SHEET INDEX

GENERAL

TS	TITLE SHEET
TS1-0	GENERAL NOTES, LEGEND & ABBREVIATIONS
TS1-1	FIRE NOTES
TS1-2	MEP NOTES
TS2-0	ACCESSIBILITY NOTES
TS2-1	ACCESSIBILITY NOTES & DETAILS
TS2-2	ACCESSIBILITY DETAILS
TS3-0	EGRESS DIAGRAMS
TS3-1	EGRESS DIAGRAMS

ARCHITECTURAL PLANS

A1-0	SITE PLAN/FLOOR PLAN LEVEL ONE
A2-0	FLOOR PLAN LEVEL ZERO (BASEMENT)
A2-1	FLOOR PLAN LEVEL TWO
A2-2	FLOOR PLAN LEVEL THREE
A2-3	ROOF PLAN
A3-0	BUILDING SECTION
A4-0	EXTERIOR ELEVATIONS
A4-1	EXTERIOR ELEVATIONS
A5-0	ENLARGED UNIT PLANS
A5-1	ENLARGED UNIT PLANS
A5-2	ENLARGED UNIT PLANS
A5-3	ENLARGED STAIR PLANS
A6-0	ENLARGED KITCHEN ELEVATIONS
A6-1	ENLARGED BATHROOM ELEVATIONS
A6-2	ENLARGED BATHROOM ELEVATIONS
A7-0	WINDOW/DOOR SCHEDULE
A8-1	RATED ASSEMBLIES
A8-2	RATED ASSEMBLIES
A8-3	FIRE STOPPING
A8-4	WALL DETAILS
A8-6	FLASHING DETAILS
A8-7	DOOR DETAILS
A8-8	WINDOW DETAILS
A8-9	STAIR AND GUARDRAIL DETAILS
A8-10	MISCELLANEOUS DETAILS

STRUCTURAL PLANS

S1-0	FOUNDATION FRAMING PLAN NORTH
S1-1	FOUNDATION FRAMING PLAN SOUTH
S2-0	GROUND FLOOR FRAMING PLAN NORTH
S2-1	GROUND FLOOR FRAMING PLAN SOUTH
S3-0	SECOND FLOOR FRAMING PLAN NORTH
S3-1	SECOND FLOOR FRAMING PLAN SOUTH
S4-0	THIRD FLOOR FRAMING PLAN NORTH
S4-1	THIRD FLOOR FRAMING PLAN SOUTH
S5-0	ROOF FRAMING PLAN NORTH
S5-1	ROOF FRAMING PLAN SOUTH

LEED/T24/ENERGY

T24-MM	MANDATORY MEASURES
T24-1	RESIDENTIAL
T24-2	RESIDENTIAL
CG-1	MANDATORY MEASURES
CG-2	MANDATORY MEASURES
CG-3	MANDATORY MEASURES
CG-4	MANDATORY MEASURES
CG-5	COMMISSIONING DOCUMENTS
CG-6	COMMISSIONING DOCUMENTS
CG-7	COMMISSIONING DOCUMENTS
CG-8	COMMISSIONING DOCUMENTS

MECHANICAL PLANS

M1-0	SCHEDULES & NOTES
M1-1	SCHEDULES & NOTES
M2-0	FLOOR PLAN LEVEL 0 (BASEMENT)
M3-1	GROUND LEVEL PLAN
M3-2	FLOOR PLAN LEVEL 2
M3-3	FLOOR PLAN LEVEL 3
M3-4	ROOF PLAN

ELECTRICAL PLANS

E0-1	LEGEND
E1-0	NOTES & ABBREVIATIONS
E1-1	LIGHTING FIXTURE SCHEDULE
E1-2	DETAILS
E1-3	DIAGRAMS
E2-0	SITE PLAN
E3-0	LEVEL 1 PLAN
E3-1	LEVEL 0 PLAN
E3-2	LEVEL 2 PLAN
E3-3	LEVEL 3 PLAN
E4-0	ENLARGED ELECTRICAL PLANS
E4-1	ENLARGED ELECTRICAL PLANS
E5-0	ENLARGED UNIT PLANS
E5-1	ENLARGED UNIT PLANS
E5-2	ENLARGED UNIT PLANS
E5-3	ENLARGED UNIT PLANS
E5-4	ENLARGED UNIT PLANS
E5-5	ENLARGED UNIT PLANS
E5-6	ENLARGED UNIT PLANS
E5-7	ENLARGED UNIT PLANS
E5-8	ENLARGED UNIT PLANS
E5-9	ENLARGED UNIT PLANS
E5-10	ENLARGED UNIT PLANS
E5-11	ENLARGED UNIT PLANS
E5-12	ENLARGED UNIT PLANS
E6-0	ELECTRICAL/TELEPHONE/CATV RISER DIAGRAMS
E7-0	POWER SINGLE LINE DIAGRAM
E8-0	LOAD SUMMARY
E10-0	ELECTRICAL SPECIFICATIONS

PLUMBING PLANS

P1-0	NOTES
P1-1	NOTES
P1-2	SCHEDULES
P2-0	SCHEDULES
P3-0	FLOOR PLAN LEVEL 0 (BASEMENT)
P3-1A	GROUND LEVEL PLAN DWV
P3-1B	GROUND LEVEL PLAN WATER & GAS
P3-2	FLOOR PLAN LEVEL 2
P3-3	FLOOR PLAN LEVEL 3
P3-4	ROOF PLAN
P4-0	PLUMBING ENLARGED PLANS
P4-1	PLUMBING ENLARGED PLANS

CIVIL GRADING PLANS

SWGR-1	GRADING PLANS
SWGR-2	GRADING PLANS
SWGR-3	GRADING PLANS
SWGR-4	GRADING PLANS
SWGR-5	GRADING PLANS

LANDSCAPE PLANS (FOR REFERENCE ONLY)

LT-1	LANDSCAPE TITLE SHEET
LT-2	LANDSCAPE GENERAL NOTES
LC-1	LANDSCAPE CNSTRUCTION PLAN
LC-2	LANDSCAPE CONSTRUCTION DETAILS
LI-1	IRRIGATION PLAN
LI-2	IRRIGATION DETAILS
LI-3	IRRIGATION DETAILS
LI-4	IRRIGATION NOTES & CALCULATIONS
LI-5	IRRIGATION CALCULATIONS
LP-1	TREE REMOVAL PLAN
LP-2	PLANTING PLAN
LP-3	PLANTING DETAILS

FIRE NOTES

1. THE CALIFORNIA FIRE CODE REQUIRES A MINIMUM FIRE FLOW OF 1,500 GALLONS PER MINUTE (GPM) FOR TWO HOURS, WITH 20 PSI RESIDUAL PRESSURE, BASED ON THE BUILDING CONSTRUCTUION TYPE, TOTAL SQUARE FOOTAGE AND ALLOWED FIRE FLOW REDUCTION, SINCE THE BUILDING WILL HAVE FIRE SPRINKLERS. THE WATER DISTRICT MUST PROVIDE THE FIRE FLOW OF THE NEAREST FIRE HYDRANT, LOCATED APPROXIMATELY 100 FEET SOUTH ON THE WEST SIDE OF THE STREET.

2. AN AUTOMATIC FIRE SPRINKLER SYSTEM COMPRISED OF COMMERCIAL SPRINKLER SYSTEM (STEEL PIPE) FOR COMMERCIAL SPACE AND RESIDENTIAL FIRE SPRINKLERS SYSTEM (PLASTIC PIPE) FOR RESIDENTIAL AREAS WILL BE REQUIRED. COVERED WALKWAYS AND TUCK UNDER PARKING SHALL HAVE FIRE SPRINKLERS. A DCDA-BACKFLOW ASSEMBLY VALVE LOCATED ABOVE GRADE WILL BE REQUIRED.

3. A STANDPIPE SYSTEM IS REQUIRED FOR THE PARKING STRUCTURE, STAIRWELL(S) AND ROOFTOP AND MUST BE COMBINED WITH THE AUTOMATIC SPRINKLER SYSTEM THROUGH PIPING AND CONNECTION OF THE FIRE DEPARTMENT CONNECTION (FDC) WHICH MAY BE ATTACHED TO THE DCDA-BACKFLOW VALVE ASSEMBLY; INSTALLED IN AN ACCESSIBLE LOCTION NEAR THE SIDEWALK.

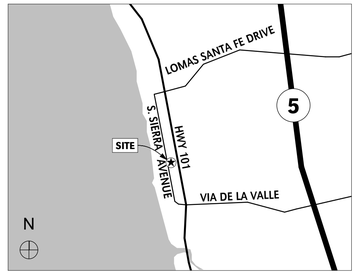
4. A FIRE ALARM SYSTEM (INCULDING HORNS) WILL BE REQUIRED FOR ALL RESIDENTIAL LIVING UNITS.

5. THE PROJECT SHOULD HAVE TWO GATES, ONE AT EACH END WITH KNOX BOXES AND ACCESS KEYS TO FACILITATE FIRE DEPARTMENT ACCESS FOR FIRE FIGHTING PURPOSES.

6. PARKING STRUCTURE VENTILATION THAT CAN BE AUTOMATICALLY OR MANUALLY CONTROLLED BY THE FIRE DEPARTMENT MAY BE REQUIRED.

VICINITY MAP

NO SCALE





PROJECT TEAM

DEVELOPER: HITZKE DEVELOPMENT CORPORATION
PO BOX 1700
TEMECULA, CA 92593
PHONE#: (619) 846-3532
EMAIL: mike@hitzkeconsulting.com
CONTACT: MIKE VANBUSKIRK

CONSTRUCTION MANAGER: JP&K
4995 REBEL ROAD
SAN DIEGO, CA 92117
PHONE#: (858) 864-7265
EMAIL: zrs4995@sbcglobal.net
CONTACT: JEFF PETERSON

ARCHITECT: FoundationForForm ARCHITECTURE
830 25TH STREET
SUITE 200
SAN DIEGO, CA 92102
PHONE#: (619) 906-4006
FAX#: (619) 906-4007
CONTACT: MICHAEL BURNETT / JEFFREY UMPHRES

STRUCTURAL: PALOS VERDES ENGINEERING
990 HIGHLAND DRIVE
SUITE 104C
SOLANA BEACH, CA 92075
PHONE#: (310) 541-5055 / (858) 509-8505
EMAIL: john@pvec.com / eric@pvec.com
CONTACT: JOHN SCHURICT / ERIC PARKER

CIVIL: SWS ENGINEERING
261 AUTUMN DRIVE .
SUITE 115
SAN MARCOS, CA 92069
PHONE#: (760) 744-0011
FAX#: (760) 744-0046
CONTACT: TRACY SANTUCCI

MECHANICAL: BTA ENGINEERS, INC.
9845 ERMA RD.
SAN DIEGO, CA 92131
PHONE#: (858) 715-6601
EMAIL: bong@btaengineers.com
CONTACT: BONG MANLULU

PLUMBING: BTA ENGINEERS, INC.
9845 ERMA RD.
SAN DIEGO, CA 92131
PHONE#: (858) 715-6601
EMAIL: allan@btaengineers.com
CONTACT: ALLAN MARTIN

ELECTRICAL: C & G ENGINEERING, INC.
1045 14TH STREET
SUITE 110
SAN DIEGO, CA 92101
PHONE#: (619) 398-3479
CONTACT: CARLOS ZUNIGA

LANDSCAPE: MZAKI DESIGN
4670 SARATOGA AVE.
SUITE 3
SAN DIEGO, CA 92107
PHONE#: (619) 255-1802
FAX#: (619) 255-1802
CONTACT: MOHAMED ZAKI

PROJECT DATA

PROJECT NAME: THE PEARL
PROJECT ADDRESS: S. SIERRA AVENUE SOLANA BEACH, CA
ASSESSOR'S PARCEL NUMBER: 298-211-81-00

SITE AREA: 0.338 ACRES (14,721 SQ FT)
LOT COVERAGE: 9,871 SQ FT/ 14,721 = 67%

EXISTING ZONE: C-COMMERCIAL
GENERAL PLAN DESIGNATION: C-COMMERCIAL

NUMBER OF RESIDENTIAL UNITS: 10
COMMERCIAL SPACE: 795 SQ FT
BUILDING HEIGHT: 35'-0" MAX

F.A.R. CALCULATION:

NOTE: SQ FT FOR P1 WAS FIGURED BY SUBTRACTING 3,600 SQ FT FROM 9,871 SQ FT, THIS ALLOWS 200 SQ FT PER PARKING SPACE: 200 X 18 = 3,600 SQ FT.

LEVEL P0	N/A (BASEMENT)	0 SQ FT
LEVEL P1		6,271 SQ FT
LEVEL 2		6,256 SQ FT
LEVEL 3		4,562 SQ FT
	TOTAL	**17,089 SQ FT**
F.A.R.		**17,089/14,721 = 1.16**

BUILDING AREA:

LEVEL P0	UTILITY / MAINT.	123 SQ FT
	PARKING	10,068 SQ FT
	STAIRS / ELEVATOR	416 SQ FT
	TOTAL	**10,607 SQ FT**
LEVEL P1	COMMERCIAL	795 SQ FT
	UTILITY / TRASH	303 SQ FT
	PARKING	8,308 SQ FT
	STAIRS / ELVATOR	465 SQ FT
	TOTAL	**9,871 SQ FT**
LEVEL 2	RESIDENTIAL	6,080 SQ FT
	LAUNDRY / MAINT.	176 SQ FT
	TOTAL	**6,256 SQ FT**
LEVEL 3	RESIDENTIAL	4,562 SQ FT
	TOTAL	**4,562 SQ FT**
OVERALL SQ FT		**31,296 SQ FT**

PROPOSED USE: NEW MIXED-USE RESIDENTIAL AND COMMERCIAL BUILDING INCLUDING PUBLIC PARKING SPACES AND NEW LANDSCAPING.

IRRIGATED LANDSCAPE AREA: 1,530 SQ FT

NON-IRRIGATED LANDSC. AREA: NONE

BUILDING FOOTPRINT: 9,871 SQ FT

PAVED AREAS: 2,170 SQ FT

REFER TO DETAILED LANDSCAPE AREAS ON SHEET L1

EARTHWORK QUANTITIES: 5,100 CY EXPORT

REQUIRED PARKING SPACES:

COMMERCIAL	(1 PER 200 SQ FT G.F.A.)	795 SQ FT/200 = 4
RESIDENTIAL	1 BDRM = 1/UNIT	(3) ONE BDRM = 3
	2 BDRM = 2/UNIT	(3) TWO BDRM = 6
	3 BDRM = 2/UNIT	(3) THREE BDRM = 6
	4 BDRM = 2.5/UNIT	(1) FOUR BDRM = 2.5
		TOTAL 22

PROVIDED PARKING SPACES: **53 SPACES** (INCL. 3 ACCESSIBLE SPACES)

RESIDENTIAL 18 PARKING SPACES PROVIDED (INCL 1 ACCESSIBLE SPACE)

REPLACED 31 SPACES (INCL. 1 ACCESSIBLE SPACE)

COMMERCIAL 795 SQ FT / 200 = 4 SPACES
4 SPACES (INCL. 1 ACCESSIBLE SPACE)

BICYCLE PARKING: 4 SPACES
MOTORCYCLE PARKING: 1 SPACE

UNIT REFERENCE TABLE

UNIT TYPE	#	UNIT SIZE RANGE
1 BEDROOM	3	505 / 505 / 515 SQ FT
2 BEDROOM	3	918 / 1010 / 1032 SQ FT
3 BEDROOM	3	1002 / 1089 / 1232 SQ FT
4 BEDROOM	1	1383 SQ FT
TOTAL UNITS	**10**	

Consultant

FOUNDATION for FORM ARCHITECTURE

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

TITLE SHEET

TS

© 2018 FoundationForForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and are not to be used by any person, firm, or organization for any purpose whatsoever without written permission of FoundationForForm.

GENERAL NOTES (CONTINUED)

6. IT IS TO BE THE CONTRACTOR'S AND/OR SUB-CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PROVIDE ALL SUCH MATERIALS AS ARE SUGGESTED/REQUIRED BY THE MANUFACTURER TO PROPERLY INSTALL ANY AND ALL PRODUCTS.

7. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT LOCATIONS WITH THE EQUIPMENT SUPPLIER AND OWNER'S REPRESENTATIVE FOR PROPER SIZE AND LOCATION OF SUPPORTS, DRAINS, PITCH POCKETS AND OTHER PROVISIONS THAT MUST BE MADE FOR THE PROPER INSTALLATION OF THE EQUIPMENT.

8. ALL SUB-CONTRACTOR'S SHALL PREPARE AND SUBMIT ORIGINAL SHOP DRAWINGS, AS INDICATED IN THE SPECIFICATIONS, TO THE ARCHITECT FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK. SHOP DRAWINGS WHICH ARE REPRODUCTIONS OF THESE DOCUMENTS WILL BE RETURNED REJECTED WITHOUT REVIEW

9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OBSERVED.

10. THE CONTRACTOR AND HIS SUB-CONTRACTORS ARE RESPONSIBLE FOR REVIEWING THE CONTRACT DOCUMENTS IN DETAIL INCLUDING DIMENSIONS FOR THE PURPOSE OF DETERMINING THAT THE WORK CAN BE PERFORMED AS SHOWN PRIOR TO PROCEEDING WITH THE WORK. IF ANY CONFLICTS ARISE, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK IN QUESTION OR WITH RELATED WORK.

11. THE CONTRACTOR SHALL INSPECT THE PREMISES DURING THE COURSE OF BIDDING AND PRIOR TO THE START OF CONSTRUCTION IN ORDER TO BE FAMILAR WITH POSSIBLE FIELD CONDITIONS THAT MAY ARISE. SUCH CONDITIONS ARE TO BE REFLECTED AND QUALIFIED IN THE BID.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION AND SIZE OF OPENINGS FOR ALL TRADES AND SHALL COORDINATE ALL CONSTRUCTION AS INDICATED BY THE CONTRACT DOCUMENTS, INCLUDING SHOP DRAWINGS REVIEWED BY THE ARCHITECT AND OWNER.

13. CONTRACTOR TO VERIFY: ALL HEATING, VENTILATING, AND COOLING SYSTEMS AND APPLIANCES COMPLY WITH CURRENT U.M.C. AS WELL AS ALL RELIVENT FEDERAL, STATE AND MUNICAPAL CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO, REGULATIONS CONCERNING ENVIRONMENTAL HAZARDS, RECYCLED CONTENT, AND ENERGY AND WATER CONSERVATION.

14. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING @ 1/4" PER FOOT MINIMUM AT ALL LOCATIONS.

15. "TYPICAL" OR "TYP" MEANS IDENTICAL FOR ALL THE SAME CONDITIONS UNLESS OTHERWISE NOTED. "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON THE PLANS.

16. CLEAN UP OF THE JOB SITE: DISPOSE OF, OFF THE SITE, ALL DEBRIS PROMPTLY AND IN A MANNER STRICTLY COMPLYING WITH THE REGULATIONS OF THE LOCAL AND STATE AGANCIES HAVING JURISDICTION. CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE AS WORK PROGRESSES AND LEAVE GROUNDS EACH DAY IN A MANNER SATISFACTORY TO THE ARCHITECT AND CLIENT.

17. CONTRACTOR TO MAINTAIN A DRUG AND ALCOHOL FREE WORKPLACE.

MINIMUM SUSTAINABLE BUILDING STANDARDS

THE PROJECT SHALL COMPLY WITH THE FOLLOWING REGULATIONS

A. ALL REHABILITATION PROJECTS SHALL HAVE IMPROVED ENERGY EFFICIENCY ABOVE THE MODELED ENERGY CONSUMPTION BASED ON EXISTING CONDITIONS, WITH AT LEAST A TEN PERCENT (10%) POST-REHABILITATION IMPROVEMENT OVER EXISTING CONDITIONS. SCATTERED-SITE REHABILITATION PROJECTS SHALL ALSO HAVE AT LEAST A FIVE PERCENT (5%) IMPROVEMENT OVER EXISTING CONDITIONS AT EACH LOCATION.

B. LANDSCAPING. A VARIETY OF PLANT AND TREE SPECIES THAT REQUIRE LOW WATER USE SHALL BE PROVIDED IN SUFFICIENT QUANTITIES BASED ON LANDSCAPING PRACTICES IN THE GENERAL MARKET AREA AND LOW MAINTENANCE NEEDS. PROJECTS SHALL FOLLOW THE REQUIREMENTS OF THE STATE'S MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (TITLE 23, CALIFORNIA CODE OF REGULATIONS, SECTION 490 ET SEQ.) (HTTP://WWW.WATER.CA.GOV/WATERUSEEFFICIENCY/LANDSCAPEORDINANCE/) UNLESS A LOCAL LANDSCAPE ORDINANCE HAS BEEN DETERMINED TO BE AT LEAST AS STRINGENT AS THE CURRENT MODEL ORDINANCE.

C. ROOFS. ROOFING SHALL CARRY A THREE-YEAR SUBCONTRACTOR GUARANTEE AND AT LEAST A 20-YEAR MANUFACTURER'S WARRANTY.

D. EXTERIOR DOORS. INSULATED OR SOLID CORE, FLUSH, PAINT OR STAIN GRADE EXTERIOR DOORS SHALL BE MADE OF METAL CLAD, HARDWOOD FACES, OR FIBERGLASS FACES; WITH ALL SIX SIDES FACTORY PRIMED AND SUBJECT TO A STANDARD ONE-YEAR GUARANTEE.

E. APPLIANCES. REFRIGERATORS, DISHWASHERS, CLOTHES WASHERS AND CLOTHES DRYERS PROVIDED OR REPLACED WITHIN LOW-INCOME UNITS AND/OR IN ON-SITE COMMUNITY FACILITIES SHALL BE ENERGY STAR RATED APPLIANCES UNLESS WAIVED BY THE EXECUTIVE DIRECTOR.

F. WINDOW COVERINGS. WINDOW COVERINGS SHALL BE PROVIDED AND MAY INCLUDE FIRE RETARDANT DRAPES OR BLINDS.

G. WATER HEATER. FOR UNITS WITH INDIVIDUAL TANK-TYPE WATER HEATERS, MINIMUM CAPACITIES ARE TO BE 28 GALLONS FOR ONE-BEDROOM AND TWO-BEDROOM UNITS AND 38 GALLONS FOR THREE-BEDROOM AND LARGER UNITS.

H. FLOOR COVERINGS. A HARD, WATER RESISTANT, CLEANABLE SURFACE SHALL BE REQUIRED FOR ALL KITCHEN AND BATH AREAS. CARPETING SHALL COMPLY WITH U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT/ FEDERAL HOUSING ADMINISTRATION UM44D.

I. INSULATION. ALL FIBERGLASS-BASED INSULATION SHALL MEET THE GREENGUARD EMISSION CRITERIA FOR CHILDREN AND SCHOOLS AS REQUIRED BY THE CALIFORNIA TAX CREDIT ALLOCATION COMMITTEE TITLE 4, DIVISION 17, CHAPTER 1, SECTION 10325.

GENERAL NOTES

BUILDING DEPARTMENT CONFORMITY

1. PER C.B.C., ALL WEATHER EXPOSED SURFACES SHALL HAVE A WEATHER RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING AND EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER TO MAKE THEM WEATHERPROOF.

2. PROVIDE PERMANENTLY WIRED-IN SMOKE PROTECTORS WITH BATTERY BACK-UP IN EACH HABITABLE ROOM AND IN A CENTRAL LOCATION TO PROTECT THOSE AREAS. SEE ELECTRICAL PLANS AND ARCHITECTURAL RCP'S.

3. GLAZING ADJACENT TO DOORS (WITHIN 24") OR ADJACENT TO WALKING SURFACES MUST BE OF SAFETY GLAZING MATERIAL.

4. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBS.

5. PROVIDE MAXIMUM 2.2 GPM FLOW ON FAUCETS OR AS REQUIRED BY LOCAL JURISDICTION.

6. ALL FAUCETS SHALL BE EQUIPPED WITH FLOW RESTRICTORS AS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS AND SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION.

7. ALL SWINGING DOORS AND WINDOWS LEADING TO UNCONDITIONED AREAS SHALL BE FULLY WEATHER STRIPPED.

8. FULLY SEAL ALL JOINTS AROUND WINDOW FRAMES AND OTHER PENETRATIONS SUCH AS WALL SOLE PLATES AND OPENINGS FOR UTILITY PIPING AND WIRING.

9. ALL NEW GLAZING WILL BE INSTALLED WITH A CERTIFYING LABEL ATTACHED, SHOWING THE U-VALUE

10. ALL EXHAUST FANS OR OTHER EXHAUST SYSTEMS SHALL BE PROVIDED WITH BACK DRAFT DAMPERS OR AUTOMATIC

11. THERMOSTATS (EXCEPT THOSE CONTROLLING HEAT PUMPS) SHALL BE EQUIPPED WITH AN AUTOMATIC SETBACK THAT THE BUILDING OCCUPANTS CAN PROGRAM TO AUTOMATICALLY SETBACK THE THERMOSTAT FOR 2 PERIODS DURING ANY 24-HOUR PERIOD.

12. EQUIPMENT THAT REQUIRES PREVENTATIVE MAINTAINANCE TO MAINTAIN EFFICIENT OPERATION SHALL BE FURNISHED WITH COMPLETE NECESSARY MAINTAINANCE INFORMATION.

13. ALL GAS-FIRED FAN TYPE CENTRAL FURNACES, GAS-FIRED FAN TYPE WALL FURNACES, AND COOKING APPLIANCES SHALL BE EQUIPPED WITH AN INTERMITTENT IGNITION DEVICE.

14. ALL TRANSVERSE DUCT, PLENUM, AND FITTING JOINTS SHALL BE SEALED WITH PRESSURE SENSITIVE TAPE OR MASTIC TO PREVENT AIR LOSS AND SHALL BE INSULATED TO CONFORM TO THE PROVISIONS OF THE U.M.C.

15. INSULATION SHALL COMPLY WITH CALIFORNIA QUALITY STANDARDS.

16. THE INSULATION INSTALLER SHALL POST A SIGNED CERTIFICATE.

17. PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE SOILS ENGINEER SHALL ADVISE THE BUILDING OFFICIAL IN WRITING THAT:
    A) THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT.
    B) THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED, AND
    C) THE FOUNDATION EXCAVATIONS, THE SOILS EXPANSIVE CHARACTERISTICS AND BEARING CAPACITY ALL CONFORM TO THE SOILS REPORT.

18. STATE HEALTH AND SAFETY CODE SEC. 17921.9 BANS THE USE OF CHLORINATED POLYVINYL CHLORIDE, CPVC FOR INTERIOR WATER-SUPPLY PIPING.

19. ALL GAS CONNECTIONS TO BUILDING REQUIRE SEISMIC SHUT-OFF VALVES PER STATE AND/OR LOCAL ORDINANCE, RE: MECHANICAL.

20. EXISTING SERVICES NOT USED MUST BE KILLED AT THE MAIN.

21. IF THE SERVICES WILL BE INSTALLED BY OWNER OR CONTRACTOR, THE CITY MUST STILL TAP INTO THE WATER MAIN AND INSTALL THE METER. WATER TAP FEE:_____, METER INSTALLATION FEE:_____, PLUS ENGINEERING PERMIT FEES & CONTRACTOR'S FEES.

22. A TOKEN INSPECTION IS REQUIRED WHEN A CONTRACTOR OR OWNER INSTALLS A SEWER LATERAL IN A STREET OR ALLEY. TOKEN INSPECTION FEE:$25.00, PLUS ENGINEERING PERMIT FEES & CONTRACTOR'S FEES.

GENERAL NOTES TO THE GENERAL CONTRACTOR ("GC")

1. ALL WORK SHALL BE DONE IN A PROFESSIONAL MANNER AND SHALL CONFORM TO THE REQUIREMENTS AND REGULATIONS OF ALL LOCAL AND STATE AGENCIES HAVING JURISTICTION AND SHALL COMPLY WITH CURRENT C.B.C., U.P.C, AND N.E.C.

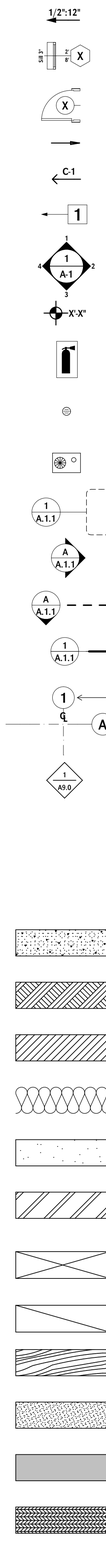
2. MECHANICAL, ELECTRICAL, PLUMBING (MEP) AND STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE SUPPLEMENTAL TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. IT IS TO BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS PRIOR TO BIDDING, ORDERING OR INSTALLING ANY WORK DONE ON MEP AND STRUCTURAL ELEMENTS. ANY DISCREPANCIES BETWEEN THE ACHITECTURAL AND CONSULTING ENGINEER'S DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING, ORDERING OR INSTALLING. ANY INSTALLATION AND/OR CONSTRUCTION PERFORMED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE GENERAL CONTRACTOR AT HIS OWN EXPENSE, AND AT NO EXPENSE TO THE OWNER OR ARCHITECT. GC TO PROVIDE ALL MEP AND STRUCTURAL TRADES WITH BOTH ARCHITECTURAL AND ENGINEERING DRAWINGS AND INSURE THAT ALL SUB-CONTRACTORS REFER TO BOTH DOCUMENTS DURING BIDDING, ORDERING AND CONSTRUCTION/INSTALLATION.

3. THE RECOMMENDATIONS CONTAINED IN THE SOIL REPORT FOR EARTHWORK AND FOUNDATION EXCAVATION ARE A PART OF THIS WORK. A COPY OF THIS REPORT IS AVAILABLE AT THE OFFICE OF THE ARCHITECT.

4. THE SAFETY OF ALL PARTIES PRESENT AT THE JOB SITE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK IS TO BE PERFORMED IN A PROFESSIONAL MANNER.

5. THE CONTRACTOR AND SUB-CONTRACTORS ARE CONSIDERED SPECIALISTS IN THEIR RESPECTIVE FIELDS AND SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY WORK THAT CAN NOT BE FULLY GUARANTEED, PRIOR TO ORDERING MATERIALS OR PERFORANCE OF WORK.

SYMBOL LEGEND



DIRECTION OF ROOF/FLOOR SLOPE

WINDOW WITH MARKER INCLUDING OPENING DIMENSIONS AND SILL HEIGHT

DOOR WITH MARKER

SLOPE OF SLAB PER STRUCTURAL

FINISH TRANSITION, SEE FIN. SCHED. FOR ADDITIONAL INFORMATION

KEYNOTE LABEL

INTERIOR ELEVATION

FINISH FLOOR ELEVATION RELATIVE TO PROJECT 0'-0"

RECESSED FIRE EXTINGUISHER W/ BRONZE ANODIZED FINISH OR SIM. PER 1/A.8.9

FLOOR DRAIN PER PLUMBING (SLOPE 1/4":12")

ROOF DRAIN WITH OVERFLOW

ENLARGED DRAWING REFERENCE

BUILDING ELEVATION

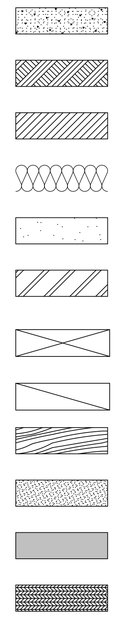
BUILDING SECTION

WALL SECTION

GRID REFERENCE LINES
GRID DENOTING CENTER-LINE OF WALL OR COLUMN, FACE OF WALL, "CL" DENOTES CENTERLINE

WALL TYPE

UNIT NUMBER
A: FLOOR AREA
G: OCCUPANCY GROUP
O: OCCUPANCY USE/LOAD
X: REQUIRED NUMBER OF EXITS



CONCRETE

EARTH

MASONRY

INSULATION

STONE

METAL

WOOD FRAMING CONTINUOUS

WOOD FRAMING INTERUPTED

WOOD FINISH

GRAVEL OR SAND

GYPSUM BOARD

PLYWOOD

ABBREVIATIONS

A.B.	ANCHOR BOLT
A.C.	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
ACT	ACOUSTICAL TILE
A.D.	AREA DRAIN
ADJ.	ADJUSTABLE
ADJA.	ADJACENT
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
ALUM.	ALUMINUM
ALT.	ALTERNATE
ANOD.	ANODIZED
A.P.	ACCESS PANEL
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASB.	ASBESTOS
ASPH.	ASPHALT
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
BTM.	BOTTOM
B.R.	BEDROOM
BRKT.	BRACKET
BSMNT.	BASEMENT
B/S	BOTH SIDES
B.U.R.	BUILT UP ROOFING
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CER.	CERAMIC
C.I.	CAST IRON
C.I.P.	CAST IRON PIPE
C.J.	CONTROL JOINT
C.L.	CHAIN LINK
CLG.	CEILING
CLKG.	CAULKING
CLOS.	CLOSET
CLR.	CLEAR
CMU	CONC. MASONRY UNIT
CNTR.	COUNTER
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
COND.	CONDITION
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CORR.	CORRIDOR
C.P.	CEMENT PLASTER
CPT.	CARPET
C.T.	CERAMIC TILE
CTR.	CENTER
CTSK.	COUNTERSUNK
CW	COLD WATER
D.	DEEP, DEPTH
D.A.	DOUBLE ACTING
DBL.	DOUBLE
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
D.O.	DOOR OPENING
DN.	DOWN
DR.	DOOR
D.S.	DOWNSPOUT
D.S.P.	DRY STAND PIPE
DWG.	DRAWING
DWR.	DRAWER
E.	EAST
EA.	EACH
E.F.	EXTERIOR FINISH
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
E.O.S.	EDGE OF SLAB
E.P.	ELECTRIC PANELBOARD
EQ.	EQUAL
EQPT.	EQUIPMENT
ETS	EXPOSED TO STRUCTURE
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
EXH.	EXHAUST
EXIST. (E)	EXISTING
EXP.	EXPANSION
EXPO.	EXPOSED
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.B.	FLAT BAR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.	FACTORY FINISH
F.F.EL.	FINISH FLOOR ELEVATION
FIN.	FINISH
F.H.C.	FIRE HOSE CABINET
FL.	FLOOR
FLASH.	FLASHING
FLCO.	FLOOR CLEAN OUT
FLDG.	FOLDING
FLUOR.	FLUORESCENT
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUDS
FPRF.	FIREPROOF(ING)
FR.	FRAME
F.S.	FULL SIZE
FT.	FOOT OR FEET
FTG.	FOOTING
FURN.	FURNISH
FURR.	FURRING
FUT.	FUTURE
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
GC.	GLAZED COATING
G.I.	GALVANIZED IRON
GL.	GLASS, GLAZING
GND.	GROUND
GR.	GRADE
GYP. BD.	GYPSUM WALL BOARD
GYP.	GYPSUM
H.	HIGH
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HDWD.	HARDWOOD
HDWE.	HARDWARE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
HR.	HOUR
HT.	HEIGHT
H.V.A.C.	HEATING,VENTILATION,& AIR CONDITIONING
HW	HOT WATER
I.D.	INSIDE DIAMETER
INCL.	INCLUDING
INSUL.	INSULATION
INT.	INTERIOR
JAN.	JANITOR
JST.	JOIST
JT.	JOINT
KIT.	KITCHEN
K.O.	KNOCK OUT
LAB.	LABORATORY
LAM.	LAMINATE
LAV.	LAVATORY
LKR.	LOCKER
L.R.	LIVING ROOM
LT.	LIGHT
LVR.	LOUVER
MAT.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.C.	MEDICINE CABINET
M.D.	METAL DECK
MECH.	MECHANICAL
MEMB.	MEMBRANE
MET.	METAL
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
M.R.	MOISTURE RESISTANT
MTD.	MOUNTED
MTG.	MOUNTING
MUL.	MULLION
N.	NORTH
N.I.C.	NOT IN CONTRACT
NO(S).	NUMBER(S)
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O/	OVER
O.A.	OVER ALL
OBS.	OBSCURE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.D.	OVERFLOW DRAIN
O.F.I.C.	OWNER FURNISHED-CONTRACTOR INSTALLED
OFF.	OFFICE
O.H.	OVERHANG
OPNG.	OPENING
OPP.	OPPOSITE
OVHD.	OVERHEAD
P.	PAINT
P.D.	PLANTER DRAIN
PDC	PREFABRICATED DRAINAGE COMPOSITE
PC.	PIECE
PERF.	PERFORATED
PL.	PLATE
PLAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLBG.	PLUMBING
PLYWD.	PLYWOOD
PNL.	PANEL
PR.	PAIR
PRCST.	PRECAST
PT.	POINT
P.T.D.	PAPER TOWEL DISPENSER
P.T.D./R.	COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN.	PARTITION
P.T.R.	PAPER TOWEL RECEPTACLE
PVMT.	PAVEMENT
Q.T.	QUARRY TILE
R.	RISER
RAD.	RADIUS
R.B.	RESILIENT BASE
R.D.	ROOF DRAIN
REF.	REFERENCE
REFR.	REFRIGERATOR
REINF.	REINFORCING
REQ.	REQUIRED
RESIL.	RESILIENT
REV.	REVISED
RFG.	ROOFING
RGTR.	REGISTER
R.H.	ROBE HOOK
RM.	ROOM
R.O.	ROUGH OPENING
RWD.	REDWOOD
R.W.L.	RAIN WATER LEADER
S.	SOUTH
S.A.	SINGLE ACTING
S.C.	SOLID CORE
S.C.D.	SEAT COVER DISPENSER
SCHED.	SCHEDULE
SCR.	SCREEN
S.D.	SOAP DISPENSER
SEAL.	SEALER
SECT.	SECTION
SEP.	SEPERATE OR SEPARATION
SH.	SHELF
SHR.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
SL.	SLOPE
SLDG.	SLIDING
SM.	SMOOTH
S.N.D.	SANITARY NAPKIN DISPENSER
SPEC.	SPECIFICATION
SQ.	SQUARE
SST.	STAINLESS STEEL
S.SK.	SERVICE SINK
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRL.	STRUCTURAL
SURR.	SURROUND
SUSP.	SUSPENDED
SW	SWITCH
SYM.	SYMMETRICAL
SYS.	SYSTEM
T.	TREAD
T.B.	TOWEL BAR
T.B.S.	TO BE SPECIFIED
T.C.	TOP OF CURB
TEL.	TELEPHONE
TEMP.	TEMPERED
TER.	TERRAZZO
T&G	TONGUE AND GROOVE
THK.	THICK
THR.	THRESHOLD
TKBD.	TACKBOARD
TOIL.	TOILET
T.O.P.	TOP OF PARAPET
T.P.	TOP OF PAVEMENT
T.P.D.	TOILET PAPER INTERIOR DISPENSER
T.P.H.	TOILET PAPER HOLDER
T.S.	TOP OF STEEL
T.V.	TELEVISION
T.W.	TOP OF WALL
TYP.	TYPICAL
UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
UR.	URINAL
V.C.T.	VINYL COMPOSITION TILE
VERT.	VERTICAL
VEST.	VESTIBULE
VOL.	VOLUME
V.T.R.	VENT THRU ROOF
W.	WEST
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
WDO	WINDOW OPENING
WDW.	WINDOW
W.H.	WATER HEATER
W.O.	WHERE OCCURS
W/O	WITH OUT
WP.	WATERPROOF
WPM.	WATERPROOF MEMBRANE
W.R.	WATER RESISTANT
WSCT.	WAINSCOT
W.S.P.	WET STAND PIPE
WT.	WEIGHT
W.W.M.	WELDED WIRE MESH
Y.D.	YARD DRAIN
Y.H.	YARD HYDRANT
&	AND
@	AT
#	NUMBER
∠	ANGLE
℄	CENTER LINE
⊥	PERPENDICULAR
Ø	DIAMETER

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

GENERAL NOTES
LEGEND &
ABBREVIATIONS

TS1-0

FIRE PROTECTION NOTES

1. FIRE PROTECTION, INCLUDING FIRE APPARATUS ACCESS ROADS AND WATER SUPPLIES FOR FIRE PRRTECTION, SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION. (CFC 901.3, 8704.2, 8704.3)
2. PLANS FOR ALL FIXED FIRE PROTECTION EQUIPMENT SUCH AS STANDPIPES, SPRINKLER SYSTEMS AND FIRE ALARM SYSTEMS, MUST BE SUBMITTED TO, AND APPROVED BY, THE FIRE AND HAZARD PREVENTION SERVICES BEFORE THIS EQUIPMENT IS INSTALLED.
3. EXIT DOORS TO BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
4. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC CHAPTER 14 (CFC 1401.1).
5. FIRE HYDRANT LOCATIONS SHALL BE IDENTIFIED BY THE INSTALLATION OF REFLECTIVE MARKERS (CFC 901.4.3)
6. ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILINGS IN A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. (CFC 501.1, FHPS POLICY P-00-6).
7. EMERGENCY PLANS SHALL BE SUBMITTED TO FIRE AND LIFE SAFETY FOR REVIEW AND APPROVAL PRIOR TO OCCUPANCY (CFC 1303.4.2, CAL CODE REGS., TIT. 19, 3.09)
8. DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME RETARDANT CONDITION. (CODE REGS., TIT. 19, SEC 3.08, 3.21, CFC 804)
9. COMPLETE PLANS AND SPECIFICATIONS FOR FIRE ALARM SYSTEMS; FIRE-EXTINGUISHING SYSTEMS, INCLUDING AUTOMATIC SPRINKLERS AND WET AND DRY STANDPIPES; HALON SYSTEMS AND OTHER SPECIAL TYPES OF AUTOMATIC FIRE-EXTINGUISHING SYSTEMS; BASEMENT PIPE INLETS; AND OTHER FIRE PROTECTION SYSTEMS AND APPURTENANCES THERETO SHALL BE SUBMITTED TO FIRE AND LIFE SAFETY FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. (CFC 901.2)
10. FIRE-EXTINGUISHING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH CFC 903 AND COMPLY WITH STANDARDS OF 903.3.
11. ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEMS AND WATER-FLOW SWITCHES ON ALL SPRINKLER SYSTEMS SHALL BE ELECTRONICALLY MONITORED WHERE THE NUMBER OF SPRINKLERS IS 20 OR MORE. (CFC 903.4)
12. AN APPROVED AUDIBLE SPRINKLER FLOW ALARM SHALL BE PROVIDED ON THE EXTERIOR OF THE BUILDING IN AN APPROVED LOCATION. AN APPROVED AUDIBLE SPRINKLER FLOW ALARM TO ALERT THE OCCUPANTS SHALL BE PROVIDED IN THE INTERIOR OF THE BUILDING IN A NORMALLY OCCUPIED LOCATION.(CBC 904.3.2, UBC STANDARD 9-1)
13. INSTALLATION OF FIRE ALARM SYSTEMS SHALL BE IN ACCORDANCE WITH CFC 907.
14. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2-A-10B:C SHALL BE PROVIDED WITHIN 75 FEET MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQUARE FEET OR PORTION THEREOF ON EACH FLOOR (CFC 906)
15. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 4-A-20B:C SHALL BE PROVIDED OUTSIDE OF EACH MECHANICAL, ELECTRICAL, OR BOILER ROOM (CFC 1002, UFC STANDARD 10-1, CAL. CODE REGS., TIT. 19, 3.29)
16. COMPLETE PLANS AND SPECIFICATIONS FOR FIRE ALARM SYSTEMS SHALL BE SUBMITTED TO FIRE AND LIFE SAFETY FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. (CFC 907.1.1).
17. AN APPROVED AUDIBLE SPRINKLER FLOW ALARM SHALL BE PROVIDED ON THE EXTERIOR OF THE BUILDING IN AN APPROVED LOCATION. (CFC 903.4.2)
18. SPRAYED FIRE-RESISTANT MATERIALS: SPECIAL INSPECTIONS AND TEST FOR SPRAYED FIRE-RESISTANT MATERIALS APPLIED TO FLOOR, ROOF AND WALL ASSEMBLIES AND STRUCTURAL ELEMENTS, FOR CONDITIONS OF SUBSTRATES, THICKNESS OF APPLICATION, DENSITY, ADHESION/COHESION AND BOND STRENGTH, CONDITION OF FINISH APPLICATION AND THE REQUIRED FIRE-RESISTIVE RATING ON THE STATEMENT OF SPECIAL INSPECTIONS. (CBC 1704.12)
19. SPECIAL INSPECTIONS AND TEST FOR SPRAY-APPLIED FIRE RESISTANT MATERIALS SHALL BE IN ACCORDANCE WITH SECTIONS 1704.12.1 THROUGH 1704.12.6 AND SHALL BE PERFORMED AFTER THE ROUGH INSTALLATION OF ELECTRICAL, AUTOMATIC SPRINKLER, MECHANICAL AND PLUMBING SYSTEMS AND SUSPENSION SYSTEMS FOR CEILINGS, WHERE APPLICABLE (CBC 1704.12)
20. EMERGENCY BUILDING ACCESS VIA KNOX BOXES, KNOX KEY SWITCHES, AND/OR KNOX KEY CABINETS SHALL BE PROVIDED FOR ACCESS TO ALL UTILITY ROOMS, LOCKED DOORS, GATES (INCLUDING GATES WITHIN THE PARKING STRUCTURE) OR OTHER AREAS DEEMED NECESSARY BY THE FIRE MARSHAL. KNOX KEY BOXES FOR MULTIPLE ACCESS LOCATIONS AND MASTER KEYS TO SPECIFIC AREAS AND BUSINESSES (FOR BOTH THE COMMERCIAL AND RESIDENTIAL PORTIONS OF THE BUILDING) SHALL BE INSTALLED IN AREAS DETERMINED BY THE FIRE DEPARTMENT.

FIRE CODE NOTES (CONTINUED)

33. ADEQUATE WATER FLOW FOR FIRE FIGHTING BASED UPON THE SQUARE FEET OF THE BUILDING SHALL BE PROVIDED.
34. CENTRAL STATION MONITORING OF THE FOR SUPRESSION SYSTEMS IS REQUIRED.
35. FIRE SPRINKLER AND FIRE ALARM PLANS WILL REQUIRE A SEPERATE PLAN SUBMITTAL. A TECHNICAL REVIEW OF THESE PLANS WILL BE REQUIRED. CONTACT LOCAL FIRE DEPARTMENT FOR AN APPROVED CONSULTANT LIST.
36. A KNOX KEY ENTRY SYSTEM WILL BE REQUIRED FOR ACCESS TO ALL SECURED OPENINGS TO THE COMMON AREAS (PARKING GARAGES, GATES, ETC.) AND FOR ACCESS TO FIRE PROTECTION SYSTEMS (RISER ROOMS, ALARM CONTROL PANELS, ETC.)
37. WHEN SERVING MORE THAN 20 SPRINKLER HEADS, AUTOMATIC SPRINKLER SYSTEMSSHALL BE SUPERVISED BY AN APPROVED CENTRAL, PROPRIETARY OR REMOTE, STATION SERVICE, OR SHALL BE PROVIDED WITH A LOCAL ALARM WHICH WILL GIVE AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED STATION.
38. CONSTRUCTION DOCUMENTS APPROVED BY THE FIRE CODE OFFICIAL ARE APPROVED WITH THE INTENT THAT SUCH CONSTRUCTION DOCUMENTS COMPLY IN ALL RESPECTS WITH CURRENT CODE. REVIEW AND APPROVAL BY THE FIRE CODE OFFICIAL SHALL NOT RELIEVE THE APPLICANT OF THE REPONSIBILITY OF COMPLIANCE WITH THIS CODE (CFC 105.4.4).
39. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC CHAPTER 14 (CFC 1401.1).
40. THE PRIMARY SOURCE FOR THE DETECTORS SHALL BE FROM THE BUILDING WIRING BUT THEY SHALL ALSO BE EQUIPPED WITH A BATTERY BACKUP.
41. EGRESS ILLUMINATION REQUIRES A SOURCE OF EMERGENCY POWER WHEN THE OCCUPANT LOAD IS 100 OR MORE.
42. ANY TIME A BUILDING IS OCCUPIED, THE MEANS OF EGRESS SHALL BE ILLUMINATED AT AN INTENSITY OF NOT LESS THAN 1 FOOTCANDLE AT THE FLOOR LEVEL. CBC 1003.2.9.1

FIRE SPRINKLER NOTES

1. AN AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED AS PER N.F.P.A. 13, WHICHEVER IS APPLICABLE, THE MOST CURRENT EDITION SHALL BE USED (WITH SOME EXCEPTIONS AS NOTED BELOW), AND THE CITY OF SOLANA BEACH FIRE DEPARTMENT POLICIES. DETAILED SPRINKLER PLANS SHALL BE SUBMITTED TO THE FIRE PREVENTION BUREAU FOR APPROVAL PRIOR TO INSTALLATION.
2. SYSTEM(S) DEMAND CURVE SHALL BE A MIN. OF 10% BELOW WATER SUPPLY CURVE.
3. SPRINKLER SYSTEM SHALL HAVE AN EASILY ACCESSIBLE INSPECTOR'S TEST VALVE RUN FROM THE HIGHEST AND MOST REMOTE POINT FROM THE SYSTEM RISE. A PROVISION TO CONTROL RUNOFF SHALL BE INCLUDED FOR THE INSPECTOR'S TEST VALVE AND SYSTEM DRAIN. LOCATE ON GROUND LEVEL IN STAIR 3.
4. TAMPER ALARMS SHALL BE REQUIRED ON ALL FIRE SERVICE VALVES. FLOW AND TAMPER ALARMS SHALL BE RUN OFF SITE TO A UL APPROVED CENTRAL MONITORING STATION (PER NFPA 71)
5. PLANS FOR FIRE SERVICE UNDERGROUND PIPING SHALL BE SUBMITTED TO THE FIRE PREVENTION BUREAU FOR APPROVAL PRIOR TO INSTALLATION. STRICT ADHERENCE TO NFPA 13 AND NFPA 13R SHALL BE REQUIRED AND UNDERGROUND SHALL COMPLY WITH NFPA 24 ALSO. ALL EXPOSED PIPING AND VALVES SHALL BE PROTECTED BY A DURABLE FINISH. CALCULATIONS FOR FIRE SPRINKLER SYSTEMS SHALL BE RUN TO THE POINT OF CONNECTION TO THE WATER DISTRICT MAIN INCLUDING CHECK VALVES AND DOUBLE O, S, AND Y GATE VALVES.
6. INSTALL "BLUE DOT" REFLECTIVE FIRE DEPARTMENT CONNECTION MARKER 4" TO 6" FROM CENTER LINE ON FDC SIDE.
7. ALL AUTOMATIC FIRE SPRINKLER SYSTEMS SHALL BE SUPERVISED BY AN APPROVED CENTRAL STATION.
8. ALL FIRE SPRINKLER PIPING AND VALVES EXPOSED TO WEATHER SHALL BE PROTECTED BY A DURABLE FINISH.
9. UNDERGROUND TEST - A PRESSURE TEST OF 200 PSI SHALL BE MAINTAINED FOR A PERIOD OF TWO (2) HOURS. THE LINE SHALL THEN BE FLUSHED. BOTH THE TEST AND THE FLUSH SHALL BE WITNESSED BY A REPRESENTATIVE FROM THE FIRE PREVENTION BUREAU.
10. FIRE SPRINKLER SYSTEM FLOW ALARM SHALL ACTIVATE FIRE ALARM SYSTEM.
11. IN ADDITION TO SMOKE DETECTORS REQUIRED BY C.B.C. SEC 907.2.10.1, GROUP R, DIVISION 2 OCCUPANCIES SHALL BE PROVIDED WITH A MANUAL AND AUTOMATIC FIRE ALARM SYSTEM. INSTALL ALARM DEVICES (MINI-HORNS) IN EA. DWELLING UNIT, AT PULL BOXES AND WHERE NECESSARY TO ENSURE THAT ALARM DEVICES ARE CLEARLY AUDIBLE THROUGHOUT THE ENTIRE STRUCTURE.

FIRE CODE NOTES (CONTINUED)

8. IN PUBLIC AREAS OF GROUP B, DIVISION 2 OCCUPANCIES, AND ASSEMBLY OCCUPANCIES WITHOUT FIXED SEATS, THE MINIMUM CLEAR AISLE WIDTH SHALL BE 36 INCHES WHERE TABLES, COUNTERS, FURNISHINGS, MERCHANDISE, OR OTHER SIMILAR OBSTRUCTIONS ARE PLACED ON ONE SIDE OF THE AISLE ONLY, AND 44 INCHES WHEN SUCH OBSTRUCTIONS ARE PLACED ON BOTH SIDES OF THE AISLE.
9. HOUSEKEEPING - GOOD HOUSEKEEPING SHALL BE MAINTAINED AT ALL TIMES. ACCUMULATION OF COMBUSTIBLE WASTE MATERIALS IN THE BUILDING SHALL NOT BE ALLOWED.
10. LEGAL OWNERS OF PROPERTY SHALL MAINTAIN SERVICE CONTRACT FOR ALL FIRE PROTECTION AND LIFE AND SAFETY SYSTEMS. LEGAL OWNERS SHALL SUPPLY THE CORONADO FIRE PREVENTION BUREAU WITH A COPY OF SAID CONTRACTS PRIOR TO BUILDING FINAL.
11. AN APPROVED SET OF PLANS (BUILDING, FIRE SPRINKLER, FIRE ALARM, ETC.) SHALL BE ON THE JOB SITE DURING CONSTRUCTION. NO INSPECTIONS WILL BE MADE WITHOUT COMPLIANCE WITH ABOVE.
12. "IMPORTANT"- WHERE UNDERGROUND WATER MAINS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED, AND IN SERVICE WITH HYDRANT(S) LOCATED AS DIRECTED BY THE FIRE DEPARTMENT PRIOR TO CONSTRUCTION WORK. UFC SECTION 901.3.
13. "PRIOR TO DELIVERY OF COMBUSTIBLE BUILDING MATERIALS ON SITE, WATER AND SEWER SYSTEMS SHALL SATISFACTORILY PASS ALL REQUIRED TESTS AND BE CONNECTED TO THE PUBLIC WATER AND SEWER SYSTEMS. IN ADDITION, THE FIRST LIFT OF ASPHALT PAVING SHALL BE IN PLACE TO PROVIDE ADEQUATE, PERMANENT ACCESS FOR EMERGENCY VEHICLES. THE FINAL LIFT OF ASPHALT SHALL NOT BE INSTALLED UNTIL ALL OTHER CONSTRUCTION ACTIVITY HAS BEEN SUBSTANTIALLY COMPLETED TO THE SATISFACTION OF THE CITY." UFC SECTION 901.3.
14. "ALL DESIGNATED EMERGENCY ACCESS ROADS SHALL BE POSTED PURSUANT TO FIRE DEPARTMENT STANDARDS" UFC SECTION 901.3.
15. "ONE-HOUR FIRE RATED CORRIDORS SHALL HAVE DOOR OPENINGS PROTECTED BY TIGHT-FITTING SMOKE AND DRAFT CONTROL ASSEMBLIES RATED 20 MINUTES, EXCEPT OPENINGS IN INTERIOR WALLS OF EXTERIOR EXIT BALCONIES. DOORS SHALL BE MAINTAINED SELF-CLOSING OR BE AUTOMATIC CLOSING BY ACTION OF A SMOKE DETECTOR PER C.B.C. SECTION 907.2.10. DOORS SHALL BE GASKETED TO PROVIDE A SMOKE AND DRAFT SEAL WHERE THE DOOR MEETS THE STOP ON SIDES AND TOP." C.B.C. SECTION 715.4.
16. "ELECTRICAL-ALL CIRCUIT BREAKER SHALL BE LABELED TO CLEARLY INDICATE AREAS SERVED. THE MAIN ELECTRICAL SHUT-OFF SHALL BE IDENTIFIED WITH EITHER THE BUSINESS NAME OR THE BUSINESS ADDRESS." NEC
17. "NATURAL GAS- THE MAIN GAS SHUT-OFF TO THE BUILDING SHALL BE LABLED WITH EITHER THE BUSINESS NAME OR THE BUSINESS ADDRESS. PROTECTIVE STEEL POSTS FILLED WITH CONCRETE SHALL BE PLACED AROUND ALL METERS SUBJECT TO VEHICULAR TRAFFIC." UFC SECTION 1106.
18. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC ARTICLE 87 (UFC/CFC SEC. 8701.)
19. ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY (UFC/CFC SEC. 901.4.4, FHPS POLICY P-00-6.)
20. DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME RETARDANT CONDITION. (CAL CODE REGS., TIT. 19, SEC. 3.08, 3.21, UFC/CFC SEC. 2501.5.
21. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2A10BC SHALL BE PROVIDED WITHIN 75' MAXIMUM TRAVEL DISTANCE FOR EACH 6000 SQ. FT. OR PORTION THEREOF ON EACH FLOOR. (UFC/CFC SEC. 1002, UFC STANDARD 10-1, CAL. CODE REGS., TIT. 19, 3.29.
22. COMPLETE PLANS AND SPECIFICATIONS FOR FIRE ALARM SYSTEMS; FIRE-EXTINGUISHING SYSTEMS, INCLUDING AUTOMATIC SPRINKLERS AND WET & DRY STANDPIPES; HALON SYSTEMS AND OTHER SPECIAL TYPES OF AUTOMATIC FIRE -EXTINGUISHING SYSTEMS; BASEMENT PIPE INLETS; AND OTHER FIRE-PROTECTION SYSTEMS AND APPURTENANCES THERETO SHALL BE SUBMITTED TO FIRE AND HAZARD PREVENTION SERVICES FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. (UFC/CFC SEC. 1001.3)
23. FIRE-EXTINGUISHING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.B.C. SEC. 904 & SEC. 906.
24. WHEN SERVING MORE THAN 24 SPRINKLER HEADS, AUTOMATIC SPRINKLER SYSTEMS SHALL BE SUPERVISED BY AN APPROVED CENTRAL, PROPRIETARY OR REMOTE, STATION SERVICE, OR SHALL BE PROVIDED WITH A LOCAL ALARM WHICH WILL GIVE AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED LOCATION.
25. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 4-A-20BC SHALL BE PROVIDED OUTSIDE EACH MECHANICAL, ELECTRICAL, OR BOILER ROOM. (UFC/CFC SEC. 1002, UFC STANDARD 10-1, CAL. CODE REGS., TIT 19, SEC. 3.29)
26. FIRE PROTECTION, INCLUDING FIRE APPARATUS ACCESS ROADS AND WATER SUPPLIES FOR FIRE PROTECTION, SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING TIME OF CONSTRUCTION. (UFC/CFC SEC. 901.3, 8704.2, 8704.3)
27. NOT USED
28. FIRE HYDRANT LOCATIONS SHALL BE IDENTIFIED BY THE INSTALLATION OF REFLECTIVE MARKERS. (UFC/CFC SEC. 901.4.3)
29. NOTE USED
31. FIRE DEPARTMENT SHALL HAVE ACCESS TO ANY LOCKED COMMON AREAS.
32. APPROPRIATE ACCESS SHALL BE MAINTAINED FOR FIRE DEPARTMENT PERSONNEL AND VEHICLES.

FIRE REQUIREMENT NOTES

1. ALL STRUCTURES SHALL BE SPRINKLERED AND ALARMED
2. ALL OVERHANGS & VEGETATION SHALL PROVIDE A MIN. OF 14'-0" CLEARANCE. ALL VEGETATION ON OVERHANGS TO BE MAINTAINED.
3. 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 ON THE TITLE SHEET.
4. 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.
5. 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 SOLANA BEACH FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. CFC 901.2.
6. COMPLETE PLANS AND SPECIFICATIONS FOR FIRE ALARM SYSTEMS SHALL BE SUBMITTED TO THE CITY OF SOLANA BEACH DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. CFC 907.1.1.
7. LOCATIONS AND CLASSIFICATIONS OF EXTINGUISHERS SHALL BE IN ACCORDANCE WITH CFC 906 AND CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 19.
8. DURING CONSTRUCTION, AT LEAST ONE EXTINGUISHER SHALL BE PROVIDED ON EACH FLOOR LEVEL AT EACH STAIRWAY, IN ALL STORAGE AND CONSTRUCTION SHEDS, IN LOCATIONS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED OR USED, AND WHERE OTHER SPECIAL HAZARDS ARE PRESENT PER CFC SECTION 3315.1.
9. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL CONFORM TO CFC CHAPTER 33. WELDING, CUTTING, AND OTHER HOT WORK SHALL BE IN CONFORMANCE WITH CFC CHAPTER 35.
10. ADDRESS IDENTIFICATION SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A LOCATION THAT IS PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. WHERE ACCESS IS BY WAY OF A PRIVATE ROAD AND THE BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, AN APPROVED SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. PREMISES IDENTIFICATION SHALL BE CONFORM TO CBC SECTION 501.2.
11. WALL, FLOOR AND CEILING FINISHES AND MATERIALS SHALL NOT EXCEED THE INTERIOR FINISH CLASSIFICATIONS IN CBC TABLE 803.9 AND SHALL MEET THE FLAME PROPAGATION PERFORMANCE CRITERIA OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 19, DIVISION 1. DECORATIVE MATERIALS SHALL BE PROPERLY TREATED BY A PRODUCT OR PROCESS APPROVED BY THE STATE FIRE MARSHAL WITH APPROPRIATE DOCUMENTATION PROVIDED TO THE CITY OF SOLANA BEACH.
12. KEY BOXES SHALL BE PROVIDED FOR ALL HIGH-RISE BUILDINGS, 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 ACCESS TO AN AREA IS RESTRICTED.
13. 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.
14. 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.
15. OPEN FLAMES, FIRE, AND BURNING ON ALL PREMISES IS PROHIBITED EXCEPT AS SPECIFICALLY PERMITTEDBY THE CITY OF ESCONDIDO AND CFC 308.
16. THE EGRESS PATH SHALL REMAIN FREE AND CLEAR OF ALL OBSTRUCTIONS AT ALL TIMES. NO STORAGE IS PERMITTED IN ANY EGRESS PATHS.

FIRE CODE NOTES

1. DRAFT STOPS SHALL BE INSTALLED IN FLOOR-CEILING ASSEMBLIES OF BUILDINGS HAVING MORE THAN ONE DWELLING UNIT AND IN HOTELS. SUCH DRAFT STOPS SHALL BE IN LINE WITH WALLS SEPARATING INDIVIDUAL DWELLING UNITS AND GUEST ROOMS FROM EACH OTHER AND FROM OTHER AREAS.
2. SEE FIRE SPRINKLER NOTES FOR ADDITIONAL INFORMATION
3. FIRE-RESISTIVE EXTERIOR WALL CONSTRUCTION SHALL BE MAINTAINED THROUGH ATTIC AREAS OR OTHER AREAS CONTAINING CONCEALED SPACES.
4. PENETRATIONS OF FIRE-RESISTIVE WALLS, FLOOR-CEILINGS AND ROOF-CEILINGS SHALL BE PROTECTED AS REQUIRED IN C.B.C. SEC. 712. NO HAZARDOUS MATERIAL PER C.B.C. TABLE 307.1 (1) AND TABLE 307.1(2) SHALL BE PRODUCED, STORED, OR USE IN ANY PORTION OF THE BUILDING.
5. POST "NO PARKING - FIRE LANE" SIGN(S) PER CVC 22500.1 & UFC 901.4.2. 8. ALL DESIGNATED EMERGENCY ACCESS ROADS SHALL BE POSTED PURSUANT TO FIRE DEPARTMENT STANDARDS.
6. ALL TWO-WAY TRAFFIC AISLES SHALL BE A MINIMUM OF 24 FEET WIDE, AND EMERGENCY ACCESS SHALL BE PROVIDED AND MAINTAINED FREE AND CLEAR A MINIMUM OF 24 FEET WIDE AT ALL TIMES DURING CONSTRUCTION IN ACCORDANCE WITH FIRE DEPARTMENT REQUIREMENTS.
7. ADDRESS NUMBERS SHALL BE CLEARLY VISIBLE FROM THE STREET FRONTING THE STRUCTURE. WHERE STRUCTURES ARE LOCATED OFF A ROADWAY ON LONG DRIVEWAYS, A MONUMENT SHALL BE PLACED AT THE ENTRANCE WHERE THE DRIVEWAY INTERSECTS THE MAIN ROADWAY. PERMANENT ADDRESS NUMBERS SHALL BE DISPLAYED ON THIS MONUMENT. MINIMUM FIVE INCH NUMBERS FOR RESIDENTIAL, AND EIGHT INCH MINIMUM FOR COMMERCIAL.

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

FIRE NOTES

TS1-1

© 2018 foundationformarchitecture | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of foundationformarchitecture, and were created, evolved, and developed on instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of foundationformarchitecture.

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2013 CALIFORNIA ELECTRICAL CODE.
2. ALL INTERIOR LIGHTING SYSTEMS SHALL COMPLY WITH CALIFORNIA ENERGY COMMISSION STANDARDS.
3. ALL RESIDENTIAL RECEPTACLES SHALL BE CHILD PROOF.

MECHANICAL / PLUMBING NOTES

1. ALL MECHANICAL WORK SHALL COMPLY WITH THE 2013 CALIFORNIA PLUMBING CODE.
2. ALL PLUMBING WORK SHALL COMPLY WITH THE 2013 CALIFORNIA PLUMBING CODE.
3. HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS SHALL COMPLY WITH CALIFORNIA ENERGY COMMISSION STANDARDS.
4. 5 AIR CHANGES PER HOUR FOR BATHROOM AND LAUNDRY VENTILATION.
5. OVERFLOW ROOF DRAINS SHALL BE 2" ABOVE THE LOW POINT OF THE ROOF (SEC. 1101.11.2.1, CPC)
6. LAVATORY FAUCETS IN RESTROOMS OF COMMERCIAL PROJECTS SHALL BE THE SELF-CLOSING TYPE.
7. SHOWERS AND TUB/SHOWER COMBINATIONS SHALL BE PROVIDED WITH MIXING VALVES PER CPC SEC. 420.0.
8. EACH FAUCET SHALL NOT EXCEED A WATER FLOW RATE OF 2.2 GPM.
9. EACH SHOWERHEAD SHALL NOT EXCEED A WATER FLOW RATE OF 2.5 GPM.
10. EACH TOILET SHALL BE THE ULTRA LOW FLUSH TYPE.
11. EACH URINAL SHALL HAVE A WATER CONSUMPTION OF NOT MORE THAN 1 GALLON PER FLUSH.
12. VACUUM BREAKERS SHALL BE PROVIDED AT ALL HOSE BIBBS.
13. FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE SYSTEM AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS .
14. SERVICE WATER HEATING SYSTEMS AND EQUIPMENT SHALL COMPLY WITH ENERGY EFFICIENCY STANDARDS SEC. 113.
15. SWIMMING POOL AND SPA HEATING SYSTEMS AND EQUIPMENT SHALL COMPLY WITH ENERGY EFFICIENCY STANDARDS SEC. 114.
16. SMOKE DETECTORS SHALL BE PROVIDED AT SUPPLY AIR DUCTS OF AIR MOVING SYSTEMS EXCEEDING 2000 CFM PER CMC SEC. 608.
17. PERMANENT LADDER/ACCESS TO ROOF MOUNTED EQUIPMENT SHALL COMPLY WITH CMC SEC. 307.
18. BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH CPC SEC. 701.0.
19. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
20. CHEMICAL WASTE PIPING SHALL COMPLY WITH CPC SEC. 811.0.
21. ALL STORAGE WATER HEATING EQUIPMENT SHALL BE PROVIDED WITH AN APPROVED, LISTED EXPANSION TANK OR OTHER DEVICE DESIGNED FOR INTERMITTENT OPERATION FOR THERMAL EXPANSION CONTROL PER CPC SEC. 608.3.
22. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT EXCEPT THOSE SPECIFIC ITEMS LISTED IN INFORMATION BULLETIN 103.
23. WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENTS DUE TO EARTHQUAKE MOTION PER 508.2 CPC.
24. MATERIALS EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH CMC SEC. 601.1.3.
25. CHLORINATED POLYVINYL CHLORIDE (CPVC) SHALL NOT BE USED FOR INTERIOR WATER SUPPLY PIPING PER STATE HEALTH & SAFETY CODE SEC. 17921.9.
26. HVAC EQUIPMENT AND WATER HEATERS SHALL COMPLY WITH CMC CHAP. 3.
27. MEDIUM PRESSURE GAS PIPING SHALL BE LABELED EVERY FIVE FEET.
28. MECHANICAL VENTILATION, WHEN REQUIRED IN RESIDENTIAL BATHROOMS AND LAUNDRY ROOMS AS APPLICABLE PER CBC SEC. 1203, SHALL PROVIDE A MINIMUM OF FIVE AIR CHANGES PER HOUR AND BE ROUTED TO THE EXTERIOR.
29. WATER HEATER SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION PER SECTION 508.2 CPC.

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

MEP NOTES

TS1-2

DISABLED ACCESS NOTES (CONTINUED)

C. ADJACENT TO THE LATCH OUTSIDE THE SANITARY FACILITIES DOOR, PROVIDE RAISED LETTERS AND BRAILLE CONFORMING WITH C.B.C. SEC. 1117B.5.5. IF THERE IS NO WALL SPACE ON THE LATCH SIDE, SIGNS SHALL BE ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. THE CENTER OF THE SIGN SHALL BE 60" HIGH, MOUNTED SO A PERSON MAY APPROACH WITHIN 3" WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR DOOR SWING. (C.B.C. SEC. 1117B.5.7)

D. TOILET FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS, NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. PER FOOT. (C.B.C. SEC. 1115B.4.1, ITEM 5)

E. WHERE URINALS ARE PROVIDED AT LEAST ONE WITH A RIM PROJECTING A MINIMUM OF 14" FROM THE WALL AND AT A MAXIMUM OF 17" ABOVE THE FLOOR SHALL BE PROVIDED. (C.B.C. SEC. 1115B.4.2, ITEM 1)

F. URINAL FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST AND SHALL BE MOUNTED NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT. (C.B.C. SEC. 1115B.4.2, ITEM 2)

G. HOT WATER AND DRAINPIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES. (C.B.C. SEC. 1115B.4.3, ITEM 4)

H. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT. LEVER OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS. (C.B.C. SEC. 1115B.4.3, ITEM 1)

J. MIRRORS SHALL BE MOUNTED WITH THE BOTTOM EDGE NOT MORE THAN 40" ABOVE THE FLOOR. (C.B.C. SEC. 1115B.8.1)

K. LOCATE TOWEL, SANITARY NAPKIN, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS NOT MORE THAN 40" FROM THE FLOOR. (C.B.C. SEC. 1115B.8.3)

L. LOCATE TOILET TISSUE DISPENSERS ON THE WALL OR PARTITION WITHIN 12" OF THE FRONT EDGE OF THE TOILET SEAT AND 19" MIN ABOVE THE FLOOR, AND 36" MAX. TO THE FAR EDGE FROM THE REAR WALL. (C.B.C. SEC. 1115B.8.4)

M. GRAB BARS, TUB AND SHOWER SEATS, FASTENERS AND MOUNTING DEVICES SHALL BE DESIGNED FOR 250 LBS. PER LINEAR FOOT LOAD. (C.B.C. SEC. 1115B.7.2)

N. GRAB BARS:
   1. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACE OF A GRAB BAR SHALL BE 1-1/4" TO 1-1/2" OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. (C.B.C. SEC. 1115B.7.1)
   2. IF THE GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BARS SHALL BE 1-1/2". (C.B.C. SEC. 1115B.7.1)
   3. A GRAB BAR AND ANY WALL OR ANY OTHER SURFACE ADJACENT SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS. (C.B.C. SEC. 1115B.7.3)
   4. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS. (C.B.C. SEC. 1115B.7.2, ITEM 5)
   5. EDGES SHALL BE FREE OF ANY SHARP OR ABRSASIVE ELEMENTS AND HAVE A MINIMUM RADIUS OF 1/8 INCH. (C.B.C. SEC. 1115B.7.3)
   6. THE STRUCTURAL STRENGTH OF GRAB BARS, TUB, AND SHOWER SHEETS, FASTENERS, AND MOUNTING DEVICES SHALL MEET THE SPECIFICATIONS OF C.B.C. SEC. 1115B.7.2)

8. SWITCHES CONTROL AND ELECTRICAL OUTLETS

A. THE TOP OF THE GRIP OF THE OPERATING HANDLE OF SWITCHES USED TO CONTROL LIGHT SWITCHES, THERMOSTATS, AND OTHER ENVIROMENTAL CONTROLS SHALL BE LOCATED NO HIGHER THAN 48" AND THE BOTTOM NO LOWER THAN 15" ABOVE THE FINISH FLOOR. (C.B.C. SEC. 1117B.6, ITEM 5.1)

B. IF THE REACH IS OVER AN OBSTRUCTION BETWEEN 20 AND 25" IN DEPTH, THE MAX. HEIGHT IS REDUCED TO 44" FOR FORWARD APPROACH, OR 46" FOR SIDE APPROACH PROVIDED THE OBSTRUCTION IS NO MORE THAN 24" IN DEPTH. OBSTRUCTION MAY NOT EXTEND MORE THAN 25 INCHES FROM THE WALL BENEATH A CONTROL.

C. THE TOP OF 30 AMPERES OR LESS ELECTRICAL OUTLETS MUST BE INSTALLED NO HIGHER THAN 48" AND THE BOTTOM NO LOWER THAN 15" ABOVE THE FINISH FLOOR. IF THE OUTLET IS OVER AND OBSTRUCTION, COMPLY WITH THE REQUIREMENTS SPECIFIED IN ITEM B ABOVE. (C.B.C. SEC. 1117B.6, ITEM 5.2)

D. THE TOP OF FIRE ALARM INITIATING DEVICES SHALL BE LOCATED 48" ABOVE THE LEVEL OF THE FLOOR, WORKING PLATFORM, GROUND SURFACE, OR SIDEWALK.

E. IF EMERGENCY WARNING SYSTEMS ARE REQUIRED THEY SHALL ACTIVATE. A MEANS OF WARNING THE HEARING IMPAIRED. FLASHING VISUAL WARNING SHALL HAVE A PERFECT FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE

DWELLING UNITS

11. ALL DWELLING UNITS ALONG THE ACCESSIBLE ROUTE SHALL BE ADAPTABLE. (C.B.C. SEC. 1133A.1)

12. ADAPTABLE DWELLING UNIT KITCHENS

A. ALL DWELLING UNITS WITH A BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE SHALL BE DEFINED AS AN ADAPTABLE DWELLING UNIT AND FOLLOW THE REQUIREMENTS OF THIS SECTION AND SHALL BE DESIGNED IN SUCH A MANNER THAT THE BATHROOMS AND KITCHENS ARE READILY ACCESSIBLE AND CAPABLE OF ALTERING OR ADDING TO ACCOMMODATE DISABLED PERSONS.

B. U-SHAPED KITCHENS WITH CABINETS, APPLIANCES OR FIXTURES ON THREE WALLS SHALL BE DESIGNED AND CONSTRUCTED TO PROVIDE A MINIMUM CLEAR SPACE OF 60" BETWEEN CABINET FRONTS, APPLIANCES OR FIXTURES TO ALLOW A PARALLEL APPROACH. A MINIMUM CLEAR SPACE OF 48" MUST BE PROVIDED FOR ALL OTHER KITCHEN DESIGNS. (C.B.C. SEC. 1133A.2.1, ITEM 1 & 3)

C. KITCHEN SINK FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OF TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. (C.B.C. SEC. 1133A.6)

D. A MIN. LINEAR LENGTH OF 30 INCH COUNTERTOP SHALL BE PROVIDED FOR KITCHEN SINK, AND A MIN. LINEAR LENGTH OF 30" OF COUNTERTOP SHALL BE PROVIDED FOR A WORK SURFACE, BOTH OF WHICH SHALL BE DESIGNED TO ENABLE REPOSITIONING TO A MIN. HEIGHT OF 28". THE BASE CABINETS DIRECTLY UNDER THE SINK AND WORK SURFACE COUNTER AREAS WHICH ARE DESIGNED FOR REPOSITIONING SHALL BE REMOVABLE TO PROVIDE CLEARANCE FOR A WHEEL CHAIR. FINISHED FLOORING SHALL BE INSTALLED ON THE FLOOR BENEATH THE REMOVABLE KITCHEN COUNTERTOPS. THE SIDE AND BACK OF ADJACENT CABINETS, WHICH MAY BECOME EXPOSED TO MOISTURE OR FOOD HANDLING WHEN A COUTNERTOP IS LOWERED, SHALL BE CONSTRUCTED OF DURABLE, NON-ABSORBENT MATERIAL APPROPRIATE FOR SUCH USES. ONLY 5% OF THE DWELLING UNITS THAT ARE REQUIRED TO BE ACCESSIBLE ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS FOR REPOSITIONABLE COUNTERTOPS. STONE, CULTURED STONE AND TILED COUNTERTOPS MAY BE USED WITHOUT MEETING THE REPOSITIONING REQUIREMENTS. 2 15 INCH MIN. WIDTH BREADBOARDS MAY BE PROVIDED IN LIEU OF THE REQUIRED 30" OF COUNTERTOP WORK SURFACE. (C.B.C. SEC. 1133A.4 & SEC. 1133A.4.1)

DISABLED ACCESS NOTES (CONTINUED)

P. EVERY REQUIRED EXIT MUST BE LARGE ENOUGH TO PERMIT A DOOR AT LEAST THREE FEET WIDE AND 6 FEET 8" HIGH. EXIT DOORS SHALL OPEN AT LEAST 90 DEGREES AND PROVIDE A CLEAR WIDTH OF AT LEAST 32". A 34 INCH WIDE DOOR IS ACCEPTABLE WITHIN THE UNIT PROVIDED A 32 INCH CLEAR OPENING IS MAINTAINED. (C.B.C. SEC. 1126A.1)

Q. THRESHOLDS AT EXTERIOR DOORS OTHER THAN PRIMARY ENTRANCES SHALL BE NO HIGHER THAN 3/4 INCH. SUCH THRESHOLDS SHALL BE BEVELED AT A SLOPE NO GREATER THAN 1:2. (C.B.C. SEC. 1132A.4.1)

R. THE FLOOR LANDING IMMEDIATELY OUTSIDE THE ENTRY MAY BE SLOPED UP TO 1/8 INCH PER FOOT IN THE DIRECTION AWAY FROM THE PRIMARY ENTRANCE FOR DRAINAGE.

S. EXTERIOR DECK, PATIO, OR BALCONY SURFACES SHALL BE NO MORE THAN ½" BELOW THE FLOOR LEVEL OF THE INTERIOR OF THE DWELLING UNIT, UNLESS IT IS CONSTRUCTED OF IMPERVIOUS MATERIAL. IN SUCH A CASE, THE SURFACE SHALL BE NO MORE THAN 4" BELOW THE FLOOR LEVEL OF THE INTERIOR OF THE DWELLING UNIT, OR LOWER IF REQUIRED BY LOCAL BUILDING CODES.

T. THE SPACE BETWEEN TWO CONSECUTIVE DOOR OPENINGS IN A VESTIBULE SERVING OTHER THAN A REQUIRED EXIT STAIRWAY, MUST HAVE AT LEAST 48" OF CLEAR SPACE FROM ANY DOOR OPENING INTO THE VESTIBULE WHEN THE DOOR IS POSITIONED 90 DEGREES FROM ITS CLOSED POSITION. DOORS IN A SERIES MUST SWING EITHER IN THE SAME DIRECTION OR AWAY FROM THE SPACE BETWEEN THE DOORS. (C.B.C. SEC. 1126A.3.3)

U. INTERIOR PASSAGE DOOR IN A COVERED DWELLING UNIT MUST PROVIDE A MIN. OF 32" CLEAR SPACE BETWEEN THE FACE OF THE DOOOR AND THE DOOR STOP WHEN THE DOOR IS IN THE 90 DEGREE OPEN POSITION. A 34" DOOR IS ACCEPTABLE, AND STANDARD 6' SLIDING GLASS DOOR IS ACCEPTABLE. (C.B.C. SEC. 1132A.3)

V. INTERIOR PASSAGE HALLWAYS SHALL BE A MIN. OF 36" WIDE. (C.B.C. SEC. 1120A.1)

6. STAIRWAYS

A. STAIRWAYS SHALL HAVE HANDRAILS ON EACH SIDE. A STAIRWAY MORE THAN 88" WIDE MUST HAVE AT LEAST ONE INTERMEDIATE RAIL FOR EACH 88" OF REQUIRED WIDTH. INTERMEDIATE HANDRAILS SHALL BE SPACED AT EQUAL INTERVALS WITHIN THE WIDTH OF THE STAIRWAY AND BE CONTINUOUS FOR THE ENTIRE LENGTH. (C.B.C. SEC. 1115A.6.1)

B. HANDRAILS MUST BE 34" TO 38" ABOVE THE NOSING OF THE TREADS AND MUST EXTEND IN THE DIRECTION OF THE STAIR RUN FOR AT LEAST 12" BEYOND THE TOP NOSING AND 12" PLUS THE TREAD WIDTH BEYOND THE BOTTOM NOSING. (C.B.C. SEC. 1115A.6.2 & SEC. 1115A.6.2.3)

C. WHERE THE EXTENSION OF THE HANDRAIL IN THE DIRECTION OF THE STAIR RUN WOULD CREATE A HAZARD, THE EXTENSION SHALL BE MADE AT RIGHT ANGLES ON THE FACE OF A RETURNING WALL WHERE THE STAIRS ARE CONTINUOUS FROM LANDING TO LANDING. THE INNER RAIL SHALL BE CONTINUOUS AND NOT EXTEND OUT ONTO THE LANDING. (C.B.C. SEC. 1115A.6.2.3)

D. ENDS SHALL BE RETURNED OR SHALL TERMINATE IN A NEWEL POST OR SAFETY TERMINAL.

E. STAIRWAY HANDRAILS PROJECTING FROM A WALL ARE TO BE 1-1/2" FROM THE WALL. HANDRAILS MAY BE LOCATED IN A RECESS NO MORE THAN 3" DEEP EXTENDING AT LEAST 18" ABOVE THE TOP OF THE RAIL (SEC. 1115A.6.2.4)

F. THE STAIRWAY HAND GRIP MUST BE BETWEEN 1-1/4" TO 2" WIDE, OR THE SHAPE MUSTE PROVIDE AN EQUIVALENT SMOOTH GRIPPING SURFACE. SURFACE OF HANDRAILS AND ADJACENT WALLS MUST BE FREE OF ANY SHARP OR ABRASIVE ELEMTENTS. EDGES MUST HAVE A MINIMUM RADIUS OF 1/8". (C.B.C. SEC. 1115A.6.2.5)

G. THE UPPER APPROACH AND LOWER TREAD TO EACH INTERIOR STAIR SHALL HAVE A CLEARLY CONTRASTING COLOR STRIP AT LEAST 2" WIDE PARALLEL TO & WITHIN 1" OF THE NOSING. THE STRIP SHALL BE AT LEAST AS SLIP-RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIP IS ACCEPTABLE. (C.B.C. SEC. 1123A.5)

H. WHERE STAIRWAYS OCCUR OUTSIDE A BUILDING, THE UPPER APPROACH AND ALL TREADS OUTSIDE SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR AT LEAST 2" WIDE AND TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP-RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIP SHALL BE ACCEPTABLE. (C.B.C. SEC. 1115A.5)

J. ALL TREAD SURFACES SHALL BE SLIP-RESISTANT (C.B.C. SEC. 1115A.3)

K. TREADS SHALL HAVE SMOOTH, ROUNDED OR BEVELED EDGES AND NO ABRUPT EDGES AT THE NOSE. (C.B.C. SEC. 1115A.3)

L. NOSING SHALL NOT PROJECT MORE THAN 1-1/2" PAST THE FACE OF THE RISER BELOW. (C.B.C. SEC. 1115A.4)

M. APPROVED STAIRWAY IDENTIFICATION SIGNS SHALL BE LOCATED AT EACH FLOOR LEVEL LANDING IN ALL ENCLOSED STAIRWAYS IN A BUILDING TWO OR MORE STORIES IN HEIGHT. FOR SPECIFIC REQUIREMENTS REGARDING SUBJECT MATTER OF THE SIGN, THE USE OF ARABIC AND BRAILLE SYMBOLS HEIGHT, VISIBILITY. PER SECTION 1117B.5.1 AND 1011.3.

N. STAIR RISER SHALL BE SUFFICIENTLY SOLID TO PREVENT THE PASSAGE OF OBJECTS LARGER THAT 0.500 INCH.

O. IN COVERED MULTI-FAMILY BUILDINGS, OPEN RISERS ARE NOT PERMITTED ALONG ACCESSIBLE ROUTES. (C.B.C. SEC. 1115A.2)

P. EVERY REQUIRED EXIT MUST BE LARGE ENOUGH TO PERMIT A DOOR AT LEAST THREE FEET WIDE AND 6 FEET 8" HIGH. EXIT DOORS SHALL OPEN AT LEAST 90 DEGREES AND PROVIDE A CLEAR WIDTH OF AT LEAST 32". A 34 INCH WIDE DOOR IS ACCEPTABLE WITHIN THE UNIT PROVIDED A 32 INCH CLEAR OPENING IS MAINTAINED. (C.B.C. SEC. 1126A.1)

Q. THRESHOLDS AT EXTERIOR DOORS OTHER THAN PRIMARY ENTRANCES SHALL BE NO HIGHER THAN 3/4 INCH. SUCH THRESHOLDS SHALL BE BEVELED AT A SLOPE NO GREATER THAN 1:2. (C.B.C. SEC. 1132A.4.1)

R. THE FLOOR LANDING IMMEDIATELY OUTSIDE THE ENTRY MAY BE SLOPED UP TO 1/8 INCH PER FOOT IN THE DIRECTION AWAY FROM THE PRIMARY ENTRANCE FOR DRAINAGE.

S. EXTERIOR DECK, PATIO, OR BALCONY SURFACES SHALL BE NO MORE THAN ½" BELOW THE FLOOR LEVEL OF THE INTERIOR OF THE DWELLING UNIT, UNLESS IT IS CONSTRUCTED OF IMPERVIOUS MATERIAL. IN SUCH A CASE, THE SURFACE SHALL BE NO MORE THAN 4" BELOW THE FLOOR LEVEL OF THE INTERIOR OF THE DWELLING UNIT, OR LOWER IF REQUIRED BY LOCAL BUILDING CODES.

T. THE SPACE BETWEEN TWO CONSECUTIVE DOOR OPENINGS IN A VESTIBULE SERVING OTHER THAN A REQUIRED EXIT STAIRWAY, MUST HAVE AT LEAST 48" OF CLEAR SPACE FROM ANY DOOR OPENING INTO THE VESTIBULE WHEN THE DOOR IS POSITIONED 90 DEGREES FROM ITS CLOSED POSITION. DOORS IN A SERIES MUST SWING EITHER IN THE SAME DIRECTION OR AWAY FROM THE SPACE BETWEEN THE DOORS. (C.B.C. SEC. 1126A.3.3)

U. INTERIOR PASSAGE DOOR IN A COVERED DWELLING UNIT MUST PROVIDE A MIN. OF 32" CLEAR SPACE BETWEEN THE FACE OF THE DOOOR AND THE DOOR STOP WHEN THE DOOR IS IN THE 90 DEGREE OPEN POSITION. A 34" DOOR IS ACCEPTABLE, AND STANDARD 6' SLIDING GLASS DOOR IS ACCEPTABLE. (C.B.C. SEC. 1132A.3)

V. INTERIOR PASSAGE HALLWAYS SHALL BE A MIN. OF 36" WIDE. (C.B.C. SEC. 1120A.1)

7. PUBLIC SANITARY FACILITIES

A. SANITARY FACILITIES THAT SERVE BUILDINGS, FACILITIES OR PORTIONS OF BUILDINGS OR FACILITIES THAT ARE REQUIRED TO BE ACCESSIBLE TO PERSONS WITH DISABILITIES ARE REQUIRED TO BE ACCESSIBLE.

B. WATER CLOSET COMPARTMENTS SHALL BE EQUIPPED WITH A DOOR THAT HAS AN AUTOMATIC CLOSING DEVICE AND SHALL HAVE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32" WHEN LOCATED AT THE END AND 34" WHEN LOCATED AT THE SIDE WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION. (C.B.C. SEC. 1126A.1, ITEM 1)

DISABLED ACCESS NOTES (CONTINUED)

F. THE SURFACE OF ALL RAMPS SHALL BE SLIP RESISTANT. OUTDOOR RAMPS AND THEIR APPROACHES SHALL BE CONSTRUCTED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.

G. TOP LANDINGS SHALL BE NOT LESS THAN 60" WIDE AND SHALL HAVE A LENGTH OF NOT LESS THAN 60" IN THE DIRECTION OF THE RAMP RUN. (C.B.C. SEC. 1114A.4.2)

H. INTERMEDIATE LANDINGS SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 30" OF VERTICAL RISE AT EACH CHANGE OF DIRECTION. INTERMEDIATE LANDINGS ARE TO BE AT LEAST 60" IN THE DIRECTION OF THE RAMP.

J. BOTTOM AND INTERMEDIATE LANDINGS AT A CHANGE IN DIRECTION OVER 30 DEGREES MUST BE AT LEAST 72" IN THE DIRECTION OF THE RAMP TO ACCOMMODATE THE HANDRAIL EXTENSION. (C.B.C. SEC. 1114A.4.6)

K. DOORS IN ANY POSITION SHALL NOT REDUCE THE MINIMUM DIMENSION OF THE RAMP LANDING TO LESS THAN 42" AND SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN 3" WHEN FULLY OPEN. (C.B.C. SEC. 1114A.4.4)

L. THE WIDTH OF THE LANDING SHALL EXTEND 24" PAST THE STRIKE EDGE OF ANY DOOR OR GATE FOR EXTERIOR RAMPS AND 18" PAST THE STRIKE EDGE FOR ANY INTERIOR RAMPS. (C.B.C. SEC. 1114A.4.5)

M. AT THE BOTTOM AND INTERMEDIATE LANDINGS, THE WIDTH SHALL BE AT LEAST THE SAME AS REQUIRED FOR THE RAMP.

N. SLOPES OF THE CURB RAMP FOR MULITFAMILY BUILDINGS SHALL NOT EXCEED 1:12 (8.33% SLOPE). THE SLOPE OF THE FANNED OR FLARED SIDES OF CURB RAMPS SHALL EXCEED 1:8 (12.5% SLOPE). IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, THE FLARED SIDES SHALL SLOPE 1:10 MAX. (C.B.C. SEC. 1112A.5)

P. A LEVEL LANDING 4' (1219 MM) DEEP SHALL BE PROVIDED AT THE UPPER END OF EACH CURB RAMP FOR MULTIFAMILY BUILDINGS OVER ITS FULL WIDTH, OR THE FANNED OR FLARED SIDES OF THE CURB RAMPS SHALL NOT SLOPE OVER 1:12 (8.33% SLOPE). (C.B.C. SEC. 1112A.6)

Q. THE LOWER END OF EACH CURB RAMP FOR MULTIFAMILY BUILDINGS SHALL HAVE A 1/2" (13MM) LIP BEVELED AT 45 DEGREES.

R. A CURB RAMP FOR MULTIFAMILY BUILDINGS SHALL HAVE A DETECTABLE WARNING THAT EXTENDS THE FULL WIDTH AND DEPTH OF THE CURB RAMP WHEN THE RAMP SLOPE IS LESS THAN 1 VERTICAL TO 15 HORIZONTAL (6.7% SLOPE). DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES AND VISUAL CONTRAST. (C.B.C. SEC. 1112A.9)

S. CURB RAMPS FOR MULTIFAMILY BUILDINGS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED CARS. (C.B.C. SEC. 1112A.2)

T. IF THE SIDE OF THE RAMP SURFACE OR LANDING HAS A VERTICAL DROP EXCEEDING 4" THAT IS NOT BOUNDED BY A WALL OR FENCE PROVIDE A CURB AT LEAST 2" HIGH, OR A WHEEL GUIDE RAIL 2 TO 4" HIGH. (C.B.C. SEC. 1114A.7, ITEM 2)

U. RAMPS SHALL NOT ENCROACH INTO ANY ACCESSIBLE PARKING SPACE OR THE ADJACENT ACCESS AISLE.

V. RAMPS SERVING R OCCUPANCIES MAY BE 36" CLEAR WIDTH WHEN SERVING 10 OR LESS OCCUPANTS. ALL OTHER RAMPS SHALL HAVE A MINIMUM WIDTH OF 48 INCHES. (C.B.C. SEC. 1114A.1)

W. WHERE A RAMP IS NOT BOUNDED BY A WALL OR FENCE AND THE RAMP EXCEEDS 10' IN LENGTH, THERE SHALL BE A CURB AT LEAST 2 INCHES HIGH, OR A WHEEL GUIDE RAIL CENTERED 2 - 4 INCHES. (C.B.C. SEC. 1114A.7)

X. CURB RAMPS SHALL BE CONSTRUCTED AT EACH CORNER OF STREET INTERSECTIONS AND WHERE PEDESTRIAN WAY CROSSES A CURB. (C.B.C. SEC. 1112A.1)

Y. CURB RAMPS SHALL BE A MINIMUM OF 4 FEET IN WIDTH AND SHALL BE, GENERALLY, IN A SINGLE SLOPED PLANE, WITH A MINIMUM OF SURFACE WARPING AND CROSS SLOPE. (C.B.C. SEC. 1112A.3)

5. ENTRANCES AND DOORWAYS

A. ALL PRIMARY ENTRANCES TO BUILDINGS AND FACILITIES SHALL BE MADE ACCESSIBLE TO THE PHYSICALLY DISABLED. (C.B.C. SEC. 1117A.2)

B. RECESSED DOORMATS SHALL BE ADEQUATELY ANCHORED TO PREVENT INTERFERENCE WITH WHEELCHAIR TRAFFIC. (C.B.C. SEC. 1110A.3.1)

C. EVERY PRIMARY ENTRANCE TO A DWELLING UNIT SHALL BE PROVIDED WITH A DOOR BUZZER, BELL, CHIME, OR EQUIVALENT INSTALLATION, MOUNTED A MAXIMUM OF 48" ABOVE THE FLOOR CONNECTED TO PERMANENT WIRING. (C.B.C. SEC. 1132A.10)

D. AT EVERY PRIMARY PUBLIC ENTRANCE AND AT EVERY MAJOR JUNCTION ALONG OR LEADING TO AN ACCESSIBLE ROUTE OF TRAVEL, THERE SHALL BE A SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SIGNS SHALL INDICATE THE DIRECTION TO ACCESSIBLE BUILDING ENTRANCES AND FACILITIES. (C.B.C. SEC. 1110A.2)

E. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL, SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE.

F. HAND ACTIVATED DOOR OPENING HARDWARE SHALL BE CENTERED BETWEEN 30" AND 44" ABOVE THE FLOOR, AND BE OPENABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE. (C.B.C. SEC. 1126A.6)

G. 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 A MINIMUM OF 60" SQUARE IN THE DIRECTION OF THE DOOR SWING AND A MINIMUM OF 44" SQUARE IN THE OPPOSITE DIRECTION OF DOOR SWING. THE SQUARES SHALL BE MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR ON ITS CLOSED POSITION. SEE NOTE J BELOW FOR STRIKE SIDE REQUIREMENTS. (C.B.C. SEC. 1126A.2)

H. IN EACH COVERED DWELLING UNIT OF MULTIFAMILY BUILDINGS, THE LEVEL AREA MUST BE 36" LONG MINIMUM IN BOTH DIRECTIONS AND OPPOSITE THE DIRECTION OF THE DOOR SWING. SEE NOTE J BELOW FOR STRIKE SIDE REQUIREMENTS.

J. THE WIDTH OF THE LEVEL AND CLEAR AREA ON THE SIDE TO WHICH THE DOOR SWING SHALL EXTEND 24" PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18" PAST THE STRIKE EDGE FOR INTERIOR DOORS AND THE PRIMARY ENTRANCE TO THE DWELLING UNIT. (C.B.C. SEC. 1126A.3.2)

K. THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2 INCH LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4 INCH AND 1/2 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2. (C.B.C. SEC. 1126A.2.1)

L. THE BOTTOM 10" OF ALL DOORS, EXCEPT AUTOMATED AND SLIDING DOORS, MUST HAVE A SMOOTH, UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. (C.B.C. SEC. 1126A.7)

M. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8-1/2 LBS. FOR EXTERIOR DOORS AND 5 LBS. FOR INTERIOR DOORS. SUCH PULL OR PUSH EFFORT SHALL BE APPLIED AT RIGHT ANGLES TO HINGED DOORS AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED UP TO EXCEED 15 LBS. (C.B.C. SEC. 1126A.4)

N. EXIT DOORS MUST OPEN FROM THE INSIDE WITHOUT A KEY, OR ANY SPECIAL KNOWLEDGE OR EFFORT. EXIT DOORS FROM BUILDINGS OR ROOMS SERVING 10 OR FEWER MAY HAVE A NIGHT LATCH, DEADBOLT, OR SECURITY CHAIN, AS LONG AS THE DOORS CAN STILL BE OPENED FROM THE INSIDE WITHOUT A KEY, SPECIAL KNOWLEDGE OR EFFORT. IN ADDITION, THESE DEVICES ARE NOT MOUNTED MORE THAN 48" ABOVE THE FLOOR. MANUALLY OPERATED EDGE BOLTS, SURFACE-MOUNTED FLUSH BOLTS AND SURFACE BOLTS ARE PROHIBITED. WHEN EXIT DOORS ARE USED IN PAIRS AND AUTOMATIC FLUSH BOLTS ARE USED, THE DOOR LEAF WITH THE FLUSH BOLT MUST HAVE NO DOORKNOBS OR SURFACE MOUNTED HARDWARE, THE UNLATCHING OF ANY LEAF MUST NOT REQUIRE MORE THAN ONE OPERATION.

DISABLED ACCESS NOTES

1. SITE DEVELOPMENT

A. GRADE AND DEVELOP SITE SO THAT ACCESSIBLE ROUTES OF TRAVEL ARE PROVIDED FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING, AND ACCESSIBLE PASSENGER LOADING ZONES, AND PUBLIC STREETS OR SIDEWALKS TO THE ACCESSIBLE ENTRANCE THEY SERVE. THE ACCESSIBLE ROUTE SHALL TO THE EXTENT FEASIBLE, COINCIDE WITH THE ROUTE FOR THE GENERAL PUBLIC.

B. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDING FACILITIES. WHERE ELEVATIONS AND SPACES ON THE SAME SITE ARE PROVIDED WITH MORE THAN ONE ROUTE OF TRAVEL, ALL ROUTES SHALL BE ACCESSIBLE.

C. IF AN ACCESSIBLE ROUTE HAS A CHANGE IN LEVEL GREATER THAN 1/2 INCH, THEN A CURB RAMP, RAMP, ELEVATOR, OR PLATFORM LIFT SHALL BE PROVIDED. STAIRS SHALL NOT BE PART OF AN ACCESSIBLE ROUTE.

D. ALL WALKS, HALLS, CORRIDORS, AISLES, AND OTHER SPACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 48" (4'-0") AND A CLEAR HEIGHT OF 80" (6'-8").

E. ALL COMMON USE AREAS THAT SERVE ADAPTABLE DWELLING UNITS SHALL BE ACCESSIBLE. THIS INCLUDES RECREATION BUILDINGS, POOLS, TRAILS, WALKS, PLAYGROUNDS, PARKING AREAS, ETC.

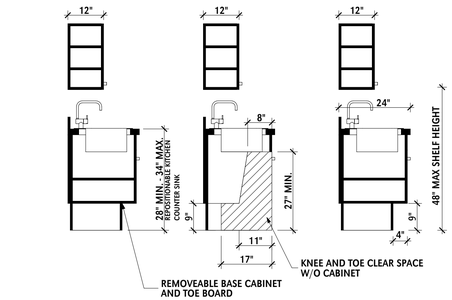
2. PARKING

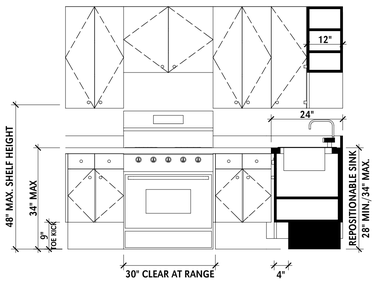
A. SURFACE SLOPES OF PARKING SPACES FOR THE PHYSICALLY DISABLED SHALL NOT EXCEED 1/4 INCH PER FOOT IN ANY DIRECTION.

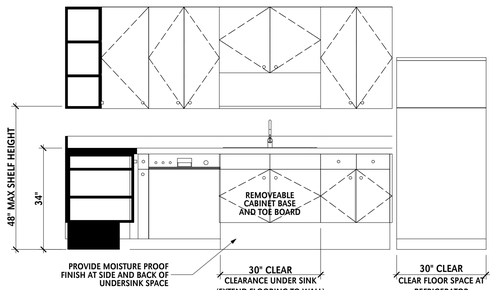
B. ALL ENTRANCES TO AND VERTICAL CLEARANCES WITHIN PARKING STRUCTURES SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 8'-2" WHERE REQUIRED FOR ACCESSIBILITY TO PARKING SPACES FOR PERSONS WITH PHYSICAL DISABILITIES. THE 8'-2" VERTICAL DIMENSION SHALL BE CLEAR OF ALL OBSTRUCTIONS INCLUDING BEAMS, SPRINKLER HEADS, PIPING, ETC.

C. ONE IN EVERY EIGHT ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, SHALL BE SERVED BY AN ACCESS AISLE 96" WIDE MINIMUM AND SHALL BE DESIGNATED VAN ACCESSIBLE WITH A SIGN "VAN ACCESSIBLE" MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY. REFER TO DETAIL 2 ON THIS SHEET.

D. EACH PARKING SPACE REQUIRED FOR THE DISABLED SHALL BE IDENTIFIED BY A SIGN CENTERED BETWEEN 3 FEET AND 5 FEET ABOVE THE PARKING SURFACE OF THE PARKING SPACE. AT THE HEAD OF THE PARKING SPACE THE SIGN SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED OR EQ

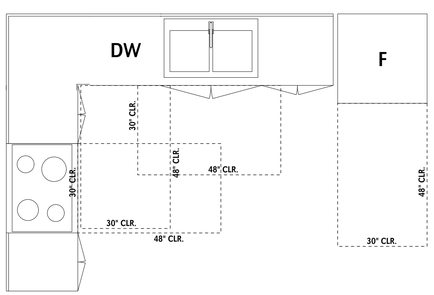




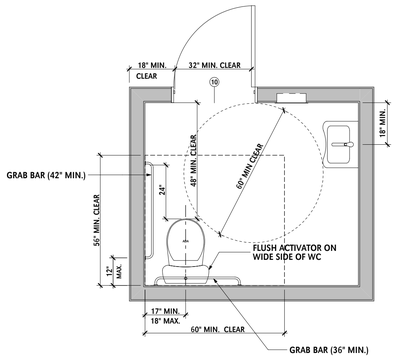


NOTES:

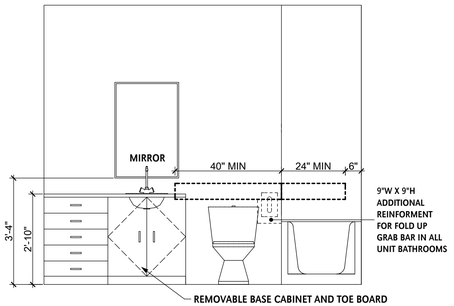
1. HOT WATER AND DRAIN PIPES EXPOSED UNDER SINKS SHALL BE INSULATED OR OTHERWISE COVERED.
2. FAUCET CONTROLS SHALL BE OPERABLE WITH ONE HAND, SHALL NOT REQUIRE GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED FOR OPERATION SHALL NOT BE GREATER THAN 5 LBS (22N).
3. REMOVABLE CABINETS SHALL BE REMOVABLE WITHOUT SPECIAL KNOWLEDGE OR TOOLS.
4. ALL ACCESSIBLE KITCHENS SHALL FOLLOW ALL REQUIREMENETS OF 2010 CBC 1133A
5. PLUMBING MUST BE INSTALLED IN A MANNER PERMITTING REPOSITIONING OF THE SINK AND COUNTERTOP.

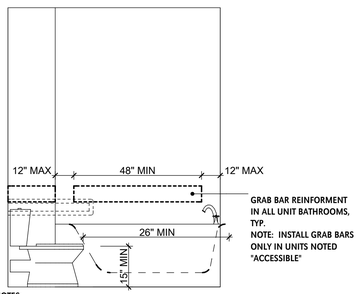


4 TYPICAL ACCESIBLE KITCHEN CLEARANCES



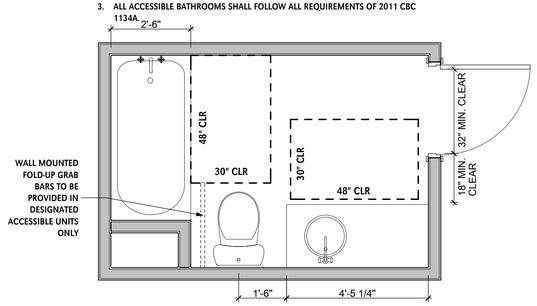
2 ACCESSIBLE COMMERCIAL RESTROOM CLEARANCES





NOTES:

1. HOT WATER AND DRAIN PIPES EXPOSED UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED.
2. FAUCET CONTROLS SHALL BE OPERABLE WITH ONE HAND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWITING OF THE WRIST. THE FORCE REQUIRED FOR OPERATION SHALL NOT BE GREATER THAN 5 LBS (22 N).
3. ALL ACCESSIBLE BATHROOMS SHALL FOLLOW ALL REQUIREMENTS OF 2011 CBC 1134A.



3 ADAPTABLE RESTROOM CLEARANCES

DISABLED ACCESS NOTES (CONTINUED)

F. WHERE A TOILET IS PLACED ADJACENT TO A SIDE WALL, REINFORCEMENTS SHALL BE INSTALLED ON BOTH SIDES OR ON ONE SIDE AND THE BACK. IF REINFORCEMENT IS INSTALLED AT THE BACK IT SHALL BE INSTALLED BETWEEN 32" AND 38" ABOVE THE FLOOR. THE GRAB BAR REINFORCEMENT SHALL BE A MINIMUM OF 6" IN HEIGHT AND 40" IN LENGTH CENTERED ON THE TOILET. (C.B.C. SEC. 1134A.7, ITEM 2)

G. WHERE THE TOILET IS NOT PLACED ADJACENT TO A SIDE WALL, THE BATHROOM SHALL HAVE PROVISIONS TO REINFORCE THE FLOOR MOUNTED, FOLDAWAY OR SIMILAR ALTERNATIVE GRAB BAR. (C.B.C. SEC. 1134A.7, ITEM 2)

H. WHERE A TUB IS INSTALLED WITH SURROUNDING WALLS, GRAB BAR REINFORCEMENT SHALL BE INSTALLED ON EACH END OF THE BATHTUB 32" TO 38" ABOVE THE FLOOR EXTENDING A MINIMUM OF 24 INCHES ALIGNED WITH THE FRONT EDGE OF THE BATHTUB TOWARDS THE BACK WALL OF THE BATHTUB. THE REINFORCEMENT SHALL BE 6" HIGH. REINFORCEMENT ALONG BACK WALL OF THE BATHTUB SHALL START 6" ABOVE THE BATHTUB RIM AND EXTEND UPWARD TO A POINT A MINIMUM OF 38" ABOVE THE FLOOR AND EXTENDING HORIZONTALLY TO WITHIN 6" OF THE END WALLS. (C.B.C. SEC. 1134A.5, ITEM 2)

15. PARKING (MISC.)

A. EACH LOT OR PARKING STRUCTURE WHERE PARKING IS PROVIDED FOR CLIENTS, GUESTS, EMPLOYEES, OR RESIDENTS SHALL PROVIDE ACCESSIBLE PARKING. (C.B.C. SEC. 1109A.1)

B. IF ASSIGNED PARKING IS PROVIDED AT PRIVATELY-FUNDED MULTIFAMILY BUILDING SITES, ACCESSIBLE PARKING ON AN ACCESSIBLE ROUTE SHALL BE PROVIDED FOR ATLEAST 2 PERCENT OF THE COVERED DWELLING UNITS, BUT NOT LESS THAN ONE. SIGNAGE IS NOT REQUIRED. (C.B.C. SEC. 1109A.3)

C. WHEN VISITOR PARKING IS PROVIDED A MINIMUM OF 5 PERCENT, BUT NOT LESS THAN ONE, OF VISITOR PARKING SHALL BE ACCESSIBLE. VISITOR PARKING SHALL BE PROVIDED WITH SIGNAGE. (C.B.C. SEC. 1109A.5)

D. ACCESSIBLE PARKING SHALL BE LOCATED ON THE SHORTEST POSSIBLE ACCESSIBLE ROUTE OF TRAVEL TO AN ACCESSIBLE BUILDING ENTRANCE. IN FACILITIES WITH MULTIPLE BUILDING ENTRANCES WITH ADJACENT PARKING, ACCESSIBLE PARKING SPACES SHALL BE DISPERSED AND LOCATED NEAR THE ACCESSIBLE ENTRANCES. (C.B.C. SEC. 1109A.7, ITEMS 1 & 2)

E. TWO ADJACENT ACCESSIBLE PARKING SPACES MAY BE PROVIDED WITH A 23 FOOT WIDE AREA LINED TO PROVIDE A 9 FOOT PARKING AREA ON EACH SIDE OF A 5 FOOT LOADING AND UNLOADING AREA IN THE CENTER. (C.B.C. SEC. 1109A.8.5, ITEM 2)

F. THE MINIMUM LENGTH OF EACH PARKING SPACE SHALL BE 18 FEET. (C.B.C. SEC. 1109A.8.5, ITEM 3)

G. WHEN PRACTICAL, THE ACCESSIBLE ROUTE OF TRAVEL SHALL NOT CROSS LANES FOR VEHICULAR TRAFFIC. WHEN CROSSING VEHICLE TRAFFIC LANES IS NECESSARY, THE ROUTE OF TRAVEL SHALL BE DESIGNATED AND MARKED AS A CROSSWALK. (C.B.C. SEC. 1109A.7, ITEM 3)

PARKING NOTES

1. SEE TITLE SHEET FOR FOR TOTAL NUMBER OF SPACES.

2. ACCESSIBLE PARKING SPACE REQUIREMENTS

A. ALL ACCESSIBLE PARKING SPACES SHALL COMPLY WITH (C.B.C. SEC. 1109A.8)

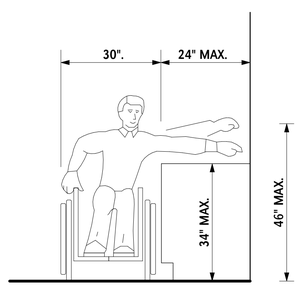
B. PROVIDE A BUMPER OR CURB AT EACH SPACE TO PREVENT ENCROCHMENT INTO REQUIRED WIDTH OF WALKWAYS (C.B.C. SEC. 1109A.8.2, ITEM 1)

C. ALL ACCESSIBLE PARKING ASPACES ARE TO BE IDENTIFIED BY A REFLECTORIZED SIGN, PERMANENTLY POSTED IMMEDIATELY ADJACENT OT AND VISIBLE FROM EACH SPACE. REFER TO DETAILS ON SHEET GN-2.

D. EACH ACCISSIBLE PARKING SPACE IS REQUIRED TO BE MARKED WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SEE DETAIL 3 ON SHEET GN-2.

E. AN ADDITIONAL SIGN SHALL ALSO BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF-STREET PARKING FACILITY OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH SPACE. SEE DETAIL 1 ON SHEET GN-2.

*FOR FURTHER PARKING INFORMATION, REFER TO 'PARKING NOTES,' ON SITE PLAN (SHEET A1-0)



MAXIMUM REACH OVER OBSTRUCTIONS

1 SIDE REACH OVER OBSTRUCTION

DISABLED ACCESS NOTES (CONTINUED)

E. IN THE ADAPTABLE UNITS REGARDLESS OF CLEAR WIDTH PROVIDED OR LOCATION, BASE CABINETS BELOW KITCHEN SINK AREA, INCLUDING TOEBOARD AND SHELVING, SHALL BE REMOVABLE WITHOUT SPECIAL KNOWLEDGE OR TOOLS. FOR ALL REMOVABLE BASE CABINETS THE SIDES AND BACK OF ADJACENT CABINETS, WHICH MAY BECOME EXPOSED TO MOISTURE OR FOOD HANDLING WHEN A COUNTERTOP IS LOWERED, SHALL BE CONSTRUCTED OF DURABLE, NONABSORBENT MATERIALS APPROPRIATE FOR SUCH USES. FINISHED FLOORING SHALL BE INSTALLED ON THE FLOOR BENEATH SUCH COUNTERTOP. (C.B.C. SEC. 1133A.4.1)

F. 30"X48" CLEAR SPACE IS REQUIRED FOR PARALLEL APPROACH TO STOVE OR COOK TOP, & EITHER PARALLEL OR FORWARD APPROACH AT OVEN, DISHWASHER, REFRIGERATOR, FREEZER, AND TRASH COMPACTOR. (C.B.C. SEC. 1133A.2, ITEM 1 & 2)

G. PROVIDE LOWER SHELVING & DRAWERS < 48" ABOVE THE FLOOR IN BUILT-OUT UNITS. (C.B.C. SEC. 1133A.5)

13. DWELLING UNIT BATHROOMS

A. BATHROOM ENTRANCE DOORWAYS REQUIRE 18 INCH STRIKE SIDE CLEARANCE ON THE SWING SIDE WHERE THE DOOR SWINGS INTO THE BATHROOM. THERE MUST BE A 30 BY 48 INCH CLEAR SPACE WITHIN THE ROOM TO POSITION A WHEELCHAIR CLEAR OF THE PATH OF A DOOR AS IT IS CLOSED.

B. SUFFICIENT MANEUVERING SPACE MUST BE PROVIDED FOR A DISABLED PERSON USING A WHEELCHAIR TO ENTER AND CLOSE THE DOOR, USE THE FIXTURES, REOPEN THE DOOR AND EXIT. (C.B.C. SEC. 1134A.4)

C. THERE SHALL BE A MINIMUM CLEAR SPACE 48" PARALLEL BY 30" PERPENDICULAR TO THE SIDE OF THE BATHTUB OR A BATHTUB/SHOWER COMBINATION MEASURED FROM THE FOOT OF THE TUB. A SHOWER SPRAY IS NOT REQUIRED IN BATHTUBS DEFINED IN C.B.C. SEC. 1134A.5, ITEM 1.

D. THE WATER CLOSET SHALL BE LOCATED 18" MIN. FROM THE WALL IN A SPACE 36" WIDE WITH 48" OF CLEAR SPACE IN FRONT OR 48" WIDE WITH 36" OF CLEAR SPACE IN FRONT. THIS SPACE MAY INCLUDE MANEUVERABLE SPACE UNDER A LAVATORY, ARRANGED NOT TO IMPEDE ACCESS. (C.B.C. SEC. 1134A.7)

E. WATER CLOSET SEATS MUST BE AT LEAST 15" ABOVE THE FLOOR. (C.B.C. SEC. 1134A.7, ITEM 3)

F. WATER CLOSET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OF TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL BE NO GREATER THAN 5 LBF. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. BATHROOM FLUSH VALVE CONTROLS SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS NO MORE THAN 44" ABOVE THE FLOOR. (SEC. 1109A). A SHOWER SPRAY UNIT WITH A HOSE AT LEAST 60 IN LONG THAT CAN BE USED AS A FIXED SHOWER HEAD OR AS A HAND-HELD SHOWER SHALL BE PROVIDED. (C.B.C. SEC. 1134A.7, ITEM 4)

G. ALL PARALLEL APPROACHES FOR A WHEELCHAIR TO LAVATORY CABINETS SHALL PROVIDE AN ADAPTABLE KNEE SPACE 30" WIDE, 8" DEEP, 29" HIGH IN FRONT, WHICH MAY REDUCE FROM 27" TO 8" FROM THE BACK. THE KNEE SPACE SHALL BE UNOBSTRUCTED UNLESS THE CABINETS OR DOORS SHALL BE EASILY REMOVABLE TO PROVIDE THE REQUIRED SPACE. PROVIDE A 30" WIDE TOE SPACE CENTERED ON THE LAVATORY 17" DEEP AND 9" HIGH. THE FLOORING SHALL EXTEND TO THE WALL BELOW THE ACCESSIBLE FIXTURE. (C.B.C. SEC. 1134A.8, ITEM 4)

H. LAVATORY FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS. (SEC. 1109A). LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS (SEC. 1109A). SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS. (C.B.C. SEC. 1134A.8, ITEM 7)

J. ONLY ONE BATHROOM NEED BE ACCESSIBLE PROVIDED THAT IT COMPLIES WITH THE FOLLOWING ADDITIONAL PROVISIONS AND ALL OTHER BATHROOMS AND POWDER ROOMS WITHIN THE DWELLING UNIT ARE AN ACCESSIBLE ROUTE WITH USABLE ENTRY DOORS.

1. WHEN BOTH TUB AND SHOWER FIXTURES ARE PROVIDED, AT LEAST ONE SHALL BE ACCESSIBLE. IF A SHOWER IS THE ONLY BATHING FACILITY, THE STALL MUST BE MIN 42" X48" WITH AN OPENING 36" WIDE, THRESHOLD MAX. 1/2" HIGH WITH 45 DEGREE SLOPE. SHOWER FLOOR MUST BE NON-SLIP WITH MAX SLOPE 1/2" PER FOOT IN ANY DIRECTION. WHEN TWO OR MORE LAVATORIES ARE PROVIDED IN A BATHROOM (C.B.C. SEC. 1134A.6, ITEM 1), AT LEAST ONE SHALL BE MADE ACCESSIBLE WITH 18" MIN. FROM WALL OR ADJOINING FIXTURE, WITH RIM &/OR COUNTER HEIGHT MAX 34" ABOVE FLOOR. (C.B.C. SEC. 1134A.8, ITEM 1)
2. TOILETS SHALL BE LOCATED IN SUCH A MANNER THAT PERMITS A GRAB BAR TO BE INSTALLED ON ONE SIDE OF THE FIXTURE. IN LOCATIONS WHERE TOILETS ARE ADJACENT TO WALLS OR BATHTUBS, THE CENTERLINE OF THE FIXTURE SHALL BE A MINIMUM OF 18" FROM THE OBSTACLE. THE NON-GRAB BAR SIDE OF THE TOILET FROM MUST BE A MINIMUM OF 18" FROM THE FINISHED SURFACE FO ADJOINING WALLS, VANITIES OR FROM THE EDGE OF A LAVATORY. (C.B.C. SEC. 1134A.7, ITEM 1)
3. VANITIES AND LAVATORIES SHALL BE INSTALLED WITH THE CENTERLINE OF THE FIXTURE A MINIMUM OF 1'-6" HORIZONTALLY FROM AN ADJOINING WALL OR FIXTURE. THE TOP OF THE FIXTURE SHALL BE A MINIMUM OF 2'-10" ABOVE THE FINISHED FLOOR. IF KNEE SPACE IS PROVIDED BELOW THE VANITY, THE BOTTOM OF THE APRON MUST BE 2'-5" ABOVE THE FLOOR. IF PROVIDED, FULL KNEE SPACE SHALL BE AT LEAST 1'-5" DEEP. HOT WATER AND DRAINPIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES. (C.B.C. SEC. 1134A.8)
4. DOOR WIDTHS AND STRIKE DISTANCES PER C.B.C. SEC. 1132A.5. MIN. 36" WIDE ACCESSIBLE ROUTE WITHIN EACH BATHROOM. REINFORCEMENT FOR FUTURE GRAB BARS PER C.B.C. SEC. 1134A.7 & SEC. 1127A.4. - LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS, ETC. PER CA ELECTRIC CODE.

K. BATHROOMS SHALL HAVE AT LEAST ONE OF EACH MIRROR AND TOWEL FIXTURES ACCESSIBLE WITHIN 40" OF THE FLOOR. (C.B.C. SEC. 1134A.8, ITEM 8)

L. SHOWER & BATHTUB ENCLOSURES SHALL USE SHATTER-RESISTANT MATERIALS. (C.B.C. SEC. 1134A.6, ITEM 6)

14. DWELLING UNIT GRAB BARS

A. GRAB BARS NEED NOT BE INSTALLED IN EITHER A BATHING OR TOILET FACILITY WITHIN AN ADAPTABLE DWELLING UNIT PROVIDED ALL STRUCTURAL REINFORCEMENTS FOR FUTURE INSTALLATION OF GRAB BARS ARE PROVIDED IN THE APPROPRIATE LOCATIONS IN THE ADJOINING WALLS. THE REINFORCEMENT SHALL BE OF SUFFICIENT LENGTH TO PERMIT THE INSTALLATION OF GRAB BARS AND SUPPORTING A 250-POUND LOAD.

B. IF GRAB BARS ARE PROVIDED THEY SHALL BE 1-1/4" TO 1-1/2" DIA. MOUNTED 1-1/2" CLEAR FROM THE WALL, CANNOT ROTATE IN THEIR FITTINGS, AND DESIGNED TO SUPPORT 250 POUND LOAD. (C.B.C. SEC. 1127A.4.3)

C. A GRAB BAR AND ANY WALL SURFACE ADJACENT TO IT MUST BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS. EDGES MUST HAVE A MINIMUM 1/8 INCH RADIUS. (C.B.C. SEC. 1127A.4.5)

D. GRAB BAR REINFORCEMENTS FOR TOILETS IN MULTIFAMILY UNITS SHALL BE INSTALLED ON BOTH SIDES OR ON ONE SIDE AND A MINIMUM OF 40" ACROSS THE BACK. SIDE REINFORCEMENTS SHALL BE INSTALLED WITHIN 12" OF THE REAR WALL AND EXTEND TO 26" MINIMUM IN FRONT OF THE WATER CLOSET STOOL. GRAB BAR REINFORCEMNT SHALL BE A MINIMUM OF 6" IN HOMINAL HEIGHT AND INSTALLED BETWEEN 32 AND 38" A.F.F. (C.B.C. SEC. 1134A.7, ITEM 2)

E. GRAB BARS CAN NOT ROTATE WITHIN THEIR FITTINGS. (C.B.C. SEC. 1127A.4.4, ITEM 5)

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

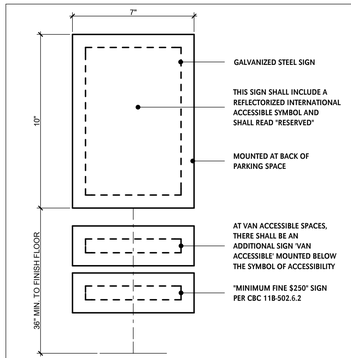
PROJECT # 1008

ACCESSIBILITY NOTES & DETAILS

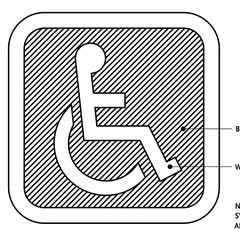
TS2-1

© 2018 FoundationForm All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



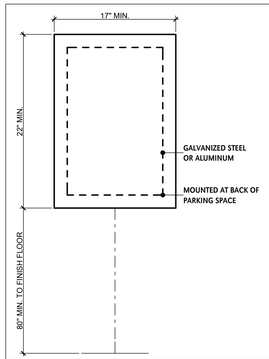
13 ACCESSIBLE PARKING SIGNAGE NO SCALE



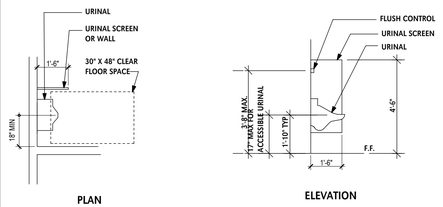
14 ACCESSIBLE PARKING GRAPHIC NO SCALE



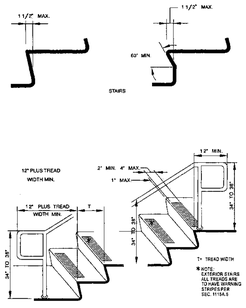
16 ACCESSIBLE PARKING (PERPENDICULAR) NO SCALE



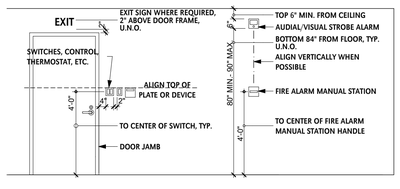
9 ACCESSIBILITY SIGNAGE NO SCALE



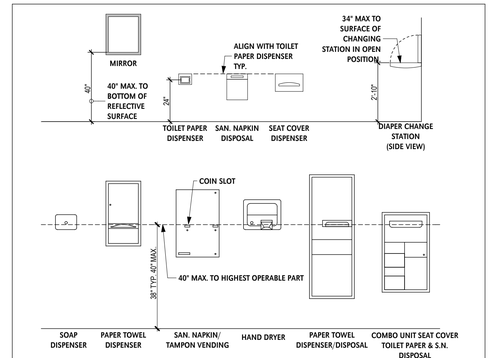
10 ACCESSIBLE URINAL CLEARANCES NO SCALE



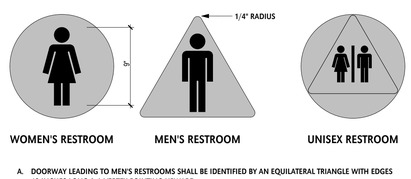
11 STAIRS-WARNING STRIPING & HANDRAIL EXT. NO SCALE



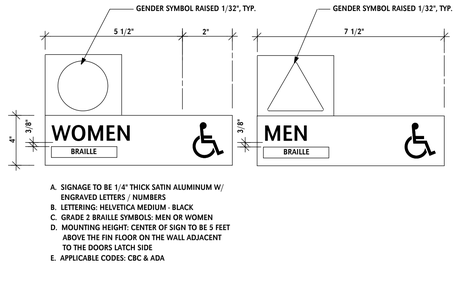
12 NO SCALE



5 RESTROOM ACCESSORY MOUNTING NO SCALE

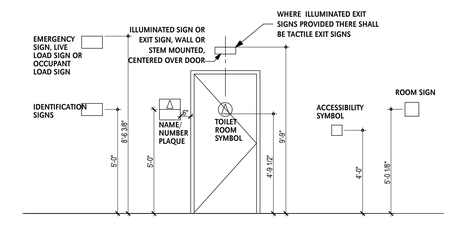


A. DOORWAY LEADING TO MEN'S RESTROOMS SHALL BE IDENTIFIED BY AN EQUILATERAL TRIANGLE WITH EDGES 12 INCHES LONG & A VERTEX POINTING UPWARD
DOORWAYS LEADING TO WOMEN'S RESTROOMS SHALL BE IDENTIFIED BY A CIRCLE 12 INCHES IN DIAMETER
B. SIGNAGE TO BE 1/4" THICK SATIN ALUMINUM WITH ETCHED AND FILLED ADA GRAPHICS (BLACK)
C. MOUNTING LOCATION: CENTER ON DOOR, CENTER OF SIGN TO BE 5 FEET ABOVE THE FLOOR.
D. APPLICABLE CODES: CBC

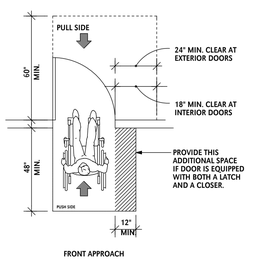


A. SIGNAGE TO BE 1/4" THICK SATIN ALUMINUM W/ ENGRAVED LETTERS / NUMBERS
B. LETTERING: HELVETICA MEDIUM - BLACK
C. GRADE 2 BRAILLE SYMBOLS: MEN OR WOMEN
D. MOUNTING HEIGHT: CENTER OF SIGN TO BE 5 FEET ABOVE THE FIN FLOOR ON THE WALL ADJACENT TO THE DOORS LATCH SIDE
E. APPLICABLE CODES: CBC & ADA

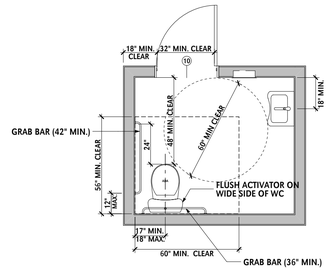
7 RESTROOM DOOR SIGNAGE NO SCALE



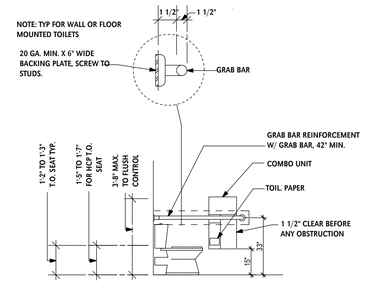
8 INTERIOR SIGNAGE LOCATIONS NO SCALE



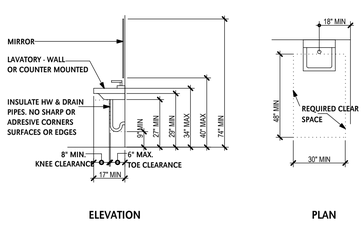
1 DOOR MANEUVERING CLEARANCES NO SCALE



2 TOILET PLAN CLEARANCES NO SCALE



3 TOILET ELEVATION NO SCALE



4 LAVATORY NO SCALE

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

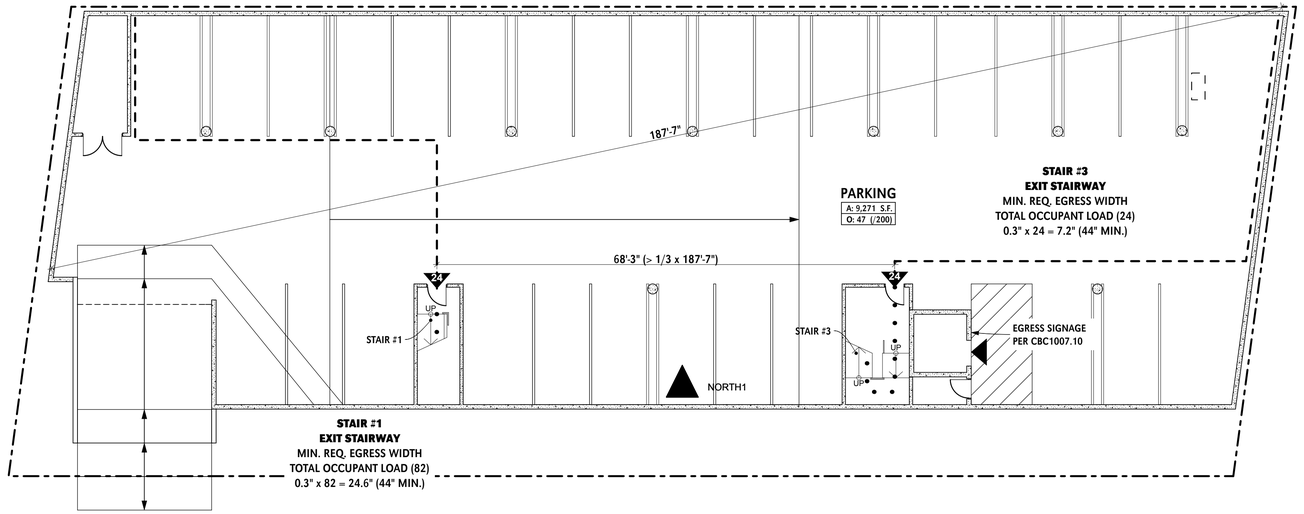
THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

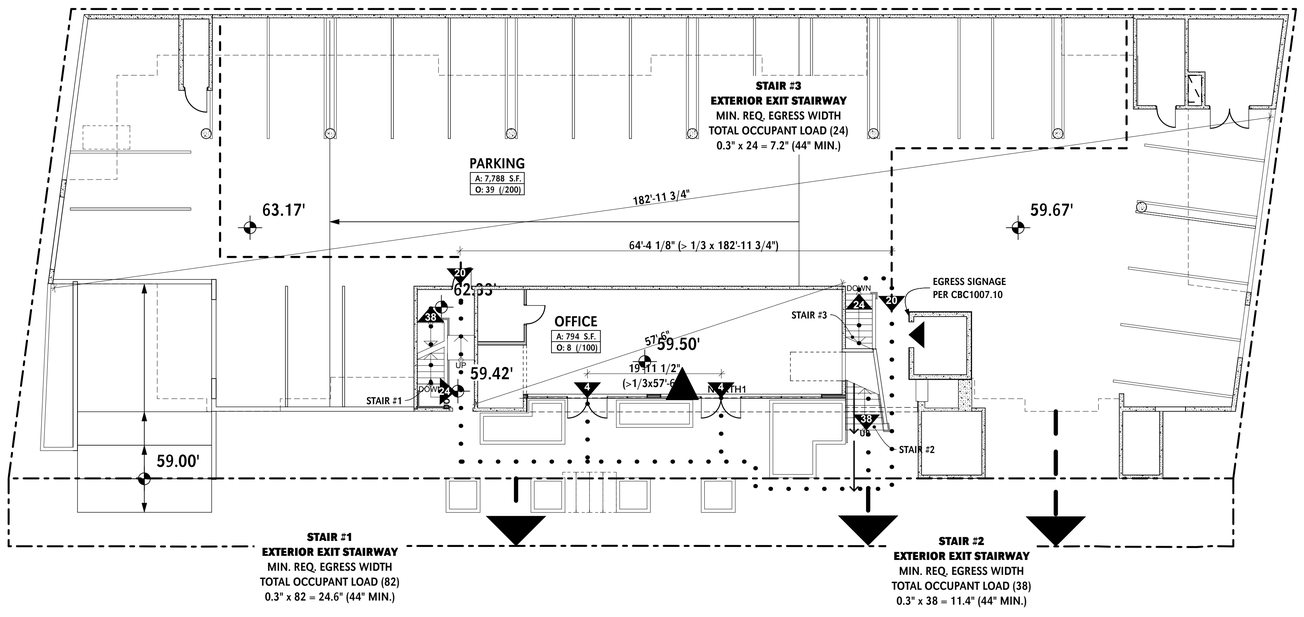
ACCESSIBILITY DETAILS

TS2-2



1
-

EGRESS PLAN - PARKING LEVEL (BASEMENT)
3/32" = 1'-0"



2
-

EGRESS PLAN - GROUND LEVEL
3/32" = 1'-0"

EXITING KEY

- EXIT — EXIT SIGN
- 5 — NUMBER OF OCCUPANTS USING AN EXIT
- EXIT DISCHARGE
- EXIT PATH
- COMMON PATH OF TRAVEL IN UNIT
- EXIT ACCESS TRAVEL FROM MOST REMOTE PORTION OF THE BUILDING TO AN EXIT
- FIRE EXTINGUISHER

EXITING NOTES

1. EXIT SIGNS ARE REQUIRED WHENEVER TWO EXITS ARE REQUIRED. PER CBC SECTION 1011.1

2. A TACTILE SIGN STATING "EXIT" AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN EGRESS STAIRWAY, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE, PER CBC SECTION 1011.3. (SEE DETAIL 13/A-9.6 FOR ADDITIONAL SIGN INFORMATION)

3. FIRE EXTINGUISHER INSTALLED PER DETAIL 3/A-8.4

4. THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR AT LEAST 90 MINUTES.
SEC 1006.3

5. PROVIDE MEANS OF EGRESS IDENTIFICATION USING EXIT SIGNS THAT ARE INTERNALLY OR EXTERNALLY ILLUMINATED ALONG THE PATH OF EXIT TRAVEL WITHIN THE MEANS OF EGRESS SYSTEM. MARK ALL EXITS AND ACCESS DOORS. EXIT SIGNS SHALL BE LOCATED TO CLEARLY INDICATE THE DIRECTION OF EGRESS TRAVEL AND SUCH THAT NO POINT SHALL BE MORE THAN 100 FEET FROM THE NEAREST VISIBLE SIGN. SEC. 1011.1 & SEC. 1011.2.

6. ELECTRICALLY POWERED, SELF-LUMINOUS AND PHOTOLUMINESCENT EXIT SIGNS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 924 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND CHAPTER 27. EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES. SEC. 1011.4.

7. ANY TIME A BUILDING IS OCCUPIED, MEANS OF EGRESS SHALL BE ILLUMINATED. PROVIDE MEANS OF EXIT ILLUMINATION THAT HAS A MINIMUM INTENSITY OF NOT LESS THAN 1 FOOT CANDLE AT THE FLOOR LEVEL. POWER FOR THE MEANS OF EGRESS ILLUMINATION SHALL BE PROVIDED BY THE PREMISES' ELECTRICAL SUPPLY. SEC. 1006.2 & 1006.3.

8. FOR GROUP B OCCUPANCIES, THE MAIN EXIT DOORS ARE PERMITTED TO BE EQUIPPED WITH KEY-OPERATED LOCKING DEVICES FROM THE EGRESS SIDE PROVIDED:
   a.) THE LOCKING DEVICE IS READILY DISTINGUISHABLE AS LOCKED
   b.) A READILY VISIBLE DURABLE SIGN IS POSTED ON THE EGRESS SIDE, ON OR ADJACENT TO THE DOOR, STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPPIED." THE SIGN SHALL BE IN LETTERS 1 INCH HIGH ON CONTRASTING BACKGROUND
   c.) THE USE OF THE KEY-OPERATED LOCKING DEVICE IS REVOKABLE BY THE BUILDING OFFICIAL FOR DUE CAUSE. PER CBC SEC. 1008.1.9.3(2.1)

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

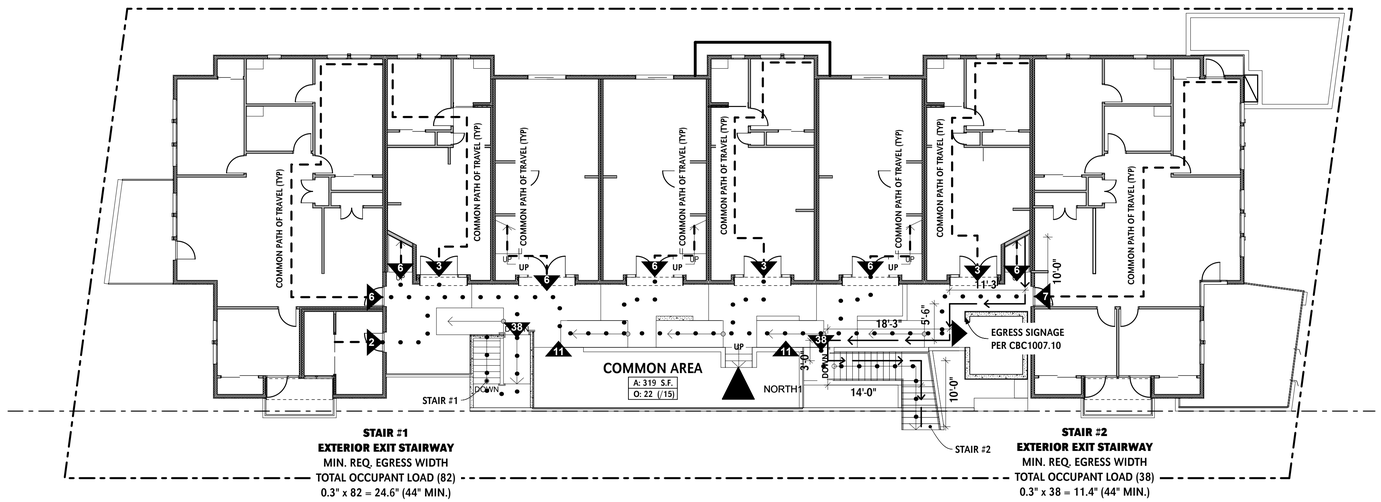
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

EGRESS DIAGRAMS

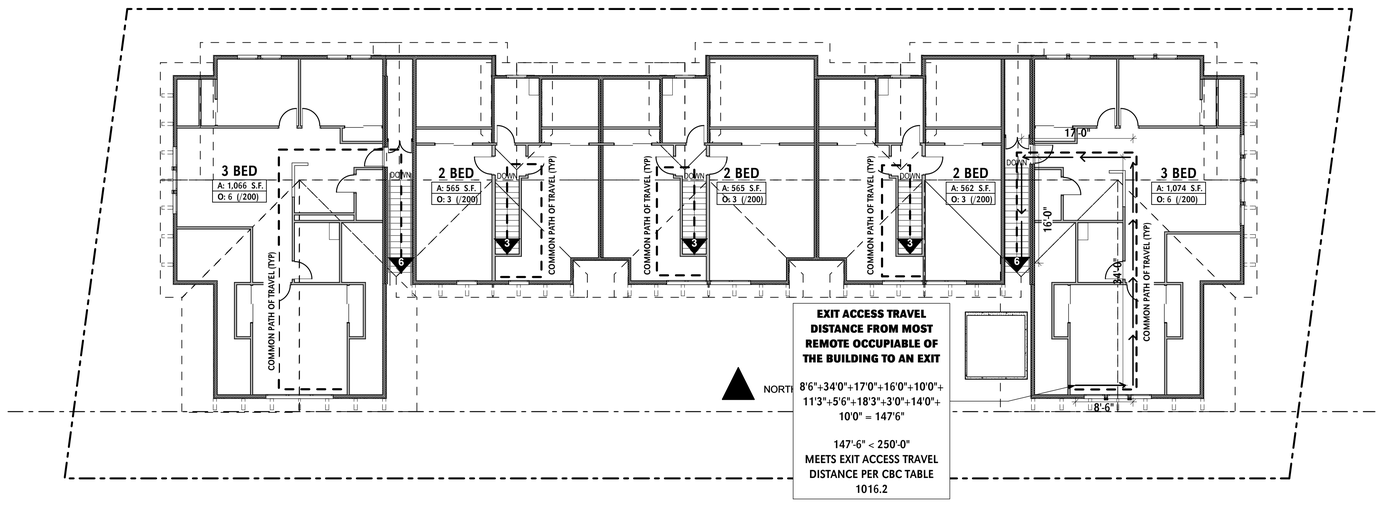
TS3-0

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



1
-

EGRESS PLAN - LEVEL 2 (PODIUM / RESIDENTIAL GROUND FLOOR)
3/32" = 1'-0"



2
-

EGRESS PLAN - LEVEL 3
3/32" = 1'-0"

EXITING KEY

- EXIT — EXIT SIGN
- 5 — NUMBER OF OCCUPANTS USING AN EXIT
- EXIT DISCHARGE
- EXIT PATH
- COMMON PATH OF TRAVEL IN UNIT
- EXIT ACCESS TRAVEL FROM MOST REMOTE PORTION OF THE BUILDING TO AN EXIT
- FIRE EXTINGUISHER

EXITING NOTES

1. EXIT SIGNS ARE REQUIRED WHENEVER TWO EXITS ARE REQUIRED. PER CBC SECTION 1011.1

2. A TACTILE SIGN STATING "EXIT" AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN EGRESS STAIRWAY, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE, PER CBC SECTION 1011.3. (SEE DETAIL 13/A-9.6 FOR ADDITIONAL SIGN INFORMATION)

3. FIRE EXTINGUISHER INSTALLED PER DETAIL 3/A-8.4

4. THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR AT LEAST 90 MINUTES.
SEC 1006.3

5. PROVIDE MEANS OF EGRESS IDENTIFICATION USING EXIT SIGNS THAT ARE INTERNALLY OR EXTERNALLY ILLUMINATED ALONG THE PATH OF EXIT TRAVEL WITHIN THE MEANS OF EGRESS SYSTEM. MARK ALL EXITS AND ACCESS DOORS. EXIT SIGNS SHALL BE LOCATED TO CLEARLY INDICATE THE DIRECTION OF EGRESS TRAVEL AND SUCH THAT NO POINT SHALL BE MORE THAN 100 FEET FROM THE NEAREST VISIBLE SIGN. SEC. 1011.1 & SEC. 1011.2.

6. ELECTRICALLY POWERED, SELF-LUMINOUS AND PHOTOLUMINESCENT EXIT SIGNS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 924 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND CHAPTER 27. EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES. SEC. 1011.4.

7. ANY TIME A BUILDING IS OCCUPIED, MEANS OF EGRESS SHALL BE ILLUMINATED. PROVIDE MEANS OF EXIT ILLUMINATION THAT HAS A MINIMUM INTENSITY OF NOT LESS THAN 1 FOOT CANDLE AT THE FLOOR LEVEL. POWER FOR THE MEANS OF EGRESS ILLUMINATION SHALL BE PROVIDED BY THE PREMISES' ELECTRICAL SUPPLY. SEC. 1006.2 & 1006.3.

8. FOR GROUP B OCCUPANCIES, THE MAIN EXIT DOORS ARE PERMITTED TO BE EQUIPPED WITH KEY-OPERATED LOCKING DEVICES FROM THE EGRESS SIDE PROVIDED:
   a.) THE LOCKING DEVICE IS READILY DISTINGUISHABLE AS LOCKED
   b.) A READILY VISIBLE DURABLE SIGN IS POSTED ON THE EGRESS SIDE, ON OR ADJACENT TO THE DOOR, STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPPIED." THE SIGN SHALL BE IN LETTERS 1 INCH HIGH ON CONTRASTING BACKGROUND
   c.) THE USE OF THE KEY-OPERATED LOCKING DEVICE IS REVOKABLE BY THE BUILDING OFFICIAL FOR DUE CAUSE. PER CBC SEC. 1008.1.9.3(2.1)

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

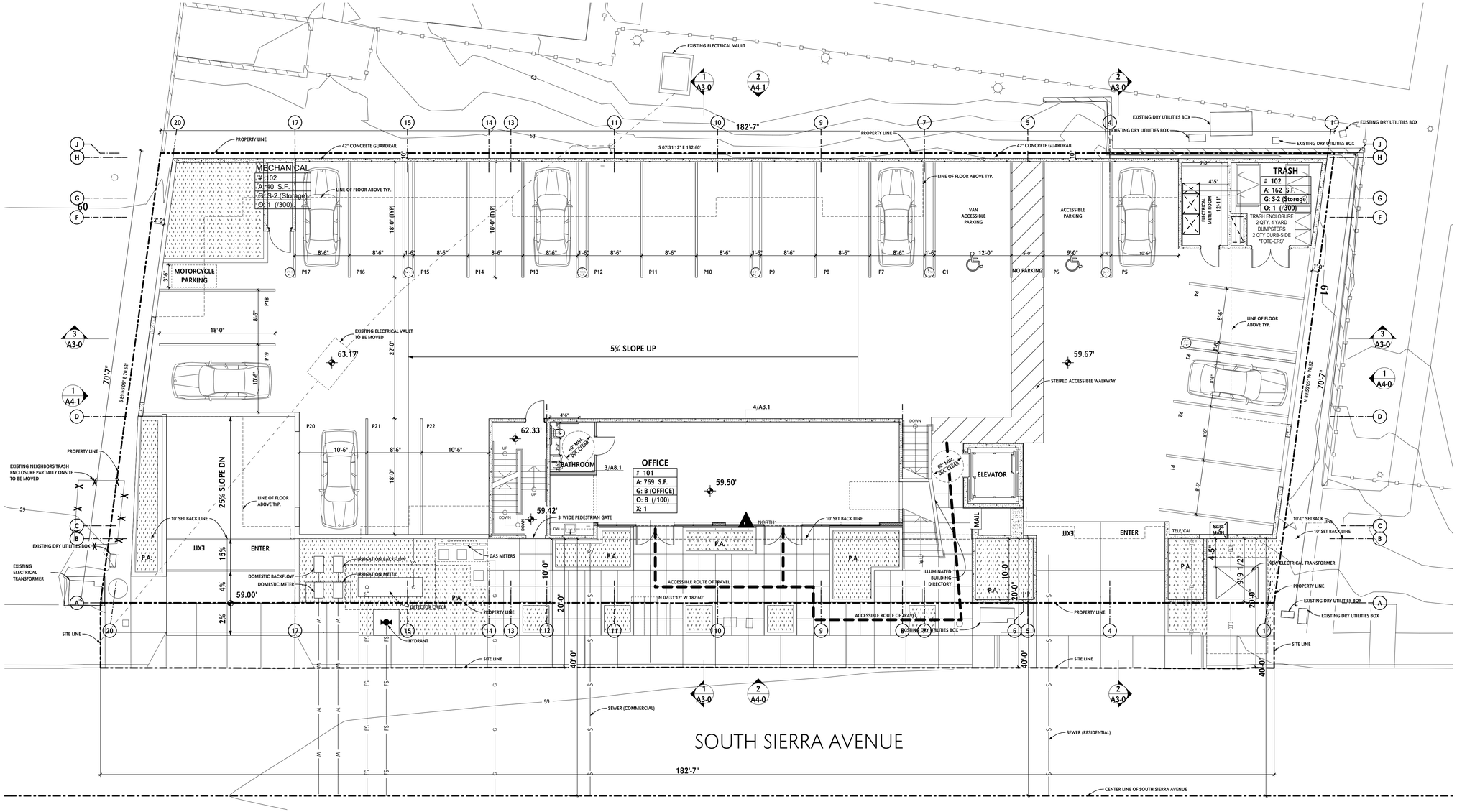
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

EGRESS DIAGRAMS

TS3-1

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



N

PROPOSED SITE PLAN LEVEL P1

1/8" = 1'-0"

GRADING INFORMATION

PROPOSED AMOUNT OF GRADING IN CUBIC YARDS:	5,100 CY
VOLUME OF CUTTING IN CUBIC YARDS:	5,100 CY
CUT SLOPE RATIO __:__ AND HEIGHT __:__:	NOT APPLICABLE - NO CUT SLOPES
VOLUME TO FILL IN CUBIC YARDS:	0
FILL SLOPE RATIO __:__ AND HEIGHT __:__:	NOT APPLICABLE - NO FILL SLOPES
VOLUME OF SOIL IMPORTED / EXPORTED:	EXPORT 5,100 CY
RETAINING WALLS LENGTH IN FEET:	ALL RETAINING TO BE DONE BY STRUCTURE
HEIGHT OF RETAINING WALLS FROM EXISTING GRADE:	6"
HEIGHT OF RETAINING WALLS FROM FINAL GRADE:	7'-0"

PARKING NOTES

1. STANDARD SPACES, 8'-6" x 18'-0", TYP.
2. ALL ACCESSIBLE PARKING SPACES SHALL COMPLY WITH CBC SECTION 1109A.8
3. PROVIDE A BUMPER OR CURB AT EACH SPACE TO PREVENT ENCROACHMENT INTO REQUIRED WIDTH OF WALKWAYS PER CBC SECTION 1109A.8.2, ITEM #1
4. ALL ACCESSIBLE PARKING SPACES ARE TO BE IDENTIFIED BY A REFLECTORIZED SIGN, PERMANENTLY POSTED IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH SPACE.
5. EACH ACCESSIBLE PARKING SPACE IS REQUIRED TO BE MARKED WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
6. AN ADDITIONAL SIGN SHALL ALSO BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF STREET PARKING FACILITY OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH SPACE.

GENERAL NOTES

1. FOR ADDITIONAL INFORMATION SEE CIVIL DRAWINGS, SEE CIVIL PLANS FOR ADDITIONAL INFORMATION ON PROPOSED WALLS, RETAINING WALLS AND FENCES. SEE CIVIL FOR ADDITIONAL INFORMATION ON CURB RAMPS.
2. FOR ADDITIONAL INFORMATION SEE LANDSCAPE DRAWINGS.
3. SEE GRADING PLANS FOR SLOPES AT ALL WALKWAYS. CURB CUTS PER IBC SHALL BE PROVIDED AT ALL INTERSECTIONS WITH WALKWAYS.
4. AREA LIGHTING SHALL BE DESIGNED AND DIRECTED TO PREVENT EXCESS LIGHT FROM FALLING ON ADJACENT PROPERTIES TO THE NORTH, SOUTH AND EAST. ALL WALKWAYS, PATIOS AND COURTYARD SPACES SHALL BE PROPERLY LIT TO MAINTAIN A SECURE AND SAFE LIVING ENVIRONMENT. EXACT INTENSITY AND LOCATION OF SITE LIGHTING WILL BE PROVIDED AT TIME OF BUILDING PERMIT SUBMTTAL FOR REVIEW AND CONFORMANCE TO THE CITY OF SOLANA BEACH STANDARDS.
5. ALL SIGNS THAT WILL BE USED FOR THE PROJECT SHALL BE CONSISTENT WITH MUNICIPAL CODE SIGN PERMITS.

SYMBOL LEGEND

A	GRIDLINE
UNIT: # XXX / A: XXX sq.ft. / G: X (XXX) / O: XX (XXX) / X: X	NAME UNIT NUMBER AREA OCCUPANCY GROUP OCCUPANT USE/LOAD MIN. # EXITS
0'	DATUM. WORKPOINT
drawing sheet #	ELEVATION MARKER
drawing sheet #	SECTION MARKER
	SOFFIT PER 9/A8.2

MATERIAL LEGEND

	CAST CONCRETE CONSTRUCTION
	WOOD FRAMING, INTERIOR WALL
	WOOD FRAMING, EXTERIOR WALL/ PARTY WALL/FLOOR
	STONE
	EARTH
	LANDSCAPING

© 2018 foundationform | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of foundationform, and were created, evolved, and developed on instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of foundationform.

Consultant

FOUNDATION FORM ARCHITECTURE

Developer

Hitzke Development Corporation

THE PEARL

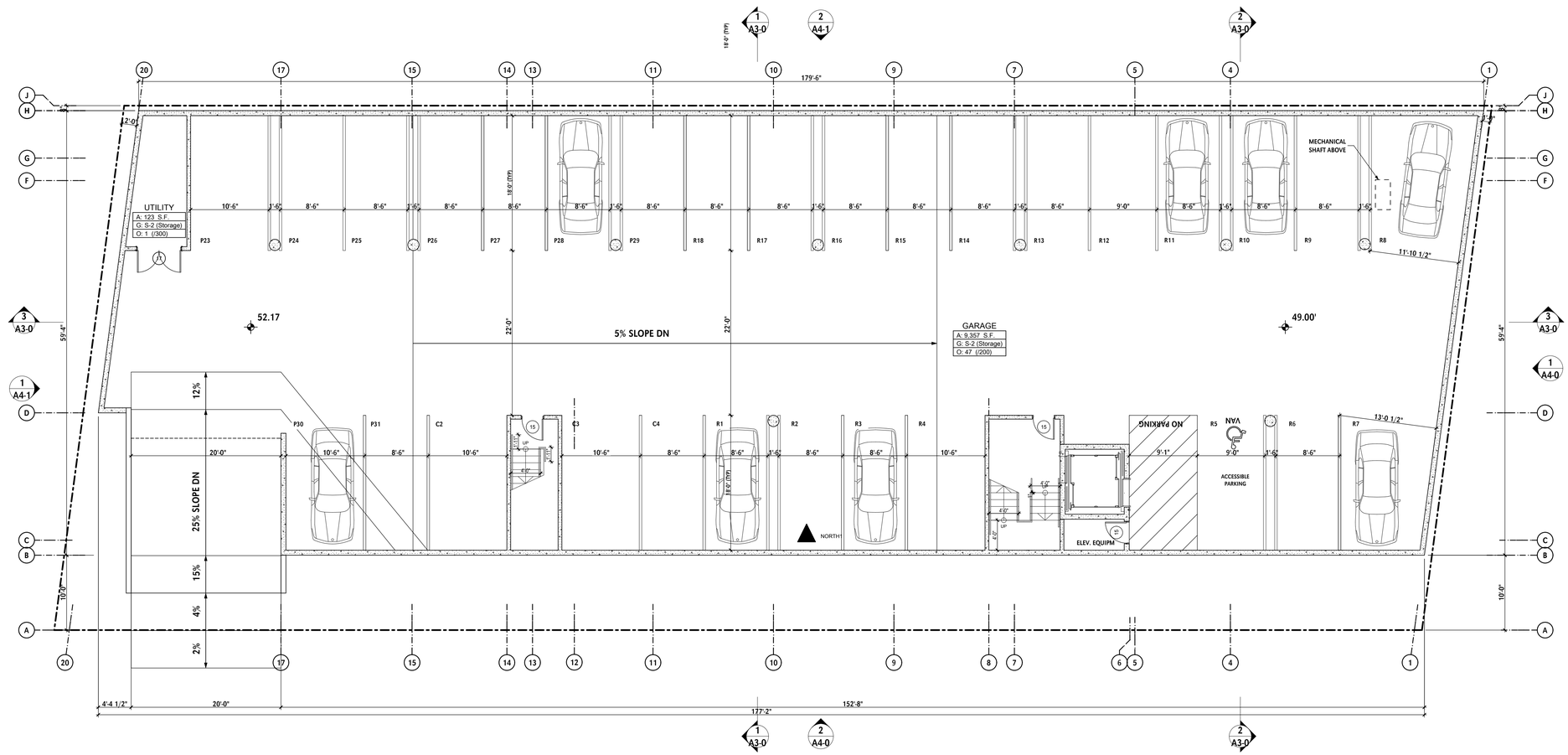
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

SITE PLAN / FLOOR PLAN LEVEL 1

A1-0



N

FLOOR PLAN LEVEL P0

1/8" = 1'-0"

GENERAL NOTES

1. FOR ADDITIONAL INFORMATION SEE CIVIL DRAWINGS, SEE CIVIL PLANS FOR ADDITIONAL INFORMATION ON PROPOSED WALLS, RETAINING WALLS AND FENCES. SEE CIVIL FOR ADDITIONAL INFORMATION ON CURB RAMPS.
2. FOR ADDITIONAL INFORMATION SEE LANDSCAPE DRAWINGS.
3. SEE GRADING PLANS FOR SLOPES AT ALL WALKWAYS. CURB CUTS PER IBC SHALL BE PROVIDED AT ALL INTERSECTIONS WITH WALKWAYS.
4. AREA LIGHTING SHALL BE DESIGNED AND DIRECTED TO PREVENT EXCESS LIGHT FROM FALLING ON ADJACENT PROPERTIES TO THE NORTH, SOUTH AND EAST. ALL WALKWAYS, PATIOS AND COURTYARD SPACES SHALL BE PROPERLY LIT TO MAINTAIN A SECURE AND SAFE LIVING ENVIRONMENT. EXACT INTENSITY AND LOCATION OF SITE LIGHTING WILL BE PROVIDED AT TIME OF BUILDING PERMIT SUBMTTAL FOR REVIEW AND CONFORMANCE TO THE CITY OF SOLANA BEACH STANDARDS.
5. ALL SIGNS THAT WILL BE USED FOR THE PROJECT SHALL BE CONSISTENT WITH MUNICIPAL CODE SIGN PERMITS.

SYMBOL LEGEND

- GRIDLINE
- UNIT (# XXX; A: XXX sq.ft.; G: X (XXX); O: XX (XXX); X: X)
- NAME
- UNIT NUMBER
- AREA
- OCCUPANCY GROUP
- OCCUPANT USE/LOAD
- MIN. # EXITS
- DATUM. WORKPOINT
- ELEVATION MARKER
- SECTION MARKER
- SOFFIT PER 9/A8.2

MATERIAL LEGEND

- CAST CONCRETE CONSTRUCTION
- WOOD FRAMING, INTERIOR WALL
- WOOD FRAMING, EXTERIOR WALL/ PARTY WALL/FLOOR
- STONE
- EARTH
- LANDSCAPING

Consultant

FOUNDATION OF FORM ARCHITECTURE

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

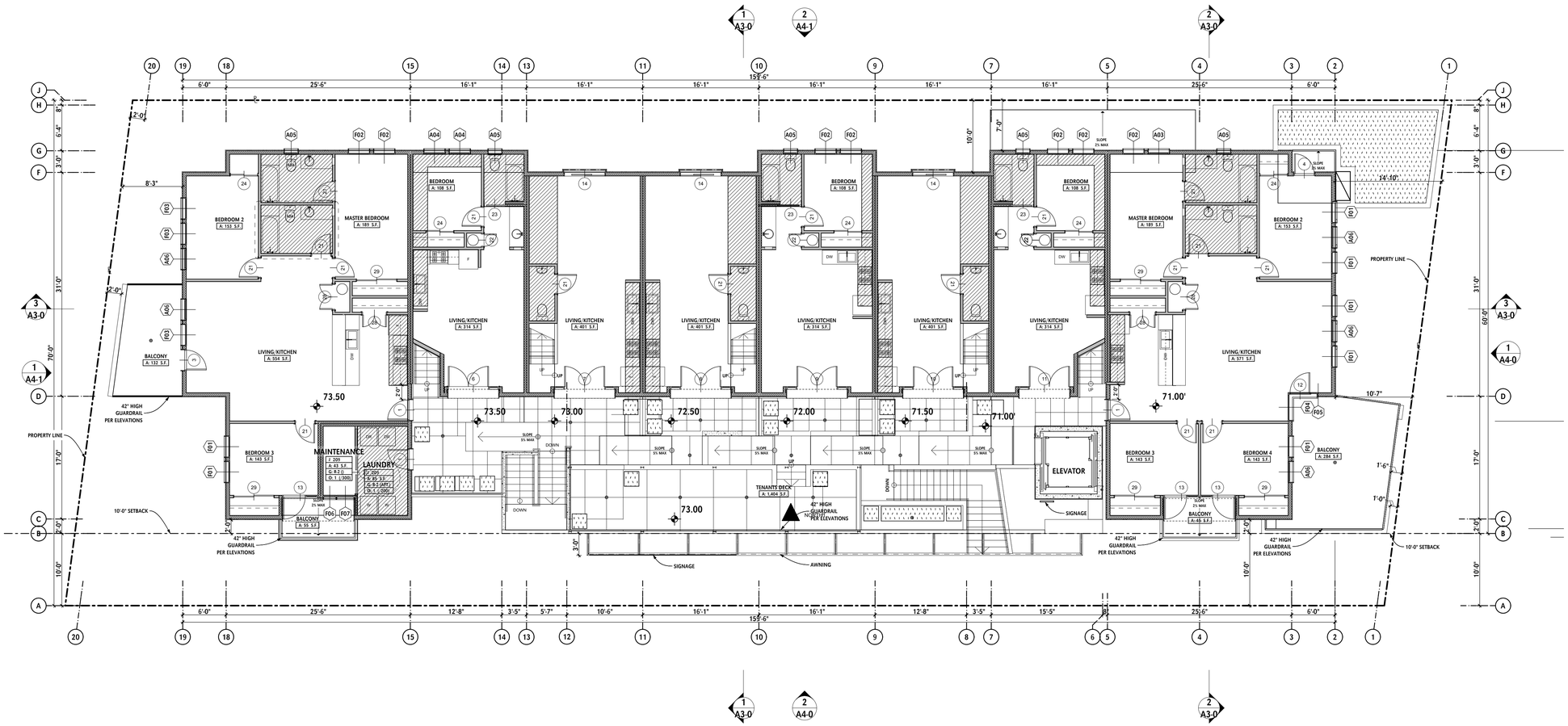
PROJECT # 1008

PARKING FLOOR PLAN LEVEL 0

A2-0

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



N

FLOOR PLAN LEVEL 2

1/8" = 1'-0"

GENERAL NOTES

1. FOR ADDITIONAL INFORMATION SEE CIVIL DRAWINGS, SEE CIVIL PLANS FOR ADDITIONAL INFORMATION ON PROPOSED WALLS, RETAINING WALLS AND FENCES. SEE CIVIL FOR ADDITIONAL INFORMATION ON CURB RAMPS.
2. FOR ADDITIONAL INFORMATION SEE LANDSCAPE DRAWINGS.
3. SEE GRADING PLANS FOR SLOPES AT ALL WALKWAYS. CURB CUTS PER IBC SHALL BE PROVIDED AT ALL INTERSECTIONS WITH WALKWAYS.
4. AREA LIGHTING SHALL BE DESIGNED AND DIRECTED TO PREVENT EXCESS LIGHT FROM FALLING ON ADJACENT PROPERTIES TO THE NORTH, SOUTH AND EAST. ALL WALKWAYS, PATIOS AND COURTYARD SPACES SHALL BE PROPERLY LIT TO MAINTAIN A SECURE AND SAFE LIVING ENVIRONMENT. EXACT INTENSITY AND LOCATION OF SITE LIGHTING WILL BE PROVIDED AT TIME OF BUILDING PERMIT SUBMTTAL FOR REVIEW AND CONFORMANCE TO THE CITY OF SOLANA BEACH STANDARDS.
5. ALL SIGNS THAT WILL BE USED FOR THE PROJECT SHALL BE CONSISTENT WITH MUNICIPAL CODE SIGN PERMITS.

SYMBOL LEGEND

- GRIDLINE
- UNIT (# XXX; A: XXX sq.ft.; G: X (XXX); O: XX (XXX); X: X) — NAME, UNIT NUMBER, AREA, OCCUPANCY GROUP, OCCUPANT USE/LOAD, MIN. # EXITS
- DATUM. WORKPOINT
- ELEVATION MARKER (drawing / sheet #)
- SECTION MARKER (drawing / sheet #)
- SOFFIT PER 9/A8.2

MATERIAL LEGEND

- CAST CONCRETE CONSTRUCTION
- WOOD FRAMING, INTERIOR WALL
- WOOD FRAMING, EXTERIOR WALL/ PARTY WALL/FLOOR
- STONE
- EARTH
- LANDSCAPING

Consultant: FOUNDATION FORM ARCHITECTURE

Developer: Hitzke Development Corporation

THE PEARL

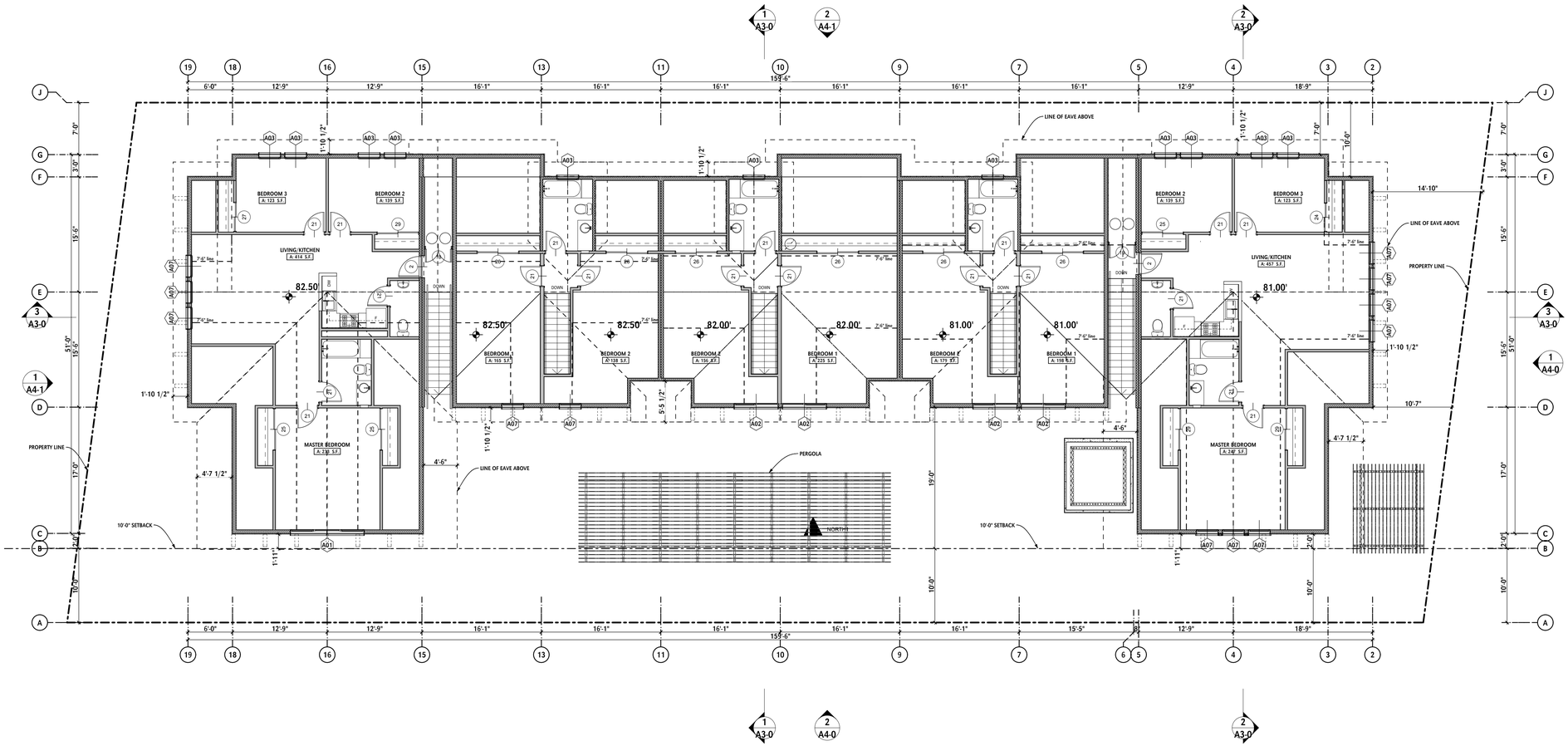
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

RESIDENTIAL FLOOR PLAN LEVEL 2

A2-1



N

FLOOR PLAN LEVEL 3

1/8" = 1'-0"

GENERAL NOTES

1. FOR ADDITIONAL INFORMATION SEE CIVIL DRAWINGS, SEE CIVIL PLANS FOR ADDITIONAL INFORMATION ON PROPOSED WALLS, RETAINING WALLS AND FENCES. SEE CIVIL FOR ADDITIONAL INFORMATION ON CURB RAMPS.
2. FOR ADDITIONAL INFORMATION SEE LANDSCAPE DRAWINGS.
3. SEE GRADING PLANS FOR SLOPES AT ALL WALKWAYS. CURB CUTS PER IBC SHALL BE PROVIDED AT ALL INTERSECTIONS WITH WALKWAYS.
4. AREA LIGHTING SHALL BE DESIGNED AND DIRECTED TO PREVENT EXCESS LIGHT FROM FALLING ON ADJACENT PROPERTIES TO THE NORTH, SOUTH AND EAST. ALL WALKWAYS, PATIOS AND COURTYARD SPACES SHALL BE PROPERLY LIT TO MAINTAIN A SECURE AND SAFE LIVING ENVIRONMENT. EXACT INTENSITY AND LOCATION OF SITE LIGHTING WILL BE PROVIDED AT TIME OF BUILDING PERMIT SUBMTTAL FOR REVIEW AND CONFORMANCE TO THE CITY OF SOLANA BEACH STANDARDS.
5. ALL SIGNS THAT WILL BE USED FOR THE PROJECT SHALL BE CONSISTENT WITH MUNICIPAL CODE SIGN PERMITS.

SYMBOL LEGEND

- GRIDLINE
- UNIT (# XXX; A: XXX sq.ft.; G: X (XXX); O: XX (XXX); X: X) — NAME, UNIT NUMBER, AREA, OCCUPANCY GROUP, OCCUPANT USE/LOAD, MIN. # EXITS
- DATUM. WORKPOINT
- ELEVATION MARKER (drawing / sheet #)
- SECTION MARKER (drawing / sheet #)
- SOFFIT PER 9/A8.2

MATERIAL LEGEND

- CAST CONCRETE CONSTRUCTION
- WOOD FRAMING, INTERIOR WALL
- WOOD FRAMING, EXTERIOR WALL/ PARTY WALL/FLOOR
- STONE
- EARTH
- LANDSCAPING

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

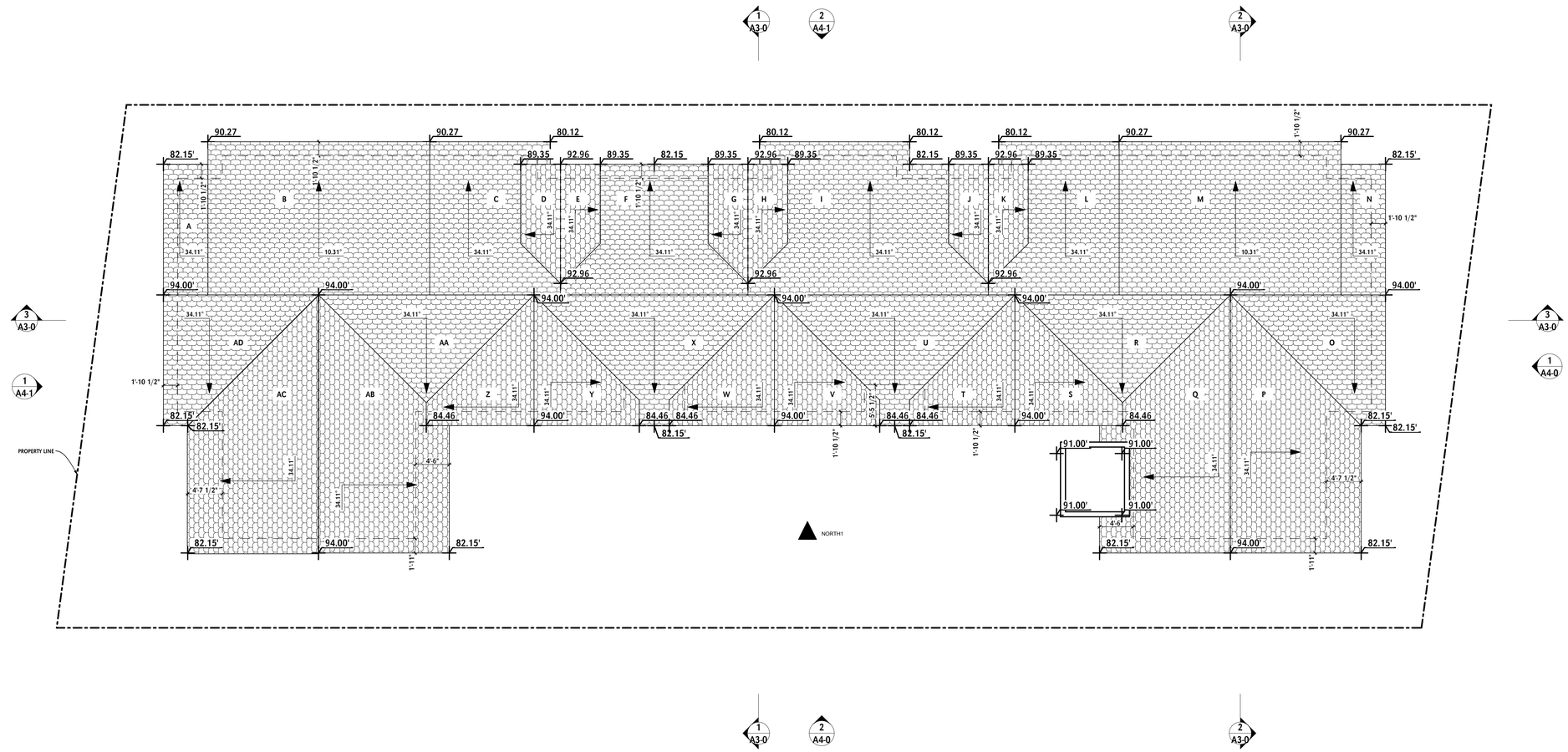
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

RESIDENTIAL FLOOR PLAN LEVEL 3

A2-2



N

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

GENERAL NOTES

1. FOR ADDITIONAL INFORMATION SEE CIVIL DRAWINGS, SEE CIVIL PLANS FOR ADDITIONAL INFORMATION ON PROPOSED WALLS, RETAINING WALLS AND FENCES. SEE CIVIL FOR ADDITIONAL INFORMATION ON CURB RAMPS.
2. FOR ADDITIONAL INFORMATION SEE LANDSCAPE DRAWINGS.
3. SEE GRADING PLANS FOR SLOPES AT ALL WALKWAYS. CURB CUTS PER IBC SHALL BE PROVIDED AT ALL INTERSECTIONS WITH WALKWAYS.
4. AREA LIGHTING SHALL BE DESIGNED AND DIRECTED TO PREVENT EXCESS LIGHT FROM FALLING ON ADJACENT PROPERTIES TO THE NORTH, SOUTH AND EAST. ALL WALKWAYS, PATIOS AND COURTYARD SPACES SHALL BE PROPERLY LIT TO MAINTAIN A SECURE AND SAFE LIVING ENVIRONMENT. EXACT INTENSITY AND LOCATION OF SITE LIGHTING WILL BE PROVIDED AT TIME OF BUILDING PERMIT SUBMTTAL FOR REVIEW AND CONFORMANCE TO THE CITY OF SOLANA BEACH STANDARDS.
5. ALL SIGNS THAT WILL BE USED FOR THE PROJECT SHALL BE CONSISTENT WITH MUNICIPAL CODE SIGN PERMITS.

SYMBOL LEGEND

- GRIDLINE
- UNIT / NAME / UNIT NUMBER / AREA / OCCUPANCY GROUP / OCCUPANT USE/LOAD / MIN. # EXITS
  - # XXX
  - A: XXX sq.ft.
  - G: X (XXX)
  - O: XX (XXX)
  - X: X
- DATUM. WORKPOINT
- ELEVATION MARKER (drawing / sheet #)
- SECTION MARKER (drawing / sheet #)
- SOFFIT PER 9/A8.2

MATERIAL LEGEND

- CAST CONCRETE CONSTRUCTION
- WOOD FRAMING, INTERIOR WALL
- WOOD FRAMING, EXTERIOR WALL/ PARTY WALL/FLOOR
- STONE
- EARTH
- LANDSCAPING

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

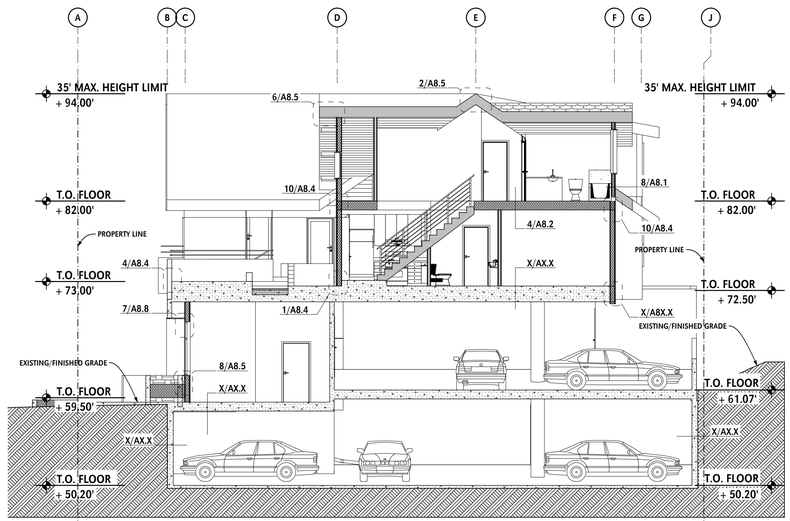
THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

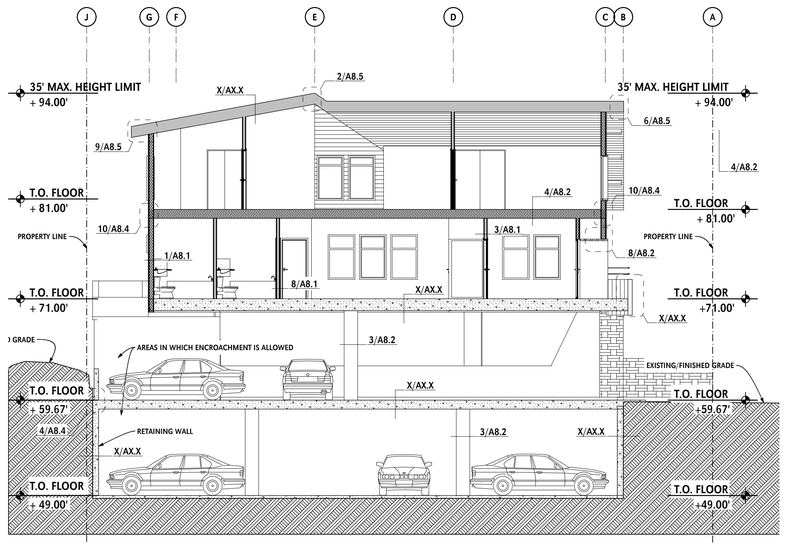
PROJECT # 1008

RESIDENTIAL ROOF PLAN

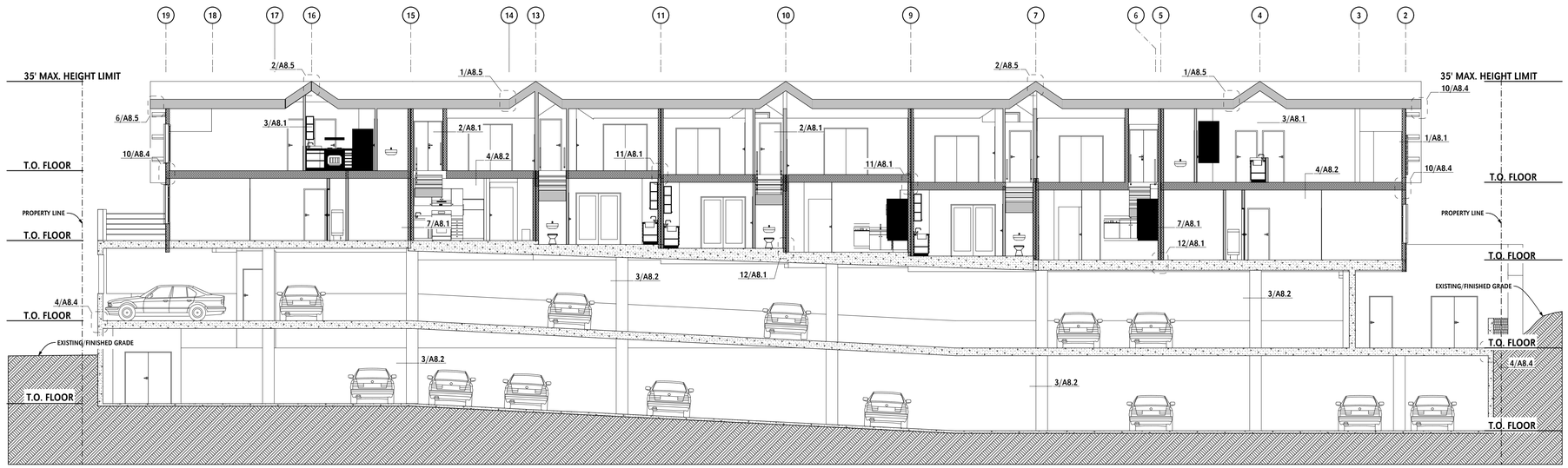
A2-3



1 **SECTION 1 - EAST-WEST**
1/8" = 1'-0"



2 **SECTION 2 - EAST-WEST**
1/8" = 1'-0"



3 **SECTION 3 - NORTH-SOUTH**
1/8" = 1'-0"

SECTION NOTES

1. ALL WINDOWS IN EXTERIOR WALLS PER DETAILS ON SHEET A8-8
2. TYPICAL INSULATION PER TITLE 24 REPORT, SEE T24 SHEETS:
   2X4 EXT WALLS R-13
   2X6 EXT WALLS R-19
   FLOOR R-19
   ROOF R-30
3. REFER TO CIVIL DRAWINGS FOR GRADES ADJACENT TO BUILDINGS, GRADES SHOWN FOR GRAPHIC REFERENCE ONLY
4. ALL DIMENSIONS A.F.F. U.N.O
5. MECHANICAL EQUIPMENT THAT CAN BE SEEN FROM THE PUBLIC RIGHT-OF-WAY SHALL BE SCREENED WITH CITY APPROVED
6. ARCHITECTURAL DEVICES PRIOR TO OCCUPANCY. ALL MATERIALS AND COLORS SHOULD RETURN TO THE INSIDE CORNER U.N.O.
7. REFER TO SIGNAGE PACKAGE FOR SIGNAGE INFORMATION.

MATERIAL LEGEND

- CAST CONCRETE CONSTRUCTION
- WOOD FRAMING, INTERIOR WALL
- WOOD FRAMING, EXTERIOR WALL/ PARTY WALL/FLOOR
- STONE
- EARTH
- LANDSCAPING

Consultant
FOUNDATION OF FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

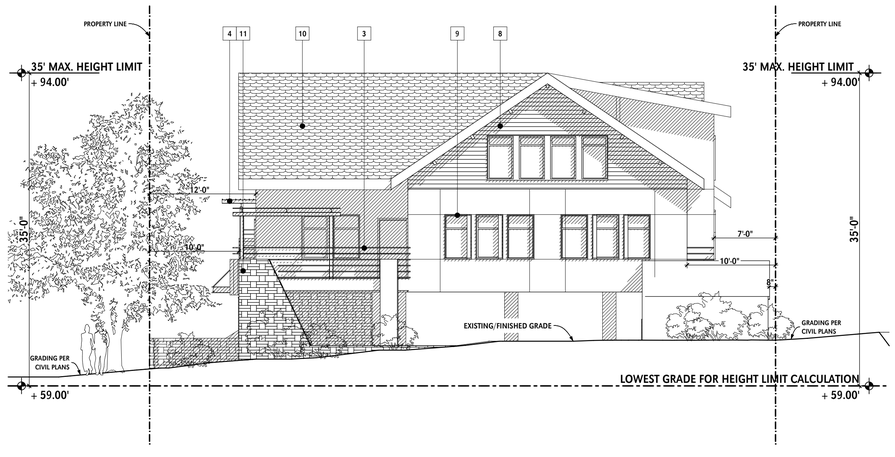
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

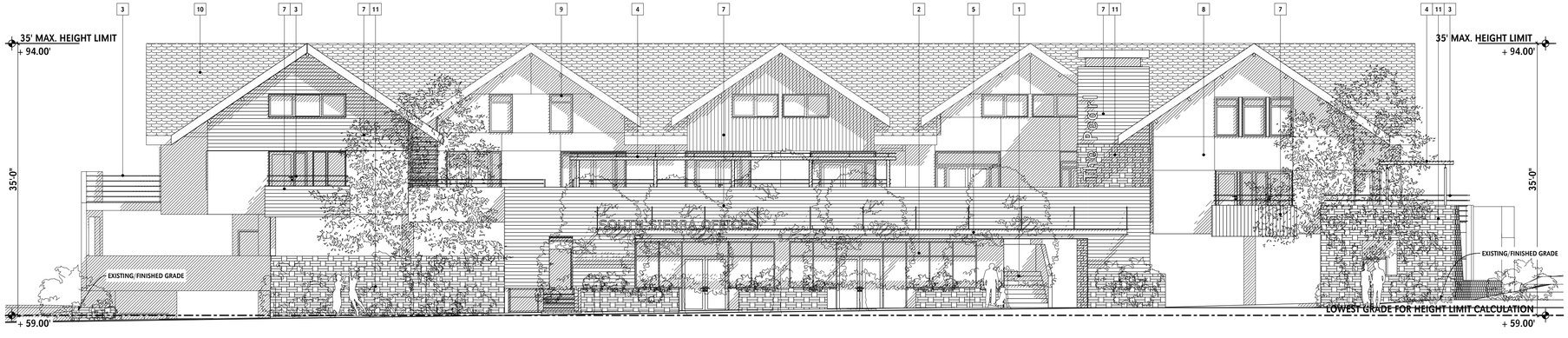
BUILDING SECTIONS

A3-0

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



1 **SOUTH ELEVATION**
1/8" = 1'-0"



2 **WEST ELEVATION**
1/8" = 1'-0"

KEY NOTES

1	CONCRETE AND STEEL STAIRS
2	ALUMINUM STOREFRONT WINDOW SYSTEM
3	42" HIGH GUARDRAIL
4	TRELLIS / PERGOLA
5	AWNING
6	CAST IN PLACE CONCRETE COLUMNS
7	SIDING
8	SEMI-SMOOTH FIELD STUCCO (COLOR T.B.D.)
9	VINYL WINDOWS (COLOR T.B.D.)
10	CLASS 'A' ROOF COMPOSITE ASPHALTIC ROOF (COLOR ONIX BLACK)
11	COASTAL REEF STONE VENEER

Consultant
FOUNDATION of FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

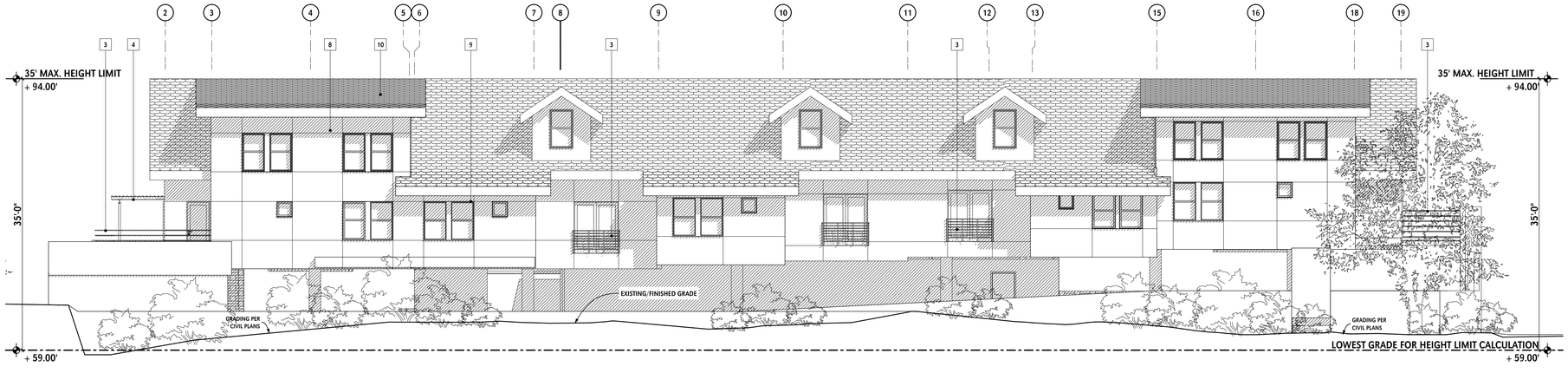
BUILDING ELEVATIONS

A4-0

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



1 **NORTH ELEVATION**
1/8" = 1'-0"



2 **EAST ELEVATION**
1/8" = 1'-0"

KEY NOTES

1	CONCRETE AND STEEL STAIRS
2	ALUMINUM STOREFRONT WINDOW SYSTEM
3	42" HIGH GUARDRAIL
4	TRELLIS / PERGOLA
5	AWNING
6	CAST IN PLACE CONCRETE COLUMNS
7	SIDING
8	SEMI-SMOOTH FIELD STUCCO (COLOR T.B.D.)
9	VINYL WINDOWS (COLOR T.B.D.)
10	CLASS 'A' ROOF COMPOSITE ASPHALTIC ROOF (COLOR ONIX BLACK)
11	COASTAL REEF STONE VENEER

Consultant
FOUNDATION of FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

BUILDING ELEVATIONS

A4-1

© 2018 FoundationofForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationofForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationofForm.

ENLARGED PLAN NOTES

1. ALL DIMENSIONS TO FACE OF STRUCTURAL MATERIAL (F.O.S.) OR CENTER OF, U.N.O
2. WRITTEN DIMENSIONS TO PREVAIL OVER SCALING OF DRAWINGS. SUBCONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY OWNER OR ARCHITECT OF ANY DISCRAPANCIES
3. REFER TO FRAMING PLANS AND CROSS-SECTIONS FOR CLARIFCATION AND DIMENSIONS OF SOFFITED AREAS.
4. REFER TO CROSS SECTIONS FOR CLARIFICATION OF FLOOR ELEVATION HEIGHTS. FOR ALL PENETRATIONS AND RECESSED FIXTURES IN RATED OR PARTY WALLS, SEE DETAILS ON SHEET A8-3
5. WALL AND CELING MATERILS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CBC TABLE 803.5.
6. THE COUNTERTOP SPACE AT SINK TO BE REPOSITIONABLE AT ALL ACCESSIBLE/ADAPTABLE UNITS PER SHEET TS1-0. SEE SEC. 12 SHEET TS3-0 & TS3-1. FOR ADDITONAL INFORMATION OF REPOSITIONABLE SINK AND REMOVABLE BASE CABINET.

WALL LEGEND

- 1 HR WALL, EXTERIOR (2x4) SEE DETAIL X/A7-X
- 1 HR WALL, EXTERIOR (2x6) SEE DETAIL X/A7-X
- 1 HR WALL, INTERIOR (2x4) SEE DETAIL X/A7-X
- 1 HR WALL, INTERIOR (2x8) SEE DETAIL X/A7-X
- 1 HR (PARTY) WALL, INTERIOR SEE DETAIL X/A7-X
- PARTIAL HEIGHT WALL CONSTRUCTION TYPE VARIES
- SOFFIT ABOVE SEE DETAIL X/A7-X

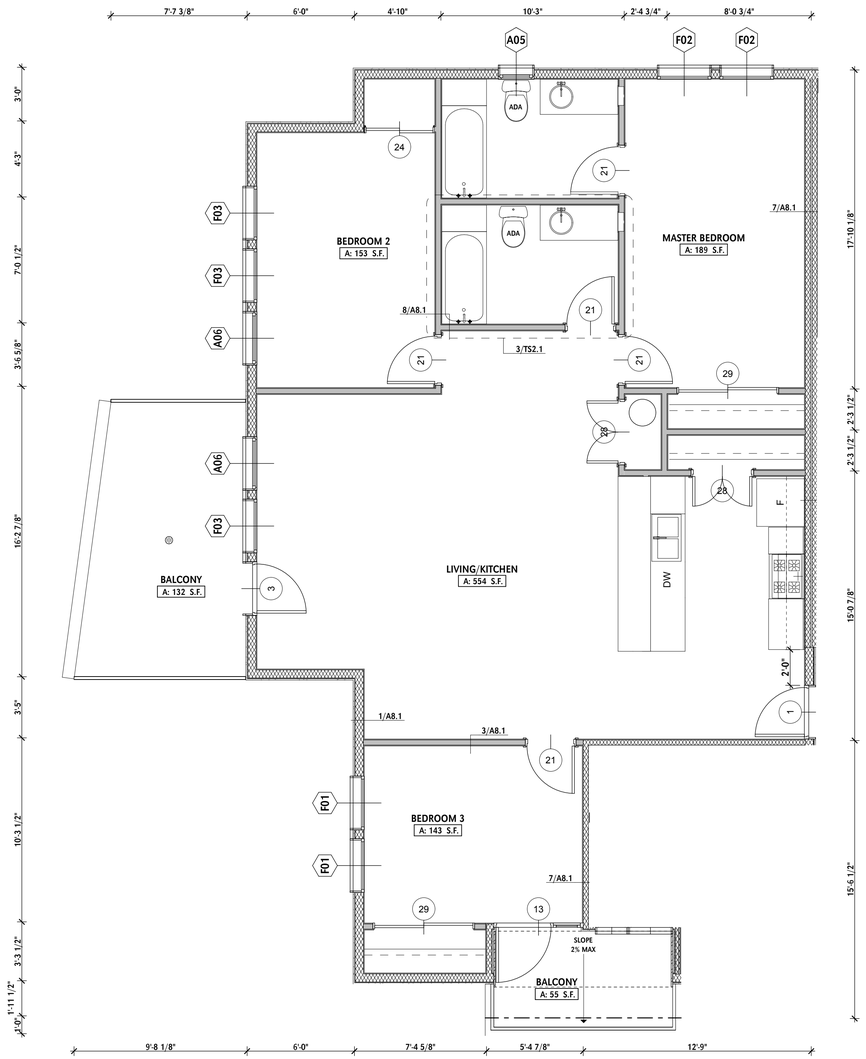
SYMBOL LEGEND (CONT'D)

- DW — KITCHEN SINK + DISHWASHER
- VANITY
- WATER CLOSET
- ADA — WATER CLOSET ADA
- BATHTUB

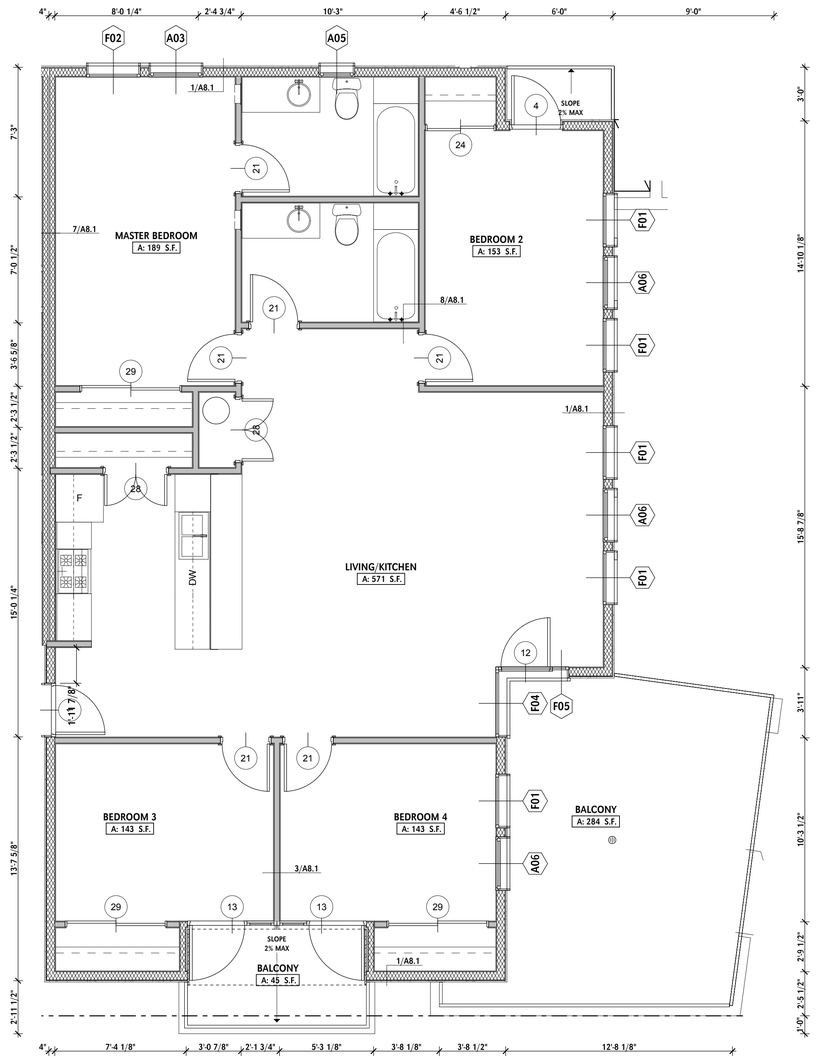
SYMBOL LEGEND

SEE TS-5 FOR COMPLETE SYMBOL LEGEND

- F — 2A:10B:C FIRE EXTINGUISHER
- F — REFRIGERATOR
- W — CLOTHES WASHER
- DR — CLOTHES DRYER
- RANGE



3 BEDROOM UNIT TYPE A - LEVEL 2
1/4" = 1'-0"



4 BEDROOM UNIT TYPE B - LEVEL 2
1/4" = 1'-0"

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

ENLARGED UNIT PLANS

A5-0

ENLARGED PLAN NOTES

1. ALL DIMENSIONS TO FACE OF STRUCTURAL MATERIAL (F.O.S.) OR CENTER OF, U.N.O
2. WRITTEN DIMENSIONS TO PREVAIL OVER SCALING OF DRAWINGS. SUBCONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY OWNER OR ARCHITECT OF ANY DISCRAPANCIES
3. REFER TO FRAMING PLANS AND CROSS-SECTIONS FOR CLARIFCATION AND DIMENSIONS OF SOFFITED AREAS.
4. REFER TO CROSS SECTIONS FOR CLARIFICATION OF FLOOR ELEVATION HEIGHTS. FOR ALL PENETRATIONS AND RECESSED FIXTURES IN RATED OR PARTY WALLS, SEE DETAILS ON SHEET A8-3
5. WALL AND CELING MATERILS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CBC TABLE 803.5.
6. THE COUNTERTOP SPACE AT SINK TO BE REPOSITIONABLE AT ALL ACCESSIBLE/ADAPTABLE UNITS PER SHEET TS1-0. SEE SEC. 12 SHEET TS3-0 & TS3-1. FOR ADDITONAL INFORMATION OF REPOSITIONABLE SINK AND REMOVABLE BASE CABINET.

WALL LEGEND

- 1 HR WALL, EXTERIOR (2x4) SEE DETAIL X/A7-X
- 1 HR WALL, EXTERIOR (2x6) SEE DETAIL X/A7-X
- 1 HR WALL, INTERIOR (2x4) SEE DETAIL X/A7-X
- 1 HR WALL, INTERIOR (2x8) SEE DETAIL X/A7-X
- 1 HR (PARTY) WALL, INTERIOR SEE DETAIL X/A7-X
- PARTIAL HEIGHT WALL CONSTRUCTION TYPE VARIES
- SOFFIT ABOVE SEE DETAIL X/A7-X

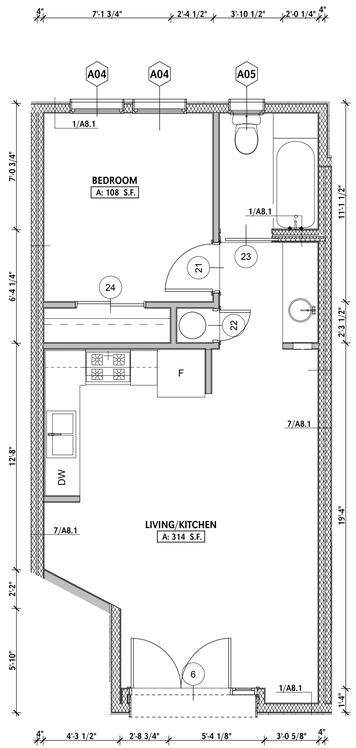
SYMBOL LEGEND (CONT'D)

- DW — KITCHEN SINK + DISHWASHER
- VANITY
- WATER CLOSET
- ADA — WATER CLOSET ADA
- BATHTUB

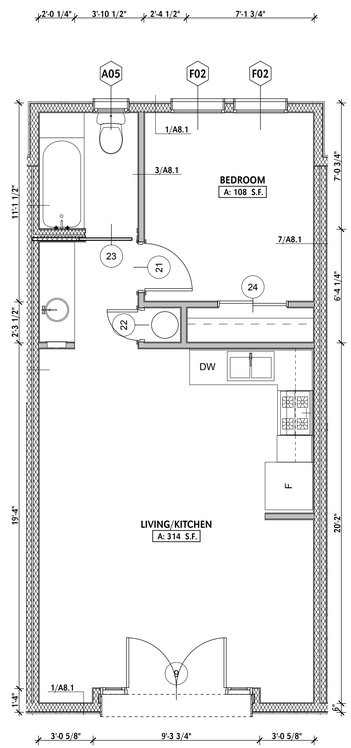
SYMBOL LEGEND

SEE TS-5 FOR COMPLETE SYMBOL LEGEND

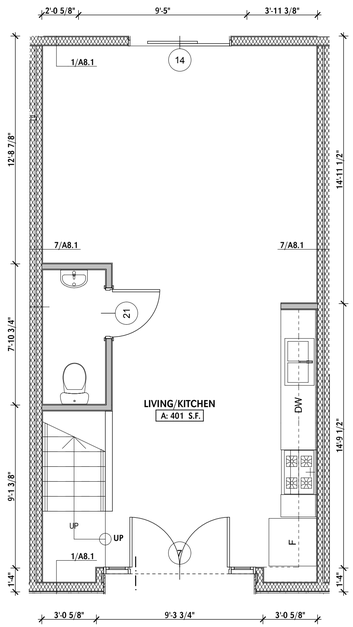
- F — 2A:10B:C FIRE EXTINGUISHER
- F — REFRIGERATOR
- W — CLOTHES WASHER
- DR — CLOTHES DRYER
- RANGE



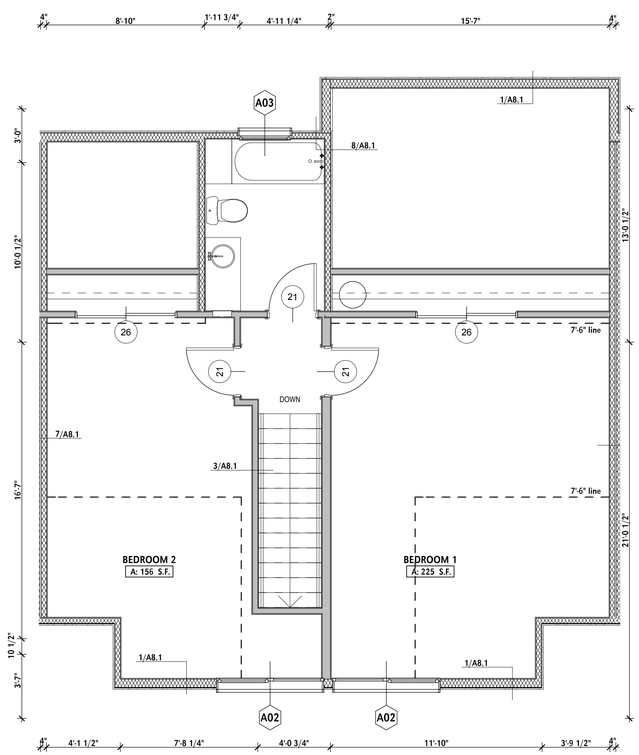
1 BEDROOM UNIT TYPE C1 - LEVEL 2
1/4" = 1'-0"



1 BEDROOM UNIT TYPE C2 - LEVEL 2
1/4" = 1'-0"



2 BEDROOM UNIT TYPE D1/D2 - LEVEL 2
1/4" = 1'-0"



2 BEDROOM UNIT TYPE D1 - LEVEL 3
1/4" = 1'-0"

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

ENLARGED UNIT PLANS

A5-1

© 2018 foundationform | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of foundationform, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of foundationform.

ENLARGED PLAN NOTES

1. ALL DIMENSIONS TO FACE OF STRUCTURAL MATERIAL (F.O.S.) OR CENTER OF, U.N.O
2. WRITTEN DIMENSIONS TO PREVAIL OVER SCALING OF DRAWINGS. SUBCONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY OWNER OR ARCHITECT OF ANY DISCRAPANCIES
3. REFER TO FRAMING PLANS AND CROSS-SECTIONS FOR CLARIFCATION AND DIMENSIONS OF SOFFITED AREAS.
4. REFER TO CROSS SECTIONS FOR CLARIFICATION OF FLOOR ELEVATION HEIGHTS. FOR ALL PENETRATIONS AND RECESSED FIXTURES IN RATED OR PARTY WALLS, SEE DETAILS ON SHEET A8-3
5. WALL AND CELING MATERILS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CBC TABLE 803.5.
6. THE COUNTERTOP SPACE AT SINK TO BE REPOSITIONABLE AT ALL ACCESSIBLE/ADAPTABLE UNITS PER SHEET TS1-0. SEE SEC. 12 SHEET TS3-0 & TS3-1. FOR ADDITONAL INFORMATION OF REPOSITIONABLE SINK AND REMOVABLE BASE CABINET.

WALL LEGEND

- 1 HR WALL, EXTERIOR (2x4) SEE DETAIL X/A7-X
- 1 HR WALL, EXTERIOR (2x6) SEE DETAIL X/A7-X
- 1 HR WALL, INTERIOR (2x4) SEE DETAIL X/A7-X
- 1 HR WALL, INTERIOR (2x8) SEE DETAIL X/A7-X
- 1 HR (PARTY) WALL, INTERIOR SEE DETAIL X/A7-X
- PARTIAL HEIGHT WALL CONSTRUCTION TYPE VARIES
- SOFFIT ABOVE SEE DETAIL X/A7-X

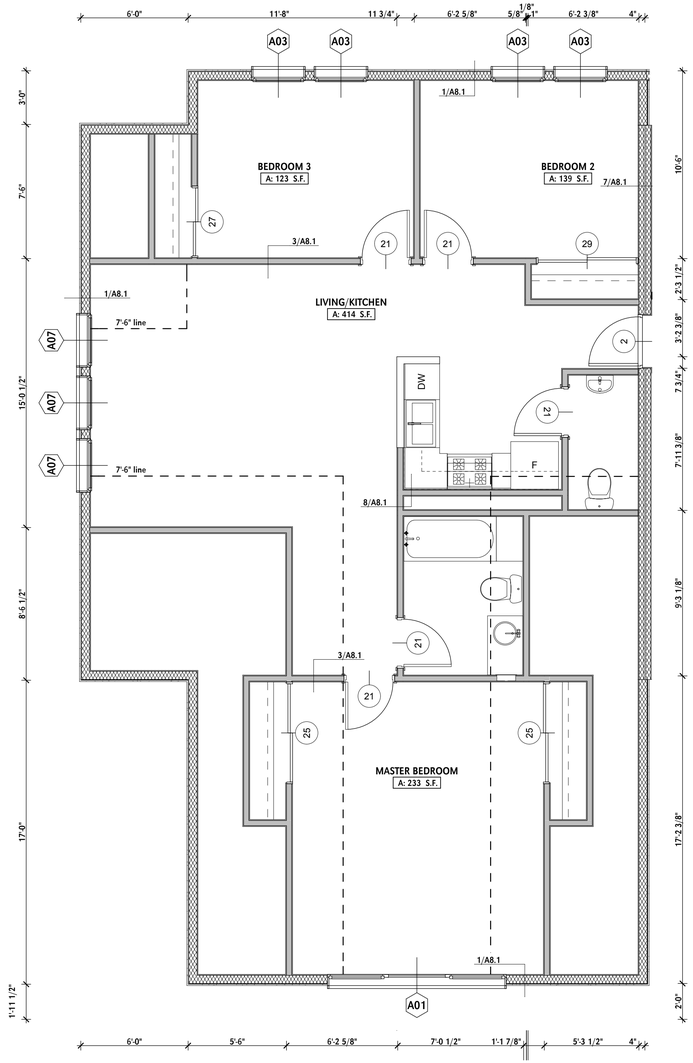
SYMBOL LEGEND (CONT'D)

- DW — KITCHEN SINK + DISHWASHER
- VANITY
- WATER CLOSET
- WATER CLOSET ADA
- BATHTUB

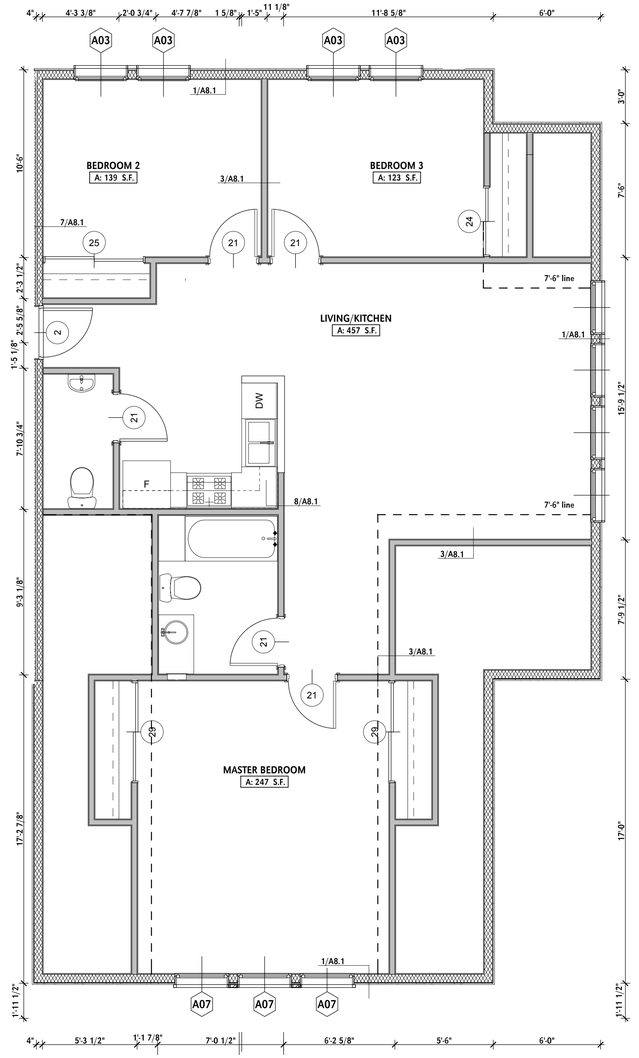
SYMBOL LEGEND

SEE TS-5 FOR COMPLETE SYMBOL LEGEND

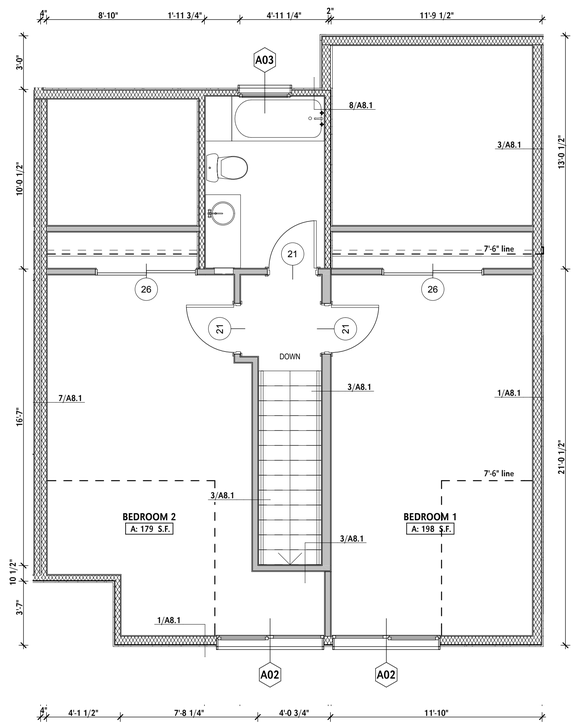
- F — 2A:10B:C FIRE EXTINGUISHER
- F — REFRIGERATOR
- W — CLOTHES WASHER
- DR — CLOTHES DRYER
- RANGE



3 BEDROOM UNIT TYPE E1 - LEVEL 3
1/4" = 1'-0"



3 BEDROOM UNIT TYPE E2 - LEVEL 3
1/4" = 1'-0"



2 BEDROOM UNIT TYPE D2 - LEVEL 3
1/4" = 1'-0"

Consultant

FOUNDATION FORM ARCHITECTURE

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

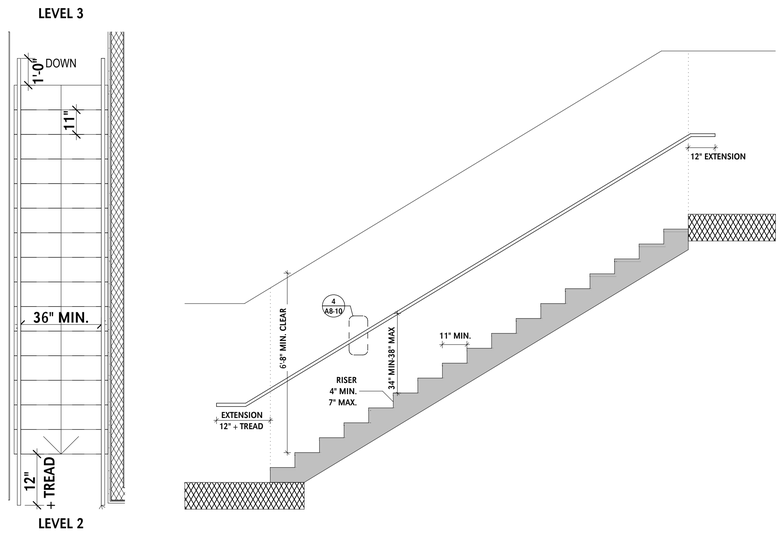
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

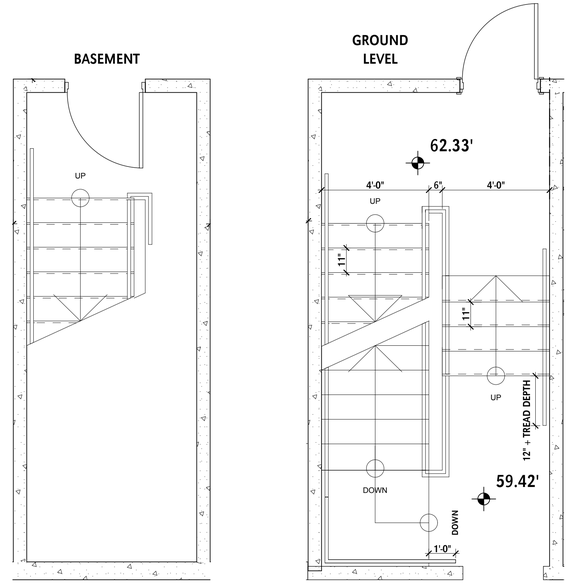
ENLARGED UNIT PLANS

A5-2

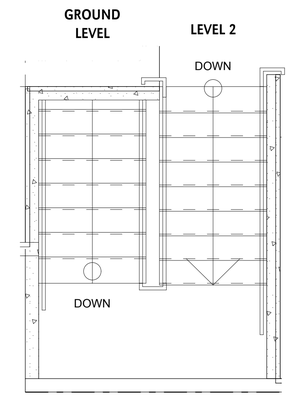
© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

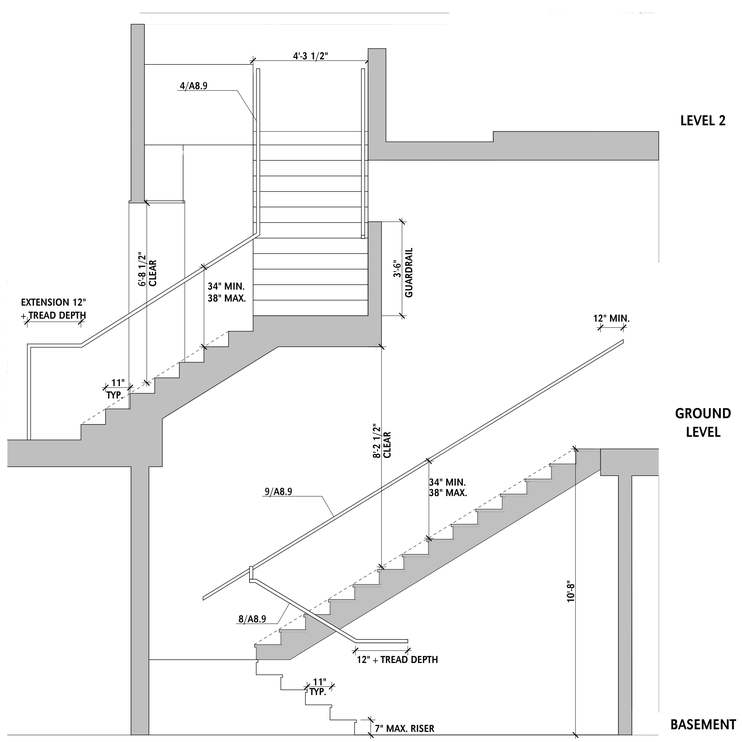


4 — ENLARGED STAIR 4 - PLAN & SECTION
- — 3/8" = 1'-0"

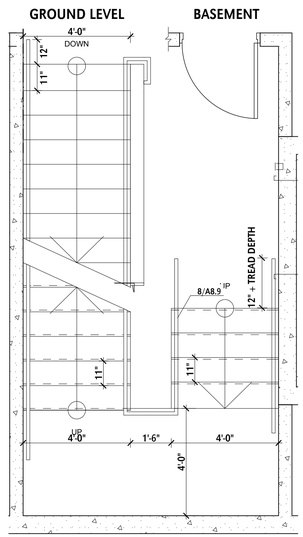


1 — ENLARGED STAIR 1 - PLAN
- — 3/8" = 1'-0"

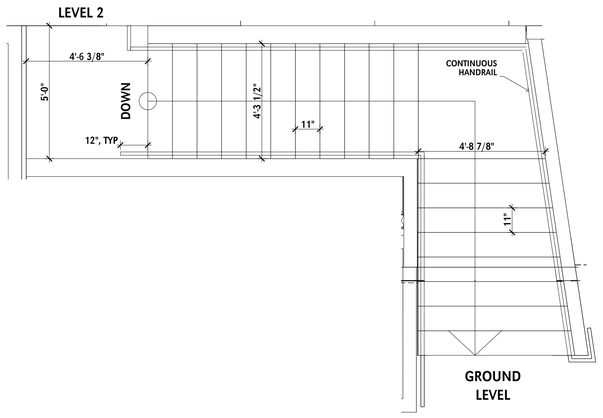




5 — STAIR 2 & 3 SECTION
- — 3/8" = 1'-0"



3 — ENLARGED STAIR 3 - PLAN
- — 3/8" = 1'-0"



2 — ENLARGED STAIR 2 - PLAN
- — 3/8" = 1'-0"

GENERAL STAIR NOTES

1. PER CBC1009.7.2 STAIR RISER HEIGHTS SHALL BE 7" MAX. AND 4" MIN. & TREAD DEPTHS SHALL BE 11" MIN.
2. PER CBC1009.7.2 EXCEPTION WITHIN DWELLING UNITS IN GROUP R-2 OCCUPANCIES, THE MAX. RISER HEIGHT SHALL BE 7 3/4" AND THE MIN. TREAD DEPTH SHALL BE 10"
3. PER CBC 1009.4. STAIR TREADS AND RISERS SHALL BE OF A UNIFORM SIZE AND SHAPE. THE TOLERANCE BETWEEN THE LARGEST AND SMALLEST RISER HEIGHT OR BETWEEN THE LARGEST AND SMALLEST TREAD DEPTH SHALL NOT EXCEED 3/8" IN ANY FLIGHT OF STAIRS.
4. PER CBC 1115A.5 ALL EXTERIOR STAIRS SHALL HAVE THE UPPER APPROACH AND ALL TREADS MARKED BY A STRIPE PROVIDING CLEAR VISUAL CONTRAST.
   THE STRIPE SHALL BE A MIN. OF 2 INCHES WIDE TO A MAX. OF 4 INCHES WIDE PLACED PARALLEL TO, AND NOT MORE THAN 1 INCH FROM, THE NOSE OF THE STEP OR UPPER APPROACH. THE STRIPE SHALL EXTEND THE FULL WIDTH OF THE STEP OR UPPER APPROACH AND SHALL BE OF MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIPE SHALL BE ACCEPTABLE.
5. PER CBC 1123A.5 ALL INTERIOR STAIRS EXCEPT WITHIN DWELLING UNITS SHALL HAVE THE UPPER APPROACH AND LOWER TREAD MARKED BY A STRIPE PROVIDING CLEAR VISUAL CONTRAST.
   THE STRIPE SHALL BE A MIN. OF 2 INCHES WIDE TO A MAX. OF 4 INCHES WIDE PLACED PARALLEL TO, AND NOT MORE THAN 1 INCH FROM, THE NOSE OF THE STEP OR UPPER APPROACH. THE STRIPE SHALL EXTEND THE FULL WIDTH OF THE STEP OR UPPER APPROACH AND SHALL BE OF MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIPE SHALL BE ACCEPTABLE.

STAIRWAY IDENTIFICATION SIGN NOTES

1. PER CBC 1022.9, A SIGN SHALL BE PROVIDED AT EACH FLOOR LANDING IN AN INTERIOR EXIT STAIRWAY CONNECTING MORE THAN THREE STORIES DESIGNATING THE FLOOR LEVEL, THE TERMINUS OF THE TOP AND BOTTOM OF THE INTERIOR EXIT STAIRWAY AND THE IDENTIFICATION OF THE STAIR.
2. THE SIGNAGE SHALL STATE THE STORY OF AND THE DIRECTION TO THE EXIT DISCHARGE AND THE AVAILABILITY OF THE ROOF ACCESS FROM THE INTERIOR EXIT STAIRWAY FOR THE FIRE DEPARTMENT.
3. THE SIGN SHALL BE LOCATED 5' ABOVE THE FLOOR LANDING IN A POSITION THAT IS READILY VISIBLE WHEN THE DOORS ARE IN THE OPEN OR CLOSED POSITIONS.
4. IN ADDITION TO THE STAIRWAY IDENTIFICATION SIGN, RAISED CHARACTERS AND BRAILLE FLOOR IDENTIFICATION SIGNS SHALL BE LOCATED AT THE LANDING OF EACH FLOOR LEVEL, PLACED ADJACENT TO THE DOOR ON THE LATCH SIDE, IN ALL ENCLOSED STAIRWAYS TO IDENTIFY THE FLOOR LEVEL..
5. AT THE EXIT DISCHARGE LEVEL, THE SIGN SHALL INCLUDE A RAISED FIVE POINTED STAR LOCATED TO THE LEFT OF THE IDENTIFYING FLOOR LEVEL. THE OUTSIDE DIAMETER OF THE STAR SHALL BE THE SAME AS THE HEIGHT OF THE RAISED CHARACTERS.
6. PER CBC 1022.9.1, STAIRWAY IDENTIFICATION SIGNS SHALL BE
   - A MINIMUM SIZE OF 18"x12"
   - THE LETTERS DESIGNATING THE IDENTIFICATION OF THE STAIR ENCLOSURE SHALL BE PLACED AT THE TOP OF THE SIGN
   - LETTERS SHALL BE A MINIMUM OF 1-1/2" IN HEIGHT WITH 1/4" STROKES
   - THE NUMBER DESIGNATING THE FLOOR LEVEL SHALL BE A MINIMUM OF 5" IN HEIGHT WITH 3/4" STROKES AND LOCATED IN THE CENTER OF THE SIGN.
   - THE MEZZANINE LEVELS SHALL HAVE THE LETTER "M" PRECEDING THE FLOOR NUMBER
   - THE BASEMENT LEVELS SHALL HAVE THE LETTER "B" PRECEDING THE FLOOR NUMBER
   - ALL OTHER LETTERING AND NUMBERS SHALL BE A MINIMUM OF 1" IN HEIGHT
   - THE STAIRWAY'S UPPER TERMINUS, SUCH AS "ROOF ACCESS" OR "NO ROOF ACCESS", SHALL BE PLACED UNDER THE STAIRWAY IDENTIFICATION IN 1" HIGH BLOCK LETTERING WITH 1/4" STROKES
   - THE LOWER AND UPPER TERMINUS OF THE STAIRWAY SHALL BE PLACED AT THE BOTTOM OF THE SIGN IN 1" HIGH BLOCK LETTERING W/ 1/4" STROKES
   - CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH
   - CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON LIGHT BACKGROUND.

Consultant: FOUNDATION by FORM ARCHITECTURE

Developer: Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

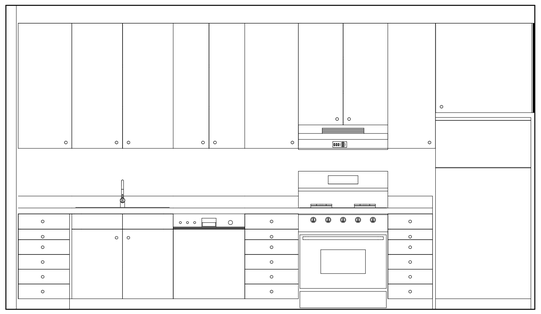
PROJECT # 1008

ENLARGED STAIR PLANS

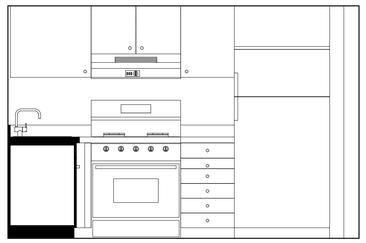
A5-3

© 2018 foundationbyform | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of foundationbyform, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of foundationbyform.

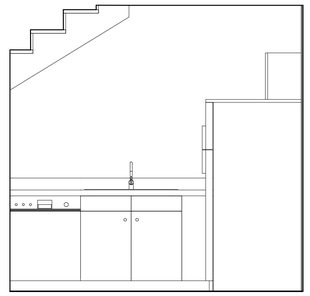
© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



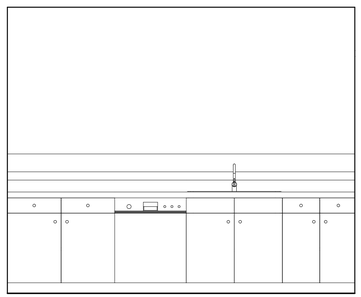
3 — 2 BED KITCHEN, TYP.
- — 1/2" = 1'-0"



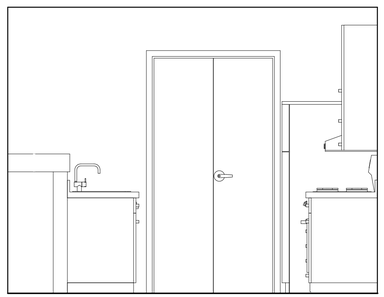
2 — 1 BED KITCHEN, TYP.
- — 1/2" = 1'-0"



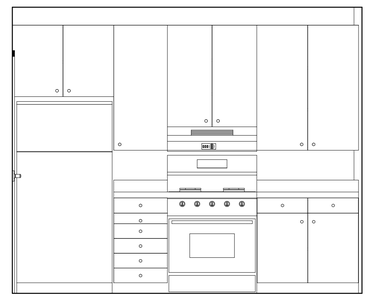
1 — 1 BED KITCHEN, TYP.
- — 1/2" = 1'-0"



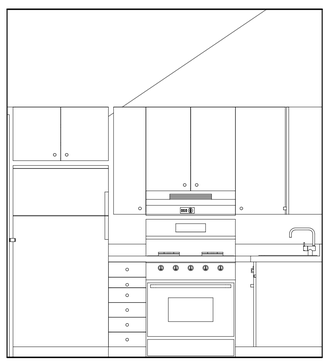
6 — 3 BED KITCHEN - A, TYP.
- — 1/2" = 1'-0"



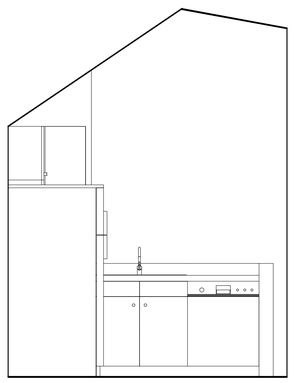
5 — 3 BED KITCHEN - A, TYP.
- — 1/2" = 1'-0"



4 — 3 BED KITCHEN - A, TYP.
- — 1/2" = 1'-0"



8 — 3 BED KITCHEN - B, TYP.
- — 1/2" = 1'-0"



7 — 3 BED KITCHEN - B, TYP.
- — 1/2" = 1'-0"

Consultant

FOUNDATION FORM ARCHITECTURE

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

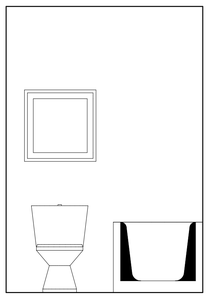
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

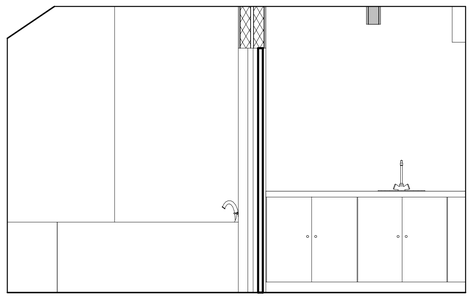
ENLARGED KITCHEN ELEVATIONS

A6-0

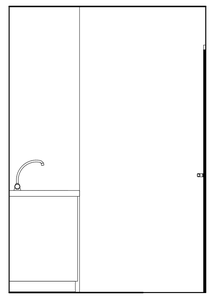
© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



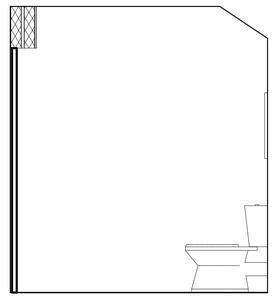
4 1 BED, TYP.
- 1/2" = 1'-0"



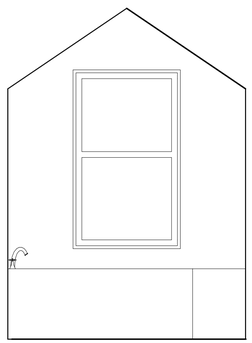
3 1 BED, TYP.
- 1/2" = 1'-0"



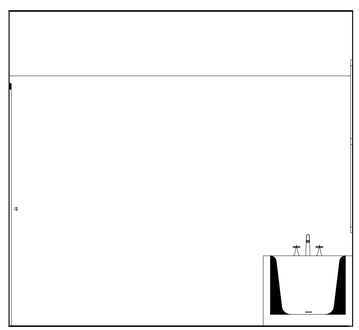
2 1 BED, TYP.
- 1/2" = 1'-0"



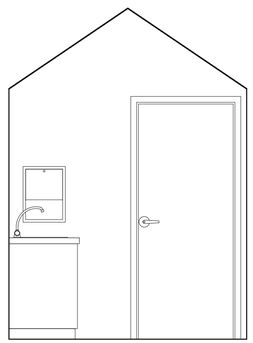
1 1 BED, TYP.
- 1/2" = 1'-0"



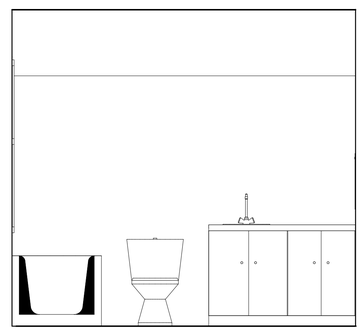
8 2 BED, TYP.
- 1/2" = 1'-0"



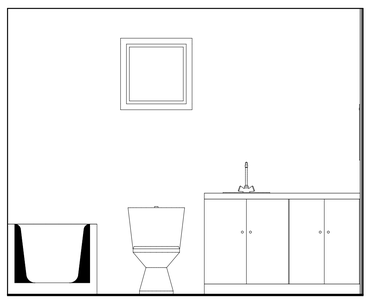
7 2 BED, TYP.
- 1/2" = 1'-0"



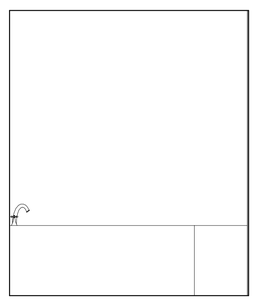
6 2 BED, TYP.
- 1/2" = 1'-0"



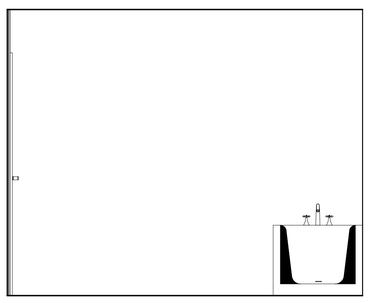
5 2 BED, TYP.
- 1/2" = 1'-0"



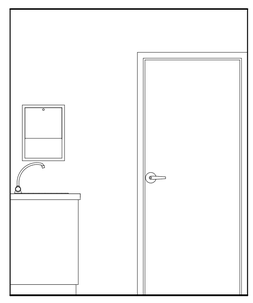
12 3 BED - A, TYP.
- 1/2" = 1'-0"



11 3 BED - A, TYP.
- 1/2" = 1'-0"



10 3 BED - A, TYP.
- 1/2" = 1'-0"



9 3 BED - A, TYP.
- 1/2" = 1'-0"

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

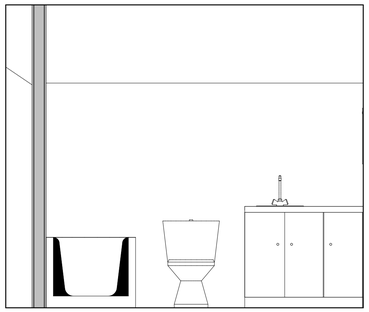
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

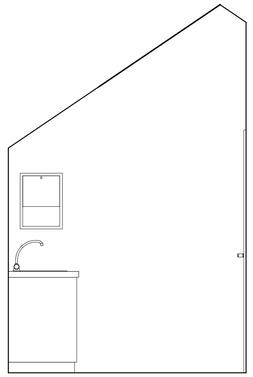
ENLARGED BATHROOM ELEVATIONS

A6-1

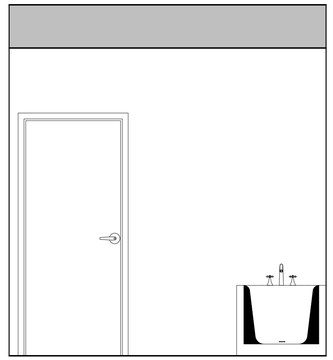
© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



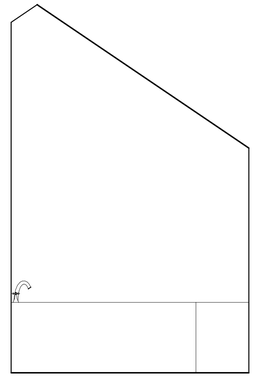
4 3 BED - B, TYP.
- 1/2" = 1'-0"



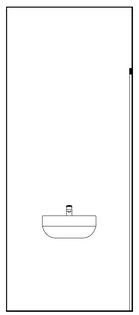
3 3 BED - B, TYP.
- 1/2" = 1'-0"



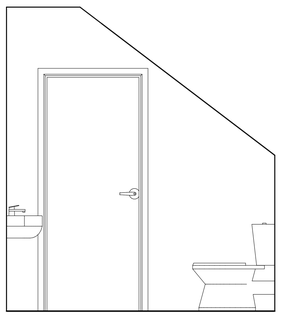
2 3 BED - B, TYP.
- 1/2" = 1'-0"



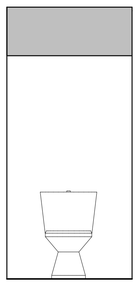
1 3 BED - B, TYP.
- 1/2" = 1'-0"



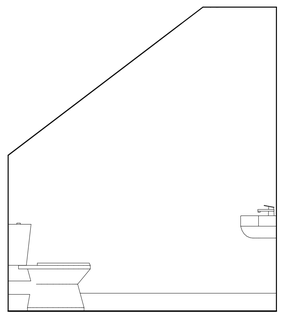
8 HALF, TYP.
- 1/2" = 1'-0"



7 HALF, TYP.
- 1/2" = 1'-0"



6 HALF, TYP.
- 1/2" = 1'-0"



5 HALF, TYP.
- 1/2" = 1'-0"

Consultant

FOUNDATION FORM ARCHITECTURE

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

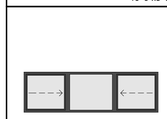
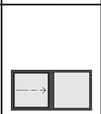
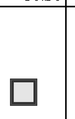
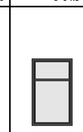
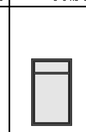
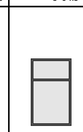
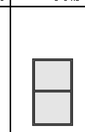
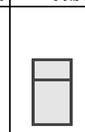
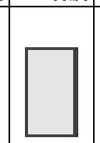
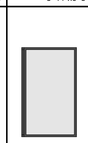
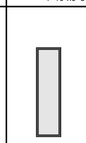
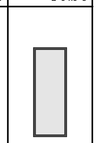
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

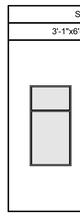
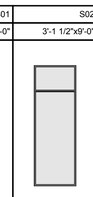
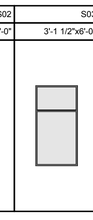
ENLARGED BATHROOM ELEVATIONS

A6-2

WINDOW SCHEDULE						
MARK	QTY	DIMENSIONS		GLAZING		NOTES
		WIDTH	HEIGHT	TYPE	AREA	
A01	1	10'-0"	3'-0"		30.00	
A02	4	6'-0"	3'-0"		18.00	
A03	12	3'-0"	5'-0"		15.00	
A04	2	3'-0"	4'-6"		13.50	
A05	5	2'-0"	2'-0"		4.00	
A06	5	3'-0"	5'-0"		15.00	
A07	12	3'-0"	5'-0"		15.00	
F01	7	3'-0"	5'-0"		15.00	
F02	7	3'-0"	5'-0"		15.00	
F03	3	3'-0"	5'-0"		15.00	
F04	1	3'-9"	6'-8"		25.02	
F05	1	3'-11"	6'-8"		26.11	
F06	1	1'-10"	6'-8"		12.22	
F07	1	2'-6"	6'-8"		16.56	

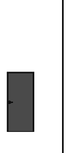
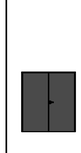
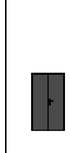
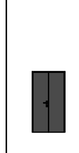
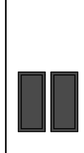
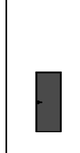
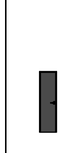
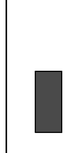
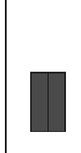
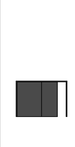
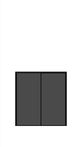
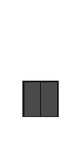
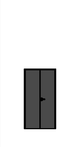
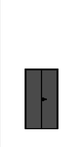
A01	A02	A03	A04	A05	A06	A07	F01	F02	F03	F04	F05	F06	F07
10'-0"x3'-0"	6'-0"x3'-0"	3'-0"x5'-0"	3'-0"x4'-6"	2'-0"x2'-0"	3'-0"x5'-0"	3'-0"x5'-0"	3'-0"x5'-0"	3'-0"x5'-0"	3'-0"x5'-0"	3'-9"x6'-8"	3'-11"x6'-8"	1'-10"x6'-8"	2'-6"x6'-8"
													

STOREFRONT GLAZING SCHEDULE						
MARK	QTY	DIMENSIONS		GLAZING		NOTES
		WIDTH	HEIGHT	TYPE	AREA	
S01	4	3'-1"	6'-0"	STOREFRONT	18.49	
S02	1	3'-1 1/2"	9'-0"	STOREFRONT	28.12	
S03	5	3'-1 1/2"	6'-0"	STOREFRONT	18.75	

S01	S02	S03
3'-1"x6'-0"	3'-1 1/2"x9'-0"	3'-1 1/2"x6'-0"
		

DOOR AND FRAME SCHEDULE				
MARK	QTY	DESCRIPTION	DOOR SIZE	NOTES
1	3	EXTERIOR ENTRANCE	3'-0"x6'-8"	
2	2	EXTERIOR ENTRANCE	3'-0"x6'-10"	
3	1	EXTERIOR ENTRANCE	3'-0"x7'-2"	
4	1	EXTERIOR ENTRANCE	3'-0"x7'-2"	
5	2	EXTERIOR ENTRANCE	6'-1 1/2"x9'-0"	
6	1	EXTERIOR ENTRANCE	7'-1 1/2"x6'-8"	
7	1	EXTERIOR ENTRANCE	8'-6"x7'-2"	
8	1	EXTERIOR ENTRANCE	8'-6"x7'-8"	
9	1	EXTERIOR ENTRANCE	8'-6"x8'-2"	
10	1	EXTERIOR ENTRANCE	8'-5"x8'-8"	
11	1	EXTERIOR ENTRANCE	7'-1 1/2"x7'-1...	
12	1	EXTERIOR BALCONY	3'-0"x6'-8"	
13	3	EXTERIOR BALCONY	5'-0"x6'-8"	
14	3	EXTERIOR SLIDING	5'-9"x6'-8"	
15	6	EXTERIOR	3'-0"x6'-8"	
16	1	EXTERIOR STORAGE	3'-6"x6'-8"	
17	2	EXTERIOR STORAGE	6'-0"x6'-8"	
18	1	EXTERIOR STORAGE	3'-8"x6'-4 1/2"	
19	1	EXTERIOR STORAGE	3'-8"x6'-9 1/2"	
20	1	INTERIOR POCKET	6'-0"x6'-8"	
21	36	INTERIOR SWING	2'-10"x6'-8"	
22	4	INTERIOR SWING	1'-11"x6'-9 1/2"	
23	3	INTERIOR POCKET	2'-11 1/2"x6'-...	
24	6	INTERIOR SLIDING	3'-11 1/2"x6'-8"	
25	3	INTERIOR SLIDING	5'-8 1/2"x4'-0"	
26	6	INTERIOR SLIDING	5'-8 1/2"x6'-0"	
27	1	INTERIOR SLIDING	4'-0"x4'-0"	
28	1	INTERIOR CLOSET SWING	3'-6"x6'-8"	
28	3	INTERIOR CLOSET SWING	3'-8"x6'-8"	
29	8	INTERIOR CLOSET SLIDING	5'-8 1/2"x6'-8"	

1	2	3	4	5	6	7	8	9	10	11	12	13	14
3'-0"x6'-8"	3'-0"x6'-10"	3'-0"x7'-2"	3'-0"x7'-2"	6'-1 1/2"x9'-0"	7'-1 1/2"x6'-8"	8'-6"x7'-2"	8'-6"x7'-8"	8'-6"x8'-2"	8'-5"x8'-8"	7'-1 1/2"x7'-10 1/2"	3'-0"x6'-8"	5'-0"x6'-8"	5'-9"x6'-8"
													

15	16	17	18	19	20	21	22	23	24	25	26	27	28	28
3'-0"x6'-8"	3'-6"x6'-8"	6'-0"x6'-8"	3'-8"x6'-4 1/2"	3'-8"x6'-9 1/2"	6'-0"x6'-8"	2'-10"x6'-8"	1'-11"x6'-9 1/2"	2'-11 1/2"x6'-10"	3'-11 1/2"x6'-8"	5'-8 1/2"x4'-0"	5'-8 1/2"x6'-0"	4'-0"x4'-0"	3'-6"x6'-8"	3'-8"x6'-8"
														

GENERAL WINDOW NOTES

1. SLEEPING ROOMS IN R-2 OCCUPANCIES SHALL HAVE A WINDOW OR EXTERIOR DOOR FOR EMERGENCY ESCAPE PER CBC 1029.

A) WINDOWS MUST HAVE AN OPENABLE AREA OF AT LEAST 5.7 SQUARE FEET, WITH THE MINIMUM OPENABLE WIDTH 20" AND THE MINIMUM OPENABLE HEIGHT 24".
B) THE BOTTOM OF THE CLEAR OPENING SHALL NOT EXCEED 44" ABOVE THE FLOOR.
C) SUCH OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR A COURT THAT OPENS TO A PUBLIC WAY (4-SIDED COURTS ARE PROHIBITED).
D) THE EMERGENCY DOOR OR WINDOW SHALL BE OPENABLE FROM THE INSIDE TO PROVIDE A FULL, CLEAR OPENING WITHOUT THE USE OF ANY KEYS OR TOOLS.

2. FRAME COLOR PER SCHEDULE UNLESS NOTED OTHERWISE ON ELEVATION. PROVIDE WINDOW BLINDS FOR ALL RESIDENTIAL UNIT WINDOWS THAT HAVE CLEAR GLASS.

3. GLAZING IN THE FOLLOWING LOCATIONS SHOULD BE OF SAFETY GLAZING MATERIAL IN ACCORDANCE WITH CBC SECTION 2406.4:
A) FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE. EXCEPTION: FOR R-2 OCCUPANCIES (ONLY), GLAZING IN WALLS PERPENDICULAR TO THE DOOR IN ITS CLOSED POSITION, OTHER THAN THE WALL TOWARDS WHICH THE DOOR SWINGS.

B) INDIVIDUAL FIXED OR OPERABLE PANELS, OTHER THAN THOSE LOCATIONS DESCRIBED ABOVE, THAT MEET ALL OF THE FOLLOWING CONDITIONS:
I) EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SQUARE FEET, AND:
II) EXPOSED BOTTOM EDGE IS LESS THAN 18 INCHES ABOVE THE FLOOR, AND:
III) EXPOSED TOP EDGE IS GREATER THAN 36 INCHES ABOVE THE FLOOR, AND:
IV) ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES HORIZONTALLY OF THE PLANE OF THE GLAZING.

C) GLAZING ADJACENT TO STAIRWAYS OR RAMPS WITHIN 36 INCHES HORIZONTALLY OF A WALKING SURFACE; WHEN THE EXPOSED SURFACE; WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.

4. FOR R-2 OCCUPANCIES, WHERE A WINDOW SILL IS MORE THAN 6' ABOVE THE FINISHED GRADE, THE LOWEST OPENABLE PART OF THE WINDOW SHALL BE AT LEAST 36" ABOVE THE FINISHED FLOOR OF THE ROOM. GLAZING BETWEEN THE FLOOR AND A HEIGHT OF 36" SHALL BE FIXED OR HAVE OPENINGS SUCH THAT A 4" SPHERE CANNOT PASS THROUGH PER CBC SECTION 1013.8.

5. ALL WINDOWS AND GLASS DOORS ON RESIDENTIAL UNITS SHOULD HAVE A MINIMUM RATING OF STC 28, PER ACOUSTICAL REPORT.

6. GLAZING DATA:

	U-VALUE	SHGC	STC
FIXED	.30	.23	PER T24
SLIDING	.30	.23	PER T24

GENERAL DOOR NOTES

1. ALL DOORS SHALL HAVE SINGLE EFFORT, NON GRASP LATCHING HARDWARE THAT IS CENTERED BETWEEN 30" AND 44" ABOVE THE FLOOR, OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE OR EFFORT.

2. DEADBOLT OPERATION SHALL BE SINGLE EFFORT TO OPEN DOOR

3. ALL DOORS INTO A ONE-HOUR COORIDOR SHALL ALSO BEAR AN APPROVED LABEL SHOWING THE RATING FOLLOWED BY THE LETTER "S", THE NAME OF THE MANUFACTURER AND THE IDENTIFICATION OF THE LISTING SERVICE.

4. DOORS CALLING FOR SPECIAL TEMPERATURE RISE CHARACTERISTICS (TYPCALLY DOORS IN TWO HOUR STAIR ENCLOSURE) SHALL BE 90 MIN. RATED ASSEMBLIES WITH THE ADDITIONAL SPECIAL CHARACTERISTIC OF A MAXIMUM TRANSMITTED TEMPERATURE END-POINT OF 450 DEGREES F. AT 30 MIN. IN ACCORDANCE WITH CBC STANDARD 7-2.

5. DOOR OPENING FORCE AT ALL NON-UNIT DOORS SHALL NOT EXCEEED 5 LBS. AT EXTERIOR AND INTEERIOOR DOORS. DOOR OPENING FORCE IN RESIDENTIAL OCCUPANCY AREAS SHALL BE 8.5 LBS. AT EXTERIOR DOORS AND 5 LBS. MAX AT INTERIOR DOORS. DOOR OPENING FORCE AT ALL FIRE DOORS SHALL BE 15 LBS. MAX.

6. FOR ALL DOORS WITH CLOSERS, THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70° THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LANDING EDGE OF THE DOOR.

7. ALL DOORS REQUIRED TO BE ACCESSIBLE SHALL HAVE 24" (EXTERIOR) OR 18" (INTERIOR) STRIKE SIDE X 60" DEEP LANDING ON PULL SIDE, 12" STRIKE SIDE (ONLY WHEN DOOR HAS LATCH AND CLOSER, OTHERWISE 0") X 60" DEEP LANDING ON PUSH SIDE OF DOORS IN 'R' OCCUPANCIES ONLY REQUIRE 44" DEEP LANDING PER CBC 1133B.2.4.2 EXCEPTION 2.

8. SEE DETAIL 12/A9.4 FOR TYP. EXTERIOR DOOR THRESHOLD FLASHING.

9. ALL DOORS AND GATES, WITHIN THE EXIT PATH TO A PUBLIC WAY FROM AN OCCUPANCY OF GROUP A HAVING AN OCCUPANT LOAD OF 50 OR MORE SHALL NOT BE PROVIDED WITH LATCHES OR LOCKS UNLESS THEY ARE EQUIPPED WITH PANIC HARDWARE PER CBC SECTIONS 1008.1.10 AND 1002.

10. ALL WINDOWS AND GLASS DOORS ON RESIDENTIAL UNITS SHOULD HAVE A MINIMUM RATING OF STC 28, PER ACOUSTICAL REPORT.

11. A CLOSET DESIGNED FOR THE INSTALLATION OF A CLOTHES DRYER REQUIRES THE DOOR TO HAVE A MINIMUM OF 100 SQUARE INCHES OF OPENING FOR MAKEUP AIR (SEC. 504.3.2 CMC).

12. DOORS IN THE MEANS OF EGRESS SYSTEM TO BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. CBC 1008.1.9.

13. GLAZING DATA:

	U-VALUE	SHGC	STC
FIXED	.50	PER T24	PER T24
SLIDING	.50	PER T24	PER T24

Consultant
FOUNDATION OF FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

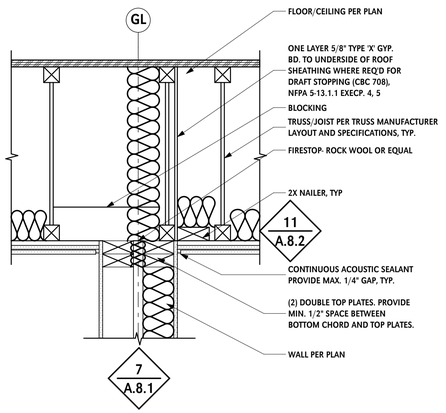
PROJECT # 1008

DOOR & WINDOW SCHEDULE

A7-0

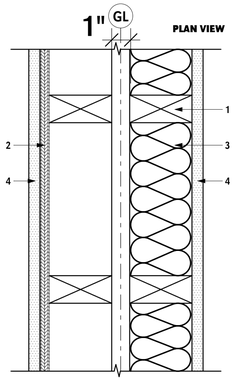
© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

© 2018 foundationform | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of foundationform, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of foundationform.



10 1-HR PARTY WALL @ CEILING

1-1/2" = 1'0"



FIRE: UL DESIGN #U341

SOUND: STC 56 PER OWENS CORNING #OCF448

1 **WOOD STUDS**
2X WOOD STUDS ON SEPARATE PLATES 1" APART PER STRUCTURAL.
MINIMUM- 2X4 STUDS @ 16" O.C.

2 **STRUCTURAL SHEATHING**
PLYWOOD OR OSB SHEATHING WHERE OCCURS, PER STRUCTURAL PLAN. (ALWAYS TERMINATE @ INSIDE CORNER)

3 **INSULATION**
FORMALDEHYDE FREE FIBERGLASS BATT INSULATION PER T24.

4 **GYPSUM WALLBOARD**
ONE LAYER 5/8" TYPE 'X' GYP. WALLBOARD OR GYP. VENEER BASE APPLIED PARALLEL OR AT RIGHT ANGLES TO EACH SIDE OF DOUBLE ROW 2X4 WOOD STUDS WITH 6d COATED NAILS, 1 7/8" LONG, 0.0915" SHANK, 1/4" HEADS, 7" O.C. (WHERE STRUCTURAL SHEATHING OCCURS, LENGTH OF FASTENERS SHALL BE INCREASED BY NOT LESS THAN THE THICKNESS OF THE STRUCTURAL SHEATHING). JOINTS SATAGGERED 16" ON OPPOSITE SIDES. HORIZONTAL BRACING REQUIRED AT MID-HEIGHT. (LOAD-BEARING)

*NON-RIGID FIRE BLOCKING REQUIRED PER CBC 718.2.1.5

7 1-HR PARTY WALL

3" = 1'0"

FIRE: UBC TABLE 7-B, ITEM # 7-1.1

SOUND: N/A

1 **REINFORCEMENT**
HORIZONTAL & VERTICAL TEMPERATURE REINFORCEMENT PER STRUCTURAL.

2 **CONCRETE**
SILICEOUS AGGREGATE CONCRETE. MINIMUM THICKNESS BELOW:

4 HOUR = 7.0 INCHES — 3 HOUR = 6.2 INCHES
2 HOUR = 5.0 INCHES — 1 HOUR = 3.5 INCHES

3 **FINISH**
VERY LIGHT SANDBLAST FINISH W/ CLEAR COAT SEALER. TYP. BOTH SIDES U.N.O.

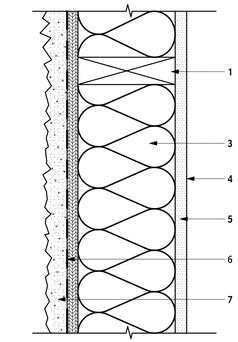
4 **SHEATHING** (NOT REQUIRED FOR FIRE)
EXTERIOR SIDES OF WALLS TO BE COMPLETELY WRAPPED IN PLYWOOD, THICKNESS PER STRUCTURAL PLAN.

5 **BUILDING PAPER** (NOT REQUIRED FOR FIRE)
INSTALL HORIZONTALLY WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2" AND WITH 6" LAPS AT VERTICAL JOINTS MIN.

6 **FINISH** (NOT REQUIRED FOR FIRE)
PER ARCHITECT, 3 COAT PORTLAND CEMENT PLASTER PER SPECIFICATIONS - 7/8" TOTAL THICKNESS (MEASURED FROM FACE OF STUD). 1:4 FOR SCRATCH COAT, 1:5 FOR BROWN COAT, BY VOLUME, CEMENT TO SAND.

4 1 TO 4-HR CONCRETE WALL

3" = 1'0"



FIRE: UL DESIGN #U356
1-HR FIRE RATED BEARING WALL

1 **WOOD STUDS**
TYPICAL - 2X6 STUDS @ 16" O.C. U.N.O.
MINIMUM - 2X4 STUDS @ 24" O.C.

2 **STRUCTURAL SHEATHING**
ALL EXTERIOR SIDES OF WALLS TO BE COMPLETELY WRAPPED IN PLYWOOD, MIN. 7/16", 4' WIDE WOOD STRUCTURAL PANELS, MIN GRADE "C-D" OR "SHEATHING". INSTALLED WITH LONG DIMENSION OF SHEET (STRENGTH OF AXIS) OR FACE GRAIN OF PLYWOOD PARALLEL W/ OR PERPENDICULAR TO STUDS. VERTICAL JOINTS CENTERED ON STUDS. HORIZNTAL JOINTS BACKED W/ NOM 2"X4" WOOD BLOCKING. ATTACHED TO STUDS ON EXTERIOR SIDE OF WALL W/ 6D CEMENT COATED BOX NAILS SPACED 6" O.C. @ PERIMETER OF PANELS AND 12" O.C. ALONG INTERIOR STUDS. ACTUAL THICKNESS PER STRUCTURAL PLAN.

3 **INSULATION**
FORMALDEHYDE FREE FIBERGLASS BATT INSULATION PER T24.

4 **FINISH SYSTEM**
FACE LAYER JOINTS COVERED WITH TAPE AND COATED WITH JOINT COMPOUND. NAIL HEADS COVERED WITH JOINT COMPOUND.

5 **GYPSUM WALLBOARD**
ONE LAYER OF 5/8" TYPE 'X' GYP. BOARD APPLIED VERTICALLY OR HORIZONTALLY TO WOOD FRAMING WITH 6d COOLER OR WALLBOARD NAILS AT 7" O.C. WITH END JOINTS ON NAILING MEMBERS. OR ALTERNATE PER UL DESIGN #U356

6 **BUILDING PAPER**
PER SPECIFICATIONS, COMPLYING WITH UBC 1402.1 INSTALLED HORIZONTALLY WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2" AND WITH 6" LAPS AT VERTICAL JOINTS MIN.

7 **FINISH**
CEMENTITIOUS STUCCO - PORTLAND CEMENT OR SYNTHETIC STUCCO SYSTEMS W/ SELF-FURRING METAL LATH OR ADHESIVE BASE COAT. THICKNESS FROM 3/8" TO 3/4" DEPENDING ON SYSTEM. INSTALLED IN ACCORDANCE W/ THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

1 1-HR EXTERIOR WALL, STUCCO

3" = 1'0"

FIRE: UL DESIGN #U356
1-HR FIRE RATED BEARING WALL

ACOUSTIC INTEGRITY NOTE:
(APPLIES TO ALL WALL, FLOOR OR CEILING ASSEMBLIES WITH A REQUIRED STC RATING)
be sealed, lined, insulated or otherwise treated to maintain the required acoustic and fire ratings. cbc 1207.2. soffits or heating, ventilation or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required acoustic and fire ratings. cbc 1207.2.

1 **WOOD STUDS**
TYPICAL - 2X6 STUDS @ 16' O.C. U.N.O.
MINIMUM - 2X4 STUDS @ 24" O.C.

2 **STRUCTURAL SHEATHING**
ALL EXTERIOR SIDES OF WALLS TO BE COMPLETELY WRAPPED IN PLYWOOD, THICKNESS PER STRUCTURAL PLAN.

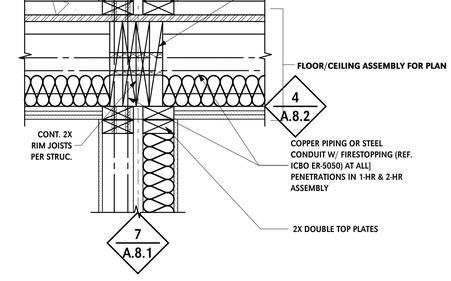
3 **INSULATION**
FORMALDEHYDE FREE FIBERGLASS BATT INSULATION PER T24.

4 **FINISH SYSTEM**
FACE LAYER JOINTS COVERED WITH TAPE AND COATED WITH JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND.

5 **GYPSUM WALLBOARD - INTERIOR**
ONE LAYER OF 5/8" TYPE 'X' GYP. BOARD APPLIED VERTICALLY OR HORIZONTALLY TO WOOD FRAMING WITH 6d COOLER OR WALLBOARD NAILS AT 7" O.C. WITH END JOINTS ON NAILING MEMBERS.

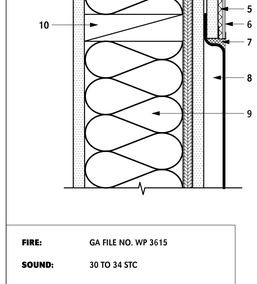
6 **BUILDING PAPER**
INSTALL HORIZONTALLY WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2" AND WITH 6" LAPS AT VERTICAL JOINTS MIN.

7 **FINISH**
PER ARCHITECT, 3 COAT PORTLAND CEMENT PLASTER PER SPECIFICATIONS - 7/8" TOTAL THICKNESS (MEASURED FROM FACE OF STUD). 1:4 FOR SCRATCH COAT, 1:5 FOR BROWN COAT, BY VOLUME, CEMENT TO SAND.



11 1-HR PARTY WALL @ FLOOR

1-1/2" = 1'0"



FIRE: GA FILE NO. WP 3615

SOUND: 30 TO 34 STC

1 **WOOD STUDS**
TYPICAL - 2 X 4" STUDS @ 16" O.C.

2 **STRUCTURAL SHEATHING**
PLYWOOD OR OSB SHEATHING WHERE OCCURS, PER STRUCTURAL PLAN. (ALWAYS TERMINATE @ INSIDE CORNER)

3 **GYPSUM WALLBOARD** (2ND LAYER NOT REQUIRED FOR FIRE)
TWO LAYERS 5/8" PROPRIETARY TYPE X GLASS MAT WATER-RESISTANT GYPSUM BACKING BOARD* APPLIED PARALLEL OR AT RIGHT ANGLES TO STUDS W/ PHOSPHATE COATED NAILS, 1 7/8" LONG, 1/4" DIAMETER CUPPED HEADS, 8" O.C. (WHERE STRUCTURAL SHEATHING AND/OR ADDITIONAL LAYER(S) OF OCCUR, LENGTH OF FASTENERS SHALL BE INCREASED BY NOT LESS THAN THE THICKNESS OF THE STRUCTURAL SHEATHING AND/OR ADDITIONAL LAYER).

* 5/8" DENSHIELD® FIREGUARD - GEORGIA PACIFIC GYPSUM LLC

4 **FURRING STRIP** (NOT REQUIRED FOR FIRE)
WATERPROOF FURRING STRIP EQUAL TO THICKNESS OF TUB FLANGE, APPLIED BETWEEN GYPSUM BACKING BOARDS.

5 **FINISH**
JOINTS STAGGERED 16" ON OPPOSITE SIDES AND COVERED W/ 10 X 10 MESH GLASS TAPE AND TILE ADHESIVE.

6 **TILE** (NOT REQUIRED FOR FIRE)
NON-COMBUSTIBLE TILE W/ SCHULTER EDGE PER FINISH SCHEDULE.

7 **SEALANT** (NOT REQUIRED FOR FIRE)
CLEAR FLEXIBLE SEALANT INTO 1/8" MIN. GAP

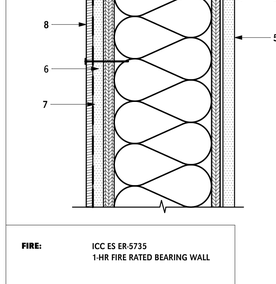
8 **TUB/SHOWER** (NOT REQUIRED FOR FIRE)
ONE PIECE FIBERGLASS TUB AND SHOWER SURROUND

9 **INSULATION** (NOT REQUIRED FOR FIRE)
FORMALDEHYDE FREE FIBERGLASS BATT INSULATION PER T24.

10 **BLOCKING** (NOT REQUIRED FOR FIRE)
BLOCKING PER TUB MANUF.

8 1-HR DETAIL @ TUB/SHOWER

3" = 1'0"



FIRE: UL DESIGN #U356
1-HR FIRE RATED BEARING WALL

1 **WOOD STUDS**
TYPICAL - 2X6 STUDS @ 16' O.C. U.N.O.
MINIMUM - 2X4 STUDS @ 16" O.C.

2 **STRUCTURAL SHEATHING**
ALL EXTERIOR SIDES OF WALLS TO BE COMPLETELY WRAPPED IN PLYWOOD, MIN. 7/16", 4' WIDE WOOD STRUCTURAL PANELS, MIN GRADE "C-D" OR "SHEATHING". INSTALLED WITH LONG DIMENSION OF SHEET (STRENGTH OF AXIS) OR FACE GRAIN OF PLYWOOD PARALLEL W/ OR PERPENDICULAR TO STUDS. VERTICAL JOINTS CENTERED ON STUDS. HORIZNTAL JOINTS BACKED W/ NOM 2"X4" WOOD BLOCKING. ATTACHED TO STUDS ON EXTERIOR SIDE OF WALL W/ 6D CEMENT COATED BOX NAILS SPACED 6" O.C. @ PERIMETER OF PANELS AND 12" O.C. ALONG INTERIOR STUDS. ACTUAL THICKNESS PER STRUCTURAL PLAN.

3 **INSULATION**
FORMALDEHYDE FREE FIBERGLASS BATT INSULATION PER T24.

4 **FINISH SYSTEM**
FACE LAYER JOINTS COVERED WITH TAPE AND COATED WITH JOINT COMPOUND. NAIL HEADS COVERED WITH JOINT COMPOUND.

5 **GYPSUM WALLBOARD**
ONE LAYER OF 5/8" TYPE 'X' GYP. BOARD APPLIED VERTICALLY OR HORIZONTALLY TO WOOD FRAMING WITH 6d COOLER OR WALLBOARD NAILS AT 7" O.C. WITH END JOINTS ON NAILING MEMBERS. OR ALTERNATE PER UL DESIGN #U356

6 **BUILDING PAPER**
PER SPECIFICATIONS, COMPLYING WITH UBC 1402.1 INSTALLED HORIZONTALLY WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2" AND WITH 6" LAPS AT VERTICAL JOINTS MIN.

7 **FINISH**
CEMENTITIOUS STUCCO - PORTLAND CEMENT OR SYNTHETIC STUCCO SYSTEMS W/ SELF-FURRING METAL LATH OR ADHESIVE BASE COAT. THICKNESS FROM 3/8" TO 3/4" DEPENDING ON SYSTEM. INSTALLED IN ACCORDANCE W/ THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5 1-HR EXT. WALL, 2 SIDED STUCCO

3" = 1'0"

FIRE: ICC ES ER-5735
1-HR FIRE RATED BEARING WALL

1 **WOOD STUDS**
MIN. 2X6 STUDS @ 16" O.C. U.N.O.
MINIMUM- 2X4 STUDS @ 24" O.C.

2 **STRUCTURAL SHEATHING**
ALL EXTERIOR WALLS TO BE COMPLETELY WRAPPED IN PLYWOOD, THICKNESS PER STRUCTURAL PLAN..

3 **INSULATION**
FORMALDEHYDE FREE FIBERGLASS BATT INSULATION PER T24.

4 **FINISH SYSTEM**
FACE LAYER JOINTS COVERED WITH TAPE AND COATED WITH JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND. JOINT COMPOUND MUST COMPLY WITH ASTM C474 AND C475.

5 **GYPSUM WALLBOARD - INTERIOR**
ONE LAYER OF 5/8" TYPE 'X' GYP. BOARD COMPLYING WITH ASTM C 36-95b APPLIED VERTICALLY TO WOOD FRAMING WITH 1-5/8" LONG, NO.6 TYPE 'S' DRYWALL SCREWS, 8" O.C. AT EDGES, 12" O.C. FIELD. PANEL EDGES MUST BE BLOCKED. JOINTS STAGGERED FROM EXTERIOR SIDE GYPEUM PANELS.

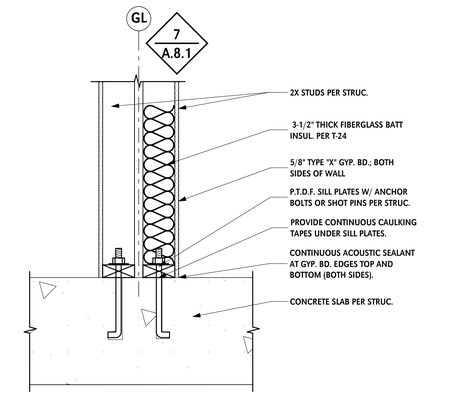
6 **GYPSUM WALLBOARD - EXTERIOR**
ONE LAYER OF 5/8" DENSGLASS SHEATHING COMPLYING WITH ASTM E 136 APPLIED TO 2X4 MIN. STUDS WITH 1-5/8" LONG, NO.6 TYPE 'S' DRYWALL SCREWS, 8" O.C. AT EDGES, 12" O.C. FIELD. PANEL EDGES MUST BE BLOCKED.

7 **BUILDING PAPER**
COMPLYING WITH UBC 1402.1, INTALLED HORIZONTALLY WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2" AND WITH 6" LAPS AT VERTICAL JOINTS.

8 **FIBER CEMENT SIDING**
SIDING FACE RAILED USING 2 1/2" LONG. DOUBLE HOT-DIPPED, GALV. ROOFING NAILS HAVING A HEAD DIAMETER OF 3/8".

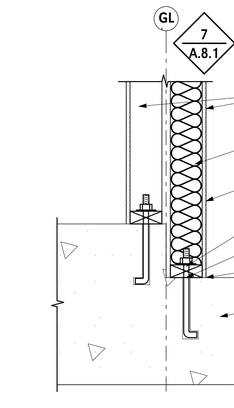
2 1-HR EXT. WALL, FIBER-CEMENT SIDING

3" = 1'0"



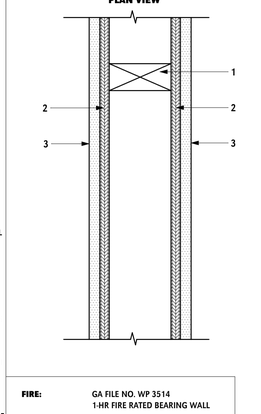
12 1-HR PARTY WALL @ SLAB

1-1/2" = 1'0"



9 1-HR PARTY WALL @ STEPPED SLAB

1-1/2" = 1'0"



FIRE: UL DESIGN #U311
1-HR FIRE RATED BEARING WALL
SOUND: BBN 760903,9-17-76
STC--50-54

1 **WOOD STUDS**
MIN. 2X4 STUDS @ 16' O.C. OR 24" O.C. EFFECTIVELY CROSS BRACED.

2 **STRUCTURAL SHEATHING**
PLYWOOD OR OSB SHEATHING WHERE OCCURS, PER STRUCTURAL PLAN. (ALWAYS TERMINATE @ INSIDE CORNER)

3 **INSULATION**
3" THICK MINERAL WOOL BATTS, PLACED TO FILL INTERIOR OF WALL, ATTACHED TO THE STUDS WITH STAPLES PLACED 24" O.C. OR APPROVED ALT. AS LISTED IN U.L. DESIGN #U311.

4 **FINISH SYSTEM**
WALLBOARD JOINTS COVERED W/ PAPER TAPE AND JOINT COMPOUND. SCREW HEADS COVERED W/ JOINT COMPOUND. AS AN ALT., NOM 3/32" THICK GYPSUM VENEER PLASTER MAY BE APPLIED TO THE ENTIRE SURFACE OF CLASSIFIED VENEER BASEBOARD W/ JOINTS REINFORCED W/ PAPER TAPE.

5 **MEMBRANE PENETRATIONS**
OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE NOT LESS THAN THE DEPTH OF THE STUDS. BOXES LESS THAN 24" FROM EACH OTHER SHALL BE PROTECTED WITH A ELECTRONIC OUTLET FIRE PROTECTION PAD COMPLYING WITH UL263. USE ACOUSTICAL SEALANT AT ALL ELECTRICAL BOXES OR SIMILAR MEMBRANE PENETRATIONS IN RESIDENTIAL UNIT WALLS.

6 **GYPSUM WALLBOARD**
5/8" TYPE 'C' GYP. BOARD OR APPROVED ALTERNATE AS LISTED IN U.L. DESIGN # U311

6A SIDE A: ONE LAYER OF 5/8" TYPE 'C' GYP BOARD. SCREW ATTACHED ON ONE SIDE OF WALL TO FURRING CHANNEL W/ 1" LONG, SELF-DRILLING, SELF-TAPPING STEEL SCREWS SPACED 12" O.C., VERTICAL JOINTS LOCATED MIDWAY BETWEEN STUDS AND BACK BLOCKED W/ FURRING CHANNELS, ATTACHED W/ 1" LONG, SELF-DRILLING, SELF-TAPPING SCREWS, SPACED 12" O.C. ALONG EACH EDGE.

6B SIDE B: ATTACH ONE LAYER OF 5/8" TYPE 'C' GYP BOARD TO RESILIENT CHANNELS WITH MIN. 1" LONG TYPE SELF DRILLING, SELF TAPPING SCREWS SPACED AT 12" O.C. ALONG EACH EDGE.

7 **RESILIENT CHANNEL**
25 MSG GA. GALV. STEEL. RESILIENT CHANNELS SPACED VERTICALLY AT 24" O.C., FLANGE PORTION SCREW ATTACHED TO ONE SIDE OF STUDS WITH 1-1/2" LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREW OR APPROVED ALT. AS LISTED IN U.L. DESIGN #U311.

6 1-HR INTERIOR WALL, SINGLE STUD, STC 51

3" = 1'0"

FIRE: GA FILE NO. WP 3514
1-HR FIRE RATED BEARING WALL
SOUND: 35 TO 39 STC

1 **WOOD STUDS**
TYPICAL- 2X4 STUDS @ 16' O.C.

2 **STRUCTURAL SHEATHING**
PLYWOOD OR OSB SHEATHING WHERE OCCURS, PER STRUCTURAL PLAN. (ALWAYS TERMINATE @ INSIDE CORNER)

3 **GYPSUM WALLBOARD**
ONE LAYER 5/8" TYPE 'X' GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL OR AT RIGHT ANGLES TO EACH SIDE OF STUDS WITH 1 1/4" TYPE W DRYWALL SCREWS 12" O.C. (WHERE STRUCTURAL SHEATHING OCCURS, LENGTH OF FASTENERS SHALL BE INCREASED BY NOT LESS THAN THE THICKNESS OF THE STRUCTURAL SHEATHING). JOINTS STAGGERED 16" ON OPPOSITE SIDES. (LOAD-BEARING)

3 1-HR INT. WALL

3" = 1'0"

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

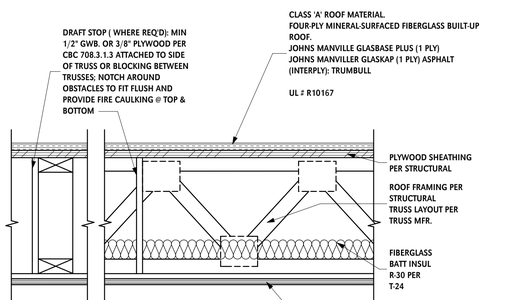
PROJECT # 1008

RATED ASSEMBLIES

A8-1

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

10 NOT USED

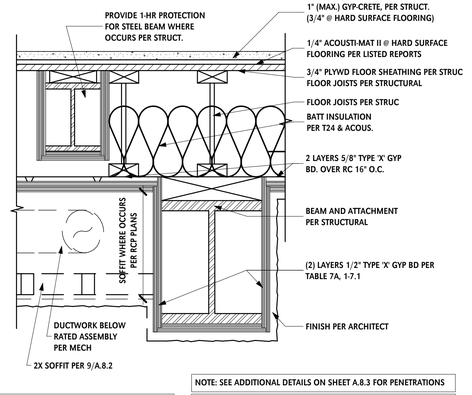


NOTE: PER NFPA SECTION 5-13.1.1, CONCEALED SPACES ENCLOSED WHOLLY OR PARTLY BY EXPOSED COMBUSTIBLE CONSTRUCTION SHALL BE PROTECTED BY SPRINKLERS. PER NFPA SECTION 5-13.1.1, EXCEPTION NO. 4, SPRINKLERS ARE NOT REQUIRED IN CONCEALED SPACES THAT ARE DRAFTSTOPPED INTO VOLUMES EACH NOT EXCEEDING 160 CUBIC FEET.
EXCEPTION NO. 5, SPRINKLERS ARE NOT REQUIRED IN CONCEALED SPACES THAT ARE ENTIRELY FILLED WITH NONCOMBUSTIBLE INSULATION.

FIRE: 1 HR RATING UL P522

11 1HR ROOF ASSEMBLY — 3" = 1'0"

7 NOT USED



FIRE: 1-HR; PER ESR-1153, ASSEMBLY B
1-HR STEEL BEAM RATING PER TABLE 7-A ITEM 1-7.1

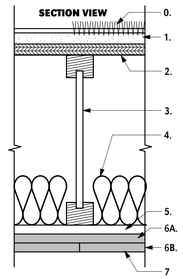
NOTE: SEE ADDITIONAL DETAILS ON SHEET A.8.3 FOR PENETRATIONS

HARDWOOD OR CERAMIC TILE W/ ACOUSTI-MAT II - FSTC 56, FIIC 52 STORK/TWIN CITY TESTING 1801.99.1736.7 & 1801.99.1736.4, ADD 3 IN 1 FOAM UNDERLAYMENT @ WD-1

56 OZ. CARPET AND 40 OZ. PAD FSTC 58, FIIC 54, ESR-1153, ASSEMBLY B

8 TYP. 1-HR FLOOR/CEILING ASSEMBLY — 3" = 1'0"

4 1-HR FLOOR/CEILING ASSEMBLY — 3" = 1'0"



0 FINISH FLOORING OR ROOFING *(NOT REQUIRED FOR FIRE OR SOUND)*
FINISH FLOORING OR ROOFING (CLASS A) PER PLAN.

1 FLOOR TOPPING
1" (MAX.) GYP-CRETE UNDERLAYMENT UNDER FLOOR FINISHES IN INTERIOR SPACES PER STRUCTURAL (3/4" GYP-CRETE OVER 1/4" ACOUSTI-MAT AT HARD SURFACE FLOORING).

2 FLOOR SHEATHING
3/4" WOOD STRUCTURAL PANELS INSTALLED AT RIGHT ANGLES TO I-JOISTS WITH END JOINTS STAGGERED. SECURE WITH CONSTRUCTION ADHESIVE AND 6d RINGED SHANK NAILS AT 12" O.C ALONG EACH JOIST - SEE STRUCTURAL PLANS.

3 WOOD I- JOIST
MAX. O.C. SPACING: 24" MIN. FLANGE DEPTH: 1-1/4"
MIN. FLANGE WIDTH: 1-1/2" MIN. WEB THICKNESS: 3/8"
MIN. I-JOIST: 9-1/2"

4 INSULATION *(NOT REQUIRED FOR FIRE)*
MIN. 1" THICK GLASS FIBER BATT AND BLANKET INSULATION BEARING UL CLASSIFICATION AS TO SURFACE BURNING CHARACTERISTICS AND/OR FIRE RESISTANCE DRAPED OVER RESILIENT CHANNEL..

5 RESILIENT CHANNEL
25 MSG GALVANIZED STEEL CHANNEL APPLIED AT RIGHT ANGLES TO MIN. 9-1/2" DEEP WOOD I-JOIST, 12" O.C. W/ 1-1/4" TYPE S DRYWALL SCREWS.

6 GYPSUM WALL BOARD
6A BASE LAYER: 1/2" TYPE C, IP-X2, IPC-AR OR 5/8" TYPE C, IP-X2 GYP. BOARD APPLIED AT RIGHT ANGLES TO RESILIENT CHANNELS WITH 1" TYPE 'S' DRYWALL SCREWS AT 8" O.C. AT BUTT JOINTS AND 16" O.C. IN THE FIELD OF PANEL.
6B FACE LAYER: 1/2" TYPE C, IP-X2, IPC-AR OR 5/8" TYPE C, IP-X2 GYP. BOARD APPLIED AT RIGHT ANGLES TO CHANNELS W/ 1 5/8" TYPE S DRYWALL SCREWS AT 8" O.C. AND 1-1/2" TYPE G SCREWS AT 8" O.C. AT BUTT JOINTS LOCATED MIDSPAN BETWEEN RESILIENT CHANNELS

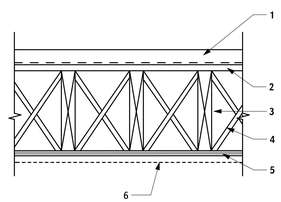
7 FINISH SYSTEM
FACE LAYER JOINTS COVERED WITH TAPE AND COATED WITH JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND.

FIRE: BXUV.L570 - ANSI/UL 263
DESIGN NO. L570 (REVISED) 08.27.2015

SOUND: STC= 64 - 66

IIC & TEST: RAL-0T03-01/02
RAL-TL-81-87

5 NOT USED — 3" = 1'0"



1 FLOOR FINISH
1-HR RATED MIRACOTE MIRAFLEX WATERPROOF DECK COATING SYSTEM.
ICC-ES ESR-1714

2 FLOOR SHEATHING
3/4" PLYWOOD FLOOR SHEATHING
PER STRUCTURAL APPLIED WITH EXTERIOR GRADE GLUE AND SCREWS.
SLOPE PLYWOOD 1/4" per 12", DIRECTION PER PLAN.

3 WOOD JOIST
2X FRAMING PER STRUC., MIN. 2X10 @ 16" O.C.

4 BLOCKING
1X3 MIN. CROSS BRIDGING OR 2X10 BLOCKING

5 GYPSUM WALLBOARD
1 LAYER 5/8" THICK GYP. BD
TYPE 'C' OR REQ'D PER MFR. PER LISTED ASSEMBLY

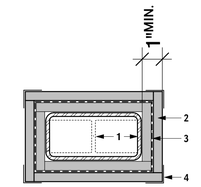
6 FINISH SYSTEM *(NOT REQUIRED FOR FIRE RATING)*
PER ARCHITECT

FIRE: 1-HR RATING PER ICC-ES ESR-1714
CBC TABLE 721.1(3) ASSEMBLY 13

SOUND: N/A

6 1-HR FLOOR ASSEMBLY — 3" = 1'0"

1 1-HR COLUMN — 3" = 1'0"



1 STEEL COLUMN
SIZE & TYPE VARIES

2 GYPSUM WALLBOARD
2 LAYERS OF 1/2" GYPSUM WALL BOARD ADHESIVELY SECURED (APPROVED ADHESIVE QUALIFIED UNDER ASTM E 119 OR UL 263) TO COLUMN FLANGES AND SUCCESSIVE LAYERS. WALLBOARD APPLIED W/OUT HORZ. JOINTS. CORNER EDGES OF EACH LAYER STAGGERED. FOR EXTERIOR LOCATIONS USE 1/2" DENSGLASS

3 WALL TIES
WALLBOARD LAYER BELOW OUTER LAYER SECURED TO COLUMN W/ DOUBLED 0.049" (NO. 18 B.W. GAGE) STEEL WIRE TIES SPACED 15" O.C.

4 CORNERS
EXPOSED CORNERS TAPED AND TREATED.

INDIVIDUAL ENCASEMENT PROTECTION ON ALL SIDES FOR THE FULL LENGTH, INCLUDINGCONNECTIONS TO OTHER STRUCTURAL MEMBERS, WITH MATERIALS HAVING THE REQUIRED FIRE-RESISTANCE RATING

FIRE PROTECTION PER THIS DETAIL IS TYPICAL FOR ALL STEEL STRUCTURAL COLUMNS INDICATED ON THE STRUCTURAL PLANS, U.N.O.

FIRE: 1-HR FIRE RATED STEEL COLUMN
CBC Table 721.1(1), ITEM # 1-7.1

2 1-HR COLUMN — 3" = 1'0"



STEEL SIZE	A/P	Hp/A	in.	mm
SP 4.5 X 0.313	0.29	135	0.117	2.99
SP 8 X 0.875	0.79	49	0.097	2.46
SP 8.625 X 0.5	0.47	85	0.97	2.46
ST 3.5 X 3.5 X 3/16	0.18	224	0.165	4.18
ST 5 X 3 X 1/4	0.23	169	0.104	2.65
ST 5 X 3 X 5/16	0.29	135	0.084	2.13
ST 8 X 6 X 3/8	0.35	114	0.074	1.87
ST 8 X 6 X 7/16	0.41	100	0.074	1.87
ST 5 X 3 X 1/2	0.44	93	0.074	1.87
ST 8 X 8 X 1/2	0.47	85	0.074	1.87

1 STEEL COLUMN
STEEL TUBE (ST) OR STEEL PIPE (SP) W/ MIN. SIZES SHOWN IN THE TABLE. COLUMNS SHALL BE FREE OF DIRT, LOOSE SCALE AND OIL AND PRIMED W/ A PHENOLIC MODIFIED ALKYD RESIN PRIMER.

2 MASTIC AND INTUMESCENT COATING
COATING SPRAY, BRUSH OR TROWEL APPLIED DIRECTLY FROM CONTAINERS TO DESIRED THICKNESS. SEE TABLE FOR APPROPRIATE FINAL DRY THICKNESS AND APPLICABLE RATING.

BERLIN CO LTD - TYPE WB 3 & TYPE WB 4, INVESTIGATED FOR INTERIOR GENERAL PURPOSE. TYPE WB 4, INVESTIGATED FOR EXTERIOR USE W/ TOP COAT AS DESCRIBED IN ITEM 3.

ISOLATEK INTERNATIONAL - TYPE SPRAYFILM-WB 3, TYPE WB 3, TYPE SPRAYFILM-WB 4 & TYPE WB 4, INVESTIGATED FOR INTERIOR GENERAL PURPOSE. TYPE SPRAYFILM-WB 4 & TYPE WB 4, INVESTIAGATED FOR EXTERIOR USE W/ TOP COAT AS DESCRIBED IN ITEM 3.

NEWKEM PRODUCTS CORP - TYPE WB 3 & TYPE WB 4 INVESTIGATED FOR INTERIOR GENERAL PURPOSE. TYPE WB 4, INVESTIGATED FOR EXTERIOR USE W/ TOP COAT AS DESCRIBED IN ITEM 3.

3 TOP COAT (REQUIRED FOR EXTERIOR USE)
TYPE SPRAYFILM - TOPSEAL AND TYPE TOPSEAL, APPLIED AT A MIN. DRY THICKNESS OF 14 MILS (0.34MM) OVER THE INTUMESCENT MATERIAL. SEE CLASSIFICATION INFO. IN THE MASTIC AND INTUMESCENT COATING (CDWZ) CATEGORY, ISOLATEK INTERNATIONAL, FOR MIXING REQUIREMENTS.

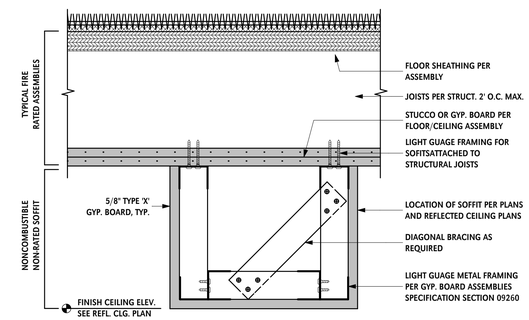
INDIVIDUAL ENCASEMENT PROTECTION ON ALL SIDES FOR THE FULL LENGTH, INCLUDINGCONNECTIONS TO OTHER STRUCTURAL MEMBERS, WITH MATERIALS HAVING THE REQUIRED FIRE-RESISTANCE RATING

FIRE PROTECTION PER THIS DETAIL IS TYPICAL FOR ALL STEEL STRUCTURAL COLUMNS INDICATED ON THE STRUCTURAL PLANS, U.N.O.

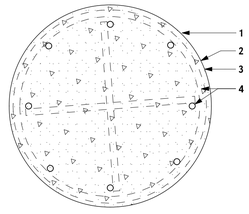
FIRE: UL DESIGN #X650
BXUV - FIRE RESISTANCE RATING - ANSI/UL 263

12 NOT USED

9 METAL STUD FRAMMED SOFFIT (TYP) — 3" = 1'0"



3 CONCRETE COLUMN



COLUMN CONSTRUCTION

MINIMUM FINISH THICKNESS FOR SILICEOUS AGGRAGATE CONCRETE FOR AREA SEPARATION:

4 HOUR = 7.0 INCHES
3 HOUR = 6.2 INCHES
2 HOUR = 5.0 INCHES
1 HOUR = 3.5 INCHES

1 CAST IN PLACE CONCRETE COLUMN
SIZE VARIES. COLUMN PER STRUCTURAL

2 V.LIGHT SANDBLAST FINISH

3 CLEAR COAT SEALER TYP.

4 REBAR PER STRUCTURAL

FIRE: 1-4-HOUR ASSEMBLY
UBC TABLE 7-B, ITEM # 7-1.1

SOUND: N/A

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

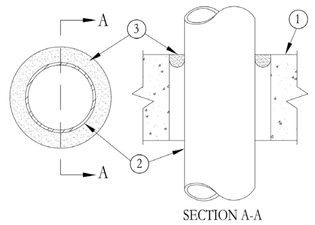
RATED ASSEMBLIES

A8-2

© 2018 foundationform | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of foundationform, and were created, evolved, and developed on instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to my person, firm, or organization for any purpose whatsoever without written permission of foundationform.

System No. C-AJ-1027

January 18, 1999
(Formerly System No. 202)
F Rating – 3 Hr
T Rating – 0 Hr



SECTION A-A

1. **Floor or Wall Assembly** – Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of through opening is 12-1/4 in.
   See **Concrete Blocks** (CAZT) category in Fire Resistance Directory for names of manufacturers.
2. **Through Penetrants** – One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Min annular space between pipe, conduit or tubing and edge of opening is 0 in. (point contact). Max annular space is dependent on pipe, conduit or tubing type and size as well as the F Rating of the system, as shown in the table below. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. **Steel Pipe** – Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Conduit** – Nom 6 in. diam (or smaller) rigid steel conduit.
   C. **Conduit** – Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
   D. **Copper** – Tubing Nom 3 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper** – Pipe Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.
   F. **Iron Pipe** – Nom 10 in. diam (or smaller) cast or ductile iron pipe.

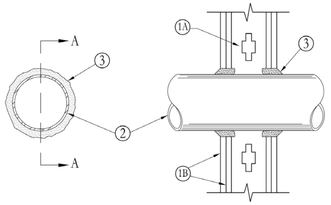
Pipe Conduit or Tubing Type	Max Nom Pipe Conduit or Tubing Diam In.	F Rating Hr	Max Annular Space In.
A or F	10	3	3/4
B	6	3	3/4
C	4	3	1-1/2
D and E	3	3	3/4
D and E	3	2	7/8

3. **Fill,Void or Cavity Materials*** – **Putty** – Moldable putty material kneaded by hand and applied to fill annular space to a min depth of 1 in., flush with top surface of floor. In wall assemblies, required putty thickness to be installed symmetrically on both sides of wall.
   3M COMPANY – MP+ Stix

*Bearing the UL Classification Marking

System No. W-L-1001

June 15, 2005
F Ratings – 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings – 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient – less than 1 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft



SECTION A-A

1. **Wall Assembly** – The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs** – Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
   B. **Gypsum Board*** – Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 24 in. (660 mm).
2. **Through Penetrant** – One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm) (point contact) to max 2 in. (51 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. **Steel Pipe** – Nom 24 in. (610 mm) diam (or smaller).
   B. **Iron Pipe** – Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
   C. **Conduit** – Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing
   D. **Copper Tubing** – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing
   E. **Copper Pipe** – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
   F. **Through Penetrating Product*** – **Flexible Metal Piping** – The following types of steel flexible metal gas piping may be used:
      1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
         OMEGA FLEX INC
      2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
         TITEFLEX CORP
         A BUNDY CO
      3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
         WARD MFG INC
3. **Fill,Void or Cavity Material*** – **Caulk or Sealant** – Min 5/8. 1-1/4,1-7/8 and 2-1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In. (mm)	F Rating Hr	T Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

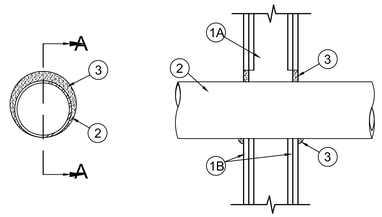
   +When copper pipe is used, T Rating is 0 hr.
   3M COMPANY – CP 25WB+ caulk or FB-3000 WT sealant,

*Bearing the UL Classification Marking

12 FIRESTOPPING FOR PIPES NOT TO SCALE

System No. W-L-7196

July 12, 2010
F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr



SECTION A-A

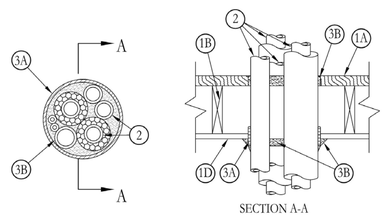
1. **Wall Assembly —** The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs —** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
   B. **Gypsum Board* —** Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Diam of opening to be max 2 in. (51 mm) larger than OD of steel duct (Item 2). Max diam of opening is 14 in. (356 mm).
   The hourly F Ratlng of the firestop system ls equal to the hourly fire ratlng of the wall assembly In whlch It Is Installed.
2. **Steel Duct —** Nom 12 in. (305 mm) diam (or smaller) No. 26 gauge (or heavier) spiral wound or long seam galv steel duct. The duct shall be constructed and reinforced in accordance with SMACNA construction standards. Annular space between duct and periphery of opening to be min 0 in. (point contact) to max 2 in. (51 mm). Duct to be rigidly supported on both sides of the wall assembly.
3. **Fill, Void or Cavity Material* — Sealant —** Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. (6 mm) diam bead of fill material applied at steel duct/gypsum board interface on both surfaces of wall.
   3M COMPANY
   3M FIRE PROTECTION PRODUCTS — IC 15WB+, CP 25WB+ or FB-3000 WT sealant

*Bearing the UL Classification Mark

7 FIRESTOPPING FOR DUCTS (WALL) NOT TO SCALE

System No. F-C-8012

May 19, 2005
F Rating – 1 Hr
T Rating – 1 Hr



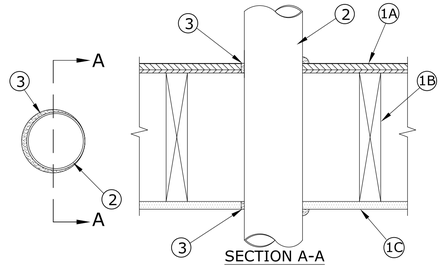
SECTION A-A

1. **Floor-Ceiling Assembly** – The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:
   A. **Flooring System** – Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 4-1/2 in. (114 mm).
   B. **Joists** – Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
   C. **Gypsum Board*** – Nom 4 ft (122 cm) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Wallboard nailed to wood joists. Max diam of ceiling opening is 4-1/2 in. (114 mm).
1.1 **Chase Wall** – (Optional, not shown) – The through penetrants (Item 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the material and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs** – Nom 2 in. by 6 in. (51 mm by 152 mm) or double nom 2 in. by 4 in. (51 mm by 102 mm) lumber studs.
   B. **Sole Plate** – Nom 2 in. by 6 in(51 mm by 152 mm) or parelled 2 in. by 4 in. (51 mm by 102 mm) lumber plates, tightly butted.
   C. **Top Plate** – The double top plate shall consist of two nom 2 in. by 6 in. (51 mm by 152 mm) or two sets of parallel 2 in. by 4 in. (51 mm by 102 mm) lumber plates, tightly butted. Max diam of opening is 4-1/2 in. (114 mm).
   D. **Gypsum Board*** – Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.
2. **Through Penetrants** – Pipes, conduits, tubing or cables to be bundled within the opening such that the aggregate cross-sectional area of

9 FIRESTOPPING FOR BUNDLES NOT TO SCALE

System No. F-C-7022

May 19, 2005
F Rating - 1 Hr
T Rating - 1/4 Hr



SECTION A-A

1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:

A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the Individual Floor-Ceiling Design. Max diam of openlng ls 11 In. (279 mm).

B. Wood Joists - Nom 10 In. (254 mm) deep (or deeper) lumber, steel or combinatlon lumber and steel Jolsts, trusses or Structural Wood Members* with brldging as required and with ends firestopped.

C. Gypsum Board* - Nom 4 ft. (122 cm) wlde by 5/8 In. (16 mm) thick as specified In the Individual Floor-Ceilling Deslgn. Max dlam of openlng ls 11 In. (279 mm).

2. Steel Duct - Nom 10 In. (254 mm) (or smaller) No. 28 gauge (or heavier) steel duct or nom 5 In. (127 mm) (or smaller) No. 30 gauge (or heavier) steel duct to be Installed either concentrlcally or eccentrlcally wlthln openlng. The annular space between duct and perlphery of openlng shall be mln 0 In. (polnt contact) to max 1 In. (0 mm to max 25 mm). Duct to be rlgldly supported on both sides of floor assembly.

3. Fill,Void or Cavity Material* - Caulk or Sealant - Mln 3/4 In. (19 mm) thlckness of caulk applied wlthln annulus, flush with top surface of floor. Mln 5/8 In. (16 mm) thlckness of caulk applied wlthln annulus, flush with bottom surface of ceilling. Mln 1/4 In. (6 mm) dlam bead of caulk applied at point contact locations at duct/floor Interface on top surface of floor and at duct/ceiling Interface.

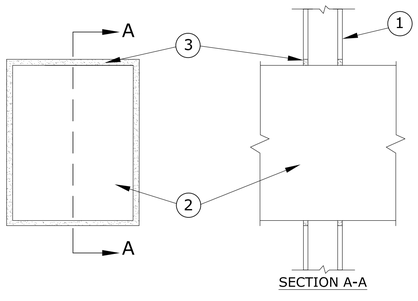
3M COMPANY - CP 25WB+, IC 15WB+ caulk or FB-3000 WT sealant

*Bearing the UL Classlfication Marklng

4 FIRESTOPPING FOR DUCTS (FLOOR- CEILING) NOT TO SCALE

System No.W-L-7052

May 19, 2005
F Rating - 1 Hr
T Rating - 0 Hr



SECTION A-A

1. Wall Assembly - The 1 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and In the manner specified In the Individual U300, U400 or V400 Series Wall and Partltion Designs In the UL Fire Resistance Directory and shall include the following construction features.

A. Studs - Wall framlng may consist of elther wood studs or steel studs. Wood studs to consist of nom 2 by 4 in. (51 mm by 102 mm) lumber spaced 16 In.(406 mm) OC. Steel studs to be mln 3-1/2 In. (89 mm) wide and spaced max 24 In. (610 mm) OC.

B. Gypsum Board* - Thickness, type, number of layers and fasteners as required In the individual Wall and Partltion Design. Max size of opening is 14 by 14 In. (356 mm by 356 mm) square.

2. Steel Duct - Nom 12 by 12 In. (305 mm by 305 mm) (or smaller) No. 24 gauge (or heavier) galv steel duct to be centered wlthln openlng with a nom annular space of 1 In. (25 mm). Duct to be rigidly supported on both sides of opening.

3. Fill,Void or Cavity Material* - Caulk or Sealant - Mln 5/8 In. (16 mm) thlckness of caulk applied wlthln annulus, flush with both surfaces of wall assembly.

3M COMPANY - CP 25WB+, IC 15WB+ caulk or FB-3000 WT sealant

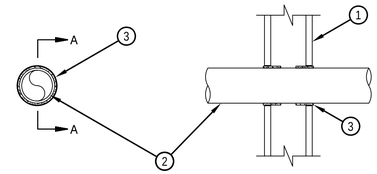
*Bearing the UL Classlfication Mark

6 FIRESTOPPING FOR DUCTS (WALL) NOT TO SCALE

CLASSIFIED
Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. W-L-2284

F Rating - 1 Hr
T Rating - 1 Hr



SECTION A-A

1. Wall Assembly -- The 1 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs -- Wall framing shall consist of wood studs or steel channel studs. Wood studs to consist of 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-1/2 in. wide and spaced max 24 in. OC.
   B. Gypsum Board* -- Min 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers and orientation shall be as specified in the individual U300 or U400 Wall and Partition Design. Max diam of opening is 4 in.
2. Through Penetrants -- One nonmetallic pipe to be centered within the firestop system. An annular space of 3/16 to 1/4 in. is required within the firestop system. Pipe to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes may be used:
   A. Polyvinyl Chloride (PVC) Pipe -- Nom 3 in. diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   B. Chlorinated Polyvinyl Chloride (CPVC) Pipe -- Nom 3 in. diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.
3. Fill, Void or Cavity Material* -- Wrap Strip - Layers of intumescent wrap strip are continuously wrapped around the pipe with ends held in place with tape. Wrap strip installed such that ends protrude nom. 1/8 in. beyond both surfaces of wall. Size of wrap strip and number of layers are shown in table below.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- CP648-E W25/1" or CP648-E W45/1-3/4" Firestop Wrap Strip

ProductDesignation	Pipe Diameter (in.)	Number of Layers	Nom. Wrap Strip Width (in.)
CP648-E-W25/1"	1-1/2 and 2	1	1
CP648-E-W45/1-3/4"	1-1/2, 2 and 3	1	1-3/4

   A. Fill, Void or Cavity Material* - Wrap Strip -- (As an alternate to the wrap strip in Item 3) - One layer of intumescent wrap strip is tightly wrapped around the pipe with ends butted and held in place with integrated tape. Wrap strip installed such that ends protrude nom. 1/8 in. beyond both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF
   HILTI INC -- CP648-S-1.5" US, CP648-S-2" US, CP648-S-3" US

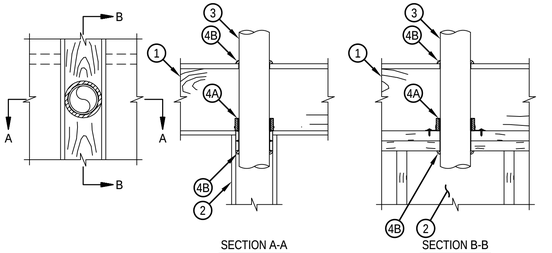
*Bearing the UL Classification Mark

1 1-HR WALL PENETRATION FOR PVC, CPVC, PEX NO SCALE

CLASSIFIED
Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. F-C-2404

F Rating — 1 Hr
T Rating — 1/4 Hr



SECTION A-A SECTION B-B

1. Floor-Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:
   A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Diam of opening shall max 1/8 in. (3 mm) larger than actual outside pipe diam.
   B. Wood Joists — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
   C. Gypsum Board* — Nom 4 ft (1219 mm) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design.
2. Chase Wall — The through penetrant (item no. 3) shall be routed through a single, double or staggered wood stud/gypsum board chase wall and shall include the following:
   A. Studs — Nom 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber studs.
   B. Top Plate — A double 2 by 4 (51 by 102 mm) or 2 by 6 (51 by 152 mm) top plate shall be installed to the underside of the joists. Diam of opening shall be 1/8 in. (3 mm) larger than actual outside pipe diameter
   C. Gypsum Board — Min ½ in. (13 mm) rated or non-rated gysum board.
3. Through Penetrants — One nonmetallic pipe or conduit installed concentrically within opening. Annular space between penetrant and periphery of opening to be min 1/16 in. (1.6 mm). Penetrant to be rigidly supported on both sides of wall. The following types and sizes of penetrants may be used:
   A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
4. Firestop System — The details of the firestop system shall be as follows:
   A. Firestop Device* — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to the top of the top plate using two anchor tabs provided. The anchor tabs are secured using ¾ in. (19 mm) wood screws and washers.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP643N Firestop Collar.
   B. Fill, Void or Cavity Material* - Sealant — Min ½ in. (12 mm) bead of sealant shall be applied at bottom surface of lower top plate. In addition, at the top of floor, a min ½ in. (12 mm) bead of sealant shall be applied at the top of sole plate or subfloor.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant

*Bearing the UL Classification Mark

3 1-HR FLOOR PENETRATION FOR PVC, CPVC, PEX NO SCALE

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

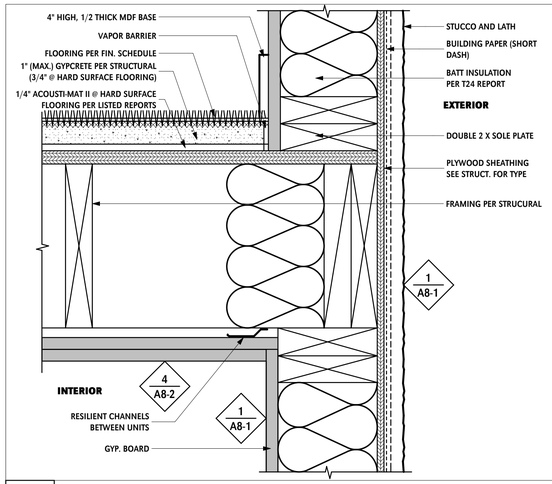
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

FIRE STOPPING

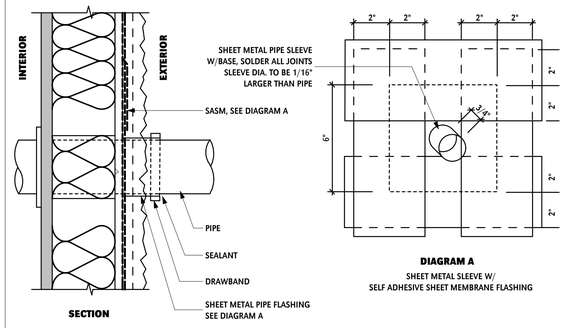
A8-3

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



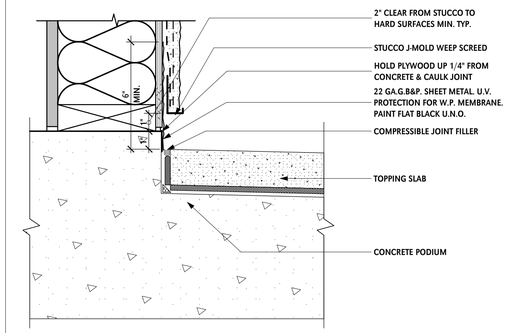
10 EXTERIOR WALL TO FLOOR

3" = 1'0"

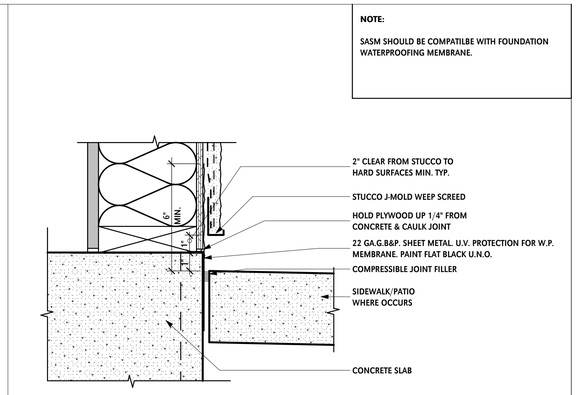


7 PIPE PENETRATION THROUGH STUCCO

3" = 1'0"



4 WALL FRAMING @ CONCRETE PODIUM



1 WALL FRAMING @ CONCRETE SLAB

3" = 1'0"

11 PLASTER SOFFIT REVEAL

NOTE:

WIRE TIE ONE SIDE OF JOINT ACCESSORY AND FASTEN THE OTHER PER ASTM C1063, STANDARD SPECIFICATION FOR INSTALLATION OF LATHING AND FURRING TO RECEIVE INTERIOR AND EXTERIOR PORTLAND CEMENT-BASED PLASTER.

8 STUCCO JOINTS

3" = 1'0"

5 STUCCO @ CORNERS

3" = 1'0"

NOTE:

SASM SHOULD BE COMPATILBE WITH FOUNDATION WATERPROOFING MEMBRANE.

2 WALL FRAMING @ CONCRETE SLAB

3" = 1'0"

12 WALL AT MECHANICAL LOUVER

9 WALL TO DECK

6 RECESS IN RATED WALL

3 RECESSED FIRE EXTINGUISHER CABINET

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

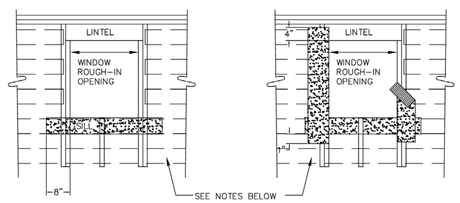
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

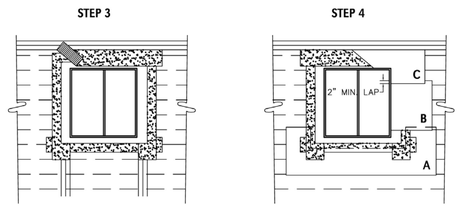
WALL DETAILS

A8-4



ATTACH SILL STRIP WITH TOP EDGE LEVEL WITH ROUGH SILL; EXTEND BEYOND EDGE OF ROUGH OPENING AT LEAST 8". SECURE ALL FLASHING PAPER OR SIM. APPROVED FLASHING MATERIAL WITH GALVINIZED NAILS OR POWER-DRIVEN STAPLES.

ATTACH JAMB STRIPS WITH SIDE EDGE EVEN WITH ROUGH-JAMB FRAMING, START STRIP 1" BELOW LOWER EDGE OF SILL STRIP AND EXTEND 4" ABOVE LOWER EDGE OF LINTEL.



INSTALL WINDOW INTO ROUGH OPENING WITH SILL AND JAMB FLANGES OVER PREVIOUSLY INSTALLED FLASHING . ATTACH HEAD FLASHING OVER THE WINDOW FLANGE.

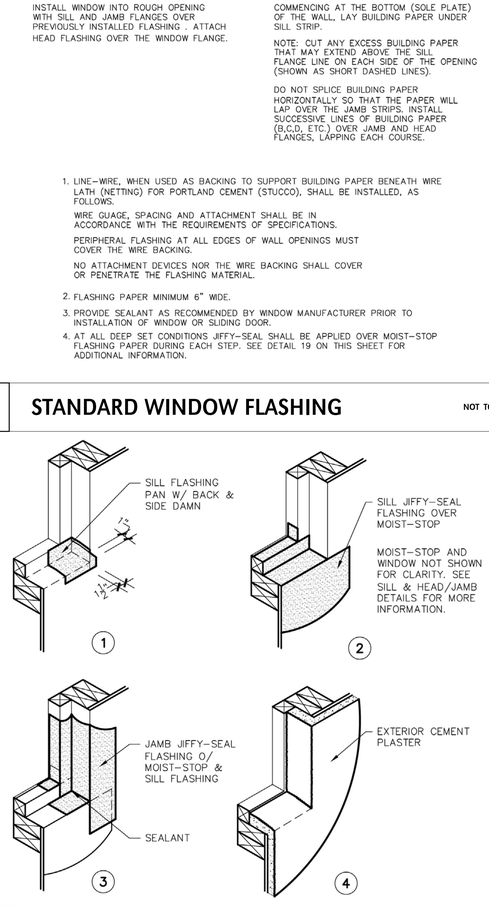
COMMENCING AT THE BOTTOM (SOLE PLATE) OF THE WALL, LAY BUILDING PAPER UNDER SILL STRIP.

NOTE: CUT ANY EXCESS BUILDING PAPER THAT MAY EXTEND ABOVE THE SILL FLANGE LINE ON EACH SIDE OF THE OPENING (SHOWN AS SHORT DASHED LINES).

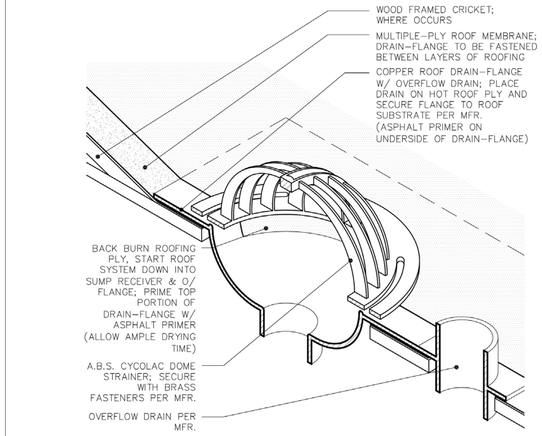
DO NOT SPLICE BUILDING PAPER HORIZONTALLY SO THAT THE PAPER WILL LAP OVER THE JAMB STRIPS. INSTALL SUCCESSIVE LINES OF BUILDING PAPER (B,C,D, ETC.) OVER JAMB AND HEAD FLANGES, LAPPING EACH COURSE.

1. LINE-WIRE, WHEN USED AS BACKING TO SUPPORT BUILDING PAPER BENEATH WIRE LATH (NETTING) FOR PORTLAND CEMENT (STUCCO), SHALL BE INSTALLED, AS FOLLOWS.
   WIRE GUAGE, SPACING AND ATTACHMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATIONS.
   PERIPHERAL FLASHING AT ALL EDGES OF WALL OPENINGS MUST COVER THE WIRE BACKING.
   NO ATTACHMENT DEVICES NOR THE WIRE BACKING SHALL COVER OR PENETRATE THE FLASHING MATERIAL.
2. FLASHING PAPER MINIMUM 6" WIDE.
3. PROVIDE SEALANT AS RECOMMENDED BY WINDOW MANUFACTURER PRIOR TO INSTALLATION OF WINDOW OR SLIDING DOOR.
4. AT ALL DEEP SET CONDITIONS JIFFY-SEAL SHALL BE APPLIED OVER MOIST-STOP FLASHING PAPER DURING EACH STEP. SEE DETAIL 19 ON THIS SHEET FOR ADDITIONAL INFORMATION.

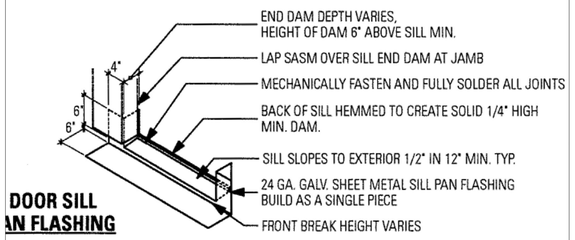
11 STANDARD WINDOW FLASHING NOT TO SCALE



12 ISOMETRIC OF RECESSED OPENINGS NOT TO SCALE



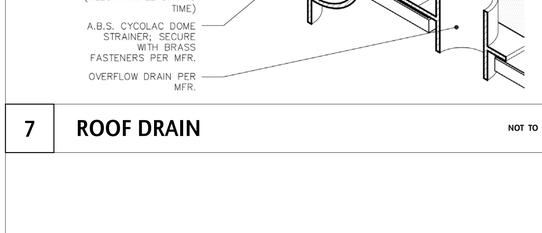
7 ROOF DRAIN NOT TO SCALE



DOOR SILL AN FLASHING

NOTE: APPLY SILL FLASHING PRIOR TO WALL FLASHING. OVERLAP 3" MIN. & SET IN SEALANT.

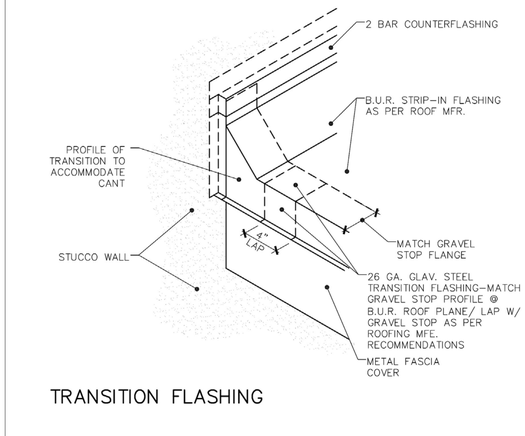
8 TYP. DOOR SILL PAN FLASHING NOT TO SCALE



WINDOW SILL PAN FLASHING

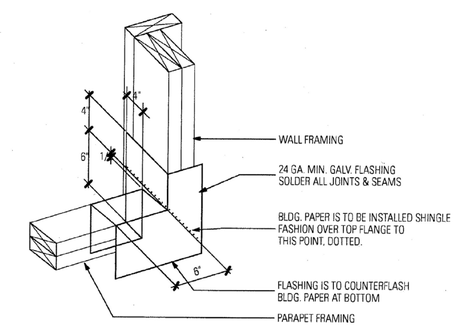
NOTE: APPLY SILL FLASHING PRIOR TO WALL FLASHING. OVERLAP 3" MIN. & SET IN SEALANT.

9 TYP. WINDOW SILL PAN FLASHING NOT TO SCALE

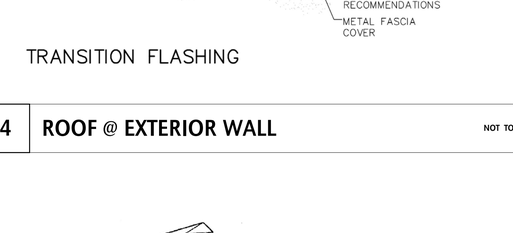


TRANSITION FLASHING

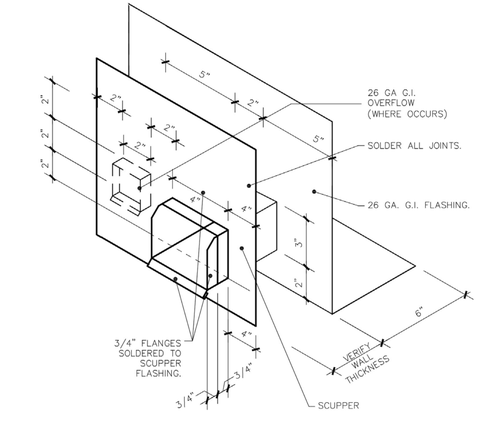
4 ROOF @ EXTERIOR WALL NOT TO SCALE



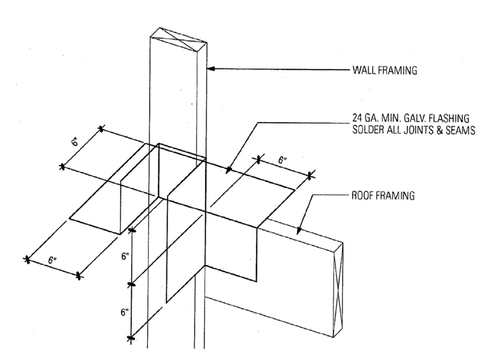
5 FLASHING - PARAPET TO WALL NOT TO SCALE



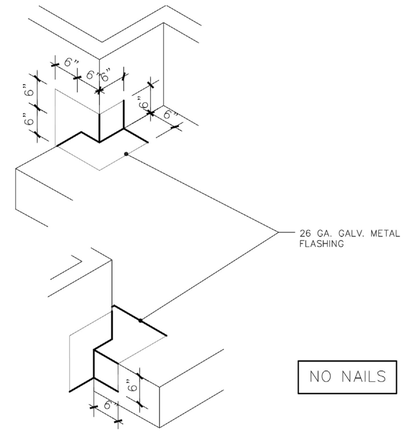
6 FLASHING - PARAPET TO OVERHANG NOT TO SCALE



1 SCUPPER ISOMETRIC W/OVERFLOW NOT TO SCALE



2 FLASHING - PARAPET TO ROOF NOT TO SCALE



3 LOW ROOF @ PARAPET NOT TO SCALE

© 2018 foundationform | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of foundationform, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of foundationform.

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

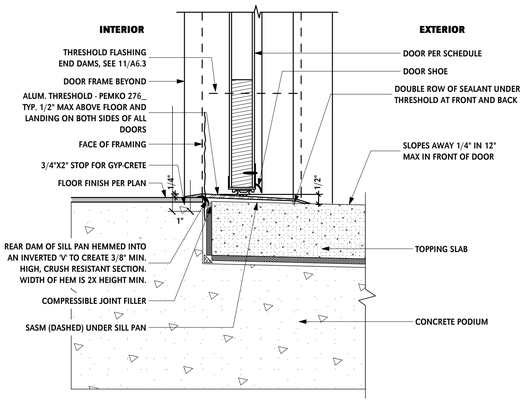
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

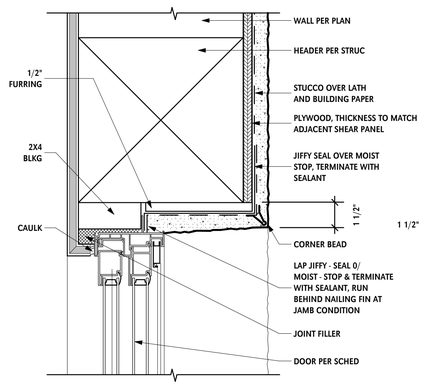
FLASHING DETAILS

A8-6

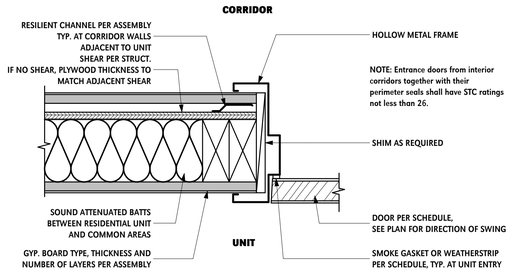
© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



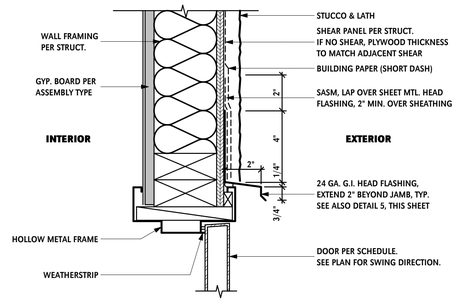
10 **ADA DOOR THRESHOLD @ PODIUM** 3" = 1'0"



7 **TWO PANEL PATIO DOOR HEAD** 3" = 1'0"



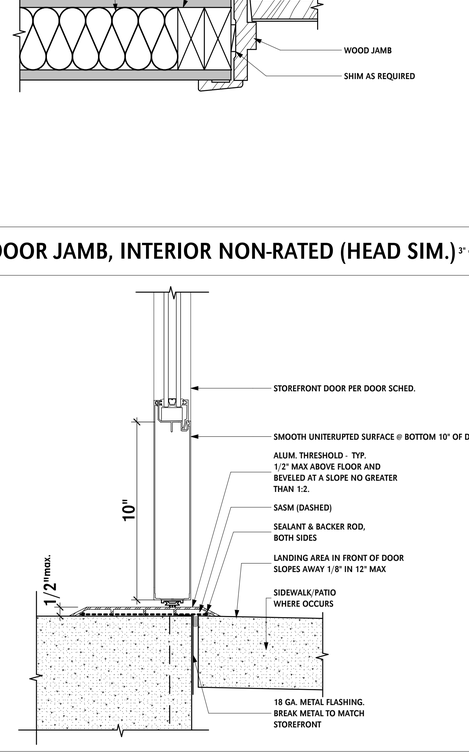
4 **DOOR JAMB, INTERIOR RATED (HEAD SIM.)** 3" = 1'0"



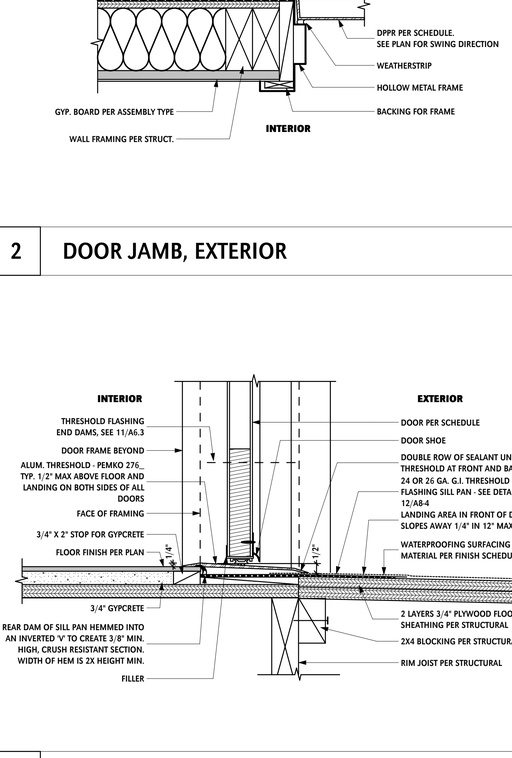
1 **DOOR HEAD, EXTERIOR** 3" = 1'0"

11 **NOT USED** 3" = 1'0"

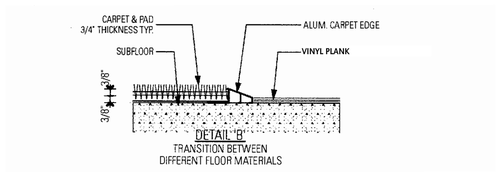
8 **EXTERIOR DOOR HEAD FLASHING** 3" = 1'0"



5 **DOOR JAMB, INTERIOR NON-RATED (HEAD SIM.)** 3" = 1'0"



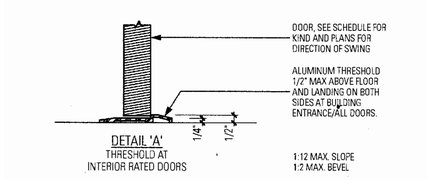
2 **DOOR JAMB, EXTERIOR** 3" = 1'0"



12 **FLOORING TRANSITION** 3" = 1'0"

NOTE:

PROVIDE A 1:2 SLOPED BEVEL AT THRESHOLDS GREATER THAN 1/4" HIGH. 3" = 1'0"



9 **INTERIOR THRESHOLD** 3" = 1'0"

6 **STOREFRONT DOOR THRESHOLD** 3" = 1'0"

3 **DOOR THRESHOLD** 3" = 1'0"

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

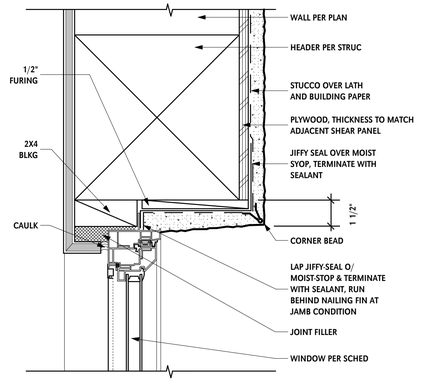
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

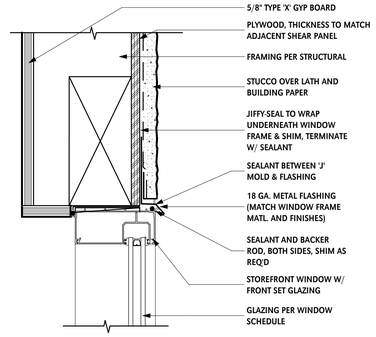
DOOR DETAILS

A8-7

© 2018 foundationform | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of foundationform, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of foundationform.

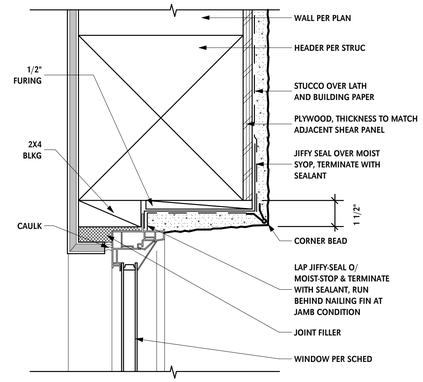


10 **CASEMENT WINDOW HEAD, JAMB SIM** 3" = 1'0"

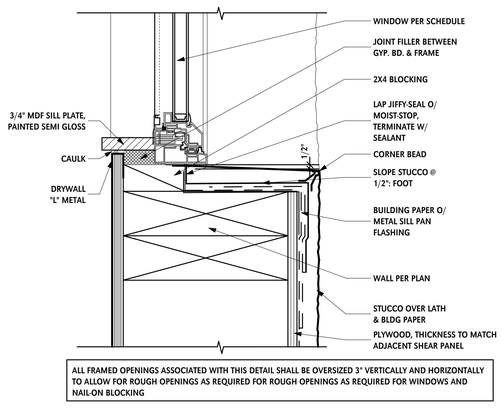


7 **STOREFRONT HEAD** 3" = 1'0"

4 **NOT USED**

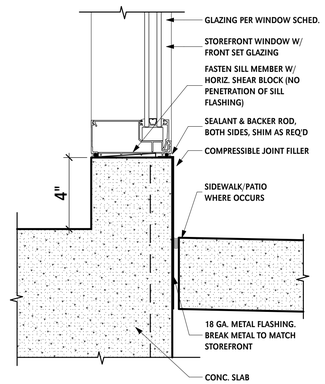


1 **FIXED WINDOW HEAD, JAMB SIM.** 3" = 1'0"



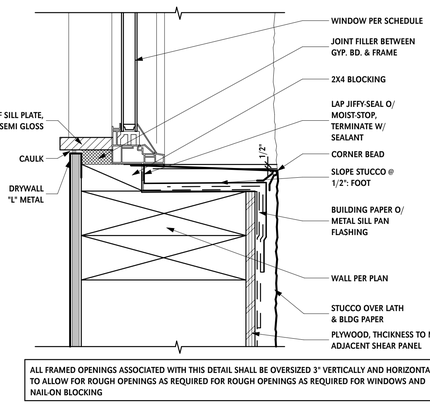
ALL FRAMED OPENINGS ASSOCIATED WITH THIS DETAIL SHALL BE OVERSIZED 3" VERTICALLY AND HORIZONTALLY TO ALLOW FOR ROUGH OPENINGS AS REQUIRED FOR ROUGH OPENINGS AS REQUIRED FOR WINDOWS AND NAIL-ON BLOCKING

11 **CASEMENT WINDOW SILL** 3" = 1'0"



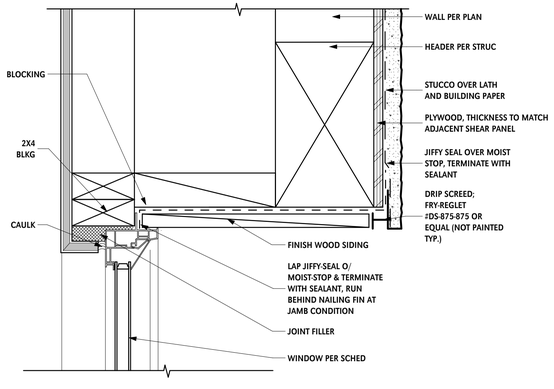
8 **STOREFRONT SILL @ CONCRETE SLAB** 3" = 1'0"

5 **NOT USED**

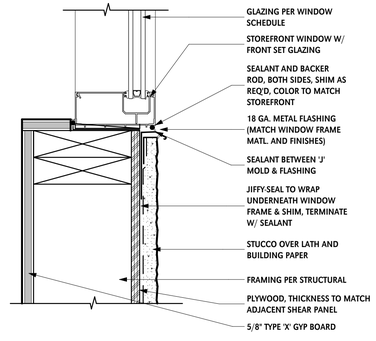


ALL FRAMED OPENINGS ASSOCIATED WITH THIS DETAIL SHALL BE OVERSIZED 3" VERTICALLY AND HORIZONTALLY TO ALLOW FOR ROUGH OPENINGS AS REQUIRED FOR ROUGH OPENINGS AS REQUIRED FOR WINDOWS AND NAIL-ON BLOCKING

2 **FIXED WINDOW SILL** 3" = 1'0"

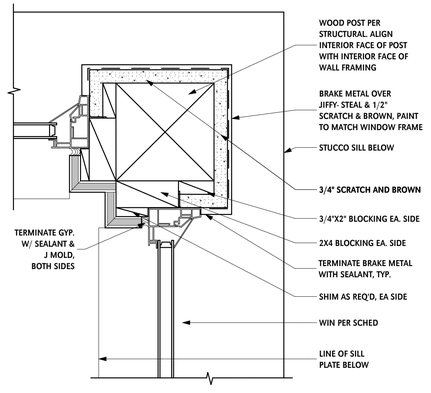


12 **RECESSED FIXED WINDOW HEAD** 3" = 1'0"



9 **STOREFRONT SILL @ STUCCO** 3" = 1'0"

6 **NOT USED**



3 **FIXED WINDOW JAMB @ CORNER POST** 3" = 1'0"

Consultant

FOUNDATION OF FORM ARCHITECTURE

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

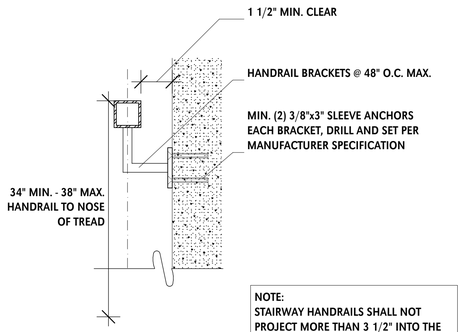
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

WINDOW DETAILS

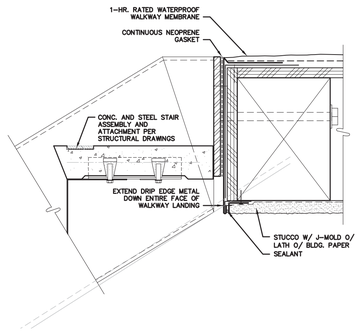
A8-8

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

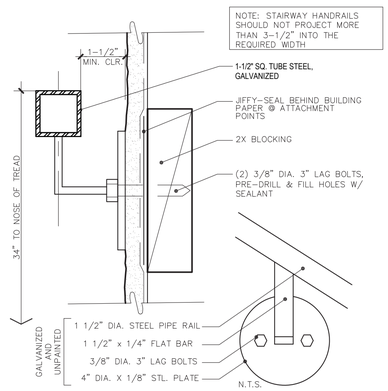


9 HANDRAIL @ CIP WALL

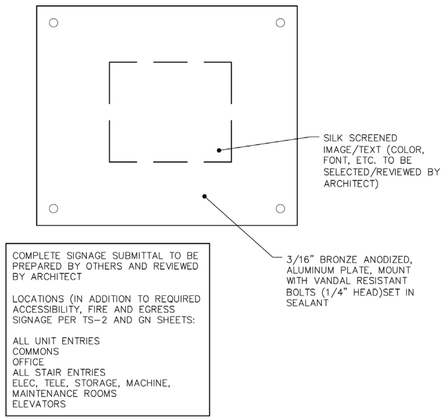
3" = 1'-0"



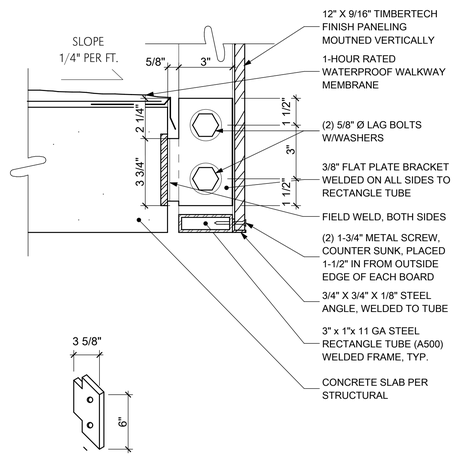
6 STAIR LANDING @ WALKWAY



4 HANDRAIL @ STUCCO

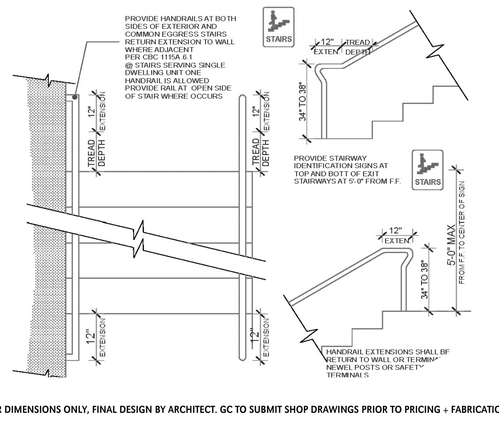


1 SIGNAGE - DWELLING UNIT



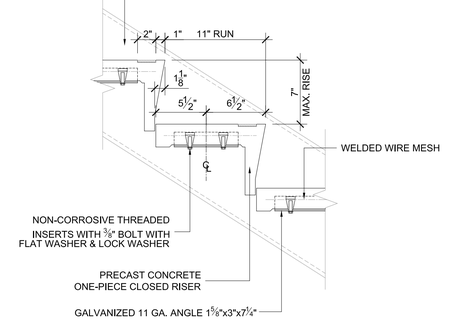
11 GUARDRAIL CONNECTION @ CONCRETE

SCALE: 3"=1'-0"

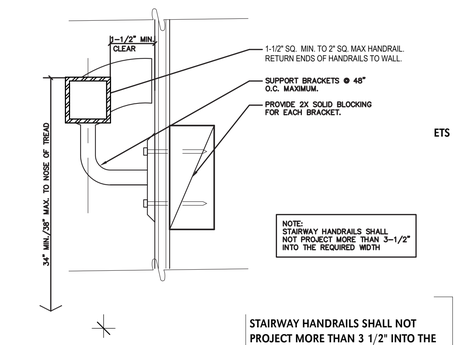


* FOR DIMENSIONS ONLY, FINAL DESIGN BY ARCHITECT. GC TO SUBMIT SHOP DRAWINGS PRIOR TO PRICING + FABRICATION

8 TYP. HANDRAIL @ EXTERIOR STAIRS



5 STAIR TREADS AND RISERS



ETS

2 HANDRAIL INTERIOR

3" = 1'-0"

10 NOT USED

7 BALCONY RAIL CONNECTION @ STUCCO

3 NOT USED

1" = 1'-0"

Consultant

FOUNDATION FORM ARCHITECTURE

Developer

Hitzke Development Corporation

THE PEARL

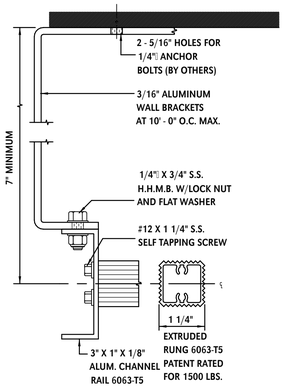
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

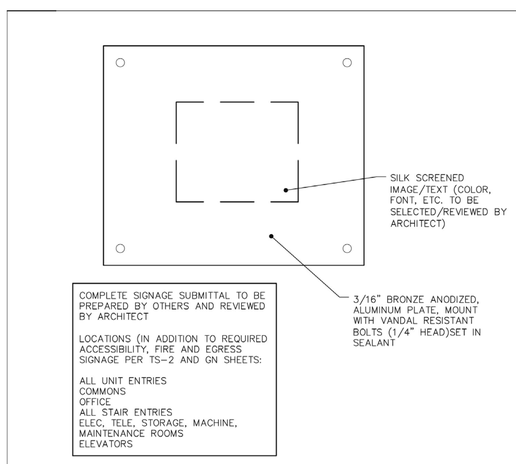
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

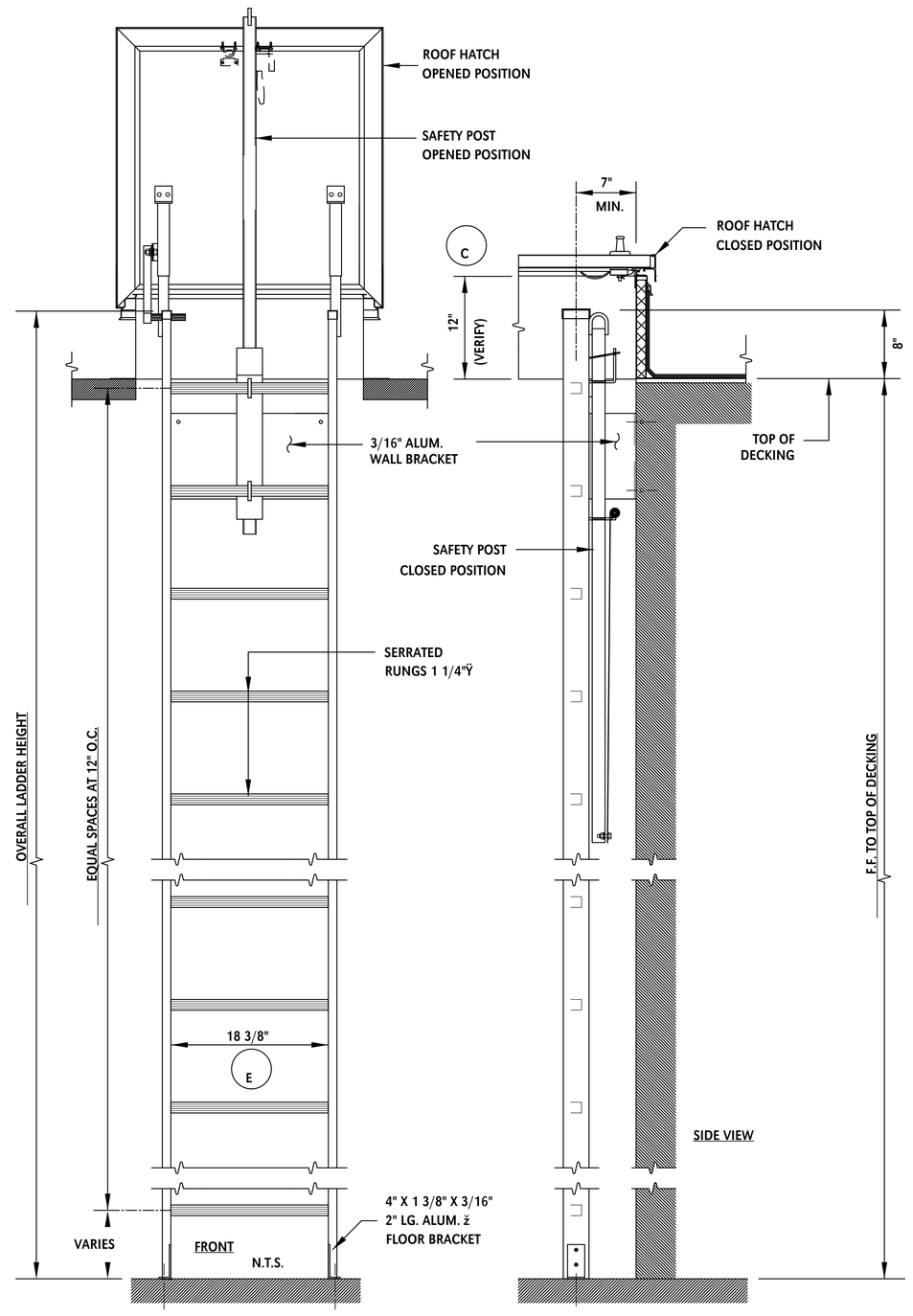
BALCONY/ GUARDRAIL/ STAIR DETAILS

A8-9





3 **ROOM UNIT SIGNAGE**



1 **FIXED ROOF ACCESS ALUMINUM LADDER** 1 /2" = 1'-0"

© 2018 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed in furtherance of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

Consultant
FOUNDATION FORM ARCHITECTURE

Developer
Hitzke Development Corporation

THE PEARL

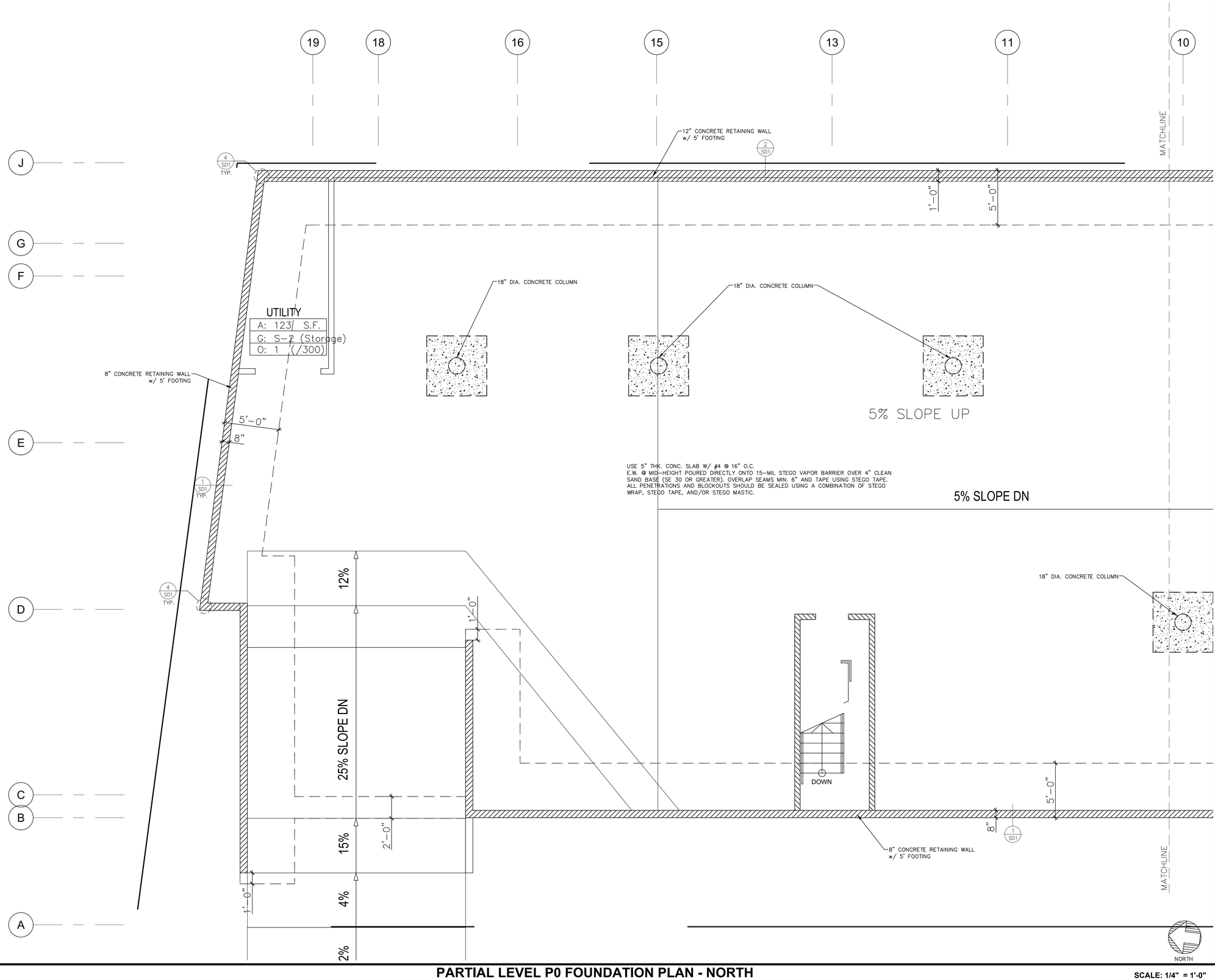
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

MISC. DETAILS

A8-10



PARTIAL LEVEL P0 FOUNDATION PLAN - NORTH

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

FOUNDATION NOTES

1) CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS FOR POURED-IN-PLACE CONTINUOUS AND SPREAD FOOTINGS, AND 4000 PSI (SPECIAL INSP. REQ.'D) AT 28 DAYS FOR GRADE BEAMS.

2) PORTLAND CEMENT SHALL BE TYPE 1 PER ASTM C 150. AGGREGRATES SHALL BE PER ASTM C33 WITH MAXIMUM SIZE OF 11/2" FOR FOOTINGS AND 1" FOR ALL OTHER WORK.

3) REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, CLEAN AND RUST FREE. LAPS AT SPLICES AND POUR LINES TO BE 40 BAR DIAMETERS (2'-0" MINIMUM) UNLESS NOTED OTHERWISE ON PLANS.

4) ALL NEW SILL PLATE ANCHOR BOLTS TO BE INSTALLED IN FRESH CONCRETE SHALL BE 5/8" DIAMETER A307 "L" BOLTS SPACED PER PLAN AND SHEARWALL SCHEDULE WITH MINIMUM 7" EMBEDMENT. MAXIMUM ANCHOR BOLT SPACING SHALL BE 4'-0" o.c. ANCHOR BOLTS AT ENDS OF WALL PANELS SHALL BE LOCATED WITHIN 12" AND GREATER THAN 7 BOLT DIAMETERS FROM THE END OF SILL PLATE. THERE SHALL BE A MINIMUM OF TWO ANCHOR BOLTS PER WALL PANEL. (ANCHOR BOLTS TO EXISTING FOOTINGS PER NOTE #8 BELOW). PLATE WASHERS A MINIMUM 3"X3"X0.229" THICK SHALL BE USED ON EACH BOLT. ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

5) IF NO SOILS REPORT IS PROVIDED, ASSUMED ALLOWABLE SOIL BEARING PRESSURE (ASBP) SHALL BE 1500 PSF (PER SOIL SITE CLASS D) & EMBED FOOTINGS A MINIMUM OF 12" INTO COMPETENT SOIL.

6) REINFORCING SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH INTERSECTIONS.

7) ALL NEW SILL PLATE ANCHOR BOLTS TO BE INSTALLED INTO EXISTING FOOTINGS SHALL BE SIMPSON TITAN HD ANCHOR (ICC-ES-ESER-2508/LARR# 25744)

8) CONSTRUCTION JOINTS SHALL BE PREPARED BY WIRE BRUSHING, CLEANING AND BRUSHING IN A PASTE OF NEAT CEMENT MORTAR IMMEDIATELY PRIOR TO POURING. LOCATION OF CONSTRUCTION JOINT SHALL BE APPROVED BY THE PROJECT STRUCTURAL ENGINEER.

9) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

10) PRIOR TO POURING INTERIOR CONCRETE FLOOR SLABS, ALL SOIL BELOW FLOOR SHALL BE COMPACTED TO REQUIRED DENSITY AND MOISTENED TO A DEPTH NOT LESS THAN 18" OR PER SOILS REPORT.

11) DEEPEN NEW FOOTINGS AS NECESSARY TO OBTAIN REQUIRED EMBEDMENT FOR ALL NEW HOLD DOWN BOLTS. ALL HOLD DOWN BOLTS TO HAVE A MINIMUM OF 3" OF CONCRETE COVER TO SOIL @ BOTTOM. ALL HOLDOWN BOLTS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION

12) ALL HOLDOWNS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.

13) MINIMUM HORIZONTAL DISTANCE FROM BOTTOM LEADING EDGE OF FOOTING TO DAYLIGHT SHALL BE 7'-0"

14) ALL EXISTING FOOTINGS TO BE VERIFIED. NOTIFY ENGINEER IF DIFFERENT.

15) DOWEL ALL NEW FOOTINGS TO EXISTING (SEE DETAIL IF APPLIES)

FOUNDATION LEGEND

- (N) 60" WIDE x 18" DEEP FOOTING w/ #6 @12" oc T. & B. EW
- (N) CONC. PAD PER PLAN
- 6x POST U.N.O.
- SHEARWALL PER PLAN

CONCRETE SLAB ON GRADE

USE 5" THK. CONC. SLAB W/ #4 @ 16" O.C. E.W. @ MID-HEIGHT POURED DIRECTLY ONTO 15-MIL STEGO VAPOR BARRIER OVER 4" CLEAN SAND BASE (SE 30 OR GREATER). OVERLAP SEAMS MIN. 6" AND TAPE USING STEGO TAPE. ALL PENETRATIONS AND BLOCKOUTS SHOULD BE SEALED USING A COMBINATION OF STEGO WRAP, STEGO TAPE, AND/OR STEGO MASTIC.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Suite 104
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT:
The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

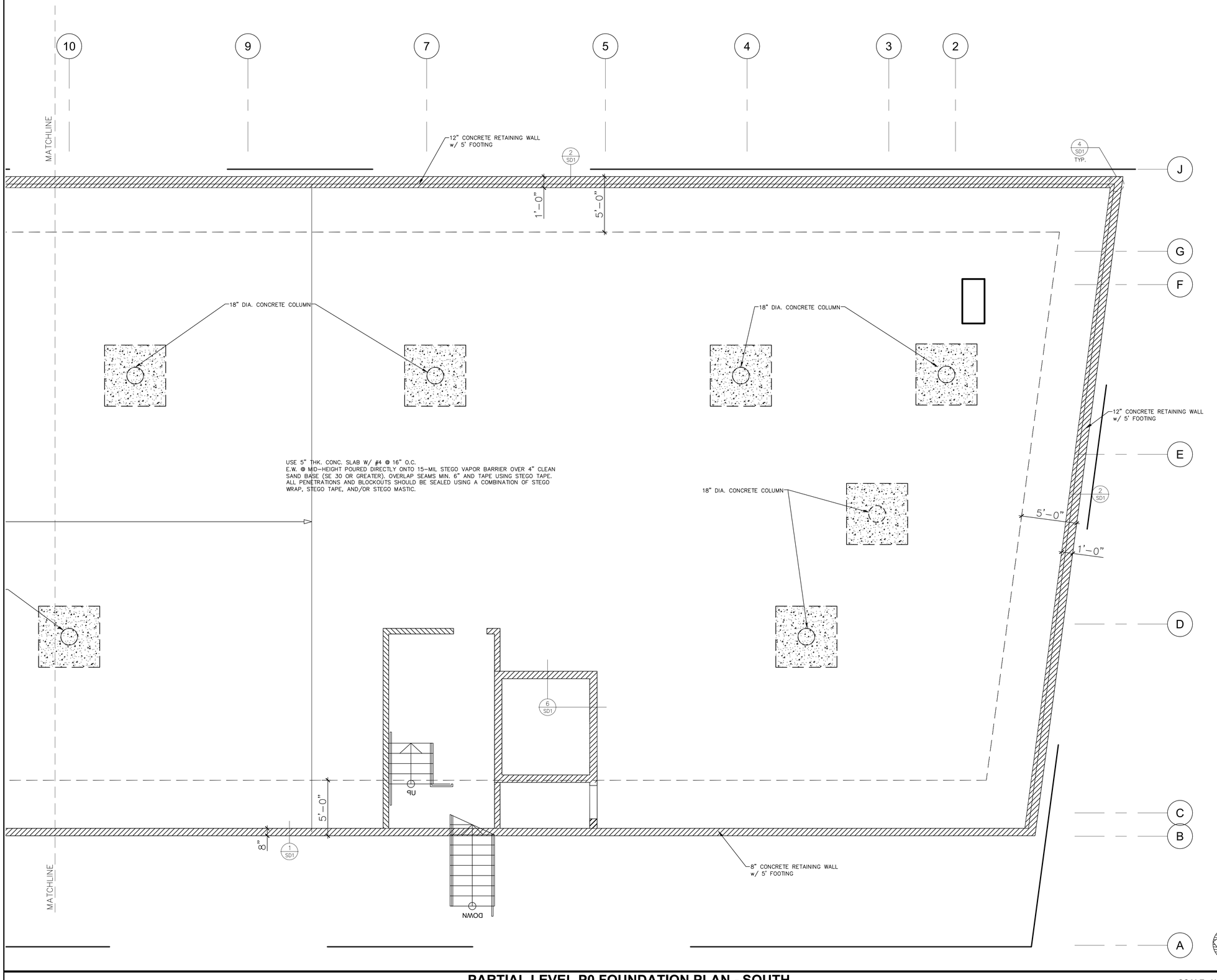
DRAWING:
Level P0
Foundation Plan
South

REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET
S1
— OF X SHEETS

Copyright 2016. All rights reserved. The use of these plans, calculations and specifications shall be restricted to the original site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.



PARTIAL LEVEL P0 FOUNDATION PLAN - SOUTH

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

FOUNDATION NOTES

1) CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS FOR POURED-IN-PLACE CONTINUOUS AND SPREAD FOOTINGS, AND 4000 PSI (SPECIAL INSP. REQ.'D) AT 28 DAYS FOR GRADE BEAMS.

2) PORTLAND CEMENT SHALL BE TYPE 1 PER ASTM C 150. AGGREGRATES SHALL BE PER ASTM C33 WITH MAXIMUM SIZE OF 11/2" FOR FOOTINGS AND 1" FOR ALL OTHER WORK.

3) REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, CLEAN AND RUST FREE. LAPS AT SPLICES AND POUR LINES TO BE 40 BAR DIAMETERS (2'-0" MINIMUM) UNLESS NOTED OTHERWISE ON PLANS.

4) ALL NEW SILL PLATE ANCHOR BOLTS TO BE INSTALLED IN FRESH CONCRETE SHALL BE 5/8" DIAMETER A307 "L" BOLTS SPACED PER PLAN AND SHEARWALL SCHEDULE WITH MINIMUM 7" EMBEDMENT. MAXIMUM ANCHOR BOLT SPACING SHALL BE 4'-0" o.c. ANCHOR BOLTS AT ENDS OF WALL PANELS SHALL BE LOCATED WITHIN 12" AND GREATER THAN 7 BOLT DIAMETERS FROM THE END OF SILL PLATE. THERE SHALL BE A MINIMUM OF TWO ANCHOR BOLTS PER WALL PANEL. (ANCHOR BOLTS TO EXISTING FOOTINGS PER NOTE #8 BELOW). PLATE WASHERS A MINIMUM 3"X3"X0.229" THICK SHALL BE USED ON EACH BOLT. ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

5) IF NO SOILS REPORT IS PROVIDED, ASSUMED ALLOWABLE SOIL BEARING PRESSURE (ASBP) SHALL BE 1500 PSF (PER SOIL SITE CLASS D) & EMBED FOOTINGS A MINIMUM OF 12" INTO COMPETENT SOIL.

6) REINFORCING SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH INTERSECTIONS.

7) ALL NEW SILL PLATE ANCHOR BOLTS TO BE INSTALLED INTO EXISTING FOOTINGS SHALL BE SIMPSON TITAN HD ANCHOR (ICC-ES-ESER-2508/LARR# 25744)

8) CONSTRUCTION JOINTS SHALL BE PREPARED BY WIRE BRUSHING, CLEANING AND BRUSHING IN A PASTE OF NEAT CEMENT MORTAR IMMEDIATELY PRIOR TO POURING. LOCATION OF CONSTRUCTION JOINT SHALL BE APPROVED BY THE PROJECT STRUCTURAL ENGINEER.

9) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

10) PRIOR TO POURING INTERIOR CONCRETE FLOOR SLABS, ALL SOIL BELOW FLOOR SHALL BE COMPACTED TO REQUIRED DENSITY AND MOISTENED TO A DEPTH NOT LESS THAN 18" OR PER SOILS REPORT.

11) DEEPEN NEW FOOTINGS AS NECESSARY TO OBTAIN REQUIRED EMBEDMENT FOR ALL NEW HOLD DOWN BOLTS. ALL HOLD DOWN BOLTS TO HAVE A MINIMUM OF 3" OF CONCRETE COVER TO SOIL @ BOTTOM. ALL HOLDOWN BOLTS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION

12) ALL HOLDOWNS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.

13) MINIMUM HORIZONTAL DISTANCE FROM BOTTOM LEADING EDGE OF FOOTING TO DAYLIGHT SHALL BE 7'-0"

14) ALL EXISTING FOOTINGS TO BE VERIFIED. NOTIFY ENGINEER IF DIFFERENT.

15) DOWEL ALL NEW FOOTINGS TO EXISTING (SEE DETAIL IF APPLIES)

FOUNDATION LEGEND

- (N) 60" WIDE x 18" DEEP FOOTING w/ #6 @12" oc T. & B. EW
- (N) CONC. PAD PER PLAN
- 6x POST U.N.O.
- SHEARWALL PER PLAN

CONCRETE SLAB ON GRADE

USE 5" THK. CONC. SLAB W/ #4 @ 16" O.C. E.W. @ MID-HEIGHT POURED DIRECTLY ONTO 15-MIL STEGO VAPOR BARRIER OVER 4" CLEAN SAND BASE (SE 30 OR GREATER). OVERLAP SEAMS MIN. 6" AND TAPE USING STEGO TAPE. ALL PENETRATIONS AND BLOCKOUTS SHOULD BE SEALED USING A COMBINATION OF STEGO WRAP, STEGO TAPE, AND/OR STEGO MASTIC.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT:
The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

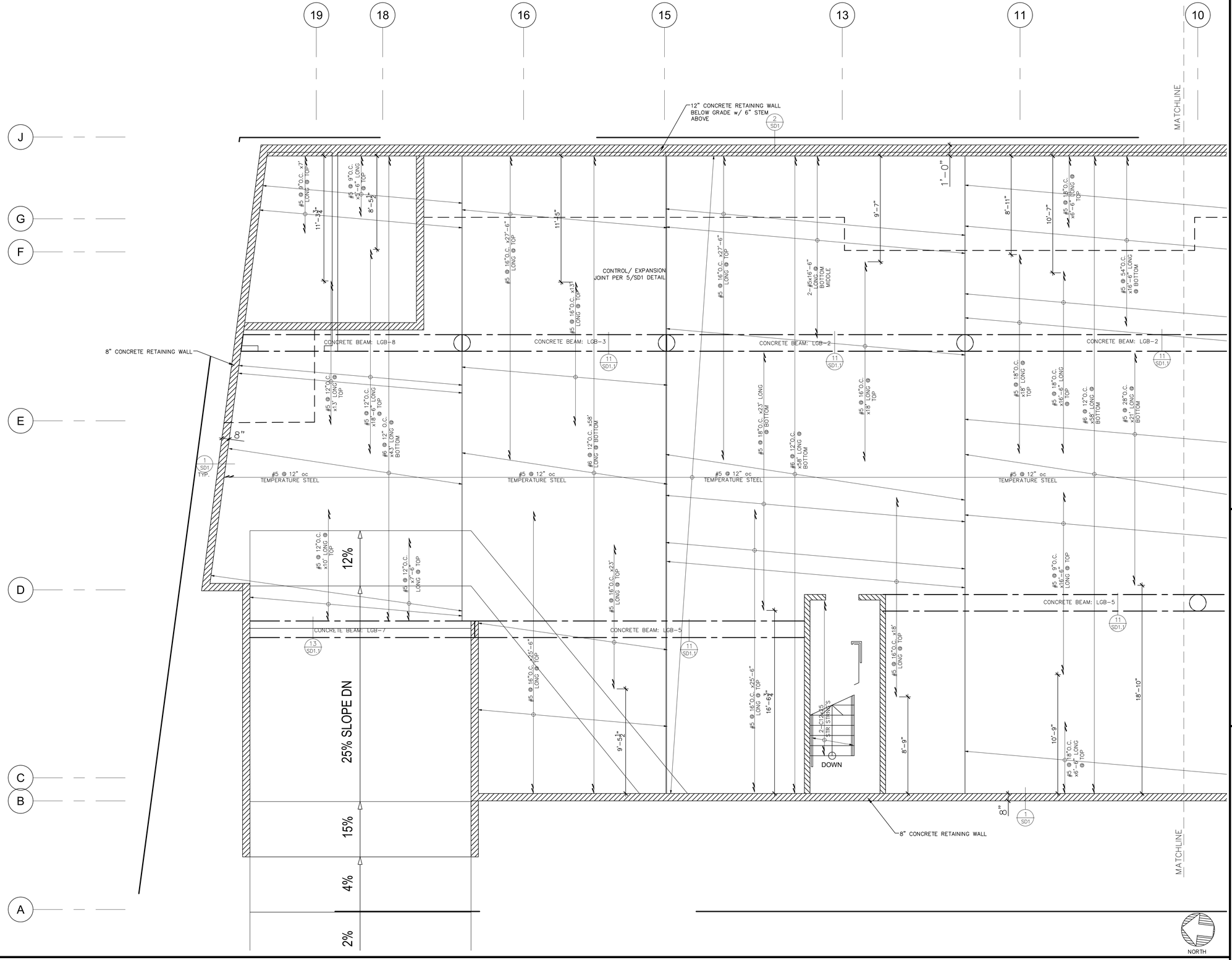
DRAWING:
Level P0
Foundation Plan
South

REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET
S1.1
— OF X SHEETS

Copyright 2016. All rights reserved. The use of these plans, calculations and specifications shall be restricted to the original site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.



PARTIAL LEVEL P1 SLAB PLAN - NORTH

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

FRAMING NOTES

ROOF DIAPHRAGM

15/32" APA RATED SHEATHING (MIN.), EXPOSURE 1, 24/0 MAX. SPAN RATING, w/ 8d COMMON NAILS @ 6"o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FLOOR DIAPHRAGM

23/32" APA STURD-I-FLOOR, EXPOSURE 1, TONGUE AND GROOVE, w/ 10d COMMON NAILS @ 6" o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FRAMING

1) ALL (2) 2x ROOF & FLOOR FRAMING TO HAVE MIN. 16d AT 12" O.C. T&B, STAGGERED

2) ALL (3) 2x FRAMING TO HAVE MIN. 1/2" DIAMETER BOLTS AT 18" O.C. T&B, STAGGERED

3) 2x SOLID BLOCKING REQUIRED AT POINTS OF SUPPORT FOR ALL HORIZONTAL FRAMING MEMBERS. IN ADDITION, ALL 2x10 AND LARGER MEMBERS SHALL HAVE SOLID FULL DEPTH BLOCKING OR BRIDGING AT MAX. 8'-0" o.c.

4) ALL WOOD POSTS AT UPPER FLOORS TO CONTINUE TO BEAM OR FOUNDATION

5) UNLESS DETAILED OTHERWISE, ALL RIDGE / HIP / VALLEY CONNECTIONS TO HAVE A SIMPSON A35 CONNECTOR AT EACH CORNER WITH A 2x KICKER TO BEARING WALL

6) ALL NEW TO EXISTING TOP PLATES TO HAVE SIMPSON ST6236 STRAP

7) AT ROOF-TO-WALL FRAMING, PROVIDE A35 FRAMING ANCHORS PER SHEARWALL SCHEDULE OR AT MAX. 48" O.C. FROM PLATES TO RAFTERS AND RAFTER BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

8) AT FIRST FLOOR AND SUBTERRANEAN LEVEL PROVIDE A35'S PER SHEARWALL SCHEDULE OR AT 32" O.C. MAX. FROM PLATES TO FLOOR JOISTS AND BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

9) PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL WALLS, U.N.O.

10) WHEN SHEAR WALLS ARE SUPPORTED BY WOOD JOISTS THAT ARE PERPENDICULAR TO THE SHEAR WALL, ATTACH SOLID 4x BLOCKING UNDER SHEAR WALLS BETWEEN JOISTS. PROVIDE 2x SOLID BLOCKING UNDER NON-SHEAR WALLS PERPENDICULAR TO FLOOR JOISTS. SEE PLANS AND DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

11) ATTACH MIN. 2x SOLID BLOCKING AND EDGE NAIL THE PERIMETER OF ALL OPENINGS OVER 10" IN WIDTH OR LENGTH IN ALL SHEAR PANELS AND DIAPHRAGMS. SEE DETAILS WHERE OTHER REQUIREMENTS MAY OCCUR.

12) PROVIDE A MINIMUM 3x4 OR 2x6 @ 16" FOR ALL STUD WALLS SUPPORTING TWO OR THREE FLOORS WITH 10' MAX PLATE HEIGHTS.

13) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

STUD SIZE	MAX. HEIGHT
2x4 @ 16" oc	10 FT
2x6 @ 16" oc	12 FT
2x6 @ 8" oc	14 FT
2x8 @ 16" oc	16 FT

LEGEND

- 11.875 TJI F.J. PER PLAN @ 19.2" o.c., U.N.O.
- 2x12 R.R. @ 16" o.c., U.N.O.
- 6x POST U.N.O.
- PLYWOOD SHEARWALL PER PLAN
- ST6236 SIMPSON STRAP, U.N.O.
- DL — DRAG LINE PER PLAN SEE SHEARWALL NOTES ON SHEET SN1
- TENSION REINFORCEMENT FOR 1ST AND 2ND FLOOR SLABS

CONCRETE SLAB @ 1ST FLOOR

USE 12" THK. CONC. SLAB W/ TENSION STEEL IN THE EAST-WEST DIRECTION PER PLAN AND #5 TEMPERATURE STEEL @ 12" O.C. IN THE NORTH-SOUTH DIRECTION @ MID-HEIGHT

BEAM	SIZE
P1	24" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P2	30" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P3	42" SQ.x12" THK. CONC. PAD W/ 4-#4 E.W.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Suite 104
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT:
The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

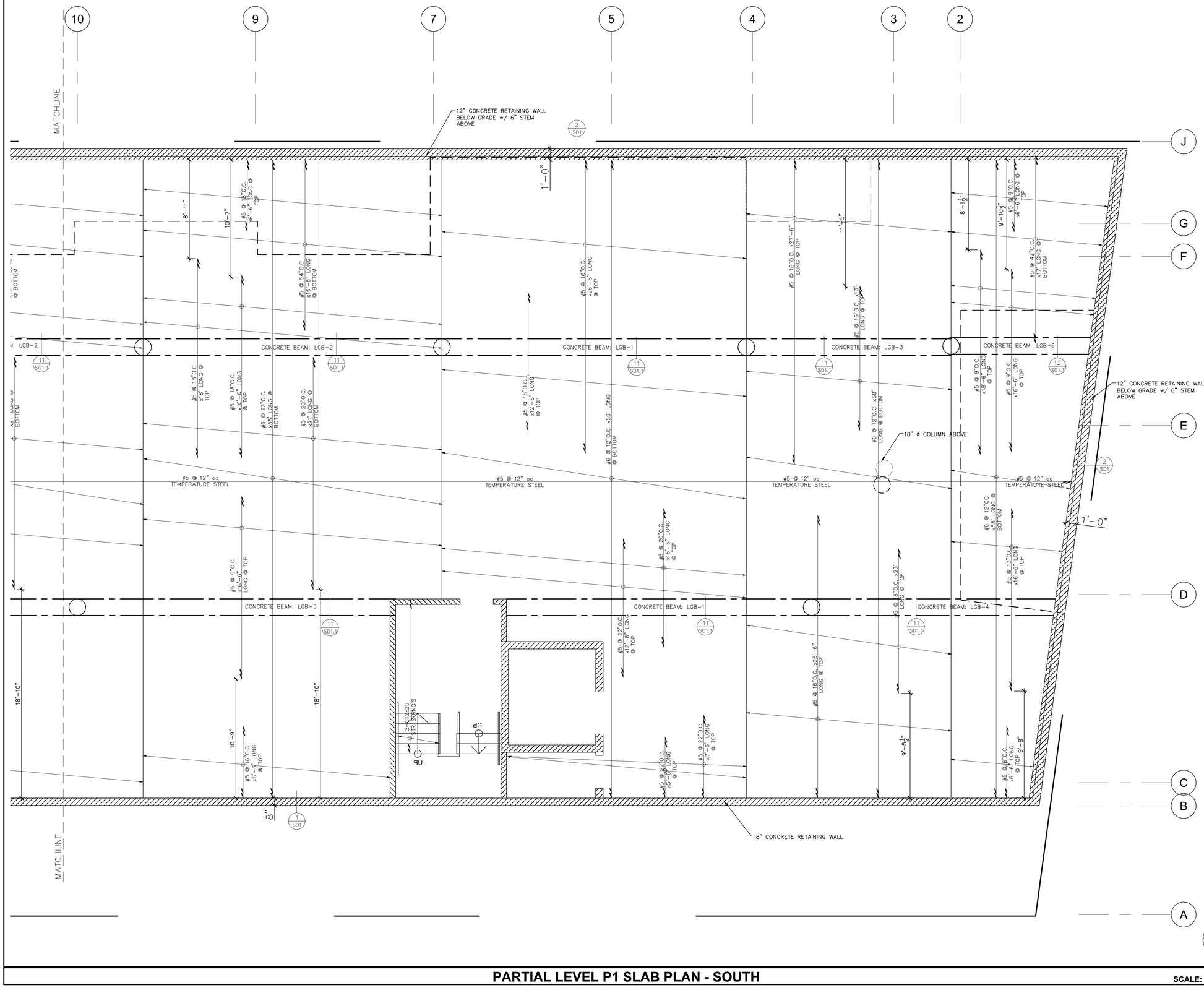
DRAWING:
Level P1
Slab Plan
North

REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET
S2
— OF X SHEETS

Copyright 2016. All rights reserved. The use of these plans, calculations and specifications shall be restricted to the original site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.



PARTIAL LEVEL P1 SLAB PLAN - SOUTH

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

FRAMING NOTES

ROOF DIAPHRAGM

15/32" APA RATED SHEATHING (MIN.), EXPOSURE 1, 24/0 MAX. SPAN RATING, w/ 8d COMMON NAILS @ 6"o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FLOOR DIAPHRAGM

23/32" APA STURD-I-FLOOR, EXPOSURE 1, TONGUE AND GROOVE, w/ 10d COMMON NAILS @ 6" o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FRAMING

1) ALL (2) 2x ROOF & FLOOR FRAMING TO HAVE MIN. 16d AT 12" O.C. T&B, STAGGERED

2) ALL (3) 2x FRAMING TO HAVE MIN. 1/2" DIAMETER BOLTS AT 18" O.C. T&B, STAGGERED

3) 2x SOLID BLOCKING REQUIRED AT POINTS OF SUPPORT FOR ALL HORIZONTAL FRAMING MEMBERS. IN ADDITION, ALL 2x10 AND LARGER MEMBERS SHALL HAVE SOLID FULL DEPTH BLOCKING OR BRIDGING AT MAX. 8'-0" o.c.

4) ALL WOOD POSTS AT UPPER FLOORS TO CONTINUE TO BEAM OR FOUNDATION

5) UNLESS DETAILED OTHERWISE, ALL RIDGE / HIP / VALLEY CONNECTIONS TO HAVE A SIMPSON A35 CONNECTOR AT EACH CORNER WITH A 2x KICKER TO BEARING WALL

6) ALL NEW TO EXISTING TOP PLATES TO HAVE SIMPSON ST6236 STRAP

7) AT ROOF-TO-WALL FRAMING, PROVIDE A35 FRAMING ANCHORS PER SHEARWALL SCHEDULE OR AT MAX. 48" O.C. FROM PLATES TO RAFTERS AND RAFTER BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

8) AT FIRST FLOOR AND SUBTERRANEAN LEVEL PROVIDE A35'S PER SHEARWALL SCHEDULE OR AT 32" O.C. MAX. FROM PLATES TO FLOOR JOISTS AND BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

9) PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL WALLS, U.N.O.

10) WHEN SHEAR WALLS ARE SUPPORTED BY WOOD JOISTS THAT ARE PERPENDICULAR TO THE SHEAR WALL, ATTACH SOLID 4x BLOCKING UNDER SHEAR WALLS BETWEEN JOISTS. PROVIDE 2x SOLID BLOCKING UNDER NON-SHEAR WALLS PERPENDICULAR TO FLOOR JOISTS. SEE PLANS AND DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

11) ATTACH MIN. 2x SOLID BLOCKING AND EDGE NAIL THE PERIMETER OF ALL OPENINGS OVER 10" IN WIDTH OR LENGTH IN ALL SHEAR PANELS AND DIAPHRAGMS. SEE DETAILS WHERE OTHER REQUIREMENTS MAY OCCUR.

12) PROVIDE A MINIMUM 3x4 OR 2x6 @ 16" FOR ALL STUD WALLS SUPPORTING TWO OR THREE FLOORS WITH 10' MAX PLATE HEIGHTS.

13) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

STUD SIZE	MAX. HEIGHT
2x4 @ 16" oc	10 FT
2x6 @ 16" oc	12 FT
2x6 @ 8" oc	14 FT
2x8 @ 16" oc	16 FT

LEGEND

- 11.875 TJI F.J. PER PLAN @ 19.2" o.c., U.N.O.
- 2x12 R.R. @ 16" o.c., U.N.O.
- 6x POST U.N.O.
- PLYWOOD SHEARWALL PER PLAN
- ST6236 SIMPSON STRAP, U.N.O.
- DL — DRAG LINE PER PLAN SEE SHEARWALL NOTES ON SHEET SN1
- TENSION REINFORCEMENT FOR 1ST AND 2ND FLOOR SLABS

CONCRETE SLAB @ 1ST FLOOR

USE 12" THK. CONC. SLAB W/ TENSION STEEL IN THE EAST-WEST DIRECTION PER PLAN AND #5 TEMPERATURE STEEL @ 12" O.C. IN THE NORTH-SOUTH DIRECTION @ MID-HEIGHT

BEAM	SIZE
P1	24" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P2	30" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P3	42" SQ.x12" THK. CONC. PAD W/ 4-#4 E.W.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Suite 104
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT: The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

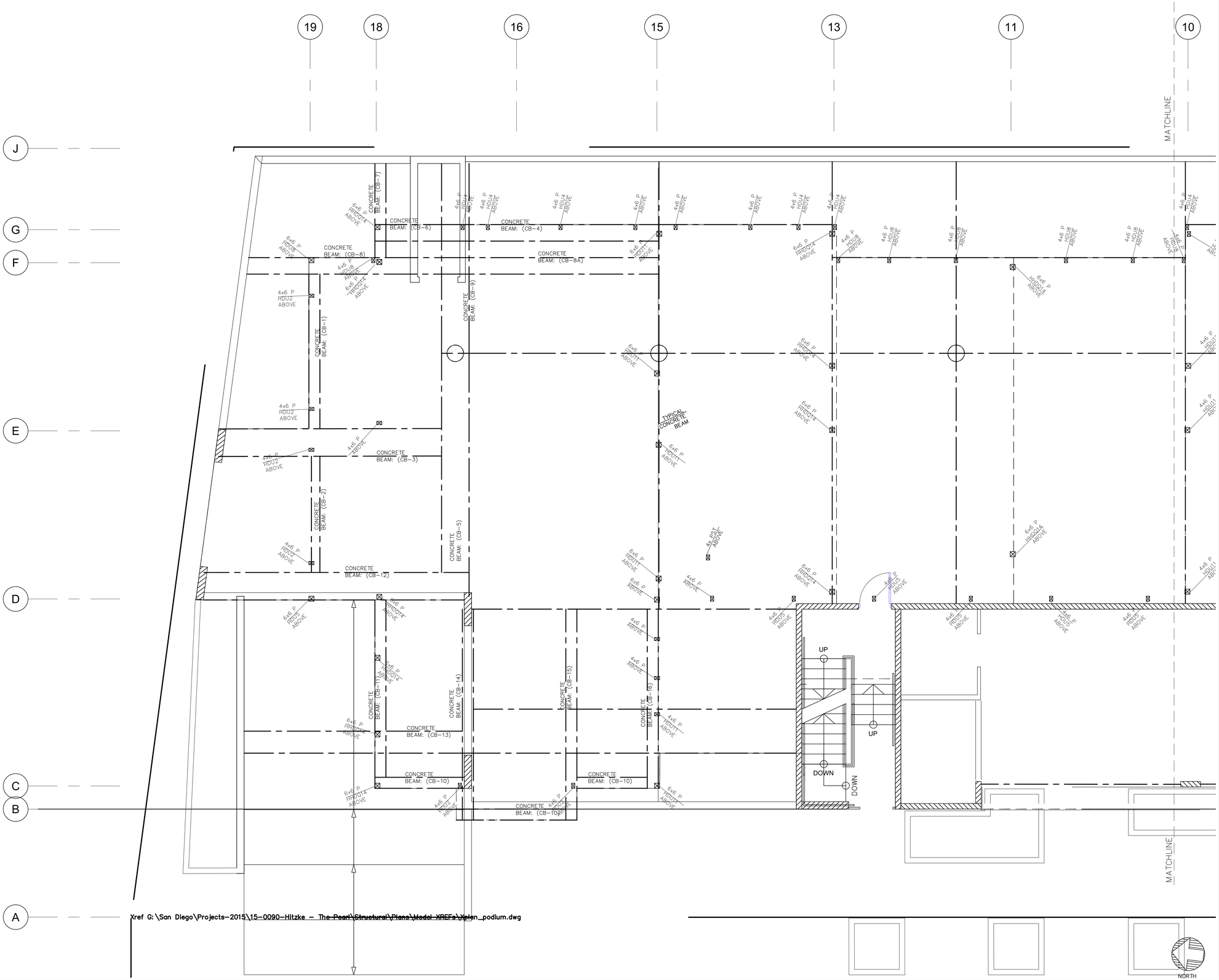
DRAWING: Level P1 Slab Plan South

REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET S2.1 — OF X SHEETS

Copyright 2016. All rights reserved. The use of these plans, calculations and specifications shall be restricted to the orginal site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.



Xref G:\San Diego\Projects-2015\15-0090-Hitzke - The Pearl\Structural\Plans\Model XREFs\Xplan_podium.dwg

PARTIAL SECOND FLOOR SLAB PLAN - NORTH

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

FRAMING NOTES

ROOF DIAPHRAGM

15/32" APA RATED SHEATHING (MIN.), EXPOSURE 1, 24/0 MAX. SPAN RATING, w/ 8d COMMON NAILS @ 6"o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FLOOR DIAPHRAGM

23/32" APA STURD-I-FLOOR, EXPOSURE 1, TONGUE AND GROOVE, w/ 10d COMMON NAILS @ 6" o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FRAMING

1) ALL (2) 2x ROOF & FLOOR FRAMING TO HAVE MIN. 16d AT 12" O.C. T&B, STAGGERED

2) ALL (3) 2x FRAMING TO HAVE MIN. 1/2" DIAMETER BOLTS AT 18" O.C. T&B, STAGGERED

3) 2x SOLID BLOCKING REQUIRED AT POINTS OF SUPPORT FOR ALL HORIZONTAL FRAMING MEMBERS. IN ADDITION, ALL 2x10 AND LARGER MEMBERS SHALL HAVE SOLID FULL DEPTH BLOCKING OR BRIDGING AT MAX. 8'-0" o.c.

4) ALL WOOD POSTS AT UPPER FLOORS TO CONTINUE TO BEAM OR FOUNDATION

5) UNLESS DETAILED OTHERWISE, ALL RIDGE / HIP / VALLEY CONNECTIONS TO HAVE A SIMPSON A35 CONNECTOR AT EACH CORNER WITH A 2x KICKER TO BEARING WALL

6) ALL NEW TO EXISTING TOP PLATES TO HAVE SIMPSON ST6236 STRAP

7) AT ROOF-TO-WALL FRAMING, PROVIDE A35 FRAMING ANCHORS PER SHEARWALL SCHEDULE OR AT MAX. 48" O.C. FROM PLATES TO RAFTERS AND RAFTER BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

8) AT FIRST FLOOR AND SUBTERRANEAN LEVEL PROVIDE A35'S PER SHEARWALL SCHEDULE OR AT 32" O.C. MAX. FROM PLATES TO FLOOR JOISTS AND BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

9) PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL WALLS, U.N.O.

10) WHEN SHEAR WALLS ARE SUPPORTED BY WOOD JOISTS THAT ARE PERPENDICULAR TO THE SHEAR WALL, ATTACH SOLID 4x BLOCKING UNDER SHEAR WALLS BETWEEN JOISTS. PROVIDE 2x SOLID BLOCKING UNDER NON-SHEAR WALLS PERPENDICULAR TO FLOOR JOISTS. SEE PLANS AND DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

11) ATTACH MIN. 2x SOLID BLOCKING AND EDGE NAIL THE PERIMETER OF ALL OPENINGS OVER 10" IN WIDTH OR LENGTH IN ALL SHEAR PANELS AND DIAPHRAGMS. SEE DETAILS WHERE OTHER REQUIREMENTS MAY OCCUR.

12) PROVIDE A MINIMUM 3x4 OR 2x6 @ 16" FOR ALL STUD WALLS SUPPORTING TWO OR THREE FLOORS WITH 10' MAX PLATE HEIGHTS.

13) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

STUD SIZE	MAX. HEIGHT
2x4 @ 16" oc	10 FT
2x6 @ 16" oc	12 FT
2x6 @ 8" oc	14 FT
2x8 @ 16" oc	16 FT

LEGEND

- 11.875 TJI F.J. PER PLAN @ 19.2" o.c., U.N.O.
- 2x12 R.R. @ 16" o.c., U.N.O.
- 6x POST U.N.O.
- PLYWOOD SHEARWALL PER PLAN
- ST6236 SIMPSON STRAP, U.N.O.
- DL — DRAG LINE PER PLAN SEE SHEARWALL NOTES ON SHEET SN1
- TENSION REINFORCEMENT FOR 1ST AND 2ND FLOOR SLABS

CONCRETE SLAB @ 1ST FLOOR

USE 12" THK. CONC. SLAB W/ TENSION STEEL IN THE EAST-WEST DIRECTION PER PLAN AND #5 TEMPERATURE STEEL @ 12" O.C. IN THE NORTH-SOUTH DIRECTION @ MID-HEIGHT

BEAM	SIZE
P1	24" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P2	30" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P3	42" SQ.x12" THK. CONC. PAD W/ 4-#4 E.W.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Suite 104
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT: The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

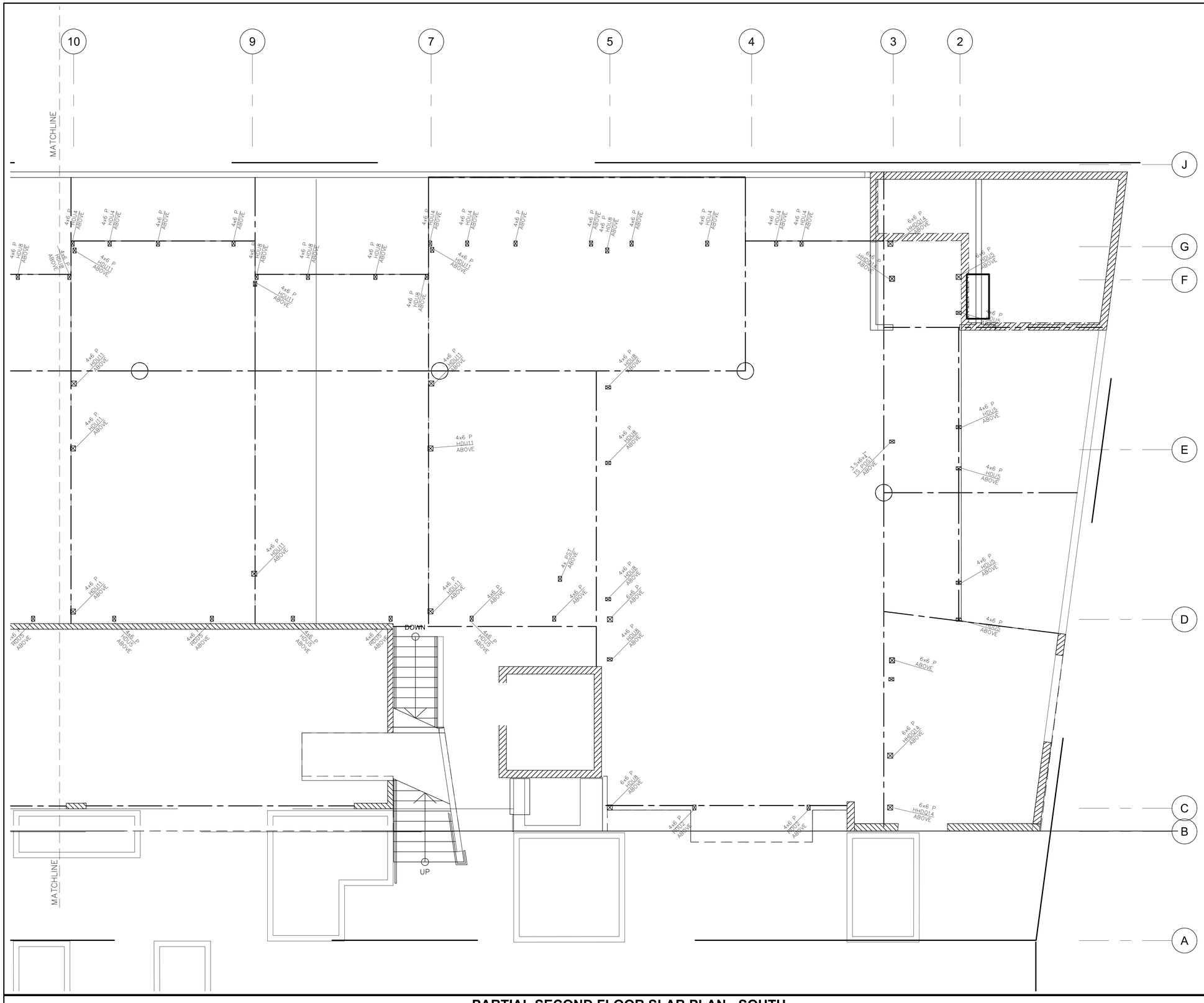
DRAWING: Second Floor Slab Plan North

REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET S3
— OF X SHEETS

Copyright 2016. All rights reserved. The use of these plans, calculations and specifications shall be restricted to the original site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.



PARTIAL SECOND FLOOR SLAB PLAN - SOUTH

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

FRAMING NOTES

ROOF DIAPHRAGM

15/32" APA RATED SHEATHING (MIN.), EXPOSURE 1, 24/0 MAX. SPAN RATING, w/ 8d COMMON NAILS @ 6"o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FLOOR DIAPHRAGM

23/32" APA STURD-I-FLOOR, EXPOSURE 1, TONGUE AND GROOVE, w/ 10d COMMON NAILS @ 6" o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FRAMING

1) ALL (2) 2x ROOF & FLOOR FRAMING TO HAVE MIN. 16d AT 12" O.C. T&B, STAGGERED

2) ALL (3) 2x FRAMING TO HAVE MIN. 1/2" DIAMETER BOLTS AT 18" O.C. T&B, STAGGERED

3) 2x SOLID BLOCKING REQUIRED AT POINTS OF SUPPORT FOR ALL HORIZONTAL FRAMING MEMBERS. IN ADDITION, ALL 2x10 AND LARGER MEMBERS SHALL HAVE SOLID FULL DEPTH BLOCKING OR BRIDGING AT MAX. 8'-0" o.c.

4) ALL WOOD POSTS AT UPPER FLOORS TO CONTINUE TO BEAM OR FOUNDATION

5) UNLESS DETAILED OTHERWISE, ALL RIDGE / HIP / VALLEY CONNECTIONS TO HAVE A SIMPSON A35 CONNECTOR AT EACH CORNER WITH A 2x KICKER TO BEARING WALL

6) ALL NEW TO EXISTING TOP PLATES TO HAVE SIMPSON ST6236 STRAP

7) AT ROOF-TO-WALL FRAMING, PROVIDE A35 FRAMING ANCHORS PER SHEARWALL SCHEDULE OR AT MAX. 48" O.C. FROM PLATES TO RAFTERS AND RAFTER BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

8) AT FIRST FLOOR AND SUBTERRANEAN LEVEL PROVIDE A35'S PER SHEARWALL SCHEDULE OR AT 32" O.C. MAX. FROM PLATES TO FLOOR JOISTS AND BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

9) PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL WALLS, U.N.O.

10) WHEN SHEAR WALLS ARE SUPPORTED BY WOOD JOISTS THAT ARE PERPENDICULAR TO THE SHEAR WALL, ATTACH SOLID 4x BLOCKING UNDER SHEAR WALLS BETWEEN JOISTS. PROVIDE 2x SOLID BLOCKING UNDER NON-SHEAR WALLS PERPENDICULAR TO FLOOR JOISTS. SEE PLANS AND DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

11) ATTACH MIN. 2x SOLID BLOCKING AND EDGE NAIL THE PERIMETER OF ALL OPENINGS OVER 10" IN WIDTH OR LENGTH IN ALL SHEAR PANELS AND DIAPHRAGMS. SEE DETAILS WHERE OTHER REQUIREMENTS MAY OCCUR.

12) PROVIDE A MINIMUM 3x4 OR 2x6 @ 16" FOR ALL STUD WALLS SUPPORTING TWO OR THREE FLOORS WITH 10' MAX PLATE HEIGHTS.

13) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

STUD SIZE	MAX. HEIGHT
2x4 @ 16" oc	10 FT
2x6 @ 16" oc	12 FT
2x6 @ 8" oc	14 FT
2x8 @ 16" oc	16 FT

LEGEND

- 11.875 TJI F.J. PER PLAN @ 19.2" o.c., U.N.O.
- 2x12 R.R. @ 16" o.c., U.N.O.
- 6x POST U.N.O.
- PLYWOOD SHEARWALL PER PLAN
- ST6236 SIMPSON STRAP, U.N.O.
- DL — DRAG LINE PER PLAN SEE SHEARWALL NOTES ON SHEET SN1
- TENSION REINFORCEMENT FOR 1ST AND 2ND FLOOR SLABS

CONCRETE SLAB @ 1ST FLOOR

USE 12" THK. CONC. SLAB W/ TENSION STEEL IN THE EAST-WEST DIRECTION PER PLAN AND #5 TEMPERATURE STEEL @ 12" O.C. IN THE NORTH-SOUTH DIRECTION @ MID-HEIGHT

BEAM	SIZE
P1	24" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P2	30" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P3	42" SQ.x12" THK. CONC. PAD W/ 4-#4 E.W.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Suite 104
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT: The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

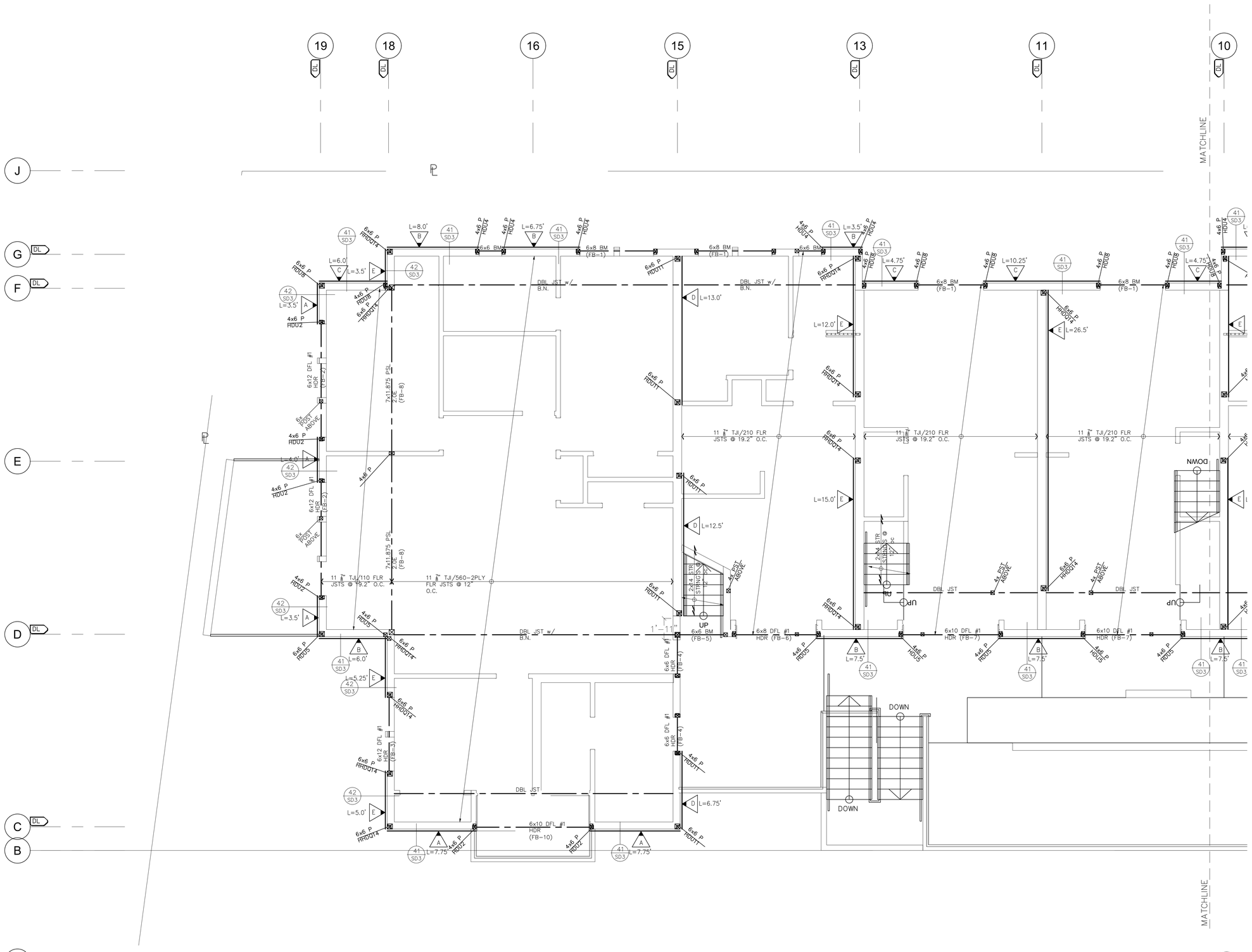
DRAWING: Second Floor Slab Plan South

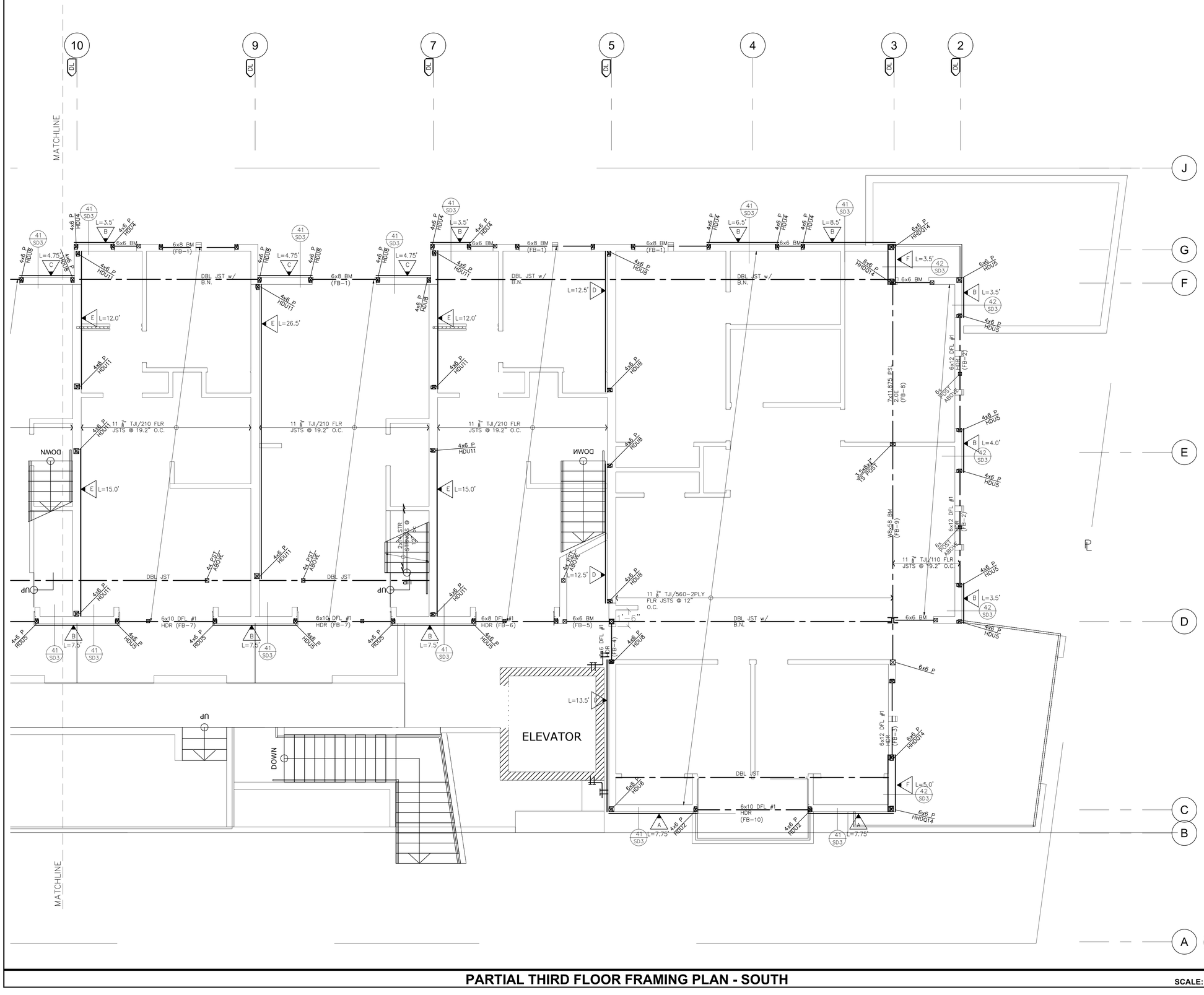
REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET
S3.1
— OF X SHEETS

Copyright 2016. All rights reserved. The use of these plans, calculations and specifications shall be restricted to the orginal site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.


19
18
16
15
13
11
10
J
G
F
E
D
C
B
A
DL
MATCHLINE
DBL JST w/ B.N.
DBL JST
11 7/8" TJI/210 FLR JSTS @ 19.2" O.C.
11 7/8" TJI/110 FLR JSTS @ 19.2" O.C.
11 7/8" TJI/560-2PLY FLR JSTS @ 12" O.C.
7x11.875 PSL 2.0E (FB-8)
6x12 DFL #1 HDR (FB-2)
6x12 DFL #1 HDR (FB-3)
6x10 DFL #1 HDR (FB-10)
6x8 DFL #1 HDR (FB-6)
6x10 DFL #1 HDR (FB-7)
6x6 DFL #1 HDR (FB-4)
6x8 BM (FB-1)
6x6 BM (FB-5)
6x6 P HDU11
6x6 P HDU14
4x6 P HDU8
4x6 P HDU5
4x6 P HDU2
4x6 P HDU4
6x6 P HDU5
6x6 P HDU8
6x6 P HDU2
6x6 P HDU4
6x6 P HDU14
6x6 P HDU11



PARTIAL THIRD FLOOR FRAMING PLAN - SOUTH

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

FRAMING NOTES

ROOF DIAPHRAGM

15/32" APA RATED SHEATHING (MIN.), EXPOSURE 1, 24/0 MAX. SPAN RATING, w/ 8d COMMON NAILS @ 6"o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FLOOR DIAPHRAGM

23/32" APA STURD-I-FLOOR, EXPOSURE 1, TONGUE AND GROOVE, w/ 10d COMMON NAILS @ 6" o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FRAMING

1) ALL (2) 2x ROOF & FLOOR FRAMING TO HAVE MIN. 16d AT 12" O.C. T&B, STAGGERED

2) ALL (3) 2x FRAMING TO HAVE MIN. 1/2" DIAMETER BOLTS AT 18" O.C. T&B, STAGGERED

3) 2x SOLID BLOCKING REQUIRED AT POINTS OF SUPPORT FOR ALL HORIZONTAL FRAMING MEMBERS. IN ADDITION, ALL 2x10 AND LARGER MEMBERS SHALL HAVE SOLID FULL DEPTH BLOCKING OR BRIDGING AT MAX. 8'-0" o.c.

4) ALL WOOD POSTS AT UPPER FLOORS TO CONTINUE TO BEAM OR FOUNDATION

5) UNLESS DETAILED OTHERWISE, ALL RIDGE / HIP / VALLEY CONNECTIONS TO HAVE A SIMPSON A35 CONNECTOR AT EACH CORNER WITH A 2x KICKER TO BEARING WALL

6) ALL NEW TO EXISTING TOP PLATES TO HAVE SIMPSON ST6236 STRAP

7) AT ROOF-TO-WALL FRAMING, PROVIDE A35 FRAMING ANCHORS PER SHEARWALL SCHEDULE OR AT MAX. 48" O.C. FROM PLATES TO RAFTERS AND RAFTER BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

8) AT FIRST FLOOR AND SUBTERRANEAN LEVEL PROVIDE A35'S PER SHEARWALL SCHEDULE OR AT 32" O.C. MAX. FROM PLATES TO FLOOR JOISTS AND BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

9) PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL WALLS, U.N.O.

10) WHEN SHEAR WALLS ARE SUPPORTED BY WOOD JOISTS THAT ARE PERPENDICULAR TO THE SHEAR WALL, ATTACH SOLID 4x BLOCKING UNDER SHEAR WALLS BETWEEN JOISTS. PROVIDE 2x SOLID BLOCKING UNDER NON-SHEAR WALLS PERPENDICULAR TO FLOOR JOISTS. SEE PLANS AND DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

11) ATTACH MIN. 2x SOLID BLOCKING AND EDGE NAIL THE PERIMETER OF ALL OPENINGS OVER 10" IN WIDTH OR LENGTH IN ALL SHEAR PANELS AND DIAPHRAGMS. SEE DETAILS WHERE OTHER REQUIREMENTS MAY OCCUR.

12) PROVIDE A MINIMUM 3x4 OR 2x6 @ 16" FOR ALL STUD WALLS SUPPORTING TWO OR THREE FLOORS WITH 10' MAX PLATE HEIGHTS.

13) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

STUD SIZE	MAX. HEIGHT
2x4 @ 16" oc	10 FT
2x6 @ 16" oc	12 FT
2x6 @ 8" oc	14 FT
2x8 @ 16" oc	16 FT

LEGEND

- 11.875 TJI F.J. PER PLAN @ 19.2" o.c., U.N.O.
- 2x12 R.R. @ 16" o.c., U.N.O.
- 6x POST U.N.O.
- PLYWOOD SHEARWALL PER PLAN
- ST6236 SIMPSON STRAP, U.N.O.
- DL — DRAG LINE PER PLAN SEE SHEARWALL NOTES ON SHEET SN1
- TENSION REINFORCEMENT FOR 1ST AND 2ND FLOOR SLABS

CONCRETE SLAB @ 1ST FLOOR

USE 12" THK. CONC. SLAB W/ TENSION STEEL IN THE EAST-WEST DIRECTION PER PLAN AND #5 TEMPERATURE STEEL @ 12" O.C. IN THE NORTH-SOUTH DIRECTION @ MID-HEIGHT

BEAM	SIZE
P1	24" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P2	30" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P3	42" SQ.x12" THK. CONC. PAD W/ 4-#4 E.W.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT: The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

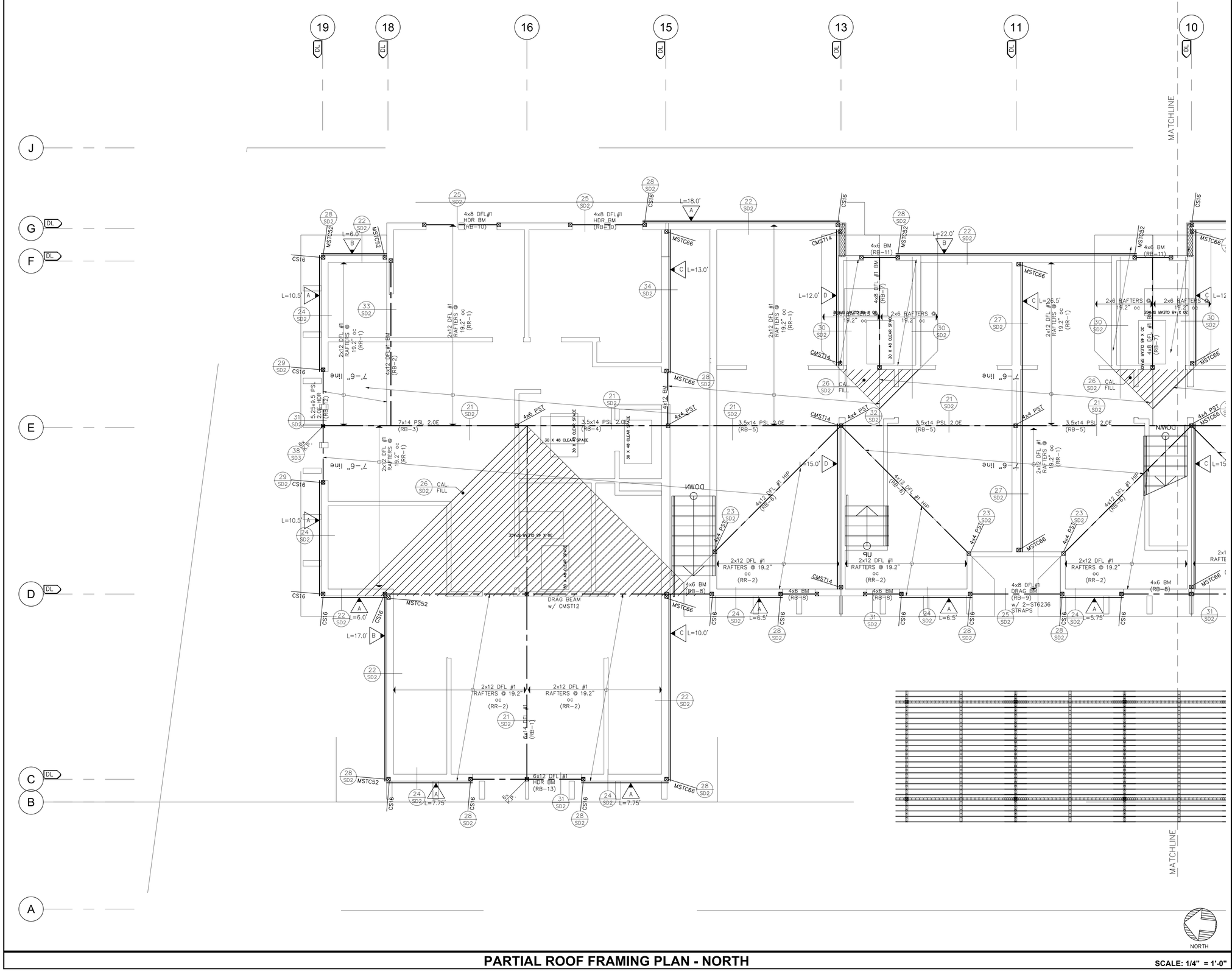
DRAWING: Third Floor Framing Plan South

REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET S4.1 — OF X SHEETS

Copyright 2016. All rights reserved. The use of these plans, calculations and specifications shall be restricted to the orginal site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.



PARTIAL ROOF FRAMING PLAN - NORTH

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

FRAMING NOTES

ROOF DIAPHRAGM

15/32" APA RATED SHEATHING (MIN.), EXPOSURE 1, 24/0 MAX. SPAN RATING, w/ 8d COMMON NAILS @ 6"o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FLOOR DIAPHRAGM

23/32" APA STURD-I-FLOOR, EXPOSURE 1, TONGUE AND GROOVE, w/ 10d COMMON NAILS @ 6" o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FRAMING

1) ALL (2) 2x ROOF & FLOOR FRAMING TO HAVE MIN. 16d AT 12" O.C. T&B, STAGGERED

2) ALL (3) 2x FRAMING TO HAVE MIN. 1/2" DIAMETER BOLTS AT 18" O.C. T&B, STAGGERED

3) 2x SOLID BLOCKING REQUIRED AT POINTS OF SUPPORT FOR ALL HORIZONTAL FRAMING MEMBERS. IN ADDITION, ALL 2x10 AND LARGER MEMBERS SHALL HAVE SOLID FULL DEPTH BLOCKING OR BRIDGING AT MAX. 8'-0" o.c.

4) ALL WOOD POSTS AT UPPER FLOORS TO CONTINUE TO BEAM OR FOUNDATION

5) UNLESS DETAILED OTHERWISE, ALL RIDGE / HIP / VALLEY CONNECTIONS TO HAVE A SIMPSON A35 CONNECTOR AT EACH CORNER WITH A 2x KICKER TO BEARING WALL

6) ALL NEW TO EXISTING TOP PLATES TO HAVE SIMPSON ST6236 STRAP

7) AT ROOF-TO-WALL FRAMING, PROVIDE A35 FRAMING ANCHORS PER SHEARWALL SCHEDULE OR AT MAX. 48" O.C. FROM PLATES TO RAFTERS AND RAFTER BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

8) AT FIRST FLOOR AND SUBTERRANEAN LEVEL PROVIDE A35'S PER SHEARWALL SCHEDULE OR AT 32" O.C. MAX. FROM PLATES TO FLOOR JOISTS AND BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

9) PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL WALLS, U.N.O.

10) WHEN SHEAR WALLS ARE SUPPORTED BY WOOD JOISTS THAT ARE PERPENDICULAR TO THE SHEAR WALL, ATTACH SOLID 4x BLOCKING UNDER SHEAR WALLS BETWEEN JOISTS. PROVIDE 2x SOLID BLOCKING UNDER NON-SHEAR WALLS PERPENDICULAR TO FLOOR JOISTS. SEE PLANS AND DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

11) ATTACH MIN. 2x SOLID BLOCKING AND EDGE NAIL THE PERIMETER OF ALL OPENINGS OVER 10" IN WIDTH OR LENGTH IN ALL SHEAR PANELS AND DIAPHRAGMS. SEE DETAILS WHERE OTHER REQUIREMENTS MAY OCCUR.

12) PROVIDE A MINIMUM 3x4 OR 2x6 @ 16" FOR ALL STUD WALLS SUPPORTING TWO OR THREE FLOORS WITH 10' MAX PLATE HEIGHTS.

13) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

STUD SIZE	MAX. HEIGHT
2x4 @ 16" oc	10 FT
2x6 @ 16" oc	12 FT
2x6 @ 8" oc	14 FT
2x8 @ 16" oc	16 FT

LEGEND

- 11.875 TJI F.J. PER PLAN @ 19.2" o.c., U.N.O.
- 2x12 R.R. @ 16" o.c., U.N.O.
- 6x POST U.N.O.
- PLYWOOD SHEARWALL PER PLAN
- ST6236 SIMPSON STRAP, U.N.O.
- DL — DRAG LINE PER PLAN SEE SHEARWALL NOTES ON SHEET SN1
- TENSION REINFORCEMENT FOR 1ST AND 2ND FLOOR SLABS

CONCRETE SLAB @ 1ST FLOOR

USE 12" THK. CONC. SLAB W/ TENSION STEEL IN THE EAST-WEST DIRECTION PER PLAN AND #5 TEMPERATURE STEEL @ 12" O.C. IN THE NORTH-SOUTH DIRECTION @ MID-HEIGHT

BEAM	SIZE
P1	24" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P2	30" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P3	42" SQ.x12" THK. CONC. PAD W/ 4-#4 E.W.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Suite 104
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT: The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

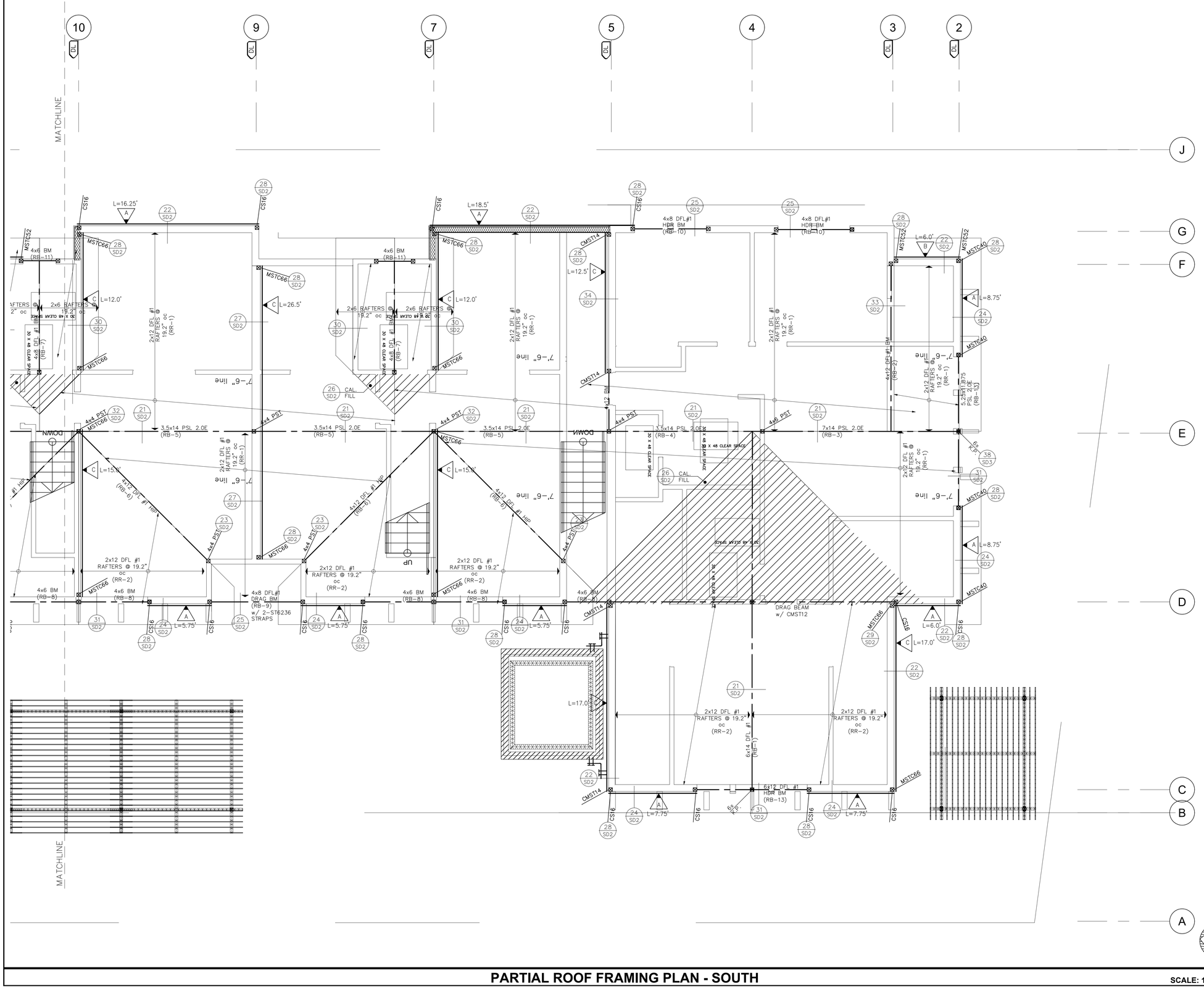
DRAWING: Roof Framing Plan North

REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET S5 — OF X SHEETS

Copyright 2016, All rights reserved. The use of these plans, calculations and specifications shall be restricted to the original site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.



PARTIAL ROOF FRAMING PLAN - SOUTH

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

FRAMING NOTES

ROOF DIAPHRAGM

15/32" APA RATED SHEATHING (MIN.), EXPOSURE 1, 24/0 MAX. SPAN RATING, w/ 8d COMMON NAILS @ 6"o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FLOOR DIAPHRAGM

23/32" APA STURD-I-FLOOR, EXPOSURE 1, TONGUE AND GROOVE, w/ 10d COMMON NAILS @ 6" o.c. AT BOUNDARY & PANEL EDGE NAILING (E.N.), AND 12" o.c. AT INTERMEDIATE FRAMING MEMBERS

FRAMING

1) ALL (2) 2x ROOF & FLOOR FRAMING TO HAVE MIN. 16d AT 12" O.C. T&B, STAGGERED

2) ALL (3) 2x FRAMING TO HAVE MIN. 1/2" DIAMETER BOLTS AT 18" O.C. T&B, STAGGERED

3) 2x SOLID BLOCKING REQUIRED AT POINTS OF SUPPORT FOR ALL HORIZONTAL FRAMING MEMBERS. IN ADDITION, ALL 2x10 AND LARGER MEMBERS SHALL HAVE SOLID FULL DEPTH BLOCKING OR BRIDGING AT MAX. 8'-0" o.c.

4) ALL WOOD POSTS AT UPPER FLOORS TO CONTINUE TO BEAM OR FOUNDATION

5) UNLESS DETAILED OTHERWISE, ALL RIDGE / HIP / VALLEY CONNECTIONS TO HAVE A SIMPSON A35 CONNECTOR AT EACH CORNER WITH A 2x KICKER TO BEARING WALL

6) ALL NEW TO EXISTING TOP PLATES TO HAVE SIMPSON ST6236 STRAP

7) AT ROOF-TO-WALL FRAMING, PROVIDE A35 FRAMING ANCHORS PER SHEARWALL SCHEDULE OR AT MAX. 48" O.C. FROM PLATES TO RAFTERS AND RAFTER BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

8) AT FIRST FLOOR AND SUBTERRANEAN LEVEL PROVIDE A35'S PER SHEARWALL SCHEDULE OR AT 32" O.C. MAX. FROM PLATES TO FLOOR JOISTS AND BLOCKING AROUND PERIMETER OF BUILDING AND AT DRAG LINES AS INDICATED ON PLANS (SEE PLANS WHERE OTHER REQUIREMENTS MAY OCCUR)

9) PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL WALLS, U.N.O.

10) WHEN SHEAR WALLS ARE SUPPORTED BY WOOD JOISTS THAT ARE PERPENDICULAR TO THE SHEAR WALL, ATTACH SOLID 4x BLOCKING UNDER SHEAR WALLS BETWEEN JOISTS. PROVIDE 2x SOLID BLOCKING UNDER NON-SHEAR WALLS PERPENDICULAR TO FLOOR JOISTS. SEE PLANS AND DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

11) ATTACH MIN. 2x SOLID BLOCKING AND EDGE NAIL THE PERIMETER OF ALL OPENINGS OVER 10" IN WIDTH OR LENGTH IN ALL SHEAR PANELS AND DIAPHRAGMS. SEE DETAILS WHERE OTHER REQUIREMENTS MAY OCCUR.

12) PROVIDE A MINIMUM 3x4 OR 2x6 @ 16" FOR ALL STUD WALLS SUPPORTING TWO OR THREE FLOORS WITH 10' MAX PLATE HEIGHTS.

13) ALL CONNECTORS AND METAL HARDWARE IN CONTACT WITH PRESSURE TREATED TIMBER SHALL HAVE CORROSION RESISTANT COATINGS OR PROTECTION, SUCH AS "ZMAX", HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL.

STUD SIZE	MAX. HEIGHT
2x4 @ 16" oc	10 FT
2x6 @ 16" oc	12 FT
2x6 @ 8" oc	14 FT
2x8 @ 16" oc	16 FT

LEGEND

- 11.875 TJI F.J. PER PLAN @ 19.2" o.c., U.N.O.
- 2x12 R.R. @ 16" o.c., U.N.O.
- 6x POST U.N.O.
- PLYWOOD SHEARWALL PER PLAN
- ST6236 SIMPSON STRAP, U.N.O.
- DL — DRAG LINE PER PLAN SEE SHEARWALL NOTES ON SHEET SN1
- TENSION REINFORCEMENT FOR 1ST AND 2ND FLOOR SLABS

CONCRETE SLAB @ 1ST FLOOR

USE 12" THK. CONC. SLAB W/ TENSION STEEL IN THE EAST-WEST DIRECTION PER PLAN AND #5 TEMPERATURE STEEL @ 12" O.C. IN THE NORTH-SOUTH DIRECTION @ MID-HEIGHT

BEAM	SIZE
P1	24" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P2	30" SQ.x12" THK. CONC. PAD W/ 3-#4 E.W.
P3	42" SQ.x12" THK. CONC. PAD W/ 4-#4 E.W.

PALOS VERDES ENGINEERING
Civil and Structural Consulting
960 Highland Drive
Suite 104C
Solana Beach
CA 92075
(858) 509-8505
(858) 509-8515 Fax
sandiego@pvec.com

These drawings are not valid for construction unless wet stamped and signed by Palos Verdes Engineering Corporation

STAMP

PROJECT: The Pearl
298 South Sierra Avenue
Solana Beach, CA 92075

DRAWING: Roof Framing Plan South

REVISIONS	BY

JOB# 02-15-0090
ENGINEER: EP
DRAWN: EP
CHECKED: JS
FILE: Pearl.dwg
DATE: 6-4-2018
SCALE: 1/4" = 1'-0"

SHEET S5.1
— OF X SHEETS

Copyright 2016. All rights reserved. The use of these plans, calculations and specifications shall be restricted to the original site for which they were prepared, and publication thereof is expressly limited to such use. Reproduction, publication or reuse by any method, in whole or part, is prohibited without the permission and consent of Palos Verdes Engineering Corp. (PVEC). Title to the Plans, calculations and specifications shall constitute prima facie evidence of the acceptance of these restrictions. In the event of unauthorized reuse of the plans by a third party, the third party shall hold PVEC harmless. Note: Plans are not valid for construction unless approved by the corresponding city building department.

2016 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. "Exceptions may apply.
(Original 08/2016)

Building Envelope Measures:	
§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 cfm/ft² or less when tested per NFRC-400 or ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.'
§ 110.6(a)5:	**Labeling.** Fenestration products must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from TABLES 110.6-A and 110.6-B for compliance and must be caulked and/or weatherstripped.'
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation specified or installed must meet Standards for Insulating Material.
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be installed per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** A radiant barrier must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 110.8(a):	**Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.'
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less (R-19 in 2x6 or U-factor of 0.074 or less). Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102, equivalent to an installed value of R-13 in a wood framed assembly.'
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.'
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3%; have a water vapor permeance no greater than 2.0 perm/inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In Climate Zones 1-16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In Climate Zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.'
Fireplaces, Decorative Gas Appliances, and Gas Log Measures:	
§ 150.0(e)1A:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)1B:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)1C:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.'
§ 150.0(e)2:	**Pilot Light.** Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.
Space Conditioning, Water Heating, and Plumbing System Measures:	
§ 110.0-§ 110.3:	**Certification.** Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the Energy Commission.'
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in TABLE 110.2-A through TABLE 110.2-K.'
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.'
§ 110.2(c):	**Thermostats.** All unitary heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.'
§ 110.3(c)5:	**Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)6.
§ 110.3(c)7:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2 kW) must have isolation valves with hose bibbs or other fittings on both cold water and hot water lines of water heating systems to allow for water tank flushing when the valves are closed.
§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt); and pool and spa heaters.'
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; SMACNA Residential Comfort System Installation Standards Manual; or ACCA Manual J using design conditions specified in § 150.0(h)2.

2016 Low-Rise Residential Mandatory Measures Summary

§ 150.0(h)3A:	**Clearances.** Installed air conditioner and heat pump outdoor condensing units must have a clearance of at least 5 feet from the outlet of any dryer vent.
§ 150.0(h)3B:	**Liquid Line Drier.** Installed air conditioner and heat pump systems must be equipped with liquid line filter driers if required, as specified by manufacturer's instructions.
§ 150.0(j)1:	**Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A:	**Water piping and cooling system line insulation.** For domestic hot water system piping, whether buried or unburied, all of the following must be insulated according to the requirements of TABLE 120.3-A: the first 5 feet of hot and cold water pipes from the storage tank; all piping with a nominal diameter of 3/4 inch or larger; all piping associated with a domestic hot water recirculation system regardless of the pipe diameter; piping from the heating source to storage tank or between tanks; piping buried below grade; and all hot water pipes from the heating source to kitchen fixtures.'
§ 150.0(j)2B:	**Water piping and cooling system line insulation.** All domestic hot water pipes that are buried below grade must be installed in a water proof and non-crushable casing or sleeve.'
§ 150.0(j)2C:	**Water piping and cooling system line insulation.** Pipe for cooling system lines must be insulated as specified in § 150.0(j)2A. Distribution piping for steam and hydronic heating systems or hot water systems must meet the requirements in TABLE 120.3-A.'
§ 150.0(j)3:	**Insulation Protection.** Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.
§ 150.0(j)3A:	**Insulation Protection.** Insulation exposed to weather must be installed with a cover suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. The cover must be water retardant and provide shielding from solar radiation that can cause degradation of the material.
§ 150.0(j)3B:	**Insulation Protection.** Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must have a Class I or Class II vapor retarder.
§ 150.0(n)1:	**Gas or Propane Systems.** Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: a 120V electrical receptacle within 3 feet of the water heater; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu/hr.
§ 150.0(n)2:	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC) or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must be installed, sealed, and insulated to meet the requirements of CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 (or higher if required by CMC § 605.0) or a minimum installed level of R-4.2 when entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area of the ducts.'
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Dampers.** All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner core flex duct must have a non-porous layer between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11and Reference Residential Appendix RA3.
§ 150.0(m)12:	**Air Filtration.** Mechanical systems that supply air to an occupiable space through ductwork exceeding 10 feet in length and through a thermal conditioning component, except evaporative coolers, must be provided with air filter devices that meet the design, installation, efficiency, pressure drop, and labeling requirements of § 150.0(m)12.

2016 Low-Rise Residential Mandatory Measures Summary

§ 150.0(m)13:	**Duct System Sizing and Air Filter Grille Sizing.** Space conditioning systems that use forced air ducts to supply cooling to an occupiable space must have a hole for the placement of a static pressure probe (HSPP), or a permanently installed static pressure probe (PSPP) in the supply plenum. The space conditioning system must also demonstrate airflow ≥ 350 CFM per ton of nominal cooling capacity through the return grilles, and an air-handling unit fan efficacy ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.3. This applies to both single zone central forced air systems and every zone for zonally controlled central forced air systems.'
§150.0(o):	**Ventilation for Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2. Neither window operation nor continuous operation of central forced air system air handlers used in central fan integrated ventilation systems are permissible methods of providing whole-building ventilation.
§ 150.0(o)1A:	**Field Verification and Diagnostic Testing.** Whole-building ventilation airflow must be confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.7.
Pool and Spa Systems and Equipment Measures:	
§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.'
§ 110.4(b)1:	**Piping.** Any pool or spa heating equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional inlets and time switches for pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.'
Lighting Measures:	
§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.'
§ 110.9(e):	**JA8 High Efficacy Light Sources.** To qualify as a JA8 high efficacy light source for compliance with § 150.0(k), a residential light source must be certified to the Energy Commission according to Reference Joint Appendix JA8.
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must be high efficacy in accordance with TABLE 150.0-A.
§ 150.0(k)1B:	**Blank Electrical Boxes.** The number of electrical boxes that are more than 5 feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C. A JA8-2016-E light source rated for elevated temperature must be installed by final inspection in all recessed downlight luminaires in ceilings.
§ 150.0(k)1D:	**Electronic Ballasts.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E:	**Night Lights.** Permanently installed night lights and night lights integral to installed luminaires or exhaust fans must be rated to consume no more than 5 watts of power per luminaire or exhaust fan as determined in accordance with § 130.0(c). Night lights do not need to be controlled by vacancy sensors.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).'
§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must not be recessed downlight luminaires in ceilings and must contain lamps that comply with Reference Joint Appendix JA8. Installed lamps must be marked with "JA8-2016" or "JA8-2016-E" as specified in Reference Joint Appendix JA8.'
§ 150.0(k)1H:	**Enclosed Luminaires.** Light sources installed in enclosed luminaires must be JA8 compliant and must be marked with "JA8-2016-E."
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be switched separately from lighting systems.'
§ 150.0(k)2C:	**Interior Switches and Controls.** Luminaires must be switched with readily accessible controls that permit the luminaires to be manually switched ON and OFF.
§ 150.0(k)2D:	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	**Interior Switches and Controls.** No control must bypass a dimmer or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F:	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2G:	**Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with dimmer requirements if it: functions as a dimmer according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.5(f); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	**Interior Switches and Controls.** An EMCS may be used to comply with vacancy sensor requirements in § 150.0(k) if it meets all of the following: it functions as a vacancy sensor according to § 110.9; the Installation Certificate requirements of § 130.4; the EMCS requirements of § 130.5(f); and all other requirements in § 150.0(k)2.
§ 150.0(k)2I:	**Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.

2016 Low-Rise Residential Mandatory Measures Summary

§ 150.0(k)2J:	**Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by a vacancy sensor.
§ 150.0(k)2K:	**Interior Switches and Controls.** Dimmers or vacancy sensors must control all luminaires required to have light sources compliant with Reference Joint Appendix JA8, except luminaires in closets less than 70 square feet and luminaires in hallways.'
§ 150.0(k)2L:	**Interior Switches and Controls.** Undercabinet lighting must be switched separately from other lighting systems.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either item § 150.0(k)3Aii (photocell and motion sensor) or item § 150.0(k)3Aiii (photo control and automatic time switch control, astronomical time clock, or EMCS).
§ 150.0(k)3B:	**Residential Outdoor Lighting.** For low-rise multifamily residential buildings, outdoor lighting for private patios, entrances, balconies, and porches; and outdoor lighting for residential parking lots and residential carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3D:	**Residential Outdoor Lighting.** Outdoor lighting for residential parking lots and residential carports with a total of eight or more vehicles per site must comply with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7, and 141.0.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	**Interior Common Areas of Low-rise Multi-Family Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be high efficacy luminaires and controlled by an occupant sensor.'
§ 150.0(k)6B:	**Interior Common Areas of Low-rise Multi-Family Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting in that building must: i. Comply with the applicable requirements in §§ 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Buildings:	
§ 110.10(a)1:	**Single Family Residences.** Single family residences located in subdivisions with ten or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete by the enforcement agency must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	**Low-rise Multi-family Buildings.** Low-rise multi-family buildings must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1:	**Minimum Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area.'
§ 110.10(b)2:	**Orientation.** All sections of the solar zone located on sloped roofs must be oriented between 110 degrees and 270 degrees of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.'
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.'
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location for inverters and metering equipment and a pathway for routing of conduit from the solar zone to the point of interconnection with the electrical service (for single family residences the point of interconnection will be the main service panel); and a pathway for routing of plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be: positioned at the opposite (load) end from the input feeder location or main circuit location; and permanently marked as "For Future Solar Electric".

ENERGY INSPECTORS®
One Civic Center Drive, Ste 300
San Marcos, CA 92069
760-761-3695 (T)
760-761-3650 (F)

REVISIONS

NO.	DATE	DESCRIPTION	BY

DEVELOPER
HITZKE DEVELOPMENT CORPORATIONS
251 AUTUMN DRIVE
SUITE 100
SAN MARCOS, CA 92169

If is the clients responsibility prior to or during construction to notify in writing of any perceived errors or omissions in the plans and specifications of which a contractor thoroughly knowledgeable with building codes and methods of construction should be reasonably be aware. Written instructions addressing such perceived errors or omissions shall be received prior to the client or client's subcontractors proceed with the work. The client will be responsible for any defects in construction if these procedures are not followed.

THESE DRAWINGS AND THE INFORMATION CONTAINED ON THEM ARE THE SOLE PROPERTY OF ENERGY INSPECTORS. ANY USE OF THESE DOCUMENTS OR THE INFORMATION CONTAINED HEREIN, CAN ONLY BE USED WITH WRITTEN PERMISSION FROM ENERGY INSPECTORS. ENERGY INSPECTORS ASSUMES NO LIABILITY FOR THESE DRAWINGS OR INFORMATION CONTAINED HEREIN.

THE PEARL
S. SIERRA AVENUE
SOLANA BEACH, CA

NOTE: ENERGY CALCULATIONS REPRESENT MINIMUM REQUIRED EFFICIENCIES.
REFER TO MECHANICAL DOCUMENTS FOR ACTUAL SYSTEM EFFICIENCIES.

PLAN
MANDATORY MEASURES

DRAWN
CHECKED
DATE 06.04.18
SCALE
ARCHITECUTRALS RECEIVED
STRUCTURALS RECEIVED
SHEET
T24-MM

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 1 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

GENERAL INFORMATION					
01	Project Name	The Pearl			
02	Calculation Description	Title 24 Analysis			
03	Project Location	South Sierra Avenue			
04	City	Solana Beach	05	Standards Version	Compliance 2017
06	Zip Code		07	Compliance Manager Version	BEMCmpMgr 2016.3.0 (934 SP1)
08	Climate Zone	CZ7	09	Software Version	EnergyPro 7.2
10	Building Type	Multifamily	11	Front Orientation (deg/Cardinal)	270
12	Project Scope	Newly Constructed	13	Number of Dwelling Units	10
14	Total Cond. Floor Area (ft²)	8840	15	Number of Zones	5
16	Slab Area (ft²)	0	17	Number of Stories	3
18	Addition Cond. Floor Area(ft²)	n/a	19	Natural Gas Available	Yes
20	Addition Slab Area (ft²)	n/a	21	Glazing Percentage (%)	18.4%

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.

ENERGY USE SUMMARY				
04	05	06	07	08
Energy Use (kTDV/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	4.90	5.45	-0.95	-21.1%
Space Cooling	6.47	6.56	-0.09	-1.4%
IAQ Ventilation	2.75	2.75	0.00	0.0%
Water Heating	16.74	14.92	1.82	10.9%
Photovoltaic Offset	----	0.00	0.00	----
Compliance Energy Total	30.46	29.68	0.78	2.6%

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 2 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

ENERGY DESIGN RATING

Energy Design Rating (EDR) is an alternate way to express the energy performance of a building using a scoring system where 100 represents the energy performance of the Residential Energy Services (RESNET) reference home characterization of the 2006 International Energy Conservation Code (IECC) with California modeling assumptions. A score of zero represents the energy performance of a building that combines high levels of energy efficiency with renewable generation to"zero out" its TDV energy. Because EDR includes consideration of components not regulated by Title 24, Part 6 (such as domestic appliances and consumer electronics), it is not used to show compliance with Part 6 but may instead be used by local jurisdictions pursuing local ordinances under Title 24, Part 11 (CALGreen).
As a Standard Design building under the 2016 Building Energy Efficiency Standards is significantly more efficient than the baseline EDR building, the EDR of the Standard Design building is provided for information. Similarly, the EDR score of the Proposed Design is provided separately from the EDR value of installed PV so that the effects of efficiency and renewable energy can both be seen

EDR of Standard Efficiency	EDR of Proposed Efficiency	EDR Value of Proposed PV + Battery	Final Proposed EDR
67.1	66.6	0.0	66.6

- ☐ Design meets Tier 1 requirement of 15% or greater code compliance margin (CALGreen A4.203.1.2.1) and QII verification prerequisite.
- ☐ Design meets Tier 2 requirement of 30% or greater code compliance margin (CALGreen A4.203.1.2.2) and QII verification prerequisite.
- ☐ Design meets Zero Net Energy (ZNE) Design Designation requirement for Multifamily in climate zone CZ7 (San Diego) (CALGreen A4.203.1.2.3) including on-site photovoltaic (PV) renewable energy generation sufficient to achieve a Final Energy Design Rating (EDR) of zero or less. The PV System must be verified.

Notes:
- **Excess PV Generation EDR Credit: Bypassing PV size limit may violate Net Energy Metering (NEM) rules**

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis

NO SPECIAL FEATURES REQUIRED

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building components tables below.

Building-level Verifications:
- **High quality insulation installation (QII)**
- **IAQ mechanical ventilation**

Cooling System Verifications:
- **Verified Refrigerant Charge**

HVAC Distribution System Verifications:
- -- None --

Domestic Hot Water System Verifications:
- -- None --

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
The Pearl	8840	10	22	5	0	10

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 3 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

ZONE INFORMATION

01	02	03	04	05
Zone Name	Zone Type	Zone Floor Area (ft²)	Avg. Ceiling Height	Number of Dwelling Units
4 Bed Unit	Conditioned	1232	9	1
1 Bed Unit	Conditioned	1525	9	3
3 Bed Unit-2nd Floor	Conditioned	1032	9	1
2 Bed Unit	Conditioned	2960	9	3
3 Bed Unit-3rd Floor	Conditioned	2091	9	2

DWELLING UNIT INFORMATION

01	02	03
Dwelling Unit Name	Dwelling Unit Type	Zone
DDU-1 4 Bed Unit-(1/1)	DU-1 4 Bed Unit	4 Bed Unit
DDU-2 1 Bed Unit-(1/2)	DU-2 1 Bed Unit	1 Bed Unit
DDU-2 1 Bed Unit-(2/2)	DU-2 1 Bed Unit	1 Bed Unit
DDU-3 1 Bed Unit-(1/1)	DU-3 1 Bed Unit	1 Bed Unit
DDU-4 3 Bed Unit-(1/1)	DU-4 3 Bed Unit	3 Bed Unit-2nd Floor
DDU-5 2 Bed Unit-(1/1)	DU-5 2 Bed Unit	2 Bed Unit
DDU-6 2 Bed Unit-(1/1)	DU-6 2 Bed Unit	2 Bed Unit
DDU-7 2 Bed Unit-(1/1)	DU-7 2 Bed Unit	2 Bed Unit
DDU-8 3 Bed Unit-(1/1)	DU-8 3 Bed Unit	3 Bed Unit-3rd Floor
DDU-9 3 Bed Unit-(1/1)	DU-9 3 Bed Unit	3 Bed Unit-3rd Floor

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 4 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

DWELLING UNIT TYPES

01	02	03	04	05	06	07
Name	CFA (ft²)	Number of Bedrooms	Number in Building	Space Conditioning Systems Assigned	DHW System Name	IAQ Vent Fan Name
DU-1 4 Bed Unit	1232	4	1	DDU-1 4 Bed Unit | Heat Pump System 1::2:3	DHW Sys 1	Default Minimum IAQ Fan
DU-2 1 Bed Unit	505	1	2	DDU-2 1 Bed Unit 1/2 | Heat Pump System 2::2:3 DDU-2 1 Bed Unit 2/2 | Heat Pump System 2::2:3	DHW Sys 1	Default Minimum IAQ Fan
DU-3 1 Bed Unit	515	1	1	DDU-3 1 Bed Unit | Heat Pump System 2::2:3	DHW Sys 1	Default Minimum IAQ Fan
DU-4 3 Bed Unit	1032	3	1	DDU-4 3 Bed Unit | Heat Pump System 3::2:3	DHW Sys 1	Default Minimum IAQ Fan
DU-5 2 Bed Unit	918	2	1	DDU-5 2 Bed Unit | Heat Pump System 4::2:3	DHW Sys 3	Default Minimum IAQ Fan
DU-6 2 Bed Unit	1010	2	1	DDU-6 2 Bed Unit | Heat Pump System 4::2:3	DHW Sys 3	Default Minimum IAQ Fan
DU-7 2 Bed Unit	1032	2	1	DDU-7 2 Bed Unit | Heat Pump System 4::2:3	DHW Sys 3	Default Minimum IAQ Fan
DU-8 3 Bed Unit	1002	3	1	DDU-8 3 Bed Unit | Heat Pump System 5::2:3	DHW Sys 3	Default Minimum IAQ Fan
DU-9 3 Bed Unit	1089	3	1	DDU-9 3 Bed Unit | Heat Pump System 5::2:3	DHW Sys 3	Default Minimum IAQ Fan

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 5 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window & Door Area (ft²)	Tilt (deg)
Front Wall	4 Bed Unit	R-19 Wall	270	Front	283.5	86.7	90
Left Wall	4 Bed Unit	R-19 Wall	0	Left	486	20	90
Rear Wall	4 Bed Unit	R-19 Wall	90	Back	283.5	89.5	90
Right Wall	4 Bed Unit	R-19 Wall	180	Right	247.5	145	90
Right Interior Surface	4 Bed Unit<1 Bed Unit	R-19 Wall1	n/a	n/a	238.5	0	n/a
Raised Floor	4 Bed Unit	Uninsulated Raised Slab F	n/a	n/a	1232	n/a	n/a
Front Wall 2	1 Bed Unit	R-19 Wall	270	Front	432	173.9	90
Left Wall 2	1 Bed Unit	R-19 Wall	0	Left	117	0	90
Rear Wall 2	1 Bed Unit	R-19 Wall	90	Back	432	99	90
Right Wall 2	1 Bed Unit	R-19 Wall	180	Right	117	0	90
Left Interior Surface	1 Bed Unit>2 Bed Unit	R-19 Wall1	n/a	n/a	558	0	n/a
Right Interior Surface 2	1 Bed Unit>2 Bed Unit	R-19 Wall1	n/a	n/a	558	0	n/a
Raised Floor 2	1 Bed Unit	Uninsulated Raised Slab F	n/a	n/a	1525	n/a	n/a
Front Wall 3	3 Bed Unit-2nd Floor	R-19 Wall	270	Front	283.5	33.3	90
Left Wall 3	3 Bed Unit-2nd Floor	R-19 Wall	0	Left	459	126.5	90
Rear Wall 3	3 Bed Unit-2nd Floor	R-19 Wall	90	Back	283.5	34	90
Right Wall 3	3 Bed Unit-2nd Floor	R-19 Wall	180	Right	220.5	20	90
Right Interior Surface 3	3 Bed Unit-2nd Floor>=1 Bed Unit	R-19 Wall1	n/a	n/a	238.5	0	n/a
Raised Floor 3	3 Bed Unit-2nd Floor	Uninsulated Raised Slab F	n/a	n/a	1032	n/a	n/a
Front Wall 4	2 Bed Unit	R-19 Wall	270	Front	432	199	90
Left Wall 4	2 Bed Unit	R-19 Wall	0	Left	27	0	90
Rear Wall 4	2 Bed Unit	R-19 Wall	90	Back	432	115	90
Right Wall 4	2 Bed Unit	R-19 Wall	180	Right	27	0	90
Front Wall 5	2 Bed Unit	R-19 Wall	270	Front	792	102	90
Left Wall 5	2 Bed Unit	R-19 Wall	0	Left	402.8	0	90
Rear Wall 5	2 Bed Unit	R-19 Wall	90	Back	792	45	90
Right Wall 5	2 Bed Unit	R-19 Wall	180	Right	402.8	0	90
Raised Floor 4	2 Bed Unit	Uninsulated Raised Slab F	n/a	n/a	1377	n/a	n/a
Front Wall 6	3 Bed Unit-3rd Floor	R-19 Wall	270	Front	558	75	90
Left Wall 6	3 Bed Unit-3rd Floor	R-19 Wall	0	Left	918	66	90

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 6 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

Rear Wall 6	3 Bed Unit-3rd Floor	R-19 Wall	90	Back	558	120	90
Right Wall 6	3 Bed Unit-3rd Floor	R-19 Wall	180	Right	918	81	90
Interior Floor	3 Bed Unit-3rd Floor>=3 Bed Unit-2nd Floor	R-19 Floor No Crawlspace	n/a	n/a	1002	n/a	n/a
Interior Floor 2	3 Bed Unit-3rd Floor>=4 Bed Unit	R-19 Floor No Crawlspace	n/a	n/a	1089	n/a	n/a

OPAQUE SURFACES – Cathedral Ceilings

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Type	Orientation	Area (ft²)	Skylight Area (ft2)	Roof Rise (x in 12)	Roof Pitch	Roof Tilt (deg)	Roof Reflectance	Roof Emittance	Framing Factor
Roof	2 Bed Unit	R-30 Roof Cathedral	Front	1583	0	4	0.33	18.43	0.1	0.85	0.1
Roof 2	3 Bed Unit-3rd Floor	R-30 Roof Cathedral	Front	2091	0	4	0.33	18.43	0.1	0.85	0.1

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 7 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10
Name	Type	Surface (Orientation-Azimuth)	Width (ft)	Height (ft)	Multiplier	Area (ft²)	U-factor	SHGC	Exterior Shading
Window	Window	Front Wall (Front-270)	----	----	1	86.7	0.30	0.23	Insect Screen (default)
Window 2	Window	Left Wall (Left-0)	----	----	1	20.0	0.30	0.23	Insect Screen (default)
Window 3	Window	Rear Wall (Back-90)	----	----	1	89.5	0.30	0.23	Insect Screen (default)
Window 4	Window	Right Wall (Right-180)	----	----	1	145.0	0.30	0.23	Insect Screen (default)
Window 5	Window	Front Wall 2 (Front-270)	----	----	1	173.9	0.30	0.23	Insect Screen (default)
Window 6	Window	Rear Wall 2 (Back-90)	----	----	1	99.0	0.30	0.23	Insect Screen (default)
Window 7	Window	Front Wall 3 (Front-270)	----	----	1	33.3	0.30	0.23	Insect Screen (default)
Window 8	Window	Left Wall 3 (Left-0)	----	----	1	126.5	0.30	0.23	Insect Screen (default)
Window 9	Window	Rear Wall 3 (Back-90)	----	----	1	34.0	0.30	0.23	Insect Screen (default)
Window 10	Window	Right Wall 3 (Right-180)	----	----	1	20.0	0.30	0.23	Insect Screen (default)
Window 11	Window	Front Wall 4 (Front-270)	----	----	1	199.0	0.30	0.23	Insect Screen (default)
Window 12	Window	Rear Wall 4 (Back-90)	----	----	1	115.0	0.30	0.23	Insect Screen (default)
Window 13	Window	Front Wall 5 (Front-270)	----	----	1	102.0	0.30	0.23	Insect Screen (default)
Window 14	Window	Rear Wall 5 (Back-90)	----	----	1	45.0	0.30	0.23	Insect Screen (default)
Window 15	Window	Front Wall 6 (Front-270)	----	----	1	75.0	0.30	0.23	Insect Screen (default)
Window 16	Window	Left Wall 6 (Left-0)	----	----	1	66.0	0.30	0.23	Insect Screen (default)
Window 17	Window	Rear Wall 6 (Back-90)	----	----	1	120.0	0.30	0.23	Insect Screen (default)
Window 18	Window	Right Wall 6 (Right-180)	----	----	1	81.0	0.30	0.23	Insect Screen (default)

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 8 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Winter Design U-factor	Assembly Layers
Uninsulated Raised Slab F	Exterior Floors	Concrete / ICF / Brick			0.285	• *Floor Surface: Carpeted* • *Mass Layer: 4 in. Concrete*
R-19 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O.C.	R 19 in 5-1/2 in. cavity (R-18)	0.074	• *Inside Finish: Gypsum Board* • *Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6* • *Exterior Finish: 3 Coat Stucco*
R-19 Wall1	Interior Walls	Wood Framed Wall	2x6 @ 16 in. O.C.	R 19 in 5-1/2 in. cavity (R-18)	0.069	• *Inside Finish: Gypsum Board* • *Cavity / Frame: R-19 in 5-1/2 in.* • *Other Side Finish: Gypsum Board*
R-30 Roof Cathedral	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O.C.	R 30	0.036	• *Inside Finish: Gypsum Board* • *Cavity / Frame: R-30 / 2x12* • *Roof Deck: Wood Siding/sheathing/decking* • *Roofing: Light Roof (Asphalt Shingle)*
R-19 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x6 @ 16 in. O.C.	R 19 in 5-1/2 in. cavity (R-18)	0.049	• *Floor Surface: Carpeted* • *Floor Deck: Wood Siding/sheathing/decking* • *Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6* • *Ceiling Below Finish: Gypsum Board*

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04
Quality Insulation Installation (QII)	Quality Installation of Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07
Name	System Type	Number of Systems in Building	Multi-Family Distribution Type	Water Heater	Number of Water Heaters/System	Solar Fraction (%)
DHW Sys 1	Standard	5	Multi-family: No loops or recirc pump	DHW Heater 1 (1)	1	0
DHW Sys 3	Standard	5	Multi-family: No loops or recirc pump	DHW Heater 3 (1)	1	0

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 9 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12
Name	Heater Element Type	Tank Type	Number of Units	Tank Volume (gal)	Uniform Energy Factor / Energy Factor / Efficiency	Input Rating / Pilot / Thermal Efficiency	Tank Insulation R-value (Ind/Ext)	Standby Loss / Recovery Eff	First Hour Rating / Flow Rate	NEEA Heat Pump Brand / Model	Tank Location or Ambient Condition
DHW Heater 1	Gas	Small Instantaneous	1	0	0.92 EF	199,900 Btu/hr	0	n/a	n/a	n/a	n/a
DHW Heater 3	Gas	Small Instantaneous	1	0	0.92 EF	199,900 Btu/hr	0	n/a	n/a	n/a	n/a

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06
SC Sys Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name
DDU-1 4 Bed Unit | Heat Pump System 1::2:3	Heat Pump Heating and Cooling System	Heat Pump System 1	Heat Pump System 1	None	None
DDU-2 1 Bed Unit 1/2 | Heat Pump System 2::2:3	Heat Pump Heating and Cooling System	Heat Pump System 2	Heat Pump System 2	None	None
DDU-2 1 Bed Unit 2/2 | Heat Pump System 2::2:3	Heat Pump Heating and Cooling System	Heat Pump System 2	Heat Pump System 2	None	None
DDU-3 1 Bed Unit | Heat Pump System 2::2:3	Heat Pump Heating and Cooling System	Heat Pump System 2	Heat Pump System 2	None	None
DDU-4 3 Bed Unit | Heat Pump System 3::2:3	Heat Pump Heating and Cooling System	Heat Pump System 3	Heat Pump System 3	None	None
DDU-5 2 Bed Unit | Heat Pump System 4::2:3	Heat Pump Heating and Cooling System	Heat Pump System 4	Heat Pump System 4	None	None
DDU-6 2 Bed Unit | Heat Pump System 4::2:3	Heat Pump Heating and Cooling System	Heat Pump System 4	Heat Pump System 4	None	None
DDU-7 2 Bed Unit | Heat Pump System 4::2:3	Heat Pump Heating and Cooling System	Heat Pump System 4	Heat Pump System 4	None	None
DDU-8 3 Bed Unit | Heat Pump System 5::2:3	Heat Pump Heating and Cooling System	Heat Pump System 5	Heat Pump System 5	None	None
DDU-9 3 Bed Unit | Heat Pump System 5::2:3	Heat Pump Heating and Cooling System	Heat Pump System 5	Heat Pump System 5	None	None

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 10 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10
Name	System Type	Heating HSPF/COP	Heating Cap 47	Heating Cap 17	Cooling SEER	Cooling EER	Zonally Controlled	Multispeed Compressor	HERS Verification
Heat Pump System 1	DuctlessMiniSplitHeatPump	9.8	45200	30500	18.4	8.5	No	No	Heat Pump System 1-hers-cool
Heat Pump System 2	DuctlessMiniSplitHeatPump	8.9	22000	14500	18	12	No	No	Heat Pump System 2-hers-cool
Heat Pump System 3	DuctlessMiniSplitHeatPump	9.3	36000	24600	18	9.4	No	No	Heat Pump System 3-hers-cool
Heat Pump System 4	DuctlessMiniSplitHeatPump	10.5	28600	18800	17.5	9.1	No	No	Heat Pump System 4-hers-cool
Heat Pump System 5	DuctlessMiniSplitHeatPump	9.3	36000	24600	18	9.4	No	No	Heat Pump System 5-hers-cool

HVAC COOLING - HERS VERIFICATION

01	02	03	04	05	06
Name	Verified Airflow	Airflow Target (CFM)	Verified EER	Verified SEER	Verified Refrigerant Charge
Heat Pump System 1-hers-cool	Not Required	n/a	Not Required	Not Required	Required
Heat Pump System 2-hers-cool	Not Required	n/a	Not Required	Not Required	Required
Heat Pump System 3-hers-cool	Not Required	n/a	Not Required	Not Required	Required
Heat Pump System 4-hers-cool	Not Required	n/a	Not Required	Not Required	Required
Heat Pump System 5-hers-cool	Not Required	n/a	Not Required	Not Required	Required

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01

Project Name: The Pearl **Calculation Date/Time:** 14:01, Wed, Feb 14, 2018 **Page 11 of 12**

Calculation Description: Title 24 Analysis **Input File Name:** Hitzke Development The Pearl Residential.ribd16x

IAQ (Indoor Air Quality) FANS

01	02	03	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness(%)	HERS Verification
DDU-1 4 Bed Unit 1/1	74	0.25	Default	0	Required
DDU-2 1 Bed Unit 1/2	30	0.25	Default	0	Required
DDU-3 1 Bed Unit 1/1	30	0.25	Default	0	Required
DDU-4 3 Bed Unit 1/1	61	0.25	Default	0	Required
DDU-5 2 Bed Unit 1/1	50	0.25	Default	0	Required
DDU-6 2 Bed Unit 1/1	53	0.25	Default	0	Required
DDU-7 2 Bed Unit 1/1	53	0.25	Default	0	Required
DDU-8 3 Bed Unit 1/1	60	0.25	Default	0	Required
DDU-9 3 Bed Unit 1/1	63	0.25	Default	0	Required

Registration Number: 218-P010143830A-000-000-0000000-0000 Registration Date/Time: 2018-05-17 14:51:15 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-09012017-934 SP1 Report Generated at: 2018-02-14 14:02:15

NOTE: ENERGY CALCULATIONS REPRESENT MINIMUM REQUIRED EFFICIENCIES.
REFER TO MECHANICAL DOCUMENTS FOR ACTUAL SYSTEM EFFICIENCIES.

CalCERTS, Inc. HERS PROVIDER

ENERGY INSPECTORS®
950 Boardwalk, Ste 301
San Marcos, CA 92078
760-761-3695 (T)
760-761-3650 (F)

REVISIONS

NO.	DATE	DESCRIPTION	BY

DEVELOPER
HITZKE DEVELOPMENT CORPORATION
251 AUTUMN DRIVE
SUITE 100
SAN MARCOS, CA 92169

IT IS THE CLIENTS RESPONSIBILITY PRIOR TO OR DURING CONSTRUCTION TO NOTIFY IN WRITING OF ANY PERCEIVED ERRORS OR OMISSIONS IN THE PLANS AND SPECIFICATIONS OF WHICH A CONTRACTOR THOROUGHLY KNOWLEDGEABLE WITH BUILDING CODES AND METHODS OF CONSTRUCTION SHOULD BE REASONABLY BE AWARE. WRITTEN INSTRUCTIONS ADDRESSING SUCH PERCEIVED ERRORS OR OMISSIONS SHALL BE RECEIVED PRIOR TO THE CLIENT OR CLIENT'S SUBCONTRACTORS PROCEED WITH THE WORK. THE CLIENT WILL BE RESPONSIBLE FOR ANY DEFECTS IN CONSTRUCTION IF THESE PROCEDURES ARE NOT FOLLOWED.

THESE DRAWINGS AND THE INFORMATION CONTAINED ON THEM ARE THE SOLE PROPERTY OF ENERGY INSPECTORS. ANY USE OF THESE DOCUMENTS OR THE INFORMATION CONTAINED HEREIN, CAN ONLY BE USED WITH WRITTEN PERMISSION FROM ENERGY INSPECTORS. ENERGY INSPECTORS ASSUMES NO LIABILITY FOR THESE DRAWINGS OR INFORMATION CONTAINED HEREIN.

THE PEARL
S. SIERRA AVENUE
SOLANA BEACH, CA

PLAN
RESIDENTIAL

DRAWN

STAMP

CHECKED

DATE 06.04.18

SCALE

ARCHITECUTRALS RECEIVED

STRUCTURALS RECEIVED

SHEET
T24-1

CONTACT INFORMATION
PROJECT CONTACT:
EMAIL:
PRINCIPAL:
PROJECT DESIGNER:
PROJECT NUMBER:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Sean Allen	Documentation Author Signature: Sean Allen
Company: Energy Inspectors	Signature Date: 2018-05-17 11:31:45
Address: 2570 South Miller Lane	CEA/HERS Certification Identification (If applicable):
City/State/Zip: Las Vegas, NV 89117	Phone: 702-365-8080
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I certify the following under penalty of perjury, under the laws of the State of California: 1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance. 2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 3. 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.	
Responsible Designer Name: Mike VanBuskirk	Responsible Designer Signature: Mike VanBuskirk
Company: Hitzke Development Corporation	Date Signed: 2018-05-17 14:51:15
Address: 251 Autumn Drive, Suite 100	License: N/A
City/State/Zip: San Marcos, CA 92069	Phone: 760-798-9809

CalCERTS Inc. HERS PROVIDER

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Easy to Verify at CalCERTS.com

Registration Number: 218-P01014383OA-000-000-0000000-0000
CA Building Energy Efficiency Standards - 2016 Residential Compliance

Registration Date/Time: 2018-05-17 14:51:15
Report Version - CF1R-09012017-934 SP1

HERS Provider: CalCERTS Inc.
Report Generated at: 2018-02-14 14:02:15

NOTE: ENERGY CALCULATIONS REPRESENT MINIMUM REQUIRED EFFICIENCIES.
REFER TO MECHANICAL DOCUMENTS FOR ACTUAL SYSTEM EFFICIENCIES.

THESE DRAWINGS AND THE INFORMATION CONTAINED ON THEM, ARE THE SOLE PROPERTY OF ENERGY INSPECTORS. ANY USE OF THESE DOCUMENTS OR THE INFORMATION CONTAINED HEREIN, CAN ONLY BE USED WITH WRITTEN PERMISSION FROM ENERGY INSPECTORS. ENERGY INSPECTORS ASSUMES NO LIABILITY FOR THESE DRAWINGS OR INFORMATION CONTAINED HEREIN.

ENERGY INSPECTORS®
950 Boardwalk, Ste 301
San Marcos, CA 92078
760-761-3695 (T)
760-761-3650 (F)

REVISIONS

NO.	DATE	DESCRIPTION	BY

DEVELOPER
HITZKE DEVELOPMENT CORPORATION
251 AUTUMN DRIVE
SUITE 100
SAN MARCOS, CA 92169

It is the clients responsibility prior to or during construction to notify in writing of any perceived errors or omissions in the plans and specifications of which a contractor thoroughly knowledgeable with building codes and methods of construction should be reasonably be aware. Written instructions addressing such perceived errors or omissions shall be received prior to the client or client's subcontractors proceed with the work. The client will be responsible for any defects in construction if these procedures are not followed.

THE PEARL
S. SIERRA AVENUE
SOLANA BEACH, CA

PLAN
RESIDENTIAL

STAMP

DRAWN
CHECKED
DATE 06.04.18
SCALE
ARCHITECUTRALS RECEIVED
STRUCTURALS RECEIVED
SHEET

T24-2

CONTACT INFORMATION
PROJECT CONTACT:
EMAIL:
PRINCIPAL:
PROJECT DESIGNER:
PROJECT NUMBER:

Division 4.1 – PLANNING AND DESIGN

4.101.1 Scope.
The provisions of this division outline plan- ning, design and development methods that include environ- mentally responsible site selection, build- ing design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

4.102.1 Definitions
The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.
FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.
WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a down flow slope. Wattles are also used for perimeter and inlet controls.

SECTION 4.106 SITE DEVELOPMENT

4.106.1 General.
Preservation and use of available natural resources shall be accomplished through evaluation and care- ful planning to minimize negative effects on the site and adja- cent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

4.106.2 Storm water drainage and retention during construction.
Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.
1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage sys- tem, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water man- agement ordinance.

4.106.3 Grading and paving.
Construction plans shall indi- cate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:
1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.
Exception: Additions and alterations not altering the drainage path.

4.106.4. Electric vehicle (EV) charging for new construction.
New construction shall comply with Sections 4.106.4.1 and 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.
Exceptions: On a case-by-case basis, where the local enforcing agency has determined EV charging and infra- structure are not feasible based upon one or more of the fol- lowing conditions:
1. Where there is no commercial power supply.
2. Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per dwelling unit.

4.106.4.1 New one- and two-family dwellings and town- houses with attached private garages.
For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The race- way shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Race- ways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere mini- mum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.1.1 Identification.
The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPA- BLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings.
Where 17 or more multifamily dwelling units are constructed on a building site, 3 percent of the total number of parking spaces pro- vided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging stations (EVCS) capable of supporting future EVSE and shall be identified on construction documents. Calculations for the number of EVCS shall be rounded up to the nearest whole number.
Note: Construction documents are intended to demon- strate the project's capability and capacity for facilitating future EV charging. There is no require- ment for EVCS to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 Electric vehicle charging station (EVCS) locations.
Construction documents shall indicate the location of proposed EVCS. At least one EVCS shall be located in common use areas and available for use by all residents.
When EV chargers are installed, EVCS required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:
1. The EVCS shall be located adjacent to an accessi- ble parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.
2. The EVCS shall be located on an accessible route, as defined in the California Building Code, Chap- ter 2, to the building.

4.106.4.2.2 Electric vehicle charging station (EVCS) dimensions and slope. The EVCS shall be designed to comply with the following:
1. The minimum length of each EVCS shall be 18 feet (5486 mm).
2. The minimum width of each EVCS shall be 9 feet (2743 mm).
3. One in every 25 EVCS, but not less than one EVCS, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the mini- mum width of the EVCS is 12 feet (3658 mm).
a. Surface slope for this EVCS and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.3 Single EVCS required.
Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall termi- nate into a listed cabinet, box or enclosure in close prox- imity to the proposed location of the EVCS. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch cir- cuit overcurrent protective device.

4.106.4.2.4 Multiple EVCS required.
Construction documents shall indicate the raceway termination point and proposed location of future EVCS and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical sys- tem, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EVCS at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Raceways and related compo- nents that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be in- stalled at the time of original construction.

4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent

Division 4.2 – ENERGY EFFICIENCY

4.201.1 Scope
For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

Division 4.3 – WATER EFFICIENCY AND CONSERVATION

4.301.1 Scope
The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

4.302.1 Definitions
The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

SECTION 4.303 INDOOR WATER USE

4.303.1 Water conserving plumbing fixtures and fittings.
Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
4.301.1 Water Closets.
The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the perfor mance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.
Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushed and one full flush.

4.303.1.2 Urinals.
The effective flush volume of urinals shall not exceed 0.5 gallons per flush.

4.303.1.3. Showerheads.
4.303.1.3.1 Single Showerhead.
Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple Showerheads Serving One Shower
When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.
Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.
4.303.1.4.1 Residential lavatory faucets.
The maximum flow rate of residential lavatory faucets shall not exceed 1.5 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi

4.303.1.4.2 Lavatory faucets in common and public use areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering faucets. Metering faucets when installed in residential buildings shall not deliver more tha 0.25 gallons per cycle.

4.303.1.4.4 Kitchen Faucets
The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.
Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.2 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1401.1 of the California Plumbing Code.

STANDARDS FOR PLUMBING FIXTURES AND FIXTURE FITTINGS

REQUIRED STANDARDS	
Water closets (toilets)—flushometer valve-type single flush, maximum flush volume	ASME A 112.19.2/CSA B45.1 – 1.28 gal (4.8 L)
Water closets (toilets)—flushometer valve-type dual flush, maximum flush volume	ASME A 112.19.14 and U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification – 1.28 gal (4.8 L).
Water closets (toilets)—tank type	U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification
Urinals, maximum flush volume	ASME A 112.19.2/CSA B45.1 – 0.5 gal (1.9 L)
Urinals, nonwater urinals	ASME A 112.19.19 (vitreous china) ANSI Z124.9-2004 or IAPMO Z124.9 (plas- tic)
Public lavatory faucets: Maximum flow rate – 0.5 gpm (1.9 L/min)	ASME A 112.18.1/CSA B125.1
Public metering self-closing faucets: Maximum water use – 0.25 gal (1.0 L) per metering cycle	ASME A 112.18.1/CSA B125.1
Residential bathroom lavatory sink faucets: Maximum flow rate – 1.5 gpm (5.7 L/ min)	ASME A 112.18.1/CSA B125.1

SECTION 4.304 OUTDOOR WATER USE
4.304.1 Irrigation Controllers
Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:
1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.
Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association.

Division 4.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.401.1 Scope
The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture; construction waste diversion; employment of techniques to reduce pollution through recycling of materials; and building commissioning or test- ing, adjusting and balancing.

4.402.1 Definitions
The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.
SECTION 4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 Rodent proofing.
Exception: Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

SECTION 4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING
4.408.1 Construction Waste Management
Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition debris, or meet a local construction and demo- lition waste management ordinance, whichever is more stringent.
Exceptions:
1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 Construction Waste Management Plan

Where a local jurisdiction does not have a construction and demolition waste management ordinance, a construction waste management plan shall be sub- mitted for approval to the enforcing agency that:
1. Identifies the materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specifies if materials will be sorted on-site or mixed for transportation to a diversion facility.
3. Identifies the diversion facility where the material collected will be taken.
4. Identifies construction methods employed to reduce the amount of waste generated.
5. Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 Waste Management company.
Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complie with Secion 4.408.1.
Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.4 Waste stream reduction alternative
Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed four (4) lbs./sq.ft. of the building area shall meet the minimum 50 percent construction waste reduction requirement in Section 4.408.1

4.408.4.1 Waste Stream reduction alternative. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do no exceed two (2) pounds per square foot of the buildings area, shall meet the minimum 50-percent construction waste reduction requirement in Section 4.409.1

4.408.5 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4
Notes:
1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mized construction and demolition debris (C&D) processors can be located at the California Department of Resources Recycling and Recovery (CalRe- cycle).

SECTION 4.410 BUILDING MAINTENANCE AND OPERATION
4.410.1 Operation & Maintenance Manual
At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which include all the fol- lowing shall be placed in the building:
1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operations and maintenance instructions for the following:
a. Equipment and appliances, including water-saving devices and systems, HVAC systems, water-heating systems and other major appliances and equipment.
b. Roof and yard drainage, including gutters and downspouts.
c. Space conditioning systems, including condensers and air filters.
d. Landscape irrigation systems.
e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60% and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routing maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspection verifications required by the enforcing agency or this code.

Division 4.5 – ENVIRONMENTAL QUALITY
4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

4.502.1 Definitions
The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.
AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.
COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. Composite wood products do not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, and glued laminated timber as specified in "Structural Glued Laminated Timber" (ANSI A190.1-2002) or prefabricated wood I-joists.
MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "base reac- tive organic gas (ROG) mixture" per weight of compound added, expressed to hundredths of a gram (g O3/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.
MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.
PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIRs calculated according to equations found in CCR, Title 17, Section 94521(a).
REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the tropo- sphere.
VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other ele- ments. See CCR Title 17, Section 94508(a).
Note: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 4.503 FIREPLACES
4.503.1 General (Direct Vent Gas Fireplace)
Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA Phase II emission limits where applicable. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

SECTION 4.504 POLLUTANT CONTROL
4.504.1 Covering of Duct Openings and Protection of Mechanical Equipment during Construction.
At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling 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 or debris which may collect in the system.

4.504.2 Finish Material Pollutant Control
Finish materials shall comply with this section.

4.504.2 Finish Material Pollutant Control
Finish materials shall comply with this section.
4.504.2.1 Adhesives, Sealants and Caulks
Adhesives, sealants and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:
1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as ap- plicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.

TABLE 4.504.1
ADHESIVE VOC LIMIT[1, 2]
Less Water and Less Exempt Compounds in Grams per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168.

TABLE 4.504.2
SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural Nonporous Porous	250 775
Modified bituminous	500
Marine deck	760
Other	750

TABLE 4.504.3
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2, 3]
Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	
Flat coatings	50
Nonflat coatings	100
Nonflat-high gloss coatings	150
SPECIALTY COATINGS	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings[1]	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs Clear Opaque	730 550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subse- quent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

4.504.2.2 Paints and Coatings
Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings catego- ries listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsec- tions 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.
4.504.2.3 Aerosol Paints and Coatings
Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibi- tions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.
4.504.2.4 Verification
Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:
1. Manufacturer's product specification
2. Field verification of on-site product containers

4.504.3 Carpet Systems
All carpet installed in the building interior shall meet the testing and product requirements of one of the following:
1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350).
3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Indoor Advantage™ Gold.

4.504.3.1 Carpet Cushion
All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.

4.504.3.2 Carpet Adhesive
All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 Resilient Flooring Systems
Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall comply with the VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) Low-emitting Materials List or certified under the Resilient Floor Covering Institute (RFCI) FloorScore program.

4.504.5 Composite Wood Products
Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in CARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5.

4.504.5.1 Documentation
Verification of compliance with this section shall be provided as required by the enforcing agency. Documentation shall include at least one of the following:
1. Product certifications and specifications
2. Chain of custody certifications
3. Other methods acceptable to the enforcing agency

TABLE 4.504.5
FORMALDEHYDE LIMITS
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard2	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accor- dance with ASTM E 1333-96(2002). For additional information, see California Code of Regulations, Title 17, Sections 93120 through 93120.12.
2. Thin medium density fiberboard has a maximum thickness of 8 millimeters

SECTION 4.505 INTERIOR MOISTURE CONTROL

4.505.1 General
Buildings shall meet or exceed the provisions of the California Building Standards Code.

4.505.2 Concrete Slab Foundations
Concrete slab foundations required to have a vapor retarder by California Building Code, CCR, Title 24, Part 2, Chapter 19, shall also comply with this section.

4.505.2.1 Capillary Break
A capillary break shall be installed in compliance with at least one of the following:
1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7 mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed California Architect or Engineer.

4.505.3 Moisture Content of Building Materials
Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 % moisture content.
1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.
2. Moisture readings shall be taken at a point 2 feet (610mm) to 4 feet (1219 mm) from the grade stamped end of each piece to be verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.
Insulation products which are visibly wet or have high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

SECTION 4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom Exhaust Fans
Mechanical exhaust fans which exhaust directly from bathrooms shall comply with the following:
1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidistat which shall be readily accessible.
Humidistat controls shall be capable of adjustment between relative humidity ranges of 50 to 80 percent.
Note: For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.

SECTION 4.507 ENVIRONMENTAL COMFORT

4.507.1 Openings
Whole house exhaust fans shall have insulated louvers or covers which close when the fan is off. Covers or louvers shall have a minimum insula- tion value of R-4.2.

4.507.2 Heating & Air-Conditioning System Design
Heating and air-conditioning systems shall be sized, designed and have their equipment selected using the following methods:
1. The heat loss and heat gain is established according to ACCA Manual J, ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ACCA 29-D Manual D, ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ACCA 36-S Manual S or other equivalent design software or methods.
Exception: Use of alternate design temperatures necessary to ensure the systems function is acceptable.

CH. 7 INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS

702.1 Installer Training
HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervi- sion and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:
1. State certified apprenticeship programs
2. Public utility training programs
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations
4. Programs sponsored by manufacturing organizations
5. Other programs acceptable to the enforcing agency

702.2 Special Inspection
When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspec- tors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifi- cations acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:
1. Certification by a national or regional green building program or standard publisher
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors
3. Successful completion of a third party apprentice training program in the appropriate trade
4. Other programs acceptable to the enforcing agency
Notes:
1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).
[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate com- petence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certifica- tion shall be closely related to the primary job function, as determined by the local agency.
Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
[DSA-AA] The enforcing agency may require special inspection to verify compliance with this code or other laws that are enforced by the agency. The special inspector shall be qualified person who shall demonstrate competence, to the satisfaction of the enforcing agency, for inspec- tion of the particular type of construction or operation requiring special inspection.

703.1 Verifications
Verification of compliance with this code may include construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.

ENERGY INSPECTORS®
950 Boardwalk, Suite 301
San Marcos, CA 92078
T: (760) 761-3695
F: (760) 761-3650

California Green Building Code
CalGreen Residential Mandatory Measures
(Updated July 1st, 2015)

Date:
06/06/2016

Builder:
Hitzke Development

Community:
The Pearl

Plan Names:
For All Plan Types

CG-1

CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES

Division 5.1 – PLANNING AND DESIGN

SECTION 5.101 GENERAL

5.101.1 Scope. The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS

5.102.1 Definitions. The following terms are defined in Chapter 2.

CUTOFF LUMINAIRES.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV).

TENANT-OCCUPANTS.

VANPOOL VEHICLE.

ZEV.

SECTION 5.103 SITE SELECTION (Reserved)

SECTION 5.104 SITE PRESERVATION (Reserved)

SECTION 5.105 DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES (Reserved)

SECTION 5.106 SITE DEVELOPMENT

5.106.1 Storm water pollution prevention. Newly constructed projects and additions which disturb less than one acre of land shall prevent the pollution of stormwater runoff from the construction activities through one or more of the following measures:

5.106.1.1 Local ordinance. Comply with a lawfully enacted stormwater management and/or erosion control ordinance.

5.106.1.2 Best management practices (BMP). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP.

1. Soil loss BMP that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Scheduling construction activity.

   b. Preservation of natural features, vegetation and soil.
   c. Drainage swales or lined ditches to control stormwater flow.
   d. Mulching or hydroseeding to stabilize disturbed soils.
   e. Erosion control to protect slopes.
   f. Protection of storm drain inlets (gravel bags or catch basin inserts).
   g. Perimeter sediment control (perimeter silt fence, fiber rolls).
   h. Sediment trap or sediment basin to retain sediment on site.
   i. Stabilized construction exits.
   j. Wind erosion control.
   k. Other soil loss BMP acceptable to the enforcing agency.
2. Good housekeeping BMP to manage construction equipment, materials and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Material handling and waste management.
   b. Building materials stockpile management.
   c. Management of washout areas (concrete, paints, stucco, etc.).
   d. Control of vehicle/equipment fueling to contractor's staging area.
   e. Vehicle and equipment cleaning performed off site.
   f. Spill prevention and control.
   g. Other housekeeping BMP acceptable to the enforcing agency.

5.106.4 Bicycle parking. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2.

5.106.4.1 Bicycle parking. [BSC] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 Short-term bicycle parking. [BSC] If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.

Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. For new buildings with over 10 tenant-occupants or for additions or alterations that add 10 or more tenant vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicular parking spaces being added, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2.

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.

5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

5.106.5.2 Designated parking. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

TABLE 5.106.5.2

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0–9	0
10–25	1
26–50	3
51–75	6
76–100	8
101–150	11
151–200	16
201 and over	At least 8 percent of total

5.106.5.2.1 Parking stall marking. Paint, in the paint used for stall striping, the following characters such that

the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle:

CLEAN AIR/
VANPOOL/EV

Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.

5.106.5.3 Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the *California Building Code*, the *California Electrical Code* and as follows:

5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the *California Electrical Code.* Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.
3. The raceway shall not be less than trade size 1."
4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure or equivalent.
5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.

5.106.5.3.2 Multiple charging space requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the *California Electrical Code.* Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent.
3. Plan design shall be based upon 40-ampere minimum branch circuits.
4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage.
5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

5.106.5.3.3 EV charging space calculation. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.
2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

TABLE 5.106.5.3.3

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV CHARGING SPACES
0-50	0
51-75	1
76-100	2
101-200	3
201 and over	3% [1]

1. Calculation for spaces shall be rounded up to the nearest whole number.

5.106.5.3.4 [N] Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

5.106.5.3.5 [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking.

Notes:

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/traffops/policy/13-01.pdf.
2. See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.
3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which pro-

vides helpful information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.

5.106.8 Light pollution reduction. [N] Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the *California Energy Code* for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and
2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and
3. Allowable BUG ratings not exceeding those shown in Table 5.106.8, or

Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

1. Luminaires that qualify as exceptions in Section 140.7 of the *California Energy Code*.
2. Emergency lighting.

Note: [N] See also *California Building Code*, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.

TABLE 5.106.8 [N]
MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS[1,2]

ALLOWABLE RATING	LIGHTING ZONE 1	LIGHTING ZONE 2	LIGHTING ZONE 3	LIGHTING ZONE 4
Maximum Allowable Backlight Rating[3]				
Luminaire greater than 2 mounting heights (MH) from property line	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1 – 2 MH from property line	B2	B3	B4	B4
Luminaire back hemisphere is 0.5 – 1 MH from property line	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	B0	B0	B1	B2
Maximum Allowable Uplight Rating				
For area lighting[4]	U0	U0	U0	U0
For all other outdoor lighting, including decorative luminaires	U1	U2	U3	U4
Maximum Allowable Glare Rating[5]				
Luminaire greater than 2 MH from property line	G1	G2	G3	G4
Luminaire front hemisphere is 1 – 2 MH from property line	G0	G1	G1	G2
Luminaire front hemisphere is 0.5 – 1 MH from property line	G0	G0	G1	G1
Luminaire back hemisphere is less than 0.5 MH from property line	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the *California Energy Code* and Chapter 10 of the *California Administrative Code.*
2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.
3. If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced Backlight rating shall be met.
4. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas shall meet *U*-value limits for "all other outdoor lighting."
5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.

Division 5.3 – WATER EFFICIENCY AND CONSERVATION

SECTION 5.301 GENERAL

5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS

5.302.1 Definitions. The following terms are defined in Chapter 2.

GRAYWATER.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO).

POTABLE WATER.

RECYCLED WATER.

SUBMETER.WATER

BUDGET.

SECTION 5.303 INDOOR WATER USE

5.303.1 Meters. Separate submeters or metering devices shall be installed for the uses described in Sections 5303.1.1 and 5303.1.2.

5.303.1.1 New buildings or additions in excess of 50,000 square feet. Separate submeters shall be installed as follows:

1. For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
   a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
   b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
   c. Steam and hot-water boilers with energy input more than 500,000 Btu/h (147 kW).

5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

5.303.2 Reserved.

5.303.3 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

5.303.3.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.3.2 Urinals. The effective flush volume of urinals shall not exceed 0.5 gallons per flush.

5.303.3.3 Showerheads.

5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

5.303.3.4 Faucets and fountains.

5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi].

5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.

5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 [rim space (inches) at 60 psi].

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

5.303.4 Areas of addition or alteration. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 shall apply to new fixtures in additions or areas of alteration to the building.

5.303.6 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1401.1 of the *California Plumbing Code* and in Chapter 6 of this code.

SECTION 5.304 OUTDOOR WATER USE

5.304.1 Water budget. A water budget shall be developed for landscape irrigation use that installed in conjunction with a new building or an addition or alteration conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Model Water Efficient Landscape Ordinance where no local ordinance is applicable.

Note: Prescriptive measures to assist in compliance with the water budget are listed in Sections 492.5 through 492.8, 492.10 and 492.11 of the ordinance, which may be found at: http://www.water.ca.gov/wateruseefficiency/docs/WaterOrdSec492.cfm.

5.304.2 Outdoor potable water use. For new water service or for addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet (the level at which *Water Code* §535 applies), separate submeters or metering devices shall be installed for outdoor potable water use.

5.304.3 Irrigation design. In new nonresidential construction or building addition or alteration with at least 1,000 but not more than 2,500 square feet of cumulative landscaped area (the level at which the MWELO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.

5.304.3.1 Irrigation controllers. Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the con-

ENERGY INSPECTORS®
950 Boardwalk, Suite 301
San Marcos, CA 92078
T: (760) 761-3695
F: (760) 761-3650

California Green Building Code
CalGreen Non-Residential
Mandatory Measures
(Updated July 1st, 2015)

Date:
06/06/2016

Builder:
Hitzke Development

Community:
The Pearl

Plan Names:
For All Plan Types

CG-2

troller(s). Soil moisture-based controllers are not required to have rain sensor input.

Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association.

SECTION 5.305
WATER REUSE SYSTEMS
(Reserved)

Division 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.401
GENERAL

5.401.1 Scope. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

SECTION 5.402
Definitions

5.402.1 Definitions. The following terms are defined in Chapter 2.

ADJUST.

BALANCE.

BUILDING COMMISSIONING.

TEST.

SECTION 5.403
FOUNDATION SYSTEMS
(Reserved)

SECTION 5.404
EFFICIENT FRAMING TECHNIQUES
(Reserved)

SECTION 5.405
MATERIAL SOURCES
(Reserved)

SECTION 5.406
ENHANCED DURABILITY AND REDUCED MAINTENANCE
(Reserved)

SECTION 5.407
WATER RESISTANCE AND MOISTURE MANAGEMENT

5.407.1 Weather protection. Provide a weather-resistant exterior wall and foundation envelope as required by *California Building Code* Section 1403.2 (Weather Protection) and *California Energy Code* Section 150, (Mandatory Features and Devices), manufacturer's installation instructions or local ordinance, whichever is more stringent.

5.407.2 Moisture control. Employ moisture control measures by the following methods.

5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.

5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:

5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:

1. An installed awning at least 4 feet in depth.
2. The door is protected by a roof overhang at least 4 feet in depth.
3. The door is recessed at least 4 feet.
4. Other methods which provide equivalent protection.

5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.

SECTION 5.408
CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that

1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction and demolition waste material collected will be taken.
4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

5.408.1.2 Waste management company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 50 percent minimum requirement as approved by the enforcing agency.

5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1 through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at http://www.bsc.ca.gov/Home/CALGreen.aspx may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris (C&D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.3 Excavated soil and land clearing debris. [BSC] 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

Exception: Reuse, either on-or off-site, of vegetation or soil contaminated by disease or pest infestation.

Notes:

1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material. (www.cdfa.ca.gov/exec/county/county_contacts.html)

2. For a map of known pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdfa.ca.gov)

SECTION 5.409
LIFE CYCLE ASSESSMENT
(Reserved)

SECTION 5.410
BUILDING MAINTENANCE AND OPERATION

5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

5.410.1.1 Additions. [A] All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30 percent or more in floor area, shall provide recycling areas on site.

Exception: Additions within a tenant space resulting in less than a 30-percent increase in the tenant space floor area.

5.410.1.2 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code.* Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

5.410.2 Commissioning. [N] For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. Commissioning requirements shall include:

1. Owner's or owner representative's project requirements.
2. Basis of design.
3. Commissioning measures shown in the construction documents.
4. Commissioning plan.
5. Functional performance testing.
6. Documentation and training.
7. Commissioning report.

Exceptions:

1. Unconditioned warehouses of any size.
2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses.
3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1.
4. Commissioning requirements for energy systems covered by the *California Energy Code.*
5. Open parking garages of any size, or open parking garage areas, of any size, within a structure.

Note: For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and or air conditioning.

All building operating systems covered by Title 24, Part 6, as well as process equipment and controls, and renewable energy systems shall be included in the scope of the commissioning requirements.

Informational Notes:

1. IAS AC 476 is an accreditation criteria for organizations providing training and/or certification of commissioning personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. AC 476 does not certify individuals to conduct functional performance tests or to adjust and balance systems.
2. Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the *California Energy Code.*

5.410.2.1 Owner's or Owner representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:

1. Environmental and sustainability goals.
2. Energy efficiency goals [Refer to 2013 *California Energy Code*, Section 120.8(b)].
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after hours operation.
5. Equipment and systems expectations.
6. Building occupant and operation and maintenance (O&M) personnel expectations.

5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:

1. Heating, ventilation, air conditioning [HVAC] systems and controls. (Refer to 2013 *California Energy Code*, Section 120.8(c)].
2. Indoor lighting system and controls [Refer to 2013 *California Energy Code* Section 120.8(c)].
3. Water heating system [Refer to 2013 *California Energy Code* Section 120.8(c)].
4. Renewable energy systems.
5. Landscape irrigation systems.
6. Water reuse systems.

5.410.2.3 Commissioning plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:

1. General project information.
2. Commissioning goals.
3. Systems to be commissioned. Plans to test systems and components shall include:
   a. An explanation of the original design intent.
   b. Equipment and systems to be tested, including the extent of tests.
   c. Functions to be tested.
   d. Conditions under which the test shall be performed.
   e. Measurable criteria for acceptable performance.
4. Commissioning team information.
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

5.410.2.4 Functional performance testing. [N] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

5.410.2.5 Documentation and training. [N] A systems manual and systems operations training are required, including Occupational Safety and Health Act (OSHA) requirements in *California Code of Regulations* (CCR), Title 8, Section 5142, and other related regulations.

5.410.2.5.1 Systems manual. [N] Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:

1. Site information, including facility description, history and current requirements.
2. Site contact information.
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
4. Major systems.
5. Site equipment inventory and maintenance notes.
6. A copy of verifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable.

5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following:

1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces).
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the systems manual.
4. Review of the record drawings on the system/equipment.

5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

5.410.4 Testing and adjusting. Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

5.410.4.1 (Reserved)

5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project:

1. HVAC systems and controls.
2. Indoor and outdoor lighting and controls.
3. Water heating systems.
4. Renewable energy systems.
5. Landscape irrigation systems.
6. Water reuse systems.

5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC balancing. 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 National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the enforcing agency.

5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

5.410.4.5 Operation and maintenance (O & M) manual. 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, Section 5142, and other related regulations.

5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.

Division 5.5 – ENVIRONMENTAL QUALITY

SECTION 5.501
GENERAL

5.501.1 Scope. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502
DEFINITIONS

5.502.1 Definitions. The following terms are defined in Chapter 2.

ARTERIAL HIGHWAY.

A-WEIGHTED SOUND LEVEL (dBA).

1 BTU/HOUR.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL).

COMPOSITE WOOD PRODUCTS.

ENERGY INSPECTORS®
950 Boardwalk, Suite 301
San Marcos, CA 92078
T: (760) 761-3695
F: (760) 761-3650

California Green Building Code
CalGreen Non-Residential
Mandatory Measures
(Updated July 1st, 2015)

Date:
06/06/2016

Builder:
Hitzke Development

Community:
The Pearl

Plan Names:
For All Plan Types

CG-3

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn).

DECIBEL (dB).

ENERGY EQUIVALENT (NOISE) LEVEL (L_{eq}).

EXPRESSWAY.

FREEWAY.

GLOBAL WARMING POTENTIAL (GWP).

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE).

HIGH-GWP REFRIGERANT.

LONG RADIUS ELBOW.

LOW-GWP REFRIGERANT.

MERV.

MAXIMUM INCREMENTAL REACTIVITY (MIR).

PRODUCT-WEIGHTED MIR (PWMIR).

PSIG.

REACTIVE ORGANIC COMPOUND (ROC).

SCHRADER ACCESS VALVES.

SHORT RADIUS ELBOW.

SUPERMARKET.

VOC.

SECTION 5.503
FIREPLACES

5.503.1 General. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the *California Energy Code*, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with U.S. EPA Phase II emission limits where applicable.

SECTION 5.504
POLLUTANT CONTROL

5.504.1.3 Temporary ventilation. 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, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30 percent based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. 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, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.

TABLE 5.504.4.1
ADHESIVE VOC LIMIT[1,2]
Less Water and Less Exempt Compounds in Grams Per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesive not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168, http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF.

5.504.4.1 Adhesives, sealants and caulks. Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

TABLE 5.504.4.2
SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural Nonporous Porous	 250 775
Modified bituminous	500
Marine deck	760
Other	750

Note: For additional information regarding methods to measure the VOC content specified in these tables, see South Coast Air Quality Management District Rule 1168.

5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

TABLE 5.504.4.3
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2, 3]
Grams of VOC Per Liter of Coating,
Less Water and Less Exempt Compounds

COATING CATEGORY	CURENT LIMIT
Flat coatings	50
Nonflat coatings	100
Nonflat high gloss coatings	150
Specialty Coatings	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High-temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings[1]	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs: Clear Opaque	 730 550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, Febraury 1, 2008. More information is available from the Air Resources Board.

5.504.4.3.1 Aerosol paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification
2. Field verification of on-site product containers

5.504.4.4 Carpet systems. All carpet installed in the building interior shall meet at least one of the following testing and product requirements:

1. Carpet and Rug Institute's Green Label Plus Program;
2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as CDPH Standard Method V1.1 or *Specification 01350)*;
3. NSF/ANSI 140 at the Gold level or higher;
4. Scientific Certifications Systems Sustainable Choice; or
5. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria Interpretation for EQ 7.0 and EQ 7.1 (formerly EQ 2.2) dated July 2012 and listed in the CHPS High Performance Product Database.

5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

5.504.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

5.504.4.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et seq.) Those materials not exempted under the ATCM must meet the specified emission limits, as shown in Table 5.504.4.5.

5.504.4.5.1 Early compliance. Reserved.

5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, *et seq.*).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards.
5. Other methods acceptable to the enforcing agency.

TABLE 5.504.4.5
FORMALDEHYDE LIMITS[1]
Maximum Formaldehyde Emissions in Parts per Million.

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particle board	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard[2]	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333. For additional information, see *California Code of Regulations*, Title 17, Sections 93120 through 93120.12.
2. Thin medium density fiberboard has a maximum thickness of 5/16 inches (8 mm).

5.504.4.6 Resilient flooring systems. For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:

1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;
2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;
3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria Interpretation for EQ 7.0 and EQ 7.1 (formerly EQ 2.2) dated July 2012 and listed in the CHPS High Performance Product Database; or
4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's & Schools Program).

5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 8. MERV 8 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same

ENERGY INSPECTORS®
950 Boardwalk, Suite 301
San Marcos, CA 92078
T: (760) 761-3695
F: (760) 761-3650

California Green Building Code
CalGreen Non-Residential
Mandatory Measures
(Updated July 1st, 2015)

Date:
06/06/2016

Builder:
Hitzke Development

Community:
The Pearl

Plan Names:
For All Plan Types

CG-4

ENERGY INSPECTORS™
A Key Element in your Energy Efficient Design
ENERGY INSPECTORS
950 Boardwalk, Suite 301
San Marcos, CA 92078
T 760.761.3695
F 760.761.3650
C 760.498.6509
www.Energyinspectors.com

The Pearl
(Parking Garages and Irrigation Systems)
Owner's Project Requirements (OPR)
Solana Beach, CA

May 23, 2016

CALGreen Code Excerpt: *the Owner's Project Requirements (OPR) is in compliance with the CALGreen Code Section 5.410.1-2.*

General Building Information:

Project Name:	The Pearl (Parking Garages and Landscaping Irrigation Systems)
Project Location:	South Sierra Avenue Solana Beach, CA
Project Owner:	Hitzke Development Corporation 251 Autumn Drive, Suite 100 San Marcos, CA 92169
Total Building Size:	18,376 Sqft (2 Story Parking Garages)
Number of Stories:	4
Construction Type:	IB
Occupancy Type:	S-2

Executive Summary

This owner's project requirements document provides clear and concise documentation of The Pearl's goals, expectations, and requirements for the design and construction of the parking garages and landscaping irrigation systems. The OPR establishes the owner's objectives and requirements and those shall be used for the development of the Basis of Design (BOD) and the Commissioning Plan exclusively for the parking garages (including exhaust/ventilation, CO sensors, and lighting system) and the landscaping irrigation systems. The Commissioning Agent utilizes the OPR as the record of established requirements that is the basis of the commissioning process. Additionally, the OPR is considered a "living" document during the design phase of the project and is subject to change as the design progresses.

Owner and User Requirements

- The Pearl consists of apartment units, commercial spaces, and parking garages, and is located in Solana Beach, California.
- The building is owned by Hitzke Development Corporation.

Environmental and Sustainability Goals

- Meet the Mandatory California Title-24 Standards and CALGreen Building Code.
- Provide an energy efficient building that meets or exceeds the governing codes and standards.

Energy Efficiency Goals

- Overall efficiency of building shall meet California Energy Code, Title 24, part 6 Energy Standards.
- Lighting system efficiency shall meet California Energy Code, Title 24, part 6 Energy Standards.
- HVAC equipment/efficiencies shall meet at least minimum California Title 24 Standards.
- Additional energy efficiency measures that provide cost effective energy savings shall be identified and included wherever feasible.

Indoor Environmental Quality Requirements

Air Quality, Ventilation, and Filtration

- Implement a construction phase indoor pollution protection plan that reduces particulate, mold, and other pollutants during construction phase. Cover all ductwork openings to prevent pollutants from entering the HVAC system. HVAC equipment used during the construction phase must take steps to protect all return air openings with high efficiency filtering material and all filters shall be replaced with new filters prior to turn over of the facility to the Owner.
- Ventilation and filtration requirements: All mechanical equipment to have minimum MERV 8 filters, per CGBC 5.504.5.3.
- Occupancy HVAC control requirements: HVAC units to have individual thermostats located in common accessible areas.
- All selections of equipment, components, and sub components shall comply with all sections of the CALGreen code.

Lighting

- Lighting system efficiency shall meet California Energy Code performance approach energy budget.
- Lighting systems and lighting fixtures and/or controls shall be selected to meet Title 24, part 6 minimum efficiency requirements.
- Lighting Systems:
  - All lighting fixtures will be new
  - Lamping will be fluorescent and/or LED
  - Lighting fixtures will be energy efficient
  - Lighting fixture controls will include automatic shut off in accordance with Title 24, part 6 requirements

Other Owner Requirements

- Manual override capability shall be installed on both lighting and HVAC system to accommodate after-hours usage.
- All interior finish materials shall meet the VOC limitations established by CALGreen.
- All carpet not provided by the Owner shall meet the Carpet & Rug Institute's Green Label requirements or the appropriate section(s) of CALGreen.
- Plywood, particle board, and other composite wood or agrifiber products used in the construction shall be certified to contain no added urea formaldehyde resins. Note: all structural members consisting of composite construction, are exempt from CALGreen requirements.
- All building materials stored on site prior to installation shall be stored so that there is no buildup of moisture, dust, mold or other pollutants on or in the materials.

Equipment and Systems Expectations

- Level of Quality, Reliability, Equipment Type, Flexibility, Maintenance, and Complexity Desired shall be determined by the Engineer of Record for a particular identified system.
- Specific Efficiency Targets, Desired Technology's, or Preferred Manufactures for Building Systems, Acoustics, and Ventilation for the equipment selected by The Pearl which comply with all applicable state building codes.
- Degree of System Integration, Automation, and Functionality for Controls shall be determined by the Engineer of Record to accomplish compliance with state mandated codes and maybe modified through the construction process to achieve higher levels of flexibility.

Building Occupancy and O&M Personnel Expectations

Description of How the Building will be operated and by whom

- The building occupants will have the following expectations for The Pearl:
  - The lighting will be even, without glare, and adequate for daily operations.
  - Electrical power will be adequate, with reasonable space capacity for growth of usage.
  - The HVAC systems will function properly and will provide thermal comfort without cold or hot areas.
  - The HVAC systems will function without perceptible noise of vibration within conditioned areas.
  - The indoor environment will be free of irritating odors, fumes, and pollutants.
- The operations and maintenance personnel will have the following expectations for The Pearl:
  - The building finishes will be durable and easy to maintain.
  - The building will be clean and ready for immediate occupancy at building turn over.
  - O&M personnel will receive training on the operation of building systems and the required periodic maintenance requirements of all equipment.
  - Equipment manuals spare parts lists, and supplier contracts will be delivered to The Pearl prior to building turn over.
  - Equipment warranties and guarantees will be delivered to The Pearl prior to building turn over.
  - Building equipment will be easily accessible, of standard manufacture, easily repaired, with readily available spare parts.
  - Day-to-day HVAC operation will be performed by The Pearl.
  - Periodic HVAC maintenance will be performed by a service company.

Level of training and orientation required understanding, operating and use the building shall be determined based on recommendations from the Engineer of Record and Installing contractor of the selected systems.

ENERGY INSPECTORS™
A Key Element in your Energy Efficient Design
ENERGY INSPECTORS
950 Boardwalk, Suite 301
San Marcos, CA 92078
T 760.761.3695
F 760.761.3650
C 760.498.6509
www.Energyinspectors.com

The Pearl
(Parking Garages and Landscaping Irrigation Systems)
Basis of Design (BOD)
Solana Beach, CA

May 23, 2016

The Pearl consists of apartment units, commercial spaces, common areas, leasing office, and parking garages.

This document outlines the Basis of Design for the project. This document is exclusively for the parking garages (with CO sensors and lighting system), and landscaping irrigation systems. The objective of this document is to provide a narrative describing the design of the Heating, Ventilation, Air Conditioning (HVAC) Systems and Controls, Lighting Systems and Controls, Water Heating Systems, and Landscaping Irrigation Systems, and outlines the design assumptions of the each set of system and controls to be installed into the building.

CALGreen Code Excerpt: *The Basis of Design (BOD) is in compliance with the 2012 CALGreen Code, Section 5.410.2.2 and 2013 Title 24 Codes and Standards.*

1. Heating, Ventilation, Air Conditioning (HVAC) System and Controls

1.1 Narrative Description of HVAC/Ventilation System

A. Parking Garage / Exhaust Fans (see details below or per HVAC design). Note: Carbon Monoxide Control located in each Ventilation systems shall be installed per Title 24 Codes/Standards with controls (Mandatory Requirements for enclosed parking garages, Section 120.6 (c)).

B. Reasons for System Selection

The system is consistent with the owner's preference. The HVAC and ventilation/exhaust system selection was based on cost effective energy savings, ease of installation, and a designated location for service and maintenance saves time and cost.

1.2 Indoor and Outdoor Temperature Design

The indoor and outdoor design conditions are based on the latest requirements of ASHRAE Handbooks standards for the mechanical systems and will be based on the following conditions:

Summer outdoor design conditions:	*78 °F drybulb; 66 °F wetbulb*
Winter outdoor design conditions:	*40 °F drybulb*
Indoor design conditions:	*75 °F 50 %RH; 70 °F heating*

1.3 Sequence of Operations

Operating hours shall be 24/7 for Parking Garages and common areas (Ventilation systems shall be triggered by CO sensors and/or centralized CO detection systems).

1.4 Codes and Standards

The latest editions of the codes and standards are intended as guidelines for design. The codes and standards are not limited to the lists below:

Codes

- *California Energy Conservation Code*
- *International Fire Protection Code*
- *California Mechanical Code, latest version.*
- *California Building Code, latest version.*
- *California Fire Code, latest version.*
- *California Administrative Code*
  - *Title 8 General Industry Safety Order*
  - *Title 17 Public Health*
  - *Title 22 Social Security*
  - *Title 24 Part 6 Building Energy Efficiency Standards*
  - *Title 24 Part 11 California Green Buildings Standards Code*

Standards

- *ANSI American National Standards Institute*
- *UL Underwriters Laboratories*
- *AGA American Gas Association*
- *ASME American Society of Mechanical Engineers*
- *ASHRAE American Society of Heating Refrigerating and Air Conditioning Engineers*
- *ARI American Refrigeration Institute*
- *ASTM American Society for Testing and Materials*
- *FM Factory Mutual*
- *NFPA National Fire Protection Association*

ENERGY INSPECTORS®
950 Boardwalk, Suite 301
San Marcos, CA 92078
T: (760) 761-3695
F: (760) 761-3650

California Green Building Code
Commissioning Documents
(Updated July 1st, 2015)

Date:
06/06/2016

Builder:
Hitzke Development

Community:
The Pearl

Plan Names:
For All Plan Types

CG-5

2. Lighting System

2.1 Narrative Description of System

A. Fixture type(s), lamps, and ballast types shall be new and consistent with plansets, and conform to 2013 Title 24/Part 6 Codes and Standards.

B. Lighting systems and lighting fixtures and controls will be selected to meet or exceed Title 24, Part 6 minimum efficiency requirements.

2.2 Reasons for System Selection

The systems are consistent with the owner's preference to provide adequate levels of light for security purposes.

2.3 Lighting Design Criteria and Power Design Targets

The lighting design criteria are based on owner's project requirement and meet the Title 24 requirements. Fixture selection and locations have been coordinated with the owner. See lighting construction documents.

3. Landscape Irrigation System

3.1. Landscape Description Narrative

The irrigation system was designed for maximum water efficiency. This was accomplished in a number of ways:

A. Most landscape areas use drip irrigation, to provide a low water application rate, with little loss of applied water due to evaporation, standing water, run-off and overwatering. The drip irrigation applies water only to landscape area, and root zones and does not allow "overspray" onto non-landscape areas.

B. The landscape irrigation spray heads shall have anti-drain valves built in to not allow head drainage after the value has been turned off. This reduces the possibility of run off after valve closure as pipes drain.

C. The use of VAN (variable angle nozzle) is allowed for micro adjustment of spray areas further reducing the possibility of run off.

D. Deep watering irrigation head assemblies are used for trees to provide water for trees without applying excess water for shallow rooted plants.

E. The irrigation controller is to be selected.

3.2. Narrative Description of Planting

The plant materials selected for this project are low water requiring plant material except for the required front yard trees. The plant materials have been group in similar water requirement groups so that excess water is not required for high water plant located in low water planting areas.

3.3. Reasons for System Selection

The primary design criterion was for conservation of water, and reduction in energy use, including landscape maintenance. Landscape maintenance can consume gasoline (mowers and maintenance vehicles) dump transportation and storage of trimming, and manpower transportation to the site. All of these needs have been considered in the design and have been minimized (i.e. area of lawn area to be mowed reduces mower use, landscape waster and man-power maintenance requirements).

The Pearl (Parking Garages and Landscaping Irrigation Systems)

CALGreen Commissioning Plan

Prepared by:

ENERGY INSPECTORS

A Key Element in your Energy Efficient Design

950 Boardwalk, Suite 301

San Marcos, CA 92078

5/23/2016

Project Name:	The Pearl (Parking Garages and Landscaping Irrigation Systems)
Project Address:	South Sierra Avenue Solana Beach, CA

ENERGY INSPECTORS®

950 Boardwalk, Suite 301
San Marcos, CA 92078
T: (760) 761-3695
F: (760) 761-3650

California Green Building Code
Commissioning Documents
(Updated July 1st, 2015)

Date:
06/06/2016

Builder:
Hitzke Development

Community:
The Pearl

Plan Names:
For All Plan Types

CG-6

Contents

1 General Building Information 3
2 Overview 4
2.1 Abbreviations and Definitions 4
2.2 Purpose of the Commissioning Plan 4
2.3 Commissioning Goals and Objectives 5
2.4 Commissioning Scope 6
3 Commissioning Team Information 7
4 Roles and Responsibilities 8
4.1 CALGreen Commissioning Team Flow Chart 9
4.2 General Descriptions of Roles 9
4.3 Specifications and Commissioning 10
4.4 General Management Plan and Protocols 11
5 Commissioning Process 12
5.1 Commissioning Scoping Meeting 12
5.2 Final Commissioning Plan 12
5.3 Design Intent Documentation 12
5.4 Submittals 12
5.5 Site Observation 12
5.6 Pre-functional Checklists and Startup Procedures 12
5.7 Development of Functional Test and Verification Procedures 13
5.8 Execution of Functional Testing Procedures 13
5.9 Operations and Maintenance Manuals 13
5.10 Training and Orientation of Owner Personnel and Occupants 13
5.11 Warranty Period 14
5.12 Commissioning Report 14
6 Schedule 14
6.1 General Issues 14
6.2 Project Schedule 15

1 General Building Information

Project Name:	The Pearl (Parking Garages and Landscaping Irrigation System)
Project Address:	South Sierra Avenue Solana Beach, CA
Building Type:	Multi-Family Residential Buildings/Units, Commercial spaces, and Common Areas
Square Footage:	18,376 Sqft (2 Story Parking Garages)
Building Description:	Four Story Mixed-Use Buildings
Owner:	Hitzke Development Corporation 251 Autumn Drive, Suite 100 San Marcos, CA 92169
Scheduled Completion Date:	TBD

2 Overview

2.1 Abbreviations and Definitions

The following are common abbreviations used in this document.

A/E	Architect and Design Engineers
CxA	Commissioning Agent/Authority
CC	Controls Contractor
Cx	Commissioning
EM	Energy Manager
Cx Plan	Commissioning Plan Document
EC	Electrical Contractor
MM	Maintenance Manager
FPT	Functional Performance Test
GC	General Contractor
MC	Mechanical Contractor
PF	Pre-Functional Checklist
PM	Project Manager
Subs	Subcontractors to General
TAB	Test and Balance Contractor
Staff	Maintenance Staff

2.2 Purpose of the Commissioning Plan

The purpose of the Cx Plan is to provide direction for the commissioning process during construction as described in detail in the specifications, providing resolution for issues such as scheduling, roles and responsibilities, lines of communication and reporting, approvals, and coordination. The Cx Plan, in no case, supersedes the Specifications.

2.3 Commissioning Goals and Objectives

Commissioning is a systematic process of ensuring that the building systems perform according to the design intent and the owner's operational requirements as referenced in the Owner's Project Requirements document. Commissioning also ensures the project meets any governing building codes (CALGreen). All equipment and systems shall be installed according to manufacturer's recommendations and the best practices and standards of the industry.

Commissioning will include documenting the design intent, followed by activities in the construction, acceptance, and warranty phases of the project. The participation of the contractors in commissioning activities will follow the requirements defined in the specifications. The three main goals of the commissioning process are:

1. Facilitate the final acceptance of the project at the earliest possible date.
2. Facilitate the transfer of the project to the owner's maintenance staff.
3. Ensure that the comfort systems meet the requirements of the occupants.

Commissioning is also intended to achieve the following specific objectives:

- Verify and document that the equipment is installed and started per manufacturer's recommendations.
- Verify and document that equipment and systems receive complete operational checkout by installing contractors.
- Verify and document system performance with functional performance testing.
- Verify the completeness of operations and maintenance materials.
- Ensure that the owner's operating personnel are adequately trained on the operation and maintenance of the building equipment.

Commissioning process does not take away from or reduce responsibility of system designers or installing contractors to provide a finished and fully functioning product.

2.4 Commissioning Scope

The following systems will be commissioned in this project. All general references to equipment in this document refer only to equipment that is to be commissioned.

System/Location	Equipment
Parking Garages	
Ventilation System/Controls and CO Sensors	Exhaust Ventilation Equipment Controls
Lighting and Controls	Light Fixtures Lighting Controls
Irrigation Systems	
Landscaping Irrigation System	Sprinklers Flow Controllers Rain Sensors

3 Commissioning Team Information

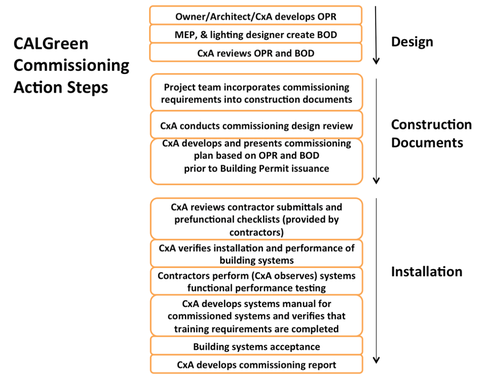
Function	Name/Address	Contact Information
Owner/	Hitzke Development Operation 251 Autumn Drive, Suite 100 San Marcos, CA 92169	Ginger Hitzke Ph (760) 798-9809 TBD
Tenant	The Pearl Solana Beach, CA	TBD
Commissioning Agent	Energy Inspectors 950 Boardwalk, Suite 301 San Marcos, CA 92078	Steve Vang Ph (760) 498-6509 svang@energyinspectors.com Jackson Chin Ph (760) 761-3695 jchin@energyinspectors.com
Architect	FoundationForForm ARCHITECTURE 830 25th Street San Diego, CA 92102	Michael Burnett Ph (619) 906-4006 TBD
Mechanical Engineer	BTA Engineers, Inc. 9845 Erma Road, Suite 204 San Diego, CA 92131	TBD Ph (858) 715-6601 TBD
Electrical Engineer	TBD	
Plumbing Engineer	TBD	
Landscaping	MZAKI Design 4670 Saratoga Ave. San Diego, CA 92107	Mohamed Zaki Ph (619) 255-1802 TBD
Mechanical Contractor	TBD	
Electrical, Lighting, Controls & Contractor	TBD	
Plumbing Contractor	TBD	

4 Roles and Responsibilities

General Management Plan

In general, the CxA coordinates the commissioning activities and reports to the owner's construction representative. The CxA's responsibilities, along with all other contractor's commissioning responsibilities are detailed in the specifications. The Specifications will take precedence over the Commissioning Plan. All members work together to fulfill contracted responsibilities and meet the objectives of the Contract Documents.

4.1 CALGreen Commissioning Team Flow Chart



4.2 General Descriptions of Roles

General descriptions of the commissioning roles are as follows:

CxA: Coordinates the commissioning process, reviews testing plans, observes and documents system testing and reviews training materials.

PM: Project Manager, facilitates the commissioning process, ensures that Subs perform their responsibilities and integrates commissioning into the construction process and schedule.

OTS: Owner, or Owner's Technical Staff, plan/attend commissioning scoping meeting, controls integration meeting, and additional meetings as necessary, arranges for facility operating and maintenance personnel to participate in commissioning

activities and training session, and finally provide final acceptance for commissioning work.

OPM: Owner's Program Manager facilitates and supports the commissioning process and gives final approval of the commissioning work.

MM: Maintenance Manager coordinates maintenance staff participation in commissioning activities.

GC(C): Construction Manager/General Contractor, facilitates the commissioning process, ensures that Subs perform their responsibilities and integrates commissioning into the construction process and schedule.

Subs: Subcontractors, demonstrate correct system performance.

Staff: Participate in commissioning tasks and performance testing, review O&M documentation, and attend training.

A/E: Design Team, attend commissioning scoping meeting, controls integration meeting and additional meeting as necessary, provide design intent and sequence of operation documentation as required, perform construction observation, approve O&M manuals, assist in resolving problems, and optionally witness equipment startup and performance testing.

Mfr.: Equipment manufacturers and vendors provide documentation to facilitate the commissioning work and perform contracting startup.

TAB: Test and Balance Representative, third party contractor performing the test and balance portion of the contract.

4.3 Specifications and Commissioning

Commissioning language must be incorporated into the planset under the general notes section.

ENERGY INSPECTORS®
950 Boardwalk, Suite 301
San Marcos, CA 92078
T: (760) 761-3695
F: (760) 761-3650

California Green Building Code
Commissioning Documents
(Updated July 1st, 2015)

Date:
06/06/2016

Builder:
Hitzke Development

Community:
The Pearl

Plan Names:
For All Plan Types

CG-7

4.4 General Management Plan and Protocols

The following protocols will be used on this project.

Issue	Protocol
For requests for information (RFI) or formal documentation requests:	The CxA goes first through the PM
For minor or verbal information and clarifications:	The CxA goes direct to the informed party
For notifying contractors of deficiencies:	The CxA documents deficiencies through the PM, but may discuss deficiency issues with contractors prior to notifying the PM.
For scheduling functional test or training:	The CxA provides input and coordination of testing and training. Scheduling is done through the PM.
For scheduling of commissioning meetings:	The CxA selects the date and schedules through the PM.
For making a request for significant changes:	The CxA has no authority to issue change orders.
For making minor changes in specified sequences of operations:	Any required changes in sequences of operation required to correct operational deficiencies must be approved and documented by the PM and A/E team. The CxA may recommend to the PM changes in sequences of operation to improve efficiency or control.
Subcontractors disagreeing with requests or interpretations by the CxA shall…	Resolve issues at the lowest level possible. First with the CxA, then with the GC and PM. Some issues may require input from the A/E team.

5 Commissioning Process

This section sequentially details the commissioning process by commissioning task or activity.

5.1 Commissioning Scoping Meeting

The scoping meeting brings together all members of the design, construction, and operations team that will be involved in the commissioning process. Each building system to be commissioned is addressed, including commissioning requirements, and completion and start up schedules. During the scoping meetings, all parties agree on the scope of work, tasks, schedules, deliverables, and responsibilities for implementation of the Commissioning Plan.

5.2 Final Commissioning Plan

The CxA finalizes the draft Commissioning Plan using the information gathered from the scoping meeting. The initial commissioning schedule is also developed along with a detailed timeline. The timeline is fine-tuned as construction progresses. The Project Manual (Specification) takes precedence over the Commissioning Plan.

5.3 Design Intent Documentation

The design requirements, relative to the building systems selected for commissioning, must be explicitly documented in order to establish a baseline of performance expectations against which the actual installed performance is compared. The CxA, with the assistance of the building owner and design team, prepares a Design Intent Summary that documents the design intent for those building systems selected for commissioning. The Design Intent Summary reflects the underlying assumptions and requirements that become represented in the construction documents.

5.4 Submittals

The general contractor will provide the CxA with a set of equipment and system submittals. This equipment data includes installation and start-up procedures, O&M data, performance data and temperature control drawings. The subcontractors, general contractor or A/E notify the CxA of any new design intent or operating parameter changes, added control strategies and sequences of operation, or other change orders that may affect commissioned systems.

5.5 Site Observation

The CxA makes periodic site visits to witness equipment and system installations. Each site visit will have a specific agenda and will be coordinated with the GC site supervisor. The CxA attends selected planning and job-site meetings in order to remain informed on construction progress and to update parties involved in commissioning. The GC provides the CxA with information regarding substitutions or change orders that may affect commissioning equipment or the commissioning schedule.

5.6 Pre-functional Checklists and Startup Procedures

A Pre-Functional Inspection Checklist will be developed and completed by the subcontractors for all equipment being commissioned. The checklist captures equipment nameplate and characteristics data, and confirms the as-built status of the equipment or system. The checklists ensure that the systems are complete and operational and document the installation of components and completion of systems.

All equipment checklists are to be provided by the contractors (based on manufacturer's data, drawings and specifications to include the required installation, checkout, and start up procedures) and reviewed by the commissioning agent. The installing subcontractors date and initial checklists as the construction and start-up is completed. The commissioning agent reviews and verifies the completed checklists before scheduling the functional performance testing.

5.7 Development of Functional Test and Verification Procedures

Functional performance testing verifies the intended operation of individual components and system interactions under various conditions and modes of operation. The systems are run through all the sequences of operation and the response of components is verified. Testing proceeds from components to subsystems to systems, and finally to interlocks and connections between systems.

The commissioning agent will work with the contractors to prepare functional performance test plans so that the complete sequence of operations is included. The commissioning agent obtains all documentation, including and updated points list, control sequences, and setpoints. If necessary, the commissioning agent may request clarifications from contractors and the design team regarding sequences and operation. Prior to execution, the commissioning agent provides a copy of the primary equipment tests to the installing subcontractor and general contractor who can review the tests for feasibility, safety, warranty and equipment protection.

5.8 Execution of Functional Testing Procedures

The commissioning agent schedules functional tests through the general contractor and subcontractors. Under the supervision of the commissioning agent, the installing subcontractor performs the hardware and/or software manipulations required for the testing. Owner maintenance staff may also be present during system observations. The commissioning agent witnesses and records the results of functional performance testing.

Any deficiencies found from functional performance testing will be documented in a Deficiency Report. The report will include all details of the components or systems found to be non-compliant with the parameters of the functional performance tests plans and design documents. The deficiency report will become part of the punch list. The report will detail the adjustments or alterations required to correct the system operation, and identify the responsible party. The deficiency report will be continuously updated. The commissioning agent schedules any required retesting through the general contractor. Decisions regarding deficiencies and corrections are made at as low a level as possible, preferably between commissioning agent, sub-contractor and general contractor.

5.9 Operations and Maintenance Manuals

The operation and maintenance manuals prepared by the contractors for the owner's maintenance personnel are reviewed for completeness. The contractors are encouraged to submit O&M manuals at the earliest possible date. Materials may be added, or requested from the contractors, to stress and enhance the importance of system interactions, troubleshooting, and long-term preventative maintenance and operation. A database of preventative maintenance information may also be created from the materials in the O&M manuals.

5.10 Training and Orientation of Owner Personnel and Occupants

Effective maintenance personnel's training is critical to the long-term performance of the new building. The commissioning agent will assist the owner and general contractor in organizing the training sessions by identifying the appropriate staff for each session and creating an overall training plan.

For each training session, the contractors provide a detailed agenda for each piece of equipment or system for which training is required. The agenda describes the training scope, duration, and methods, along with the name and qualifications of the trainers. The commissioning agent develops a plan for including in the training session contractors/trainers from different disciplines, when appropriate. The trainer documents each training session (duration, general subjects covered, and attendees). The commissioning agent may witness any of the training sessions.

5.11 Warranty Period

Seasonal variation in operations or control strategies may require additional testing during peak cooling and heating seasons to verify system performance. During the warranty period, seasonal testing and other deferred testing is completed as required to fully test all sequences of operation. The commissioning agent coordinates this activity. Tests are executed and deficiencies corrected by the appropriate subcontractors, witnessed by facilities staff and the commissioning agent. Any final adjustments to the O&M manuals and as-built due to the testing are made.

The commissioning agent will request input from the owner's operations staff and occupants about the performance of the building systems. The commissioning agent also supports the general contractor's troubleshooting process during the warranty period. The general contractor's warranty team will first try and resolve the issues before requesting assistance from the commissioning agent.

5.12 Commissioning Report

A final Commissioning Report will be compiled which summarizes all of the tasks, findings, and documentation of the commissioning process. The report will address the actual performance of the building systems in reference to the design documents. All test reports by various sub-contractors, manufacturers and controlling authorities will be incorporated into the final report.

The commissioning report includes:

- An evaluation of the operating condition of the systems at the time of functional test completion.
- Deficiencies that were discovered and the measures taken to correct them.
- Functional test procedures and results.
- Reports that document all commissioning field activities as they progressed.

6 Schedule

6.1 General Issues

The following sequential priorities are followed:

1. Equipment is not "temporarily" started (for heating and cooling), until pre-start checklist items and all manufacturers' pre-start procedures are completed and moisture, dust and other environmental and building integrity issues have been addressed.
2. Functional performance testing does not begin until pre-functional, start-up and TAB is completed for a given system.
3. The controls system and equipment it controls are not functionally tested until all points have been calibrated and pre-functional checklists are completed.

6.2 Project Schedule

Preliminary Commissioning Schedule

Commissioning Activity	Estimated Start Date	Estimated Completion Date
Commissioning Plan	5/23/16	9/23/16
Scoping Meeting and Final Plan		
Submittals	TBD	TBD
Review HVAC, and Ventilation / CO Sensor Submittals		
Review Lighting Submittals		
Landscaping Irrigation Submittals		
Construction Observation / Site Visits	TBD	TBD
Site Observations		
HVAC, and Ventilation / CO Sensor PF Checklist Completion		
Lighting PF Checklist Completion		
Landscaping Irrigation PF Checklist Completion		
Power Connected & Available to the Building		
Startup	TBD	TBD
HVAC, and Ventilation / CO Sensor Equipment Startup		
Lighting System Startup		
Landscaping Irrigation Startup		
All Systems Startup Documentation		
Functional Performance Tests	TBD	TBD
HVAC, and Ventilation / CO Sensor Functional Performance Testing		
Lighting Functional Performance Testing		
Landscaping Irrigation Functional Performance Testing		
Post Acceptance Phase	TBD	TBD
Owner Move-in		
O&M, Training, Reporting & Warranty	TBD	TBD
O&M Manuals Submitted		
Review O&M Manuals		
Review As-built Documentation		
Final Commissioning Report – All Systems		

ENERGY INSPECTORS®
950 Boardwalk, Suite 301
San Marcos, CA 92078
T: (760) 761-3695
F: (760) 761-3650

California Green Building Code Commissioning Documents

dated July 1st, 2015)

Date:
06/06/2016

Builder:
Hitzke Development

Community:
The Pearl

Plan Names:
For All Plan Types

CG-8

CONDENSING UNIT SCHEDULE (HEAT PUMP)

MARK	DESCRIPTION	SERVICE	SEER	HSPF	COOLING CAPACITY (MBH) TOTAL	COOLING CAPACITY (MBH) SENSIBLE	HEATING CAPACITY (MBH)	AMB. TEMP. °F	ELECTRICAL DATA MCA	MOCP	VOLT	PH	HZ	OPER. WEIGHT (LBS.)	BASED ON: MANUFACTURER	MODEL	REMARKS
CU 1	MULTI-ZONE SUITECASE	FC-1.1 THRU FC1.5	18.4	9.8	40.8	31.2	45.2	95	36.2	40	208/230	1	60	192	MITSUBISHI	MXZ-5B42NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 2	MULTI-ZONE SUITECASE	FC-2.1 AND FC-2.2	18.0	8.9	20.0	18.0	22.0	95	15.0	20	208/230	1	60	130	MITSUBISHI	MXZ-2B20NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 3	MULTI-ZONE SUITECASE	FC-3.1 THRU FC-3.3	17.5	10.5	28.4	25.0	28.6	95	15.0	20	208/230	1	60	150	MITSUBISHI	MXZ-3B30NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 4	MULTI-ZONE SUITECASE	FC-4.1 AND FC-4.2	18.0	8.9	20.0	18.0	22.0	95	15.0	20	208/230	1	60	130	MITSUBISHI	MXZ-2B20NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 5	MULTI-ZONE SUITECASE	FC-5.1 THRU FC-5.3	17.5	10.5	28.4	25.0	28.6	95	15.0	20	208/230	1	60	150	MITSUBISHI	MXZ-3B30NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 6	MULTI-ZONE SUITECASE	FC-6.1 THRU FC-6.3	17.5	10.5	28.4	25.0	28.6	95	15.0	20	208/230	1	60	150	MITSUBISHI	MXZ-3B30NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 7	MULTI-ZONE SUITECASE	FC-7.1 AND FC-7.2	18.0	8.9	20.0	18.0	22.0	95	15.0	20	208/230	1	60	130	MITSUBISHI	MXZ-2B20NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 8	MULTI-ZONE SUITECASE	FC-8.1 THRU FC-8.4	18.0	9.3	40.8	35.4	36.0	95	19.0	20	208/230	1	60	153	MITSUBISHI	MXZ-4B36NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 9	MULTI-ZONE SUITECASE	FC-9.1 THRU FC-9.4	18.0	9.3	40.8	35.4	36.0	95	19.0	20	208/230	1	60	153	MITSUBISHI	MXZ-4B36NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL
CU 10	MULTI-ZONE SUITECASE	FC-10.1 THRU FC-10.4	18.0	9.3	40.8	35.4	36.0	95	19.0	20	208/230	1	60	153	MITSUBISHI	MXZ-4B36NA	PROVIDE W/ WALL MOUNTING KIT, COATING COIL

FAN COIL SCHEDULE

MARK	DESCRIPTION	SERVICE	CFM	ESP (IN. WG.)	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	ELECTRICAL DATA MCA	MOCP	VOLT	PH	HZ	OPER. WEIGHT (LBS.)	BASED ON: MANUFACTURER	MODEL	REMARKS
FC 1-1, FC 1-2, FC 1-3, FC 1-4	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	6.0	7.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ6NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 1-5	HIGH WALL MOUNTED UNIT	DWELLING UNIT	339	Ø.2	17.2	21.6	*	-	*	*	*	22	MITSUBISHI	MSZ-GE18NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 2-1	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	6.0	7.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ6NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 2-2	HIGH WALL MOUNTED UNIT	DWELLING UNIT	335	Ø.2	14.0	18.0	*	-	*	*	*	22	MITSUBISHI	MSZ-GE15NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 3-1	HIGH WALL MOUNTED UNIT	DWELLING UNIT	335	Ø.2	14.0	18.0	*	-	*	*	*	22	MITSUBISHI	MSZ-GE15NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 3-2	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	12.0	14.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GE12NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 3-3	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	9.0	10.9	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ9NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 4-1	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	6.0	7.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ6NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 4-2	HIGH WALL MOUNTED UNIT	DWELLING UNIT	335	Ø.2	14.0	18.0	*	-	*	*	*	22	MITSUBISHI	MSZ-GE15NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 5-1	HIGH WALL MOUNTED UNIT	DWELLING UNIT	335	Ø.2	14.0	18.0	*	-	*	*	*	22	MITSUBISHI	MSZ-GE15NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 5-2	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	12.0	14.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GE12NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 5-3	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	9.0	10.9	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ9NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 6-1	HIGH WALL MOUNTED UNIT	DWELLING UNIT	335	Ø.2	14.0	18.0	*	-	*	*	*	22	MITSUBISHI	MSZ-GE15NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 6-2	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	12.0	14.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GE12NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 6-3	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	9.0	10.9	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ9NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 7-1	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	6.0	7.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ6NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 7-2	HIGH WALL MOUNTED UNIT	DWELLING UNIT	335	Ø.2	14.0	18.0	*	-	*	*	*	22	MITSUBISHI	MSZ-GE15NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 8-1, FC 8-2, FC 8-3	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	6.0	7.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ6NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 8-4	HIGH WALL MOUNTED UNIT	DWELLING UNIT	339	Ø.2	17.2	21.6	*	-	*	*	*	22	MITSUBISHI	MSZ-GE18NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 9-1, FC 9-2	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	6.0	7.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ6NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 9-3	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	9.0	10.9	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ9NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 9-4	HIGH WALL MOUNTED UNIT	DWELLING UNIT	335	Ø.2	14.0	18.0	*	-	*	*	*	22	MITSUBISHI	MSZ-GE15NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 10-1, FC 10-2	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	6.0	7.4	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ6NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 10-3	HIGH WALL MOUNTED UNIT	DWELLING UNIT	237	Ø.2	9.0	10.9	*	-	*	*	*	22	MITSUBISHI	MSZ-GEØ9NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.
FC 10-4	HIGH WALL MOUNTED UNIT	DWELLING UNIT	335	Ø.2	14.0	18.0	*	-	*	*	*	22	MITSUBISHI	MSZ-GE15NA	PROVIDE W/ WALL MOUNTING KIT, CONDENSATE PUMP & PROGR. T-STAT * FROM OUTDOOR UNIT.

LEGEND

SYMBOL	ABBR	DESCRIPTION
		EQUIPMENT SYMBOL NUMBER
		DUCT (RECTANGULAR OR ROUND)
	(L)	DUCT (LINED)
	(L)	DUCT (LINED)
		EXISTING TO REMOVE
		NEW
		FLEXIBLE DUCT
	FC	DUCT FLEXIBLE CONNECTION
		SQUARE ELBOW WITH TURNING VANES
		RADIUS ELBOW
		DUCT TRANSITION
		45 DEGREE BRANCH TAKE-OFF
		END DOUBLE BRANCH WITH TURNING VANES
	SA	SUPPLY AIR DIFFUSER/DUCT
	RA	RETURN AIR GRILLE/DUCT
	EA	EXHAUST AIR GRILLE/DUCT
	UP	DUCT RISE/UP THRU ROOF OR FLOOR
	DN	DUCT DROP/DOWN THRU ROOF OR FLOOR
UP		DUCT GO UP
DN		DUCT GO DOWN
	AD	ACCESS DOOR
	AFF	ABOVE FINISHED FLOOR
	ARCH	ARCHITECTURAL
	CFM	CUBIC FEET PER MINUTE
	ϕ	DIAMETER
	D/L	DOOR LOUVER
	DWG	DRAWING
	FD	FIRE DAMPER
	FSD	FIRE SMOKE/DAMPER
	SM	SHEETMETAL
SD		SMOKE DETECTOR
		SWITCH
T		THERMOSTAT (MOUNT @ 48" A.F.F.)
	U/C	UNDERCUT
1	VD	MANUAL VOLUME DAMPER
CO		CARBON MONOXIDE DETECTOR
	POC	POINT OF CONNECTION
		DIRECTION OF FLOW

REFERS TO "SMACNA" HVAC DUCT CONST. STANDARDS

Consultant
BTA ENGINEERS, INC.
8845 ERMA RD SUITE 204
SAN DIEGO, CA 92131
(858) 455-8600 FAX (858)453-7587
JOB # 15.8.00

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
M
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

SCHEDULES & NOTES

M1.0

FAN COIL SCHEDULE

MARK	DESCRIPTION	SERVICE	CFM	OSA (CFM)	ESP (IN. WG.)	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	ELECTRICAL DATA					OPER. WEIGHT (LBS.)	BASED ON:		REMARKS
								MCA	MOCP	VOLT	PH	HZ		MANUFACTURER	MODEL	
FC 11	HORIZONTAL CEILING RECESSED	FUTURE OFFICE	1200	150	Ø.3	36.0	36.0	6.0	15	208/230	1	60	153	FIRST CO.	37HXX0-C	W/ MOUNTED KIT & PROGR. T-STAT, TXV, ECM MOTOR, ENCLOSURES MERV-8 FILTER

CONDENSING UNIT SCHEDULE (HEAT PUMP)

MARK	LOCATION	SERVICE	REFRIG. TYPE	SEER	HSPF	COOLING CAPACITY (MBH)		HEATING CAPACITY (MBH)	AMB. TEMP. °F	ELECTRICAL DATA					OPER. WEIGHT (LBS.)	BASED ON:		REMARKS
						TOTAL	SENSIBLE			MCA	MOCP	VOLT	PH	HZ		MANUFACTURER	MODEL	
CU 11	GROUND	FC-1	R-410A	14.0	8.2	36.0	30.0	36.0	95	19.0	30	208/230	1	60	196	CARRIER	25HHA436	PROVIDE W/ LONG REFRIG. LINE APPLICATION KIT, WALL MOUNTED KIT

FAN SCHEDULE

MARK	DESCRIPTION	FAN DATA									OPER. WEIGHT (LBS.)	BASED ON:		REMARKS
		CFM	DRIVE	TSP (IN. WG.)	RPM	SONES	ELECTRICAL DATA					MANUF.	MODEL	
							HP	VOLT	PH	HZ				
GEP 1	IN-LINE FAN	11,000	BELT	0.5	1066	19.8	5	208	3	60	530	GREENHECK	BSQ-300HP	W/ BACKDRAFT DAMPER, SPRING ISOLATOR MOUNTING KIT, MOTOR ON SIDE
EF 1	MULTI-SPEED FAN	80	DIRECT	0.15	-	Ø.3	Ø.3 AMPS	115	1	60	12	BROAN	ZB-80	W/ BACKDRAFT DAMPER, ENERGY STAR FAN, CONTINOUSLY RUN AT LOW SPEED (40 CFM) FOR WHOLEHOUSE VENTILATION, OVERRIDE ON/OFF SWITCH
EF 2	CEILING MOUNTED	105	DIRECT	0.25	-	Ø.3	8 WATTS	115	1	60	10	BROAN	XB110	W/ BACKDRAFT DAMPER, CONTROLLED BY LIGHT SWITCH
EF 3	CEILING MOUNTED	50	DIRECT	0.25	-	Ø.3	8 WATTS	115	1	60	10	BROAN	XB50	W/ BACKDRAFT DAMPER, CONTROLLED BY LIGHT SWITCH
EF 4	CEILING MOUNTED	105	DIRECT	0.25	-	Ø.3	8 WATTS	115	1	60	10	BROAN	XB110	W/ BACKDRAFT DAMPER, CONTROLLED BY LIGHT SWITCH

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION & PROVIDE REPAIR OF ADJACENT EXISTING SURFACES, EQUIPMENT, AREAS & PROPERTY THAT MAY BE DAMAGED AS RESULT OF ANY DEMOLITION AND/ OR NEW WORK.
2. CONTRACTOR SHALL COORDINATE ALL DUCT, PIPE AND EQUIPMENT LOCATIONS WITH ELECTRICAL, STRUCTURAL, PLUMBING AND ALL OTHER TRADES.
3. ROOF ACCESS LADDER SHALL COMPLY WITH SECTION 9108 CMC.
4. PROVIDE SMOKE DETECTOR IN MAIN SUPPLY AIR DUCTS OF AIR MOVING SYSTEMS EXCEEDING 2,000 CFM PER SECTION 6093.0 CMC.
5. EQUIPMENT ACCESS SHALL CONFORM TO UBC SECTION 505.
6. DUCTWORK FABRICATION AND INSTALLATION SHALL CONFORM TO THE "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" AS PUBLISHED BY SMACNA 1995 EDITION.
7. MATERIAL EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2 CMC.
8. PROVIDE BALANCING VOLUME DAMPERS IN EACH BRANCH DUCT AND EACH MAIN DUCT TO PROVIDE FOR COMPLETE AIR BALANCING. PROVIDE ADEQUATE ACCESS. OPPOSED BLADE DAMPER (OBD) ARE NOT CONSIDERED BALANCING DAMPER.
9. ALL DAMPERS THAT ARE LOCATED IN HARD CEILING AREA SHALL BE PROVIDED WITH ACCESS PANEL ON CEILING OR REMOTE VOLUME DAMPER SHALL BE PROVIDED.
10. INSULATED DUCT SHALL REMAIN UNCOVERED UNTIL DUCT JOINTS HAVE BEEN APPROVED BY THE INSPECTOR OF RECORD.
11. ALL DRAWINGS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW & COORDINATION OF ALL DRAWINGS PRIOR TO ANY CONSTRUCTION, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING & ELECTRICAL. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO THE START OF CONSTRUCTION SO THAT CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
12. ALL WORK SHALL BE IN ACCORDANCE WITH CITY CODES, STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS AND ALL OTHER APPLICABLE CODES.
13. EXHAUST DUCTS AND DRYER VENTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS.
14. DUCT OPENINGS AND OTHER RELATED AIR DISTRIBUTION OPENINGS SHALL BE COVERED DURING CONSTRUCTION.

ENERGY COMPLIANCE NOTES

THE FOLLOWING SHALL BE COMPLIED WITH UNLESS MORE RESTRICTIVE REQUIREMENTS ARE SHOWN ON THE PLANS OR CALLED FOR IN THE SPECIFICATIONS.

1. INSULATION MATERIAL SHALL MEET THE CALIFORNIA QUALITY STANDARD PER SECTION 118 ENERGY EFFICIENCY STANDARDS (E.E.S.)
2. DOORS AND WINDOWS SHALL MEET THE MINIMUM INFILTRATION REQUIREMENTS PER SECTION 116 E.E.S.
3. ALL PIPING AND DUCTWORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 120.3, 120.4 AND 120.7 ENERGY STANDARDS AND CHAPTER 6 OF C.M.C.
4. ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTIONS 110.1-110.3, 120.1-120.4 TITLE-24 ENERGY STANDARDS.
5. ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTIONS 110.2 AND 120.2 E.E.S

Consultant
BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
(858)549-7222 FAX(858)549-7587
JOB # 18.8.010

Developer
Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

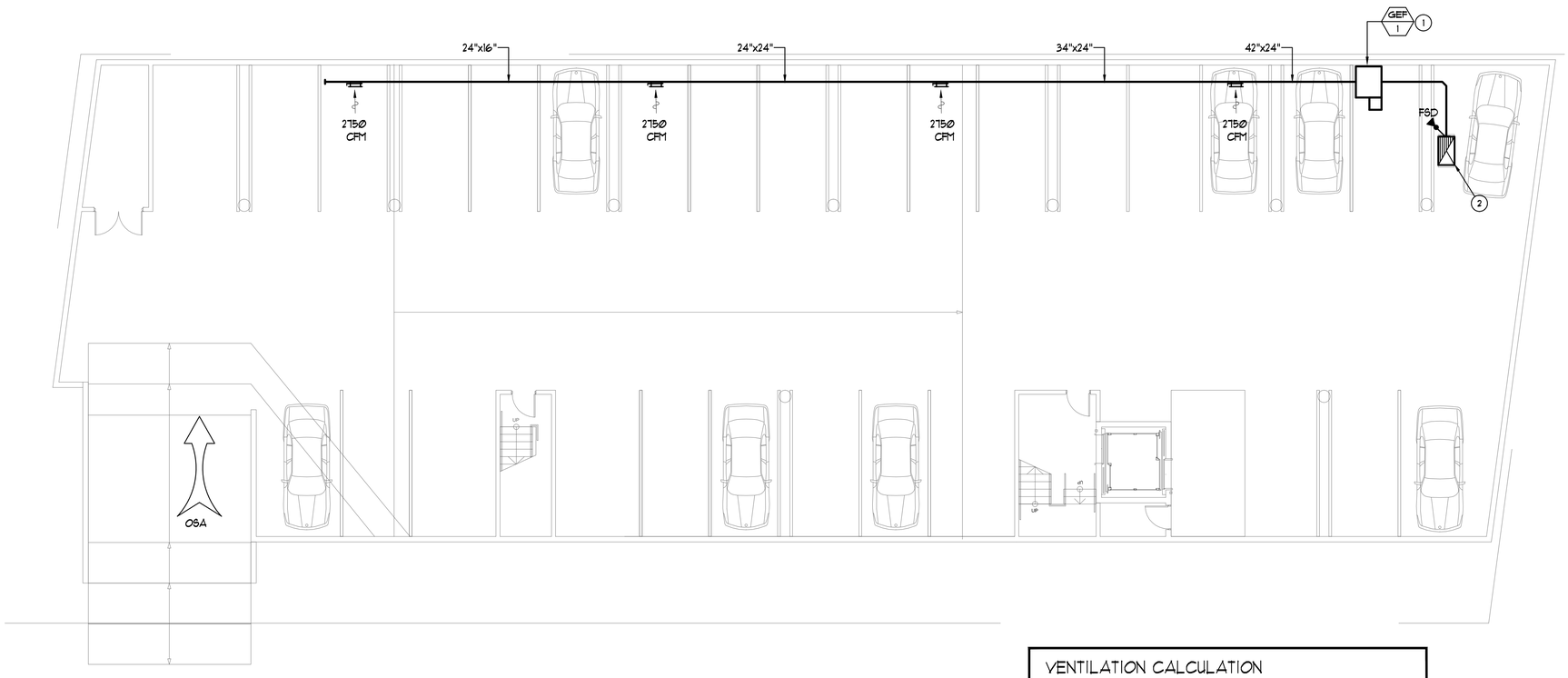
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
TOM
M32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

SCHEDULES & NOTES

M1.0



VENTILATION CALCULATION

No. OF CARS:	30 CARS
REQUIRED CFM:	30 CARS x 0.025 x 14,000 CFM/CAR = 10,500 CFM
DESIGN CFM:	11,000 CFM

1 FLOOR PLAN LEVEL P0

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

KEYNOTES:

1. MOUNT EXHAUST FAN AS HIGH AS POSSIBLE TO MAXIMIZE SPACE BELOW.
2. 42"x24" GARAGE EXHAUST AIR DUCT UP IN FIRE RATED SHAFT.

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
TEL 858.549.1500 FAX 858.453-7587
JOB # 18.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

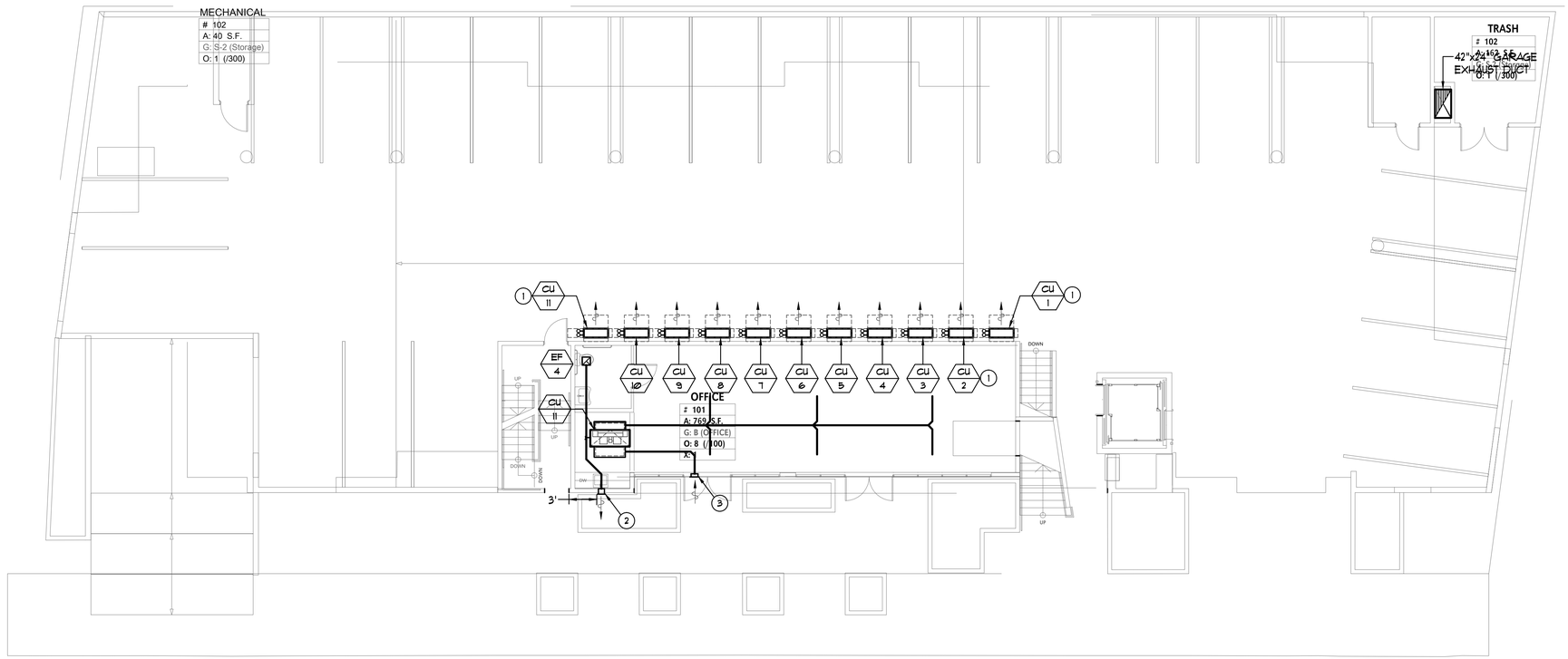
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
M32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

FLOOR PLAN
LEVEL P0

M2.0



1 GROUND LEVEL PLAN

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

KEYNOTES:

1. MOUNT CONDENSING UNIT 60" AFF.
2. 12"x6" EXHAUST WALL LOUVER.
3. 12"x12" INTAKE AIR WALL LOUVER ABOVE DOOR.

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
TEL (858)549-7857 FAX(858)453-7587
JOB # 16.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

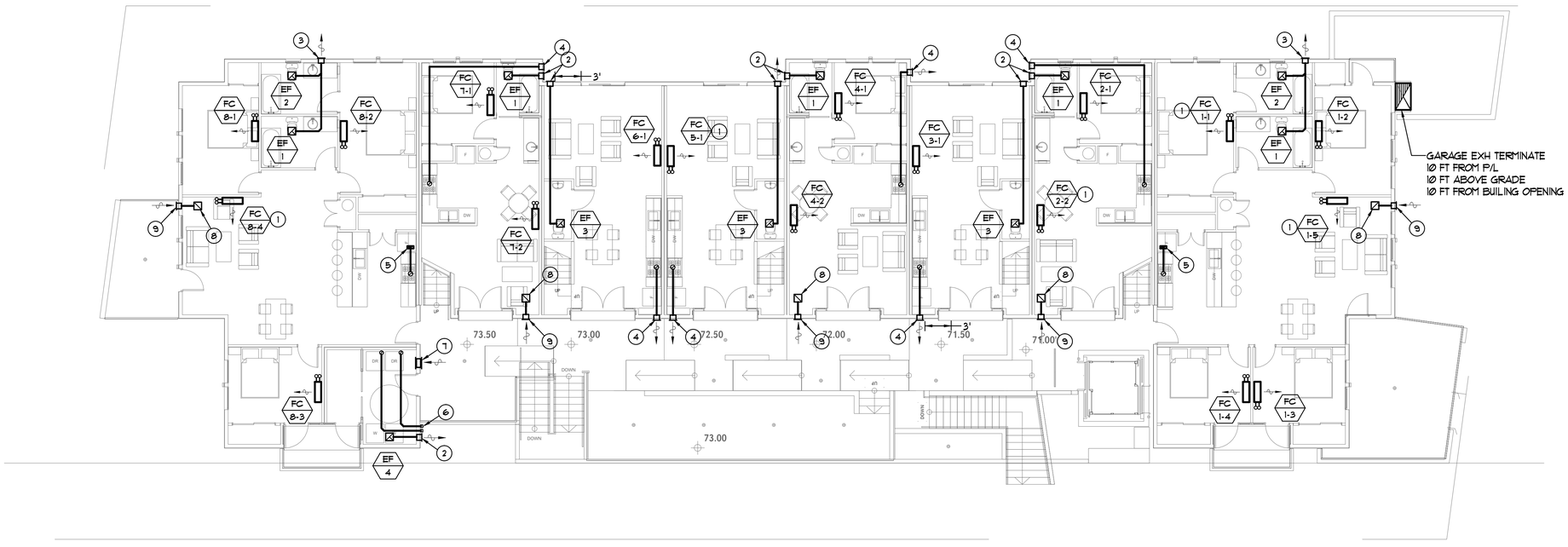
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

GROUND LEVEL PLAN

M3.1



1 MECHANICAL LEVEL 2 PLAN

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

KEYNOTES:

1. HIGH WALL MOUNTED FAN COIL UNIT SEE DETAIL.
2. 12"x6" EXHAUST AIR WALL LOUVER.
3. 12"x12" EXHAUST AIR WALL LOUVER.
4. 7"ø OR 10"x3-1/4" RANGE HOOD EXHAUST AIR THRU WALL WITH VENT CAP.
5. 10"x3-1/4" RANGE HOOD EXHAUST AIR VENT TO ROOF IN STUD WALL.
6. 4"ø DRYER VENT THRU WALL WITH VENT CAP.
7. 18"x18" INTAKE AIR WALL LOUVER.
8. OUTSIDE AIR INTAKE GRILL WITH REMOVABLE FILER.
9. 4"ø OUTSIDE AIR DUCT WITH BAROMETRIC CONNECT TO 6"x6" INTAKE AIR WALL LOUVER.

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
TEL: 858.549.7857 FAX: 858.549.7587
JOB # 18.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

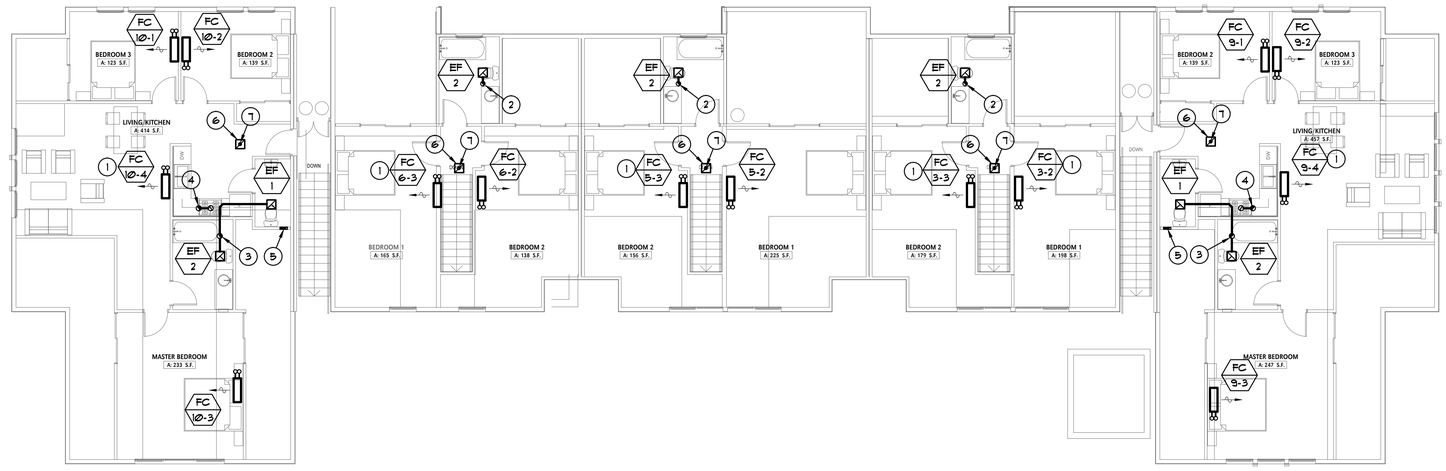
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
M
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

MECHANICAL
LEVEL 2 PLAN

M3.2



1 MECHANICAL LEVEL 3 PLAN

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

KEYNOTES:

1. HIGH WALL MOUNTED FAN COIL UNIT SEE DETAIL.
2. 6"ϕ EXHAUST AIR DUCT VENT TO ROOF WITH CAP.
3. 8"ϕ EXHAUST AIR DUCT VENT TO ROOF WITH CAP.
4. 7"ϕ RANGE HOOD EXHAUST AIR VENT TO ROOF WITH CAP.
5. 10"x3-1/4" RANGE HOOD EXHAUST AIR VENT TO ROOF WITH CAP.
6. OUTSIDE AIR INTAKE GRILL WITH REMOVABLE FILTER.
7. 4"ϕ OUTSIDE AIR DUCT UP THRU ROOF WITH BAROMETRIC DAMPER.

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
TEL 858.549.7857 FAX 858.549.7587
JOB # 18.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

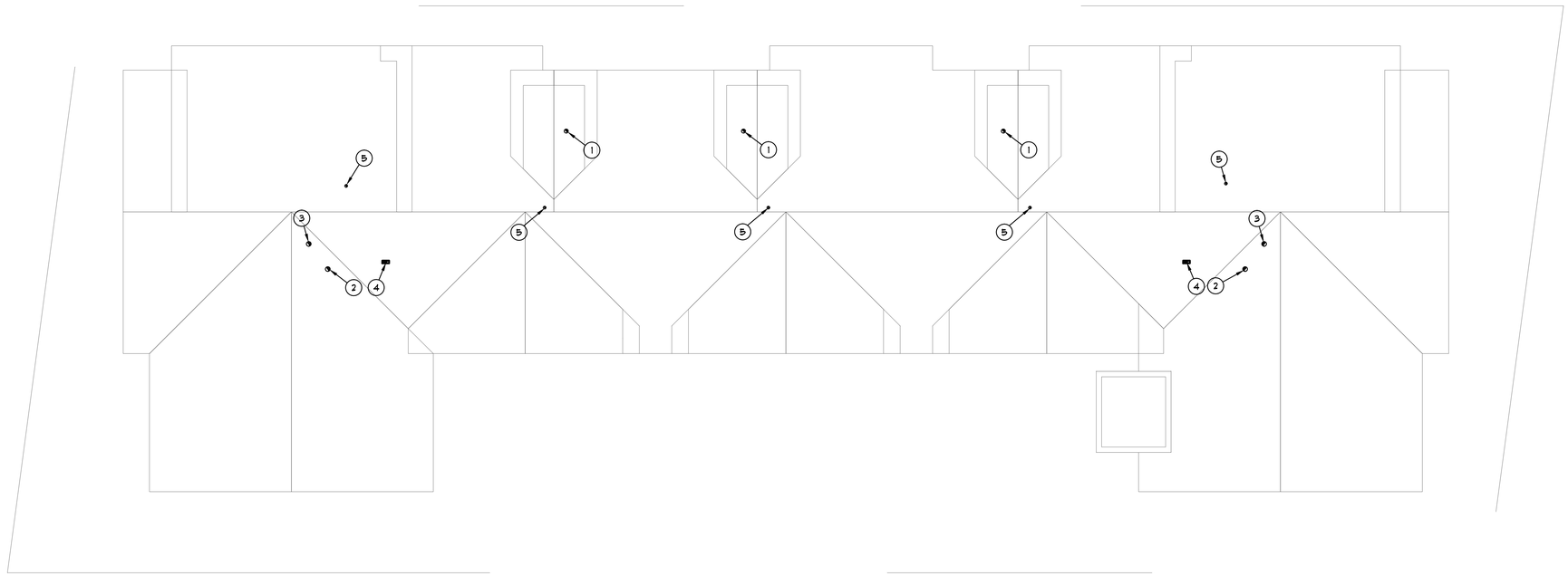
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
TOM LEE
M32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

MECHANICAL LEVEL 3 PLAN

M3.3



1 MECHANICAL ROOF PLAN

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

KEYNOTES:

1. 6"ϕ EXHAUST AIR VENT CAP.
2. 8"ϕ EXHAUST AIR VENT CAP.
3. 7"ϕ RANGE HOOD EXHAUST AIR VENT CAP.
4. 10"x3-1/4" RANGE HOOD EXHAUST AIR VENT CAP.
5. 4"ϕ OUTSIDE AIR VENT CAP.

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
TEL: (858) 549-7857 FAX: (858)453-1587
JOB # 18.8.020

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
C. O. M. L.
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

MECHANICAL ROOF PLAN

M3.4

ABBREVIATIONS

1.-MOUNTING HEIGHTS INDICATE CENTER OF ELECTRICAL OUTLET ABOVE FINISH FLOOR.

ABBREVIATIONS:

A	AMPERE (AMP)	MATV	MASTER ANTENNA TELEVISION
AC	ALTERNATING CURRENT	MAX	MAXIMUM
ACC	ACCESSIBLE	MCM	THOUSAND CIRCULAR MILS.
AFF	ABOVE FINISH FLOOR	MDF	MAIN DISTRIBUTION FRAME
AFG	ABOVE FINISH GRADE	MDP	MAIN DISTRIBUTION PANEL
AIC	AMPS INTERRUPTING CAPACITY	MECH	MECHANICAL
AL	ALUMINUM	MLO	MAIN LUGS ONLY
ANN	ANNUNCIATOR	MN	MINIMUM
APPROX	APPROXIMATE	MPC	MINI POWER CENTER
A.P.U.	ANAHEIM PUBLIC UTILITIES	MSB	MAIN SWITCHBOARD
ASYM	ASYMMETRICAL	MTD	MOUNTED
AWG	AMERICAN WIRE GAUGE	MTB	MAIN TELEPHONE TERMINAL BOARD
AT	AMP TRIP	MTG	MOUNTING
BC	BARE COPPER	N	NEUTRAL (NEUT)
BDF	BUILDING DISTRIBUTION FRAME	N/A	NOT APPLICABLE
BLDG	BUILDING	NC	NORMALLY CLOSED
BKBD	BACKBOARD	NEC	NATIONAL ELECTRICAL CODE
BFG	BELOW FINISH GRADE	NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
C	CONDUIT		
CATV	CABLE TELEVISION	NF	NON FUSED
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CL	CURRENT LIMITING	NL	NIGHT LIGHT
CLG	CEILING	NO	NORMALLY OPEN
CO	CONDUIT ONLY EMPTY RACEWAY WITH PULL WIRE	#	NUMBER
		NTS	NOT TO SCALE
COMM	COMMUNICATION	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CONT	CONTINUATION (CONTINUED)		
CU	COPPER	P	POLE
CWP	COLD WATER PIPE	PMS	PROPERTY MANAGEMENT SERVICE
DE	DUAL ELEMENT	PNL	PANEL
DP	DISTRIBUTION PANEL	POC	POINT OF CONNECTION
EDF	ELECTRIC DRINKING FOUNTAIN	PRI	PRIMARY
EF	EXHAUST FAN	PSI	POUNDS PER SQUARE INCH
ELECT	ELECTRICAL	PSLD	POWER SINGLE LINE DIAGRAM
EMERG	EMERGENCY (EM)	PVC	POLY VINYL CHLORIDE
EMT	ELECTRICAL METALIC TUBING	PWR	POWER
EOL	END OF LINE RESISTOR	RM	ROOM
EQUIP	EQUIPMENT	RSC	RIGID STEEL CONDUIT
ETC	ETCETERA	SCWR	SHORT CIRCUIT WITHSTAND RATING RMS SYMM AMPS
EUH	ELECTRIC UNIT HEATER		
EWC	ELECTRIC WATER COOLER	SD	SMOKE DETECTOR
EWH	ELECTRIC WALL HEATER	SEC	SECONDARY
EXIST	EXISTING	SHT	SHEET
FA	FIRE ALARM	SPECS	SPECIFICATIONS
FAAP	FIRE ALARM ANNUNCIATOR PANEL	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SYMM	SYMMETRICAL
FIXT.(FIX)	FIXTURE	S/S	STAINLESS STEEL
FLUOR	FLUORESCENT	TD	TIME DELAY
FS	FUSED SWITCH	TELE	TELEPHONE (TEL) (T)
GA	GAUGE	TS	TIME SWITCH
GD	GARBAGE DISPOSAL	TTB	TELEPHONE TERMINAL BOARD
GFI	GROUND FAULT INTERRUPTER	TTC	TELEPHONE TERMINAL CABINET
GRD	GROUND (G) (GND) (GRND)	TYP	TYPICAL
HID	HIGH INTENSITY DISCHARGE	UG	UNDERGROUND
HP	HORSEPOWER	UGPS	UNDERGROUND PULL SECTION
HPS	HIGH PRESSURE SODIUM	UL	UNDERWRITER'S LABORATORY
ID	INSIDE DIMENSION	UON	UNLESS OTHERWISE NOTED
IDF	INTERMEDIATE DISTRIBUTION FRAME	UTP	UNSHIELDED TWISTED PAIR CATEGORY 5 CABLE
IG	ISOLATED GROUND (ISO GRD)		
INCAN	INCANDESCENT	VA	VOLT-AMPERES
J	JUNCTION	W	WIRE
KV	KILOVOLT	WP	WEATHERPROOF DEVICE
KVA	KILOVOLT-AMPERE	XFMR	TRANSFORMER
KW	KILOWATT	Z	IMPEDANCE
LGT	LIGHT (LT)	Φ	PHASE (PH)
LTG	LIGHTING	41K	4100 DEGREES KELVIN
LV	LOW VOLTAGE		

LEGEND

OC b #1	LIGHTING CONTROLLER OCCUPANCY SENSOR, CEILING MOUNTED. NUMBER INDICATES TYPE OF OCCUPANCY SENSOR USED. CONNECT SENSOR TO NORMAL POWER SUCH THAT LIGHT FIXTURES IN AREA WILL AUTOMATICALLY BE CONTROLLED. LETTER INDICATES LIGHT FIXTURES TO BE CONTROLLED BY OCCUPANCY SENSOR.
	OCCUPANCY SENSOR #1 — SENSOR FOR CORRIDOR APPLICATION. AREA TO COVER 2,000 SQ.FT. WATT STOPPER #WA-2000H
	OCCUPANCY SENSOR #2 — SENSOR FOR OFFICE/CORRIDOR APPLICATION. AREA TO COVER 2,000 SQ.FT. WATT STOPPER #WA-2000A
	OCCUPANCY SENSOR #3 — SENSOR FOR OFFICE APPLICATION. AREA TO COVER 500 SQ.FT. WATT STOPPER #WA-500A
	OCCUPANCY SENSOR #4 — SENSOR FOR OFFICE APPLICATION. AREA TO COVER 1,200 SQ.FT. WATT STOPPER #DT-100L
ab MS	WALL MOUNTED MOTION SENSOR AND OUTLET, +45"; "WATT STOPPER" # WA-200 (SINGLE-LEVEL SWITCHING) OR #WA-300 (BI-LEVEL SWITCHING)
F	FIRE ALARM STROBE LIGHT AND OUTLET, +80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
F	FIRE ALARM MANUAL PULL STATION AND OUTLET +45" FLUSH MOUNTED
F	FIRE ALARM HORN/STROBE LIGHT, AND OUTLET, +80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
TS	MECHANICAL FIRE SPRINKLER ALARM TAMPER SWITCH AND ELECTRICAL OUTLET
PIV	MECHANICAL FIRE SPRINKLER ALARM POST INDICATOR VALVE/TAMPER SWITCH & ELECTRICAL OUTLET.
FS	MECHANICAL FIRE SPRINKLER ALARM FLOW SWITCH AND ELECT. OUTLET.
FAAP	FIRE ALARM ANNUNCIATOR PANEL FLUSH MOUNTED (U.O.N.).
FACP	FIRE ALARM CONTROL PANEL AND BATTERY CABINET.
S R	FIRE ALARM IONIZATION SMOKE DETECTOR AND OUTLET, CLG. MTD., R=ELEV. RECALL.
H	FIRE ALARM HEAT DETECTOR AND OUTLET, CEILING MOUNTED.
SD	120V SINGLE STATION COMBINATION CARBON MONOXIDE, SMOKE DETECTOR & HORN (SMOKE ALARM). DETECTOR TO BE PROVIDED WITH BATTERY BACK-UP. DETECTORS SHALL BE INTERCONNECTED TO SOUND AT THE SAME TIME.
F	SMOKE DETECTOR SYSTEM STROBE LIGHT AND OUTLET, +80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
SD ADA	120V CEILING MOUNTED SMOKE DETECTOR (SMOKE ALARM). ADA = COMBINATION SMOKE DETECTOR WITH VISUAL STROBE.
SD	120V WALL MOUNTED SMOKE DETECTOR OR CARBON MONOXIDE/SMOKE DETECTOR.
	MECHANICAL MOTOR AND ELECTRICAL POWER OUTLET AND CONNECTIONS.
	RACEWAY STUB-UP.
	RACEWAY STUB-DOWN.
CTV	CABLE TV SYSTEM RACEWAY.
H	DOOR SIGNAL PUSH BUTTON AND OUTLET. +45" AFF, (U.O.N.).
TV	CATV OUTLET, FLUSH WALL MOUNTED, VERTICAL +18" AFF (U.O.N.) PROVIDE ¾"C.O. FROM OUTLET AND STUBBED INTO ACCESSIBLE CEILING SPACE. (TO TELECOMM CABINET FOR DWELLING UNITS).
1 E2	DETAIL #1 SHOWN ON SHEET E2.
P SK	SWITCH & OUTLET, P = PILOT LIGHT; K = KEY OPERATED; +45"AFF.
	DUPLEX CONVENIENCE RECEPTACLE AND OUTLET, SPLIT WIRED, ONE-HALF MOTION SENSOR CONTROLLED BY ROOM LIGHTING OCCUPANCY SENSOR. PROVIDE ENGRAVING PER TITLE 24. VERTICAL +18" U.O.N.

LEGEND

A 2 a	LED, HID, COMPACT FLUORESCENT LIGHTING FIXTURE AND OUTLET, CEILING, PENDANT, WALL MOUNTED. SWITCH a, CIRCUIT 2, A IN FIXTURE SCHEDULE.
B 2 ab	FLUORESCENT LIGHTING FIXTURE AND OUTLET, CEILING, PENDANT, WALL MOUNTED, SWITCH a INNER LAMPS AND b OUTER LAMPS, CIRCUIT 2, B IN FIXTURE SCHEDULE.
	POLE MOUNTED LIGHTING FIXTURE.
E E	EXIT SIGN LIGHTING FIXTURE AND OUTLET, DIRECTIONAL ARROWS AS INDICATED, CEILING, PENDANT, WALL +7'-6" MOUNTED, ILLUMINATED FACES INDICATED BY FILLED QUADRANTS, E IN FIXTURE SCEHEDULE.
S 3 ab	SINGLE POLE TOGGLE SWITCHES & OUTLET, ab=LIGHTING, FIXTURES CONTROLLED & NUMBER OF SWITCHES AT SAME OUTLET & PLATE. +45", 3 = 3WAY.
S M	MANUAL MOTOR STARTING SWITCH & OUTLET, HORSEPOWER RATED, WITH THERMAL OVERLOADS, "ON" PILOT LIGHT, NEMA 1 INTERIOR, 3R EXTERIOR. +45".
S BT-1	LIGHTING OVERRIDE SWITCH (PER T24 LIGHTING OFFICE CONTROLS MEASURES). CONNECT AS REQUIRED TO CONTROL LIGHTING AREA. PROVIDE WITH NAMEPLATE TO READ: "LIGHTING OVERRIDE SWITCH", +45".
S D	DIMMER SWITCH & OUTLET, +45". WATTAGE & TYPE TO SUIT LIGHTING LOADS.
ab MS	WALL MOUNTED MOTION SENSOR AND OUTLET, +45"; "LUTRON" #LOS-SIR-M-WH (SINGLE-LEVEL SWITCHING) OR #LOS-521R-HD-WH (BI-LEVEL SWITCHING)
GFI 2	DUPLEX CONVENIENCE RECEPTACLE AND OUTLET, VERTICAL +18". CIRCUIT 2, GFI= GROUND FAULT, CIRCUIT INTERRUPTER WITH PUSH-TO-TEST AND RESET BUTTONS.
	QUADRUPLEX (DOUBLE DUPLEX) RECEPTACLE AND OUTLET.
	DEDICATED DUPLEX RECEPTACLE AND OUTLET.
	DUPLEX CONVENIENCE RECEPTACLE AND OUTLET, +44" AFF U.O.N. VERTICAL, GROUND FAULT, CIRCUIT INTERRUPTER WITH PUSH-TO-TEST AND RESET BUTTONS, 20A, 125V, 3W, NEMA 5-20R RECEPTACLE.
	DUPLEX CONVENIENCE RECEPTACLE AND OUTLET, VERTICAL +18". TAMPER PROOF TYPE RECEPTACLE.
	DUPLEX CONVENIENCE RECEPTACLE AND OUTLET, +44"AFF U.O.N. VERTICAL, GFI AND TAMPER PROOF TYPE RECEPTACLE.
	DUPLEX CONVENIENCE RECEPTACLE AND OUTLET, SPLIT WIRED, ONE-HALF SWITCH CONTROLLED. VERTICAL +18". AFCI AND TAMPER PROOF TYPE RECEPTACLE.
	DOOR SIGNAL PUSH BUTTON AND OUTLET.
	PANELBOARD, SURFACE MOUNTED.
	PANELBOARD, FLUSH MOUNTED.
	TELEPHONE AND OUTLET, +18" AFF.
	TELEPHONE/DATA OUTLET, FLUSH WALL MOUNTED, VERTICAL +18"AFF (U.O.N.) PROVIDE (1) 1"C.O. FROM OUTLET TO TELEPHONE BACKBOARD "TB".
J J	JUNCTION BOX WALL/CEILING MOUNTED.
	RACEWAY RUN UNDER FLOOR OR UNDERGROUND.
	RACEWAY RUN CONCEALED IN WALL OR ABOVE CEILING.
	RACEWAY RUN UNDER FLOOR OR UNDERGROUND.
	RACEWAY RUN EXPOSED
G A-1,3 TTB	HOMERUN, A=PANEL; 1,3=CIRCUITS, G=EQUIP. AND/OR ISOLATED GROUND BOND; CONTINUE TO RESPECTIVE PANEL OR TERMINATION (A, TTB, ETC.) AS IF ROUTING WAS SHOWN IN ITS ENTIRETY.
	FLEXIBLE CONDUIT AND CONDUCTORS SAME AS BRANCH CIRCUIT, PROVIDE 1/2"C-3#12 AWG TO DUAL SWITCHED LIGHTING FIXTURES.
MINIMUM RACEWAY & CONDUCTOR SIZES, UON	1/2"C-2#12AWG; 1/2"C-3#12AWG; 1/2"C-4#12AWG; 3/4"C-5#12AWG; 3/4"C-6#12AWG; 3/4"C-8#12AWG
	CIRCUIT BREAKER
HP 2	MECHANICAL EQUIPMENT AND ELECTRICAL CONNECTIONS.
F 100AS 70AF 3P	HEAVY DUTY, 600 VOLT, DISCONNECT SAFETY SWITCH (F=FUSED), NEMA 1 INTERIOR AND NEMA 3R EXTERIOR; AMP RATING AND NUMBER OF POLES AS REQUIRED. FUSES PER EQUIPMENT NAMEPLATE, CLASS RK1, BUSSMANN #LPN-RK/LPS-RK; CL, DE, TD, +48" OR EQUIPMENT MOUNTED. 200,000 UL RMS SYM AIC RATING 100 AMP FUSED SWITCH RATING, 70 AMP FUSE SIZE, THREE POLE, CLASS RK1 FUSES, BUSSMAN #LPN-RK/LPS-RK, CL, DE, TD, FOR MOTOR LOADS AND MECHANICAL EQUIPMENT. BUSSMANN #KWN-R/KWS-R; CURRENT LIMITING, FAST ACTING FOR ALL OTHERS. U.O.N. MAXIMUM OF 10,000 A SYM LET THRU WITH A MAXIMUM OF 42,000A SYM AVAILABLE FOR FUSES UP TO 600 AMPS.
H	HANDHOLE, PRECAST CONCRETE, [STEEL PLATE BOLT DOWN COVER H20 BRIDGE LOADING], LETTERS "LIGHTING" ON COVER, 8-3/4" X 14-1/8" X 22" DEEP ID U.O.N. SET ON ONE CUBIC FOOT OF GRAVEL WITH TOP 1" ABOVE FINISH GRADE.
	MAIN SERVICE SWITCHBOARD, DISTRIBUTION SWITCHBOARD, POWER PANELBOARD.
	GROUNDING/GROUND ROD.
CATV	CATV RACEWAY RUN CONCEALED IN WALL OR ABOVE CEILING.
T	TELEPHONE SYSTEM RACEWAY.
TTB	RACEWAY STUB OUT (WITH ELL) & CAP (ABOVE FINISH GRADE).
	TELEPHONE TERMINAL BOARD.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, and plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\Vtech01\Shared\Docs\C & G Engineering\20-16-101 The Pearl\E-0.1.dwg, 5/21/2018 8:36:04 AM

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110, SAN DIEGO, CA 92101
PHONE: (619) 298-3493 FAX (619) 298-3492

Consultant

Developer

Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

LEGEND

E-01

FIRE ALARM AND DETECTION SYSTEM

1. CONTRACTOR SHALL PROVIDE A NEW COMPLETE FIRE ALARM AND DETECTION SYSTEM AS INDICATED HEREIN, ON THE DRAWINGS, AND SPECIFICATIONS SECTION 13850. FIRE ALARM SYSTEM SHALL DESIGNED, FURNISHED, INSTALLED AND CONNECTED BY A QUALIFIED, STATE OF CALIFORNIA LICENSED FIRE ALARM CONTRACTOR WITH MINIMUM 10 YEARS OF DOCUMENTED EXPERIENCE.

2. FIRE ALARM SYSTEM SHALL CONSIST OF (BUT NOT LIMITED TO) MANUAL PULL STATIONS, SMOKE DETECTORS, HEAT DETECTORS, DUCT SMOKE DETECTORS, CARBON MONOXIDE DETECTORS, ALARM NOTIFICATION DEVICES (HORNS, ADA STROBES), FIRE SPRINKLER FLOW SWITCH DETECTORS, FIRE SPRINKLER TAMPER SWITCHES, FIRE SPRINKLER POST INDICATOR VALVES, CONTROL PANELS, DOOR HOLD OPEN DEVICES, FIRE DOORS AND FIRE CURTAIN CONNECTIONS MECHANICAL FIRE SMOKE DAMPERS, ANNUNCIATORS, BATTERIES, BATTERY CHARGER, TELEPHONE DIALERS, TERMINAL CABINETS, WIRING, RACEWAYS, AND MISCELLANEOUS DEVICES.

3. EQUIPMENT AND SYSTEM OPERATION SHALL BE PROVIDED AS REQUIRED TO MEET THE LOCAL AUTHORITY HAVING JURISDICTION, THE FIRE MARSHALL AND/OR APPLICABLE (LATEST ADOPTED EDITIONS OF: NFPA, CALIFORNIA BUILDING CODE, CALIFORNIA FIRE CODE, AND CALIFORNIA ELECTRICAL CODE) CODES FOR THIS BUILDING'S OCCUPANCY. BUILDING HAS OCCUPANCY TYPE MIXED-USE RESIDENTIAL AND COMMERCIAL.

4. ALL FIRE ALARM EQUIPMENT SHALL BE STATE OF CALIFORNIA FIRE MARSHALL LISTED AND UL LISTED. SUBMIT SHOP DRAWINGS (WHICH SHOULD INCLUDE, BUT NOT LIMITED TO, POINT TO POINT WIRING DIAGRAMS, VOLTAGE DROP AND BATTERY CALCULATIONS), SEQUENCE OF OPERATION AND PROPOSED EQUIPMENT CUTSHEETS TO AUTHORITY HAVING JURISDICTION, ARCHITECT, AND MARRIOTT'S FIRE PROTECTION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. ALL WIRING SHALL BE IN CONCEALED RACEWAYS.

5. LOCATIONS OF ALL FIRE ALARM AND DETECTION SYSTEM DEVICES SHALL BE APPROVED BY ARCHITECT AND FIRE MARSHALL.

6. ALL FIRE ALARM EQUIPMENT SHALL BE FROM A SINGLE MANUFACTURER.

7. FIRE ALARM CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND FIRE SPRINKLER CONTRACTORS FOR TYPE, LOCATION, QUANTITY AND CONNECTION REQUIREMENTS OF DUCT SMOKE DETECTORS, FIRE SMOKE DAMPERS, FIRE SPRINKLER FLOW SWITCHES, FIRE SPRINKLER TAMPER SWITCHES, AND FIRE SPRINKLER POST INDICATOR VALVES. FOR DUCT SMOKE DETECTORS AND FIRE SMOKE DAMPER CONNECTIONS REFER TO MECHANICAL WIRING DETAILS PROVIDE 120V CIRCUIT TO EACH DUCT SMOKE DETECTOR AND CONNECT AS REQUIRED TO FIRE ALARM SYSTEM SIGNAL.

8. BUILDING HAS ONE ELEVATOR. PROVIDE SMOKE DETECTOR IN ELEVATOR LOBBIES, ELEVATOR MACHINE ROOMS AND ELEVATOR SHAFTS FOR ELEVATOR RECALL. PROVIDE HEAT DETECTORS IN ELEVATOR SHAFTS AND ELEVATOR MACHINE ROOMS; CONNECT HEAT DETECTORS SUCH THAT THE ELEVATOR FEEDER CIRCUIT BREAKER WILL TRIP OPEN UPON HEAT DETECTOR ACTIVATION. ELEVATOR SMOKE AND HEAT DETECTORS SHALL BE CONNECTED TO THE FACP. ELEVATOR SHAFT SMOKE AND HEAT DETECTORS SHALL BE ACCESSIBLE AND INSTALLED AS REQUIRED BY AHJ AND ELEVATOR CODE REQUIREMENTS. DEVICES MUST BE ACCESSIBLE FROM OUTSIDE THE ELEVATOR SHAFT OR HOISTWAY (PROVIDE APPROVED FIRE RATED ACCESS DOORS AS REQUIRED).

9. SMOKE DETECTORS SHALL BE INSTALLED 36 INCHES FROM HVAC GRILLS AND AWAY FROM CEILING FANS.

10. THE CENTER OF FIRE ALARM MANUAL PULL STATION DEVICES SHALL BE LOCATED 48 INCHES (MAX.) ABOVE THE LEVEL OF THE FLOOR PER AMERICAN DISABLITIES ACT SECTION 308.2 & SECTION 308.3. (CURRENT ADDITION)

11. EMERGENCY WARNING SYSTEMS AS PART OF THE FIRE-ALARM SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 72 AS AMENDED IN CHAPTER 35.

12. IN BUILDINGS OR PORTIONS OF BUILDINGS REQUIRING AUTOMATIC SPRINKLERS OR FIRE ALARMS, THE SYSTEMS MUST HAVE APPROVED VISUAL NOTIFICATION APPLIANCES FOR THE HEARING IMPAIRED INSTALLED PER NFPA 72G IN THE FOLLOWING AREAS: RESTROOMS, CORRIDORS, MULTIPURPOSE ROOMS, OCCUPIED ROOMS WHERE AMBIENT NOISE IMPAIRS HEARING OF THE FIRE ALARM, LOBBIES, MEETING ROOMS, ANY OTHER AREA FOR COMMON USE.

13. VISUAL AND AUDIBLE ALARMS WILL COMPLY WITH THE PROVISIONS OF NFPA 72G & CBC SECTION 1007.12

14. IF MORE THAN ONE SMOKE DETECTOR/SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN UNIT, SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE UNIT PE SECTION 907.2.11.3

15. A FIRE ALARM SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED AND INSTALLED IN ACCORDANCE PER CBC 1007.12

LEED REQUIREMENT NOTES

LEED REQUIREMENTS:
DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATIONS APPLY TO THIS SECTION. THIS SECTION INCLUDES GENERAL REQUIREMENTS AND PROCEDURES FOR COMPLIANCE WITH CERTAIN U.S. GREEN BUILDING COUNCILS (USGBC) LEED PREREQUISITES AND CREDITS NEEDED FOR THE PROJECT TO OBTAIN LEED FOR HOMES SILVER LEVEL CERTIFICATION UNDER THE LEED FOR HOMES REFERENCE GUIDE VERSION 1-2008. OTHER LEED PREREQUISITES AND CREDITS NEEDED TO OBTAIN LEED CERTIFICATION ARE DEPENDENT ON DESIGN AND MATERIAL SELECTIONS AND MAY NOT BE SPECIFICALLY IDENTIFIED AS LEED REQUIREMENTS. COMPLIANCE WITH REQUIREMENTS NEEDED TO OBTAIN LEED PREREQUISITES AND CREDITS MAY BE USED AS ONE CRITERION TO EVALUATE SUBSTITUTION REQUESTS. PLEASE REVIEW AND COMPLY WITH THE LEED FOR HOMES PROJECT CHECKLIST. ADDITIONAL LEED PREREQUISITES AND CREDITS NEEDED TO OBTAIN THE INDICATED LEED CERTIFICATION ARE DEPENDENT ON THE ARCHITECT'S DESIGN AND OTHER CONSULTANTS ASPECTS OF THE PROJECT. LEED SUBMITTALS WILL BE REQUIRED IN ADDITION TO OTHER SUBMITTAL REQUIREMENTS TO IDENTIFY MATERIAL COMPLIANCE AND ASSOCIATED COST PERCENTAGES AS IT PERTAINS TO CONSTRUCTION WASTE MANAGEMENT, RECYCLED CONTENT AND REGIONAL MATERIALS.

ELECTRICAL LEED PREREQUISITES:

EA 8.0 TITLE-24 LIGHTING
MEET THE REQUIREMENTS OF TITLE - 24 IN CALIFORNIA

ELECTRICAL LEED REQUIREMENTS:

EA 8.1 BASIC LIGHTING
SELECT AND INSTALL ONE OF BOTH OF THE FOLLOWING MEASURES:
A. INDOOR LIGHTING. INSTALL THREE ENERGY STAR LABELED LIGHT FIXTURES OR ENERGY STAR LABELED COMPACT FLUORESCENT LIGHT BULBS (CFL) IN ROOMS OTHER THAN THE KITCHEN.
B. EXTERIOR LIGHTING. INSTALL AT LEAST FOUR LIGHT FIXTURES WITH INTEGRATED PHOTOVOLTAIC CELLS. ALL OTHER EXTERIOR LIGHTING MUST HAVE MOTION SENSOR CONTROLS. THE FOLLOWING LIGHTING IS EXEMPT: EMERGENCY LIGHTING, LIGHTING REQUIRED BY CODE FOR HEALTH AND SAFETY PURPOSES; AND LIGHTING USED FOR EYE ADAPTATION NEAR COVERED VEHICLE ENTRANCES OR EXITS.

EA 8.2 ADVANCED LIGHTING:
MEET ONE OF THE FOLLOWING REQUIREMENTS:
A. INSTALL ONLY HIGH-EFFICACY LIGHTING FIXTURES IN THE HOME, AS DESCRIBED IN CHAPTER 6 OF THE CEC 2008 BUILDING ENERGY EFFICIENCY STANDARDS COMPLIANCE MANUAL.
B. EARN THE ENERGY STAR ADVANCED LIGHTING PACKAGE. AT LEAST 60% OF ALL FIXTURES MUST BE ENERGY STAR LABELED. ENERGY STAR LABELED CFLs MAY BE NOT BE USED TO SATISFY THIS REQUIREMENT.
C. AT LEAST 90% OF ALL LAMPS MUST BE ENERGY STAR LABELED. ENERGY STAR LABELED CFLs MAY BE USED TO SATISFY THIS REQUIREMENT.

ELECTRICAL GENERAL NOTES

1. ALL RECEPTACLES AND SWITCHES SHALL BE FLUSH WALL MOUNTED FOR ALL AREAS. U.O.N.
2. THE ELECTRICAL DRAWINGS ARE GENERALLY DIAGRAMMATIC. THE ELECTRICAL INSTALLATION SHALL BE COORDINATED WITH ALL OTHER TRADES SO THAT INTERFERENCES BETWEEN THE ELECTRICAL INSTALLATION AND ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND EQUIPMENT INSTALLATION ARE AVOIDED. REFER TO ARCHITECTURAL DRAWINGS
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ROOM AND AREA FINISHES, CEILING PLANS, DOOR SWINGS, FIRE-RELATED PARTITIONS, CABINET AND CASE WORK AND BUILT-IN DETAILS
4. CONTRACTOR SHALL PROVIDE ALL DISCONNECTS TO MEET LOCAL CODES.
5. CONTRACTOR SHALL VERIFY ALL DOOR SWINGS BEFORE INSTALLING LIGHT SWITCHES. ALL LIGHT SWITCHES TO BE INSTALLED ON STRIKE SIDE OF DOOR UNLESS SPECIFICALLY NOTED OTHERWISE.
6. ALL FINAL CONNECTIONS SHOWN ON THE DRAWINGS ARE ACTUAL REQUIREMENTS OF THE EQUIPMENT AND ARE SHOWN IN THEIR APPROXIMATE LOCATION.
7. ALL MOTOR STARTERS SHALL BE FURNISHED AND INSTALLED UNDER OTHER DIVISIONS OF WORK (U.O.N).
8. ALL RECEPTACLES, HORNS, VISUAL INDICATORS, EMERGENCY LIGHTS, PULL STATIONS AND EXIT LIGHTS MOUNTED ON THE EXTERIOR OF THE BUILDING AND AT THE INDOOR POOL SHALL BE THE WEATHERPROOF TYPE.
9. AUDIO/VISUAL INDICATOR SHALL BE INSTALLED ABOVE THE FIRE ALARM PULL STATION WHERE APPLICABLE AT APPROXIMATELY 6" BELOW CEILING.
10. THE LOCATION OF THE DATA & POWER OUTLETS WITHIN CABINET WORK SHALL BE COORDINATED IN THE FIELD WITH THE OWNER PRIOR TO ROUGH-IN.
11. ALL EXTERIOR EQUIPMENT AND DEVICES SHALL BE WEATHERPROOF AND RAIN TIGHT.
12. COORDINATE LOCATION OF CATV CABLE STUB UP WITH THE RISER LOCATION FOR SATELLITE AND CABLE TV.
13. COORDINATE ALL LIGHTING WITH MECHANICAL AND PLUMBING EQUIPMENT.
14. TOPS OF THE OUTLET BOX FOR SWITCHES USED TO CONTROL THERMOSTATS, AND OTHER ENVIRONMENTAL CONTROLS SHALL BE LOCATED NO HIGHER THAN 45 INCHES (1143MM) AND NO LOWER THAN 18 INCHES (458MM) TO THE BOTTOM OF THE BOX ABOVE THE FLOOR. (SEC. 404.8 OF THE CEC, 1136A.2 AND 1142A.2 OF THE CBC).
15. IF THE REACH FOR A SWITCH OR OUTLET IS OVER AN OBSTRUCTION BETWEEN 20 AND 25 INCHES (508MM AND 635MM) IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44 INCHES (1118MM) FOR FORWARD APPROACH, OR 46 INCHES (1168MM) FOR SIDE APPROACH PROVIDED THE OBSTRUCTION IS NO MORE THAN 24 INCHES (610MM) IN DEPTH. OBSTRUCTIONS SHALL NOT EXTEND MORE THAN 25 INCHES (635MM) FROM THE WALL BENEATH A CONTROL. (SEC. 406.3 OF THE CEC, 1136A.1, 1136A.2, 1142A.1 AND 1142.2 OF THE CBC)
16. THE TOP OF THE OUTLET BOX FOR 30 AMPERES OR LESS ELECTRICAL OUTLETS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE INSTALLED NO HIGHER THAN 45 INCHES (1143MM) AND NO LOWER THAN 18 INCHES (458MM) TO THE BOTTOM OF THE BOX ABOVE THE FLOOR (SEC. 406.3 OF THE CEC, 1136A.1 AND 1142A.1 OF THE CBC).
17. ANY TIME A BUILDING IS OCCUPIED, THE MEANS OF EGRESS SHALL BE ILLUMINATED AT AN INTENSITY OF NOT LESS THAN 1 FOOTCANDLE AT THE WALKING SURFACE.
18. EGRESS ILLUMINATION REQUIRES A SOURCE OF EMERGENCY POWER.
19. WIRING/CABLING, RACEWAYS & OUTLET BOX LOCATIONS, INSTALLATIONS & PROTECTION SHALL MEET THE REQUIREMENTS INDICATED IN ARCHITECTURAL RATED WALL ASSEMBLIES DETAILS. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIREMENTS.

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.
2. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.
3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
4. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE COORDINATED WITH THE OWNERS REPRESENTATIVE AND ENGINEER PRIOR TO THE OUTAGE.
5. THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT (SWITCHBOARDS, PANELBOARDS, MOTOR CONTROL CENTERS) AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6 FT ABOVE THE EQUIPMENT OR TO THE STRUCTURAL CEILING, WHICHEVER IS LOWER, SHALL BE DEDICATED TO THE ELECTRICAL INSTALLATION. NO PIPING, DUCTS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE. CONTRACTOR SHALL COORDINATE WITH OTHER CONSTRUCTION TRADES IN ORDER TO COMPLY WITH THIS DEDICATED SPACE REQUIREMENT. COMPLY WITH CEC 110.26(F).
6. CONTRACTOR SHALL PROVIDE THE CEC REQUIRED WORKING SPACE IN FRONT OF ELECTRICAL EQUIPMENT (SUCH AS SWITCHBOARDS, PANELBOARDS, DISCONNECTS, COMBO STARTER/ DISCONNECTS, CONTROL PANELS, ETC.). THE DEPTH, WIDTH AND HEIGHT OF THE WORKING SPACE SHALL BE MEET CEC REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH OTHER CONSTRUCTION TRADES IN ORDER TO PROVIDE AND MAINTAIN CLEAR THE REQUIRED WORKING SPACE. COMPLY WITH CEC 110.26
7. FLASH PROTECTION WARNING: PROVIDE EACH SWITCHBOARD, PANELBOARD, SWITCHES, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES AND MOTOR CONTROL CENTERS THAT ARE IN OTHER THAN DWELLING OCCUPANCIES AND ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD MARKED TO WARN QUALIFIED PERSON OF POTENTIAL ELECTRIC ARC FLASH HAZARD. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE OF THE EQUIPMENT. (PER CEC 110.16)

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 298-3470 FAX (619) 298-3492

Consultant

Developer

Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

NOTES & ABBREVIATIONS

E-1.0

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

V:\Work\1\Boards\Docs\C & G Engineering\2016-16-101 The Pearl\E-1.0.dwg, 5/21/2018 8:35:40 AM

UNIT LIGHTING FIXTURE SCHEDULE (1)(2)(3)(4)(5)(7)(8)

TYPE	DESCRIPTION	LAMPS (EA. FIXTURE) NO.	WATTS	LAMP	WATTAGE	MANUFACTURER & CATALOG #
AA	16 1/4" X 51 1/2" SURFACE FLUORESCENT FIXTURE WITH SILVER NICKEL ENDS, OPAL WHITE ACRYLIC DIFFUSER, 120V	2	32	F032 T8 RS 835 3500K	62	LITHONIA # 11936RE-6EB10PS-FGG
BB	6" SURFACE DRUM SILVER NICKEL WITH WHITE DIFFUSER, 120V	2	13	13W QUAD 4-PIN 3500K	34	SEAGULL LIGHTING # 75520BLE-962
CC	36" WALL MOUNTED BATHROOM VANITY LIGHT, 120V.	2	25	F025 T8 RS 835 3500K	51	LIGHTWAY INDUSTRIES # VLXV-36-ES-UPS-2F25-3-M2-WSA
DD	16.25" ROUND SURFACE FLUORESCENT DRUM WITH MATTE SILVER FINISH, 120V.	2	26	26W QUAD 4-PIN 3500K	51	LIGHTWAY INDUSTRIES # PLPC-15-ES-U-2Q26-3-M13-WSA
EE	16.5" DIA. ACCENT PENDANT FLUORESCENT FIXTURE, 120V	2	26	26W QUAD 4-PIN 2700K	51	LIGHTWAY INDUSTRIES # PLVH-17-ES-U-2Q26-2-T6-FSG
HH	BALCONY LIGHT FIXTURE, PLATINUM FINISH, ADA COMPLIANT, 120V	2	18	18W TT 4-PIN 3500K	44	LIGHTWAY INDUSTRIES # ORLW-11-ES-U-2Q18-3-M13-WTP
JJ	ACCENT PENDANT FLUORESCENT FIXTURE, 120V	1	35			TBD
KK	4" APERTURE LED DOWNLIGHT, SUITABLE FOR WET LOCATION, 120V.	-	15	LED 3500K	17	TBD

FIXTURE SCHEDULE KEYNOTES:

(1) ALL 1' X 4' LIGHT FIXTURES INSTALLED IN SUSPENDED CEILING SHALL BE SECURED TO THE MAIN AND/ OR CROSS RUNNERS WITH (4) SEISMIC CLIPS AND (2) CEILING HANGER WIRES AT DIAGONAL CORNERS TO STRUCTURE ABOVE PER #6/E-1.2.

(2) SUPPORT DOWNLIGHT FIXTURE (RECESSED) FROM STRUCTURE ABOVE WITH (2) CEILING WIRES AND WITH EMT OF CHANNEL LAID ACROSS CEILING SUPPORT CHANNELS.

(3) ALL FLUORESCENT FIXTURES SHALL BE FURNISHED WITH T8 LAMPS AND ELECTRONIC, HIGH FREQUENCY, RAPID START BALLASTS. ALL BALLASTS AND LUMINARIES USED IN THIS PROJECT SHALL BE CERTIFIED TO COMPLY WITH "THE APPLIANCE STANDARDS FOR FLUORESCENT BALLASTS" PER STATE OF CALIFORNIA REQUIREMENTS (U.O.N.)

(4) ALL UNIT FIXTURES SHALL BE "ENERGY STAR" OR "ENERGY SMART" LISTED.

(5) COORDINATE EXACT LOCATION, MOUNTING HEIGHTS AND REQUIREMENTS WITH ARCHITECT.

(6) PROVIDE (4) #12 GA. STEEL WIRES FROM EACH FIXTURE HOUSING TO STRUCTURE ABOVE TO PREVENT FIXTURE FROM SWAYING ALONG HORIZONTAL PLANE.

(7) CONTRACTOR SHALL MATCH EXTERIOR LIGHTING FIXTURE MANUFACTURER AS CITRONICA FAMILY PROJECT.

(8) ALL FIXTURES THAT UTILIZE DOUBLE-ENDED FLUORESCENT LAMPS AND CONTAIN BALLASTS SHALL BE PROVIDED WITH DISCONNECTING MEANS AS REQUIRED TO COMPLY WITH NEC ARTICLE 410.136.

BUILDINGS LIGHTING FIXTURE SCHEDULE (1)(2)(3)(5)(7)(8)

TYPE	DESCRIPTION	LAMPS (EA. FIXTURE) NO.	WATTS	LAMP	WATTAGE	MANUFACTURER & CATALOG #
A	1'x4' SURFACE WRAPAROUND FLUORESCENT FIXTURE, 120V.	2	32	F032 T8 RS 841 4100K	62	LITHONIA # LB-2-32-MVOLT-ADZT-BDP
AE	SIMILAR TO TYPE "A" EXCEPT WITH INTEGRAL 90 MIN. EMERGENCY BATTERY UNIT. WITH (2) 1 LAMP BALLAST.	2	32	F032 T8 RS 841 4100K	62	LITHONIA # LB-2-32-MVOLT-ADZT-BDP -ELI4
D	6" APERTURE FLUORESCENT DOWNLIGHT, SUITABLE FOR DAMP LOCATION, 120V.	1	26	26W CFL 841 4100K	28	LITHONIA # 6HF 1/26 TRT-F601A-120-ADZT-BDP
E	SINGLE FACE EXIT SIGN, CEILING MOUNTED, SATIN ALUMINUM HOUSING, EDGE-LIT, GREEN LETTERING, WITH EMERGENCY BATTERY.	--	--	LED	5	LITHONIA # EDG-1-G-EL-M6
E2	SINGLE FACE EXIT SIGN, WALL MOUNTED, WHITE CAST ALUMINUM HOUSING, GREEN LETTERING, WITH EMERGENCY BATTERY, UL LISTED FOR WET LOCATION.	--	--	LED	3	LITHONIA # WLTE-W-1-G-EL
E2L	SIMILAR TO TYPE "E2" EXCEPT WITH LEFT CHEVRON ARROW.	--	--	LED	3	LITHONIA # WLTE-W-1-G-EL
F	1'X4' SURFACE LOW PROFILE VAPOR PROOF FLUORESCENT FIXTURE SUITABLE FOR WET LOCATION. 120V	2	32	F032 T8 RS 841 4100K	62	LITHONIA # FEM4-2-32-BMPCL-MVOLT-ADZT-BDP-LP841
G	EXTERIOR WALL SCONCE, SUITABLE FOR WET LOCATION. BLACK FINISH, MEDIUM THROW OPTICS, 120V	2	42	42W CFL 841 4100K	94	LIGHTWAY INDUSTRIES # DKAW-26-UPS-2T42-4-BI-WSA-DIM10
G1	EXTERIOR WALL SCONCE, BLACK FINISH, WIDE OPTICS, 120V. 90 MINUTES INTEGRAL BATTERY PACK.	2	42	42W CFL 841 4100K	94	LIGHTWAY INDUSTRIES # DKAW-26-UPS-2T42-4-BI-WSA-DIM10-BB
G3	SIMILAR TO TYPE "HH" EXCEPT WITH BLACK FINISH. AND WITH 90 MINUTE BATTERY PACK.	2	18	18W FL 4-PIN 4100K	44	LIGHTWAY INDUSTRIES # ORLW-11-ES-U-2Q18-3-BI-WTP-DIM10-BB
H	4' SURFACE LED GARAGE FIXTURE, SUITABLE FOR DAMP LOCATION, 120V FIXTURE	40	1	LED 4000K	39.5	LITHONIA # WL4-40L-EZI-LP840-XADST-DIM10
HE	SIMILAR TO TYPE "H" EXCEPT WITH 90 MINUTES EMERGENCY BATTERY UNIT.	40	1	LED 4000K	39.5	LITHONIA # WL4-40L-EZI-ELI4L-LP840-XADST-DIM10
EMI	EMERGENCY BATTERY WET LISTED, 6V UNIT, WHITE FINISH, 120V	2	6	MR 16	12	
J	4' SURFACE FLUORSCENT STRIP FIXTURE WITH WIRE GUARD	2	32	F032 T8 RS 841 4100K	62	LITHONIA # ZLIN-L48-5000LM-FST-MVOLT-40K-90CRI-BDP-WH
K	ROUND LED STEP LIGHTS, BLACK FINISH, 120V.	--	--	LED 3000K	4	WINONA # STEPII-RND-WL-S-LSTIA-350MA-WHT30K-MVOLT-DMD-SGB
M	2'X4' RECESSED LED FIXTURE DIRECT/INDIRECT FULLY DIMMING 0-10V DRIVER, 120V.	-	--	LED 4100K	48	LITHONIA #2AVL4 40L MDR EZI LP840
ME	SIMILAR TO TYPE "M" EXCEPT WITH AN EMERGENCY BATTERY PACK. 90 MINUTES MINIMUM BACKUP POWER CAPACITY, AC READY LIGHT AND PUSH TO TEST SWITCH, READILY ACCESSIBLE FROM BELOW .	-	--	LED 4100K	48	LITHONIA #2AVL4 40L MDR EZI LP840 ELI4L

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\Mac01\Shared\Docs\C & G Engineering\2014-16-101 The Pearl\E-1.1.dwg, 5/21/2018 8:35:13 AM

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3493 FAX (619) 299-3492

Consultant

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

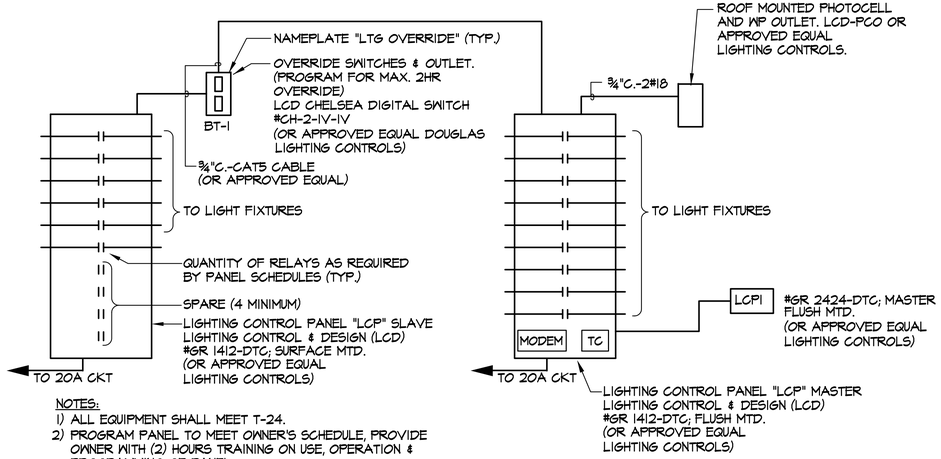
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

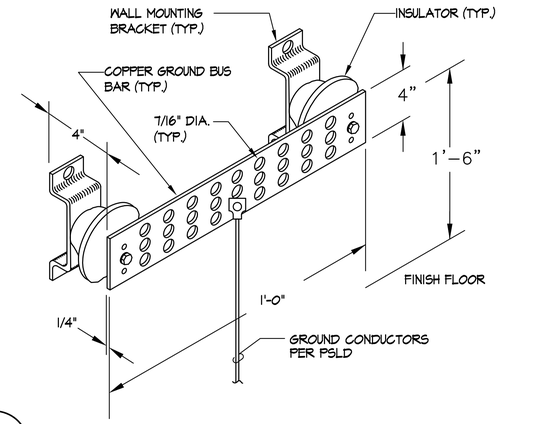
LIGHTING FIXTURE SCHEDULE

E1.1

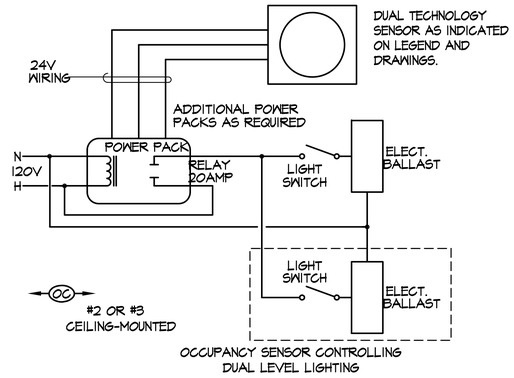


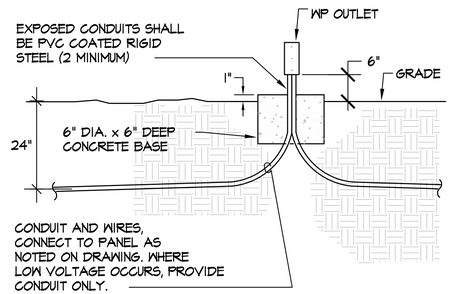
NOTES:
1) ALL EQUIPMENT SHALL MEET T-24.
2) PROGRAM PANEL TO MEET OWNER'S SCHEDULE, PROVIDE OWNER WITH (2) HOURS TRAINING ON USE, OPERATION & PROGRAMMING OF PANEL.

3 / E-1.2 — LIGHTING CONTROL SYSTEM
NOT TO SCALE

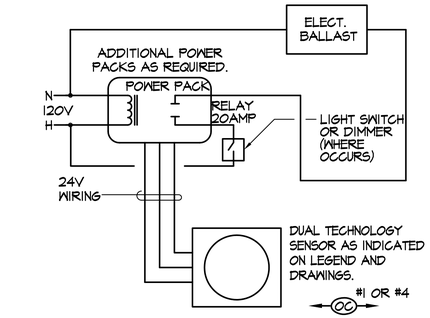


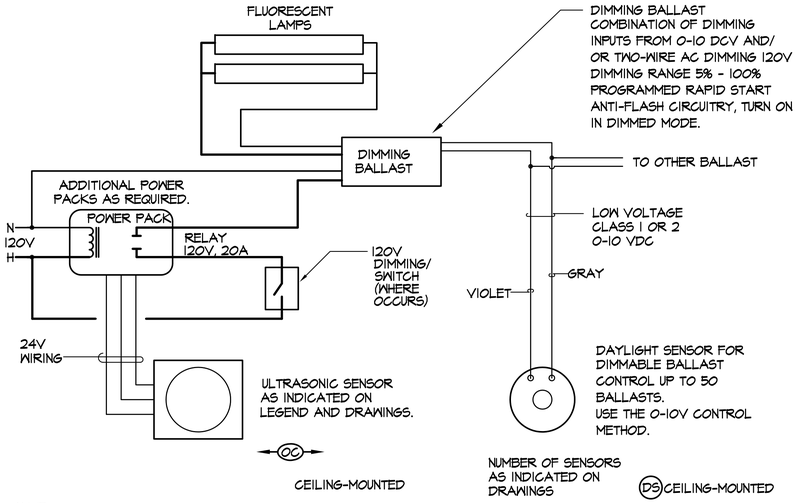
4 / E-1.2 — BUILDING MAIN GROUND BUS DETAILS
SCALE: NO SCALE





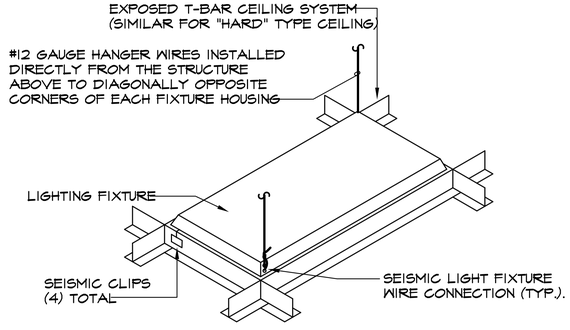
2 / E-1.2 — WP OUTLET FOR IRRIGATION CONTROLLER DETAIL
NOT TO SCALE



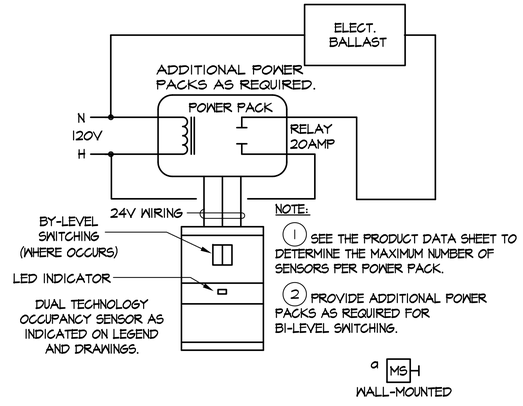


NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE DAYLIGHTING SENSING SYSTEM. SYSTEM SHALL INCLUDE TESTING, COMMISSIONING, CALIBRATION OF LIGHT LEVELS PER OWNER'S DIRECTION AND IESNA RECOMMENDATIONS. PROVIDE CALIBRATION REPORT RESULTS TO ENGINEER. PROVIDE ALL WIRING IN CONCEALED RACEWAYS & PROVIDE J-BOXES AS REQUIRED.

5 / E-1.2 — OCCUPANCY & DAYLIGHTING SENSOR DETAIL
NOT TO SCALE



6 / E-1.2 — FLUORESCENT FIXTURE SEISMIC RESTRAINT
NOT TO SCALE



1 / E-1.2 — OCCUPANCY/ MOTION SENSOR DETAILS
NOT TO SCALE

\\dexcel\Shared\Docs\C & C Engineering\20-16-101 The Pearl\E-1.2.dwg, 5/21/2018 8:34:16 AM
© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3459 FAX (619) 299-3492
Consultant

Hitzke Development Corporation
Developer

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

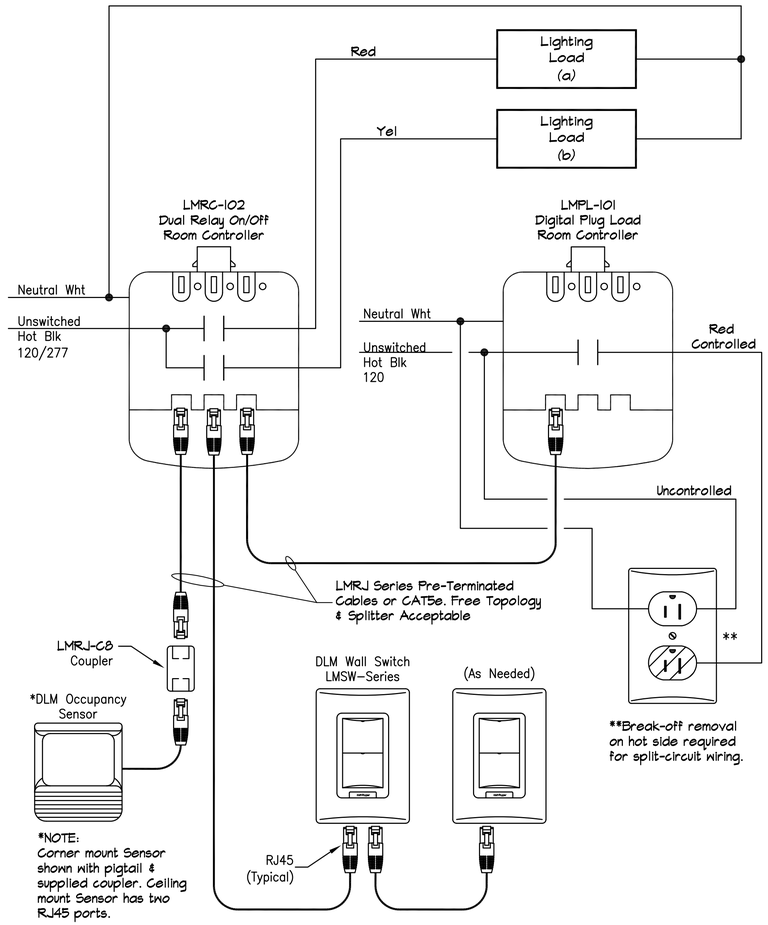
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

DETAILS

E-1.2

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\Mac\D\ShareDocs\C & G Engineering\2016-10\ The Pearl\E-1.3.dwg, 5/21/2018 8:36:35 AM



OPERATION, ± DEVICES ARE PRESET FOR PLUG n' GO ADJUSTMENT IS OPTIONAL. Sequence of Operation: In this configuration The LMRC-102 defaults to multi-level automatic-on/automatic off. Load (a) turns on automatically and load (b) defaults to manual-on control; both loads turn automatically off. The LMPL-101 defaults to automatic-on/automatic off. Maximum of 4 room controllers, controlling up to 8 loads and up to 24 communicating devices per DLM local network. For full operational details, adjustments and more features of the product, see the DLM System Installation Guide at www.mattstopper.com

LMRC-102 & LMPL-101
Wiring Diagram

1
E-1.3

OFFICE LIGHTING CONTROL DIAGRAMS

NOT TO SCALE

Consultant

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3459 FAX (619) 299-3492

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

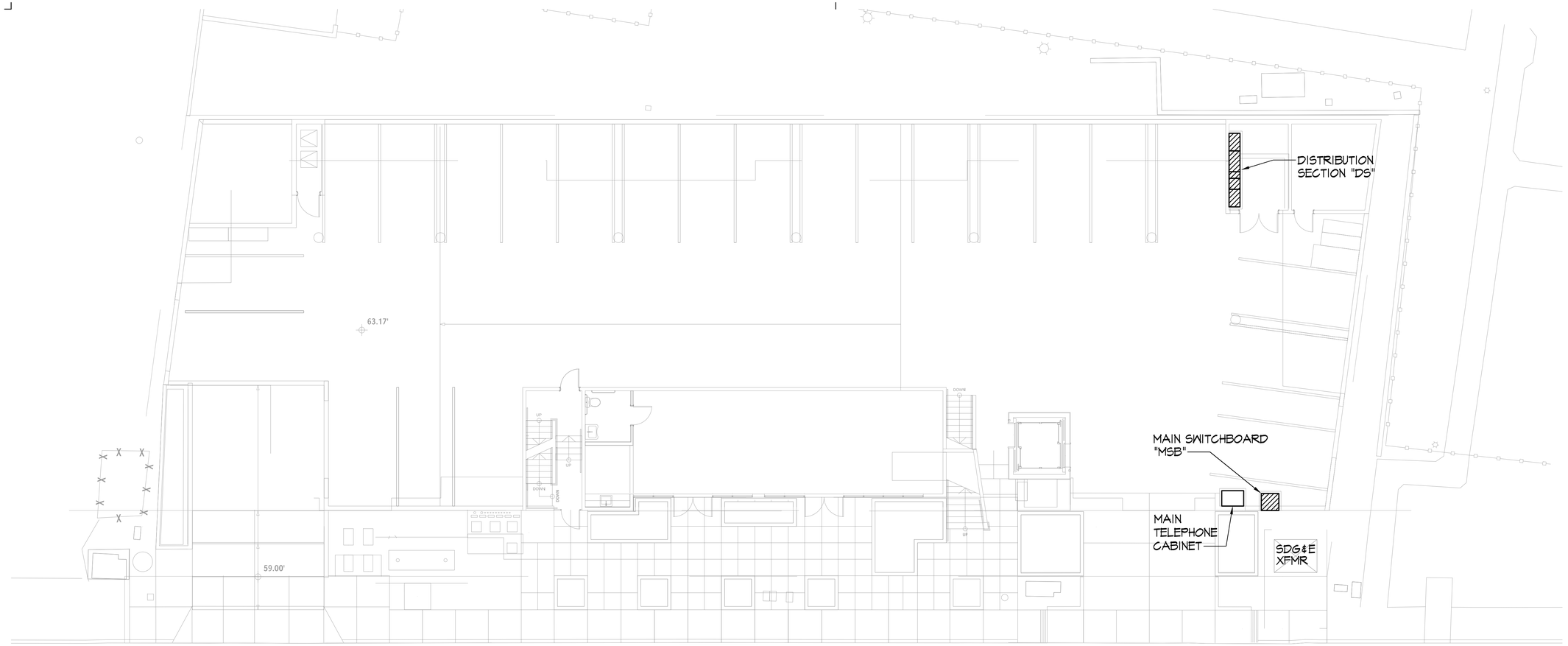
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

DIAGRAMS

E-1.3



NORTH

SITE PLAN

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

(1) (2) (4) (5)

SITE NOTES:

1. PRIOR TO COMMENCING ANY TRENCHING, CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS OF BELOW GROUND PIPING AND UTILITIES SUCH AS GAS MAINS, WATER MAINS, SANITARY SEWERS, STORM SEWERS, ELECTRICAL CONDUITS, COMMUNICATION CONDUITS AND OTHER UTILITIES ALONG WITH ASSOCIATED VALVE BOXES, VALVE PITS AND MANHOLES ARE TAKEN FROM EXISTING RECORD DRAWINGS AND VERIFIED BY FIELD OBSERVATION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION AND DEPTH OF BELOW GROUND PIPING AND UTILITIES IN THE IMMEDIATE VICINITY OF THE WORK, WHETHER SHOWN ON DRAWINGS OR NOT. CONTRACTOR SHALL MARK ALL EXIST. PIPING AND UTILITIES AFFECTED BY THE WORK USING UNDERGROUND PIPE LOCATOR TO LOCATE POSITION OF PIPES AND CONDUITS AND BY SPRAY PAINTING LOCATION OF PIPES AND CONDUITS ON THE SURFACE.
2. TRENCH, BACKFILL AND REPAIR (TO MATCH EXISTING CONDITIONS) EXIST. PAVING. PROVIDE NECESSARY BARRICADES, TEMPORARY EQUIPMENT, ETC.
3. NOTE NOT USED
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ELECTRICAL UTILITIES WORK TO 10'-0" OUTSIDE THE BUILDING. COORDINATE WITH SITE ELECTRICAL UTILITIES CONTRACTOR. WORK SHALL MEET RESPECTIVE UTILITY COMPANY REQUIREMENTS.
5. MINIMUM RACEWAY SIZES SHALL BE ¾"C. - U.O.N. MINIMUM CONDUCTOR SIZES SHALL BE #10 AWG. PROVIDE (MINIMUM) 2#10, 1#10G. AWG IN ALL RACEWAYS U.O.N.

UTILITY COMPANY CONTACTS

1. VERIFY EXACT LOCATION AND SERVICE REQUIREMENTS WITH THE FOLLOWING COMPANIES PRIOR TO BID.

SAN DIEGO GAS & ELECTRIC CO.
8315 CENTURY PARK COURT, STE. 210
SAN DIEGO, CA 92123
xx
CONTACT: xxxxxxxxxxxxx
TEL: (858) 676-9700 x112
E-MAIL: xx

AT&T TELEPHONE CO.
3750 HOME AVE
SAN DIEGO, CA 92105

CABLE/TV CO.

2. ACTUAL LOCATION OF UNDERGROUND CONDUIT & PLACEMENT OF SUBSTRUCTURES TO BE DETERMINED BY THE RESPECTIVE UTILITY CO. ENGINEERING DEPARTMENT. ROUTING OF SERVICES AS SHOWN MAY VARY FROM ACTUAL UTILITY CO. DESIGN.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL PRIMARY AND SECONDARY CONDUITS, TRENCHING AND BACKFILL, HANDHOLES, TRANSFORMER PADS, GROUNDING AND OTHER CONCRETE SUBSTRUCTURES IN ACCORDANCE WITH S.D.G. & E. REQUIREMENTS.
4. THE RESPECTIVE UTILITY CO. FINAL DRAWINGS SHALL TAKE PRECEDENCE OVER THIS PLAN AND BE THE ACTUAL CONSTRUCTION DOCUMENTS. FOR BID PURPOSES ONLY. NOT FOR CONSTRUCTION.
5. TRENCH, BACKFILL AND REPAIR (TO MATCH EXIST. CONDITIONS) EXIST. STREET PAVING. PROVIDE NECESSARY TRAFFIC CONTROL, BARRICADES, TEMPORARY EQUIPMENT, ETC., TO COMPLY WITH CITY OF SOLANA BEACH, CA. AND THE RESPECTIVE UTILITY CO. REQUIREMENTS.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\dfsc01\Shared\Docs\C & G Engineering\2016-16-101 The Pearl\E2-2.dwg, 5/21/2018 8:38:09 AM

Consultant

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

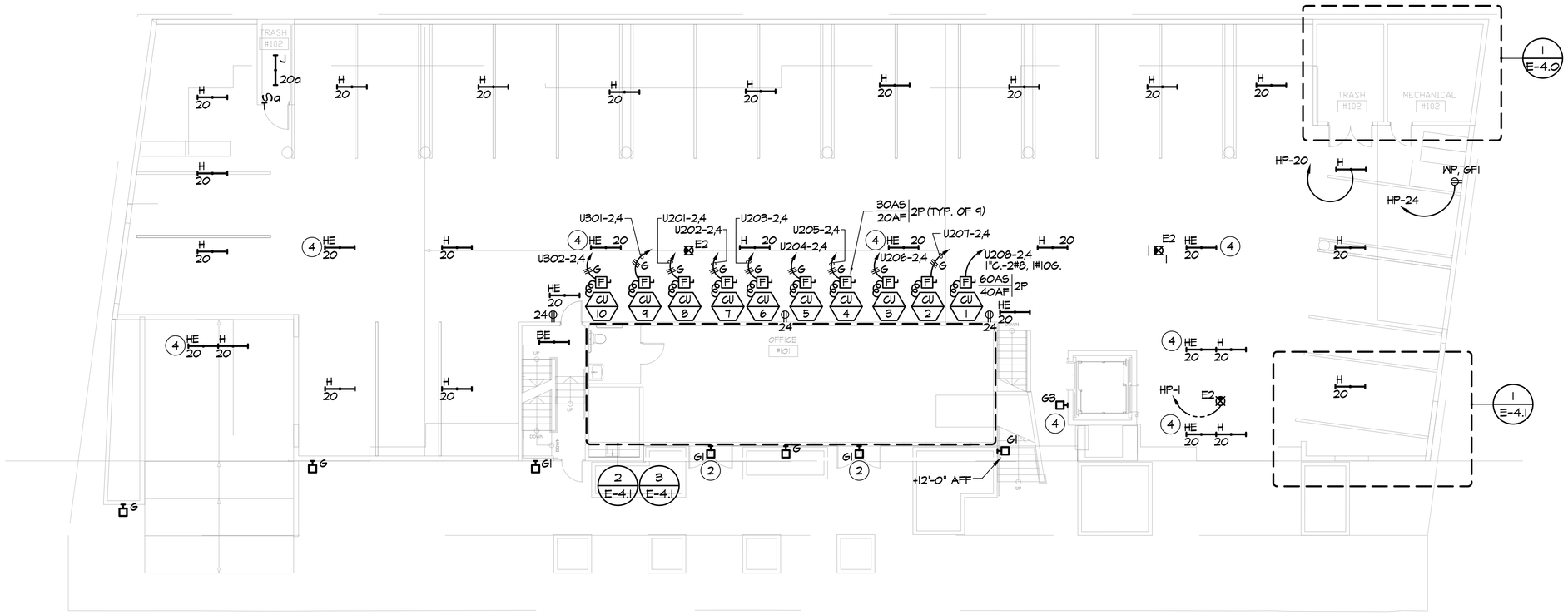
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

SITE PLAN

E-2



PLAN NORTH

LEVEL 1 - ELECTRICAL - PLAN (1) (5)

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

FLOOR PLAN KEYNOTES:

(1) CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.

(2) NOTE NOT USED

(3) NOTE NOT USED

(4) EXTEND HOT BRANCH CIRCUIT TO EMERGENCY POWER PACK AND CONNECT SUCH THAT EMERGENCY POWER PACK IS ACTIVATED ONLY UPON POWER FAILURE.

(5) RUN CONDUITS EXPOSED ON PARKING LEVEL. PROVIDE PULL BOXES AS REQUIRED.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm or organization for any purpose whatsoever without written permission of FoundationForm.

\\electric\Shared\Docs\C & G Engineering\205-16-101 The Pearl\E-3.0.dwg, 5/21/2018 8:43:49 AM

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

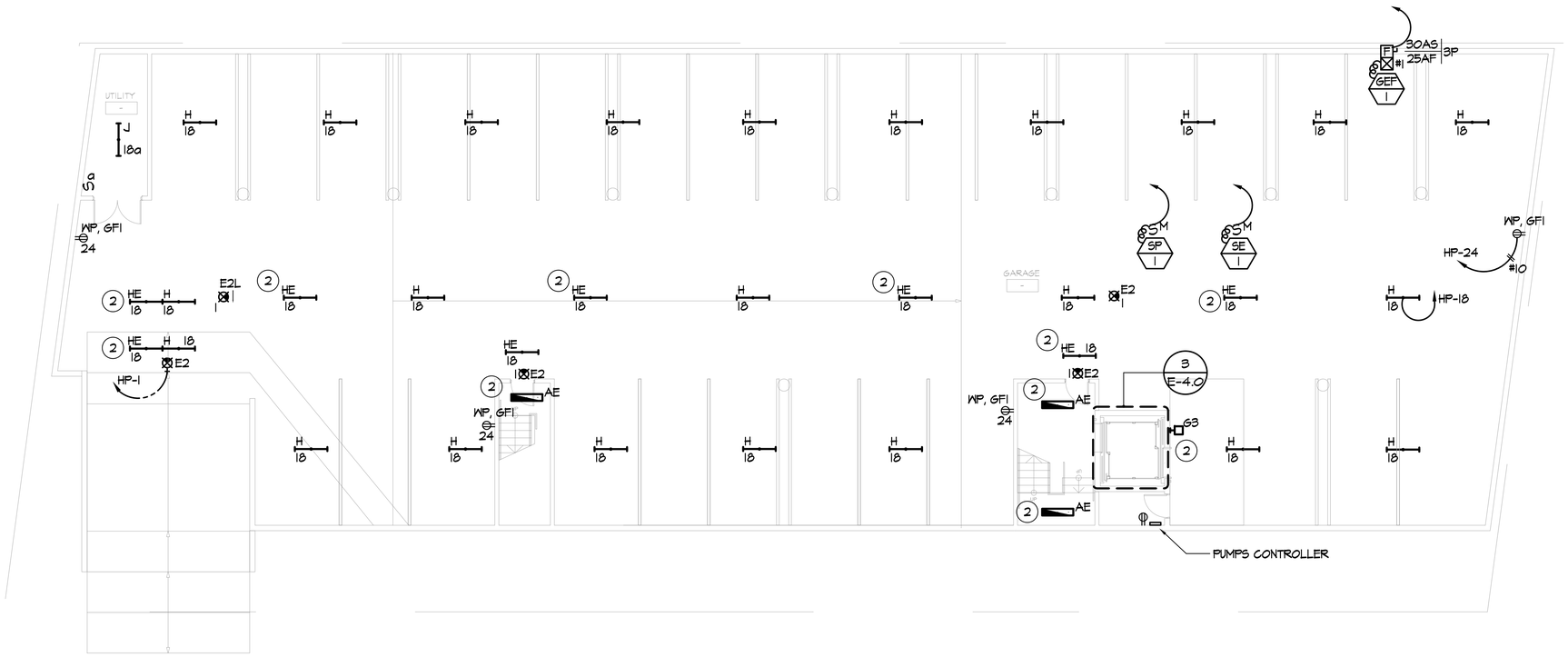
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

LEVEL 1 - ELECTRICAL PLAN

E-3.0



LEVEL 0 - ELECTRICAL - PLAN (1)

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

PLAN NORTH

FLOOR PLAN KEYNOTES:

(1) CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.

(2) EXTEND HOT BRANCH CIRCUIT TO EMERGENCY POWER PACK AND CONNECT SUCH THAT EMERGENCY POWER PACK IS ACTIVATED ONLY UPON POWER FAILURE.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\Vault01\Shared\Docs\C & G Engineering\2016-16-101 The Pearl\E-3.1.dwg, 5/21/2018 8:41:40 AM

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

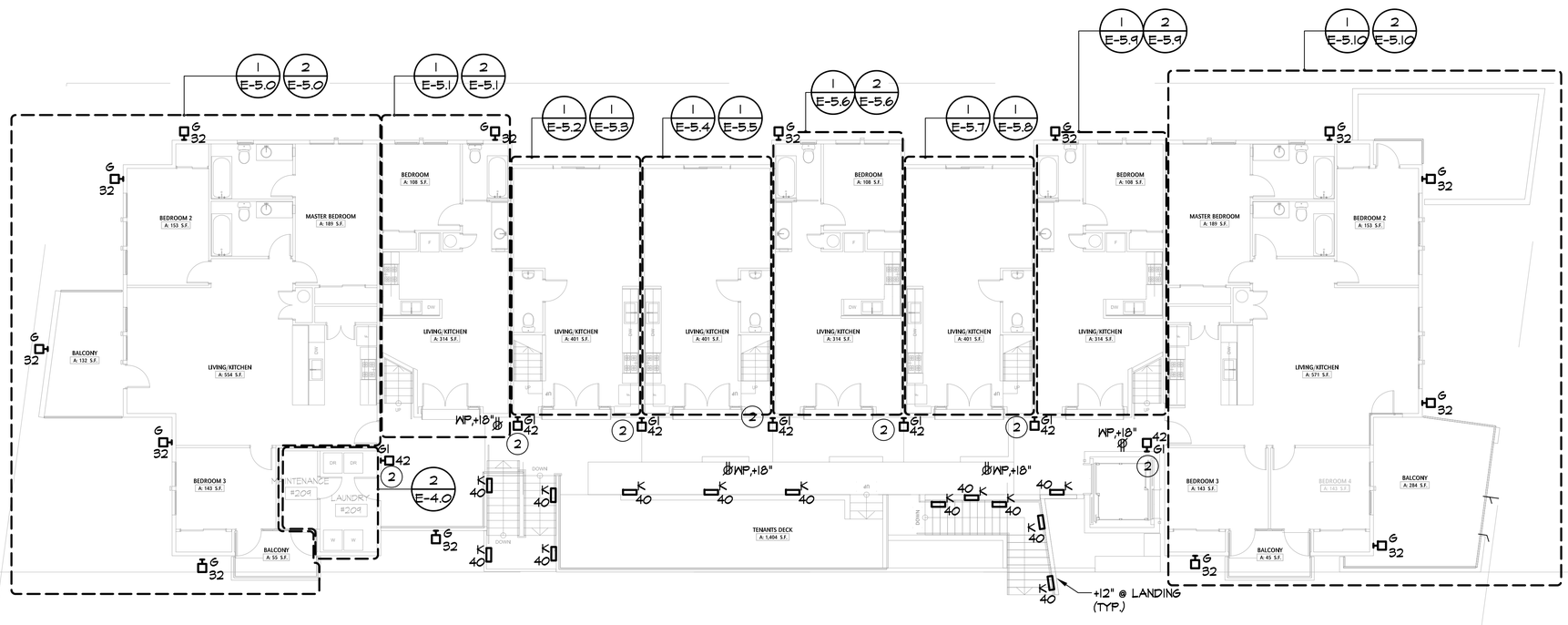
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

LEVEL 0 - ELECTRICAL PLAN

E-3.1



PLAN NORTH

LEVEL 2 ELECTRICAL - PLAN

(1)

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

FLOOR PLAN KEYNOTES:

(1) CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.

(2) EXTEND HOT BRANCH CIRCUIT TO EMERGENCY POWER PACK AND CONNECT SUCH THAT EMERGENCY POWER PACK IS ACTIVATED ONLY UPON POWER FAILURE.

(3) SEE ENLARGED FLOOR PLANS FOR ELECTRICAL WORK REQUIRED IN EACH UNIT.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\electric\Shared\Projects\C & G Engineering\205-16-101 The Pearl\E-3.2.dwg, 5/21/2018 8:49:03 AM

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 298-9499 FAX (619) 298-9492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

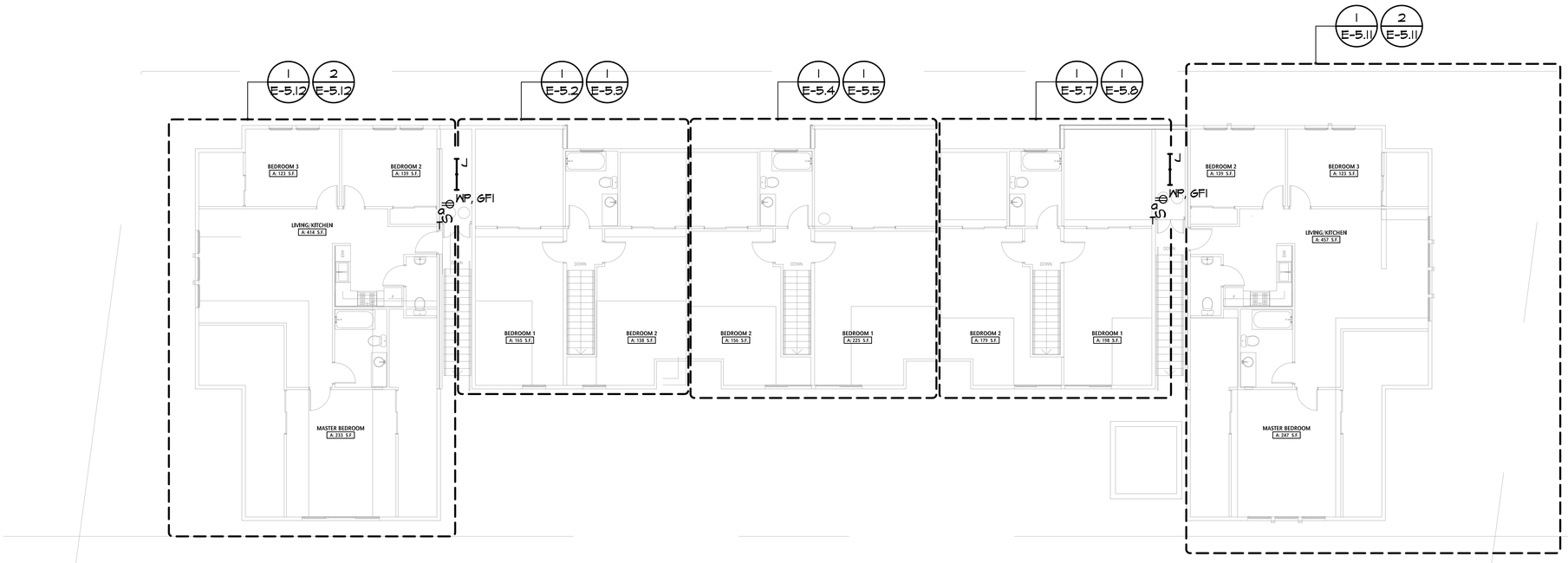
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

LEVEL 2 ELECTRICAL PLAN

E-3.2



PLAN NORTH

LEVEL 3 ELECTRICAL - PLAN (1)

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

FLOOR PLAN KEYNOTES:

(1) CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\Ae001\Shared\docs\C & G Engineering\2016-16-101 The Pearl\E-3.3.dwg, 5/21/2018 8:45:43 AM

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

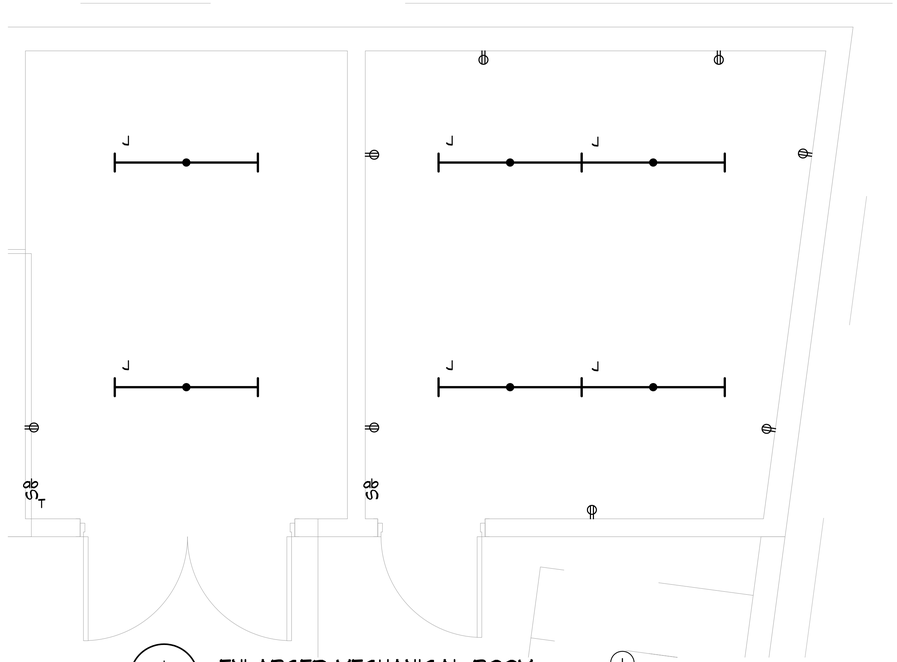
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

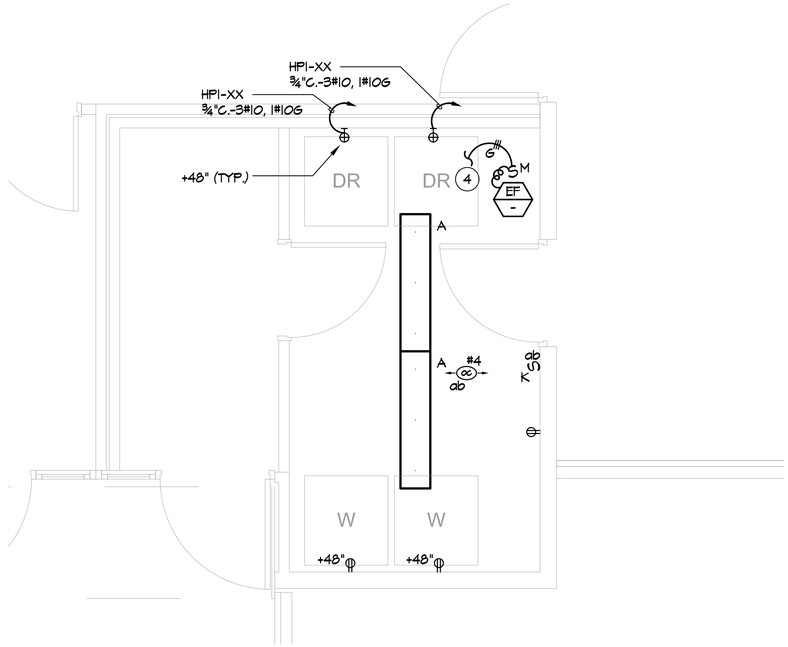
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

LEVEL 3 ELECTRICAL PLAN

E-3.3



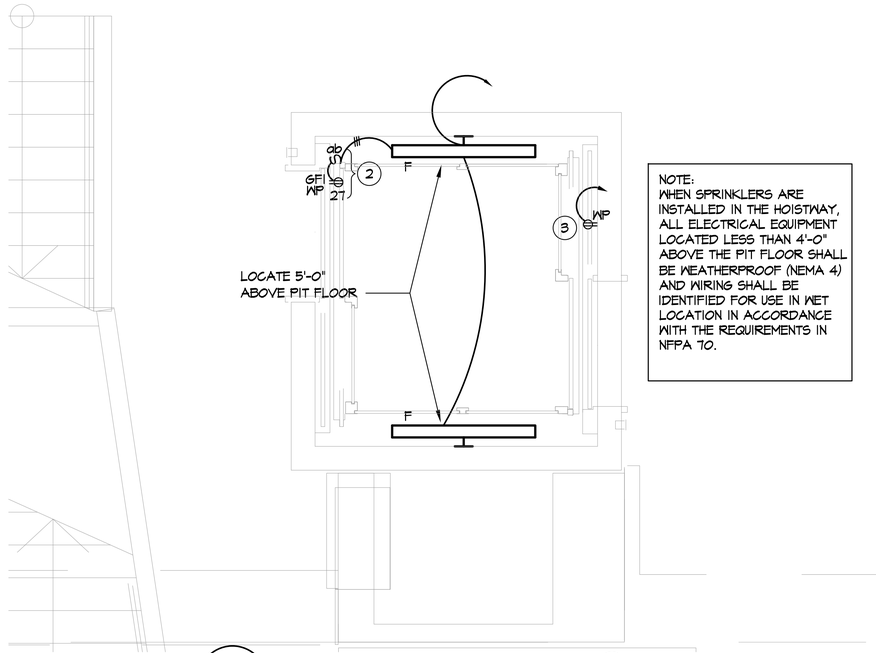
1 E-4.0 — ENLARGED MECHANICAL ROOM (1)
SCALE: ½" = 1'-0"



2 E-4.0 — ENLARGED 2ND FLOOR LAUNDRY ROOM (1)
SCALE: ½" = 1'-0"

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. MOUNT GFI RECEPTACLE AND LIGHT SWITCH @ 5'-0" ABOVE PIT FLOOR.
3. PROVIDE A TWISTLOCK W/ PILOT LIGHT SIMPLEX RECEPTACLE WITH MATCHING PLUG, WITHOUT GFI PROTECTION, TO SUPPLY THE PERMANENTLY INSTALLED SUMP PUMP. MOUNT SUMP PUMP RECEPTACLE 3'-0" ABOVE ELEVATOR PIT FLOOR.
4. EXHAUST FAN TO BE CONTROLLED BY LIGHT SWITCH. ROUTE CIRCUIT VIA LOCAL LIGHT SWITCH.



NOTE:
WHEN SPRINKLERS ARE INSTALLED IN THE HOISTWAY, ALL ELECTRICAL EQUIPMENT LOCATED LESS THAN 4'-0" ABOVE THE PIT FLOOR SHALL BE WEATHERPROOF (NEMA 4) AND WIRING SHALL BE IDENTIFIED FOR USE IN WET LOCATION IN ACCORDANCE WITH THE REQUIREMENTS IN NFPA 70.

3 E-4.0 — ENLARGED ELEVATOR PIT (1)
SCALE: ½" = 1'-0"

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\electric1\Shared\Projects\C & G Engineering\205-16-101 The Pearl\E-4.0.dwg, 5/21/2018 8:48:20 AM

Consultant

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 298-3493 FAX (619) 298-3492

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

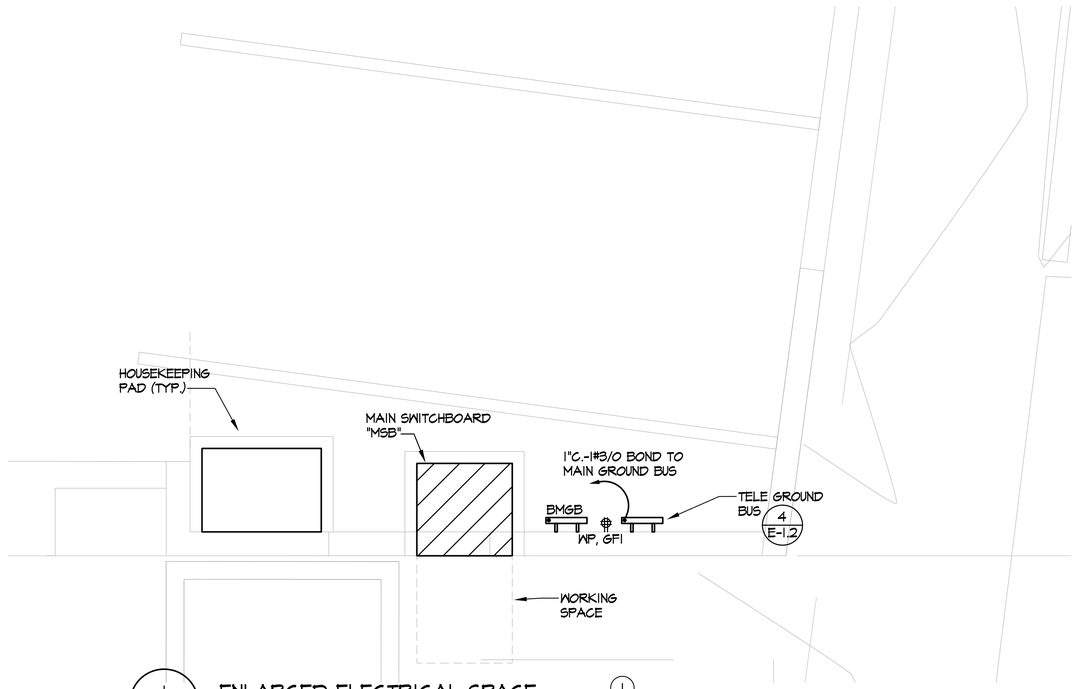
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

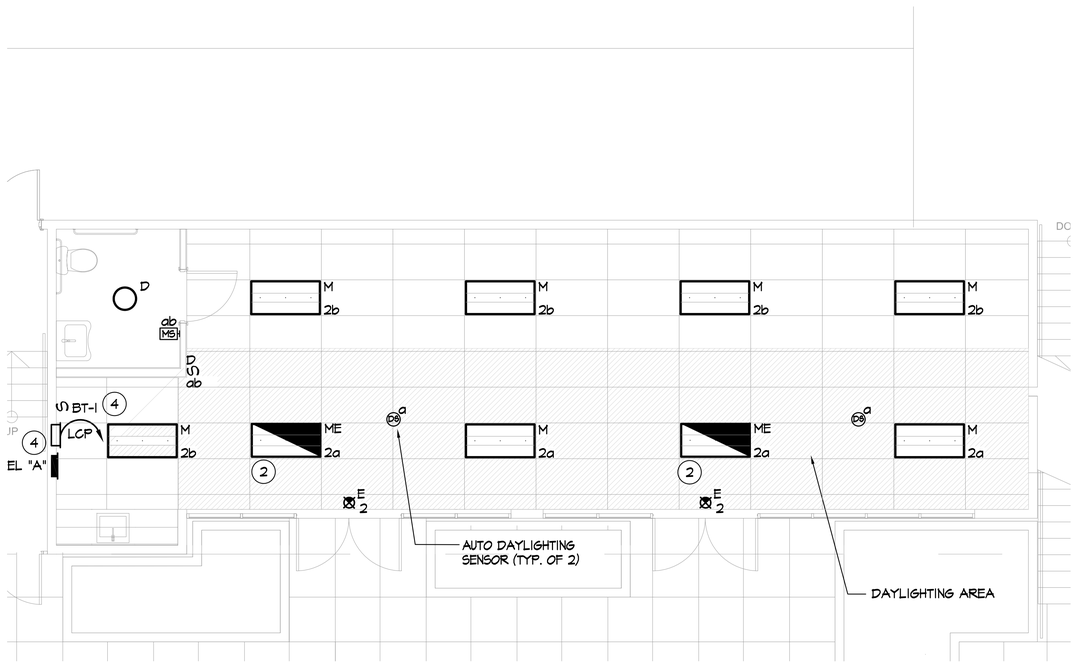
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

ENLARGED ELECTRICAL PLANS

E-4.0



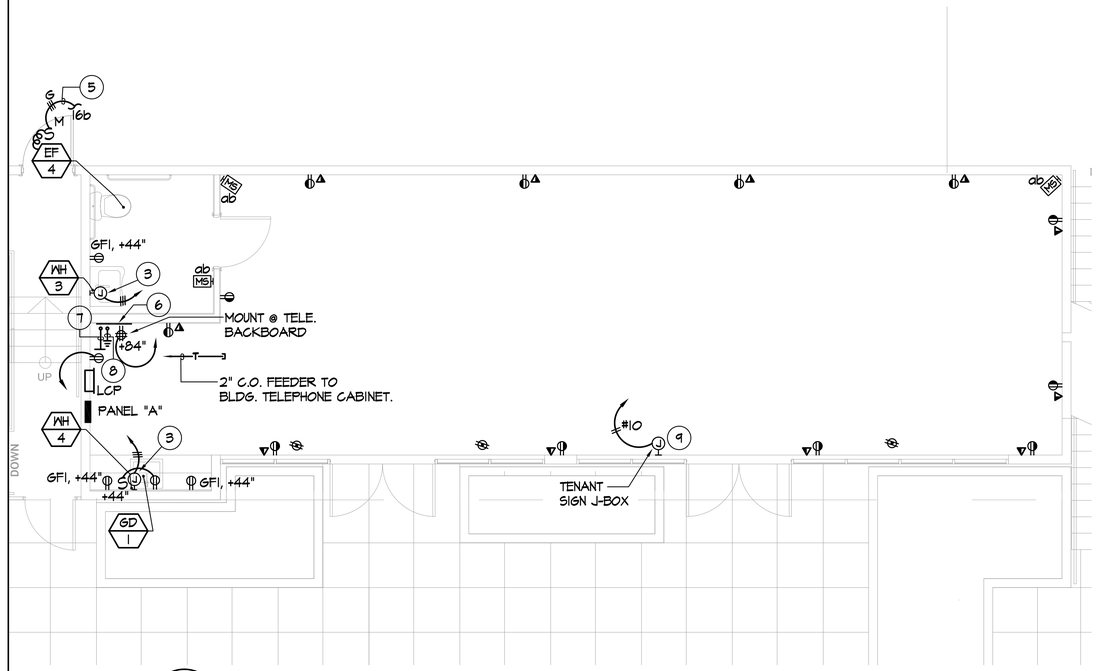
1 E-4.1 ENLARGED ELECTRICAL SPACE (1)
SCALE: ½" = 1'-0"



2 E-4.1 ENLARGED OFFICE - LIGHTING (1)
SCALE: ¼" = 1'-0"

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. EXTEND HOT BRANCH CIRCUIT TO EMERGENCY POWER PACK AND CONNECT SUCH THAT EMERGENCY POWER PACK IS ACTIVATED ONLY WITH POWER FAILURE.
3. J-BOX FOR WATER HEATER. FIELD VIERIFY EXACT REQUIREMENTS.
4. LIGHTING CONTROL PANEL AND OVERRIDE SWITCHES PER TITLE 24 MANDATORY MEASURES. CONNECT AS REQUIRED TO CONTROL LIGHTING LOAD.
5. CONNECT TO LIGHTING CIRCUIT. FAN CONTROLLED BY LIGHT SWITCH SWITCH LEG "b".
6. TELEPHONE BACKBOARD "TB". PROVIDE 2'-0" WIDTH x 4'-0" HIGH X ¾" THICK PLYWOOD. PAINT WITH FIRE RETARDANT WHITE COLOR.
7. ¾"C.-1#6 TO NEAREST ACCESSIBLE MATALLIC COLD WATER PIPE. PROVIDE ENOUGH WIRE TO REACH ANY PART OF BACKBOARD.
8. ¾"C.-1#6 CU. GND. TO EXIST. BLDG. SWITCHBOARD "MSB" GROUND BUS. PROVIDE ADDITIONAL COILED WIRE TO EXTEND TO ANY PART OF BACKBOARD.
9. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION.



3 E-4.1 ENLARGED OFFICE - POWER & SIGNAL (1)
SCALE: ¼" = 1'-0"

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

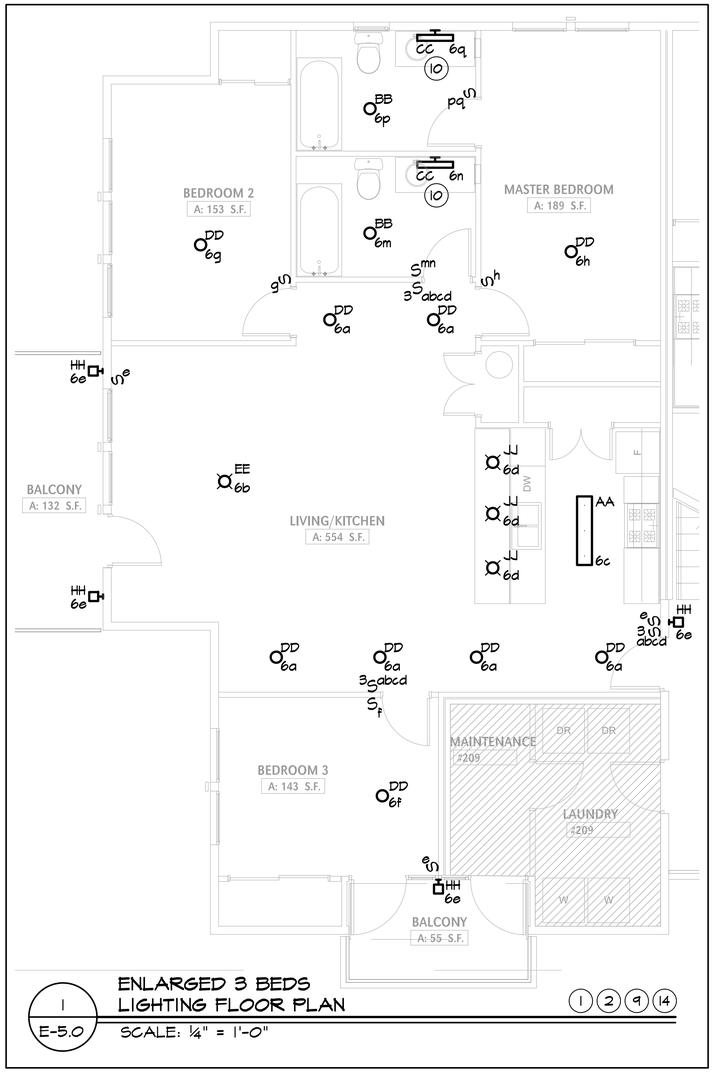
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

ENLARGED ELECTRICAL PLANS

E-4.1

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, and plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

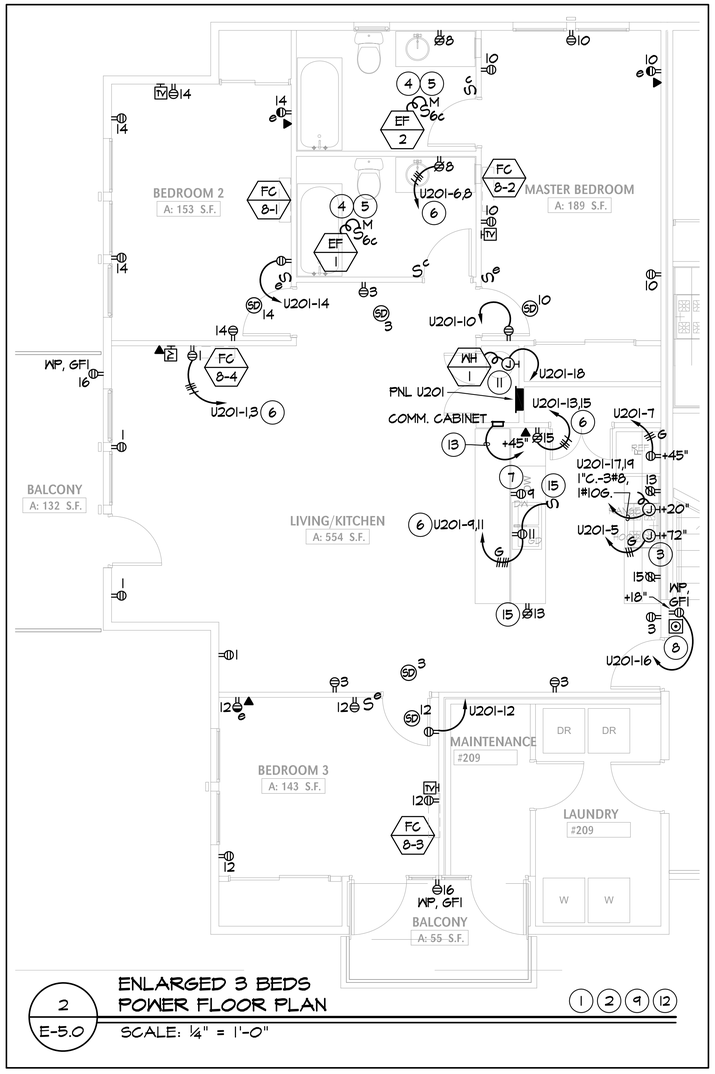
\\elec01\Shared\Docs\C & G Engineering\205-16-101 The Pearl\E-4.1.dwg, 5/21/2018 8:49:38 AM



1 E-5.0 ENLARGED 3 BEDS LIGHTING FLOOR PLAN

SCALE: ¼" = 1'-0"

(1) (2) (9) (14)



2 E-5.0 ENLARGED 3 BEDS POWER FLOOR PLAN

SCALE: ¼" = 1'-0"

(1) (2) (9) (12)

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C2I2W OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.
13. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.
15. MOUNT OUTLET ON CABINET WORK 6" BELOW COUNTERTOP. REFER TO ARCH. DRAWINGS FOR EXACT LOCATION.

PNL U201 — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR — 200 AMP BUS — 42000 AIC

	DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION	
1	LIVING RM. REC			20	1	A	2	20			CU/FC UNITS	
1	DINING ROOM REC.			20	3	B	4	2			-------	
3	HOOD			20	5	A	6	20			LIGHTING/EF	1
	REFRIG.			20	7	B	8	20			BATHROOM REC.	
	DISHWASHER			20	9	A	10	20			M. BEDROOM REC, LT	1
	GARB. DISP			20	11	B	12	20			BEDROOM #1 REC, LT	1
	KITCHEN REC.			20	13	A	14	20			BEDROOM #2 REC, LT	1
	KITCHEN REC.			20	15	B	16	20			EXTERIOR REC	
3	RANGE			40	17	A	18	15			WH	3
	-------			2	19	B	20	-			SPACE	
	SPACE			-	21	A	22	-			SPACE	
	SPACE			-	23	B	24	-			SPACE	
					25	A	26					
					27	B	28					
					29	A	30					
	SUBTOTAL	0	0						0	0	SUBTOTAL	
	TOTAL	Ø A 0	Ø B 0	NOTES: 1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION								

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Consultant

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

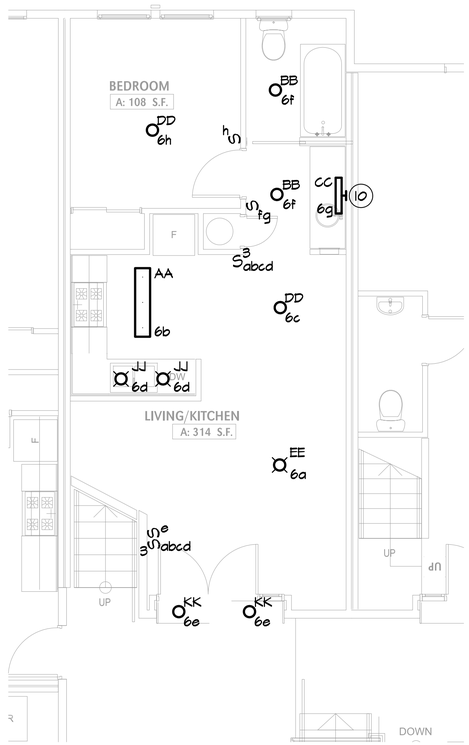
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

UNITS ENLARGED PLANS

E-5.0

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm or organization for any purpose whatsoever without written permission of FoundationForm.

\Velocity\Shared\docs\C & G Engineering\256-16-151 The Pearl\E-5.0.dwg, 5/21/2018 9:06:57 AM

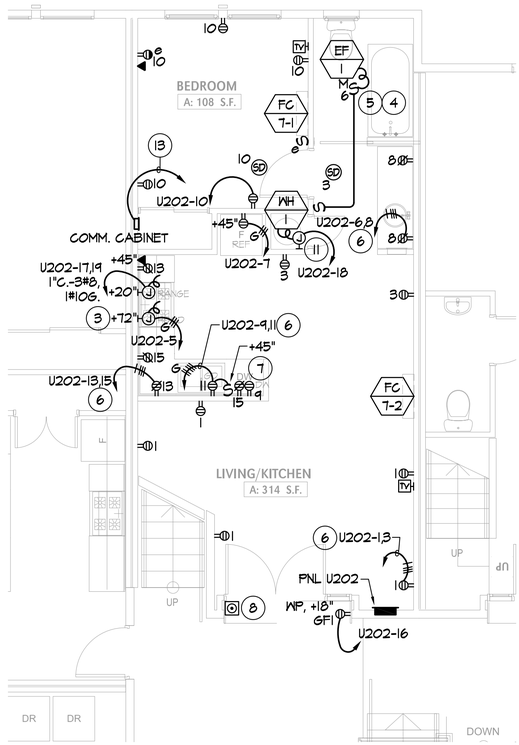


1 E-5.1

ENLARGED 1 BED LIGHTING FLOOR PLAN

(1)(2)(9)(14)

SCALE: ¼" = 1'-0"



2 E-5.1

ENLARGED 1 BED POWER FLOOR PLAN

(1)(2)(9)(12)

SCALE: ¼" = 1'-0"

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C2121W OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.
13. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.

PNL U202 — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR — 200 AMP BUS

	DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION	
1	LIVING RM. REC			20	1	A	2	20			CU/FC UNITS	
1	DINING ROOM REC.			20	3	B	4	2			--------	
3	HOOD			20	5	A	6	20			LIGHTING/EF	1
	REFRIG.			20	7	B	8	20			BATHROOM REC.	
	DISHWASHER			20	9	A	10	20			BEDROOM REC, LT	1
	GARB. DISP			20	11	B	12	20			SPARE	
	KITCHEN REC.			20	13	A	14	20			SPARE	
	KITCHEN REC.			20	15	B	16	20			EXTERIOR REC	
3	RANGE			40	17	A	18	15			WH	3
	--------			2	19	B	20	-			SPACE	
	SPACE			-	21	A	22	-			SPACE	
	SPACE			-	23	B	24	-			SPACE	
					25	A	26					
					27	B	28					
					29	A	30					
	SUBTOTAL	0	0						0	0	SUBTOTAL	
	TOTAL	Ø A 0	Ø B 0									

NOTES:
1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 398-3490 FAX (619) 398-3492

Consultant

Hitzke Development Corporation

Developer

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

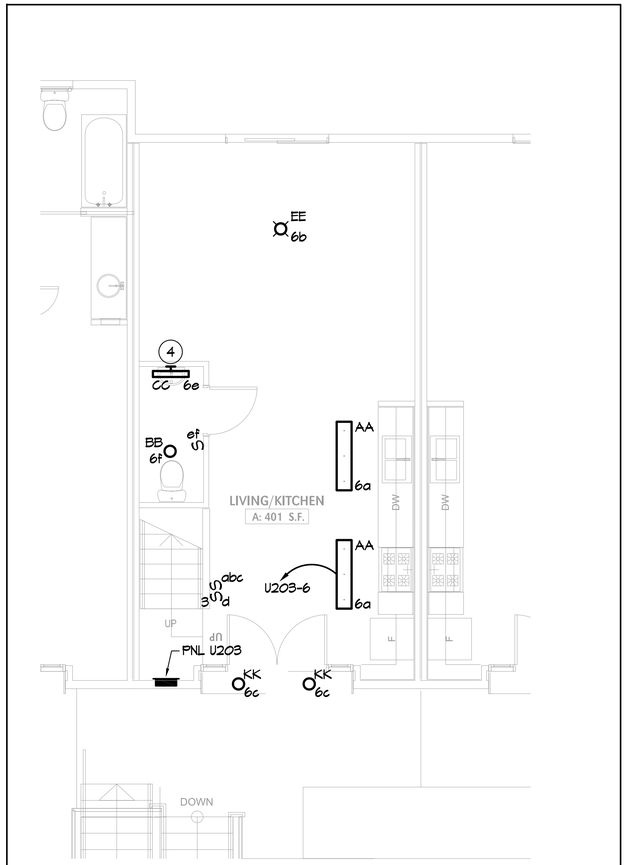
1ST SUBMITTAL 6/4/2018

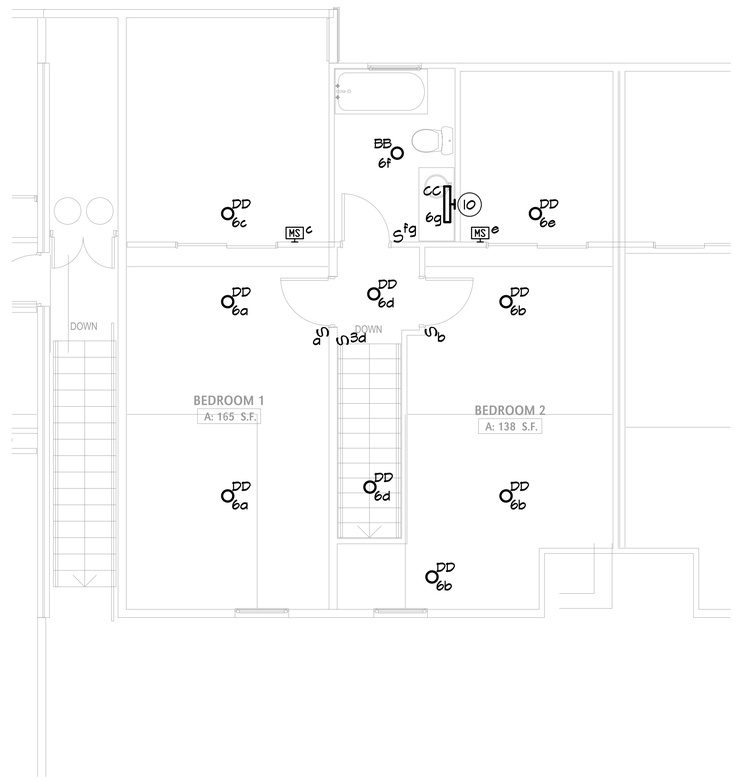
PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

UNITS ENLARGED PLANS

E-5.1





FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
4. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
5. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.

1 / E-5.3 — ENLARGED 2 BEDS LIGHTING FLOOR PLAN

SCALE: ¼" = 1'-0"

(1)(2)(3)(6)

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, and plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\Revit01\Shared\Revit\C & G Engineering\2014-16-101 The Pearl\E-5.2.rvtpg, 5/21/2018 8:59:42 AM

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 398-3459 FAX (619) 398-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

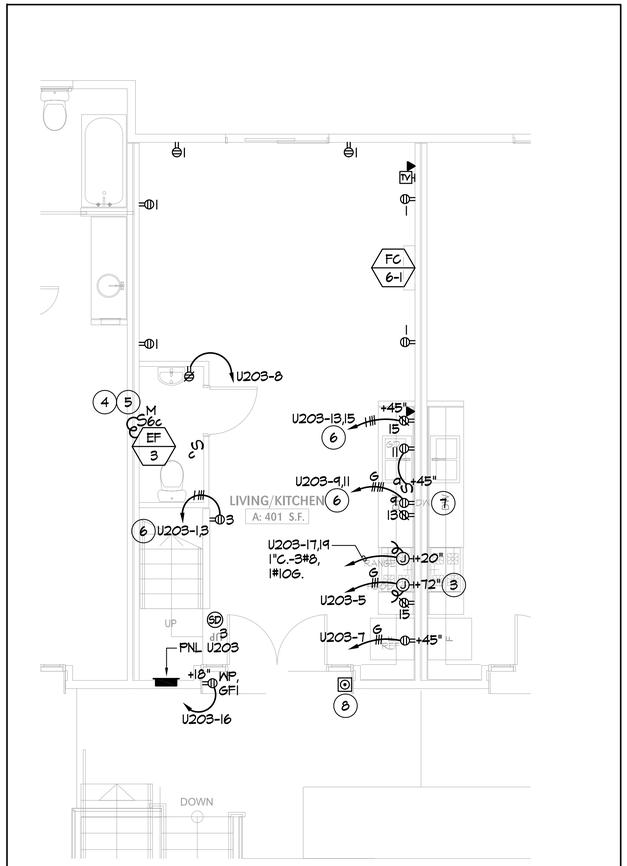
1ST SUBMITTAL 6/4/2018

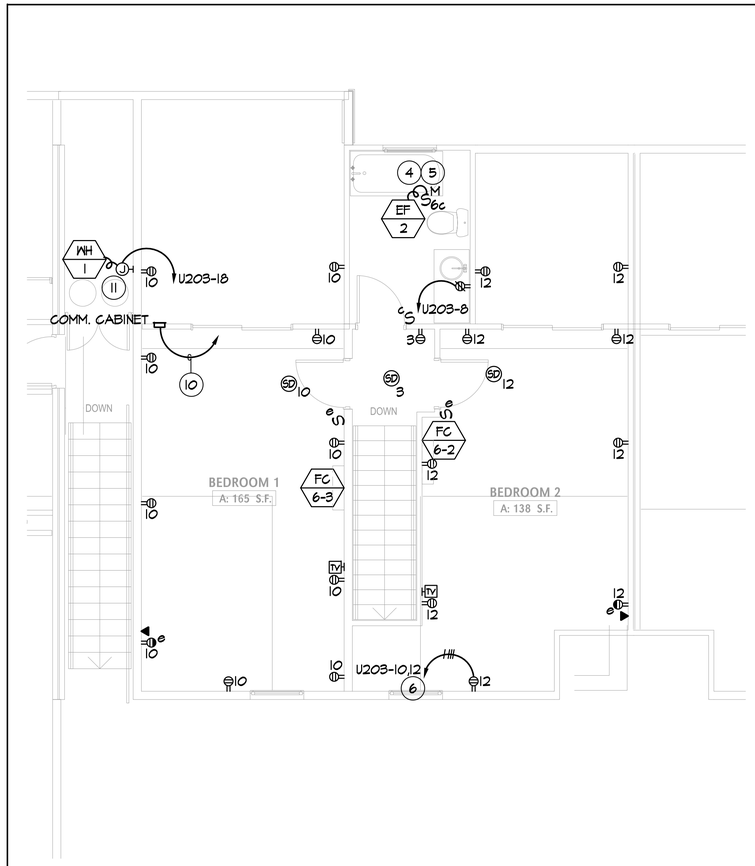
PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

UNITS ENLARGED PLANS

E-5.2





FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C2121W OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.

1 / E-5.3 — ENLARGED 2 BEDS POWER FLOOR PLAN

SCALE: ¼" = 1'-0"

(1)(2)(9)(12)

PNL U203 — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR — 200 AMP BUS — 42000 AIC

	DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION	
1	LIVING RM. REC			20	1	A	2	20			CU/FC UNITS	
	DINING ROOM REC.			20	3	B	4	2			--------	
3	HOOD			20	5	A	6	20			LIGHTING/EF	1
	REFRIG.			20	7	B	8	20			BATHROOM REC.	
	DISHWASHER			20	9	A	10	20			BEDROOM REC, LT	1
	GARB. DISP			20	11	B	12	20			BEDROOM REC, LT	
	KITCHEN REC.			20	13	A	14	20			SPARE	
	KITCHEN REC.			20	15	B	16	20			EXTERIOR REC	
9	RANGE			40	17	A	18	15			WH	9
	--------			2	19	B	20	-			SPACE	
	SPACE			-	21	A	22	-			SPACE	
	SPACE			-	23	B	24	-			SPACE	
					25	A	26					
					27	B	28					
					29	A	30					
	SUBTOTAL	0	0						0	0	SUBTOTAL	
		Ø A	Ø B									
	TOTAL	0	0									

NOTES:
1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

\\Vault01\Shared\Docs\C & G Engineering\2014-16\01 The Pearl\E-5.3.dwg, 5/21/2018 8:59:08 AM
© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3459 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

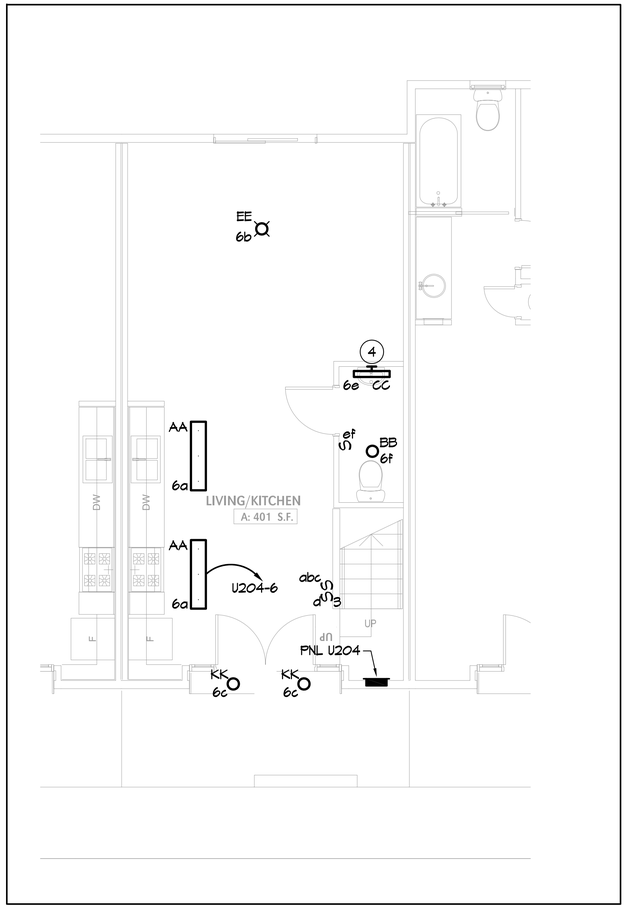
1ST SUBMITTAL 6/4/2018

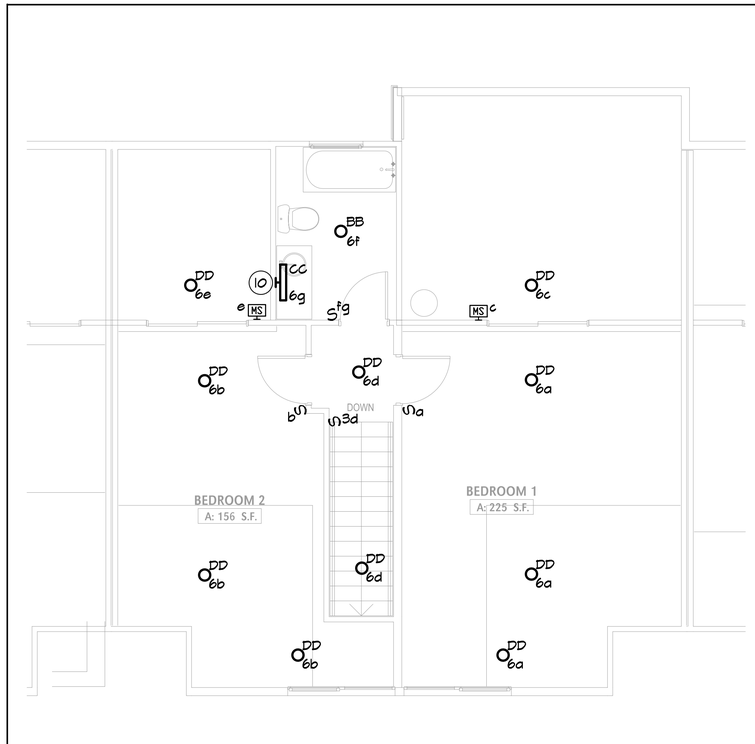
PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

UNITS ENLARGED PLANS

E-5.3





FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
4. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
5. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.

1 / E-5.4 ENLARGED 2 BEDS LIGHTING FLOOR PLAN

SCALE: ¼" = 1'-0"

(1)(2)(3)(6)

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, and plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE (619) 398-3470 FAX (619) 398-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

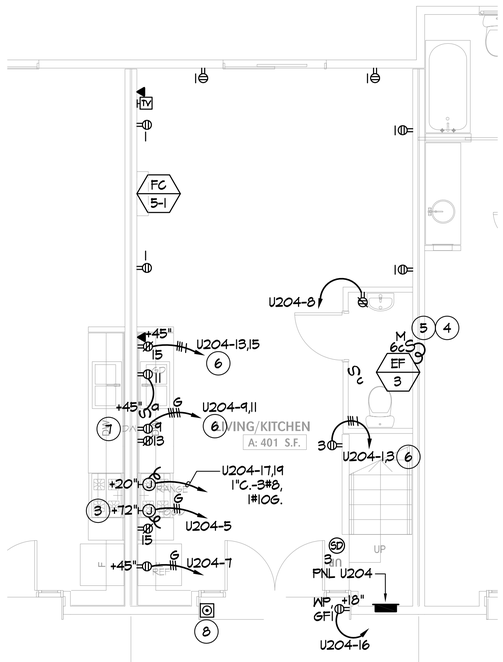
PROJECT # 1008

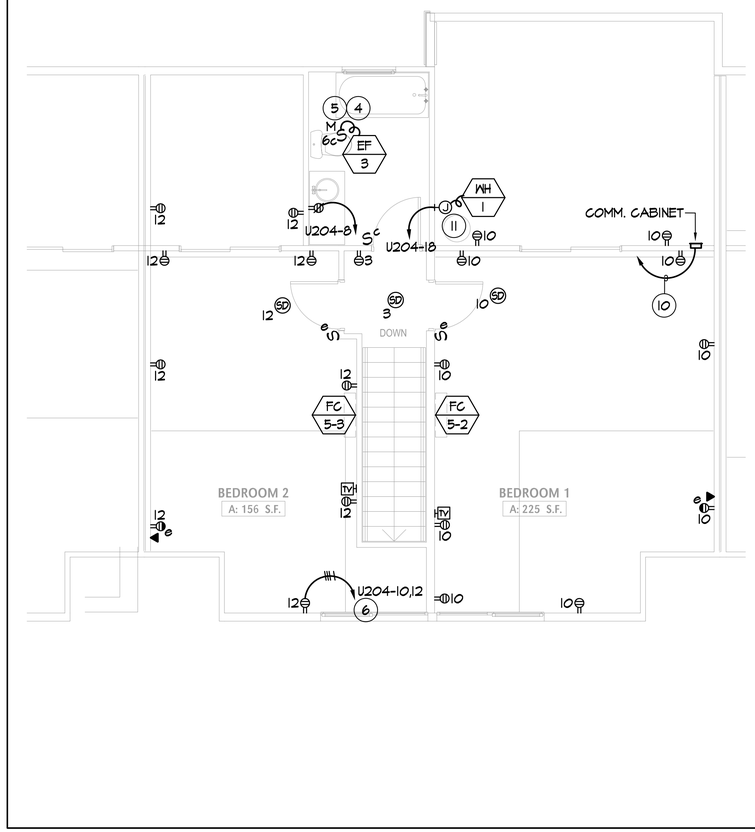
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

UNITS ENLARGED PLANS

E-5.4

\\Revit01\Shared\Revit\C & G Engineering\2016-16-101 The Pearl\E-5.4.dwg, 5/21/2018 8:58:13 AM





FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C212W OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.

1 / E-5.5 — ENLARGED 2 BEDS POWER FLOOR PLAN

SCALE: ¼" = 1'-0"

(1)(2)(9)(12)

PNL U204 — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR 200 AMP BUS — 42000 AIC

DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION
LIVING RM. REC			20	1	A	2	20			CU/FC UNITS
DINING ROOM REC.			20	3	B	4	2			--------
HOOD			20	5	A	6	20			LIGHTING/EF
REFRIG.			20	7	B	8	20			BATHROOM REC.
DISHWASHER			20	9	A	10	20			BEDROOM REC, LT
GARB. DISP			20	11	B	12	20			BEDROOM REC, LT
KITCHEN REC.			20	13	A	14	20			SPARE
KITCHEN REC.			20	15	B	16	20			EXTERIOR REC
RANGE			40	17	A	18	15			WH
--------			2	19	B	20	-			SPACE
SPACE			-	21	A	22	-			SPACE
SPACE			-	23	B	24	-			SPACE
				25	A	26				
				27	B	28				
				29	A	30				
SUBTOTAL	0	0						0	0	SUBTOTAL
	Ø A	Ø B								
TOTAL	0	0								

NOTES:
1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm or organization for any purpose whatsoever without written permission of FoundationForm.

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 398-3470 FAX (619) 398-3482

Consultant

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

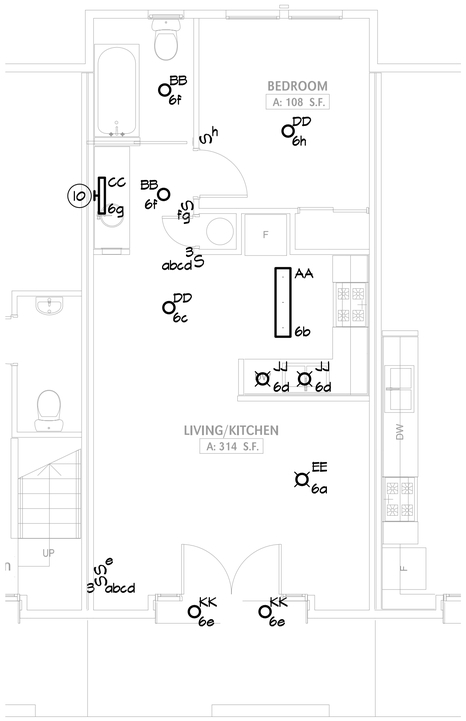
PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

UNITS ENLARGED PLANS

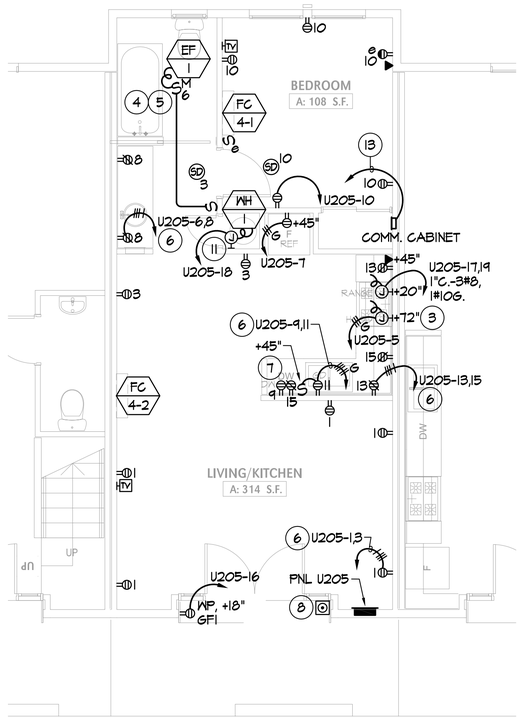
E-5.5

\\Vault01\Shared\Docs\C & G Engineering\2016-16-101 The Pearl\E-5.5.dwg, 5/21/2018 8:57:19 AM



1 E-5.6 — ENLARGED 1 BED LIGHTING FLOOR PLAN — (1)(2)(9)(14)

SCALE: ¼" = 1'-0"



2 E-5.6 — ENLARGED 1 BED POWER FLOOR PLAN — (1)(2)(6)(9)(12)

SCALE: ¼" = 1'-0"

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C2121N OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.
13. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.

[2][4][3] **PNL U205** — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR — 200 AMP BUS — 42000 AIC

	DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION	
[1]	LIVING RM. REC			20	1	A	2	20			CU/FC UNITS	
	DINING ROOM REC.			20	3	B	4	2			--------	
[3]	HOOD			20	5	A	6	20			LIGHTING/EF	[1]
	REFRIG.			20	7	B	8	20			BATHROOM REC.	
	DISHWASHER			20	9	A	10	20			BEDROOM REC, LT	[1]
	GARB. DISP			20	11	B	12	20			SPARE	
	KITCHEN REC.			20	13	A	14	20			SPARE	
	KITCHEN REC.			20	15	B	16	20			EXTERIOR REC	
[3]	RANGE			40	17	A	18	15			WH	[3]
	--------			2	19	B	20	-			SPACE	
	SPACE			-	21	A	22	-			SPACE	
	SPACE			-	23	B	24	-			SPACE	
					25	A	26					
					27	B	28					
					29	A	30					
	SUBTOTAL	0	0						0	0	SUBTOTAL	
		Ø A	Ø B	NOTES:								
	TOTAL	0	0	1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION								

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\elec01\Shared\Docs\C & G Engineering\205-16-101 The Pearl\E-5.dwg, 5/21/2018 8:56:41 AM

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3459 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

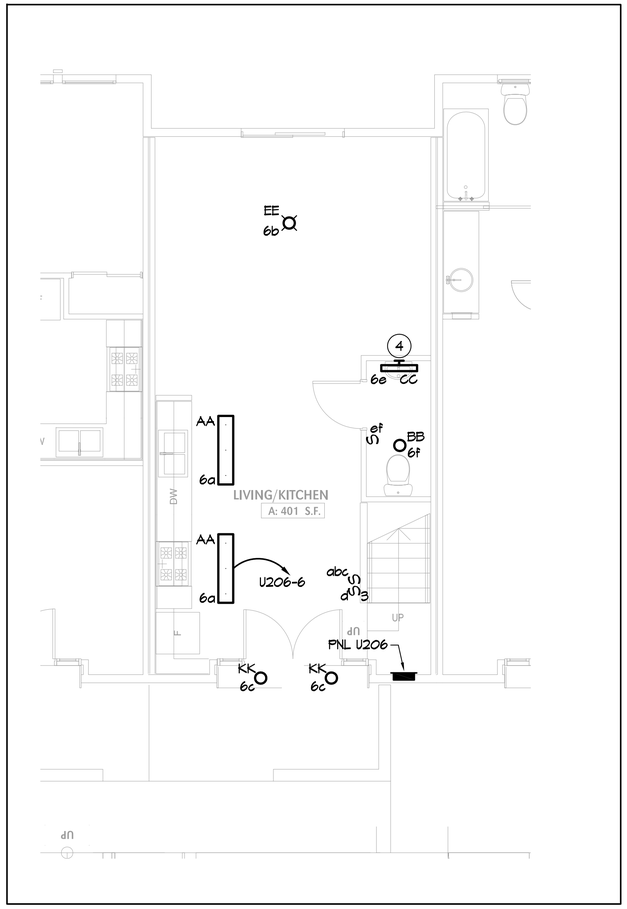
1ST SUBMITTAL 6/4/2018

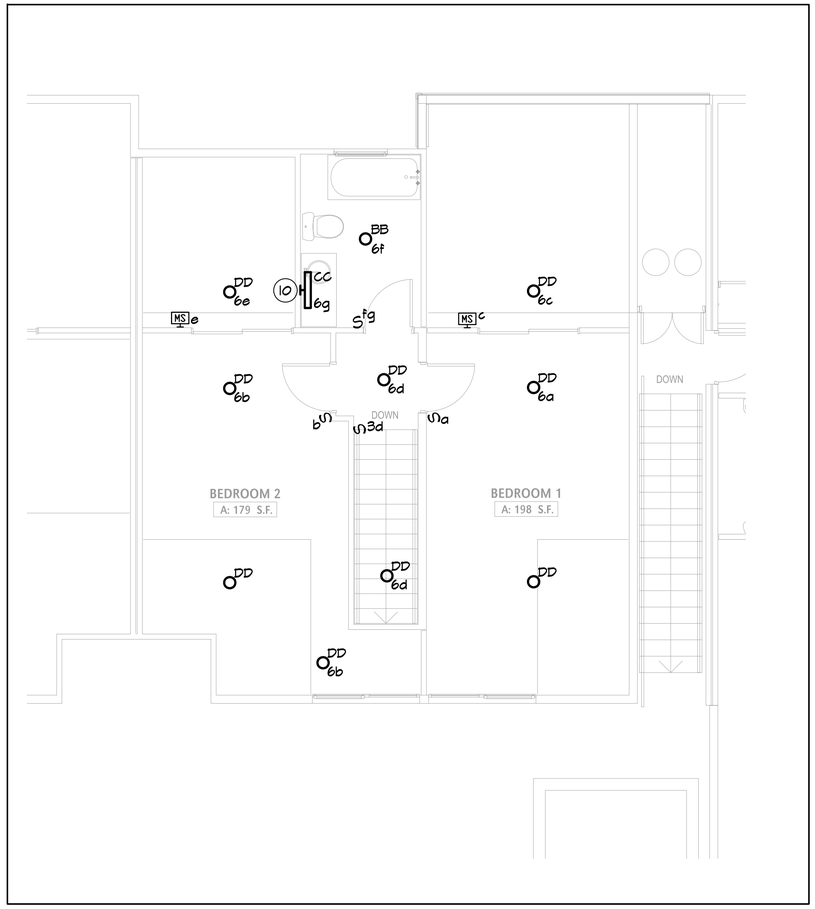
PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER CARLOS J. ZUNIGA NO. E14587 EXP. 6/30/18 ELECTRICAL

UNITS ENLARGED PLANS

E-5.6





FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
4. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
5. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.

1 / E-5.7 — ENLARGED 2 BEDS LIGHTING FLOOR PLAN

SCALE: ¼" = 1'-0"

(1)(2)(3)(6)

© 2016 FoundationforForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationforForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationforForm.

\\Revit01\Shared\Revit\C & G Engineering\2016-16-101 The Pearl\E-5.7.dwg, 5/21/2018 8:55:23 AM

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

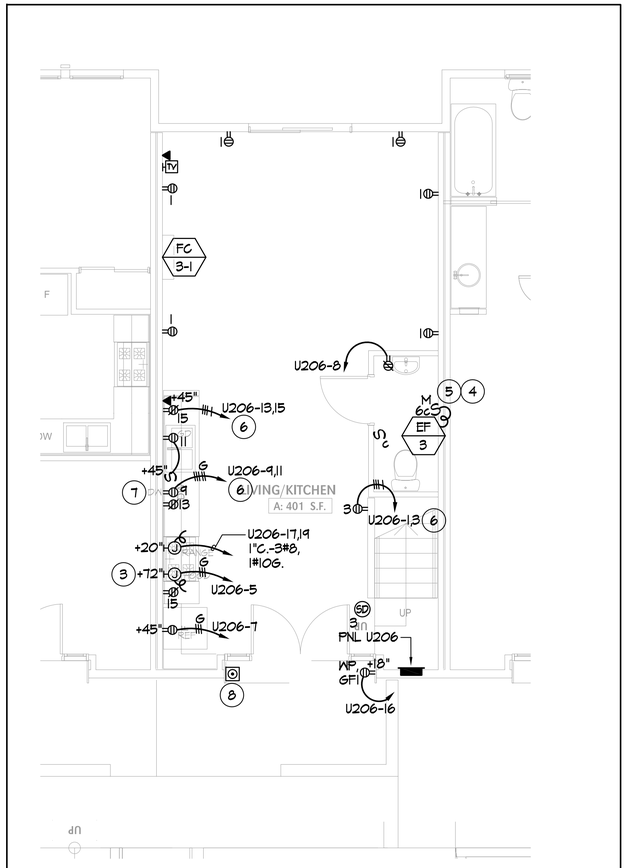
1ST SUBMITTAL 6/4/2018

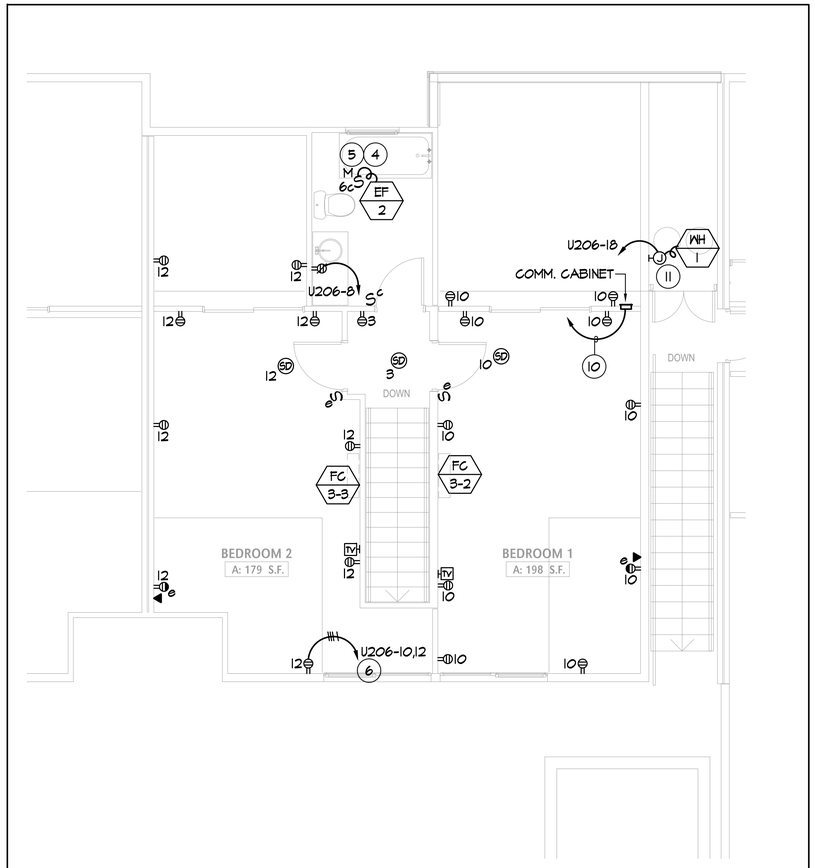
PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

UNITS ENLARGED PLANS

E-5.7





ENLARGED 2 BEDS POWER FLOOR PLAN

1 / E-5.8

SCALE: ¼" = 1'-0"

(1)(2)(9)(12)

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C212W OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.

PNL U206 — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR 200 AMP BUS — 42000 AIC

DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION
LIVING RM. REC			20	1	A	2	20			CU/FC UNITS
DINING ROOM REC.			20	3	B	4	2			--------
HOOD			20	5	A	6	20			LIGHTING/EF
REFRIG.			20	7	B	8	20			BATHROOM REC.
DISHWASHER			20	9	A	10	20			BEDROOM REC, LT
GARB. DISP			20	11	B	12	20			BEDROOM REC, LT
KITCHEN REC.			20	13	A	14	20			SPARE
KITCHEN REC.			20	15	B	16	20			EXTERIOR REC
RANGE			40	17	A	18	15			WH
--------			2	19	B	20	-			SPACE
SPACE			-	21	A	22	-			SPACE
SPACE			-	23	B	24	-			SPACE
				25	A	26				
				27	B	28				
				29	A	30				
SUBTOTAL	0	0						0	0	SUBTOTAL
	Ø A	Ø B								
TOTAL	0	0								

NOTES:
1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 398-3470 FAX (619) 398-3482

Consultant

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

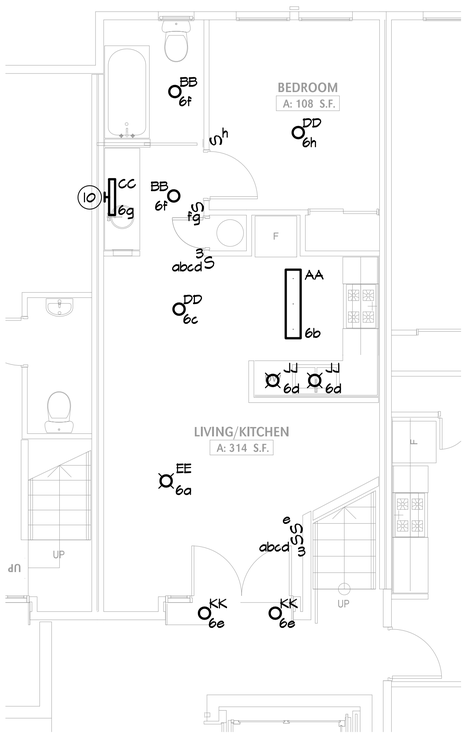
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

UNITS ENLARGED PLANS

E-5.8

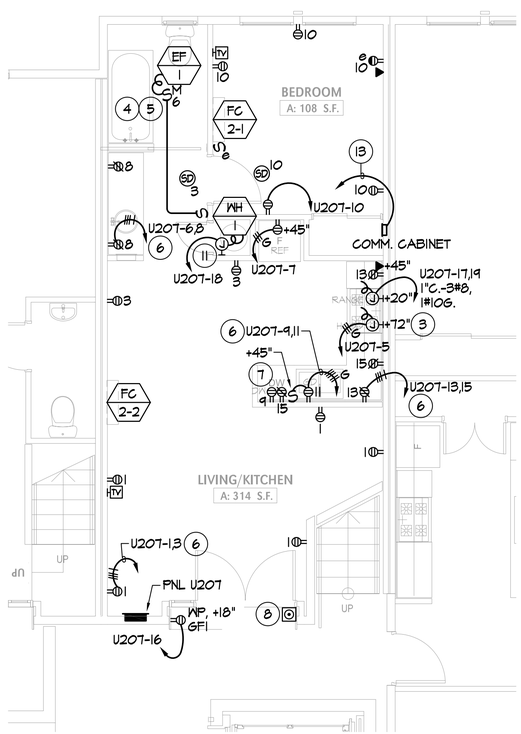
© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\Vault01\Shared\Docs\C & G Engineering\2016-16-101 The Pearl\E-5.8.dwg, 5/21/2018 8:54:48 AM



1 E-5.9 ENLARGED 1 BED LIGHTING FLOOR PLAN (1)(2)(9)(14)

SCALE: ¼" = 1'-0"



2 E-5.9 ENLARGED 1 BED POWER FLOOR PLAN (1)(2)(6)(9)(12)

SCALE: ¼" = 1'-0"

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C2121N OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.
13. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.

[2][4][3] **PNL U207** — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR — 200 AMP BUS

	DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION	
[1]	LIVING RM. REC			20	1	A	2	20			CU/FC UNITS	
	DINING ROOM REC.			20	3	B	4	2			--------	
[3]	HOOD			20	5	A	6	20			LIGHTING/EF	[1]
	REFRIG.			20	7	B	8	20			BATHROOM REC.	
	DISHWASHER			20	9	A	10	20			BEDROOM REC. LT	[1]
	GARB. DISP			20	11	B	12	20			SPARE	
	KITCHEN REC.			20	13	A	14	20			SPARE	
	KITCHEN REC.			20	15	B	16	20			EXTERIOR REC	
[3]	RANGE			40	17	A	18	15			WH	[3]
	--------			2	19	B	20	-			SPACE	
	SPACE			-	21	A	22	-			SPACE	
	SPACE			-	23	B	24	-			SPACE	
					25	A	26					
					27	B	28					
					29	A	30					
	SUBTOTAL	0	0						0	0	SUBTOTAL	
	TOTAL	Ø A 0	Ø B 0									

NOTES:
1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and shall not be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110, SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

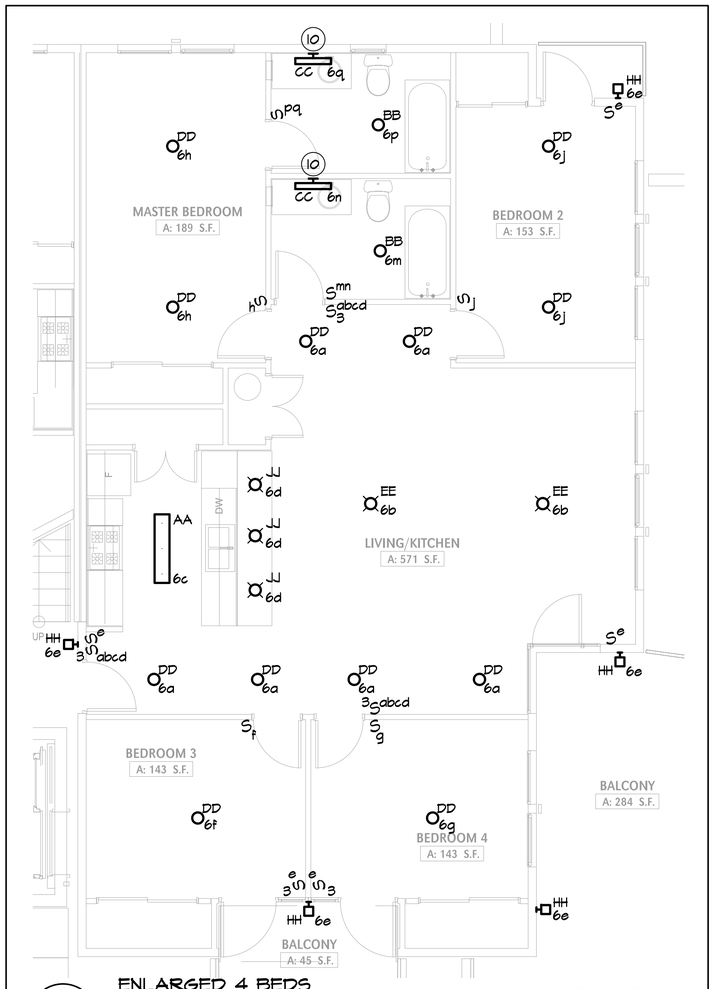
PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

UNITS ENLARGED PLANS

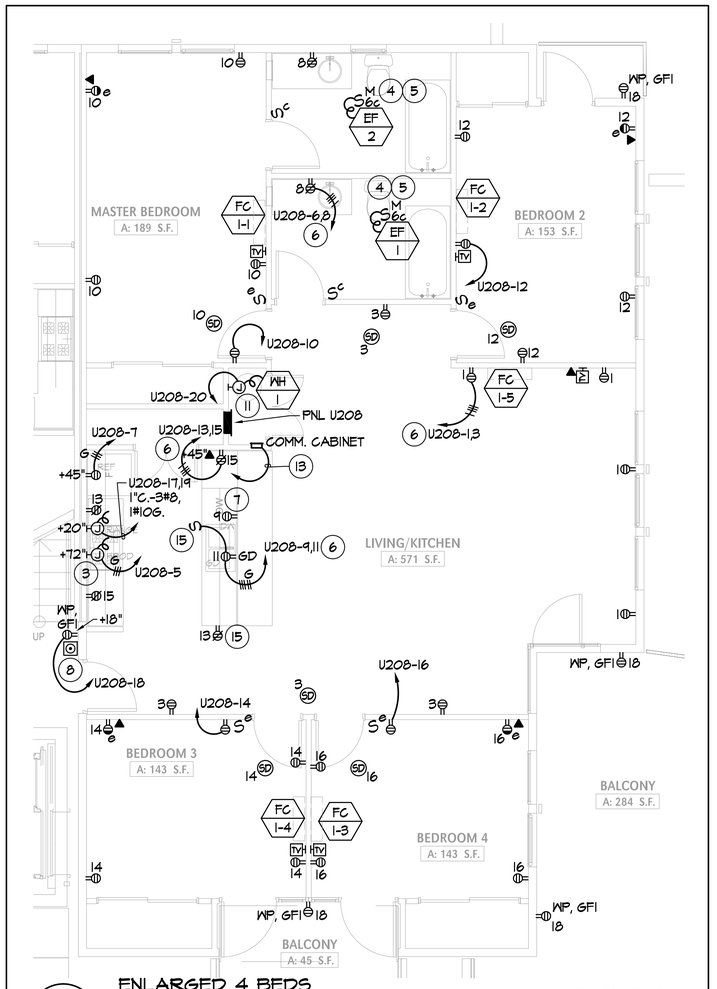
E-5.9

\\electric\Shared\Docs\C & G Engineering\205-16-101 The Pearl\E-5.9.dwg, 5/21/2018 8:54:59 AM



1 E-5.10 ENLARGED 4 BEDS LIGHTING FLOOR PLAN (1)(2)(9)(14)

SCALE: ¼" = 1'-0"



2 E-5.10 ENLARGED 4 BEDS POWER FLOOR PLAN (1)(2)(9)(12)

SCALE: ¼" = 1'-0"

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C2121N OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.
13. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.
15. MOUNT OUTLET ON CABINET WORK 6" BELOW COUNTERTOP. REFER TO ARCH. DRAWINGS FOR EXACT LOCATION.

PNL U208 — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR 200 AMP BUS — 42000 AIC

	DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION	
1	LIVING RM. REC			20	1	A	2	40			CU/FC UNITS	
1	DINING ROOM REC.			20	3	B	4	2			--------	
9	HOOD			20	5	A	6	20			LIGHTING/EF	1
	REFRIG.			20	7	B	8	20			BATHROOM REC.	
	DISHWASHER			20	9	A	10	20			M. BEDROOM REC, LT	1
	GARB. DISP			20	11	B	12	20			BEDROOM #1 REC, LT	
	KITCHEN REC.			20	13	A	14	20			BEDROOM #2 REC, LT	
	KITCHEN REC.			20	15	B	16	20			BEDROOM #3 REC, LT	
9	RANGE			40	17	A	18	20			EXTERIOR REC	
	--------			2	19	B	20	15			WH	3
	SPACE			-	21	A	22	-			SPACE	
	SPACE			-	23	B	24	-			SPACE	
					25	A	26					
					27	B	28					
					29	A	30					
	SUBTOTAL	0	0						0	0	SUBTOTAL	
	TOTAL	Ø A 0	Ø B 0									

NOTES:
1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 298-3493 FAX (619) 298-3492

Consultant

Hitzke Development Corporation

Developer

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

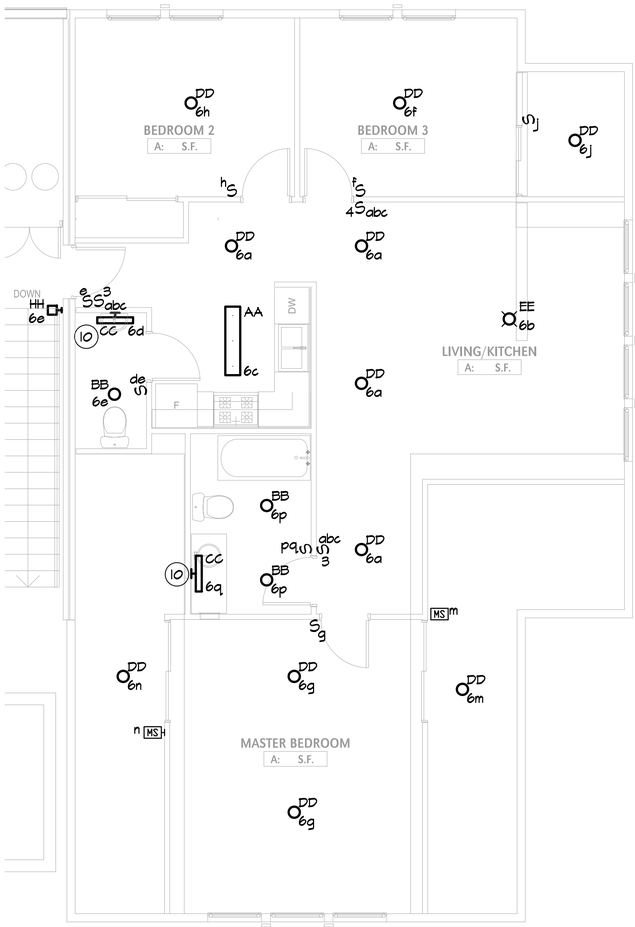
REGISTERED PROFESSIONAL ENGINEER CARLOS J. ZUNIGA NO. E14587 EXP. 6/30/18 ELECTRICAL

UNITS ENLARGED PLANS

E-5.10

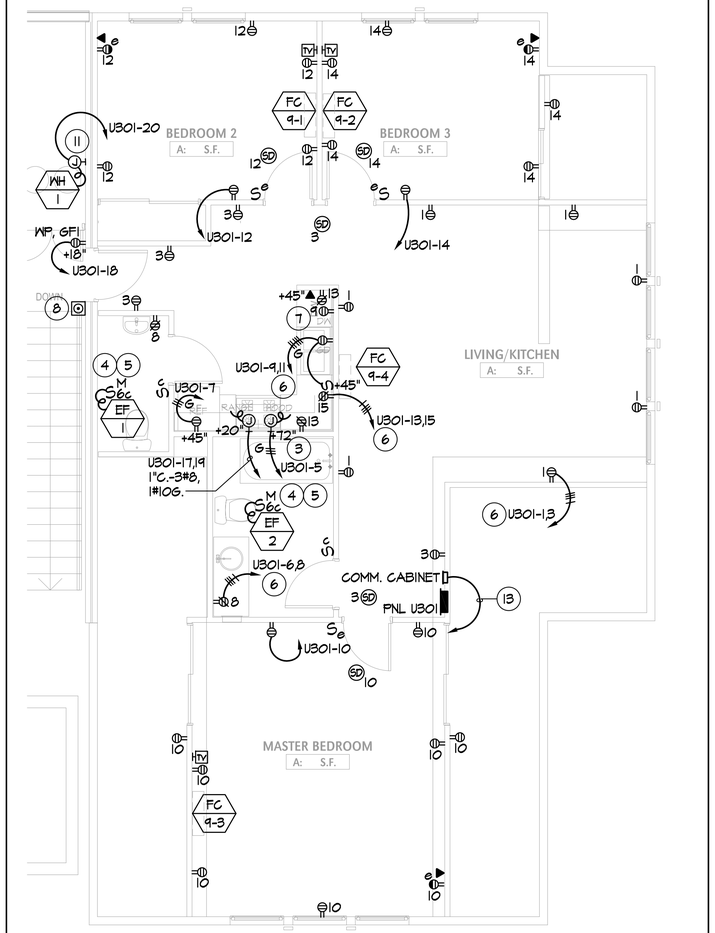
© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm or organization for any purpose whatsoever without written permission of FoundationForm.

\\vtech\Shared\Docs\C & G Engineering\1206-16-101 The Pearl\E-5.10.dwg, 5/21/2018 8:53:19 AM



1 E-5.11 ENLARGED 3 BEDS LIGHTING FLOOR PLAN (1)(2)(9)(14)

SCALE: ¼" = 1'-0"



2 E-5.11 ENLARGED 3 BEDS POWER FLOOR PLAN (1)(2)(9)(12)

SCALE: ¼" = 1'-0"

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C2121W OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.
13. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.
15. MOUNT OUTLET ON CABINET WORK 6" BELOW COUNTERTOP. REFER TO ARCH. DRAWINGS FOR EXACT LOCATION.

PNL U301 — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR — 200 AMP BUS — 42000 AIC

	DESCRIPTION	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION	
1	LIVING RM. REC			20	1	A	2	20			CU/FC UNITS	
1	DINING ROOM REC.			20	3	B	4	2			--------	
9	HOOD			20	5	A	6	20			LIGHTING/EF	1
	REFRIG.			20	7	B	8	20			BATHROOM REC.	
	DISHWASHER			20	9	A	10	20			M. BEDROOM REC, LT	1
	GARB. DISP			20	11	B	12	20			BEDROOM #1 REC, LT	1
	KITCHEN REC.			20	13	A	14	20			BEDROOM #2 REC, LT	1
	KITCHEN REC.			20	15	B	16	20			SPARE	
9	RANGE			40	17	A	18	20			EXTERIOR REC	
	--------			2	19	B	20	15			WH	9
	SPACE			-	21	A	22	-			SPACE	
	SPACE			-	23	B	24	-			SPACE	
					25	A	26					
					27	B	28					
					29	A	30					
	SUBTOTAL	0	0						0	0	SUBTOTAL	
	TOTAL	Ø A 0	Ø B 0									

NOTES:
1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 398-3499 FAX (619) 398-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

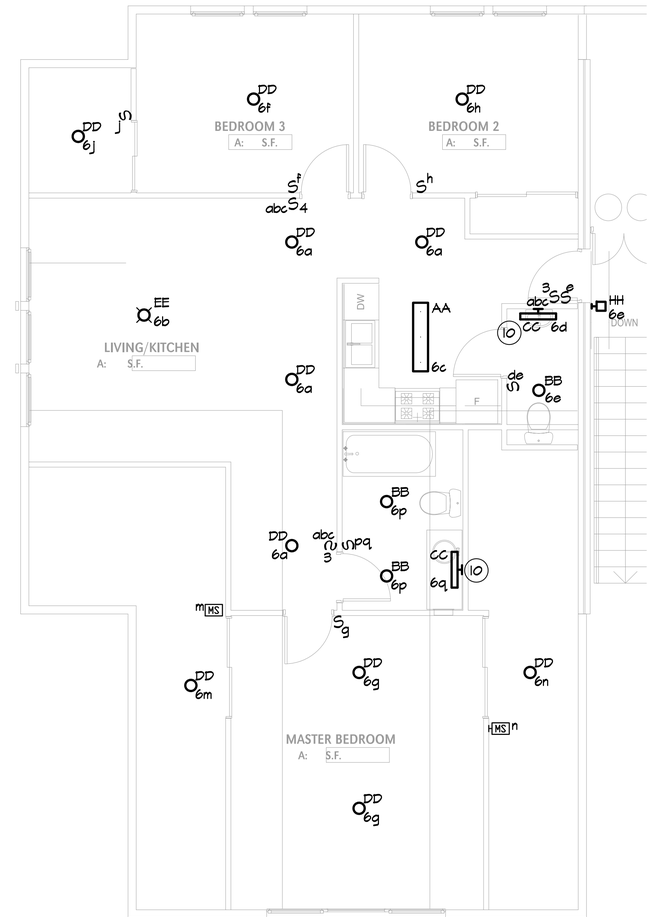
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

UNITS ENLARGED PLANS

E-5.11

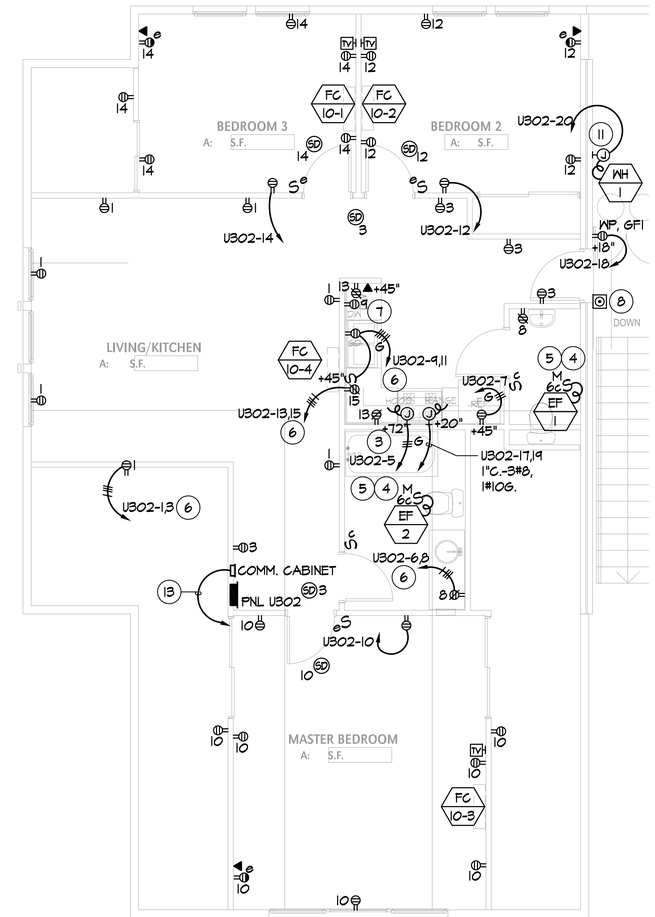
\\Revit\Shared\Docs\C & G Engineering\2016-16-101 The Pearl\E-5.11.dwg, 5/21/2018 8:53:35 AM

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.



1 E-5.12 ENLARGED 3 BEDS LIGHTING FLOOR PLAN (1)(2)(9)(14)

SCALE: ¼" = 1'-0"



2 E-5.12 ENLARGED 3 BEDS POWER FLOOR PLAN (1)(2)(9)(12)

SCALE: ¼" = 1'-0"

FLOOR PLAN KEYNOTES:

1. CONNECT SWITCHES AND BRANCH CIRCUITS TO OUTLETS, EQUIPMENT AND LIGHTING FIXTURES AS INDICATED ON PLANS (U.O.N.) TO PANEL WITH #12 AWG MIN. CONDUCTORS IN CONCEALED RACEWAYS. CONDUCTOR SIZES AND QUANTITIES OTHER THAN #12 AWG ARE NOTED ON PLANS. FINAL CONNECTIONS TO MOTORIZED AND VIBRATING EQUIPT. SHALL BE WITH FLEXIBLE CONDUIT.
2. PROVIDE ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, DENS, CLOSETS, ETC OR SIMILAR ROOMS OR AREAS.
3. WALL MOUNTED J-BOX FOR HOOD. FIELD VERIFY LOCATION AND REQUIREMENTS.
4. NEMA 1 TOGGLE FRACTIONAL HORSEPOWER. RATED MANUAL MOTOR STARTER, PROVIDE WITH THERMAL OVERLOADS.
5. DISCONNECT SWITCH SHALL BE ACCESSIBLE FROM BELOW. COORDINATE WITH CEILING ACCESS PANEL LOCATION AND ALL DISCIPLINES TO MAINTAIN CLEAR/WORKING SPACE.
6. PROVIDE SEPARATE NEUTRAL FOR EACH GFI/AFCI BRANCH CIRCUIT.
7. DUPLEX RECEPTACLE FOR DISHWASHER MACHINE MOUNTED AT +12"AFF. PROVIDE FLEXIBLE HARD WIRE CONNECTIONS TO DISHWASHER (IN LIEU OF RECEPTACLE) IF REQUIRED. FIELD VERIFY LOCATION AND REQUIREMENTS.
8. DOORBELL. PROVIDE COMPONENTS (PUSH BUTTON, CHIME, LOV TRANSFORMER) SHALL INCLUDE A COMPLETE DOOR BELL SYSTEM AS A PACKAGE. DOOR BELL SYSTEM SHALL BE EDWARDS SIGNALING C2121N OR EQUAL.
9. MOUNT DEVICES IN A MULTIGANG OUTLET BOX WITH ONE COMMON COVER PLATE. PROVIDE COMBINATION PLATES WHERE REQUIRED.
10. MOUNT FIXTURE ABOVE MIRROR. VERIFY MOUNT HEIGHT WITH ARCHITECT.
11. FIELD VERIFY & COORDINATE EXACT REQUIREMENTS WITH PLUMB. PRIOR TO INSTALLATION.
12. PLACEMENT AND SPACING OF RECEPTACLES ON WALLS IN RESIDENTIAL UNITS SHALL COMPLY WITH CEC 210.52.
13. PROVIDE (1) CAT 6E AND (1) RG-6U COAXIAL CABLE TO TELECOMM ROOM
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. ALL LIGHT FIXTURES HEIGHTS TO BE COORDINATED BY ARCHITECT.
15. MOUNT OUTLET ON CABINET WORK 6" BELOW COUNTERTOP. REFER TO ARCH. DRAWINGS FOR EXACT LOCATION.

PNL U302 — 120/208 VOLTS, 1Ø, 3 WIRE — MAIN LUGS ONLY — LOAD CENTER — GRD. & NEUTRAL BAR — 200 AMP BUS — 42000 AIC

	VOLTAMPS Ø A	VOLTAMPS Ø B	C/B	CKT	Ø	CKT	C/B	VOLTAMPS Ø A	VOLTAMPS Ø B	DESCRIPTION	
LIVING RM. REC			20	1	A	2	20			CU/FC UNITS	
DINING ROOM REC.			20	3	B	4	2			--------	
HOOD			20	5	A	6	20			LIGHTING/EF	1
REFRIG.			20	7	B	8	20			BATHROOM REC.	
DISHWASHER			20	9	A	10	20			M. BEDROOM REC, LT	1
GARB. DISP			20	11	B	12	20			BEDROOM #1 REC, LT	
KITCHEN REC.			20	13	A	14	20			BEDROOM #2 REC, LT	
KITCHEN REC.			20	15	B	16	20			SPARE	
RANGE			40	17	A	18	20			EXTERIOR REC	
-------			2	19	B	20	15			WH	3
SPACE			-	21	A	22	-			SPACE	
SPACE			-	23	B	24	-			SPACE	
				25	A	26					
				27	B	28					
				29	A	30					
SUBTOTAL	0	0						0	0	SUBTOTAL	
TOTAL	Ø A 0	Ø B 0									

NOTES:
1. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION

LOADCENTER KEYNOTES:

1. CIRCUIT BREAKERS SERVING BEDROOMS RECEPTACLES SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
2. FOR LOAD CALCULATIONS REFER TO ONE FAMILY DWELLING CALCULATION.
3. PROVIDE CIRCUIT BREAKER WITH HANDLE LOCK-OFF DEVICE.
4. NAMEPLATE DESIGNATION SHALL BE THE ACTUAL FINAL ROOM NUMBER. FIELD COORDINATE.
5. PROVIDE HANDLE-TIES FOR MULTI-WIRE CIRCUITS.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm or organization for any purpose whatsoever without written permission of FoundationForm.

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 398-3490 FAX (619) 398-3492

Consultant

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

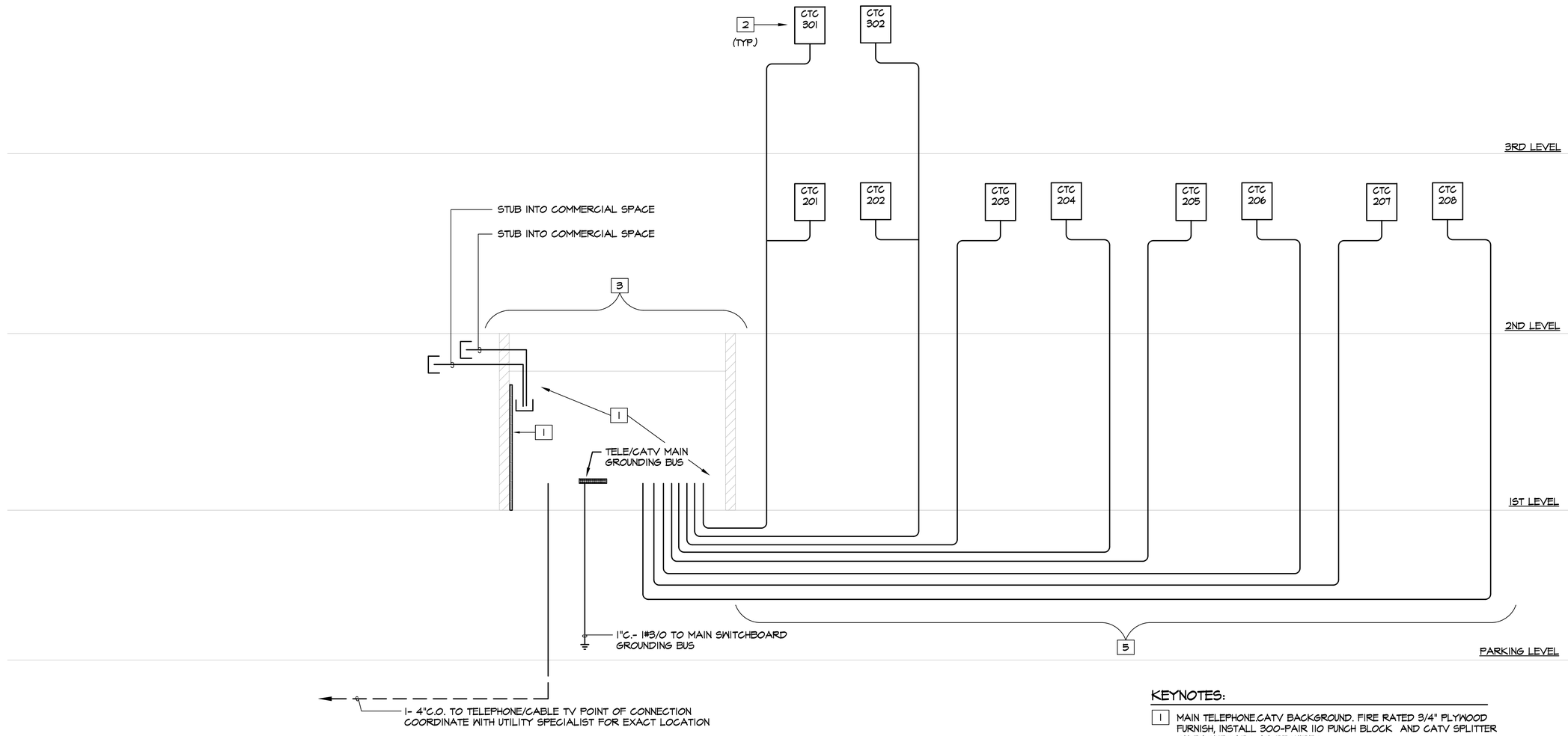
1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER CARLOS J. ZUNIGA NO. E14587 EXP. 6/30/18 ELECTRICAL STATE OF CALIFORNIA

UNITS ENLARGED PLANS

E-5.12



ELECTRICAL TELEPHONE AND CATV RISER DIAGRAM 4 6

SCALE: NO SCALE

KEYNOTES:

1. MAIN TELEPHONE.CATV BACKGROUND. FIRE RATED 3/4" PLYWOOD FURNISH, INSTALL 300-PAIR 110 PUNCH BLOCK AND CATV SPLITTER ON BACKBOARD AS REQUIRED.
2. COMM TERMINAL CABINET IN EACH DWELLING UNIT CABINET SHALL BE FLUSH MOUNTED 12' X 12" X 4" . HINGE COVER WITH FIRE RETARDANT PLYWOOD FOR MOUNTING OF 110 PUNCH BLOCK AND CATV SPLITTER. NUMBER IS APT I.D. REFERENCE ONLY SEE FLOOR PLANS.
3. PROVIDE ALL CONDUIT PENETRATIONS THRU FIRE RATED WALLS/FLOORS/CLGS SHALL BE FIRE STOPPING AS REQUIRED.
4. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL PULLBOXES, JUNCTION BOXES, ETC. LOCATE WP BOXES IN PARKING LEVEL, QUANTITY AND SIZE OF PULLBOXES PER CEC REQUIREMENTS. PROVIDE PULLBOXES WITH RELIEF DRAIN PLUG (TYP.)
5. ROUTE CONDUITS OVERHEAD AND TIGHT AGAINST UNDERSIDE OF CEILING OF PARKING LEVEL.
6. CONDUITS AND CABLING REQUIREMENTS FOR TELEPHONE, AND CABLE TV SHALL UNDER SEPARATE DIRECTIVE FROM OWNER'S TELE/COMM AND CABLE TV VENDOR.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\\sbtech\Shared\Civil & G Engineering\2016-16\ 1 The Pearl\E-6.0.dwg, 5/21/2018 9:04:13 AM

Consultant
C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3459 FAX (619) 299-3492

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

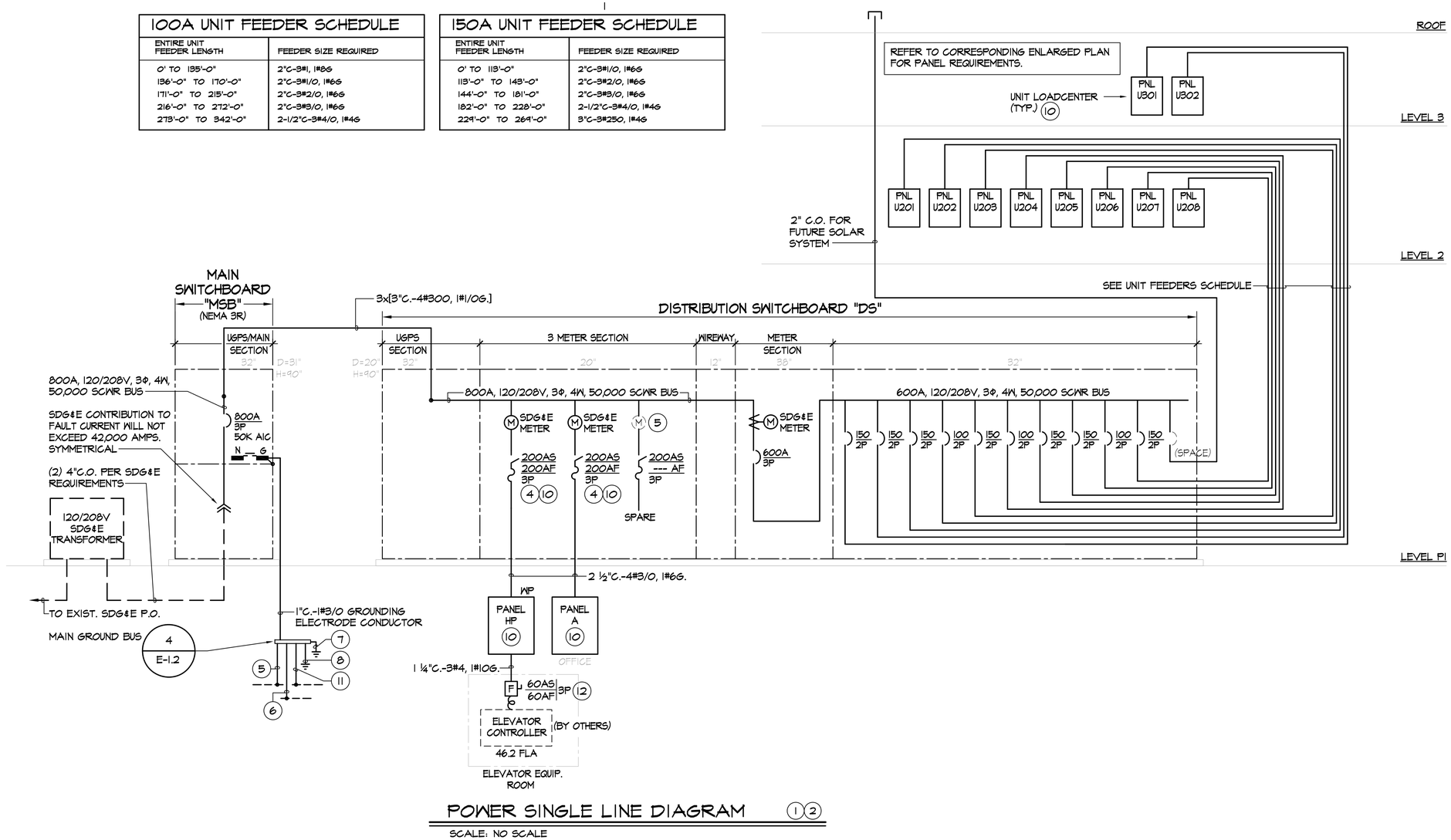
REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

ELECTRICAL TELEPHONE AND CATV RISER DIAGRAM

E-6.0

100A UNIT FEEDER SCHEDULE	
ENTIRE UNIT FEEDER LENGTH	FEEDER SIZE REQUIRED
0' TO 135'-0"	2"C.-3#1, 1#6G
136'-0" TO 170'-0"	2"C.-3#1/0, 1#6G
171'-0" TO 215'-0"	2"C.-3#2/0, 1#6G
216'-0" TO 272'-0"	2"C.-3#3/0, 1#6G
273'-0" TO 342'-0"	2-1/2"C.-3#4/0, 1#4G

150A UNIT FEEDER SCHEDULE	
ENTIRE UNIT FEEDER LENGTH	FEEDER SIZE REQUIRED
0' TO 113'-0"	2"C.-3#1/0, 1#6G
113'-0" TO 143'-0"	2"C.-3#2/0, 1#6G
144'-0" TO 181'-0"	2"C.-3#3/0, 1#6G
182'-0" TO 228'-0"	2-1/2"C.-3#4/0, 1#4G
229'-0" TO 269'-0"	3"C.-3#250, 1#4G



POWER SINGLE LINE DIAGRAM (1)(2)

SCALE: NO SCALE

POWER SINGLE LINE DIAGRAM KEYNOTES

(1) CONDUCTORS SIZES ARE BASED ON COPPER CONDUCTORS WITH "THHN" /"THWN" INSULATION.

(2) PROPERLY SHIM AND LEVEL SWITCHBOARDS AND METER BANKS, WITH ½" DIA. x 6" LONG MINIMUM CONCRETE LEAD ANCHOR BOLTS. (4) ANCHORS MINIMUM PER EACH SECTION.

(3) ALL CIRCUIT BREAKERS IN THIS SWITCHBOARD SHALL BE RATED FOR 50,000 A.I.C. (MINIMUM).

(4) FUSIBLE PULL OUTS WITH BUSSMAN #JJN, UL CLASS "T" CURRENT LIMITING FAST ACTING FUSES.

(5) ¾" PVC CONDUIT - 1#3/0 BOND TO NEAREST ACCESSIBLE METALLIC COLD WATER PIPE. CONNECTION SHALL BE MADE WITHIN 5'-0" OF PIPE BUILDING ENTRANCE.

(6) ¾" PVC CONDUIT - 1#3/0 BOND TO NEAREST FIRE SPRINKLER SYSTEM METALLIC PIPE.

(7) 1#3/0 "UFER" GROUND, CONCRETE ENCASED ELECTRODE (PER CEC).

(8) 1#3/0 TO ¾" DIA. x 10'-0" LONG COPPER CLAD STEEL GROUND ROD.

(9) PROVISIONS FOR BUS EXTENSION AT SAME AMPACITY.

(10) PROVIDE UL LISTED AND CERTIFIED SERIES RATED CIRCUIT BREAKERS TO ALLOW REDUCED RATINGS OF DOWNSTREAM BREAKERS. SUBMIT SERIES RATING FOR REVIEW WITH SHOP DRAWINGS. SYSTEM SERIES RATING SHALL BE 50,000 A.I.C. MINIMUM. PROVIDE NAMEPLATES READING "CAUTION: 50,000A SERIES RATED SYSTEM; 42,000A AVAILABLE. IDENTIFIED REPLACEMENT COMPONENT REQUIRED". (TO COMPLY WITH NEC 110-22 AND 240-83c).

(11) ¾"C.-1#3/0 BOND TO MAIN GAS METAL PIPE.

(12) PROVIDE DISCONNECT. WITH AN AUXILIARY CONTACT WITH WIRING TO THE ELEVATOR CONTROLLER. CONTACT IS OPEN WHEN DISCONNECT IS OPEN. FIELD COORDINATE W/ ELEVATOR CONTRACTOR FOR REQUIREMENTS.

(13) METER SOCKET FOR FUTURE 200A, 120/208V, 3Φ, 4W METER. PER SDG&E REQUIREMENTS.

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm or organization for any purpose whatsoever without written permission of FoundationForm.

V:\Work01\Drawn\Docs\C & G Engineering\2014-16-101 The Pearl\E-7.0.dwg, 5/21/2018 9:53:56 AM

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110, SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Consultant

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

POWER SINGLE LINE DIAGRAM

E-7.0

MULTI FAMILY DWELLING CALCULATION :
UNITS: 10

TOTAL NUMBER OF UNITS					=	10 UNITS	
UNIT 1	=	1 @	1305 SF	=	1,305 SF		
UNIT 2	=	1 @	524 SF	=	524 SF		
UNIT 3	=	1 @	1387 SF	=	1,387 SF		
UNIT 4	=	1 @	1506 SF	=	1,506 SF		
UNIT 5	=	1 @	539 SF	=	539 SF		
UNIT 6	=	1 @	1374 SF	=	1,374 SF		
UNIT 7	=	1 @	514 SF	=	514 SF		
UNIT 8	=	1 @	1457 SF	=	1,457 SF		
UNIT 9	=	1 @	1487 SF	=	1,487 SF		
UNIT 10	=	1 @	1493 SF	=	1,493 SF		
DWELLING AREA					11,586 SF		
LIGHTING LOAD @ 3 W/SF CEC-220.12	=	11,586 X	3 W/SF	=	34,758 VA		
TWO APPLIANCE CIRCUITS		20 @	1500 W EA	=	30,000 VA		
					64,758 VA		
1ST 3000W @ 100%				=	3,000 VA		
REMAINDER TO 120000	=	61,758 X	35%	=	21,615 VA		
REMAINDER AT 25% CEC 220-11	=	0 X	25%	=	0 VA		
TOTAL DEMAND LOAD				=			24,615 VA
RANGE HOOD	=	10 @	400 W EA	=	4,000 VA		
REFRIGERATOR	=	10 @	1400 W EA	=	14,000 VA		
MICROWAVE	=	10 @	1630 W EA	=	16,300 VA		
DISHWASHER	=	10 @	1050 W EA	=	10,500 VA		
GARBAGE DISPOSAL	=	10 @	1127 W EA	=	11,270 VA		
WATER HEATER	=	10 @	500 W EA	=	5,000 VA		
					61,070 VA		
DEMAND FACTOR (CEC 220.53)	=	61,070 X	75%	=			45,803 VA
RANGE	=	10 PER CEC 220.55		=	27,200 VA		
AC UNIT	=	10 @	6023 W EA	=	60,230 VA		
							87,430 VA
TOTAL DWELLING LOAD				=			157,848 VA
COMMERCIAL AREA							
COMMERCIAL PANEL AREA	=	947 SQFT					
LIGHTING		947 SF X 2 VA/SF		=	1,894 VA		
RECEPTACLES		947 SF X 2 VA/SF		=	1,894 VA		
MISC		947 SF X 18 VA/SF		=	17,046 VA		
HVAC		947 SF X 10 VA/SF		=	9,470 VA		
		TOTAL LOAD FIRST FLOOR					30,304 VA
HOUSE PANEL							
HOUSE PANEL (lighting, receptacles)					9,000		
HOUSE PANEL (Elevator 15 HP 208V, 3PH)					16,632		
		ESTIMATED HOUSE PANEL LOAD					25,632
TOTAL BLDG METER BANK LOAD							213,784 VA
BLDG METER BANK LOAD @ 120/208V, 3P, 4W				=	**594 A**		
SERVICE SIZE REQUESTED FOR BLDG				=	**800 A**		

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1045 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE (619) 299-3459 FAX (619) 299-3492

Consultant

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA

LOAD SUMMARY

E-8.0

© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm, or organization for any purpose whatsoever without written permission of FoundationForm.

\Velocity\Shared\docs\C & G Engineering\256-16-151 The Pearl\E-8.0.dwg, 5/21/2018 9:03:15 AM

ELECTRICAL SPECIFICATIONS

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. THIS SPECIFICATION AND THE DRAWINGS COVER FURNISHING AND INSTALLING A COMPLETE AND OPERABLE ELECTRICAL SYSTEM.

B. THE GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS AND APPLICABLE PORTIONS OF DIVISION 1 ARE A PART OF THIS DIVISION.

C. THE CONTRACT DRAWINGS INDICATE THE EXTENT AND THE GENERAL LOCATION AND ARRANGEMENT OF EQUIPMENT, CONDUIT AND WIRING. EQUIPMENT AND OUTLETS SHALL BE LOCATED TO AVOID INTERFERENCE WITH MECHANICAL OR STRUCTURAL FEATURES. ALL LOCATIONS FOR ELECTRICAL WORK SHALL BE CHECKED AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS. IF ANY CONFLICTS OCCUR NECESSITATING DEPARTURES FROM THE CONTRACT DRAWINGS, DETAILS OF DEPARTURES AND REASONS; THEREFORE, SHALL BE SUBMITTED FOR REVIEW. THE EQUIPMENT SHALL NOT BE INSTALLED UNTIL THE REVIEW HAS BEEN COMPLETED.

D. CODES AND STANDARDS
1. CALIFORNIA ELECTRICAL CODE, "CEC 2010".
2. CALIFORNIA CODE OF REGULATIONS (CCR), TITLES 8 AND 24.
3. LOCAL CITY AND COUNTY ELECTRICAL CODES OR NEWSLETTERS.
4. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) PUBLISHED STANDARDS.
5. UNDERWRITERS' LABORATORIES, INC. (UL) PUBLISHED STANDARDS.
6. NATIONAL ELECTRICAL CONTRACTORS' ASSOCIATION (NECA) STANDARDS OF INSTALLATION.

E. PERMITS AND INSPECTIONS: THE CONTRACTOR SHALL APPLY FOR, OBTAIN AND PAY FOR, ALL PERMITS, INSPECTIONS AND CERTIFICATES REQUIRED BY ALL LEGAL INSTITUTED PUBLIC AUTHORITIES.

1.02 SUBMITTALS

A. [SUBMIT (5) COPIES OF SHOP DRAWINGS OR MATERIALS LISTS AS INDICATED]. SUBSTITUTIONS THAT ARE NOT AS SPECIFIED SHALL HAVE PRIOR REVIEW BY THE ARCHITECT BEFORE BEING SUBMITTED AS SHOP DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DEVIATION FROM THE SPECIFICATIONS OR PLANS TO THE ATTENTION OF THE ARCHITECT.

B. SUBMIT MATERIALS LISTS FOR ALL ITEMS SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS.

C. SUBMIT SHOP DRAWINGS FOR SERVICE ENTRANCE METERING EQUIPMENT, SWITCHBOARDS, LOAD CENTERS, PANELBOARDS, TRANSFORMERS AND COMPLETE BOUND CATALOG CUTS FOR LIGHTING FIXTURES.

D. SUBMIT PROPOSED SEISMIC RESTRAINTS AND CALCULATIONS.

1.03 WORKMANSHIP AND MATERIALS

A. ALL WORKMANSHIP SHALL BE FIRST CLASS. ALL LABOR SHALL BE THOROUGHLY KNOWLEDGEABLE AND SKILLED TO PERFORM FIRST CLASS WORK IN ALL RESPECTS.

B. ALL MATERIALS AND EQUIPMENT SHALL BE NEW. MATERIALS FOR SIMILAR USES TO BE SAME TYPE AND MANUFACTURER.

1.04 GUARANTEE

A. PROVIDE A WRITTEN GUARANTEE IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 1 FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION.

1.05 OPERATION AND MAINTENANCE DATA

A. SUBMIT THREE (3) COPIES OF OPERATION AND MAINTENANCE DATA IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 1.

1.06 RECORD DRAWINGS

A. MAINTAIN AT THE JOB-SITE ONE (1) COMPLETE SET OF ELECTRICAL DRAWINGS AND MAINTAIN AN ACCURATE RECORD OF ANY CHANGES FROM THE DRAWINGS IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 1.

PART 2 - PRODUCTS

2.01 GENERAL

A. MATERIALS AND EQUIPMENT SHALL BE STANDARD CATALOGUED PRODUCTS OF CONCERNS REGULARLY ENGAGED IN THE MANUFACTURER OF THE PRODUCTS AND UL LISTED, AND SHALL BE THE LATEST STANDARD DESIGN THAT CONFORMS TO SPECIFIED MATERIALS AND EQUIPMENT.

B. ALL ELECTRICAL MATERIALS AND EQUIPMENT EXPOSED TO WATER OR WEATHER SHALL BE WEATHERPROOF, NEMA 3R ENCLOSED.

2.02 RACEWAYS

A. RIGID STEEL GALVANIZED CONDUIT OR IMC SHALL BE USED WHERE EXPOSED TO THE WEATHER, EXPOSED BELOW SWITCH HEIGHT, OR IN CONCRETE; TRIANGLE OR ROME.

B. ELECTRICAL METALLIC TUBING SHALL BE GALVANIZED AND SHALL BE USED IN INTERIOR DRY LOCATIONS; TRIANGLE OR ROME.

C. GALVANIZED FLEXIBLE STEEL OR LIQUID-TIGHT STEEL CONDUIT SHALL BE USED FOR CONNECTIONS TO MECHANICAL EQUIPMENT AND TRANSFORMERS AS INDICATED. FLEXIBLE STEEL CONDUIT; TRIANGLE OR ROME. LIQUID-TIGHT CONDUIT SHALL BE USED IN EXTERIOR OR DAMP LOCATIONS; ANACONDA OR AMERICAN BRASS.

D. SCHEDULE 40-RIGID POLYVINYL CHLORIDE ELECTRICAL CONDUIT, LISTED BY UL FOR AND USED ONLY FOR DIRECT UNDERGROUND BURIAL, MANUFACTURED FROM HIGH IMPACT, NON-CONDUCTING, SELF-EXTINGUISHING MATERIAL.

2.03 FITTINGS

A. ALL FITTINGS FOR RACEWAYS SHALL CONFORM TO SAME REQUIREMENTS AS RACEWAYS, EXCEPT AS SPECIFIED HEREIN.

B. ALL JOINTS AND TERMINATIONS IN RIGID CONDUIT SHALL BE MADE USING THREADED COUPLINGS AND LOCKNUTS.

2.04 OUTLET AND JUNCTION BOXES

A. BOXES IN INTERIOR DRY LOCATIONS SHALL BE GALVANIZED ONE PIECE PRESSED STEEL, KNOCKOUT TYPE, NOT LESS THAN 4-INCHES SQUARE BY 2-1/8 INCH DEEP; FOR RACEWAYS UNDER 1" SIZE AND NOT LESS THAN 4-11/16" SQUARE BY 2-1/8" DEEP; FOR RACEWAYS 1" SIZE AND LARGER; APPLETON OR RACO.

B. BOXES SHALL BE EQUIPPED WITH PLASTER RINGS, EXTENSION RINGS AND FIXTURE STUDS AS REQUIRED.

C. BOXES IN EXTERIOR OR DAMP LOCATIONS SHALL BE CAST METAL. BOXES SHALL HAVE THREADED CONNECTIONS FOR RIGID CONDUIT, AND SUITABLE GASKETED COVERS; CROUSE HINDS OR APPLETON.

2.05 CONDUCTORS

A. ALL CONDUCTORS SHALL BE COPPER, THWN/THHN INSULATION. NUMBER 8 AWG AND LARGER SHALL BE STRANDED.

2.06 DISCONNECT SWITCHES

A. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY, EXTERNALLY OPERATED, QUICKMAKE, QUICKBREAK, SINGLE THROW WITH FOLES AS REQUIRED AND FUSED TO COMPLY WITH EQUIPMENT NAMEPLATE REQUIREMENTS AND WITH SUITABLE ENCLOSURE FOR LOCATION; SQUARE D, SIEMENS, WESTINGHOUSE, OR EQUAL.

2.07 NAMEPLATES

A. PROVIDE EACH PANELBOARD SWITCHES, CIRCUIT BREAKERS IN POWER LOADCENTERS, WITH A MICARTA PLASTIC NAMEPLATE MADE OF WHITEFACED BLACKCORE PLASTIC LAMINATE. NAMEPLATE SHALL BE MINIMUM OF 3-INCH WIDE BY 3/4-INCH HIGH. FOR PANELBOARD INCLUDE DESIGNATION, PHASE AND VOLTAGE; PANEL A, 120/208 VOLT, 3-PHASE, 4-WIRE. INCLUDE COMPLETE NAMEPLATE SCHEDULE WITH SHOP DRAWINGS. FASTEN WITH EPOXY GLUE, DOUBLE STICK TAPE IS NOT ACCEPTABLE.

2.08 TELEPHONE SYSTEM

A. PROVIDE COMPLETE EMPTY RACEWAY SYSTEM WITH PULL CORDS, OUTLET BOXES, AND COVER PLATES AND TERMINAL BOARDS AND/OR TERMINAL CABINETS AS INDICATED ON THE DRAWINGS.

2.09 WIRING DEVICES

A. PROVIDE PHENOLIC PLASTIC PLATES AT EACH OUTLET, SMOOTH WHITE.

B. TELEPHONE OUTLETS WITH OUTLET BOX AND PLATE TO SUIT TELEPHONE EQUIPMENT.

C. SWITCHES: TOGGLE QUIET. TYPE HUBBELL #1221, 1223, 20-AMPERE, WHITE COLOR.

D. RECEPTACLES: HUBBELL #5362, 20-AMPERE, WHITE COLOR.

E. WEATHERPROOF OUTLETS, HUBBELL #5206 WO, "WET LOCATION WITH COVER OPEN" HINGED CAST ALUMINUM, GASKETED COVER PLATE.

F. GROUND FAULT INTERRUPTER RECEPTACLES INDICATOR LIGHT: LEVITON #6199-I, WHITE COLOR, LEVITON #6191 WEATHERPROOF WALL PLATE. HOSPITAL GRADE: LEVITON #6598-HGG.

G. MANUAL MOTOR STARTERS WITH OVERLOAD TRIP ASSEMBLY THERMAL UNITS (ONE PER PHASE); SQUARE D CLASS 2510; WITH HANDLE GUARD LOCK OFF

H. SPECIAL PURPOSE OUTLETS SHALL BE AS INDICATED ON THE DRAWING.

2.11 PANELBOARDS

A. PROVIDE BOLTS ON CIRCUIT BREAKERS AS INDICATED.

B. FURNISH COMPLETE WITH DOOR, KEYED LOCK, TYPE WRITTEN DIRECTORY, SET SCREW HANDLE LOCK-OFF ATTACHMENTS, AND PERMANENT CIRCUIT NUMBERS. STICK ON PAPER NUMBERS ARE NOT ACCEPTABLE.

C. CABINETS SHALL BE RIGIDLY SUPPORTED INDEPENDENT OF CONDUITS APPEARANCE.

D. FOR EXISTING PANELS, PROVIDE NEW UP-DATED TYPE WRITTEN DIRECTORY, SET SCREW HANDLE LOCK-OFF ATTACHMENTS, AND PERMANENT CIRCUIT NUMBERS. STICK ON PAPER NUMBERS ARE NOT ACCEPTABLE..

2.12 LIGHTING FIXTURES

A. PROVIDE LIGHTING FIXTURES, LAMPS AND BALLASTS PER THE FIXTURE SCHEDULE ON THE DRAWINGS.

B. LIGHTING FIXTURES SHALL HAVE PARTS AND FITTINGS NECESSARY TO COMPLETELY AND PROPERLY INSTALL THE FIXTURE. ALL FIXTURES SHALL BE WIRED FROM OUTLET TO SOCKET WITH #14 AWG UNDERWRITER'S TYPE "AF" OR "CF" FIXTURE WIRE.

C. ALL FIXTURES OF ONE TYPE SHALL BE OF ONE MANUFACTURER AND OF IDENTICAL FINISH AND APPEARANCE.

D. ALL FIXTURES SHALL BE COMPLETE WITH ACCESSORIES, END CAPS, PLASTER FRAMED, YOKES, HANGERS, ETC., WHICH ARE REQUIRED FOR THE SPECIFIC INSTALLATION.

E. THE CATALOG NUMBERS INCLUDED IN THE DESCRIPTION OF THE VARIOUS TYPES OF LIGHTING FIXTURES SHALL BE BASICALLY CONSIDERED TO ESTABLISH THE TYPE OR CLASS OF THE FIXTURES WITH A PARTICULAR MANUFACTURER ONLY. THE FIXTURE LENGTH, NUMBER OF LAMP COMPONENT MATERIALS, ACCESSORIES, AND ALL OTHER FEATURES REQUIRED TO FULFILL THE TOTAL DESCRIPTION OF THE FIXTURE, BASED ON ALL DRAWINGS AND SPECIFICATION INFORMATION, SHALL BE COMPLETED WITH, REGARDLESS OF WHETHER OR NOT THE CATALOG NUMBER SPECIFICALLY INCLUDES THESE FEATURES. IF ANY CONFLICT EXISTS BETWEEN THE CATALOG NUMBER AND THE DESCRIPTION, THE CONTRACTOR SHALL EITHER RESOLVE THE CONFLICT WITH THE ARCHITECT PRIOR TO SUBMITTAL OF HIS BID, OR FURNISH THE FIXTURE TO MEET THE INTENT AS LATER INTERPRETED BY THE ARCHITECT WITHOUT CHANGE IN CONTRACT PRICE.

F. FIXTURE CATALOG NUMBERS CALLED OUT ARE FOR INDIVIDUAL UNITS. WHERE TWO OR MORE UNITS ARE COMBINED FOR CONTINUOUS ROW INSTALLATION, THE CONTRACTOR SHALL FURNISH AND INSTALL THE NECESSARY ACCESSORIES FOR THE INDICATED REQUIREMENTS.

~~2.13 TRANSFORMERS~~

~~A. STEP DOWN TRANSFORMERS SHALL BE FACTORY ASSEMBLED BY SEIMENS, SQUARE D, OR WESTINGHOUSE, DRY TYPE, SELF AIR COOLED, TWO WINDINGS, NEMA CLASS INSULATION AND SOUND RATINGS AND WITH STANDARD FULL CAPACITY TAPS. VOLTAGE AND KVA SHALL BE AS INDICATED ON THE DRAWINGS. PROVIDE WEATHERPROOF SHIELDS AS INDICATED. TRANSFORMERS RATED 15 KVA AND LARGER SHALL HAVE ENERGY EFFICIENCIES THAT MEET NEMA TP, 1. TRANSFORMERS SHALL BE ENERGY STAR LABELED.~~

2.14 OTHER MATERIALS

A. PROVIDE OTHER MATERIALS, NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ARCHITECT.

PART 3 - EXECUTION

3.01 RACEWAYS

A. RACEWAYS SHALL BE RUN CONCEALED, UNLESS OTHERWISE INDICATED. EXPOSED RACEWAYS SHALL BE PARALLEL WITH SUPPORTING WALLS, BEAMS OR CEILINGS AND WITH EACH OTHER, AND SHALL NOT RUN CLOSER THAN 6-INCHES TO ANY HOT WATER PIPE OR HEATER FLUE VENT.

B. RACEWAYS SHALL BE INSTALLED AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR OTHER FITTINGS AND SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY FROM ONE TO ANOTHER IS OBTAINED. NAILS, PERFORATED STRAP, OR PLUMBER'S TAPE SHALL NOT BE USED FOR SUPPORT OF RACEWAYS.

C. PROVIDE 1/8-INCH POLYETHYLENE PULL CORD IN RACEWAYS WITHOUT CONDUCTORS.

D. ROOF MOUNTED RACEWAYS SHALL BE SUPPORTED 5'-0" ON CENTER, WITH 2X4 REDWOOD BLOCKS, SET INTO ROOF MASTIC.

3.02 CONDUCTORS

A. ALL CONDUCTORS SHALL BE INSTALLED IN CONCEALED RACEWAYS AND COLOR CODED.

B. MAKE JOINTS, SPLICES, TAPS AND CONNECTIONS IN CONDUCTORS WITH SOLDERLESS CONNECTORS AND WATERTIGHT IN WET OR DAMP LOCATIONS.

3.03 MOUNTING HEIGHTS

A. ELECTRICAL WIRING DEVICES MOUNTING HEIGHTS DIMENSIONS ARE TO CENTERLINE OF OUTLET ABOVE FINISH FLOOR. COMPLY WITH MOST STRINGENT A.D.A. AND STATE OF CALIFORNIA HANDICAPPED CODES.

3.04 JUNCTION AND PULL BOXES

A. PROVIDE BOXES WHERE INDICATED OR WHERE NECESSARY TO FACILITATE THE PULLING OF CONDUCTORS. TELEPHONE RACEWAYS SHALL HAVE A MAXIMUM OF TWO (2) NINETY DEGREE BENDS BETWEEN TERMINATORS OR PULL BOXES.

3.05 FLASHINGS

A. WHEREVER RACEWAYS EXTEND THROUGH THE ROOF, PROVIDE STONEMAN STORMTITE 1100-4 FOUR-POUND SEAMLESS LEAD FLASHING ASSEMBLIES.

3.06 GROUNDING

A. MAKE GOOD GROUNDING CONTACT BETWEEN RACEWAYS AND PANELBOARDS, OUTLET BOXES AND JUNCTION BOXES, OR PULL BOXES. PROVIDE GROUNDING FOR MAIN SERVICE, EQUIPMENT GROUNDS AND ISOLATED GROUNDING CONDUCTORS AS SHOWN AND SPECIFIED HEREIN.

3.07 SEISMIC REQUIREMENTS

A. ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE SEISMIC ZONE 4. ELECTRICAL EQUIPMENT SEISMIC RESTRAINTS SHALL BE DESIGNED BY A CALIFORNIA REGISTERED PROFESSIONAL ENGINEER LEGALLY QUALIFIED AND EXPERIENCED IN PROVIDING SEISMIC ENGINEERING SERVICES.

B. SEISMIC RESTRAINTS ARE REQUIRED FOR (BUT NOT LIMITED TO): SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, EMERGENCY BATTERY UNITS, LIGHTING CONTROL PANELS, LIGHT FIXTURES, AND RACEWAYS.

3.08 CUTTING AND PATCHING

A. PERFORM CUTTING AND PATCHING AND DRILLING OF THE GENERAL CONSTRUCTION WORK WHETHER EXISTING OR NEW, WHICH MAY BE REQUIRED FOR THE INSTALLATION OF ELECTRICAL WORK. PATCH WITH THE SAME MATERIALS, WORKMANSHIP AND FINISH AS THE ORIGINAL WORK AND ACCURATELY MATCH ALL SURROUNDING WORK.

SUCH WORK SHALL BE DONE BY A CRAFTSMAN ACCREDITED IN THE APPLICABLE TRADE UNDER THE CONTRACTOR'S SUPERVISION AND BE ACCEPTABLE TO THE ARCHITECT.

3.09 TESTING

A. DEMONSTRATE THAT ALL COMPONENTS OF THE WORK OF THIS DIVISION HAVE BEEN PROVIDED AND THAT THEY OPERATE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS

B. TEST WIRING AND CONNECTIONS FOR CONTINUITY, SHORT CIRCUITS AND IMPROPER GROUNDS. TEST EACH LIGHTING AND APPLIANCE PANEL WITH MAINS DISCONNECTED FROM FEEDERS, BRANCHES CONNECTED, WALL SWITCHES CLOSED AND FIXTURES PERMANENTLY CONNECTED AND COMPLETE WITH LAMPS. TEST EACH INDIVIDUAL POWER CIRCUIT WITH THE POWER EQUIPMENT CONNECTED FOR OPERATION AND PHASING.

3.10 FIRESTOPPING PENETRATIONS IN FIRE-RATED WALL/FLOOR ASSEMBLIES

A. CONTRACTORS SHALL PROVIDE PROPER SIZING WHEN PROVIDING SLEEVES OR CORE-DRILLED HOLES TO ACCOMODATE THEIR THROUGH PENETRATING ITEMS. ALL VOIDS BETWEEN SLEEVE OR CORE-DRILLED HOLE AND PIPE PASSING THROUGH, SHALL BE FIRESTOPPED TO MEET THE REQUIREMENTS OF ASTM E 814.

B. FIRESTOPPING PENETRATIONS IN FIRE-RATED WALL/FLOOR ASSEMBLIES: CONTRACTORS SHALL PROVIDE PROPER SIZING WHEN PROVIDING SLEEVES OR CORE-DRILLED HOLES TO ACCOMODATE THEIR THROUGH PENETRATING ITEMS. ALL VOIDS BETWEEN SLEEVE OR CORE-DRILLED HOLE AND PIPE PASSING THROUGH, SHALL BE FIRESTOPPED TO MEET THE REQUIREMENTS OF ASTM E 814.

C. WHERE ELECTRICAL EQUIPMENT OR MATERIALS OF THIS DIVISION PENETRATE FIRE SEPARATIONS, MAINTAIN THE INTEGRITY OF THE SEPARATION BY PROVIDING CODE APPROVED FIRE RATED PENETRATIONS OR BY PROVIDING AN ENCLOSURE AROUND THE PENETRATION OR BY PROVIDING UL LISTED FIRE BARRIER AROUND THE EQUIPMENT WHICH EFFECTIVELY CONTINUES THE SEPARATION.

C&G ENGINEERING, INC.
ELECTRICAL CONSULTING ENGINEERS AND LIGHTING DESIGN
1245 14th ST., SUITE 110 SAN DIEGO, CA 92101
PHONE: (619) 299-3499 FAX (619) 299-3492

Consultant

Developer

Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

1ST SUBMITTAL 6/4/2018

PROJECT # 1008

REGISTERED PROFESSIONAL ENGINEER
CARLOS J. ZUNIGA
NO. E14587
EXP. 6/30/18
ELECTRICAL

ELECTRICAL SPECIFICATIONS

E-10.0

\\dedc01\Shared\Docs\C & G Engineering\2016-16-101 The Pearl\E-10.0.dwg, 5/21/2018 9:05:23 AM
© 2016 FoundationForm | All ideas, designs, arrangements, and plans indicated or represented by these drawings are owned by, and property of FoundationForm, and were created, evolved, and developed as instruments of service on, and in connection with the specified project and site. None of these ideas, designs, arrangements, or plans shall be used by or disclosed to any person, firm or organization for any purpose whatsoever without written permission of FoundationForm.

REGULATORY NOTES

REGULATORY NOTES

CODE ANALYSIS
THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF:

A. 2016 CALIFORNIA BUILDING CODE
B. 2016 CALIFORNIA FIRE CODE
C. 2016 CALIFORNIA PLUMBING CODE
D. 2016 CALIFORNIA MECHANICAL CODE
E. 2016 CALIFORNIA ELECTRICAL CODE
F. 2016 CALIFORNIA ENERGY CODE
G. 2016 CALIFONRIA GREEN STANDARDS BUILDING CODE

SEISMIC RESTRAINTS

PIPING

A. SEISMIC BRACING AND ANCHORAGE OF PLUMBING PIPING SHALL BE IN ACCORDANCE WITH THE "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS," PUBLISHED BY SMACNA.

MANDATORY CONSERVATION MEASURES

WATER

A. WATER CLOSETS SHALL BE WATER CONSERVING 1.28 GALLONS PER FLUSH TYPE.

B. URINALS SHALL BE 0.5 GALLONS PER FLUSH.

C. LAVATORY, SINK FITTINGS AND SHOWER ASSEMBLIES SHALL BE LISTED AS "APPROVED" BY THE CALIFORNIA ENERGY COMMISSION.

1. FAUCETS AND SHOWER HEADS SHALL INCLUDE INTEGRAL FLOW RESTRICTING DEVICES TO LIMIT FLOW AS FOLLOWS:
   A) KITCHEN FAUCETS - 1.8 GPM MAXIMUM
   B) SHOWER HEADS - 2.0 GPM MAXIMUM
   C) PRIVATE LAVATORIES - 1.5 GPM MAXIMUM

D. LAVATORY FAUCETS IN PUBLIC RESTROOMS SHALL BE THE SELF CLOSING TYPE, AND SHALL USE 0.20 GPM PER CYCLE MAX.

ENERGY

A. DOMESTIC HOT WATER PIPING INSULATION SHALL BE LISTED AS "APPROVED" BY THE CALIFORNIA ENERGY COMMISSION.

B. DOMESTIC HOT WATER PIPING SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF THE CALIFORNIA ENERGY COMMISSION ENERGY EFFICIENCY STANDARDS SECTIONS 118 AND 123.

MANDATORY ACCESSIBILITY MEASURES

FIXTURES

A. ACCESSIBLE PLUMBING FIXTURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH 2016 CALIFORNIA BUILDING CODE.

FITTINGS AND TRIM

A. EXPOSED P-TRAP ASSEMBLY AND HOT & COLD WATER SUPPLIES SHALL INCLUDE PRE-MANUFACTURED INSULATION KIT.
B. THE FORCE REQUIRED TO OPERATE LAVATORY OR SINK FAUCETS SHALL BE NO GREATER THAN 5 LBS. SELF CLOSING FAUCETS SHALL HAVE MINIMUM 10 SECOND CYCLE TIME.

CROSS CONNECTION CONTROL MEASURES

PLUMBING SPECIALTIES

A. HOSE BIBBS SHALL BE EQUIPPED WITH INTEGRAL VACUUM BREAKERS.

B. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT (OTHER THAN THOSE LISTED IN INFORMATIONAL BULLETIN 103)

FIRE RESISTIVE BUILDING MATERIALS

PIPING INSULATION

ALL INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF SECTION 719.1 OF 2016 CALIFORNIA BUILDING CODE.

INSULATION AND COVERING ON PIPE AND TUBING SHALL HAVE A FLAME-SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY RATING NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH ASTM E-84, UL 723, NFPA 255.

INSULATION, INSULATION JACKET, ADHESIVES, TAPES, ETC. SHALL BE APPLIED PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS

REGULATORY NOTES (CONT.)

FIRE RESISTIVE BUILDING MATERIALS

PIPING INSULATION

ALL INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF SECTION 719.1 OF 2016 CALIFORNIA BUILDING CODE.

INSULATION AND COVERING ON PIPE AND TUBING SHALL HAVE A FLAME-SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY RATING NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH ASTM E-84, UL 723, NFPA 255.

INSULATION, INSULATION JACKET, ADHESIVES, TAPES, ETC. SHALL BE APPLIED PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS

ALL HOT WATER PIPING SIZED ¾" OR LARGER IS REQUIRED TO BE INSULATED AS FOLLOWS:

1" PIPE SIZE OR LESS: 1" THICK INSULATION
LARGER PIPE SIZES: 1½" THICK INSULATION.
NOTE: IN ADDITION, THE 1½" SIZE HOT WATER PIPE TO THE KITCHEN SINK IS REQUIRED TO BE INSULATED. ES 150.0(J)2.

PROJECT NOTES

GENERAL

A. VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY WORK. IN THE EVENT OF ANY DISCREPANCIES THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED IN WRITING.

B. ALL OMISSIONS AND OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF AND RESOLVED WITH THE OWNER PRIOR TO PROCEEDING WITH ANY OF THE AFFECTED WORK.

C. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF CBC AND CPC.

D. THE PLUMBING CONSTRUCTION DOCUMENTS REPRESENT THE PLUMBING AND PIPING SYSTEMS, NOT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LABOR, MATERIALS, EQUIPMENT AND ACCESSORIES NECESSARY TO ACHIEVE THE FINISHED SYSTEMS.

STRUCTURAL ELEMENTS

A. NO PIPES, SLEEVES, ETC SHALL BE PLACED IN SLABS, BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED, NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES.

ELECTRICAL POWER CONNECTIONS

A. FIELD VERIFY AND COORDINATE WITH ELECTRICAL SYSTEMS INSTALLER EXACT ELECTRICAL REQUIREMENTS OF ALL PLUMBING PRODUCTS REQUIRING POWER.

B. ELECTRICAL POWER CONNECTIONS SHALL BE MADE BY ELECTRICAL SYSTEMS INSTALLER UNDER PROVISIONS OF DIVISION 26.

GENERAL NOTES

1. WATER HAMMER ARRESTERS SHALL BE LOCATED, SIZED AND CERTIFIED ACCORDING TO PDI-WH-201 STANDARD.
2. ALL VENTS THROUGH ROOF SHALL BE METAL TYPE.
3. STOP VALVES SHALL BE PROVIDED AT ALL FIXTURES TO ENABLE REGULATION OF FLOW AND SHUT DOWN OF SUPPLY TO FIXTURES.
4. PENETRATIONS OF PIPES, CONDUITS, ETC IN WALLS, FLOORS OR CEILING ASSEMBLIES REQUIRING PROTECTED OPENINGS SHALL BE A TESTED ASSEMBLY.
5. MOUNTING HEIGHTS FOR HANDICAPPED FIXTURES TO COMPLY WITH ADA REQUIREMENTS.
6. FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE SYSTEM AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS.
7. BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH SECTIONS 701.0 AND 903.0 OF THE CALIFORNIA PLUMBING CODE.
8. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
9. ROOF TOP PIPING EXPOSED TO WEATHER OR SUNLIGHT MUST BE METALLIC.
10. ALL FERROUS PIPING EXPOSED TO WEATHER MUST BE GALVANIZED.
11. SHOWERS AND TUB-SHOWER COMBINATIONS SHALL BE PROVIDED WITH MIXING VALVES PER SECTION 408.3 CPC
12. THE CONTRACTOR OR THE APPROPRIATE PLUMBING SUBCONTRACTORS SHALL COMPLY WITH ALL THE REQUIREMENTS OF SECTION 604.12 CPC FOR THE INSTALLATION OF PEX PIPING. ALL INSTALLATIONS OF PEX PIPE INSTALLED IN NEW CONSTRUCTION SHALL BE FLUSHED TWICE OVER A PERIOD OF AT LEAST ONE WEEK PER SECTION (604.12 CPC)
13. EACH NEW PLUMBING FIXTURE SHALL BE PROVIDED WITH A TAG STATING: "THIS NEW PLUMBING SYSTEM SHALL FIRST BE FILLED AND FLUSHED ON_____(DATE), BY_____ (NAME) _____
    THE STATE OF CALIFORNIA REQUIRES THAT THE SYSTEM BE FLUSHED AFTER STANDING AT LEAST ONE WEEK AFTER THE FILL DATE SPECIFIED ABOVE. IF THIS SYSTEM IS USED EARLIER THAN ONE WEEK AFTER THE FILL DATE, THE WATER MUST BE ALLOWED TO RUN FOR AT LEAST TWO MINUTES PRIOR TO USE FOR HUMAN CONSUMPTION. THIS TAG MAY NOT BE REMOVED PRIOR TO THE COMPLETION OF THE REQUIRED SECOND FLUSHING, EXCEPT BY THE BUILDING OWNER OR OCCUPANT."
14. PRIOR TO ISSUING A BUILDING PERMIT TO INSTALL PEX PIPE, THE BUILDING OFFICIAL SHALL REQUIRE AS PART OF THE PERMITTING PROCESS THAT THE CONTRACTOR, OR THE APPROPRIATE PLUMBING SUBCONTRACTORS, PROVIDE WRITTEN CERTIFICATION THAT HE OR SHE WILL COMPLY WITH THE FLUSHING PROCEDURES SET FORTH IN THE CODE.

LEGEND

SYMBOLS	ABBREV	DESCRIPTION
	S OR W	SANITARY WASTE ABOVE FLOOR
	S OR W	SANITARY WASTE BELOW FLOOR
	FCO	FLOOR CLEANOUT
	POC	POINT OF CONNECTION
	FD	FLOOR DRAIN
	VT	SANITARY VENT
	C.W.	COLD WATER
	H.W.	HOT WATER
	S.O.V.	SHUT OFF VALVE(BALL TYPE)
P&T	P&T	PRESSURE AND TEMP. RELIEF
CD	CD	CONDENSATE
G	G	NATURAL GAS PIPE (7" W.C.)
		WALL CLEANOUT
		PIPE-UP
		PIPE-DOWN
	H.B.	HOSE-BIBB
TP	TP	TRAP PRIMER
SD	SD	STORM DRAIN
	(E)	EXISTING
	ABV.	ABOVE
	BEL.	BELOW
	CONT.	CONTINUATION
	FLR.	FLOOR
	GR.	GRADE
	TYP.	TYPICAL
	V.T.R.	VENT THROUGH ROOF
	FS	FLOOR SINK
	CLG	CEILING
	GCO	GRADE CLEANOUT
	FCO	FLOOR CLEANOUT
	B.F.F.	BELOW FINISHED FLOOR

GENERAL NOTES (cont)

15. THE BUILDING OFFICIAL SHALL NOT GIVE FINAL PERMIT APPROVAL FOR ANY PEX PLUMBING INSTALLATION UNLESS HE OR SHE FINDS THAT THE MATERIAL HAS BEEN INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THIS CODE, INCLUDING THE REQUIREMENTS TO FLUSH AND TAG THE SYSTEM
16. EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX (6) INCHES ABOVE THE FLOOD-LEVEL RIM OF THE FIXTURE SERVED BEFORE OFFSETTING HORIZONTALLY OR BEFORE BEING CONNECTED TO ANY OTHER VENT.
17. EACH FIXTURE TRAP SHALL HAVE A PROTECTING VENT SO LOCATED THAT THE DEVELOPED LENGTH OF THE TRAP ARM FROM THE TRAP WEIR TO THE INNER EDGE OF THE VENT SHALL BE WITHIN THE DISTANCE GIVEN IN TABLE 1002.2 CPC, BUT IN NO CASE LESS THAN TWO TIMES THE DIAMETER OF THE TRAP ARM
18. EACH PLUMBING FIXTURE THAT CONNECTS TO THE SANITARY SEWER SYSTEM SHALL BE PROPERLY TRAPPED AND VENTED IN ACCORDANCE WITH THE 2016 CALIFORNIA PLUMBING CODE.

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
(858)549-7857 FAX(858)453-7587
JOB # 18.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
TOM LEE
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

NOTES

P1.0

MATERIALS

A. GRAVITY STORM, SANITARY WASTE AND VENT (EXPOSED TO EXTERIOR) AND EXPOSED IN PARKING GARAGE, TYPE I AREAS)
NO-HUB CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON, AND SHALL CONFORM TO CISPI STANDARD 301. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE AND LISTED BY NSF INTERNATIONAL. ANACO COUPLINGS TO CONFORM TO CISPI 310 AND NSF CERTIFIED , NEOPRENE GASKETS SHALL CONFORM TO ASTM C 564. STAINLESS STEEL BANDS SHALL BE TIGHTENED WITH CALIBRATED TOURQUE LIMITING DEVICE.
PIPING OVER THE KITCHEN PREP AREA, FOOD STORAGE, FOOD DISPLAY, AND DINING AREAS SHALL UTILIZE HEAVY DUTY COUPLINGS. ALL PIPE AND FITTINGS PRODUCED BY A SINGLE MANUFACTURER AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND CALIFORNIA PLUMBING CODE INSTALLATION STANDARD IAPMO IS 6-2006.
AB41 OR EQUAL (IAPMO# 3270)

A1. GRAVITY STORM, SANITARY WASTE AND VENT WITHIN BUILDING IN TYPE V RESIDENTIAL FLOORS
PVC SCHEDULE 40 SOLID WALL DWV, ASTM D 1784, D 1785
PVC PIPE AND FITTINGS SHALL CONFORM TO ASTM D2665. ALL PIPE AND FITTINGS TO BE PRODUCED BY A SINGLE MANUFACTURER AND TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND INSTALLATION STANDARD IAPMO IS 9-2006. SOLVENT CEMENTS SHALL CONFORM TO ASTM D2564, PRIMER(PURPLE) SHALL CONFORM TO ASTM F656. THE SYSTEM IS INTENDED FOR NON-PRESSURE DRAINAGE APPLICATIONS WHERE THE TEMPERATURE WILL NOT EXCEED 140°F. (IAPMO #2966)

A2. GRAVITY STORM, SANITARY WASTE, VENT BELOW GRADE
PVC SCHEDULE 40 SOLID WALL DWV, ASTM D 1784, D 1785
PVC PIPE AND FITTINGS SHALL CONFORM TO ASTM D2665. ALL PIPE AND FITTINGS TO BE PRODUCED BY A SINGLE MANUFACTURER AND TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND INSTALLATION STANDARD IAPMO IS 9-2006. SOLVENT CEMENTS SHALL CONFORM TO ASTM D2564, PRIMER(PURPLE) SHALL CONFORM TO ASTM F656. THE SYSTEM IS INTENDED FOR NON-PRESSURE DRAINAGE APPLICATIONS WHERE THE TEMPERATURE WILL NOT EXCEED 140°F. (IAPMO #2966)

B1. DOMESTIC COLD BELOW GRADE TYPE K, LEAD FREE SOLDER, SOFT COPPER TUBING, FITTINGS ANSI/ASME B16.22 WROUGHT COPPER. INSTALL PER CALIFORNIA PLUMBING CODE INSTALLATION STANDARD IAPMO IS 3-2006 COPPER & BRASS INTERNATIONAL CORP. OR EQUAL (IAPMO# 2427)
BELOW GROUND PIPING SHALL BE WRAPPED WITH POLYETHYLENE TAPE

B2. DOMESTIC COLD AND HOT WATER-ABOVE GRADE EXPOSED TO EXTERIOR, AND IN GARAGE LEVEL
ASTM B88, TYPE L, LEAD FREE SOLDER, HARD DRAWN COPPER TUBING, FITTINGS ANSI/ASME B16.22 WROUGHT COPPER. (HOT INSULATED WITH FIBERGLASS PIPE INSULATION.) INSTALL PER CALIFORNIA PLUMBING CODE INSTALLATION STANDARD IAPMO IS 3-2006 COPPER & BRASS INTERNATIONAL CORP. OR EQUAL (IAPMO# 2427)

B3 DOMESTIC HOT AND COLD WATER PIPING INSIDE BLDG IN RESIDENTIAL FLOORS

½" THRU 2" SIZES, INSIDE THE BUILDING FLOWGUARD GOLD CPVC CTS PIPE & FITTINGS ASTM D2846, CEMENT ASTM F493, ASTM F656, NSF 61. INSTALL PER IAPMO IS 20-2010, AND PER MANUFACTURER'S INSTALL MANUAL. PIPE INSULATION AND FIRESTOP SYSTEM MATERIAL SHALL BE COMPATIBLE WITH CPVC PIPE SYSTEM
CHARLOTTE PIPE & FOUNDRY (IAPMO #3537)

2½" THRU 6" SIZES, INSIDE THE BUILDING CORZAN CPVC SCHEDULE 80 IRON PIPE SIZE (IPS), ASTM F441, SOCKET FITTINGS ASTM F 439, NSF 61, INSTALL PER MANUFACTURER'S INSTALL MANUAL. APPROVED TRANSITION TO CTS OR METAL PIPE SHALL BE APPROVED BY THE MANUFACTURER. PIPE INSULATION AND FIRESTOP SYSTEM MATERIAL SHALL BE COMPATIBLE WITH CPVC PIPE SYSTEM IPEX USA. INSULATE HOT WATER PIPING

B4 ABOVE GROUND PEX(CROSS LINKED POLYETHYLENE) COLD AND HOT WATER PIPING-
SIZES UP TO 1½", WITHIN RESIDENTIAL FLOOR INSIDE LIVING UNIT

PEX PIPE (ASTM F876, F877), PEX FITTINGS (ASTM F877, F1807, F1960, F2023), NSF 14 & 61 COMPLIANT, UL 263
PEX SHALL NOT BE INSTALLED WITHIN 18" OF THE WATER HEATER, ALL FITTINGS SHALL BE LEAD FREE AB1953 COMPLIANT
FLEXIBLE/CORRUGATED COPPER OR STAINLESS STEEL TO BE USED BETWEEN WATER HEATER AND PEX.
PIPE AND FITTINGS SHALL BE PROVIDED BY A SINGLE MANUFACTURER UPONOR WIRSBO AQUAPEX (IAPMO 3558).
INSTALL PEX PIPE PER MANUFACTURER'S INSTRUCTIONS. PIPE INSULATION AND FIRESTOP TO BE COMPATIBLE WITH PEX.

C. NATURAL GAS PIPING

1. STEEL PIPE: ASTM A53 SCHEDULE 40 BLACK STEEL, (INSIDE BUILDING)
   A. FITTINGS: ASTM B16.3, MALLEABLE IRON, OR ASTM A234, FORGED STEEL WELDING TYPE.
   B. JOINTS: NFPA 54, THREADED OR WELDED TO ANSI B31.2

2. GALVANIZED STEEL PIPE (EXTERIOR OR EXPOSED)
   A. FITTINGS: GALVANIZED STEEL
   B. JOINTS: NFPA 54, THREADED OR WELDED TO ANSI B31.2

(EXTERIOR BELOW GRADE OUTSIDE BLDG) POLYETHELYNE PIPE SDR11, PE2406/PE3408 HEAT FUSION FITTINGS & CORROSION RESISTANT TRACER WIRE (AWG 14).
INSTALL PER 2010 CALIFORNIA PLUMBING CODE INSTALLATION STANDARD IAPMO IS 12-2006 & PER MANUFACTURER'S INSTALL MANUAL, ANODELESS TRANSITION GAS RISER SHALL BE CONTINENTAL INDUSTRIES OR EQUAL (IAPMO #6056)

MATERIALS, CONT

D. INDIRECT DRAINAGE
EXPOSED TO EXTERIOR AND WITHIN PARKING GARAGE
ASTM B88, TYPE M, LEAD FREE SOLDER, HARD DRAWN COPPER TUBING, FITTINGS ANSI/ASME B16.22 WROUGHT COPPER. (INSULATED WITH 1" THICK MINIMUM FIBERGLASS PIPE INSULATION.) INSTALL PER CALIFORNIA PLUMBING CODE INSTALLATION STANDARD IAPMO IS 3-2006 COPPER & BRASS INTERNATIONAL CORP. OR EQUAL (IAPMO# 2427)

WITHIN RESIDENTIAL FLOORS INSIDE BUILDING
½" THRU 2" SIZES, FLOWGUARD GOLD CPVC CTS PIPE & FITTINGS ASTM D2846, CEMENT ASTM F493, ASTM F656, NSF 61. INSTALL PER IAPMO IS 20-2006, AND PER MANUFACTURER'S INSTALL MANUAL. PIPE INSULATION AND FIRESTOP SYSTEM MATERIAL SHALL BE COMPATIBLE WITH CPVC PIPE SYSTEM
CHARLOTTE PIPE & FOUNDRY (IAPMO #3537)

E. PRESSURE SEWER PIPE (OUTSIDE OF SUMP BASIN ABOVE GRADE)

ASTM B88, TYPE K, SOLDER JOINTS
HARD DRAWN COPPER TUBING, FITTINGS ANSI/ASME B16.22 WROUGHT COPPER.
BELOW GROUND PIPING SHALL BE WRAPPED WITH POLYETHYLENE TAPE

F. PRESSURE SEWER PIPE (INSIDE OF SUMP BASIN)

CHARLOTTE PIPE OR EQUAL: PVC SCHEDULE 80
PRESSURE PIPE AND FITTING SYSTEM, CELL CLASS 12454
PER ASTM D 1784 AND CONFORM WITH NSF STANDARDS 14 AND 61, PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D1785, SOCKET FITTINGS SHALL CONFORM TO ASTM D 2467, THREADED FITTINGS SHALL CONFORM TO ASTM D 2464 OR D 2467. FLANGES SHALL MEET BOLT PATTERN REQUIREMENTS OF ANSI/ASME B16.5. PIPE AND FITTINGS SHALL BE FROM A SINGLE MANUFACTURER AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND PLUMBING CODE INSTALLTION STANDARD IAPMO IS 8-2006, BURIED PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM F 1668, PVC SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564, PRIMER SHALL BE IPS P-70

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
(858)566-2660 FAX(858)453-7697
JOB # 15.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIERRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
C. M. L.
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

NOTES

P1.1

PLUMBING EQUIPMENT SCHEDULE

MARK	DESCRIPTION	LOCATION	MANUFACTURER & MODEL NUMBER-SUBSTITUTIONS TO BE REVIEWED BY OWNER & ENGR
WH 1	TANKLESS WATER HEATER	SEE PLANS	RINNAI RL94I, INTERIOR MODEL, 199000 BTUH, 5 GPM @ 60°F RISE, WITH RINNAI WATER FILTER, 120 VAC, 1 PHASE, 97 WATT, 70 LB OPERATING WEIGHT, LOW NOX, UBBINK ROLUX DIRECT VENT/AIR INTAKE CONCENTRIC VENT, Ø.82 ENERGY FACTOR, RINNAI CONDENSATE TRAP 222053 & RINNAI CONDENSATE NEUTRALIZATION KIT CSA APPROVED, WITH FLEXCON PH-5 EXPANSION TANK, 2.1 GALLON CAPCITY, 8" DIA X 11.6" H, 20 LBS, INSTALL PER MANUFACTUER'S INSTRUCTIONS
GD 1	GARBAGE DISPOSAL	SEE PLANS	BADGER 5XP, 120VAC, 1 PHASE, ¾ HORSEPOWER, WITH INSINKERATOR PLUG-IN KIT, UL LISTED, DISHWASHER CONNECTION
TMV 1	THERMOSTATIC MIXING VALVE	SEE PLANS	ACORN MODEL ST170-12, LEAD FREE AB1953, SET HOT WATER AT LAVATORIES AND HANDSINKS 100°F-108°F, ASSE 1069 & ASSE 1070 LISTED
BV 1	BACKWATER VALVE	SEE PLANS	JR SMITH 7012S, 4" SIZE, BOLTED COVER
WH 2	WATER HEATER ELECTRIC INSTANTANEOUS	SEE PLANS	CHROMONITE M-20L/208-MM, 208V/1 PHASE, 4160 WATT, 20 AMP, Ø.5 GPM @ 57 °F, LEAD FREE, UL LISTED, WITH ASSE 1070 THERMOSTATIC MIXING VALVE. NOTE: WATER HEATER IS A LISTED, NON-STORAGE, INSTANTANEOUS HEATER HAVING AN INSIDE DIAMETER OF NOT MORE THAN 3 INCHES.
WH 3	WATER HEATER ELECTRIC INSTANTANEOUS	SEE PLANS	CHROMONITE SR-40/208, 208V/1 PHASE, 8320 WATT, 40 AMP, 1 GPM @ 57 °F, LEAD FREE, UL LISTED NOTE: WATER HEATER IS A LISTED, NON-STORAGE, INSTANTANEOUS HEATER HAVING AN INSIDE DIAMETER OF NOT MORE THAN 3 INCHES.
SE 1	SEWAGE PUMP (DUPLEX)	SEE PLANS	HYDROMATIC - (2) SUBMERSIBLE PUMPS, MODEL SK60M6 WITH 3" DISCHARGE, , EACH PUMP: 200 VOLT, 3 PHASE, 3 FLA, Ø.6 HORSEPOWER EACH, 3" DISCHARGE, 2" SOLIDS HANDLING, 1750 RPM, 75 GPM @ 20 FT HEAD, HYDROMATIC SLIDE RAIL SYSTEM, WITH HYDROMATIC 208 VOLT 1 PHASE, WITH RHOMBUS DUPLEX CONTROL PANEL NEMA 4X WITH ALARMS AND SIREN OPTION, LIQUID TIGHT JUNCTION BOX. WITH (3) RHOMBUS 9JE "SIGNALMASTER" MECHANICAL PUMP FLOATS WITH 1½" CONTROL DIFFERENTIAL: PUMP OFF, PUMP ON, HIGH WATER ALARM, LEAD/LAG, LAG PUMP CONNECTED TO HIGHWATER ALARM 3 MECHANICAL FLOATS, PUMPS LOCATED IN 48" DIAMETER x 96" DEEP AK INDUSTRIES FIBERGLASS BASIN WITH ANTI-FLOAT FLANGE/WEIGHT, LIFTING RAIL, AK INDUSTRIES- FIBERGLASS SOLID & GASTIGHT SOLID COVER H20 TRAFFIC RATED
SP 1	STORM PUMP (DUPLEX)	SEE PLANS	HYDROMATIC - (2) SUBMERSIBLE PUMPS, MODEL S6L, 6" NPT DISCHARGE, EACH PUMP: 200 VOLT, 3 PHASE, 10 HORSEPOWER EACH, 35.1 FLA EACH, 3.25" SOLIDS HANDLING, 1150 RPM, 1100 GPM @ 25 FT HEAD, WITH HYDROTMATIC DUPLEX CONTROL PANEL NEMA 4X WITH ALARMS AND SIREN OPTION, LIQUID TIGHT JUNCTION BOX. WITH (3) RHOMBUS 9JE "SIGNALMASTER" MECHANICAL PUMP FLOATS WITH 1½" CONTROL DIFFERENTIAL: PUMP OFF, PUMP ON, HIGH WATER ALARM, LEAD/LAG, LAG PUMP CONNECTED TO HIGHWATER ALARM 3 MECHANICAL FLOATS, PUMPS LOCATED IN 96" DIAMETER x 156" DEEP AK INDUSTRIES FIBERGLASS BASIN WITH ANTI-FLOAT FLANGE/WEIGHT, LIFTING RAIL, AK INDUSTRIES- FIBERGLASS SOLID & GASTIGHT SOLID COVER H20 TRAFFIC RATED
SP 2	STORM PUMP (DUPLEX)	SEE PLANS	HYDROMATIC - (2) SUBMERSIBLE PUMPS, MODEL SK60M6, 3" NPT DISCHARGE, EACH PUMP: 200 VOLT, 3 PHASE, Ø.6 HORSEPOWER EACH, 3 FLA EACH, 2" SOLIDS HANDLING, 1750 RPM, 45 GPM @ 20 FT HEAD, WITH RHOMBUS DUPLEX CONTROL PANEL NEMA 4X WITH ALARMS AND SIREN OPTION, LIQUID TIGHT JUNCTION BOX. WITH (3) RHOMBUS 9JE "SIGNALMASTER" MECHANICAL PUMP FLOATS WITH 1½" CONTROL DIFFERENTIAL: PUMP OFF, PUMP ON, HIGH WATER ALARM, LEAD/LAG, LAG PUMP CONNECTED TO HIGHWATER ALARM 3 MECHANICAL FLOATS, PUMPS LOCATED IN 48" DIAMETER x 96" DEEP AK INDUSTRIES FIBERGLASS BASIN WITH ANTI-FLOAT FLANGE/WEIGHT, LIFTING RAIL, AK INDUSTRIES- FIBERGLASS SOLID & GASTIGHT SOLID COVER H20 TRAFFIC RATED
EP 1	ELEVATOR PUMP	SEE PLANS	LIBERTY - MODEL ELV250, WITH OILTECTOR CONTROL MODEL OTC-115, 115 VOLT, 1 PHASE, 5.2 FLA, 1/3 HORSEPOWER, 1½" DISCHARGE, ½" SOLDIS, 3450 RPM, 20 GPM @ 17 FT HEAD, ASME A 17.1, WITH CONTROL PANEL, ALARM, 34 LBS, UL LISTED, MINIMUM SUMP DEPTH 18" DIAMETER X 30" DEEP
OI 1	OIL/SAND INTERCEPTOR	SEE PLANS	SCHIER OS-75, OIL/SAND INTERCEPTOR, 75 GPM, 4" INLET/OUTLET, H-20 TRAFFIC RATED, FIELD ADJUSTABLE RISERS TO LID IS FLUSH WITH GRADE, 3" VENT
SM 1	SUB METER DOMESTIC COLD	SEE PLANS	ELSTER AMCO - 1" SIZE C-700 INSIDE R, BRONZE MAINCASE, COLD WATER METER, UP TO 80°F COLD WATER, LEAD FREE, CALIFORNIA CERTIFICATE NUMBER 5519-Ø1, WITH INOVONICS WIRELESS DATA AQUISITION SYSTEM, TO BE TESTED BY COUNTY OF SAN DIEGO DEPT OF WEIGHTS AND MEASURES. INSTALLED BY AN AGENCY APPROVED BY THE COUNTY OF SAN DIEGO DEPT WEIGHTS/MEASURES
WP 1	DOMESTIC WATER PUMP (DUPLEX)	SEE PLANS	QUANTUM FLO - GENIUS E2 DUPLEX SYSTEM, PUMPS: 32-125-3HP, EACH PUMP IS 3 HORSEPOWER X 2 = 6 HORSEPOWER TOTAL, 208 VOLT, 3 PHASE, 60 GPM @ 30 PSI BOOST, NSF 61 APPROVED, WITH LOW PRESSURE CUTOFF SWITCH ON INLET OF PUMP, LOW LEAD WETTED PARTS

CGC Section 4.303.1

FIXTURE FLOW RATES

FIXTURE TYPE	MAXIMUM FLOW RATE
Water closets	1.28 gallons/flush
Urinals	0.5 gallon/flush
Showerheads	2 gpm @ 80 psi
Lavatory faucets	1.5 gpm @ 60 psi[1]
Kitchen faucets	1.8 gpm @ 60 psi
Metering faucets	0.25 gallons per cycle

1. Lavatory faucets shall not have a flow rate less than 0.8 gpm at 20 psi.

WHEN A SHOWER IS PROVIDED WITH MULTIPLE SHOWER HEADS, THE SUM OF FLOW TO ALL THE HEADS SHALL NOT EXCEED 2.0 GPM @ 80 PSI, OR THE SHOWER SHALL BE DESIGNED SO THAT ONLY ONE HEAD IS ON AT A TIME. CGC SECTION 4.303.1.3.2

FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	MINIMUM PIPE CONNECTION C.W.	H.W.	WASTE	VENT	MANUFACTURER / MODEL NUMBER (TO BE APPROVED BY OWNER)
WC-1	WATER CLOSET-FLOOR MOUNTED, (FLUSH TANK) (ADA) LEFT HAND	½"	-	3"	2"	VORTENS- #3140-3475, 12" ROUGH-IN, ELONGATED BOWL, V.C., 1.28 GPF , WITH OPEN FRONT SEAT, SUPPLY/ANGLE STOP (CHROME FINISH), FIXTURE COLOR: WHITE, ASME A112.19.2/CSA B45.1 COMPLIANT
WC-2	WATER CLOSET-FLOOR MOUNTED, (FLUSH TANK) (ADA) RIGHT HAND	½"	-	3"	2"	VORTENS- #3140-3475, WITH 3477-V RIGHT HAND FLUSH, 12" ROUGH-IN, ELONGATED BOWL, V.C., 1.28 GPF , WITH OPEN FRONT SEAT, SUPPLY/ANGLE STOP (CHROME FINISH), FIXTURE COLOR: WHITE, ASME A112.19.2/CSA B45.1 COMPLIANT
WC-3	WATER CLOSET-FLOOR MOUNTED, (FLUSH TANK)	½"	-	3"	2"	VORTENS- #3208-3436, 12" ROUGH-IN, ROUND BOWL, V.C., 1.1/1.6 GPF (1.28 GPF AVG), WITH SEAT & CLOSED COVER SUPPLY/ANGLE STOP (CHROME FINISH), FIXTURE COLOR: WHITE, ASME A112.19.2/CSA B45.1 COMPLIANT
WC-4	WATER CLOSET-FLOOR MOUNTED, (FLUSH TANK)	½"	-	3"	2"	VORTENS- #3137-3475, 12" ROUGH-IN, ELONGATED BOWL, V.C., (1.28 GPF AVG), WITH SEAT & OPEN FRONT SEAT/ANGLE STOP (CHROME FINISH), FIXTURE COLOR: WHITE, ASME A112.19.2/CSA B45.1 COMPLIANT
LV-1	LAVATORY COUNTER MOUNTED	½"	½"	2"	1½"	AMERICAN STANDARD- #0476.028 'AQUALYN', (1)AFMO# 0677).V.C., FIXTURE COLOR WHITE, WITH DELTA MODEL 520-DST-1.5 SINGLE-HANDLE LAVATORY, AB1953 COMPLIANT, 1.5 GPM AERATOR, CHROME FINISH, POP-UP DRAIN, AB1953/NSF 61 ANGLE STOPS & FLEXIBLE SUPPLIES, 17 GAUGE P-TRAP, COORDINATE PLUMIBNG INSTALLATION WITH CABINET AND WALL CONTRACTOR FOR PROPER INSTALLATION OF PLUMBING COMPONENTS.
LV-2	LAVATORY (ADA) WALL MOUNTED COMMERCIAL	½"	½"	2"	1½"	AMERICAN STANDARD Ø356.421 WALL HUNG, SINGLE HOLE, VITREOUS CHINA, FIXTURE COLOR WHITE, DELTA 590T1150, Ø.5 GPM METERING LAVATORY, BATTERY OPERATED, BELOW DECK THERMOSTATIC MIXING VALVE, CHROME FINISH, TRIM PLATE, GRID DRAIN, AB1953/NSF 61 ANGLE STOPS & FLEXIBLE SUPPLIES, 17 GAUGE P-TRAP
BT-1	BATHTUB	½"	½"	2"	1½"	FIBER-CARE BATHS INC. ET60-30HC, ADA ADAPTABLE, FIXTURE COLOR WHITE(1)AFMO #3638), WITH MOEN MODEL L2353 CHATEAU BATHTUB FAUCET WITH DIVERTER & SPOUT(1)AFMO #3366), PRESSURE BALANCING MIXING VALVE, ASSE 1016/ASME A112.18.1/CSA B125, INTEGRAL STOPS, MOEN 6304EP 1.75 GPM SHOWER HEAD, CHROME FINISH, ADJUST HANDLE STOP TO PROVIDE 120°F MAX, WITH MOEN TUB DRAIN/OVERFLOW CHROME FINISH, BRASS TUBING, P-TRAP, NO SLIP JOINT P-TRAP ALLOWED, USE APPROPRIATE LEFT/RIGHT MODEL FOR DRAIN ORIENTATION
BT-2	BATHTUB-ADA	½"	½"	2"	1½"	FIBER-CARE BATHS INC. ET60-30HC, ADA GRAB BARS AND FOLD UP SEAT INSTALLED PER CA-TITLE 24, FIXTURE COLOR WHITE(1)AFMO #3638), WITH MOEN MODEL L2353 CHATEAU BATHTUB FAUCET WITH DIVERTER & SPOUT(1)AFMO #3366), PRESSURE BALANCING MIXING VALVE, ASSE 1016/ASME A112.18.1/CSA B125, INTEGRAL STOPS, MOEN 6304EP 1.75 GPM SHOWER HEAD, CHROME FINISH, ADJUST HANDLE STOP TO PROVIDE 120°F MAX, WITH MOEN TUB DRAIN/OVERFLOW CHROME FINISH, BRASS TUBING, P-TRAP, NO SLIP JOINT P-TRAP ALLOWED, USE APPROPRIATE LEFT/RIGHT MODEL FOR DRAIN ORIENTATION
S-1	SINK- COUNTER MOUNTED, DOUBLE BASIN(S.S.)	½"	½"	2"	1½"	ELKAY - #D23319, DAYTON(1)AFMO# 3464), DOUBLE BASIN, 33" L X 19" WIDE X 6" DEEP. 22 GAUGE, 300 S.S, LK-99 STRAINERS, "DELTA" #100LF-HDF-1.5 GPM SINGLE HANDLE FAUCET 1.5 GPM AERATOR/CHROME FINISH) LESS SPRAYER, AB1953 COMPLIANT, 8" CENTER, NSF 61/AB1953 COMPLIANT ANGLE STOPS, FLEXIBLE SUPPLIES, 17 GAUGE P-TRAP, DELTA AIRGAP FOR DISHWASHER CONNECTION
FD-1	FLOOR DRAIN	-	-	2"	1½"	J.R. SMITH- #2005Y(A)-P050, (1)AFMO #3663) 5" DIA., CAST IRON BODY, ROUND NICKEL BRONZE STRAINER HEAD, INTEGRAL SEEPAGE FLANGE, TRAP PRIMER CONNECTION, 2" P-TRAP, P-TRAP
FD-2	FLOOR DRAIN	-	-	3"	2"	J.R. SMITH- #2142Y-P050-NB, 12" DIA., CAST IRON BODY, ROUND VEHICLE TRAFFIC RATED NICKEL BRONZE STRAINER HEAD, TRAP PRIMER CONNECTION, 3" P-TRAP, SLIP JOINT P-TRAP NOT ALLOWED
AD-1	AREA DRAIN STORM	-	-	3"	-	J.R. SMITH- #2142Y-NB, 12" DIA., CAST IRON BODY, ROUND VEHICLE TRAFFIC RATED NICKEL BRONZE STRAINER HEAD
FS-1	FLOOR SINK	-	-	3"	2"	J.R. SMITH- #315ØY, WITH FLASHING CLAMP/INTEGRAL SEEPAGE FLANGE, 12" X 12" X 8" DEEP, ARE. INTERIOR, CAST IRON BODY WITH FLANGE, DOME STRAINER, INSTALL APPROPRIATE ¾ GRATE OR ½ GRATE, 3" OUTLET AND 3" P-TRAP
SS-1	SERVICE SINK	½"	½"	2"	1½"	FLORESTONE - #18R-2424, FIBERGLASS, WITH RIM GUARDS. MOP HANGER AND CHICAGO #897-CP FAUCET WITH VACUUM BREAKER, P-TRAP
WB-1	WASH BOX	¾"	¾"	2"	1½"	OATEY (1)AFMO #2150)- FIRE RATED WASHING SUPPLY BOX, 2" DRAIN, ¼ TURN BRASS BALL VALVE, COPPER SWEAT CONNECTION, HOT/COLD WATER SUPPLY, 2" P-TRAP
VB-1	VALVE BOX FOR REFRIGERATOR ICE MAKER	½"	-	-	-	IPS CORPORATION #FRIB12ABS (1)AFMO #2076)- FIRE RATED ICE MAKER VALVE BOX, SWEAT CONNECTION, QUARTER TURN VALVE, AB1953 COMPLIANT/LEAD FREE
RD-1	ROOF DRAIN W/ OVERFLOW	-	-	3"	-	THUNDERBIRD - RDCB3NH, COPPER FLASHING 20 OZ/SQFT, OVERFLOW, WITH CLAMP COLLAR
DD-1	DECK DRAIN	-	-	2"	-	THUNDERBIRD - BD63F, 20 OZ/SQFT COPPER FLASHING, FOR ELASTOMERIC DECK, NON-ADJUSTABLE STRAINER HEIGHT
DD-2	DECK DRAIN	-	-	2"	-	JR SMITH - DX2005, INTEGRAL SEEPAGE FLANGE, FLASHING, FOR ELASTOMERIC DECK, ADJUSTABLE STRAINER HEIGHT
DD-3	DECK DRAIN	-	-	2"	-	J.R. SMITH- #2005Y(A), (1)AFMO #3663) 5" DIA., CAST IRON BODY, ROUND NICKEL BRONZE STRAINER HEAD, INTEGRAL SEEPAGE FLANGE
HB-1	HOSE BIBB	¾"	-	-	-	ACORN - #8121-CP, WITH VACUUM BREAKER, CHROME POLISHED
HB-2	HOSE BOX	¾"	-	-	-	ACORN MODEL 8104 COLD WATER, RECESSED BOX, 18 GAUGE 304 STAINLESS STEEL, WITH VACUUM BREAKER, LOCKABLE COVER
TD-1	TRENCH DRAIN	-	-	4"	-	JR SMITH - 2710Y-C, 4" OUTLET, LOAD "C" MESH GALVANIZED STEEL TRAFFIC RATED GRATE, CAST IRON BODY, FLASHING CLAMP, 21 FT OVERALL LENGTH
TD-2	TRENCH DRAIN	-	-	2"	-	JR SMITH - 9666-FC, 2" OUTLET, STAINLESS STEEL ADA PERFORATED GRATE FLASHING CLAMP, 5 FT OVERALL LENGTH

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
(858)549-7500 FAX(858)549-7587
JOB # 16.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
TOM LAI
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

SCHEDULES

P1.2

WATER FIXTURE SUMMARY

A□□□□□□□□A□□□r□□□□□□□rF□□□r□□	M□□□□□□ F□□□r□ Br□□□□ P□□□□□□□	Pr□□□□	P□□□□	A□□□□ □□□□	F□□□r□□ Add□d	F□□□r□□ R□□ □□□d	F□□□r□□ R□□ □□□□□	□O□A□ ACRO□□
□□r□□□□□□□	1□2□	1□5	3□0	□				
C□□□□□□ □□□□r	1□2□	4□0	4□0	□	2			8
□□□□□r□□□□□d□□□□□	1□2□	1□0	1□0	1□0	17			17
□□□□□r□□□□□ □ □r□□□	1□2□	1□0	1□0	1□0	1			1
□□□□□□□□□□□□□□□□	1□2□	1□5	1□5	□	10			15
D□□□ □□□□r□□□□d□□□□□	1□2□	1□5	1□5	□	10			15
□□□□dr□□□□□	1□2□	□	1□5	□				
D□□□ □□□□r□□□□ □ □r□□□□	1□2□		1□5	□				
Ur□□□	3□4□	3□0	4□0	5□0				
W□□rC□□□□□F□□□□□□□□□□d□□□□	1□2□	2□5	2□5	3□5	17			42□5
W□□rC□□□□□F□□□□□□□□□□ □ □r□□□	1□2□	2□5	2□5	3□5	1			2□5
□ □□□B□□□	1□2□	2□5	2□5	□	1			2□5
□ □□□B□□□□□□□□dd□□□□□	1□2□	1	1	□	3			3
B□□□□□□□□□ □□□□□□□□□□□□□□r	1□2□	4□0	4□0	□	12			48
Dr□□□□□□□□□□	1□2□	0□5	0□5	0□75				
				□□□□F□□□r□U□□□□□				154□5 — 56 GPM

WATER CALCULATION
PRESSURE ANALYSIS

TOTAL FIXTURE UNITS	154□5
DEMAND FLOW (G.P.M.)	56
MINIMUM WATER PRESSURE IN STREET, (PSI).	62
PRESSURE REGULATOR: __YES X NO:	
DOMESTIC BACKFLOW: X YES __ NO	
PRESSURE LOSSES BETWEEN STREET AND PUMP INLET:	
(A) WATER METER, 1½" SIZE	8
(B) BACKFLOW	15
PRESSURE LOSS (PSI).	23
PRESSURE AVAILABLE AT PUMP INLET (P.S.I.)	39
PRESSURE BOOST THRU PUMP (P.S.I.)	30
DISCHARGE (P.S.I.)	69
PRESSURE CALCULATION FOR MOST REMOTE FIXTURE	
LOSSES:	
(A) ELEVATION Ø.43 X 30 FT.	13
(B) RESIDUAL	20
(C) TANKLESS	16
(D) SUBMETER	3
PRESSURE LOSS (PSI)	52
PRESSURE AVAILABLE	17
PRESSURE REGULATOR FOR EACH ZONE: X YES __ NO:	
CALCULATED ALLOWABLE DROP __ P.S.I. X 100 /150 FT. (DEVELOPED LENGTH) __ P.S.I. / 100 FT.	6

PIPE SIZE SCHEDULE (COLD WATER) COPPER TUBING TYPE 'L' GARAGE & AREAS EXPOSED TO EXTERIOR

SIZE	GPM	FT. F.U.	FV. F.U.
1/2"	2.5	2.5	Ø
3/4"	7	7	Ø
1"	12	16	Ø
1-1/4"	21	32	Ø
1-1/2"	31	56	14
2"	58	165	69
2-1/2"	84	294	168

PIPING SIZE FROM TABLE A2.1, CHARTS A2.1, A2.1(1) AND A4.1, 2013 CPC BASED ON 6 PSI/ 100 FT. MAXIMUM ALLOWABLE PRESSURE DROP AT MAXIMUM VELOCITY OF 6 FEET PER SEC.

PIPE SIZE SCHEDULE (HOT WATER) COPPER TUBING TYPE 'L' GARAGE & AREAS EXPOSED TO EXTERIOR

SIZE	GPM	FT. F.U.
1/2"	2.5	2.5
3/4"	7	7
1"	11	15
1-1/4"	19	28

PIPING SIZE FROM TABLE A2.1, CHARTS A2.1, A2.1(1) AND A4.1, 2013 CPC BASED ON 6 PSI/ 100 FT. MAXIMUM ALLOWABLE PRESSURE DROP AT MAXIMUM VELOCITY OF 5 FEET PER SEC.

PIPE SIZE SCHEDULE CPVC WATER TYPE V RESIDENTIAL AREAS

SIZE	GPM	FT. F.U.	FV. F.U.	
1/2"	2	2	Ø	6 FT/SEC MAX SDR 11/CTS
3/4"	6	6	Ø	
1"	11	15	Ø	
1-1/4"	17	24	Ø	
1-1/2"	25	42	8	
2"	40	86	28	
2-1/2"	60	175	76	5 FT/SEC MAX SCH 80

PIPING SIZE FROM 16-20 CHART 1, SDR11/CTS SIZES ½" THRU 2".

FOR SCH 80 PIPES GREATER THAN 2", SIZED PER MANUFACTURER'S SIZING CHARTS, 6 PSI/ 100 FT.
MAXIMUM ALLOWABLE PRESSURE DROP AT MAXIMUM VELOCITY 6 FT PER SECOND UP TO 2 INCH SIZE. LARGER SHALL BE 5 FT PER SEC.

Consultant
BTA ENGINEERS, INC.
6845 ERMA RD SUITE 204
SAN DIEGO, CA 92131
TEL (858)433-7587 FAX (858)433-7587
JOB # 16.19.00

Developer
Hitzke Development Corporation

THE PEARL
A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

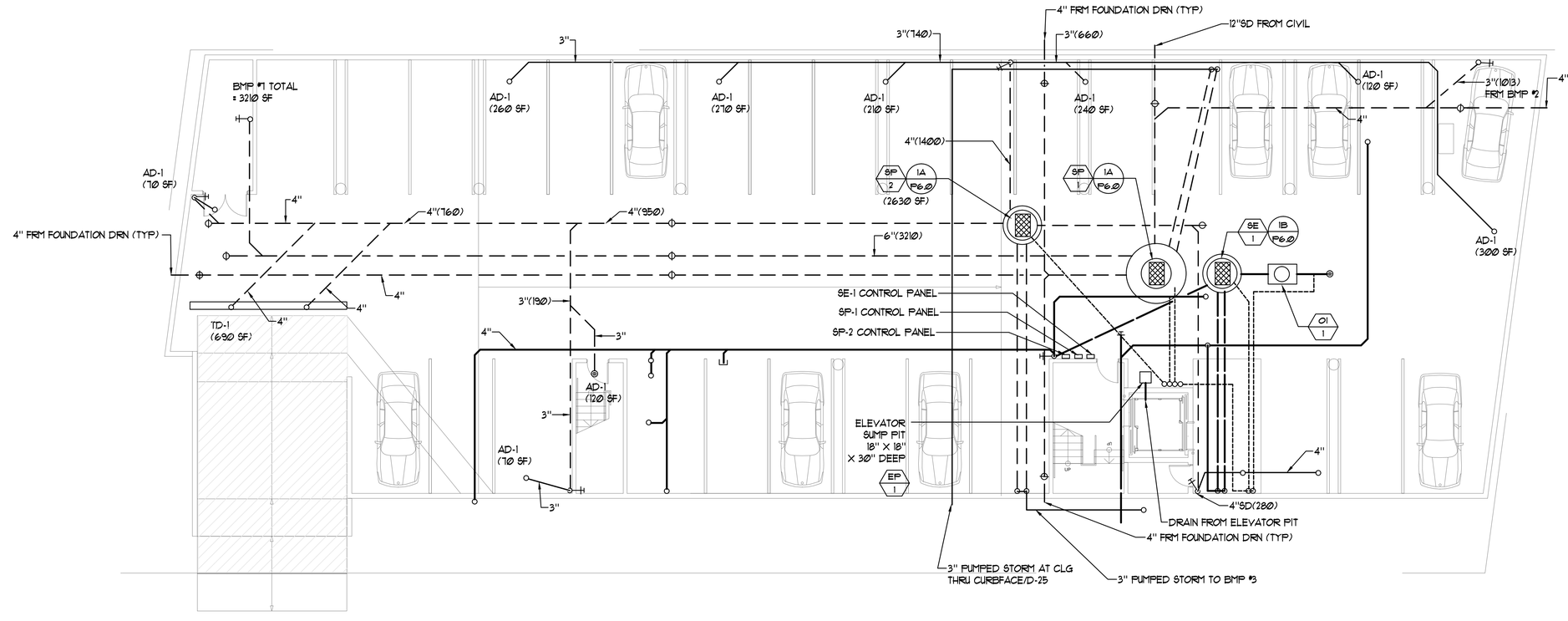
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
T. O. M.
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

SCHEDULES

P2.0



1 FLOOR PLAN LEVEL P0

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

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
T 858.566.6660 F 858.453.7587
JOB # 18.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
M
M32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

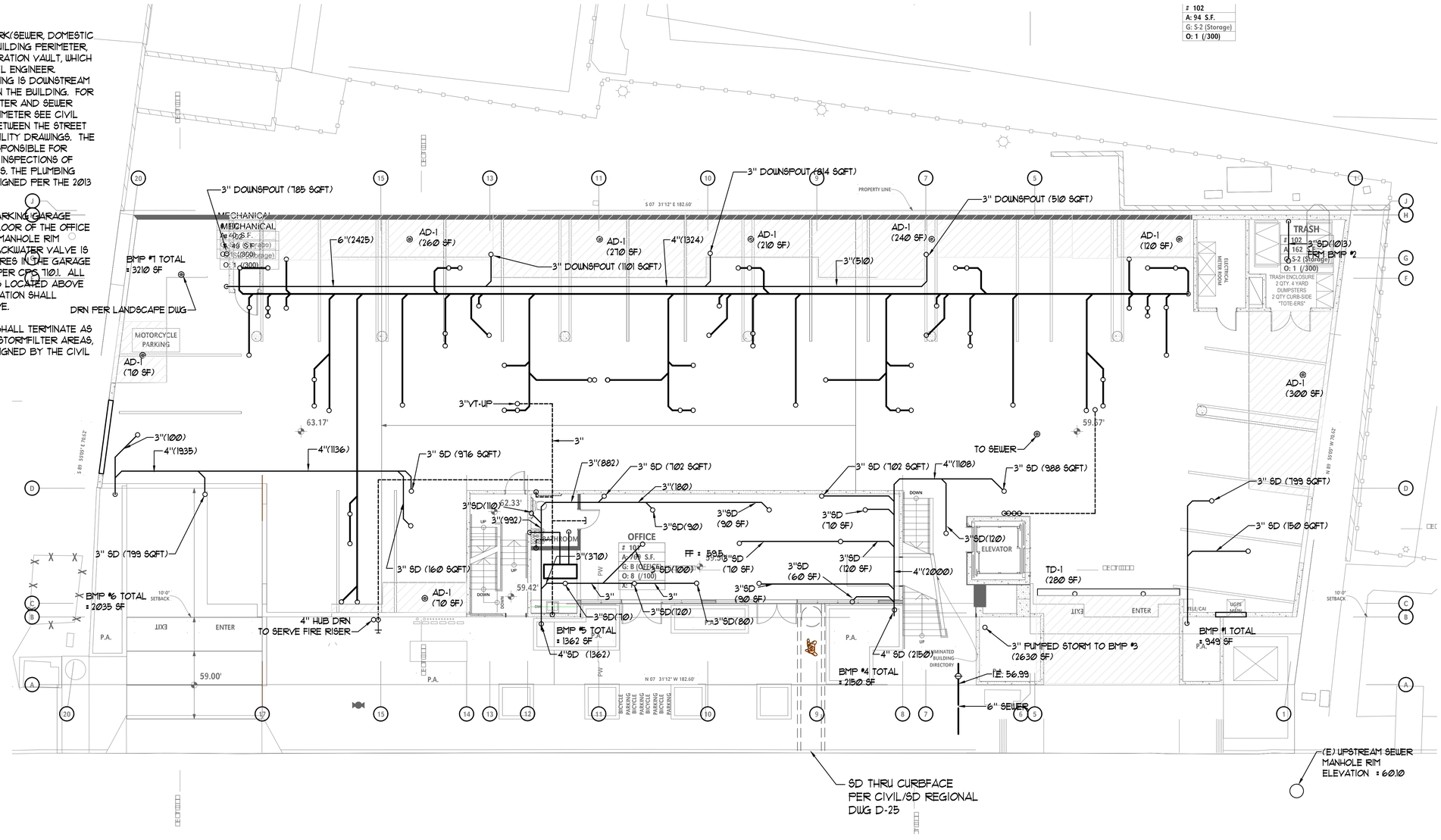
FLOOR PLAN
LEVEL P0

P3.0

NOTE: PLUMBING SCOPE OF WORK(SEWER, DOMESTIC WATER, STORM) IS WITHIN THE BUILDING PERIMETER, EXCEPT THE STORMWATER FILTRATION VAULT, WHICH WILL BE DESIGNED BY THE CIVIL ENGINEER. PLUMBING SCOPE FOR GAS PIPING IS DOWNSTREAM FROM THE GAS METER TO WITHIN THE BUILDING. FOR CONTINUATION OF DOMESTIC WATER AND SEWER PIPES BEYOND THE BLDG PERIMETER SEE CIVIL SHEET C-2. FOR GAS PIPING BETWEEN THE STREET AND GAS METER SEE SDG&E UTILITY DRAWINGS. THE CITY OF SOLANA BEACH IS RESPONSIBLE FOR PERMITTING, PLAN CHECK, AND INSPECTIONS OF THESE PRIVATE UTILITY SYSTEMS. THE PLUMBING SYSTEMS DESCRIBED ARE DESIGNED PER THE 2013 CALIFORNIA PLUMBING CODE.

THE FINISHED FLOOR OF THE PARKING GARAGE LEVEL = 59.67. THE FINISHED FLOOR OF THE OFFICE IS 59.5. THE UPSTREAM SEWER MANHOLE RIM ELEVATION = 60.10 A SEWER BACKWATER VALVE IS REQUIRED FOR PLUMBING FIXTURES IN THE GARAGE PARKING LEVELS AND OFFICE PER CPC 710.1. ALL PLUMBING FIXTURES ON FLOORS LOCATED ABOVE THE SEWER MANHOLE RIM ELEVATION SHALL BYPASS THE BACKWATER VALVE.

STORM AND OVERFLOW PIPES SHALL TERMINATE AS SHOWN ON THIS SHEET AT BMP STORMFILTER AREAS, 6" ABOVE THE BMP AREA DESIGNED BY THE CIVIL ENGINEER.



1 PLUMBING SITE/GROUND LVL PLAN-DWV

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

KEYNOTES:

1. TERMINATE 4" PUMPED SEWER TO HORIZONTAL GRAVITY DRAIN THROUGH TOP THROUGH A WYE BRANCH FITTING IN THE DIRECTION OF FLOW, CPC 710.4

GENERAL KEYNOTES:

A. MAINTAIN 8'-2" FLOOR TO OVERHEAD CLEARANCE OVER ADA DRIVE AISLES AND PARKING STALLS

B. MAINTAIN 7'-0" FLOOR TO OVERHEAD CLEARANCE OVER NON-ADA DRIVE AISLES AND NON-ADA PARKING STALLS.

C. SLOPE 4" AND LARGER WASTE @ 1% (TYP), UNLESS NOTED OTHERWISE(SUBJECT TO CITY OF SAN DIEGO PLUMBING FIELD INSPECTOR APPROVAL). SLOPE 2" & 3" WASTE @ 2% (TYP)

D. SLOPE STORM AND CONDENSATE @ 1% (TYP)

E. ROUTE OVERHEAD GRAVITY WASTE AND STORM AGAINST WALLS WHERE POSSIBLE TO MAXIMIZE OVERHEAD CLEARANCE.

F. SEE P4.0 AND P4.1 FOR GAS DIAGRAM

G. SEE P4.1 FOR COLD WATER DIAGRAM

H. WHERE PRACTICABLE PLUMBING FIXTURES SHALL BE DRAINED TO THE PUBLIC SEWER VIA GRAVITY

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 204
SAN DIEGO, CA 92131
(858) 566-2600 FAX (858)453-7587
JOB # 16.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

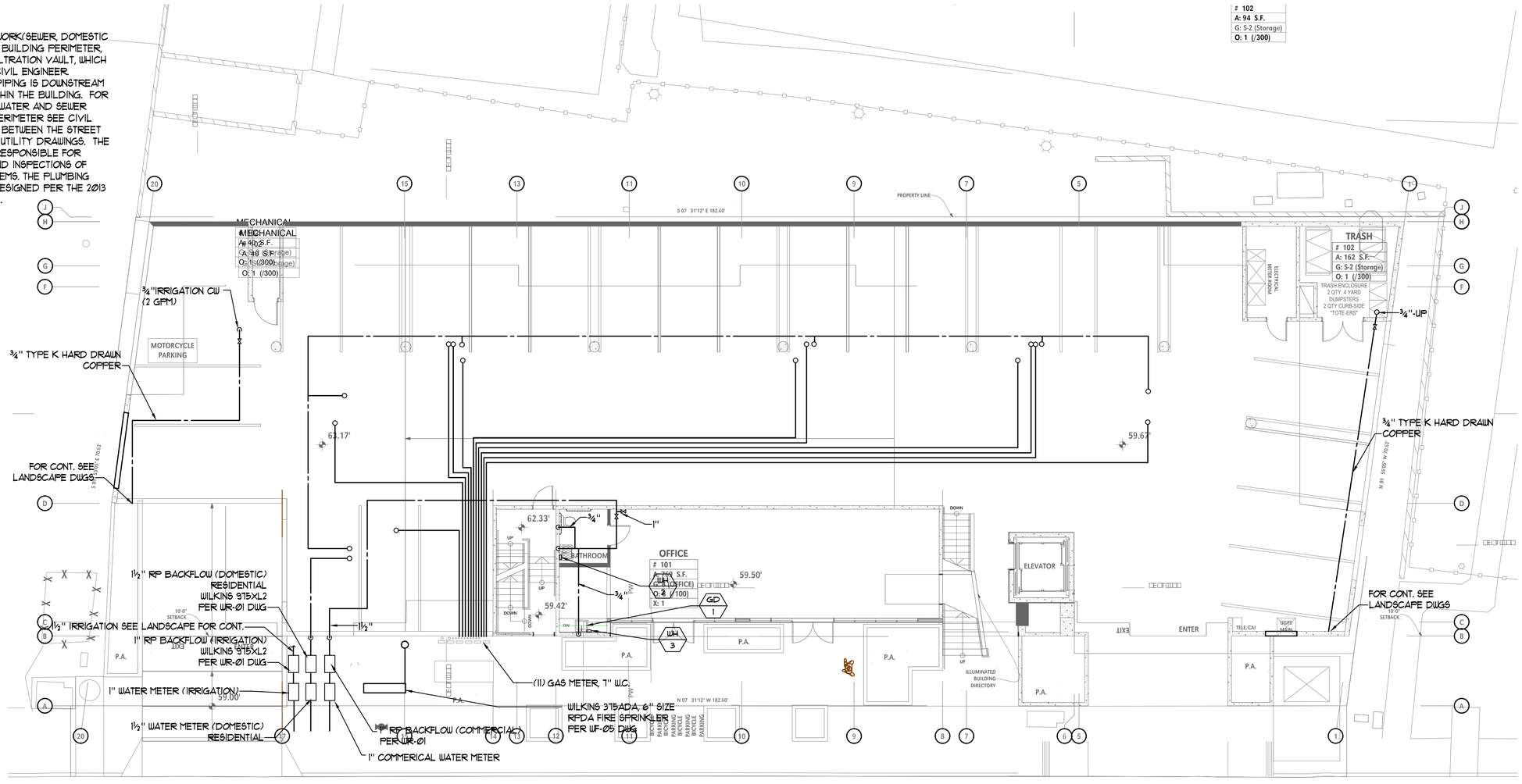
Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
THOMAS LAM
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

PLUMBING SITE/GR LVL PLAN DWV

P3.1A

NOTE: PLUMBING SCOPE OF WORK(SEWER, DOMESTIC WATER, STORM) IS WITHIN THE BUILDING PERIMETER, EXCEPT THE STORMWATER FILTRATION VAULT, WHICH WILL BE DESIGNED BY THE CIVIL ENGINEER. PLUMBING SCOPE FOR GAS PIPING IS DOWNSTREAM FROM THE GAS METER TO WITHIN THE BUILDING. FOR CONTINUATION OF DOMESTIC WATER AND SEWER PIPES BEYOND THE BLDG PERIMETER SEE CIVIL SHEET C-2. FOR GAS PIPING BETWEEN THE STREET AND GAS METER SEE SDG&E UTILITY DRAWINGS. THE CITY OF SOLANA BEACH IS RESPONSIBLE FOR PERMITTING, PLAN CHECK, AND INSPECTIONS OF THESE PRIVATE UTILITY SYSTEMS. THE PLUMBING SYSTEMS DESCRIBED ARE DESIGNED PER THE 2013 CALIFORNIA PLUMBING CODE.



1 PLUMBING SITE/GROUND LVL PLAN-WATER & GAS

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

KEYNOTES:

1. TERMINATE 4" PUMPED SEWER TO HORIZONTAL GRAVITY DRAIN THROUGH TOP THROUGH A WYE BRANCH FITTING IN THE DIRECTION OF FLOW, CPC 710.4

GENERAL KEYNOTES:

A. MAINTAIN 8'-2" FLOOR TO OVERHEAD CLEARANCE OVER ADA DRIVE AISLES AND PARKING STALLS

B. MAINTAIN 7'-0" FLOOR TO OVERHEAD CLEARANCE OVER NON-ADA DRIVE AISLES AND NON-ADA PARKING STALLS.

C. SLOPE 4" AND LARGER WASTE @ 1% (TYP), UNLESS NOTED OTHERWISE(SUBJECT TO CITY OF SAN DIEGO PLUMBING FIELD INSPECTOR APPROVAL). SLOPE 2" & 3" WASTE @ 2% (TYP.)

D. SLOPE STORM AND CONDENSATE @ 1% (TYP)

E. ROUTE OVERHEAD GRAVITY WASTE AND STORM AGAINST WALLS WHERE POSSIBLE TO MAXIMIZE OVERHEAD CLEARANCE.

F. SEE P4.0 AND P4.1 FOR GAS DIAGRAM

G. SEE P4.1 FOR COLD WATER DIAGRAM

H. WHERE PRACTICABLE PLUMBING FIXTURES SHALL BE DRAINED TO THE PUBLIC SEWER VIA GRAVITY

Consultant
BTA ENGINEERS, INC.
9845 ERMA RD SUITE 204
SAN DIEGO, CA 92131
TEL: (858)549-7857 FAX: (858)453-7587
JOB # 18.8.00

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

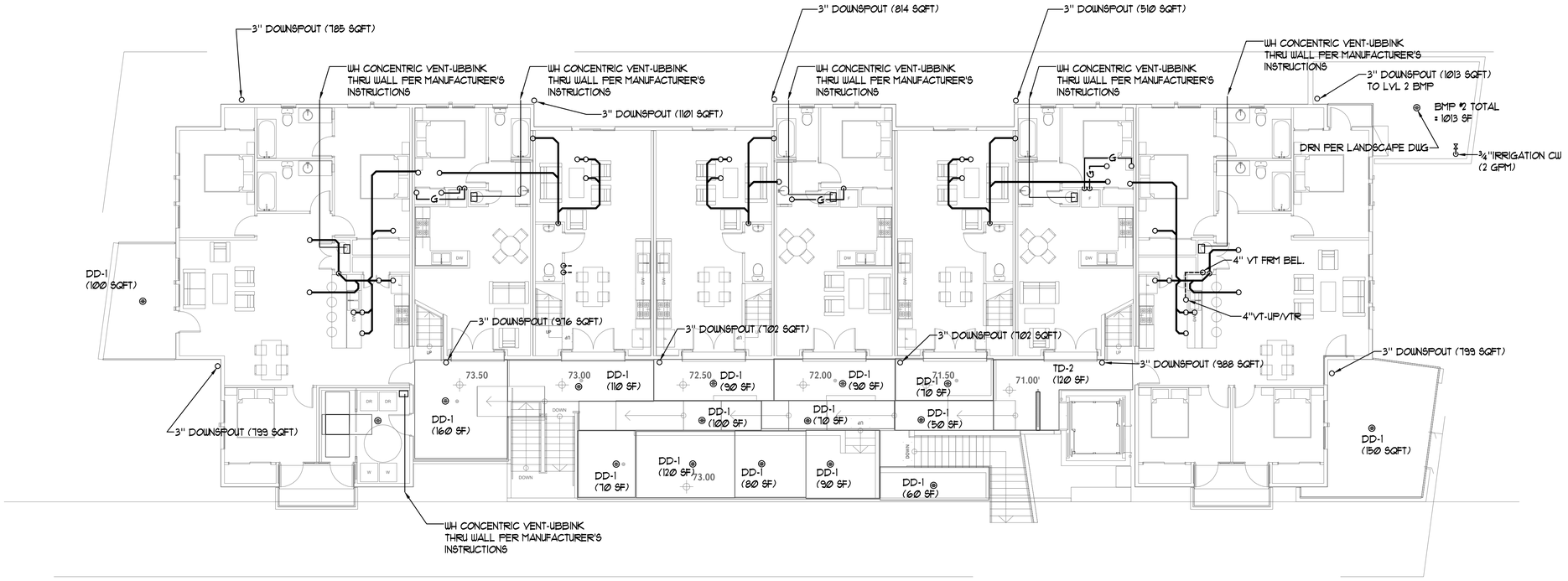
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
M
M32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

PLUMBING SITE/GR LVL WATER & GAS

P3.1B



1 PLUMBING LEVEL 2 PLAN

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

KEYNOTES:

1. GAS FROM BELOW

GENERAL KEYNOTES:

A. SLOPE 4" AND LARGER WASTE @ 1% (TYP), UNLESS NOTED OTHERWISE(SUBJECT TO CITY OF SAN DIEGO PLUMBING FIELD INSPECTOR APPROVAL). SLOPE 2" & 3" WASTE @ 2% (TYP)

B. SLOPE STORM AND CONDENSATE @ 1% (TYP)

C. ALL VALVES BEHIND WALLS AND/OR HARDLID CEILING SHALL BE PROVIDED WITH AN ACCESS PANEL. PANELS IN RATED WALLS AND CEILINGS SHALL BE RATED.

Consultant
BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
TEL: (858)549-7222 FAX:(858)453-7587
JOB # 18.8.00

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

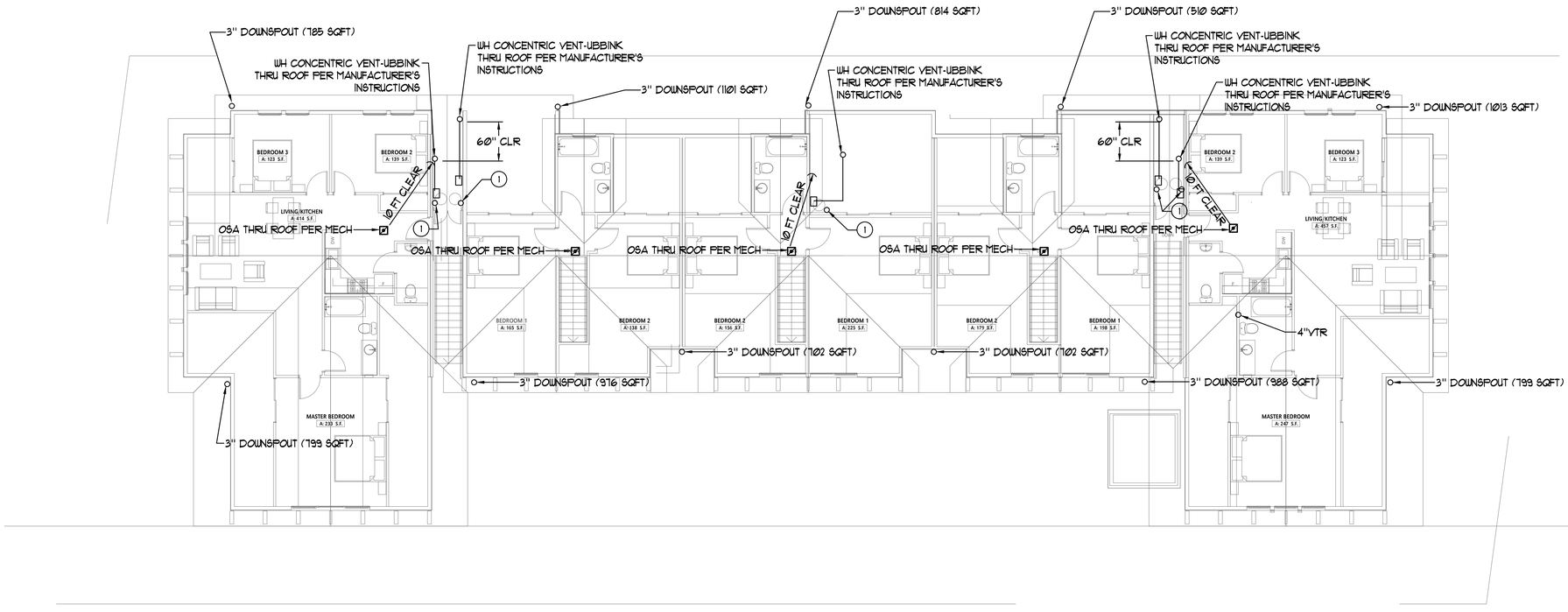
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

PLUMBING LEVEL 2 PLAN

P3.2



1 PLUMBING LEVEL 3 PLAN

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

KEYNOTES:

(1) GAS FROM BELOW

GENERAL KEYNOTES:

A. SLOPE 4" AND LARGER WASTE @ 1% (TYP). UNLESS NOTED OTHERWISE(SUBJECT TO CITY OF SAN DIEGO PLUMBING FIELD INSPECTOR APPROVAL). SLOPE 2" & 3" WASTE @ 2% (TYP)

B. SLOPE STORM AND CONDENSATE @ 1% (TYP)

C. ALL VALVES BEHIND WALLS AND/OR HARDLID CEILING SHALL BE PROVIDED WITH AN ACCESS PANEL. PANELS IN RATED WALLS AND CEILINGS SHALL BE RATED.

Consultant
BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
TEL 858.566.6660 FAX 858.453.7587
JOB # 15.8.00

Developer
Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

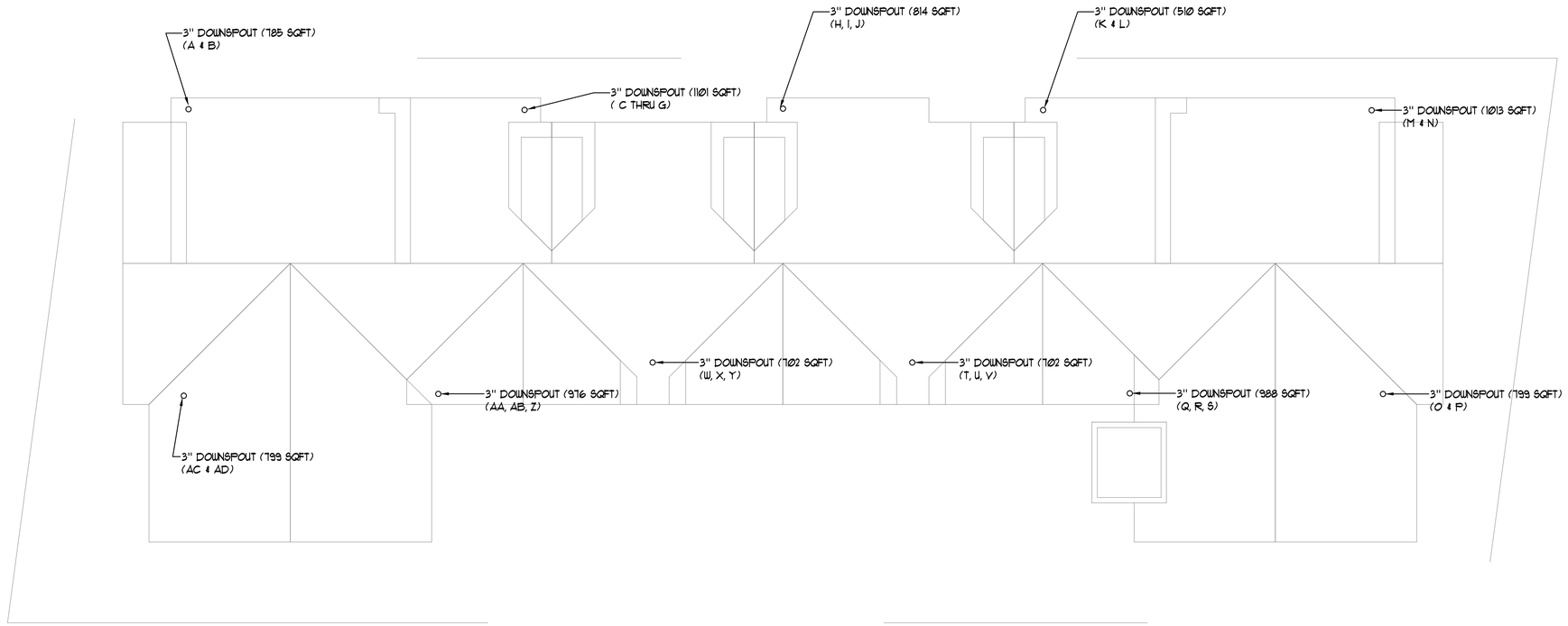
Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
M32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

PLUMBING LEVEL 3 PLAN

P3.3

NOTE: CITY OF SOLANA BEACH RAINFALL INDEX = 3.3 INCHES/HR



1 PLUMBING ROOF PLAN

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

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
TEL 858.560.1468 FAX 858.453.7587
JOB # 18.8.020

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

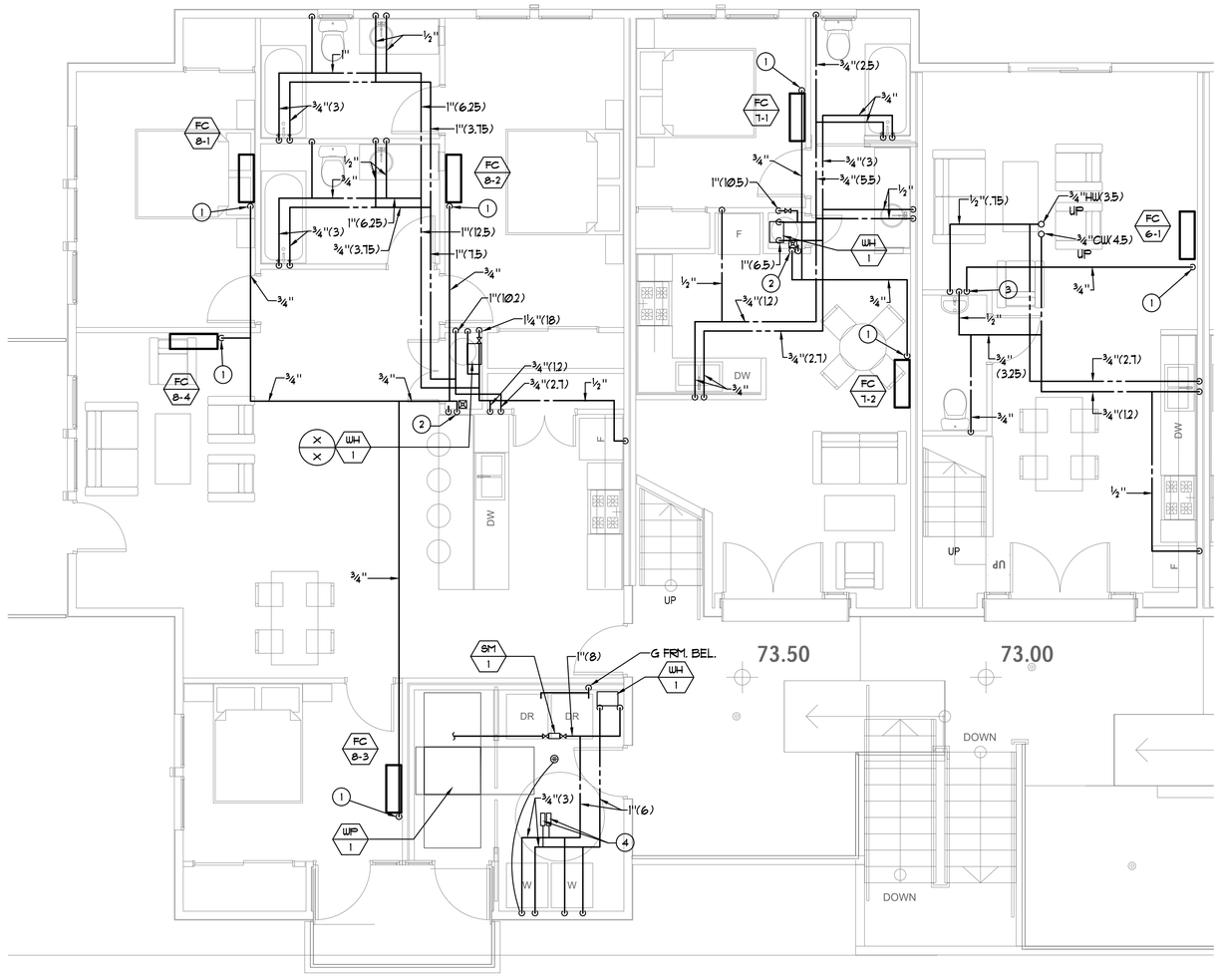
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
TOM LEE
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

PLUMBING
ROOF PLAN

P3.4



1 PLUMBING ENLARGED

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

KEYNOTES:

1. ⅜" PUMPED CONDENSATE TO ABOVE CEILING, TRANSITION TO ¾" AND SLOPE TOWARDS DRAIN.
2. TERMINATE CONDENSATE AT FLOOR SINK WITH 1" AIRGAP
3. TERMINATE ¾" CONDENSATE AT LAVATORY PTRAP, SEE 1/P6.1
4. WATER HAMMER ARRESTORS SIZE 'A' WITH ACCESS PANEL

GENERAL KEYNOTES:

A SLOPE CONDENSATE @ 1% (TYP)

B PROVIDE 12" X 12" ACCESS PANEL FOR VALVES LOCATED ABOVE HARDLID CEILING AND/OR BEHIND WALLS. ACCESS PANEL(S) LOCATED IN RATED WALLS/CEILING SHALL ALSO BE RATED.

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
T 858.695.1668 F 858.453.7587
JOB # 18.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

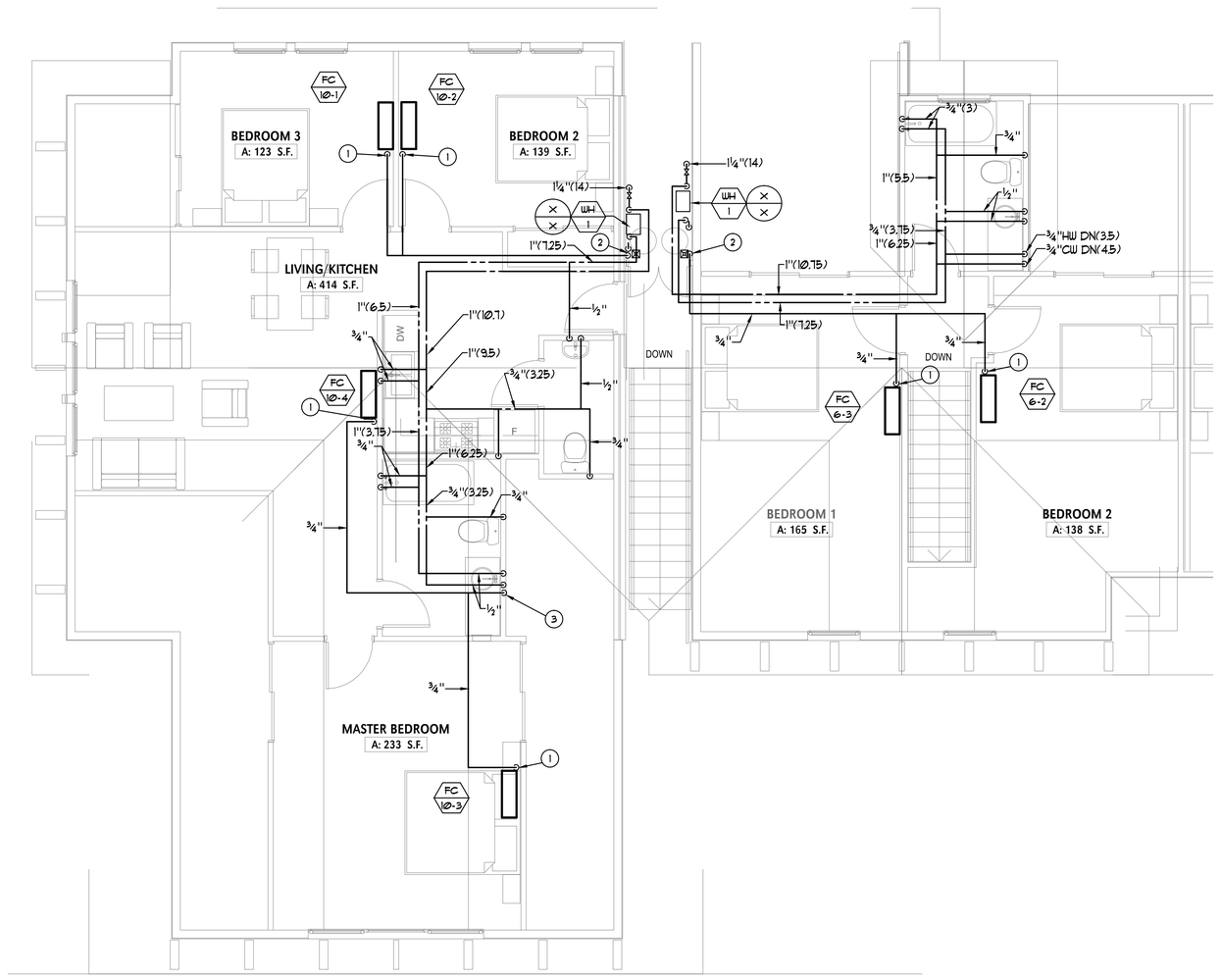
PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
TOM LAM
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

PLUMBING
Enlarged Plans

P4.0



1 PLUMBING ENLARGED

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

KEYNOTES:

1. ⅜" PUMPED CONDENSATE TO ABOVE CEILING, TRANSITION TO ¾" AND SLOPE TOWARDS DRAIN.
2. TERMINATE CONDENSATE AT FLOOR SINK WITH 1" AIRGAP
3. TERMINATE ¾" CONDENSATE AT LAVATORY PTRAP, SEE 1/P6.1

GENERAL KEYNOTES:

A SLOPE CONDENSATE @ 1% (TYP)

B PROVIDE 12" X 12" ACCESS PANEL FOR VALVES LOCATED ABOVE HARDLID CEILING AND/OR BEHIND WALLS. ACCESS PANEL(S) LOCATED IN RATED WALLS/CEILING SHALL ALSO BE RATED.

Consultant

BTA ENGINEERS, INC.
9845 ERMA RD SUITE 304
SAN DIEGO, CA 92131
T 858.566.2600 F 858.453.7587
JOB # 18.8.00

Developer

Hitzke Development Corporation

THE PEARL

A MIXED USE DEVELOPMENT
SOUTH SIEARRA AVENUE, SOLANA BEACH, CA

First Submittal 6/04/2018

PROJECT # 1008

Stamp / Signature

REGISTERED PROFESSIONAL ENGINEER
TOM LAM
M-32857
9/30/16
MECHANICAL
STATE OF CALIFORNIA

PLUMBING
Enlarged Plans

P4.1

GRADING PLANS
FOR
THE PEARL

GENERAL NOTES

1. APPROVAL OF THIS GRADING PLAN DOES NOT CONSTITUTE APPROVAL OF VERTICAL OR HORIZONTAL ALIGNMENT OF ANY PRIVATE ROAD SHOWN HEREIN FOR PUBLIC ROAD PURPOSES.

2. FINAL APPROVAL OF THESE GRADING PLANS IS SUBJECT TO FINAL APPROVAL OF THE ASSOCIATED IMPROVEMENT PLANS WHERE APPLICABLE. FINAL CURB GRADE ELEVATIONS MAY REQUIRE CHANGES IN THESE PLANS.

3. IMPORT MATERIALS SHALL BE LEGALLY OBTAINED.

4. A SEPARATE PERMIT FROM THE CITY ENGINEER WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY.

5. ALL SLOPES OVER THREE FEET IN HEIGHT SHALL BE LANDSCAPED AND IRRIGATED.

6. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK. NOTICE OF PROPOSED WORK SHALL BE GIVEN TO THE FOLLOWING AGENCIES:

UNDERGROUND SERVICE ALERT 811

CITY OF SOLANA BEACH PUBLIC WORKS 858 720-2470

7. THE SOILS REPORT TITLED "PRELIMINARY GEOTECHNICAL INTERPRETIVE REPORT PROPOSED THE PEARL DEVELOPMENT WITH UNDERGROUND PARKING, ASSESSOR'S PARCEL NUMBER 298-211-8, LOCATED ON SOUTH SIERRA AVENUE, CITY OF SOLANA BEACH, SAN DIEGO COUNTY, CALIFORNIA" PREPARED BY EARTH-STRATA INC., AND DATED JANUARY 20, 2011, SHALL BE CONSIDERED AS PART OF THIS GRADING PLAN. ALL GRADING SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN SAID REPORT.

8. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL THE PROPERTY OWNER'S PERMISSION HAS BEEN OBTAINED AND A VALID GRADING PERMIT HAS BEEN ISSUED.

9. THE CITY ENGINEER'S APPROVAL OF THESE PLANS DOES NOT CONSTITUTE THE BUILDING OFFICIAL'S APPROVAL OF ANY FOUNDATION FOR STRUCTURES TO BE PLACED ON THE AREA COVERED BY THESE PLANS. NO WAIVER OF THE GRADING ORDINANCE REQUIREMENTS CONCERNING MINIMUM COVER OVER EXPANSIVE SOILS IS MADE OR IMPLIED.

10. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED GRADING EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 7:00 A.M. AND 6:00 P.M. EACH DAY, MONDAY THROUGH FRIDAY AND NO EARTHMOVING OR GRADING OPERATIONS SHALL BE CONDUCTED ON THE PREMISES ON SATURDAYS, SUNDAYS OR HOLIDAYS WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER.

11. ALL MAJOR SLOPES SHALL BE ROUNDED INTO EXISTING TERRAIN TO PRODUCE A CONTOURED TRANSITION FROM CUT OR FILL SUFACES TO NATURAL GROUND AND ABUTTING CUT OR FILL SURFACES.

12. NOTWITHSTANDING THE MINIMUM STANDARDS SET FORTH IN THE EXCAVATION AND GRADING CODE, AND NOTWITHSTANDING THE APPROVAL OF THESE GRADING PLANS, THE PERMITTEE IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO THE ADJACENT PROPERTY. NO PERSON SHALL EXCAVATE ON LAND SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING PUBLIC STREET, SIDEWALK, ALLEY, FUNCTION OF ANY SEWAGE DISPOSAL SYSTEM, OR ANY OTHER PUBLIC OR PRIVATE PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLING, CRACKING, EROSION, SILTING SCOUR OR OTHER DAMAGE WHICH MIGHT RESULT FROM THE GRADING DESCRIBED ON THIS PLAN. THE CITY WILL HOLD THE PERMITTEE RESPONSIBLE FOR CORRECTION ON NON-DEDICATED IMPROVEMENTS, WHICH DAMAGE ADJACENT PROPERTY.

13. SLOPE RATIOS: CUT 2:1 FILL 2:1
CUT: _____CY. FILL: _____CY.
IMPORT/(EXPORT): _____CY.
NOTE: A SEPARATE PERMIT MUST EXIST FOR OFFSITE IMPORT OR EXPORT AREAS.

14. SPECIAL CONDITIONS: IF ANY ARCHEOLOGICAL RESOURCES ARE DISCOVERED ON THE SITE OF THIS GRADING DURING GRADING OPERATIONS, SUCH OPERATIONS WILL CEASE IMMEDIATELY AND THE PERMITTEE WILL NOTIFY THE CITY ENGINEER OF THE DISCOVERY. GRADING OPERATIONS WILL NOT COMMENCE UNTIL THE PERMITTEE HAS RECEIVED WRITTEN AUTHORITY FROM THE CITY ENGINEER TO DO SO.

15. ALL GRADING SHOWN ON THIS PLAN SHALL BE COMPLETED AS A SINGULAR UNIT WITH NO PROVISION FOR PARTIAL RELEASES. SHOULD IT BE ANTICIPATED THAT A PORTION OF THIS PROJECT IS COMPLETED SEPARATELY, A SEPARATE PLAN AND PERMIT APPLICATION SHALL BE SUBMITTED FOR APPROVAL.

16. THE CONTRACTOR SHALL NOTIFY THE CITY OF SOLANA BEACH AT (858) 720-2470, 24 HOURS BEFORE GRADING OPERATIONS BEGIN.

DIGALERT

DIAL TOLL FREE
811
AT LEAST TWO DAYS
BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

GENERAL NOTES CONT.

17. FINISHED GRADING AND PLANTING SHALL BE ACCOMPLISHED ON ALL SLOPES PRIOR TO OCTOBER 1, OR IMMEDIATELY UPON COMPLETION OF ANY SLOPES GRADED BETWEEN OCTOBER 1 AND APRIL 1. PRIOR TO ANY PLANTING, ALL LANDSCAPING SHALL BE APPROVED BY THE PLANNING DEPARTMENT AT THE DEVELOPMENT REVIEW STAGE, OR BY SEPARATE LANDSCAPING PLAN.

18. ALL OFF-SITE HAUL ROUTES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CITY ENGINEER FOR APPROVAL 72 HOURS PRIOR TO BEGINNING WORK.

19. UPON FINAL COMPLETION OF THE WORK UNDER THE GRADING PERMIT, BUT PRIOR TO FINAL GRADING APPROVAL AND/OR FINAL RELEASE OF SECURITY, AN AS-GRADED CERTIFICATE SHALL BE PROVIDED STATING: "THE GRADING UNDER PERMIT NO. SBGR-_____ HAS BEEN PERFORMED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED GRADING PLAN OR AS SHOWN ON THE ATTACHED AS-GRADED PLAN." THIS STATEMENT SHALL BE FOLLOWED BY THE DATE AND SIGNATURE OF THE CIVIL ENGINEER WHO CERTIFIES SUCH GRADING OPERATION.

20. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

EROSION CONTROL NOTES

1. STORM WATER AND NON-STORM WATER DISCHARGE CONTROL: BEST MANAGEMENT PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED TO MANAGE STORM WATER AND NON-STORM WATER DISCHARGES FROM THE SITE AT ALL TIMES DURING EXCAVATION AND GRADING ACTIVITIES.

2. EROSION AND SEDIMENT CONTROL: EROSION PREVENTION SHALL BE EMPHASIZED AS THE MOST IMPORTANT MEASURE FOR KEEPING SEDIMENT ON SITE DURING EXCAVATION AND GRADING ACTIVITIES. SEDIMENT CONTROLS SHALL BE USED AS A SUPPLEMENT TO EROSION PREVENTION FOR KEEPING SEDIMENT ON SITE.

3. EROSION CONTROL ON SLOPES SHALL BE MITIGATED BY INSTALLING LANDSCAPING AS PER APPROVED LANDSCAPE PLANS AS REQUIRED BY THE DEVELOPMENT REVIEW CONDITIONS, OR BY TEMPORARY EROSION CONTROL CONFORMING TO THE FOLLOWING:
NON-IRRIGATED HYDROSEED MIX WITH A BONDED FIBER MATRIX APPLIED AT 4,000 LB/ACRE.

LBS./ACRE	% PURITY/ACRE	SEED SPECIES
20	70% PLUS	ATRIPLEX GLAUCA
50		PLANTAGE INSULARIS
8		ENCELIS FARINOSA
6	SCARIFIED	LOTUS SCOPARIUS
7	50% PLUS	EXCHSCHOLZIA CALIFORNIA

TOTAL 91 LBS.

4. THE TOPS OF ALL SLOPES TALLER THAN 5' SHALL BE DIKED OR TRENCHED TO PREVENT WATER FLOWING OVER CRESTS OF SLOPES.

5. CATCH BASINS, DESILTING BASINS AND STORM DRAIN SYSTEMS SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY ENGINEER.

6. SAND BAG CHECK DAMS, SILT FENCES, FIBER ROLLS OR OTHER APPROVED BMP'S SHALL BE PLACED IN UNPAVED AREAS WITH GRADIENTS IN EXCESS OF 2%, AS WELL AS AT OR NEAR EVERY POINT WHERE CONCENTRATED FLOW LEAVE THE SITE.

7. SAND BAGS SHALL BE PLACED ON THE UPSTREAM SIDE OF ALL DRAINAGE INLETS TO MINIMIZE SILT BUILDUP IN THE INLETS AND PIPES.

8. THE CONTRACTOR SHALL REPAIR ANY ERODED SLOPES AS DIRECTED BY THE OFFICE OF THE CITY ENGINEER.

9. THE CONTRACTOR SHALL SWEEP ROADWAYS AND ENTRANCES TO AND FROM THE SITE ON A REGULAR BASIS TO KEEP THEM FREE OF SOIL ACCUMULATION AND AT ALL OTHER TIMES DIRECTED BY THE CITY ENGINEER.

10. THE CONTRACTOR SHALL WATER SITE ON A CONTINUOUS BASIS TO MINIMIZE AIR BORNE DUST CREATED FROM GRADING AND HAULING OPERATIONS OR EXCESSIVE WIND CONDITIONS, AND AT ALL TIMES DIRECTED BY THE CITY ENGINEER.

11. IN THE EVENT SILT DOES ENTER THE EXISTING PUBLIC STORM DRAIN SYSTEM, REMOVAL OF THE SILT FROM THE SYSTEM WILL BE AT THE DEVELOPER'S EXPENSE.

AS-BUILT:

UPON COMPLETION, AND PRIOR TO RELEASING THE SECURITIES, THE ENGINEER OF WORK SHALL "AS-BUILT" THE ORIGINAL MYLAR PLANS. INITIALLY, TWO COPIES OF RED-LINED PLANS SHOWING ALL AS-BUILT INFORMATION, INCLUDING ALL NEW UNDERGROUND FACILITIES (MAIN LINES, SERVICES AND LATERALS), IS TO BE SUBMITTED TO THE ENGINEERING DEPARTMENT. WHEN THE RED-LINES ARE APPROVED, THE ORIGINAL MYLAR PLANS WILL BE CHECKED OUT TO THE ENGINEER. THE ENGINEER SHALL MAKE THE CHANGES, SIGN EACH SHEET UNDER "AS-BUILT", AND RETURN ORIGINAL MYLARS TO THE CITY.

SWS ENGINEERING, INC.
CIVIL ENGINEERING ◆ LAND PLANNING ◆ SURVEYING
261 Autumn Drive, Suite 115, San Marcos, CA 92069
P: 760-744-0011 F: 760-744-0046
31045 Temecula Parkway, Suite 201, Temecula, CA 92592
P: 951-296-3407 F: 951-587-9451

DATE: Jun 06, 16 11:50am By:karen.harper
FILE:C:\Projects\2010\10-041\PROD\Construct\GP\10-041_GP-01.dwg

OWNER/DEVELOPER CERTIFICATE

I, GINGER HITZKE AS OWNER/DEVELOPER OF THE PROPERTY DESCRIBED HEREIN ACKNOWLEDGE THESE PLANS HAVE BEEN PREPARED AT MY DIRECTION WITH MY FULL CONSENT. I FULLY UNDERSTAND AND ACCEPT THE TERMS AND CONDITIONS CONTAINED HEREIN AND AS ATTACHED BY REFERENCE ON THIS GRADING PLAN.

IT IS AGREED THAT FIELD CONDITIONS MAY REQUIRE CHANGES TO THESE PLANS.

IT IS FURTHER AGREED THAT THE OWNER/DEVELOPER SHALL HAVE A REGISTERED CIVIL ENGINEER MAKE SUCH CHANGES, ALTERATIONS OR ADDITIONS TO THESE PLANS WHICH THE CITY ENGINEER DETERMINES ARE NECESSARY AND DESIRABLE FOR THE PROPER COMPLETION OF THE IMPROVEMENTS.

I FURTHER AGREE TO COMMENCE WORK ON ANY IMPROVEMENTS SHOWN ON THESE PLANS WITHIN EXISTING CITY RIGHT-OF-WAY WITHIN 9 MONTHS AFTER ISSUANCE OF THE CONSTRUCTION PERMIT AND TO PURSUE SUCH WORK ACTIVELY ON EVERY NORMAL WORKING DAY UNTIL COMPLETED, IRRESPECTIVE AND INDEPENDENT OF ANY OTHER WORK ASSOCIATED WITH THIS PROJECT OR UNDER MY CONTROL.

SIGNED _____

DATE _____

ENGINEER OF WORK CERTIFICATE

I, TRACY H. SANTUCCI, P.E. HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS AND CITY OF SOLANA BEACH RESOLUTION NO. _____.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SOLANA BEACH AND ANY OTHER PUBLIC AGENCY IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME OF RESPONSIBILITIES FOR PROJECT DESIGN.

SIGNED _____ DATE_____
P.E. NO. 49673 EXP. 09/30/2016

FIRM: SWS ENGINEERING, INC.
ADDRESS: 261 AUTUMN DRIVE, SUITE 115
SAN MARCOS CA 92069
TELEPHONE: (760)744-0011

ENGINEER OF WORK AS-BUILT CERTIFICATE

I, _____ HEREBY DECLARE THAT THE PREPARATION OF THESE AS-BUILT DRAWINGS AND THAT THE INFORMATION SHOWN IS BASED ON ACTUAL SITE INVESTIGATIONS AND SURVEYS OF THE IMPROVEMENTS BETWEEN THE DATES OF _____ AND _____. TO THE BEST OF MY KNOWLEDGE AND EXPERIENCE THE INFORMATION SHOWN ON THESE PLANS PROVIDE AN ACCURATE AND CORRECT REPRESENTATION OF THE AS-BUILT CONDITIONS.

SIGNED _____ DATE_____
R.C.E. _____ EXP. _____

FLOOD STATEMENT

I, _____, A REGISTERED CIVIL ENGINEER/SURVEYOR, HEREBY CERTIFY THAT THE PAD STRUCTURES SHOWN ON THIS AS-BUILT GRADING PLAN HAVE BEEN VERIFIED BY ME AND THAT SAID ELEVATIONS ARE AT OR ABOVE THE BASE FLOOD ELEVATION SHOWN ON THE FLOOD INSURANCE RATE MAP OF THE COUNTY OF SAN DIEGO.

SIGNED _____ DATE_____
R.C.E./P.L.S. NO. _____ EXP._____

WORK TO BE DONE:

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE LATEST EDITIONS OF:

STANDARD SPECIFICATIONS

(1) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION INCLUDING THE REGIONAL SUPPLEMENTAL AMENDMENTS.

(2) CALIFORNIA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES"

(3) STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

STANDARD DRAWINGS

(1) SAN DIEGO REGIONAL STANDARD DRAWINGS

(2) STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD PLANS

LEGEND

IMPROVEMENTS	STD. DWGS.	SYMBOL

SOILS ENGINEER CERTIFICATE

I, STEPHEN M. POOLE, A REGISTERED CIVIL ENGINEER OF THE STATE OF CALIFORNIA, PRINCIPALLY DOING BUSINESS IN THE FIELD OF APPLIED SOIL MECHANICS, HEREBY CERTIFY THAT A SAMPLING AND STUDY OF THE SOIL AND CONDITIONS PREVALENT WITHIN THE SITE WAS MADE BY ME OR UNDER MY DIRECTION BETWEEN THE DATES DECEMBER 13, 2010 AND JANUARY 20, 2011. I HAVE REVIEWED THE PROJECT DESIGN AND GRADING SHOWN HEREIN IS CONSISTENT WITH THE RECOMMENDATIONS CONTAINED IN THE APPROVED SOILS AND GEOTECHNICAL REPORTS FOR THE PROJECT. ONE COMPLETE COPY OF THE FINAL SOILS REPORT COMPILED FROM THIS STUDY, WITH MY RECOMMENDATIONS, HAS BEEN SUBMITTED TO THE OFFICE OF THE CITY ENGINEER.

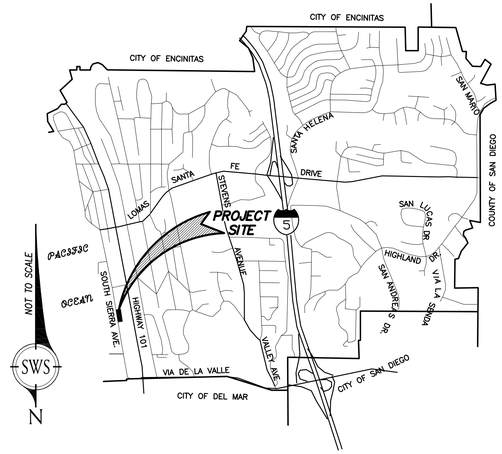
SIGNED _____ DATE _____
P.E. NO. 692 EXP. 9/30/12

EARTH-STRATA, INC.
26047 JEFFERSON AVENUE, SUITE C
MURRIETA, CA 92562
(951)461-4028

SOILS ENGINEER AS-BUILT CERTIFICATE

TO THE BEST OF MY KNOWLEDGE AND EXPERIENCE THE GRADING CONFORMS WITH THE RECOMMENDATIONS CONTAINED IN THE SOILS REPORT AND PLANS WITH THE EXCEPTION THAT ANY CHANGES OR DEVIATIONS FROM THE PLANS DUE TO UNFORESEEN FIELD CONDITIONS HAVE BEEN IDENTIFIED IN THE FINAL SOILS REPORT FOR THE PROJECT. ONE COMPLETE COPY OF THE FINAL SOILS REPORT COMPILED FROM THIS STUDY, WITH MY RECOMMENDATIONS, HAS BEEN SUBMITTED TO THE OFFICE OF THE CITY ENGINEER.

SIGNED _____ DATE_____
R.C.E./P.L.S. NO. _____ EXP._____



VICINITY MAP

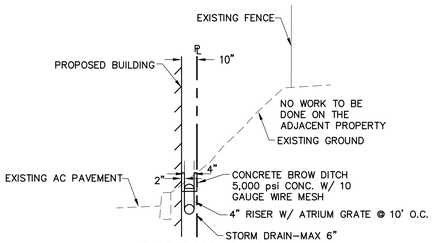
AS-BUILT

By:_____Date:_____

R.C.E.:_____ Exp: _____

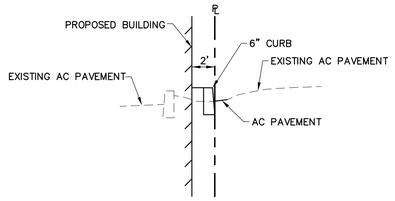
COASTAL COMMISSION PERMIT NO. _____

		ENGINEER OF WORK	CITY APPROVED CHANGES	APP'D	DATE	RECOMMENDED FOR APPROVAL	APPROVED FOR CONSTRUCTION	BENCH MARK	CITY OF SOLANA BEACH ENGINEERING DEPARTMENT	DRAWING NO.
		_____ Drawn By				By: _____Date:_____	By: _____Date:_____ Mohammad Sammak, City Engineer R.C.E.: 37146 Exp: 6/30/16	DESCRIPTION: CITY OF SOLANA BEACH CONTROL PT#2001 PER CITY SURVEY CONTROL NETWORK. 2.5" BRASS DISC ON SD INLET. LOCATION: ON THE EAST SHOULDER OF HIGHWAY 101, 0.1 MI SOUTH OF LOMAS SANTA FE DR. ELEV.: 69.28 DATUM: M.S.L.	GRADING PLANS FOR: SOUTH SIERRA AVENUE, SOLANA BEACH CA THE PEARL TITLE SHEET	SBGR-XXX Sheet 1 of 5



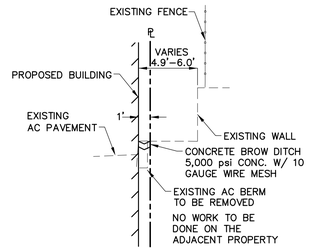
SECTION A–A

NOT TO SCALE



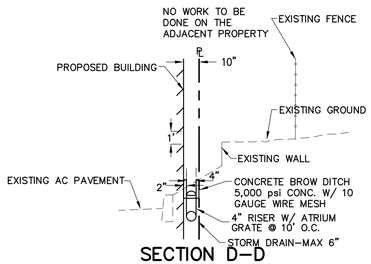
SECTION B–B

NOT TO SCALE



SECTION C–C

NOT TO SCALE



SECTION D–D

NOT TO SCALE

DIGALERT

DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

SWS ENGINEERING, INC.
CIVIL ENGINEERING ◆ LAND PLANNING ◆ SURVEYING
261 Autumn Drive, Suite 115
San Marcos, CA 92069
P: 760-744-0011 F: 760-744-0046
31045 Temecula Parkway, Suite 201
Temecula, CA 92592
P: 951-296-3407 F: 951-587-9451

DATE: Jun 24, 16 10:43am by:karen.harper
FILE:Z:\Projects\2010\10-041\PROD\Construct\GP\10-041_GP-02.dwg

AS–BUILT

By:_____ Date:_____

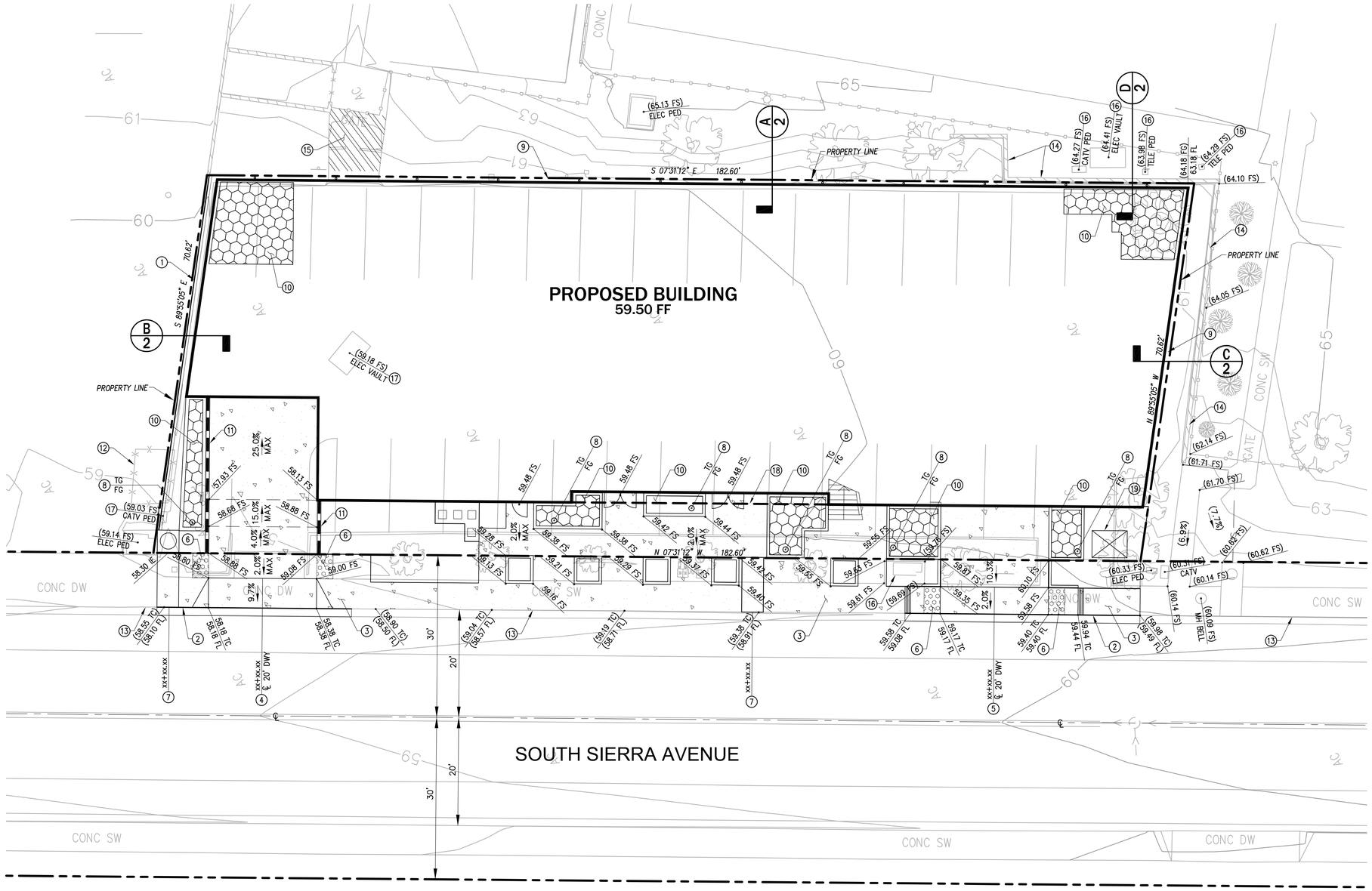
R.C.E.:_____ Exp:_____

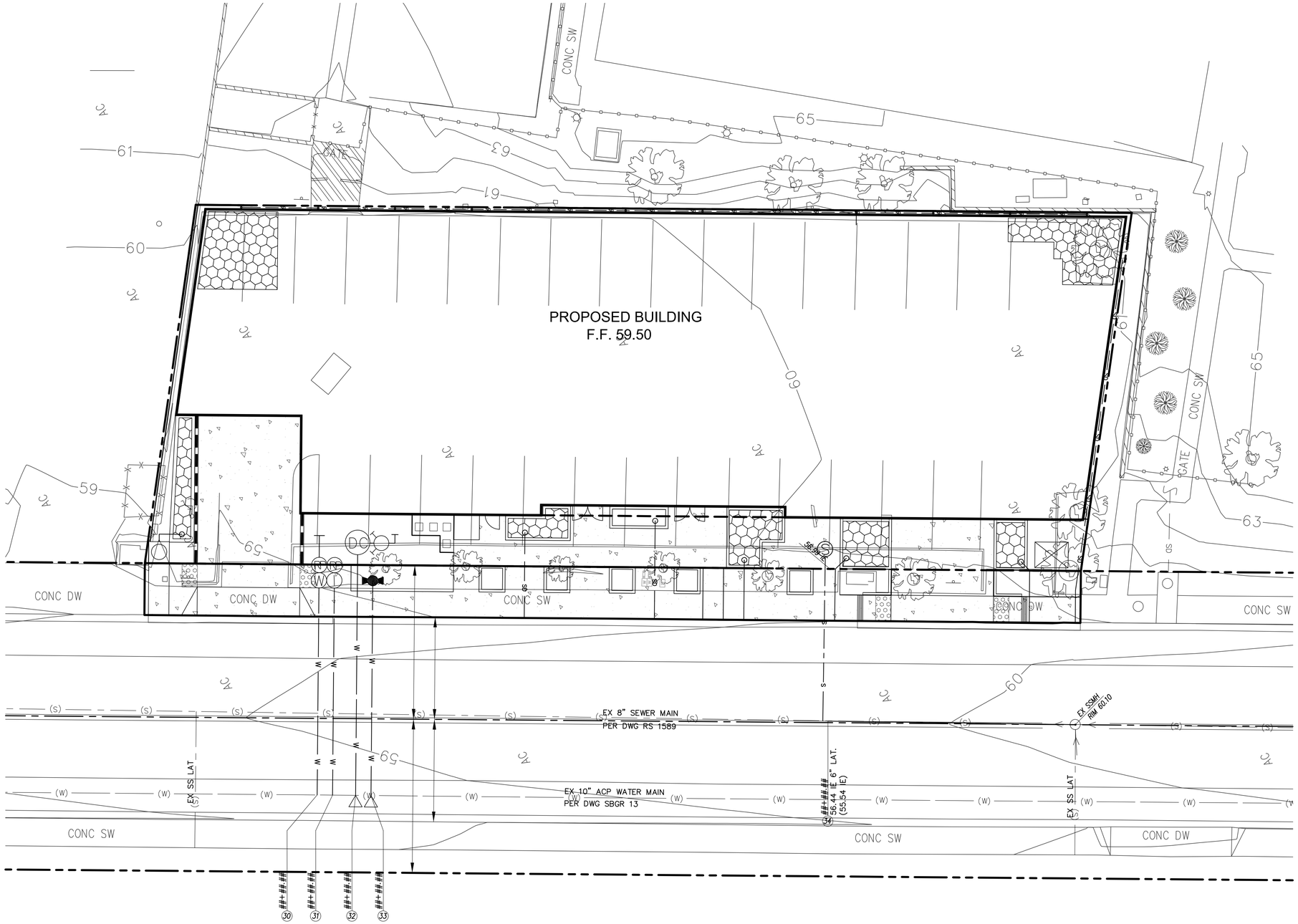
COASTAL COMMISSION PERMIT NO. _____

		ENGINEER OF WORK	CITY APPROVED CHANGES	APP'D	DATE	RECOMMENDED FOR APPROVAL	APPROVED FOR CONSTRUCTION	BENCH MARK	CITY OF SOLANA BEACH ENGINEERING DEPARTMENT	DRAWING NO.
		_____ Drawn By				By: _____ Date: _____	By: _____ Date: _____ Mohammad Sammak, City Engineer R.C.E.: 37146 Exp: 6/30/16	DESCRIPTION: CITY OF SOLANA BEACH CONTROL PT#2001 PER CITY SURVEY CONTROL NETWORK. 2.5" BRASS DISC ON SD INLET. LOCATION: ON THE EAST SHOULDER OF HIGHWAY 101, 0.1 MI SOUTH OF LOMAS SANTA FE DR. ELEV.: 69.28 DATUM: M.S.L.	GRADING PLANS FOR: SOUTH SIERRA AVENUE, SOLANA BEACH CA THE PEARL DETAIL SHEET	SBGR-XXX Sheet 2 of 5

CONSTRUCTION NOTES

1. 6" CURB PER SDRSD G-1
2. 6" TYPE 'G' CURB AND GUTTER PER SDRSD G-2
3. 4" PCC SIDEWALK PER SDRSD G-7
4. 20' WIDE DRIVEWAY PER SDRSD G-14A
5. 20' WIDE DRIVEWAY PER SDRSD G-14D
6. DARK GRAY TRUNCATED DOMES PER SDRSD G-30
7. CURB OUTLET PER UTILITY PLAN (SHEET 4)
8. CATCH BASIN PER UTILITY PLAN (SHEET 4)
9. CONCRETE BROW DITCH PER DETAIL SHEET 2
10. BIORETENTION PLANTER PER LANDSCAPE AND BUILDING PLANS
11. RETAINING WALL PER BUILDING PLANS
12. RELOCATE EXISTING TRASH ENCLOSURE
13. EXISTING CURB AND GUTTER TO REMAIN. PROTECT IN PLACE.
14. EXISTING WALL TO REMAIN. PROTECT IN PLACE.
15. EXISTING AC PAVEMENT TO REMAIN. PROTECT IN PLACE.
16. EXISTING UTILITY PEDESTAL TO REMAIN. PROTECT IN PLACE.
17. REMOVE EXISTING UTILITY VAULT OR PEDESTAL PER SEPARATE PERMIT.
18. LIMITS OF BUILDING BELOW
19. TRANSFORMER PER SEPARATE PLANS


PROPOSED BUILDING
59.50 FF
SOUTH SIERRA AVENUE
PROPERTY LINE
S 07°31'12" E 182.60'
N 07°31'12" W 182.60'
S 89°55'05" E 70.62'
N 89°55'05" W 70.62'
CONC DW
CONC SW
CONC SW
CONC DW
CONC SW
CONC SW
CONC SW
CONC DW
CONC SW
CONC SW
CONC S



CONSTRUCTION NOTES

30. 2" WATER LATERAL WITH 2" METER AND BFP PER __ WATER DISTRICT STD DWG __
31. 2" WATER LATERAL WITH 1.5" IRRIGATION METER AND BFP PER __ WATER DISTRICT STD DWG __
32. 6" FIRE SERVICE LATERAL WITH 6" DCDA PER __ WATER DISTRICT STD DWG __
33. FIRE HYDRANT LATERAL PER __ WATER DISTRICT STD DWG __
34. 6" SEWER LATERAL PER __ WATER DISTRICT STD DWG __

SCALE: 1"=10'

10 5 0 10 20 30
SCALE IN FEET
GRAPHIC SCALE

DIGALERT
DIAL TOLL FREE
811
AT LEAST TWO DAYS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

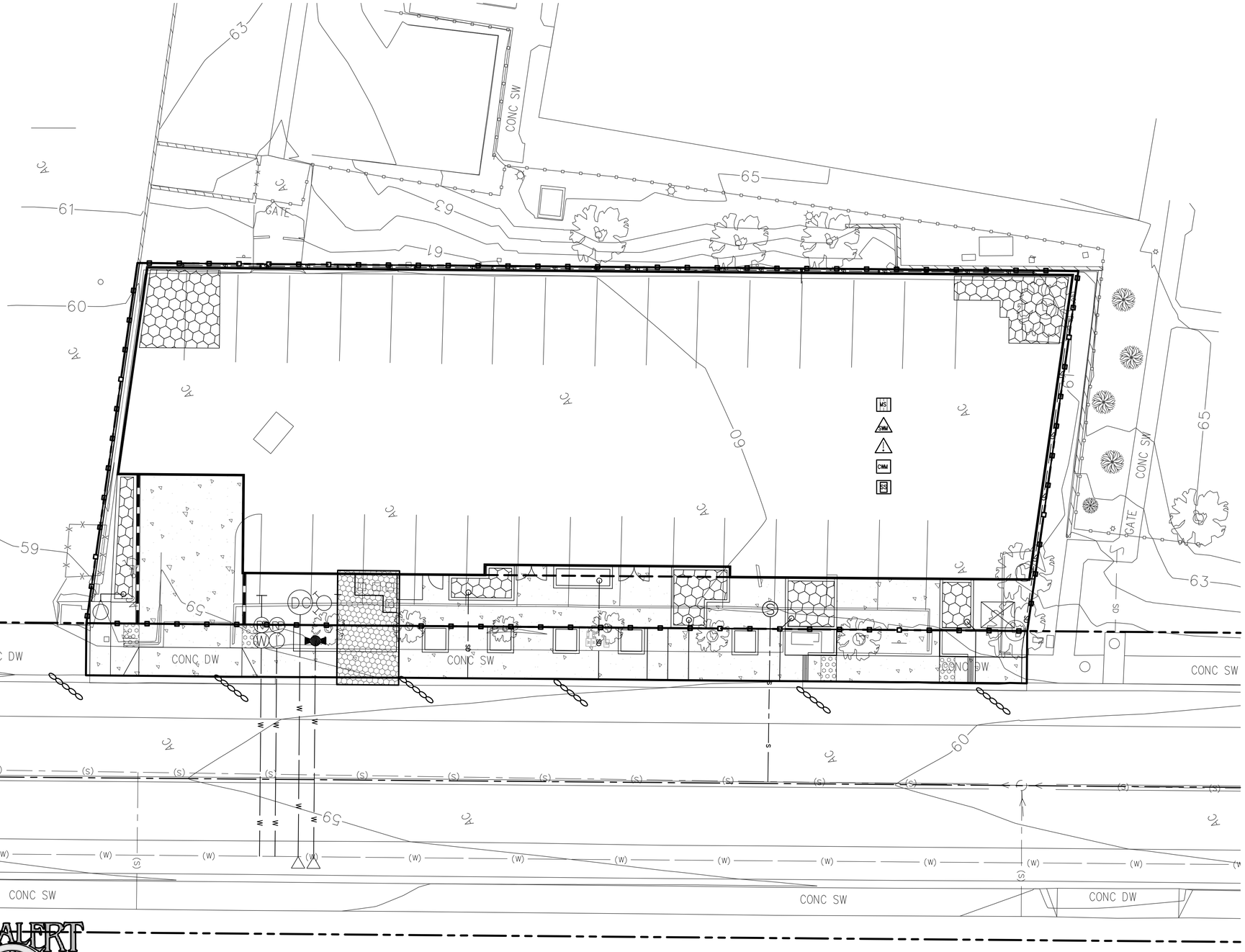
SWS ENGINEERING, INC.
CIVIL ENGINEERING • LAND PLANNING • SURVEYING
261 Autumn Drive, Suite 115, San Marcos, CA 92069
P: 760-744-0011 F: 760-744-0046
31045 Temecula Parkway, Suite 201, Temecula, CA 92592
P: 951-296-3407 F: 951-587-9451

DATE: Jun 24, 16 11:35am by:karen.harper
FILE:Z:\Projects\2010\10-041\PROD\Construct\GP\10-041_GP-04.dwg

AS-BUILT
By:_____ Date:_____
R.C.E.:_____ Exp:_____

COASTAL COMMISSION PERMIT NO. _____

		ENGINEER OF WORK	CITY APPROVED CHANGES	APP'D	DATE	RECOMMENDED FOR APPROVAL	APPROVED FOR CONSTRUCTION	BENCH MARK	CITY OF SOLANA BEACH	ENGINEERING DEPARTMENT	DRAWING NO.
		Drawn By				By: _____ Date: _____	By: _____ Date: _____ Mohammad Sammak, City Engineer R.C.E.: 37146 Exp: 6/30/16	DESCRIPTION: CITY OF SOLANA BEACH CONTROL PT#2001 PER CITY SURVEY CONTROL NETWORK. 2.5" BRASS DISC ON SD INLET. LOCATION: ON THE EAST SHOULDER OF HIGHWAY 101, 0.1 MI SOUTH OF LOMAS SANTA FE DR. ELEV.: 69.28 DATUM: M.S.L.	GRADING PLANS FOR: SOUTH SIERRA AVENUE, SOLANA BEACH CA THE PEARL	UTILITY PLAN	SBGR-XXX Sheet 4 of 5



LEGEND

DESCRIPTION	QTY	SYMBOL
SE-1 SILT FENCE	495 LF	
SE-8 GRAVEL BAG BARRIER	6 EA	
TC-1 STABILIZED CONSTRUCTION ENTRANCE	264 SF	
WM-1 MATERIAL DELIVERY STORAGE	1 EA	MS
WM-5 SOLID WASTE MANAGEMENT	1 EA	SWM
WM-6 HAZARDOUS WASTE MANAGEMENT	1 EA	!
WM-8 CONCRETE WASTE MANAGEMENT	1 EA	CWM
WM-9 SANITARY/SEPTIC WASTE MANAGEMENT	1 EA	SS

EROSION CONTROL NOTES:

1. IN CASE EMERGENCY WORK IS REQUIRED, CONTACT JEFF PETERSON AT HITZKE DEVELOPMENT PHONE NO. (858) 864-7265.
2. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY EROSION CONTROL DEVICES WHEN RAIN IS IMMINENT.
3. EROSION CONTROL DEVICES SHOWN ON PLANS SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE PUBLIC WORKS INSPECTOR.
4. THE CONTRACTOR SHALL RESTORE ALL EROSION CONTROL DEVICES TO WORKING ORDER, INCLUDING SILT AND OTHER DEBRIS REMOVAL, TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR AFTER EACH RUN-OFF PRODUCING RAINFALL.
5. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE PUBLIC WORKS INSPECTOR DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES WHICH MAY ARISE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
7. ALL EROSION CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON.
8. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
9. ALL REMOVABLE PROTECTIVE EROSION CONTROL DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FIVE-DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
10. ALL GRAVEL BAGS SHALL BE BURLAP TYPE WITH 3/4-INCH MINIMUM AGGREGATE.
11. SHOULD GERMINATION OF HYDROSEEDED SLOPES FAIL TO PROVIDE EFFECTIVE COVERAGE (90%) OF GRADED SLOPES PRIOR TO NOVEMBER 15, THE SLOPES SHALL BE STABILIZED BY PUNCH STRAW.

SCALE: 1"=10'

10 5 0 10 20 30
SCALE IN FEET
GRAPHIC SCALE

DIGALERT
DIAL TOLL FREE
811
AT LEAST TWO DAYS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

SWS ENGINEERING, INC.
CIVIL ENGINEERING ◆ LAND PLANNING ◆ SURVEYING
261 Autumn Drive, Suite 115 | 31045 Temecula Parkway, Suite 201
San Marcos, CA 92069 | Temecula, CA 92592
P: 760-744-0011 F: 760-744-0046 | P: 951-296-2407 F: 951-587-9451

DATE: Jun 24, 16 11:36am by:koren.harper
FILE:Z:\Projects\2010\10-041\PROD\Construct\GP\10-041_GP-05.dwg

AS-BUILT
By:_____ Date:_____
R.C.E.:_____ Exp: _____

COASTAL COMMISSION PERMIT NO. _____

		ENGINEER OF WORK	CITY APPROVED CHANGES	APP'D	DATE	RECOMMENDED FOR APPROVAL	APPROVED FOR CONSTRUCTION	BENCH MARK	CITY OF SOLANA BEACH ENGINEERING DEPARTMENT	DRAWING NO.
		Drawn By By: _____ Date: ____				By: _____ Date:_____	By: _____ Date:_____ Mohammad Sammak, City Engineer R.C.E.: 37146 Exp: 6/30/16	DESCRIPTION: CITY OF SOLANA BEACH CONTROL PT#2001 PER CITY SURVEY CONTROL NETWORK. 2.5" BRASS DISC ON SD INLET. LOCATION: ON THE EAST SHOULDER OF HIGHWAY 101, 0.1 MI SOUTH OF LOMAS SANTA FE DR. ELEV.: 69.28 DATUM: M.S.L.	GRADING PLANS FOR: SOUTH SIERRA AVENUE, SOLANA BEACH CA THE PEARL EROSION CONTROL PLAN	SBGR-XXX Sheet 5 of 5

LANDSCAPE DOCUMENTATION PACKAGE

for

THE PEARL

561 South Sierra Avenue
City of Solana Beach, California



Developer:

THE PEARL SOLANA BEACH, LP
P.O. Box 1700
Temecula, CA 92593-1700
Contact: Mike VanBusKirk
(619) 846-3532

Prepared By:

M Zaki Design, Inc.
4670 Saratoga Avenue # 3
San Diego, CA 92107
Contact: Mohamed Zaki
(619) 255-1802

Date: Revised June 04, 2018

DESIGN, INC.
landscape architecture • urban design • planning
p/f 619.255.1802
4670 saratoga ave #3
san diego, ca 92107
www.mzakidesign.com

Table on Contents

- **Soil Report**
- **Water Efficient landscape Worksheet Calculations**
- **Irrigation Schedule**
- **Maintenance Recommendations**

SOIL MANAGEMENT REPORT

Prepared by:

Soil and Plant Laboratory, Inc.
4741 East Hunter Avenue
Suite A
Anaheim, CA 92807
(714)282-8777

Anaheim office
Lab No: 16-116-0010
May 3, 2016

Mzaki Design, Inc.
4670 Saratoga Ave. # 3
San Diego, CA 92107

Attn: Mohammed Zaki

THE PEARL – SOLANA BEACH JOB # 11-0003

Attached are the results of the analysis performed on a soil sample that was collected from the above mentioned project site by the client and received by our laboratory on April 25, 2016. This sample was analyzed for nutrient levels and soil suitability in preparation for a new landscape installation.

Analytical Results:

All of the major and minor nutrients are sufficient for plant nutrition. Iron is high at 460 parts per million (ppm), which could potentially inhibit plant uptake of other nutrients, most notably zinc and possibly potassium. An upward pH adjustment would result in a favorable decrease in iron availability. The organic content of the soil is moderate at 2.8% by total sample dry weight.

The reaction of the soil is moderately acidic at 5.8 on the pH scale, which is at the low end of the suitable range for most plants. As noted above, adjusting the pH upward towards the slightly acidic range would decrease iron availability. This can be accomplished with calcium carbonate lime, as described below.

Salinity (ECe) is elevated at 5.4 dS/m, which could cause a broad range of plants to show tip and edge burning of older foliage. Several thorough leaching irrigations should be applied to flush excess salts out of the root zone and adjust the salinity level to less than 3.0 dS/m. We estimate that approximately 2 ½ inches of water would need to move through the soil profile to accomplish this. Be sure to allow the soil to dry slightly between irrigations to avoid creating anaerobic soil conditions. Nitrogen may be slightly below optimum after leaching.

Boron is safely low, yet sufficient for plant nutrition. The favorably low sodium adsorption ratio (SAR) indicates that soluble sodium is properly balanced by calcium and magnesium in regards to its effect on soil structure and water infiltration.

The texture of the soil is 'sandy loam' with an estimated water infiltration rate of 0.35 inches per hour. The actual rate of water infiltration may vary with the degree of soil compaction.

Comments

An inquiry was made by the client regarding soil that would be appropriate in an overstructure planter. Suggested import soil specifications are provided below. Rates of amendments and fertilizer may require adjustment based on analyses of the chosen sand and organic material.

SOIL MIX FOR OVERSTRUCTURE PLANTERS

1. If structure permits, utilize 100% fine sand to surface 8". The selected sand should meet the following gradation.

Sieve No. (US Standard)	Weight Percent Passing
10	100
18	95-100
35	65-100
60	0-50
140	0-10
270	0-5

Estimated dry bulk density 2500 lbs. / cu. yd.
Estimated wet bulk density 3000 lbs. / cu. yd.

2. The surface 8 inch layer should consist of a blend of 65% approved sand and 35% 0 - 1/4" raw fir or pine bark*. The following should be added and uniformly blended prior to placing in the planter.

AMOUNT/CU. YD.

2	lbs.	6-24-24XB® commercial fertilizer
2	lbs.	Nitroform
3	lbs.	calcium carbonate limestone
2	lbs.	dolomite lime
1	lb.	iron sulfate

Estimated dry bulk density 1900 lbs. / cu. yd.
Estimated wet bulk density 2400 lbs. / cu. yd.

* Bark Specification

1. Particle Size Distribution

Sieve Size	Percent Passing
9.51 mm (3/8 inches)	100
6.35 mm (1/4 inches)	95
500 micron (.02 inches)	0 - 30

2. Minimum 90% organic by dry weight as determined by ash method
3. pH shall be in the range of 4.0 – 5.5 as determined in saturation paste.
4. Salinity shall not exceed 2.0 dS/m as determined in saturation extract.

Recommendations

Surface Soil Preparation for Turf, Groundcover and Mass Planting

If feasible, prior to amending the areas where severe compaction exists, the surface soil should be ripped or tilled to a 9-inch depth. Uniformly broadcast and blend the following with existing soil to a 6-inch depth.

Materials	Amount per 1000 sq.ft.
Nitrogen fortified organic amendment (compost* or redwood or fir sawdust)	2 cu. yards
Calcium carbonate lime	45 lbs.
Calcium nitrate (15.5-0-0)	5 lbs.

* Rates may have to be adjusted depending on analysis of selected compost.

Tree and Shrub Planting Guidelines

1. Excavate planting pits at least twice the diameter of the rootball.
2. Uniformly blend 2 ½ lbs. of calcium carbonate lime with each cu. yd. of backfill soil.
3. The top of the rootball should be at or slightly above final grade.
4. Organic material is not required in the backfill; however if you wish, the amended surface soil or a soil blend consisting of no more than 20% by volume organic matter can be placed in the upper 12 inches of backfill only. Soil below this depth should not contain any added organic matter because of the threat of plant disease and/or anaerobic soil conditions developing.
5. Do not cover the original rootball with other soil. Ideally, a temporary soil berm is often constructed around the outer edge of the rootball to help channel water into the rootball and then into surrounding soil until roots are established in the backfill and the rootball is no longer the sole source of water for the plant.
6. Ideally, a weed and turf free zone, preferably 2-3 ft. in diameter, should be maintained just beyond the diameter of the planting hole. A 2-4 inch deep layer of coarse mulch can be placed around the tree or shrub; mulch should be kept a minimum 4-6 inches from the trunk.

Maintenance Fertilization

For turf, groundcover and mass planting areas, uniformly calcium nitrate (15.5-0-0) at the rate of 6 lbs. per 1000 sq. ft. The first application should occur approximately 45 to 60 days after planting, with repeat applications every 30-90 days or as growth and color dictate. In early fall and spring, substitute a complete fertilizer such as 16-6-8, or equal, for the sulfur coated urea at the rate of 6 lbs. per 1000 sq. ft. to ensure continuing supplies of phosphorus and potassium. Tree and shrub plantings can be maintained with the above fertilizers; however, the frequency between applications should be every 90-120 days, with the first application 90 days after planting. Follow each fertilization with a thorough irrigation. When plants have become well established, fertilizer applications can be less frequent.

If we can be of any further assistance, please feel free to contact us.



Jason Gihring

Emailed: mo@mzakidesign.com

Mzaki Design, Inc.
4670 Saratoga Ave. #3

San Diego CA 92107

4741 East Hunter Ave. Suite A
Anaheim, CA 92807
Main 714-282-8777 º Fax 714-282-8575
www.waypointanalytical.com

Project : The Pearl - Solana Beach, Ca
Job: #11-003

COMPREHENSIVE SOIL ANALYSIS

Report No : **16-116-0010**
Purchase Order :
Date Recd : 04/25/2016
Date Printed : 04/29/2016
Page : 1 of 1

Sample Description - Sample ID	Half Sat %	pH	ECe dS/m	NO_3-N ppm	NH_4-N ppm	PO_4-P ppm	K ppm	Ca ppm	Mg ppm	Cu ppm	Zn ppm	Mn ppm	Fe ppm	Organic % dry wt.	Lab No.
	TEC	Qual Lime		Sufficiency Factors											
Site Soil - 12"	17	5.8	5.4	138	25	75	161	1109	204	1.6	10.7	13	460	2.8	32452
	66	None		4.8		3.7	1.7	1.0	1.4	1.9	3.2	1.8	14.2		

Saturation Extract Values						SAR	Gravel %		Percent of Sample Passing 2 mm Screen					USDA Soil Classification	Lab No.
									Sand						
Ca meq/L	Mg meq/L	Na meq/L	K meq/L	B ppm	SO_4 meq/L		Coarse 5 - 12	Fine 2 - 5	Very Coarse 1 - 2	Coarse 0.5 - 1	Med. to Very Fine 0.05 - 0.5	Silt .002-.05	Clay 0-.002		
34.3	12.7	17.8	2.5	0.47	6.7	3.7	0.1	0.2	1.0	28.4	50.2	9.4	10.9	Sandy Loam	32452

Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m),Boron (B), Sulfate(SO_4), Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley-Black or Loss on Ignition.

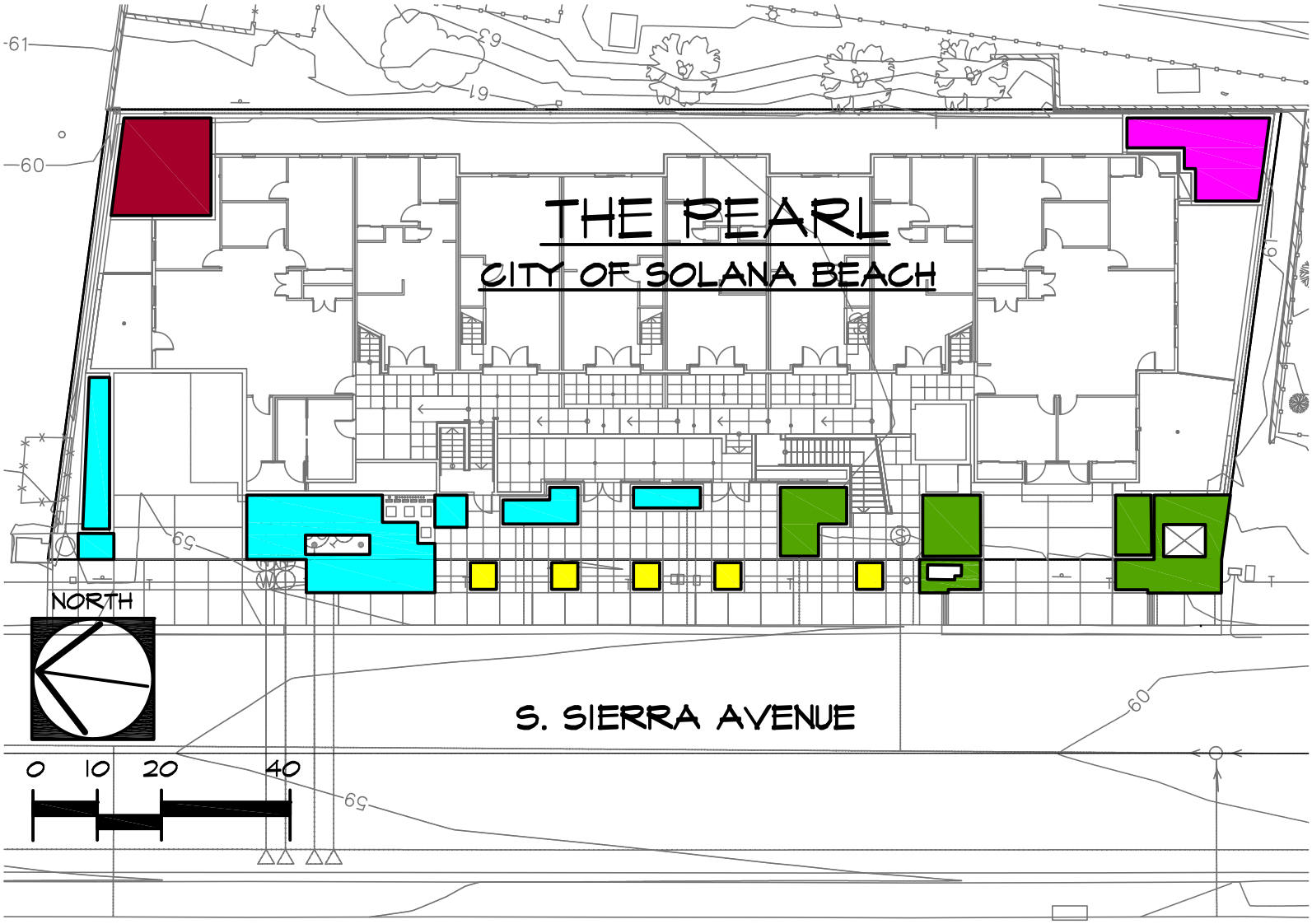
* LOW , SUFFICIENT , HIGH

WATER EFFICIENT LANDSCAPE WORKSHEET

City of Solana Beach ESTIMATED TOTAL WATER USE (ETWU) WORKSHEET including:

- **Hydrozone Information Table and chart**
- **Estimated Total Water Use (ETWU)**
- **Maximum Allowed water Allowance (MAWA)**

ETWU, MAWA Calculations and Hydrozone are included on the Landscape Construction Documents Drawing No. LI-5.



HYDRO-ZONE (1): (MED PF, DRIP IRRIGATION)
IRRIGATION CONTROL VALVE # A-1

HYDRO-ZONE (2): (LOW PF, TREE BUBBLERS)
IRRIGATION CONTROL VALVE # A-2

HYDRO-ZONE (3): (LOW PF, DRIP IRRIGATION)
IRRIGATION CONTROL VALVE # A-3

HYDRO-ZONE (4): (LOW PF, DRIP IRRIGATION)
IRRIGATION CONTROL VALVE # A-4

HYDRO-ZONE (5): (MED PF, DRIP IRRIGATION)
IRRIGATION CONTROL VALVE # A-5

HYDRO-ZONE CHART

ESTIMATED TOTAL WATER USE (ETWU) WORKSHEET

The project's Estimated Total Water Use is calculated using the following formula:

$$ETWU = (0.62)\left(\frac{PF \times HA}{IE} + SLA\right)$$

ETWU = Estimated total water use per year (gallons per year)
ETo = Evapotranspiration rate (inches per year)
PF = Plant Factor from WUCOLS (see Definitions)
HA = Hydro-zone Area (square feet): Define hydro-zones by water use: very low, low, moderate and high
SLA = Special Landscape Area: Edible plants, irrigated with recycled water, & turf used for active play
0.62 = Conversion Factor (to gallons per square foot)
IE = Irrigation Efficiency

CITY OF SOLANA BEACH ESTIMATED TOTAL WATER USE (ETWU) WORKSHEET

	Line		Hydro-zone Number (1 - 5 Below – use as many tables as necessary to complete all hydrozones)				
		1	2	3	4	5	SLA
Evapotranspiration Rate (ETo) See "A" below	1	Use 41 (west of I-5) / 47 (east of I-5)					
Conversion Factor - .62	2	0.62					
(Line 1 x Line 2)	3		25.42 (west of I-5) / 29.14 (east of I-5)				
Plant Factor (PF) See "B" below	4	0.60	0.30	0.30	0.30	0.60	
Hydrozone Area (HA) - in square feet	5	220	144	578	386	202	0
(Line 4 x Line 5)	6	132.00	43.2	173.40	115.80	121.20	
Irrigation Efficiency (IE) See "C" below	7	0.81	0.75	0.81	0.81	0.81	
(Line 6 ÷ Line 7)	8	162.96	57.60	214.08	142.96	149.63	
TOTAL of all Line 8 boxes + SLA	9	727.23					
Line 3 x Line 9 Estimated Total Water Use - **ETWU** (gallons per year) Total shall not exceed MAWA below	10	**727.23 x 25.42 = 18,486.19 Gallons / 748 = 24.72 CCF**					

A

ETo - Evapotranspiration rate =
41 (west of I-5)
47 (east of I-5)

B

PF - Plant Factor – Use WUCOLS values to determine the category for each species used. The highest water use PF must be used when more than one PF is shown in a hydro-zone.

0.1 = VLW - Very Low Water Use Plants
0.3 = LW - Low Water Use Plants
0.6 = MW - Moderate Water Use Plants
1.0= HW - High Water Use Plants

C

IE – Irrigation Efficiency
Spray = .55
Rotor = .70
Bubbler =.75
MP rotator = .75
Drip & Micro-spray = .81

A different IE may be used if supported by documentation subject to approval by the City Planner

MAXIMUM APPLIED WATER APPLICATION (MAWA) calculation:

25.42 x [(0.55 x 1,530) + (1-0.55 x 0] =
25.42 or 29.14 Total Landscape Area Total SLA
Evapotranspiration adjustment factor (ETAF) use .55 residential .45 non- residential

MAWA =
21,390.00 Gallons / 748 = 28.60 CCF

MATURITY RECOMMENDED IRRIGATION SCHEDULE

(Recommended Irrigation Schedule, Additional Notes and Requirements are Included on the Landscape Construction Documents Sheet LI-4).

MATURITY RECOMMENDED IRRIGATION SCHEDULE

PROJECT INFORMATION

Project: The Pearl
Location: City of Solana Beach, California
Proj. #: 11-003
Date: Revised 8/03/2016
By: M Zaki Design, Inc.

Controller No.: A
Controller Description: Hunter I-CORE 12-Staion with Hunter SOLAR.SYNC ET Sensor & Module
Irrigation Schedule Description: 7-Day Water Window
Landscape irrigation is porhibited between the hours of 6:00 a.m. and 9:00 p.m.
Landscape irrigation shall be limited to the hours of 9:00 p.m. and 6:00 a.m.
Source of (Eto) data indicated below: CA Model Water Efficient Ordinance Dec. 2015

AREA EVAPOTRASPIRATION DATA

Rooting Depth = 7"

	Total Eto = 39.80 (Station 173 Torrey Pines)											
	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
Normal Year Average ETo (Inches Per Month)	2.20	2.30	3.40	3.90	4.00	4.10	4.60	4.70	3.80	2.80	2.00	2.00
Normal Year Average ETo (Inches Per Day)	0.07	0.08	0.11	0.13	0.13	0.14	0.15	0.16	0.13	0.09	0.07	0.07

IRRIGATION SCHEDULE

VALVE	VALVE DESCRIPTION-MICRO CLIMATE	VALVE GPM	PRECIP. RATE (PR)	Micro Adj FACTOR	CROP COEF. (Kc)	SPKLR EFFIC.	Irrig Adj PCT	AVERAGE MINUTES PER DAY OF IRRIGATION - 7 DAYS PER WEEK											
								JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
A-1	Shrub & G.C Drip-Partial S/S	1.7	0.39	80%	0.6	81%	113%	10	12	16	19	19	20	22	23	19	13	10	10
A-2	Tree Bubbler-Partial S/S	10.0	0.96	80%	0.3	75%	100%	2	3	4	4	4	4	5	5	4	3	2	2
A-3	Shrub & G.C. Drip-Partial S/S	4.0	0.39	80%	0.3	81%	113%	5	6	8	9	9	10	11	12	9	7	5	5
A-4	Shrub & G.C. Drip-Partial S/S	3.3	0.39	80%	0.3	81%	113%	5	6	8	9	9	10	11	12	9	7	5	5
A-5	Shrub Drip-Full Sun	1.5	0.39	100%	0.6	81%	111%	13	15	20	24	24	26	27	29	24	16	13	13
	TOTAL MINUTES PER DAY							35	42	56	65	65	70	76	81	65	46	35	35
	TOTAL HOURS PER DAY							0.6	0.7	0.9	1.1	1.1	1.2	1.3	1.4	1.1	0.8	0.6	0.6

MAINTENANCE SCHEDULE

(Refer to landscape construction documents for additional notes and requirements on Sheet LT-2).

RECOMMENDED MAINTENANCE SCHEDULE

WEEKLY TASKS

- *Check all irrigation equipment and adjust/align as required.*
- *Inspect all landscape areas for pests/pathogens.*
- *Weed all shrub/groundcover areas as needed.*
- *Remove landscape debris.*
- *Repair planting wells and /or grade around plants to eliminate runoff.*
- *Perform corrective pruning to eliminate hazards and damage to plant.*
- *Repair irrigation equipment with originally specified materials.*

MINIMUM RECOMMENDED YEARLY MAINTENANCE SCHEDULE

Month	Adjust Irrigation Schedule	Inspect Tree Staking	Flush Drip Valves	Add Mulch	Prune Trees & Shrubs	Fertilize As Needed	Irrigation Winterization Flush
January	X	X					
February	X	X			X		
March	X	X	X	X		X	
April	X	X					
May	X	X			X		
June	X	X	X	X			
July	X	X					
August	X	X					
September	X	X	X	X			
October	X	X			X	X	
November	X	X					
December	X	X	X	X			X

NOTE:
ADDITIONAL MAINTENANCE REQUIREMENTS ARE INCLUDED ON THE LANDSCAPE CONSTRUCTION DOCUMENTS PLAN SHEET LT-2 UNDER MAINTENANCE BY THE CONTRACTOR AND FUTURE MAINTENANCE BY THE DEVELOPER.