- 2. CONTRACTOR SHALL CONSIDER THE PROJECT SPECIFICATIONS A PART OF THE CONTRACT DOCUMENTS. WHERE INFORMATION IS CONFLICTING, SPECIFIC DETAILS SHALL GOVERN OVER TYPICAL DETAILS WHICH SHALL GOVERN OVER THESE NOTES WHICH SHALL GOVERN OVER SPECIFICATIONS.
- 3. ALL DIMENSIONS ON STRUCTURAL DRAWINGS SHALL BE CHECKED AGAINST ARCHITECTURAL DIMENSIONS. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE OMITTED OR NOT CLEAR, CONTACT THE ARCHITECT (ARCH) OR STRUCTURAL ENGINEER OF RECORD (SEOR). ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. DIMENSIONS ARE TO THE FACE OF STUDS, AND TO CENTERLINE OF COLUMNS UNO.
- I. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY NOTIFY THE SEOR OF ANY CONFLICTS BETWEEN THE STRUCTURAL DRAWINGS AND OTHER DRAWINGS OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON DRAWINGS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE BUILDING THAT IS IN CONFLICT UNTIL THE CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.
- 5. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE CONSTRUCTION AND ALL ADJACENT PROPERTIES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO BRACING, SHORING OF LOADS DUE TO CONSTRUCTION E UIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR SEOR SHALL NOT INCLUDE OBSERVATION OF THE ABOVE ITEMS.
- SUBSTITUTION RE□UESTS FOR MATERIALS SPECIFIED ON THE STRUCTURAL DRAWINGS MAY BE CONSIDERED WITH MATERIALS HAVING EQUIVALENT OR GREATER CAPACITY AND PERFORMANCE. CURRENT EVALUATION REPORTS AND PRODUCT INFORMATION SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER DEMONSTRATING THE REQUIRED CAPACITY AND PERFORMANCE OF THE MATERIAL TO BE SUBSTITUTED. WRITTEN APPROVAL FROM THE SEOR SHALL BE OBTAINED PRIOR TO THE SUBSTITUTION OF ANY MATERIAL SPECIFIED ON THE STRUCTURAL DOCUMENTS
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT. THE ARCHITECT, SEOR, AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE RE UIREMENTS.
- 8. ALL WORK IS NEW (N) UNLESS INDICATED AS EXISTING (E).
- 9. CONSTRUCTION MATERIALS SHALL BE DISTRIBUTED WHEN PLACED ON THE STRUCTURE SUCH THAT LOADS DO NOT EXCEED DESIGN LIVE LOADS OR RESULT IN AN UNBALANCED CONDITION.
- 10. REFER TO THE PROJECT SPECIFICATIONS FOR SHOP DRAWING RE□UIREMENTS AND SUBMITTALS.
- 11. CORE DRILLS RE□UIRED SHALL NOT CUT ANY REINFORCING. THE CONTRACTOR IS TO COORDINATE WORK OF ALL TRADES TO ENSURE COMPLIANCE. ALL CORE DRILLS ARE TO BE PRESENTED TO THE IOR FOR VERIFICATION. THE IOR IS TO DOCUMENT CORES EXAMINED INDICATING AN ABSENCE OF REINFORCING.

## STRUCTURAL DESIGN CRITERIA:

CODES: ALL WORK SHALL BE IN CONFORMANCE WITH THE CALIFORNIA BUILDING CODE (CBC) 2016 EDITION, INCLUDING ALL AMENDMENTS. ALL STANDARDS USED SHALL BE THE LATEST VERSION APPROVED BY THE CODE ENFORCEMENT AGENCY ON THE DATE OF THE PERMIT ISSUANCE UNLESS SPECIFICALLY NOTED OTHERWISE.

2. DESIGN LIVE LOADS:

DE.	AD LOADS (UNREDUCIBLE, UNO):	
	a. ROOF	
П	BUILDING ROOF	20 PSF
П	CANOPY	15 PSF
LIV	/E LOADS (UNREDUCIBLE, UNO):	
	a. ROOF	
	BUILDING ROOF	20 PSF
	CANOPY	20 PSF

3. WIND DESIGN INFORMATION:

OCCUPANCY CAT. II	K <sub>□</sub> □ 0.85	K <sub>d</sub> □ 0.85	K <sub>□</sub> □ 1.0	
O SPEED $V_{\scriptscriptstyle \boxplus}$ $\Box$ 110 MPH (3	SEC GUST)	EXPOSURE C	,	
INTERNAL PRESSURE COEFF. □ □/- 0.18  WALL C&C DESIGN PRESSURE □ □ □ 22.4 PSF □ 15 FT HEIGHT				
			Γ	
	GC□□SEE ASCE7-10 FIG 30.4-1			
GC □ □ □/- 0.18				
&C DESIGN PRESSURE	□□ □ 22.4 PSF □	☐ 15 FT HEIGHT		
	GC SEE ASO	CE7-10 FIG 30.9	-1	
	GC 🗆 🗆 🗆 - 0.00	(NO POROSITY	·)	
	O SPEED V <sub>□□</sub> □ 110 MPH (3 PRESSURE COEFF. □ □/- 0 DESIGN PRESSURE	D SPEED V 110 MPH (3 SEC GUST)  PRESSURE COEFF. 00.18  DESIGN PRESSURE 0C SEE ASC  GC 00.18  &C DESIGN PRESSURE 0C-0.18  GC 00.18  GC 00.18	D SPEED V <sub>III</sub> = 110 MPH (3 SEC GUST) EXPOSURE CORESSURE COEFF. = 1/2 - 0.18  DESIGN PRESSURE GC = 22.4 PSF = 15 FT HEIGHT  GC = SEE ASCE7-10 FIG 30.4  GC = 1/2 - 0.18	

4. SEISMIC DESIGN INFORMATION:

I □ 1.25	OCCUPANCY CAT. III		SEISMIC DESIGN CATEGORY   E		
S <sub>S</sub> □ 2.301	S <sub>1</sub> □ 0.768	S <sub>DS</sub> □ 1.534	S <sub>D1</sub> □ 0.768		
E UIVALENT LATERAL FORCE PROCEDURE					
SPECIAL REINFORCED MASONRY WALL					
R □ 5	C <sub>S</sub> □ 0.38	MAX STORY DRIFT $\Delta = 0.010 \text{ h}$			

# FOUNDATION AND SLAB ON GRADE NOTES:

- 1. SEE SOIL REPORT BY: GEOTECHNICAL ENGINEERING GROUP, CITY OF LOS ANGELES JOB NO.: 17-074 DATED: AUGUST 22, 2017 ADDENDUM: NOVEMBER 9, 2017 SUPPLEMENT: OCTOBER 25, 2018
- 2. FOR CONTINUOUS AND PAD FOUNDATIONS ALLOWABLE VERTICAL BEARING PRESSURE: 2500 PSF (UNDERLAIN BY AT LEAST 30 INCHES OF COMPACTED SOIL) ALLOWABLE VERTICAL BEARING PRESSURE □ SHORT TERM: 2500 ☐ .33 □ 3333 PSF (UNDERLAIN BY AT LEAST 30 INCHES OF COMPACTED SOIL) ALLOWABLE LATERAL BEARING PRESSURE: 275 PSF PER FT OF DEPTH DESIGN COEFFICIENT OF FRICTION FOR SLIDING: 0.35
- 3. THE BEARING VALUE SHOWN ABOVE IS FOR THE TOTAL OF DEAD AND FREDUENTLY APPLIED LIVE LOADS AND MAY BE INCREASED BY ON THIRD FOR SHORT DURATION LOADING. ADD RECOMMENDATION FOR POLE FOOTING ON SUPPLIED SOILS REPORT.
- 4. THE CONTRACTOR SHALL CONFORM TO ALL RECOMMENDATIONS AND CONDITIONS INDICATED IN THE SOIL REPORT. THE GEOTECHNICAL ENGINEER SHALL OBSERVE ALL FOOTING EXCAVATIONS PRIOR TO PLACING CONCRETE.
- 5. SUBSURFACE SOIL PREPARATION:

PRIOR TO PLACEMENT

- A. ALL EXISTING UNDOCUMENTED FILL SHALL BE REMOVED AND RECOMPACTED. ALL TOPSOILS SHALL BE REMOVED AS REDUIRED BY THE GEOTECHNICAL ENGINEER.
- B. GEOTECHNICAL ENGINEER SHALL BE RETAINED DURING THE OVEREXCAVATION PROCESS. THE ACTUAL DEPTH OF REMOVAL WILL BE DETERMINED DURING
- **GRADING OPERATIONS.** C. OFFSITE FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER
- SPREAD FOOTINGS ARE CENTERED UNDER WALLS AND COLUMNS, UNO.
- 7. FOOTING ELEVATIONS ARE NOTED ON THE PLANS AND DETAILS AND SHALL BE USED FOR BIDDING. IN ANY CASE, FOOTINGS SHALL BEAR ON FIRM UNDISTURBED SOIL OR ENGINEERED FILL, IN ACCORDANCE WITH THE SOIL REPORT AND DETAILS SHOWN.
- 8. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.
- 9. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS WITH THE APPROVAL OF THE GEOTECHNICAL ENGINEER. FLOODING IS NOT PERMITTED
- 10. ALL TRENCHES SHALL COMPLY WITH APPLICABLE OSHA REQUIREMENTS.
- 11. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED BUT NOT BEHIND RETAINING WALLS BEFORE CONCRETE OR MASONRY ATTAINS ITS FULL DESIGN STRENGTH.
- 12. THE DESIGN OF ALL RETAINING WALLS AND SUBTERRANEAN BUILDING WALLS INDICATED ON THESE DRAWINGS IS BASED ON DRAINED SOILS.
- 13. CONSTRUCTION JOINTS (CJ) AND SAWCUT (SC) JOINTS IN SLABS SHALL OCCUR WHERE LOCATED ON PLANS AND DETAILS. CJIS SHALL HAVE FORMED POUR STOPS. CONSTRUCTION JOINTS IN WALLS AND FOOTINGS NEED NOT OCCUR AT THE SAME LOCATION, UNO.
- 14. SEE ARCHITECT'S PLANS FOR LOCATIONS OF SLAB SLOPES, DEPRESSIONS, CURBS, DRAINS, NON-STRUCTURAL PARTITIONS AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL PLANS.
- 15. ALL GRADING, FOUNDATION FOOTINGS, AND DRAINAGE PLANS SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER UPON SUBMITTAL. A CERTIFIED LETTER BY THE GEOTECHNICAL ENGINEER IS REDUESTED STATING THAT THE RECOMMENDATIONS CONTAINED WITHIN THE SOILS REPORT HAVE BEEN INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS PRIOR TO CONSTRUCTION.
- 16. PRIOR TO THE CONTRACTOR REDUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE SOILS ENGINEER SHALL ADVISE THE BUILDING OFFICIAL IN
- A. THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED. C. THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE SOILS

SOIL ENGINEERS APPROVAL ON FOUNDATION PLAN IS REDUIRED PRIOR TO

# **EXISTING CONDITIONS NOTES:**

- FIELD VERIFY ALL CONDITIONS & DIMENSIONS PRIOR TO SHOP DRAWING PRODUCTION AND FABRICATION OF STRUCTURAL ELEMENTS.
- 2. WHERE ALL OTHER EXISTING CONDITIONS VARY SIGNIFICANTLY FROM THOSE SHOWN ON THESE DRAWINGS, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED PRIOR TO CONTINUED CONSTRUCTION RELATED TO SUBJECT
- 3. SHORE ALL EXISTING CONSTRUCTION AS RE□UIRED.
- 4. ALL EXISTING (E) CONNECTIONS AT ELEMENTS TO BE REPLACED SHALL BE REPLACED OR RE-ATTACHED TO MATCH EXISTING CONDITIONS.
- 5. VERIFY LOCATION OF EXISTING (E) REBAR BEFORE FABRICATION USING NON-DESTRUCTIVE TESTING.
- 6. SPECIAL INSPECTION IS REQUIRED FOR ALL WORK.
- 7. SEE "AS BUILT" DRAWINGS FOR EXISTING BUILDING DESIGN FOR ITEMS NOT SHOWN OR NOTED.
- 8. ALL EXISTING (E) WOOD ELEMENTS TO REMAIN SHALL BE FIELD INSPECTED DURING CONSTRUCTION AND TREATED FOR DRYROT REMOVAL / CONTROL WHERE EXISTING GLBS TO REMAIN ARE FOUND TO HAVE EXTENSIVE DRYROT DEEPER THAN THE TOP TWO LAMINATIONS (3"), THE STRUCTURAL ENGINEER SHALL BE NOTIFIED PRIOR TO CONTINUED CONSTRUCTION RELATED TO

#### **EXISTING UNDERGROUND UTILITY NOTES:**

- 1. THE ARCHITECT AND ENGINEERS ARE NOT RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS. THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES WHICH MAY RESULT FROM HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES.
- 3. BEFORE COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL OBTAIN AN UNDERGROUND SERVICE ALERT IN UIRY I.D. NUMBER BY CALLING 1-800-422-4133. TWO WORKING DAYS SHALL BE ALLOWED AFTER THE I.D. NUMBER IS OBTAINED AND BEFORE THE EXCAVATION WORK IS STARTED THAT UTILITY OWNERS CAN BE NOTIFIED.

## **REINFORCING STEEL NOTES:**

- REINFORCING GRADES FOR CONCRETE OR MASONRY: A. ALL BARS EXCEPT THOSE TO BE WELDED...... ASTM A615, GRADE 60 B. TIES AND STIRRUPS ..
- ASTM A615, GRADE 60 C. WELDED WIRE FABRIC ASTM A185 D. ALL BARS TO BE WELDED. . ASTM A706, GRADE 60 E. ALL BARS IN THE CONCRETE SHEARWALL INDICATED ON WALL ELEVATION AS "SW" SHOULD BE A706, GRADE 60.
- 2. MAINTAIN MINIMUM CONCRETE COVER FROM FACE OF CONCRETE TO EDGE OF ALL REINFORCEMENT AS FOLLOWS (UNO): (SEE PLAN/ SECTION FOR CONCRETE W/ FIRE RATING.)

CONCRETE POURED AGAINST EARTH  CONCRETE POURED IN FORMS AND EXPOSED TO WEATHER OR EARTH  - #6 BARS AND LARGER  - #5 BARS AND SMALLER  INTERIOR COLUMNS AND BEAMS  1 1/2"  INTERIOR WALL FACES AND RAISED SLABS  1 1/2"  STRUCTURAL SLABS ON GRADE  - FROM BOTTOM OF SLAB  2"  - FROM TOP OF SLAB  OTHER CONCRETE NOT EXPOSED TO WEATHER OR EARTH FOR #11 BARS AND SMALLER	CONDIT	TION	COVER		
EXPOSED TO WEATHER OR EARTH  - #6 BARS AND LARGER  - #5 BARS AND SMALLER  1 1/2"  INTERIOR COLUMNS AND BEAMS  1 1/2"  INTERIOR WALL FACES AND RAISED SLABS  1 1/2"  STRUCTURAL SLABS ON GRADE  - FROM BOTTOM OF SLAB  2"  - FROM TOP OF SLAB  OTHER CONCRETE NOT EXPOSED TO WEATHER	CONCR	CONCRETE POURED AGAINST EARTH 3"			
- #5 BARS AND SMALLER 1 1/2"  INTERIOR COLUMNS AND BEAMS 1 1/2"  INTERIOR WALL FACES AND RAISED SLABS 1 1/2"  STRUCTURAL SLABS ON GRADE  - FROM BOTTOM OF SLAB 2"  - FROM TOP OF SLAB 1 1/2"  OTHER CONCRETE NOT EXPOSED TO WEATHER					
INTERIOR COLUMNS AND BEAMS 1 1/2"  INTERIOR WALL FACES AND RAISED SLABS 1 1/2"  STRUCTURAL SLABS ON GRADE  - FROM BOTTOM OF SLAB 2"  - FROM TOP OF SLAB 1 1/2"  OTHER CONCRETE NOT EXPOSED TO WEATHER		- #6 BARS AND LARGER	2"		
INTERIOR WALL FACES AND RAISED SLABS 1 1/2"  STRUCTURAL SLABS ON GRADE  - FROM BOTTOM OF SLAB 2"  - FROM TOP OF SLAB 1 1/2"  OTHER CONCRETE NOT EXPOSED TO WEATHER		- #5 BARS AND SMALLER	1 1/2"		
STRUCTURAL SLABS ON GRADE	INTERIOR COLUMNS AND BEAMS 1 1/2"				
- FROM BOTTOM OF SLAB 2" - FROM TOP OF SLAB 1 1/2" OTHER CONCRETE NOT EXPOSED TO WEATHER	INTERIOR WALL FACES AND RAISED SLABS 1 1/2"				
- FROM TOP OF SLAB 1 1/2"  OTHER CONCRETE NOT EXPOSED TO WEATHER	STRUCTURAL SLABS ON GRADE				
OTHER CONCRETE NOT EXPOSED TO WEATHER		- FROM BOTTOM OF SLAB	2"		
1"		- FROM TOP OF SLAB	1 1/2"		
		1"			

PROVIDE THE LARGEST COVER RE UIRED FOR ALL APPLICABLE CONDITIONS. WHERE #3 STIRRUPS OR TIES ARE USED, ENSURE THAT THE COVER FOR LONGITUDINAL BARS IS ADE □ UATE.

- 3. REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE". EACH REINFORCING BAR SHALL BE WIRED TO A CROSS BAR AT A MAXIMUM SPACING OF 24" OC. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING IN POSITIONS SHOWN ON THE PLANS.
- 4. SPLICES IN CONTINUOUS REINFORCEMENT AS USED IN WALLS, WALL FOOTINGS, ETC., SHALL HAVE A CLASS "B" LAP (1F6" MIN) AND THE SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5 EO" APART. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. BARS MAY BE WIRED TOGETHER AT SPLICES OR LAPS EXCEPT FOR TOP REINFORCING OF BEAMS AND SLABS OR WHERE SPECIFICALLY DETAILED TO BE SEPARATED. WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.
- 5. ALL DOWELS, ANCHOR BOLTS AND OTHER HARDWARE TO BE SET IN CONCRETE SHALL BE TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE. NO WET SETTING, STABBING, RODDING OR OTHER MOVEMENT OF EMBEDDED ITEMS SHALL BE PERFORMED DURING PLACEMENT OF CONCRETE.
- 6. BEND REINFORCING BARS COLD.
- 7. STEEL SHALL BE KEPT CLEAN AND FREE OF RUST.
- 8. DOWELS BETWEEN FOOTING AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE MAIN REINFORCING UNO.
- 9. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN PLACE INSPECTION IS MADE.
- 10. CHAIRS OR SPACERS FOR REINFORCING SHALL BE NON-FERROUS OR PLASTIC COATED WHEN RESTING ON EXPOSED SURFACES.

#### STRUCTURAL STEEL NOTES

- 1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS AND STANDARD OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), AS CONTAINED IN THE LATEST EDITION OF "AISC MANUAL OF STEEL CONSTRUCTION".
- 2. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADE UATELY BRACE THE STRUCTURE.

3.	PROVIDE THE FOLLOWING MATERIALS FOR STRUCTURAL STEEL UNO:

STRUCTURAL STEEL GRADES:			
A.	ALL WIDE FLANGE SECTIONS	ASTM A992	
B.	S□UARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE B (F <sub>□</sub> □46 KSI)	
C.	ROUND HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE B (F <sub>□</sub> □42 KSI)	
D.	PIPES	ASTM A53 TYPE E OR S, GRADE B, (F <sub>□</sub> □35 KSI)	
E.	PLATES, ANGLES, CHANNELS & TEES	ASTM A36	
F.	MACHINE BOLTS (MB)	ASTM A307	
G.	HIGH STRENGTH BOLTS (HSB)	ASTM A325 TYPE N	
Н.	WELDED HEADED STUDS	ASTM A108	
I.	THREADED RODS FOR ANCHOR BOLTS	ASTM F1554, GRADE 36	

- 4. EXCEPT AS OTHERWISE NOTED, ALL BOLTS SHALL BE HIGH STRENGTH BOLTS.
- 5. ALL CONNECTIONS NOT SHOWN SHALL CONFORM TO THE "AISC MANUAL OF STEEL CONSTRUCTION" AND SHALL BE SUBMITTED ON SHOP DRAWINGS FOR REVIEW BY SEOR PRIOR TO FABRICATION.
- ALL WELDED HEADED STUDS, THREADED STUDS, AND DEFORMED BARS SHALL BE NELSON, OR E□UIVALENT, AND WELDED (IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS BY CERTIFIED WELDERS) SO AS TO FULLY DEVELOP THE TENSILE CAPACITY OF THE CONNECTOR.
- 7. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF THE "AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". SLIP CRITICAL BOLTS (SC) SHALL BE USED FOR ALL "LATERAL FORCE RESISTING SYSTEM" (LFRS) MEMBER STEEL-TO-STEEL CONNECTIONS. TIGHTEN SLIP CRITICAL BOLTS USING ONE OF THE FOLLOWING: TWIST-OFF BOLTS, TENSION CONTROL CALIBRATED WRENCH OR DIRECT TENSION INDICATORS. HIGH STRENGTH BOLTS NOT IN THE LFRS MAY BE INSTALLED HAND TIGHT.
- 8. BOLTS WITH UPSET THREADS ARE NOT ALLOWED. USE THE APPROPRIATE NUT AND WASHER TYPE FOR THE SPECIFIED BOLT.
- 9. ALL STEEL FABRICATION SHALL BE PERFORMED BY A LICENSED FABRICATOR
- 10. ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL PERMANENTLY EXPOSED TO THE ELEMENTS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION UNLESS A WEATHER PROOF COATING IS SPECIFIED BY THE ARCHITECT UNO. STAINLESS AND WEATHERING STEELS ARE EXCEPTED WHERE SPECIFIED.
- 11. SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES, WELDED STUDS OR OTHER ITEMS NOT SHOWN IN THESE DRAWINGS. WHERE STEEL IS EMBEDDED IN CONCRETE OR MASONRY, PROVIDE HOLES AS RE UIRED FOR PASSAGE OF CONTINUOUS REINFORCING BARS WHERE INDICATED ON DRAWINGS. DO NOT CUT HOLES IN STRUCTURAL STEEL WITHOUT PRIOR APPROVAL OF SEOR.
- 12. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.
- 13. PLACE NON-SHRINK OR DRYPACK GROUT UNDER ALL BASE PLATES AND ALLOW TO CURE BEFORE APPLYING LOADS.

### STRUCTURAL CONCRETE NOTES:

- CONCRETE SHALL BE MIXED, PLACED AND CURED IN ACCORDANCE WITH ACI 318, LATEST EDITION, AND PROJECT SPECIFICATIONS.
- 2. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES, HOPPERS AND VERTICAL CHUTES OR TRUNKS SHALL BE USED. CHUTES OR TRUNKS SHALL BE OF VARIABLE LENGTHS SO THAT FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED SIX FEET. A SUFFICIENT NUMBER OF CHUTES OR TRUNKS SHALL BE USED TO ENSURE THE CONCRETE IS KEPT LEVEL AT ALL
- 3. CONSTRUCTION JOINTS SHALL BE CLEANED AND ROUGHENED BY REMOVING THE ENTIRE SURFACE TO EXPOSE CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX. SLUSH WITH A COAT OF NEAT CEMENT BEFORE PLACING CONCRETE. SEE PLANS AND DETAILS FOR LOCATION AND TYPE OF CONSTRUCTION JOINT. LOCATIONS OF ADDITIONAL CONSTRUCTION JOINTS NOT SHOWN ON THESE PLANS SHALL BE SUBMITTED FOR APPROVAL BY THE EOR PRIOR TO PLACING ANY CONCRETE.
- 4. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING DESIGN CRITERIA:

LOCATION	MIN 28-DAY COMP STRENGTH	CONC TYPE <sup>a</sup>	MAX AGGR. SIZE	MAX W/C RATIO	MAX SLUMP
FOUNDATION	4000 PSI	NWC	1"	0.45	4"
SURGE PIT	4000 PSI	NWC	1"	0.45	4"
SLAB ON GRADE	3000 PSI	NWC	1"	0.45	4"
ALL OTHER STRUCTURAL CONCRETE NOT NOTED ABOVE	3000 PSI	NWC	1"	0.45	6"
CONC WALL / RET. WALL	4000 PSI	NWC	1"	0.45	4"
a MAXIMUM DRY WEIGHT OF LIGHTWEIGHT CONCRETE SHALL BE 115 PCE					

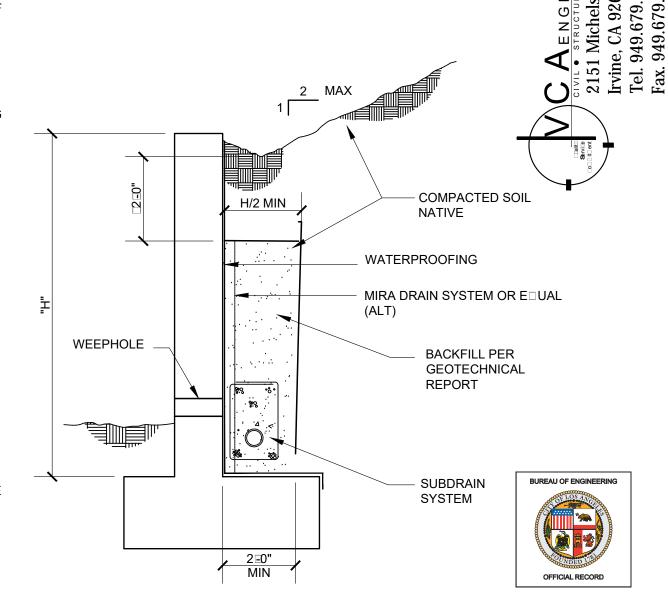
- a. MAXIMUM DRY WEIGHT OF LIGHTWEIGHT CONCRETE SHALL BE 115 PCF, UNLESS APPROVED BY SEOR. □ SLUMP MEASURED PRIOR TO SUPERPLASTICIZER, WHERE OCCURS.
- CONCRETE MIX DESIGN AND TESTING SHALL MEET THE RE□UIREMENTS OF THE BUILDING CODE, AND SPECIFICATIONS. ALL CONCRETE MIXES SHALL BE DESIGNED BY A RECOGNIZED TESTING LAB STAMPED AND SEALED BY A LICENSED CALIFORNIA CIVIL ENGINEER AND SUBMITTED TO THE SEOR FOR REVIEW PRIOR TO CONCRETE PLACEMENT. STRUCTURAL CONCRETE MIXES SHALL CONSIST OF 5 SACK MINIMUM UNO.
- 6. AGGREGATES IN NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C-33 (HARDROCK). AGGREGATES IN LIGHT WEIGHT CONCRETE SHALL CONFORM TO
- 7. COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND THE SEOR.
- 8. PORTLAND CEMENT SHALL BE TYPE II FOR ALL CONCRETE CONFORMING TO ASTM C150, LOW ALKALI. MILL TESTS WITH CERTIFICATES OF COMPLIANCE SHALL BE SUBMITTED.
- 9. FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 CLASS N OR F MAY BE USED AS A PARTIAL SUBSTITUTION FOR PORTLAND CEMENT UP TO A MAXIMUM OF 25□ TOTAL CEMENTITIOUS MATERIALS BY WEIGHT IF THE MIX DESIGN IS PROPORTIONED PER ACI318, SECTION 5.3.
- 10. CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C94.
- 11. LEAN CONCRETE, WHERE SPECIFICALLY INDICATED, SHALL CONTAIN 2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
- 12. DRYPACK OR NONSHRINK GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI, AND CONSIST OF MASTERFLOW 713, FIVE STAR GROUT, SIKA GROUT 212, EMBECO 636, OR APPROVED E□UAL. FOR THICK GROUT LAYERS FOLLOW MANUFACTURER'S GUIDELINES TO ATTAIN THE RE UIRED STRENGTH, WHICH MAY INCLUDE THE ADDITION OF PEA GRAVEL.
- 13. DO NOT USE ANY CONCRETE OR GROUT CONTAINING CHLORIDES. WATER USED IN MIX SHALL BE CLEAN AND POTABLE.
- 14. PRIOR TO ERECTING ANY ELEMENTS THAT LOAD THE FOUNDATION, CONCRETE MUST REACH AN UNCONFINED COMPRESSION STRENGTH OF 2000 PSI MINIMUM AS DETERMINED BY TESTING OR PREVIOUSLY DOCUMENTED DATA FOR THE MIX DESIGN USED UNDER SIMILAR CONDITIONS, AND MUST BE ALLOWED TO CURE FOR A MINIMUM OF 3 DAYS.
- 15. FOR INTERIOR SLABS-ON-GRADE AND ALL OTHER SLABS RECEIVING ADHERED FLOORING FINISHES (I.E., GLUED, ETC.), THE MAXIMUM W/C RATIO SHALL NOT EXCEED 0.45. CURING COMPOUNDS USED ON CONCRETE THAT IS TO RECIEVE FINISHES SHALL BE COMPATIBLE WITH TILE AND ADHESIVES OR GROUTS IN ACCORDANCE WITH MANUFACTURER'S DATA AND BE APPROVED BEFORE USE.
- 16. MAINTAIN CONCRETE ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT UNLESS OTHERWISE ACCEPTED BY SEOR.
- 17. SEE ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, WALL OFFSETS, CHAMFERS, KERFS, DRIPS AND FOR EXTENT OF DEPRESSIONS, RAMPS, ETC. PROVIDE SLEEVES FOR ALL PIPES THROUGH CONCRETE WALLS AND FOOTINGS WHERE SHOWN ON THESE DRAWINGS. CORING IS NOT PERMITTED WITHOUT PRIOR APPROVAL BY THE SEOR.
- 18. EXPOSED CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH 3/4" CHAMFER, UNO.

#### **WELDING NOTES:**

- 1. WELDING PROCEDURES, ELECTRODES AND WELDER □ UALIFICATIONS SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION", AMERICAN WELDING SOCIETY (AWS), D1.1 AND THE AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- 2. ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD UALIFICATION TESTS, AND SHALL BE CERTIFIED FOR THE WORK THEY ARE PERFORMING.
- 3. PROJECT WELDING SHALL BE PERFORMED ONLY IN ACCORDANCE WITH WELDING PROCEDURE SPECIFICATIONS (WPS) SUBMITTED BY THE CONTRACTOR AND REVIEWED BY THE SEOR AND PROJECT WELDING INSPECTOR. THE WPS SHALL BE IN ACCORDANCE WITH AWS D1.1-D1.4 CURRENT EDITION.
- 4. WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED PER AWS D1.1 USING E70XX ELECTRODES UNLESS OTHERWISED NOTED. 5. WELDING OF REINFORCING BARS SHALL BE PERFORMED PER AWS D1.4 USING
- E90XX ELECTRODES.

6. ALL FULL PENETRATION WELDS SHALL BE ULTRA-SONIC TESTED PER AWS D1.1

- 7. ALL GROOVE OR BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS. ALL EXPOSED BUTT WELDS SHALL BE GROUND SMOOTH.
- 8. ALL EXPOSED WELDS ON ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.
- 9. FIELD WELDS HAVE BEEN INDICATED WHERE THEY ARE EXPECTED TO OCCUR. THE CONTRACTOR SHALL DETERMINE THE ACTUAL FIELD WELDING NECESSARY TO COMPLETE THE PROJECT AND INCLUDE ALL ASSOCIATED COSTS WITHIN THE BASE BID.



# METAL DECK NOTES AND SCHEDULE (FILLED & UNFILLED):

- MATERIAL FOR METAL DECK SHALL HAVE A MIN YIELD STRENGTH OF 38 KSI AND CONFORM TO ASTM A653-SS GRADE 33 WITH GALVANIZED G60 COATING COMPLYING WITH ASTM A525.
- SEE TYPICAL DETAILS FOR REINFORCING OF DECK AROUND OPENINGS. CONTRACTOR SHALL COORDINATE SIZE AND LOCATIONS OF OPENINGS WITH THE VARIOUS TRADES. NO LOADS SHALL BE HUNG FROM DECK WITHOUT APPROVAL OF SEOR.
- FLOOR AND ROOF DECK IS DESIGNED FOR UNSHORED CONSTRUCTION, UNO. MAINTAIN 3 SPAN CONDITION WHEREVER POSSIBLE (2 SPAN MIN) EXCEPT AT STAIR LANDING AND WHERE NOTED OTHERWISE ON PLANS.

PROVIDE 2" MINIMUM BEARING AT ALL SUPPORTS. END LAPS OF METAL DECK SHALL BE

A MINIMUM OF 2" AND SHALL OCCUR ONLY OVER SUPPORTS. DECK SHALL BE LAID OUT SO THAT A LOW FLUTE FALLS ON EACH PARALLEL SUPPORT. INSTALL DECK BY WELDING. USE 3/4" DIAMETER PUDDLE WELDS OR WELDED STUDS TO SUPPORTS SPACED AS SHOWN ON CONSTRUCTION DRAWINGS. SPACING FOR TOP

SEAM, SIDE SEAM, BUTTON PUNCH, OR PUNCHLOK CONNECTION SHALL BE IN

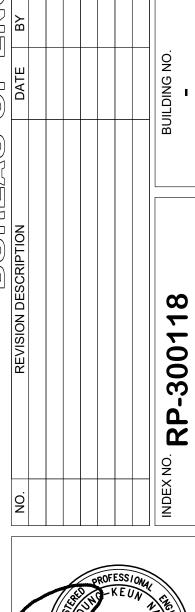
ACCORDANCE WITH DRAWINGS. SEE TYPICAL METAL DECK DETAILS. 6. SUBMIT SHOP DRAWINGS FOR METAL DECK TO THE SEOR FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW TYPE OF DECK, LAYOUT OF DECK, THE SIZE AND LOCATION OF ANY OPENINGS OF WIDTH GREATER THAN 1E0", AND

ATTACHMENT METHOD.

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- 7. ALTERNATES TO TYPE OF DECK AND FASTENING MAY BE USED WITH THE APPROVAL OF THE SEOR AND DSA. DECK PROPERTIES SHALL BE E UAL TO OR GREATER THAN THOSE SHOWN ON THE PLANS. ANY DECK OR METHOD OF FASTENING SHALL HAVE AN EVALUATION REPORT APPROVING THE DECK FOR THE APPLICATION.
- METAL DECK WITH CONCRETE FILL SHALL HAVE POSITIVE VENTING. DO NOT EMBED PIPES, SLEEVES, CONDUIT, ETC IN CONCRETE TOPPING UNO.





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