDING INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELDING INSPECTOR.
- SUBMITTALS:
 - SUBMIT DETAILED SHOP DRAWINGS SHOWING ALL STRUCTURAL STEEL LAYOUTS AND DETAILS, SIZES OF MEMBERS, TYPE OF STEEL, CONNECTION DETAILS, WELD SIZE AND LENGTH, BOLTS, CUTS, PENETRATIONS, ETC., AS REQUIRED TO FABRICATE AND ERECT ALL STRUCTURAL STEEL FRAMING.
 - ALL CONNECTIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BY THE DETAILER AND SUBMITTED ON SHOP DRAWINGS.
 - SUBMIT SIGNED AND SEALED SHOP DRAWING FOR CONNECTION DESIGN FOR REVIEW AND APPROVAL. SHOP DRAWINGS MUST BE PREPARED BY THE BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

V. METAL STAIRS, LADDERS AND GUARDS

- METAL STAIRS AND LADDERS SHALL BE DESIGNED AND CERTIFIED BY THE MANUFACTURER'S LICENSED DESIGN ENGINEER. PROVIDE CROSS-BRACING BELOW METAL STRINGERS TO AVOID LATERAL MOVEMENT AS REQUIRED. DESIGN SHALL BE PER THE METAL STAIR MANUFACTURER'S ENGINEER.
- HANDRAILS AND GUARDS:
 - HANDRAILS ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO RESIST A LOAD OF 50 POUNDS PER LINEAR FOOT APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS OF THE STRUCTURE.
 - HANDRAILS ASSEMBLIES AND GUARDS SHALL BE ABLE TO RESIST A SINGLE CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION AT ANY POINT AT THE TOP, AND HAVE ATTACHMENT DEVICES AND SUPPORTING STRUCTURE TO TRANSFER THIS LOADING TO APPROPRIATE STRUCTURAL ELEMENTS OF THE BUILDING. THIS LOAD NEED NOT BE ASSUMED TO ACT CONCURRENTLY WITH THE LOADS SPECIFIED IN THE PRECEDING PARAGRAPH. CONTRACTOR'S ENGINEER SHALL VERIFY ABOVE LOADING REQUIREMENT WITH APPLICABLE CODE.
- SUBMITTALS:
 - HANDRAILS, GUARDRAILS, METAL STAIRS AND LADDERS: SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR REVIEW AND APPROVAL. SHOP DRAWING PREPARATION SHALL BE SUPERVISED BY A REGISTERED PROFESSIONAL ENGINEER.
- METAL DECK
 - METAL DECK SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE STEEL DECK INSTITUTES "DESIGN MANUAL FOR COMPOSITE, FORM DECKS AND ROOF DECKS." DECK PROPERTIES SHALL BE COMPUTED USING THE LATEST EDITION OF AISC SPECIFICATION FOR THE "DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
 - METAL DECKS SHALL BE GALVANIZED AND BE IN ACCORDANCE TO ASTM A653, 660 WITH MINIMUM YIELD STRESS OF 33 KSI.
 - COMPOSITE FLOOR DECK:
 - SEE FRAMING PLANS FOR SIZE AND GAGE. INSTALL FLOOR DECK WITH (3) SPAN CONTINUOUS LAYOUTS.
 - PROVIDE MINIMUM OF 1-1/2 IN BEARING AT SUPPORTS FOR ALL METAL DECKS.
 - MINIMUM FASTENING OF FLOOR DECK TO SUPPORT SHALL BE (2) 5/8 IN DIA. PUDDLE WELDS OR MECHANICAL FASTENERS PER 36 IN WIDTH. DECK SHEETS MAY BE BUTTED OVER SUPPORTS.
 - MINIMUM FASTENING OF FLOOR DECK AT SIDE LAPS AND BUILDING PERIMETER SHALL BE 5/8 IN PUDDLE WELDS AT 36 IN CENTERS MAX.
 - PROVIDE CONTINUOUS CLOSURES AND POUR STOPS AT DECK ENDS, EDGES, AND OPENINGS WHERE NO STEEL ANGLE IS SPECIFIED, U.N.O.
- INSTALL ALL METAL DECKING IN A (3) SPAN CONTINUOUS LAYOUT. PROVIDE L 4 x 4 x 3/8 IN SUPPLEMENTAL FRAMING ANGLES TO SUPPORT DECK EDGES WHERE NO METAL DECK SUPPORT IS INDICATED IN THE CONTRACT DOCUMENTS.
- WELD WASHERS ARE REQUIRED FOR DECKING 24 GAUGES AND THINNER.
- HANGING OR ATTACHING DUCTWORK, CONDUIT, PIPING, EQUIPMENT, CEILING, OR OTHER LOADS TO METAL DECKING IS NOT ALLOWED.
- TESTING: A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO VISUALLY INSPECT ALL DECK WELDS AND FASTENERS.
- SUBMITTALS:
 - SUBMIT SHOP DRAWINGS SHOWING LAYOUT OF DECK, TYPE OF DECK, ALL CONNECTIONS INCLUDING END WELDS, SEAM WELDS, INTERMEDIATE WELDS, AND ALL ACCESSORY MATERIAL SUCH AS CLOSURES, SLUMPS FOR DRAINS, ETC., FOR REVIEW AND APPROVAL.
 - TESTING RESULTS.

VII. LIGHT GAGE (COLD-FORMED STEEL) FRAMING

- ALL LIGHT GAGE FRAMING SHALL CONFORM TO THE SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, BY AISI.
 - ALL LIGHT GAGE FRAMING PRODUCTS SHALL BE MANUFACTURED FROM STEEL MEETING THE MINIMUM REQUIREMENTS;
 - 16, 14 & 12 GAGE: ASTM A653 GRADE 50 CLASS 1, F_y (MIN) = 50 KSI & F_u (MIN) = 65 KSI.
 - 18 GAGE: ASTM A653 GRADE 33, F_y (MIN) = 33 KSI & F_u (MIN) = 45 KSI.
 - COATING: 660 AS PER ASTM A653.
 - WITH EACH TYPE OF LIGHT GAGE FRAMING REQUIRED, PROVIDE TRACKS, BLOCKING, BRIDGING, LIMITS, CLIP ANGLES, BRACING, FASTENERS, AND ACCESSORIES AS RECOMMENDED BY MANUFACTURER FOR APPLICATIONS INDICATED, AS NECESSARY TO PROVIDE A COMPLETE LIGHT GAGE FRAMING SYSTEM.
 - ALL LIGHT GAGE FRAMING MEMBERS SHALL BE DESIGNED TO SUPPORT ALL LIVE, DEAD, AND WIND LOADS, PLUS ANY CONCENTRATED LOADS SHOWN ON THE DRAWINGS.
 - THE LIGHT GAGE EXTERIOR WALL SYSTEM (INCLUDING ALL CONNECTIONS) SHALL BE DESIGNED TO WITHSTAND BOTH POSITIVE AND NEGATIVE WIND PRESSURE WITH A MAXIMUM DEFLECTION BASED UPON THE APPLICABLE CODE AND MATERIAL REQUIREMENTS OF THE VENEER.

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ARCHITECT
HapstakDemetriou +
 ARCHITECTURE | DESIGN
 2715 M STREET NW, 4th Floor
 WASHINGTON, DC 20007
 202.333.9038
 www.hd-ad.com info@hd-ad.com

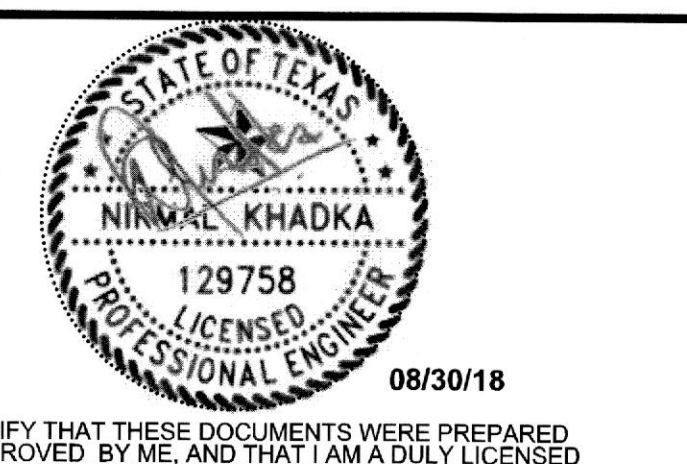
CLIENT
 ALEXANDER SMITH
 (410)241-1224
 a smith11@gmail.com

STRUCTURAL ENGINEER
 BEI STRUCTURAL ENGINEERS (FIRM #20121)
 3930 Pender Drive Fairfax, VA 22030
 703-890-5000

MEP ENGINEER
 J.B. Wyle and Associates, P.A.
 7950 Norfolk Ave., Bethesda, MD
 301-654-1410

FOOD SERVICE CONSULTANT
 JLA Corp
 13031 US Highway 19N, Clearwater, FL 33764
 727-470-7862

OUZO BAY HOUSTON
 4444 WESTHEIMER RD., HOUSTON, TX 77027, SUITE 130
PROJECT NO. 17054



I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED STRUCTURAL ENGINEER UNDER THE LAWS OF TEXAS - FIRM REGISTRATION #021

REV	DATE	ISSUED FOR	REV	DATE	ISSUED FOR
	5/16/18	PROGRESS SET			
	6/20/18	PERMIT SET			
1	8/30/18	COUNTY COMMENTS			
2	10/04/18	COUNTY COMMENTS			

STRUCTURAL NOTE
S001