GENERAL NOTES

1. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING STARTING ANY WORK. THE ENGINEER (GET STRUCTURAL) SHALL BE NOTIFIED OF ANY AND ALL DISCREPANCIES.
2. DIMENSIONING SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS. TYPICAL DETAILS AND GENERAL NOTES ARE MINIMUM REQUIREMENTS TO BE USED WHEN CONDITIONS ARE NOT SHOWN OTHERWISE.
3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON PROJECT.
4. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE (CBC), AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
5. APPROVAL BY THE INSPECTOR DOES NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE PLANS AND/OR SPECIFICATIONS. ANY DESIGN WHICH FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE ENGINEER (GET STRUCTURAL) FOR INTERPRETATION OR CLARIFICATION. 6. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR PITS, TRENCHES, ROOF OPENINGS, DEPRESSIONS ETC. NOT SHOWN ON STRUCTURAL DRAWINGS.
7. VIBRATION EFFECTS OF MECHANICAL EQUIPMENT HAVE NOT BEEN CONSIDERED BY ENGINEER.
8. THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE ENGINEER (GET STRUCTURAL). THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE APPLICATION OF ALL SHEAR WALLS, ROOF AND FLOOR DIAPHRAGMS AND FINISH MATERIALS. HE/SHE SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE APPLICATION OF THE AFOREMENTIONED MATERIALS. STRUCTURAL OBSERVATION JOBSITE VISITS BY THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
9. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE ENGINEER (GET STRUCTURAL) AND THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
10. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
11. CONSTRUCTION DOCUMENTS IDENTIFIED AS "BID SET" ON ANY OR ALL SHEETS MAY BE SUBJECT TO REVIEW. THIS REVIEW MAY RESULT IN CHANGES WHICH MAY BE MADE TO THE PLANS PRIOR TO THE ISSUANCE OF THE FINAL CONSTRUCTION SET WHICH WILL CONTAIN NO "BID SET" DESIGNATIONS. CONSTRUCTION DOCUMENTS IDENTIFIED AS "BID SET" ARE NOT CONSTRUED AS BEING THE COMPLETED OR FINAL DRAWINGS AND THEY SHOULD NOT IN ANY WAY BE USED AS SUCH.
12. ALL GUARD AND HANDRAILS SHALL BE DESIGNED TO WITHSTAND A POINT LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION AND AT ANY POINT TO TOP RAIL. A 50 PLF LOAD IS REQUIRED AT 3-STORY AND MULTI-FAMILY PROJECTS. IF OCCUPANT LOAD IS LESS THAN 50, A 20 PLF LOAD MAY BE USED.
13. THESE PLANS ARE INTENDED SOLELY FOR THE USE OF THE OWNER FOR CONSTRUCTION AND ARE EXPRESSLY NOT INTENDED FOR USE IN MARKETING. EXTERIOR ELEVATIONS AND OTHER DETAILS ON THESE PLANS ARE ONLY A REPRESENTATION AND MAY VARY SIGNIFICANTLY FROM THE ACTUAL CONSTRUCTION.
14. SLAB-ON-GRADE REQUIREMENTS TO BE PER THE SOIL ENGINEERS RECOMMENDATIONS SOLELY, U.N.O. THE SLAB-ON-GRADE IS A NON-STRUCTURAL ITEM AND THEREFORE HAS NOT BEEN DESIGNED BY THE STRUCTURAL ENGINEER, UNLESS NOTED OTHERWISE.
15. IN THE EVENT OF CONFLICT BETWEEN THE ARCHITECTURAL GENERAL NOTES AND THE STRUCTURAL GENERAL NOTES (SHT SGN), THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

REINFORCING STEEL

1. ALL REINFORCING SHALL BE ASTM A-615 GRADE 40 FOR #4 BARS AND SMALLER. ALL REINFORCING SHALL BE ASTM A-615 GRADE 60 FOR #5 BARS AND LARGER. WELDED WIRE FABRIC TO BE ASTM A-185, LAP 1-1/2 SPACES, 9" MIN. FOR STRUCTURAL SLABS ALL REINFORCING #5 AND LARGER TO BE ASTM A-615 GRADE 60
2. ALL BARS SHALL BE DEFORMED AS PER ASTM A615 / A615M.
3. ALL BARS SHALL BE CLEAN OF LOOSE FLAKY RUST, GREASE OR OR OTHER MATERIALS LIKELY TO IMPAIR BOND.
4. ALL BENDS SHALL BE MADE COLD.
5. SPLICING OF #3-#6 BARS SHALL HAVE A MIN. LAPPING OF 30 DIA. OR 2'-0" MIN. IN ALL CONTINUOUS REINFORCEMENT OF FOOTINGS AND CONCRETE WALLS, EXCEPT AS NOTED ON PLANS. MASONRY REINFORCEMENT SHALL HAVE LAPPINGS OF 40 DIA. FOR GRADE 40 AND 48 DIA. FOR GRADE 60 OR 2'-0" MIN., U.N.O.
6. ALL REINFORCING BARS SHALL BE ACCURATELY AND SECURELY PLACED BEFORE POURING CONCRETE.
7. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AT LEAST EQUAL TO THE DIAMETER OF THE BARS. COVER SHALL BE AS FOLLOW:

	CONCRETE	MASONRY
A. POURED AGAINST EARTH	3"	2"
B. POURED AGAINST FORM BELOW GRADE	2"	2"
#6 AND LARGER	2"	2'
#5 AND SMALLER	1 ½"	1 ½"
C. FORMED SLABS	1"	1"
D. SLABS ON GRADE (FROM TOP OF SLAB)	1"	1"
E. COLUMNS AND BEAMS TO MAIN BARS	1 ½"	2"
F. WALLS		
EXPOSED TO WEATHER	1 ½"	1 ½"
NOT EXPOSED TO WEATHER,		
#11 AND SMALLER	¾"	¾"
#14 AND #18	1 ½"	1 ½"

FOUNDATION/SITEWORK

1. ALL SITE PREPARATION, EXCAVATION AND COMPACTION SHALL BE DONE UNDER THE SUPERVISION OF THE LICENSE CONTRACTOR AND THE SOIL ENGINEER (IF APPLICABLE)
2. SEPARATE PERMITS SHALL BE OBTAINED FOR ALL FENCES, PLANTERS AND WALLS, AS REQUIRED.
3. PROVIDE NON-EXPANSIVE FILL AS REQUIRED TO LEVEL PAD.
4. SURFACE WATER WILL DRAIN AWAY FROM BUILDING. DRAINAGE SHALL BE 2% (MIN.) FROM BUILDING TO SWALE LINE. SWALE SHALL DRAIN AT 1% (MIN.) FROM REAR OF BUILDING TO STREET.
5. THERE SHALL BE NO UTILITY TRENCH NEAR THE BUILDING FOUNDATION WHICH EXTEND DEEPER THAN A 45 DEGREE LINE PROJECTED DOWN AND AWAY FROM THE BOTTOM OUTSIDE CORNER OF ANY FOOTING.
6. SLAB SUBGRADE REQUIREMENTS ARE NOT WITHIN THE SCOPE OF WORK AND/OR LIABILITY OF ENGINEER OF RECORD (GET STRUCTURAL).
7. ALL HOLDOWN ANCHORS, POST BASES AND HOLDOWN BOLTS SHALL BE TIED INTO PLACE PRIOR TO FOUNDATION INSPECTION.
8. PLACE 20'-0" REBAR IN FOUNDATION AT SERVICE LOCATIONS. STUB UP REBAR ABOVE THE FLOOR BY ELECTRIC SERVICE METERS.
9. FOR THE LOCATION OF CONTROL JOINTS, REFER TO THE FOUNDATION PLAN. (ZIP STRIP OR EQUAL). MINIMUM OF 20'-0" O.C. EACH WAY IS RECOMMENDED.
10. DRIVEWAY PAVING SHALL BE 4" PORTLAND CEMENT CONCRETE (5 SACKS MIN.), U.N.O.
11. FOR POST-TENSION SLAB, REFER TO APPROVED PLANS PREPARED BY OTHERS (WHEN OCCURS).
12. MINIMUM SLAB REINFORCEMENT AND PAD REQUIREMENT SHALL CONFORM TO THE LOCAL AHJ REQUIREMENTS OR THE SOILS ENGINEER'S RECOMMENDATIONS (IF APPLICABLE)

CONCRETE

1. ALL CONCRETE SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA RESIDENTIAL CODE (CRC 2019)
2. CONCRETE SHALL CONFORM TO "EXPOSURE CLASS" REQUIREMENTS OF ACI 318-14 REFER TO SOILS REPORT FOR SOIL CONDITIONS.

REQUIREMENTS FOR CONCRETE BY EXPOSURE CLASS
(ACI 318-14, Table 19.3.2.1)

FREEZING/THAWING

EXPOSURE CLASS	MAX. W/C [1]	MIN. F'c (PSI)	ADDITIONAL REQUIREMENTS	
			AIR CONTENT	LIMITS ON CEMENT. MAT'L.
F0	N/A	2,500	N/A	N/A
F1	0.45	4,500	ACI 318-14 TABLE 19.3.3.1	N/A
F2	0.45	4,500	ACI 318-14 TABLE 19.3.3.1	N/A
F3	0.45	4,500	ACI 318-14 TABLE 19.3.3.1	ACI 318-14 TABLE 19.2.1.1

SULFATE

EXPOSURE CLASS	MAX. W/C [1]	MIN. F'c (PSI)	CEMENTITIOUS MATERIAL TYPE[2]			CALCIUM CHLORIDE
			ASTM C150	ASTM C595	ASTM C1157	
S0	N/A	2,500	---	---	---	---
S1	0.50	4,000	II[3]	IP(MS), IS(<70), (MS)	MS	---
S2	0.45	4,500	V[4]	IP(HS), IS(<70), (HS)	HS	NOT PERMITTED
S3	0.45	4,500	V+POZZOLAN or SLAG[5]	IP(HS)+POZ.orSLAG[5] IS(<70), (HS)+POZ.[5]	HS+POZZOLAN or SLAG[5]	NOT PERMITTED

LOW PERMEABILITY

EXPOSURE CLASS	MAX. W/C [1]	MIN. F'c (PSI)	ADDITIONAL REQUIREMENTS
P0	N/A	2,500	NONE
P1	0.50	4,000	NONE

CORROSION

EXPOSURE CLASS	MAX. W/C [1]	MIN. F'c (PSI)	MAX. CHLORIDE ION CONTENT % BY WT.[6]		RELATED PROVISIONS
			REINFORCED CONC.	PRESTRESSED CONC.	
C0	N/A	2,500	1.00	0.06	---
C1	N/A	2,500	0.30	0.06	---
C2	0.40	5,000	0.15	0.06	ACI 19.3.2.1 & 20.6.1.4.2

NOTES:
1. FOR LIGHT WEIGHT CONCRETE, SEE ACI 318-14, SECTION 19.2.4.2
2. ALTERNATIVE COMBINATIONS OF CEMENTITIOUS MATERIAL OF THOSE LISTED IN TABLE 19.3.2.1 SHALL BE PERMITTED WHEN TESTED FOR SULFATE RESISTANCE AND MEETING THE CRITERIA IN SECTION 19.3.1.1
3. FOR SEAWATER EXPOSURE, OTHER TYPES OF PORTLAND CEMENTS WITH TRICALCIUM ALUMINATE (C_3A) CONTENTS UP TO 10% ARE PERMITTED IF THE W/C DOES NOT EXCEED 0.40
4. OTHER AVAILABLE TYPES OF CEMENT SUCH AS TYPE III OR TYPE I ARE PERMITTED IN EXPOSURE CLASSES S1 or S2 IF C_3A CONTENTS ARE LESS THAN 8% or 5%, RESPECTIVELY
5. THE AMOUNT OF THE SPECIFIC SOURCE OF POZZOLAN or SLAG TO BE USED SHALL NOT BE LESS THAN THE AMOUNT DETERMINED BY SERVICE RECORD TO IMPROVE SULFATE RESISTANCE WHEN USED IN CONCRETE CONTAINING TYPE V CEMENT. ALT: THE AMOUNT OF THE SPECIFIC SOURCE OF THE POZZOLAN or SLAG TO BE USED SHALL NOT BE LESS THAN THE AMOUNT TESTED PER ASTM C1012 AND MEETING CRITERIA OF ACI 318-08, SECTION 19.3.1.1
6. WATER SOLUBLE CHLORIDE ION CONTENT THAT IS CONTRIBUTED FROM THE INGREDIENTS INCLUDING WATER, AGGREGATES, CEMENT AND ADMIXTURES SHALL BE DETERMINED PER ASTM C1218 BETWEEN 28 AND 42 DAYS.

3. ALL CEMENT SHALL CONFORM TO ASTM C-150, C-595 OR C-1157. USE CEMENT TYPE TYPE II
4. FINE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C-33 FOR STANDARD WEIGHT CONCRETE AND ASTM C-330 FOR LIGHTWEIGHT CONCRETE.
5. CONCRETE FOR SLAB-ON-GRADE SHALL HAVE A MAX. SLUMP OF 5" PER ASTM C-143 AND MAX. SLUMP OF 4" FOR FOOTINGS AND GRADE BEAMS, U.N.O. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED PER ASTM C-94.
6. DRYPACK SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT TO NOT MORE THAN THREE PARTS SAND.
7. ANCHOR BOLTS, HOLDOWN BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURED INTO PLACE AND INSPECTED PRIOR TO POURING CONCRETE.
8. CONCRETE SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 10-DAYS OR BY AN APPROVED CURING COMPOUND.
9. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR MISCELLANEOUS ITEMS TO BE CAST INTO CONCRETE AND FLOOR STEPS, DEPRESSIONS, PITS, CURBS, ETC.
10. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPANSION JOINTS, A/C PADS, SCORING, ETC. FOR CONCRETE WALKS AND SLABS.
11. ALL STRUCTURAL CONCRETE f'_c = 2500 PSI
ALL SLAB-ON-GRADE f'_c = 2500 PSI
ALL CONTINUOUS FOOTINGS AND PADS f'_c = 2500 PSI
ALL CONCRETE SHALL REACH MINIMUM COMPRESSIVE STRENGTH 28 - DAYS (MIN. W/C RATIO=0.5).

SPECIAL INSPECTION

1. CONTINUOUS AND PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE WORK AS DESCRIBED IN CBC 2019 CHAPTER 17, SEE INSPECTION SCHEDULE BELOW ONLY CHECKED ITEMS ARE REQUIRED
2. APPROVAL BY THE INSPECTOR DOES NOT MEAN APPROVAL OF FAILURE TO COMPLY WITH THE PLANS OR SPECIFICATIONS. ANY DETAIL THAT FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE STRUCTURAL ENGINEER FOR INTERPRETATION OR CLARIFICATION
3. FOR VERIFICATION AND INSPECTION OF SOILS SEE SOILS REPORT
4. CONTINUOUS SPECIAL INSPECTION PER AWS D1.1 IS REQUIRED FOR ALL STRUCTURAL STEEL WELDING, EXCEPT FOR SINGLE PASS FILLET WELDS NOT EXCEEDING 5/16" IN SIZE WELDING INSPECTORS SHALL BE AWS Q.C.-1 CERTIFIED
5. STRUCTURAL WOOD. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS, AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS OF THE SEISMIC FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES, SHEAR PANELS, AND HOLDOWNS EXCEPTION: SPECIAL INSPECTION IS NOT REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING AND OTHER FASTENING TO OTHER COMPONENTS OF THE SEISMIC-FORCE-RESISTING SYSTEM, WHERE THE FASTENER SPACING OF THE SHEATHING IS MORE THAN 4 INCHES ON CENTER (O.C.) INSPECTIONS SHALL BE PERFORMED BEFORE COVERING
6. CONTRACTORS RESPONSIBLE FOR CONSTRUCTION OF A WIND OR SEISMIC FORCE RESISTING SYSTEM/COMPONENT LISTED IN THIS STATEMENT OF SPECIAL INSPECTION SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE LADBS INSPECTORS AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH A SYSTEM OR COMPONENT PER SEC 1704.4.
7. WHERE FABRICATION OF MEMBERS AND ASSEMBLIES IS PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTION OF THE FABRICATED ITEMS SHALL BE REQUIRED BY THIS SECTION, UNLESS THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED SPECIAL INSPECTION AGENCY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE OF VERIFYING APPROVAL OF FABRICATOR.

INSPECTION SCHEDULE

TYPE OF WORK	CODE REFERENCE	REMARKS	
CONCRETE WORK	CBC TABLE 1705.3		☐
SHOTCRETE WORK	CBC TABLE 1705.3		☐
REINFORCING STEEL	CBC TBL 1705.2.2 1705.3		☐
POST INSTALLED ANCHORS	CBC TABLE 1705.3	SEE ALSO ICC APPROVAL	☐
STRUCTURAL STEEL	CBC 1705.2		☐
STRUCTURAL STEEL WELDING	CBC 1705.2		☐
HIGH STRENGTH BOLTING	CBC 1705.2		☐
MASONRY WORK	CBC 1705.4		☐
HIGH LOAD DIAPHRAGMS	CBC 1705.5.1		☐
STRUCTURAL WOOD	CBC 1705.10.1 & 1705.11.2	SEE NOTE 5 ABOVE	☐
COLD FORMED STEEL	CBC 1705.10.2 & 1705.1.3		☐
DRIVEN DEEP FOUND. ELEMENT	CBC 1705.7		☐
CAST IN PLACE DEEP FOUND.	CBC TABLE 1705.8		☐
SOIL CONDITION	CBC TABLE 1705.6	SEE SOILS REPORT FOR COMPLIANCE	☐

STRUCTURAL STEEL NOTES

1. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE TN ACCORDANCE WITH THE LATEST EDITION OF AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, AND THE LATEST EDITION OF AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS. WHERE THE STRUCTURAL STEEL IS EXPOSED, FABRICATION AND ERECTION SHALL ALSO BE IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL.
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM DESIGNATION AS INDICATED BELOW (U.N.O.):

A. ALL WIDE FLANGES SHAPES	A992, Gr. 50
B. STEEL ANGLES	A36
C. ALL PLATES	A572, Gr. 50
D. HSS (RECTANGULAR AND SQUARED)	A500, Gr. B
E. HSS (ROUND)	A500, Gr. B
F. PIPE COLUMNS	A53, Gr. B
G. CHANNELS (C AND MC SECTION)	A36
H. ALL OTHER STRUCTURAL SECTION	A572, Gr. 50
I. BOLTS	A325x
J. ANCHOR BOLTS AT LOCATIONS OTHER THAN MOMENT FRAME COLUMN BASE PLATE	F1554, Gr. 55
K. ANCHOR BOLTS AT MOMENT FRAME COLUMN BASE PLATE	F1554, Gr. 105
L. THREADED RODS AND HANGER RODS	A36
M. NUTS FOR BOLTS AND MACHINE BOLTS	A563
N. HARDENED WASHERS	F436
O. UNHARDENED WASHERS	F844
P. PLAIN WASHERS	ANSI B18.22.1
Q. BEVELED WASHERS	ANSI B18.23.1

3. ALL STEEL SHALL BE PROVIDED BY A CITY OF LOS ANGELS LICENSE FABRICATOR.
4. WHEN FABRICATING BEAMS PLACE NATURAL CAMBER UP.
5. SPLICE MEMBERS ONLY WHERE INDICATED.
6. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. HIGH STRENGTH BOLTS SHALL BE BEARING TYPE WITH THREADS EXCLUDED FROM THE FROM THE SHEAR PLANES (LE. A325-X) UNLESS NOTED OTHERWISE.
7. ALL BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO BOLTS UNLESS SHOWN OTHERWISE. MINIMUM SIZE OF BOLTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE 3/4" DLA. EXCEPT WHEN OTHERWISE SHOWN OR NOTED.
8. ALL HOLES SHALL BE STANDARD DIAMETER U.N.O.
9. ALL FLANGE STIFFENER PLATES SHALL BE ORIENTED SO THAT ROLLING DIRECTION OF PLATE IS PARALLEL WITH DIRECTION OF PRINCIPAL STRESS.
10. AFTER FABRICATION, ALL STEEL SHALL BE CLEANED FREE OF RUST, LOOSE MILL SCALE AND OIL.
11. PROVIDE FILLS AT SPLICES OF PARTS HAVING MORE THAN 1/8" DLFFERENCE IN THICKNESS.
12. PROVIDE BEVELED WASHERS ON ALL CONNECTIONS WHERE SLOPE SURFACE EXCEEDS 1:20.
13. HEADED ANCHOR STUDS AND THREADED STUDS SHALL BE NELSON GRANULAR FLUX-F1LLED, AND SHALL BE MADE FROM COLD F1NLSHED LOW CARBON STEEL, CONFORMING TO A-106, GRADES 1015 - 1020 W1TH A M1N1MUM TENS1LE STRENGTH OF 60,000 PSI (COLA RR 2729). STUD WELDING 1NSPECT1ON AND TESTING SHALL CONFORM TO AWS D1.1.
14. DEFORMED BAR ANCHOR STUDS SHALL BE NELSON 02L GRANULAR FLUX-F1LLED REBAR STUDS OR APPROVED EQUAL, AND SHALL BE MADE OF LOW CARBON COLD ROLLED STEEL W1TH A M1N1MUM TENSILE STRENGTH OF 80,000 PS1. STUD WELDING 1NSPECT1oN AND TESTING SHALL CONFORM TO AWS D1.1.
15. HOT DTP GALVANIZE 1N ACCORDANCE W1TH ASTM A123 AND ASTM A153 STRUCTURAL STEEL AND FASTENERS THAT ARE PERMANENTLY EXPOSED TO THE WEATHER. REPAIR GALVANIZING AFTER WELDING 1N ACCORDANCE W1TH ASTM A780.
16. THE FULL DESIGN AND LOAD CARRYING CAPACITY OF THE STEELWORK SHALL NOT BE 1MPA1RED DUE TO FABR1CAT1ON, SH1PMENT, OR ERECTION PROCEDURES, THROUGHOUT THE COMPLETE PROCESS. THE STAB1L1TY OF ALL 1NDLWDUAL MEMBERS AND ASSEMBLES SHALL BE MA1NTA1NED.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIALS AND WELD SHRINKAGE.
18. ALL ADDITIONAL STEEL REQUIRED FOR ERECTION PURPOSES SHALL BE PROVIDED AT NO ADDITIONAL COST AND SHALL BE REMOVED UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE 1N WR1T1NG.

WELDING NOTES

1. ALL WELDING SHALL BE IN STRICT CONFORMANCE WITH THE LATEST EDITION OF AWS D1.1 AND THE 2013 CALIFORNIA BUILDING CODE.
2. ALL WELDING ELECTRODES (FILLER METAL) SHALL BE E7XXX (70 KSI), U.N.O., AND SHALL BE LOW HYDROGEN TYPES. FIELD WELDING OF FULL AND PARTIAL PENETRATION WELDS OF THE STEEL MOMENT FRAME CONNECTIONS BETWEEN MOMENT FRAME BEAMS AND MOMENT FRAME COLUMNS SHALL BE BY SHIELDED METAL ARC PROCESS USING LOW HYDROGEN ELECTRODES
3. ALL WELDS SHALL HAVE A FILLER METAL WITH CHARPY V-NOTCH TOUGHNESS OF 20 FT/LBS AVERAGE AT -20 DEGREES FAHRENHEIT AND 40 FT/LBS @ 70 DEGREES FAHRENHEIT. CERTIFY CONFORMANCE TO CHARPY V-NOTCH TOUGHNESS REQUIREMENTS WITH TESTS BY AN INDEPENDENT TESTING LABORATORY.
4. LENGTHS OF WELDS ARE EFFECTIVE LENGTHS AS SPECIFIED IN THE APPLICABLE CODE. WHERE LENGTH OF WELD IS NOT SHOWN IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE FULL PENETRATION, UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL PROVIDE FIELD WELDING AS REQUIRED FOR CONSTRUCTION. WHERE FIELD WELDING IS NOTED, THE DESIGNATION IS GIVEN AS A SUGGESTED CONSTRUCTION PROCEDURE ONLY.
6. ALL SHOP WELDS SHALL BE PERFORMED BY A LOS ANGELES CITY LICENSED FABRICATOR.
7. ALL WELDERS SHALL BE QUALIFIED FOR THE WORK THEY WILL BE DOING & SHALL HAVE CURRENT CERTIFICATIONS BY AWS & THE CITY OF LOS ANGELES.
8. FACES OF FILLET WELDS EXPOSED TO VIEW SHALL HAVE AS-WELDED SURFACES THAT ARE REASONABLY SMOOTH AND UNIFORM. NO FINISHING OR GRINDING SHALL BE REQUIRED, EXCEPT WHERE CLEARANCES OR FIT OF OTHER ITEMS MAY 80 NECESSITATE.
9. ALL PARTIAL AND FULL PENETRATION WELDS WHICH ARE EXPOSED TO VIEW SHALL BE GROUND SMOOTH AND FLUSH WITH FINISH SURFACE OF STEEL. HOLES SHALL BE FILLED WITH WELD METAL OR BODY SOLDER AND SMOOTHED BY GRINDING OR FILING.
10. CLEAN GROOVE PREPARATION THERMAL CUTS BY GRINDING.
11. WELDS SHALL BE TERMINATED AT THE END OF A JOINT IN A MANNER THAT WILL ENSURE SOUND WELDS. WHENEVER NECESSARY THIS SHALL BE DONE BY USE OF EXTENSION BARS AND RUN OFF TABS.
12. ALL WELDED JOINTS SHALL BE PRE-QUALIFIED PER THE LATEST EDITION OF AWS D1.1. NON PRE- QUALIFIED WELDED JOINTS SHALL BE QUALIFIED BY TEST & PROCEDURE QUALIFICATION TEST RECORD INCLUDED PER THE LATEST EDITION OF AWS 01.1.
13. THE CONTRACTOR SHALL SUBMIT ALL WELDING PROCEDURE SPECIFICATIONS (WPS) TO BE USED ON THE PROJECT PER THE LATEST EDITION OF AWS D1.1. THE WPS SHALL INCLUDE ALL MANUFACTURER'S DATA SHEETS FOR ALL WELDING MATERIALS TO BE USED. THE DATA SHEETS SHALL DESCRIBE THE PRODUCTS, LIMITATIONS OF USE, RECOMMENDED WELDING PARAMETERS, AND STORAGE AND EXPOSURE REQUIREMENTS.
14. ELECTRODES SHALL BE RECEIVED AND STORED IN THE ORIGINAL, UNDAMAGED MANUFACTURER PACKAGING, UNTIL READY FOR USE. WHEN WELDING IS TO BE SUSPENDED FOR MORE THAN 8 HOURS, ELECTRODES SHALL BE REMOVED FROM THE MACHINES AND STORED IN AN ELECTRODE WIRE OVEN MAINTAINED AT A TEMPERATURE BETWEEN 250 DEGREES AND 550 DEGREES OR AS RECOMMENDED BY THE MANUFACTURER. ELECTRODES NOT CONSUMED WITHIN 24 HOURS OF ACCUMULATED EXPOSURE OUTSIDE CLOSED OR HEATED STORAGE SHALL NOT BE USED.
15. ALL BOTTOM FLANGE BACKING BARS SHALL BE REMOVED. FOLLOWING REMOVAL OF BACKING, THE ROOT PASS SHALL BE BACKGOUGED To SOUND WELD METAL AND BACKWELDED UNTIL FLUSH OR WITH SLIGHT REINFORCEMENT. THE SURFACE SHALL BE GROUND SMOOTH TO A SURFACE ROUGHNESS NOT TO EXCEED 500 MICROINCHES.

SCREW FASTENERS

ALL SCREWS 3/4" MIN. LENGTH U.N.O

ALL STEEL SCREWS SHALL BE IN ACCORDANCE WITH AISI-GENERAL AND AISI-NAS. Fy = 50 ksi AND Ft = 70 ksi FOR ALL SCREWS.

1. MINIMUM SPACING OF SCREWS SHALL N0T BE LESS THAN 3 TIMES THE NOMINAL DIAMETER. MINIMUM EDGE DISTANCE FOR SCREWS SHALL NOT BE LESS THAN 1.5 TIMES THE NOMINAL SCREW DIAMETER.

2. THE HEAD OF THE SCREW OR WASHER SHALL HAVE A DIAMETER, DW, OF NOT LESS THAN 5/16" WASHERS SHALL BE AT LEAST 0.05" THICK.

SCREW NUMBER DESIGNATION	8	10	(12-14)	14
NOMINAL DIAMETER	0.164"	0.190"	0.216"	0.250"

COLD FORMED STRUCTURAL STEEL FRAMING

GENERAL:
ALL COLD FORMED STRUCTURAL STEEL FRAMING AND COMPONENTS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF AISI'S "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS".

FRAMING:
ALL WELDING TO BE PERFORMED BY WELDERS HOLDING A VALID CERTIFICATE AND HAVING CURRENT EXPERIENCE IN LIGHT GAUGE STEEL. CERTIFICATES SHALL BE ISSUED BY AN ACCEPTED TESTING AGENCY. DO NOT NOTCH FLANGES OF MEMBERS WITHOUT EXPRESSED APPROVAL OF THE ENGINEER OF RECORD. ALL WELDING TO BE PERFORMED IN AN APPROVED FABRICATOR SHOP.

COLD FORMED STRUCTURAL STEEL MEMBERS SHALL HAVE A MINIMUM YIELD STRENGTH OF Fy = 55,OOO PSI. COLD FORM STRUCTURAL STEEL SHALL BE GALVANIZED PER ASTM A653 WITH A MINIMUM COATING DESIGNATION OF G9O THE GRADE AND THE ASTM SPECIFICATION NUMBER OR OTHER SPECIFICATION DESIGNATION SHALL BE INDICATED BY PAINTING, DECAL, TAGGING OR OTHER SUITABLE MEANS ON EACH BUNDLE OF FABRICATED ELEMENTS. IT IS ACCEPTABLE TO USE THE Fy SHOWN ON THE MILL CERTIFICATION IN LIEU OF THE "ORDERED" Fy.

THE STEEL PURLINS DO NOT HAVE TO BEAR DIRECTLY ON THE STEEL BEAMS. IT IS ACCEPTABLE AND COMMON FOR THE PURLINS TO NEED TO BE RAISED A LITTLE (1/2" MAXIMUM) TO ASSIST IN LEVELING AND 'TUNING' THE STRUCTURE. THE LOAD BETWEEN THE PURLIN AND THE BEAM IS TRANSFERRED ENTIRELY THROUGH THE SCREWS CONNECTING THE PURLIN TO THE PURLIN CLIP. THE PURLIN DOES NOT NEED TO BEAR ON THE BEAM.

MILS	GAGE NO.	MIN DELIVERED THICKNESS (IN)	DESIGN THICKNESS (IN)
12	30	0.0120	0.0126
14	29	0.0132	0.0139
16	26	0.0174	0.0183
33	20	0.0336	0.0354
43	18	0.0447	0.0470
54	16	0.0561	0.0590
68	14	0.0713	0.0750
97	12	0.0998	0.1050
118	10	0.1283	0.1350
150	9	0.1430	0.1500

SHEET INDEX:

DESIGN LOADS

SEISMIC DESIGN DATA	
IMPORTANCE FACTOR	1.0
SITE CLASS	D
S_S	0.561
S_1	0.246
S_{DS}	0.505
S_{D1}	0.346
SDC	D
LATERAL FORCE RESISTING SYSTEM	G.2
BASE SHEAR	
C_S	0.404
R	1.25
Ω_0	1.25
PROCEDURE USED	ELF

ROOF
DL = 3 PSF
SL = 0 PSF

WIND DESIGN	
PROCEDURE USED	MWFRS
BASIC WIND SPEED	93 MPH
RISK CATEGORY	II
WIND EXPOSURE	C

SOIL
1500 PSF PER CBC 2019

YOUR SOLAR PLANS
3000 E. BIRCH STREET
SUITE 201
BREA, CA 92821
TEL: (714) 332-2741
info@GetStructural.com

REVISIONS

NO:	DATE	REVISIONS

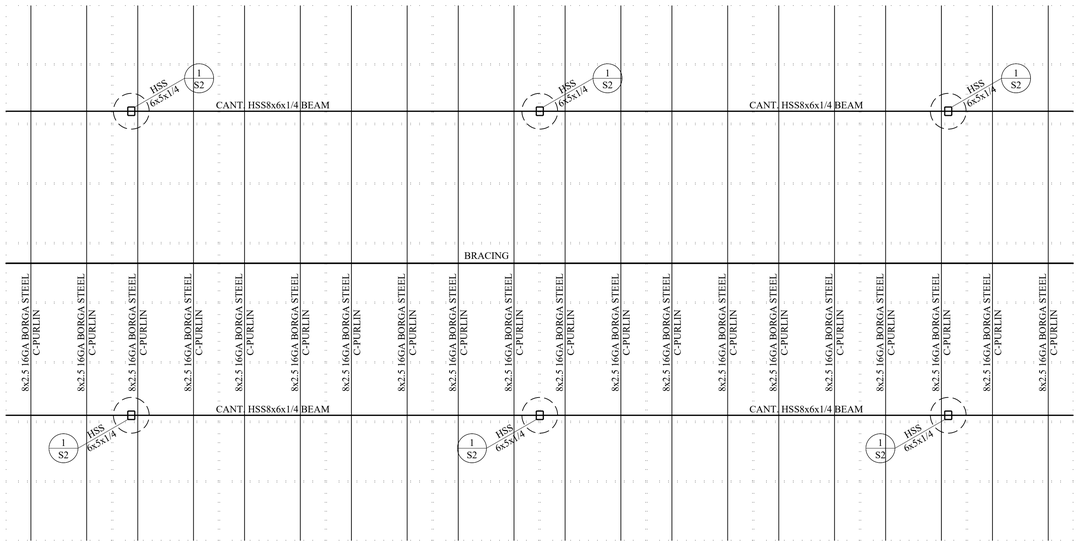
LOS HERMANOS
10050 ROSEDALE HWY
BAKERSFIELD, CA 93312

STAMP

DATE: 9/28/21
JOB:
SHEET DESCRIPTION
STRUCTURAL NOTES

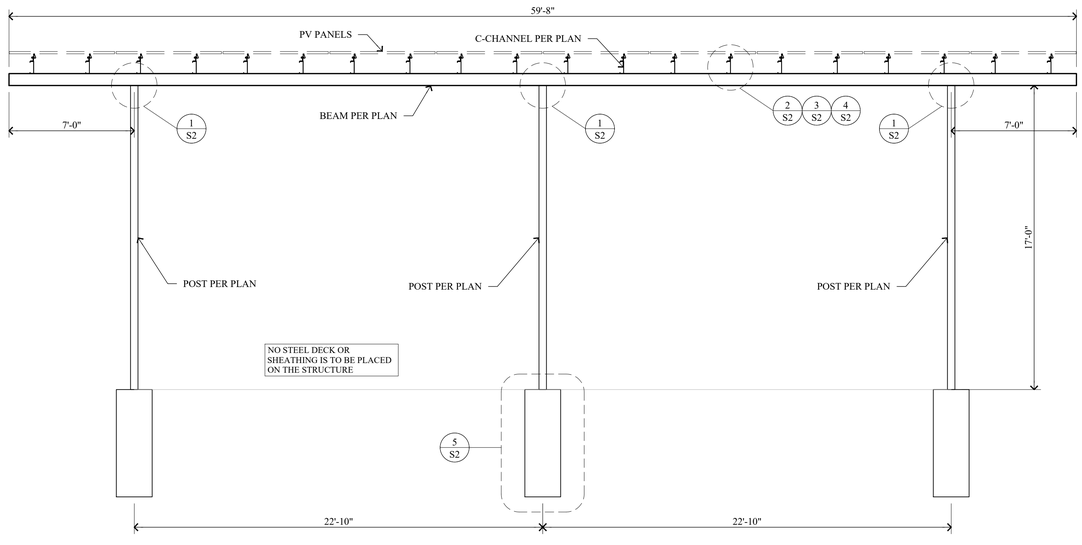
SHEET
S0

PLOT BY: Struct2



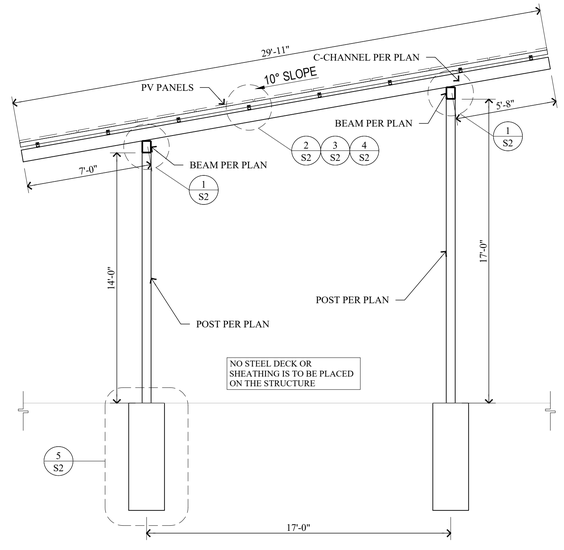
1 PV CARPORT PLAN VIEW

SCALE: N.T.S.



2 PV CARPORT FRONT ELEVATION

SCALE: N.T.S.



3 PV CARPORT SIDE ELEVATION

SCALE: N.T.S.

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REGISTERED PROFESSIONAL ENGINEER
PHONG TRUONG
NO. C70784
EXP. 06/30/2023
CIVIL
STATE OF CALIFORNIA

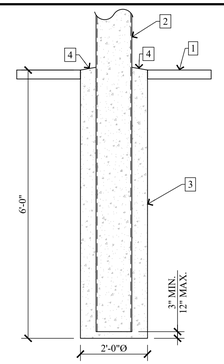
DATE: 9/28/21

JOB:

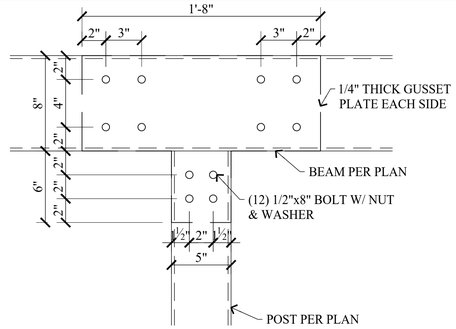
SHEET DESCRIPTION
SOLAR PATIO LAYOUT & ELEVATION

SHEET
S1

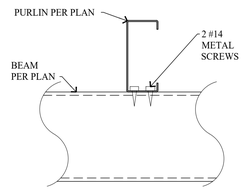
1. [E] HARDSCAPE
2. STEEL COL. PER PLAN
3. CONCRETE PIER
4. 2% SLOPE



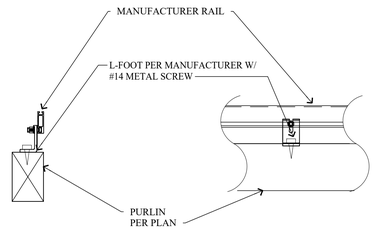
5 POLE FOOTING



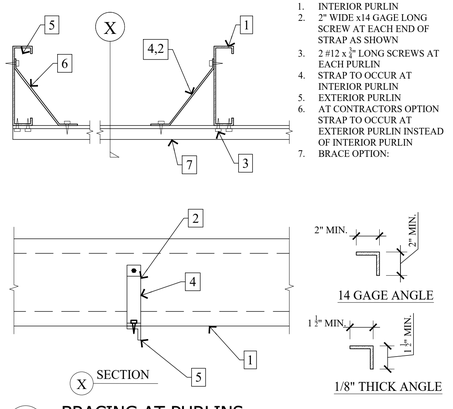
1 BEAM TO POST CONNECTION



2 PURLIN TO BEAM



3 SOLAR ATTACHMENT DETAIL



1. INTERIOR PURLIN
2. 2" WIDE x14 GAGE LONG SCREW AT EACH END OF STRAP AS SHOWN
3. 2 #12 x ¾" LONG SCREWS AT EACH PURLIN
4. STRAP TO OCCUR AT INTERIOR PURLIN
5. EXTERIOR PURLIN
6. AT CONTRACTORS OPTION STRAP TO OCCUR AT EXTERIOR PURLIN INSTEAD OF INTERIOR PURLIN
7. BRACE OPTION:

4 BRACING AT PURLINS

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SHEET DESCRIPTION
DETAILS

SHEET
S2