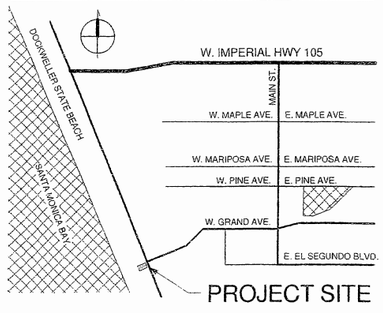
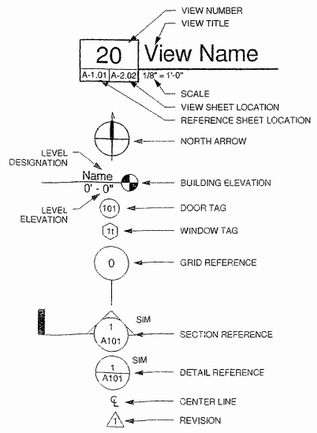
ABBREVIATIONS

ABV	ABOVE
ACOUS	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECT
B.O.	BOTTOM OF
BALC	BALCONY
BD	BOARD
BET	BETWEEN
BLDG	BUILDING
BLKG	BLOCKING
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BRKT	BRACKET
BULKHD	BULKHEAD
BUR	BUILT UP ROOF
C.G.	CORNER GUARD
CAB	CABINET
CALK	CAULKING
CEM	CEMENT
CER	CERAMIC
CJ	CONTROL JOINT
CLG	CEILING
CLOS	CLOSET
CLR	CLEAR
CO	CASED OPENING
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CPT	CARPET
CT	CERAMIC TILE
CTR	CENTER
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWN SPOUT
DW	DISHWASHER
DWG	DRAWING
E	EAST
EA	EACH
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
ELEC	ELECTRIC
ELEV	ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSURE
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EW	EACH WAY
EXP. JT.	EXPANSION JOINT
EXST	EXISTING
F.O.	FACE OF
FA	FIRE ALARM
FAP	FIRE ANNUNCIATOR PANEL
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER PANEL
FG	FINISH GROUP
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH
FLR	FLOOR
FLUOR	FLOURESCENT
FT	FOOT OR FEET
FUR	FURRING
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GL	GLASS
GND	GROUND
GWB	GYPSUM BOARD
GYP	GYPSUM
H.W.H.	HOT WATER HEATER
HDWD	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
ID	INNER DIAMETER
INCAN	INCANDESCENT
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JST	JOIST
JT	JOINT
LAM	LAMINATE
LAV	LAVATORY
LB(S)	POUNDS
LDG	LANDING
LT	LIGHT
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O.P.	OVERFLOW PIPE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFF	OFFICE
OH	OPPOSITE HAND
OPG	OPENING
OPP	OPPOSITE
PART	PARTITION
PERIM	PERIMETER
PG	PAINT GRADE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PR	PAIR
PT	PAINT
PTD	PAINTED
R	RISER
RAD	RADIUS
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE	REFER
REF	REFRIGERATOR
REINF	REINFORCED
REQD	REQUIRED
RESIL	RESILIENT
RM	ROOM
RO	ROUGH OPENING
RTU	ROOF TOP UNIT (MECH)
S	SOUTH
SAFB	SOUND ATTENUATION FIBER BATT
SC	SCUPPER
SCHED	SCHEDULE
SEAL	SEALANT
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQURE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMMETRICAL
T	TREAD
T&G	TONGUE & GROOVE
TEL	TELEPHONE
TER	TERRAZZO
THK	THICK
THR	THRESHOLD
TO	TOP OF
TYP	TYPICAL
UC	UNDERCUT
UNFIN	UNFINISHED
UNO	ULNESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT TERMINATION PIPE
VWC	VINYL WALL COVERING
W	WEST
W/	WITH
W/O	WITHOUT
WC	WATERCLOSET
WIN	WINDOW
WP	WATERPROOF
WS	WETSTACK
WSCT	WAINSCOT
WT	WEIGHT

VICINITY MAP



SYMBOLS





El Segundo Lifeguard Station

El Segundo, CA

PROJECT SCOPE

1. CONSTRUCTION OF A NEW TWO (2) STORY LIFEGUARD STATION.
2. WORK INCLUDES (BUT IS NOT LIMITED TO): ON-SITE AND OFF-SITE IMPROVEMENTS, MASONRY AND STEEL CONSTRUCTION, ELECTRICAL, MECHANICAL AND PLUMBING.

PROJECT PHASES

PHASE 1 CONSTRUCTION OF NEW RETAINING WALL AND CHAIN LINK FENCE. SECURITY FENCE BETWEEN THE SITE AND THE ADJACENT PROPERTY MUST BE MAINTAINED AT ALL TIMES.

PHASE 2 DEMOLITION OF EXISTING SECURITY FENCE AND CONSTRUCTION OF LIFEGUARD STATION.

GENERAL NOTES

1. APPLICABLE CODES AND STANDARDS:
   2007 CALIFORNIA BUILDING CODE AND ITS APPENDICES AND STANDARDS.
   2008 CITY OF LOS ANGELES BUILDING CODE - AMENDMENTS
   2007 CALIFORNIA PLUMBING CODE AND ITS APPENDICES AND STANDARDS.
   2007 CALIFORNIA MECHANICAL CODE AND ITS APPENDICES AND STANDARDS.
   2007 CALIFORNIA FIRE CODE AND ITS APPENDICES AND STANDARDS.
   2007 CALIFORNIA ELECTRICAL CODE AND ITS APPENDICES AND STANDARDS.
   2007 CALIFORNIA BUILDING ENERGY CODE.
2. ALL WORK DESCRIBED IN THE DRAWINGS SHALL BE VERIFIED FOR DIMENSION, GRADE, EXTENT AND COMPATIBILITY WITH EXISTING SITE CONDITIONS. ANY DISCREPANCIES AND UNEXPECTED CONDITIONS THAT AFFECT OR CHANGE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY. DO NOT PROCEED WITH THE WORK IN THE AREA OF DISCREPANCIES UNTIL ALL SUCH DISCREPANCIES ARE RESOLVED. IF THE CONTRACTOR CHOOSES TO DO SO, HE/SHE SHALL BE PRECEDING AT HIS/HER OWN RISK.
3. OMISSIONS MADE IN THESE DRAWINGS AND SPECIFICATIONS OR THE MIS-DESCRIPTION OF THE WORK WHICH IS MANIFESTLY NECESSARY TO CARRY OUT THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, OR WHICH IS CUSTOMARILY PERFORMED SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED OR DESCRIBED DETAILS OF THE WORK AS IF FULLY AND COMPLETELY SET FORTH AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS.
4. DIMENSIONS SHOWN SHALL TAKE PRECEDENCE OVER DRAWING SCALE OR PROPORTION. LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
5. IN THE EVENT OF THE UNFORESEEN ENCOUNTER OF MATERIALS SUSPECTED TO BE OF AN ARCHAEOLOGICAL OR PALEONTOLOGICAL NATURE, ALL GRADING AND EXCAVATION SHALL CEASE IN THE IMMEDIATE AREA AND THE APPROPRIATE AUTHORITIES ARE TO BE NOTIFIED BY THE CONTRACTOR. THE FIND SHALL BE LEFT UNTOUCHED UNTIL AN EVALUATION BY A QUALIFIED ARCHAEOLOGIST OR PALEONTOLOGIST IS MADE.
6. CONTRACTOR IS TO BE RESPONSIBLE FOR BEING FAMILIAR WITH THESE DOCUMENTS INCLUDING ALL CONTRACT REQUIREMENTS.
7. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
8. FIRE SPRINKLER SHOP DRAWINGS & CALCULATIONS SHALL BE SUBMITTED TO BUILDING DEPT. & APPROVED BY FIRE DEPT. PRIOR TO INSTALLATION.
9. SHOP WELDS MUST BE PERFORMED IN A LA CITY BLDG. DEPT. LICENSED FABRICATOR'S SHOP.
10. CONTRACTOR TO REVIEW TITLE 24 DOCUMENTATION TO PROVIDE A BUILDING THAT MEETS AND EXCEEDS THE BUILDING ENERGY AND EFFICIENCY AND PERFORMANCE AS REQUIRED BY ASHRAE/ESNA 90.1-1999 OR THE LOCAL ENERGY CODE, WHICHEVER IS MORE STRINGENT. THE BUILDING IS TO MEET THE ENERGY AND ATMOSPHERE, MINIMUM ENERGY PERFORMANCE PREREQUISITE POINT 2 PER THE USGBC LEED GREEN BUILDING RATING SYSTEM, VERSION 2.1.
11. THE FOLLOWING ITEMS SHOWN ON THE DRAWINGS ARE OWNER PROVIDED, OWNER INSTALLED. UTILITIES PROVIDED FOR THESE ITEMS WILL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE INSTALLATION WITH OWNER.
    PORTABLE AIR COMPRESSOR
    REFERIGERATOR
    SECURITY CAMERA
    MICROWAVE
12. OSHA PERMITS REQUIRED FOR VERTICAL CUTS 5' OR OVER.
13. CONTRACTOR TO PROVIDE COMPLETE DETAILS OF ENGINEERED TEMPORARY SHORING OR SLOT CUTTING PROCEDURES ON PLANS. CALL FOR INSPECTION BEFORE EXCAVATION BEGINS.
14. THE SOILS ENGINEER IS TO APPROVE THE KEY OR BOTTOM AND LEAVE A CERTIFICATE ON THE SITE FOR THE GRADING INSPECTOR. THE GRADING INSPECTOR IS TO BE NOTIFIED BEFORE ANY GRADING BEGINS, AND FOR BOTTOM INSPECTION, BEFORE FILL IS PLACED. FILL MAY NOT BE PLACED WITHOUT APPROVAL OF THE GRADING INSPECTOR.

PROJECT DIRECTORY

CLIENT
CITY OF EL SEGUNDO
ADDRESS:
350 MAIN STREET
EL SEGUNDO, CA 90245
PHONE: (310) 524-2361 **FAX:** (310) 322-4167
CONTACT: MARYAM JONAS
EMAIL: mjonas@elsegundo.org

ARCHITECT
RRM DESIGN GROUP
ADDRESS:
232 AVENIDA FABRICANTE, SUITE 112
SAN CLEMENTE, CA 92672
PHONE: (949) 361-7950 **FAX:** (949) 361-7955
CONTACT: KIRSTIE ACEVEDO & DON ILER
EMAIL: kgacevedo@rrmdesign.com & diler@rrmdesign.com

CIVIL ENGINEER
AKM CONSULTING ENGINEERS
ADDRESS:
553 WALD STREET
IRVINE, CA 92618
PHONE: (949) 753-7333 **FAX:**
CONTACT: JOHN LOAGUE
EMAIL: JLOAGUE@AKMCE.COM

STRUCTURAL ENGINEER
RSSE STRUCTURAL ENGINEERS, INC.
ADDRESS:
27042 TOWNE CENTER DRIVE, SUITE 235
FOOTHILL RANCH, CA 92610
PHONE: (949) 461-7007 **FAX:** (949) 461-7008
CONTACT: HARRY WANG
EMAIL: WANG@RSSE.COM

ELECTRICAL ENGINEER
TMAD ENGINEERING
ADDRESS:
800 FERRARI LANE #100
ONTARIO, CA 91764
PHONE: (909) 447-6915 **FAX:** (909) 447-6916
CONTACT: REY ALVERADO
EMAIL: RALVARADO@TTGCORP.COM

MECHANICAL ENGINEER
TMAD ENGINEERING
ADDRESS:
800 FERRARI LANE #100
ONTARIO, CA 91764
PHONE: (909) 447-6915 **FAX:** (909) 447-6916
CONTACT: VICKY REYES
EMAIL: VREYES@TTGCORP.COM

PLUMBING ENGINEER
TMAD ENGINEERING
ADDRESS:
800 FERRARI LANE #100
ONTARIO, CA 91764
PHONE: (909) 447-6915 **FAX:** (909) 447-6916
CONTACT: HYAN SHAW
EMAIL: RSHAW@TTGCORP.COM

AGENCIES AND UTILITIES

PLANNING AND BUILDING DEPARTMENT
CITY OF EL SEGUNDO PLANNING AND BUILDING SAFETY DEPT.
ADDRESS:
350 MAIN STREET
EL SEGUNDO, CA 90245
PHONE: (310) 524-2344 **FAX:** (310) 322-4167
CONTACT: N/A
EMAIL: N/A

WATER SERVICE
CITY OF EL SEGUNDO PUBLIC WORKS
ADDRESS:
350 MAIN STREET
EL SEGUNDO, CA 90245
PHONE: (310) 524-2744 **FAX:** N/A
CONTACT: JAMES TURNER
EMAIL: JTURNER@ELSEGUNDO.ORG

ELECTRICAL SERVICE
EDISON INTERNATIONAL (SOUTHERN CALIFORNIA EDISON)
ADDRESS:
N/A

PHONE: (800) 684-1123 **FAX:** N/A
CONTACT: N/A
EMAIL: N/A

GAS SERVICE
THE GAS COMPANY
ADDRESS:
N/A

PHONE: (800) 427-2000 **FAX:** N/A
CONTACT: N/A
EMAIL: N/A

SEWER SERVICE
CITY OF EL SEGUNDO WASTEWATER DIVISION
ADDRESS:
350 MAIN STREET
EL SEGUNDO, CA 90245
PHONE: (310) 524-2742 **FAX:** N/A
CONTACT: GIL BUSICK
EMAIL: GBUSICK@ELSEGUNDO.ORG

TELEPHONE SERVICE
AT&T
ADDRESS:
N/A

PHONE: (800) 222-0400 **FAX:** N/A
CONTACT: N/A
EMAIL: N/A

GARBAGE SERVICE
CITY OF EL SEGUNDO SOLID WASTE & RECYCLING
ADDRESS:
350 MAIN STREET
EL SEGUNDO, CA 90245
PHONE: (310) 524-2359 **FAX:** N/A
CONTACT: LAUREN MAHAKIAN
EMAIL: LMAHAKIAN@ELSEGUNDO.ORG

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JUL 21 2010

BID DOCUMENTS

STATE OF CALIFORNIA DONALD C. ILER RCE 45536 EXPIRES 5/31/2011 REGISTERED ARCHITECT

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REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
TITLE SHEET

PM DATE
DRAWN SDR DATE
CHECK DATE
APPROVED DATE
CITY ENGINEER R.E.

T-1.1
09/20/2010
SHEET 1 OF 66
JOB NO. 1109531

FILE NO.

N:\2010\1109531-El Segundo LS\Architecture\Current Tasks\Model\1109531-Model.rvt

CONDITIONS OF APPROVAL

IN ADDITION TO ALL APPLICABLE PROVISIONS OF THE EL SEGUNDO MUNICIPAL CODE ("ESMC"), THE CITY OF EL SEGUNDO AGRESS TO COMPLY WITH THE FOLLOWING PROVISIONS AS CONDITIONS FOR THE CITY OF EL SEGUNDO'S APPROVAL OF THE ENVIRONMENTAL ASSESSMENT NO. EA-865, CONDITIONAL USE PERMIT NO. 10-02, VARIANCE NO. 10-02, AND COASTAL DEVELOPMENT PERMIT NO. 10-01 ("PROJECT CONDITIONS"):

ZONING CONDITIONS:

1. THIS APPROVAL IS FOR THE PROJECT AS SHOWN ON THE PLANS REVIEWED AND APPROVED BY THE PLANNING COMMISSION AND ON FILE. BEFORE THE CITY ISSUES A BUILDING PERMIT, THE APPLICANT MUST SUBMIT PLANS, SHOWING THAT THE PROJECT SUBSTANTIALLY COMPLIES WITH THE PLANS AND CONDITIONS OF APPROVAL ON FILE WITH THE PLANNING AND BUILDING SAFETY DEPARTMENT. ANY SUBSEQUENT MODIFICATIONS MUST BE REFERRED TO THE DIRECTOR OF THE PLANNING AND BUILDING SAFETY DEPARTMENT FOR A DETERMINATION REGARDING THE NEED FOR PLANNING COMMISSION REVIEW AND APPROVAL OF THE PROPOSED MODIFICATION.
2. PURSUANT TO ESMC SECTION 15-23-11(B)(1), THE CONDITIONAL USE PERMIT EXPIRES TWENTY-FOUR (24) MONTHS AFTER ITS APPROVAL IF THE USE HAS NOT COMMENCED; OR IF IMPROVEMENTS ARE REQUIRED, BUT CONSTRUCTION HAS NOT COMMENCED UNDER A VALID BUILDING PERMIT.
3. PURSUANT TO ESMC SECTION 15-23-11 (A)(1), THE VARIANCE LAPSES AND BECOMES VOID ONE YEAR FOLLOWING THE DATE ON WHICH THE VARIANCE BECOMES EFFECTIVE UNLESS A VALID BUILDING PERMIT IS ISSUED AND CONSTRUCTION IS COMMENCED AND DILIGENTLY PURSUED TOWARD COMPLETION OF THE PROJECT ON THE SITE.

POLICE DEPARTMENT CONDITIONS:

4. ALL ENTRY DOORS, ROLL UP DOORS AND WINDOWS, AND RESTROOM DOORS MUST BE ILLUMINATED WITH A MAINTAINED MINIMUM OF ONE FOOT-CANDLE OF LIGHT ON THE GROUND SURFACE DURING HOURS OF DARKNESS.
5. OPEN STAIRWAYS MUST BE ILLUMINATED WITH A MINIMUM MAINTAINED 0.5 FOOT-CANDLES OF LIGHT ON ALL LANDINGS AND STAIR TREADS DURING HOURS OF DARKNESS.
6. LIGHTING DEVICES MUST BE ENCLOSED AND PROTECTED BY WEATHER AND VANDAL RESISTANT COVERS.
7. A PHOTOMETRIC STUDY THAT INCORPORATES THE REQUIREMENTS SPECIFIED IN CONDITIONS 4, 5, AND 6 OF THIS RESOLUTIONS MUST BE PROVIDED BEFORE ISSUING THE BUILDING PERMIT.
8. THERE MUST BE A SECURITY CAMERA (INTERNET BASED/PAN/TILT/ZOOM) INSTALLED AT THE LIFEGUARD STATION IN ACCORDANCE WITH EL SEGUNDO POLICE DEPARTMENT INSTRUCTIONS INCLUDING WITHOUT LIMITATION VIEWING OF THE BATHROOM DOORS.

FIRE DEPARTMENT CONDITIONS:

9. THE APPLICANT MUST COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE 2007 CALIFORNIA BUILDING AND FIRE CODES AND THE 2006 INTERNATIONAL FIRE CODE AS ADOPTED BY THE CITY OF EL SEGUNDO AND EL SEGUNDO FIRE DEPARMENT REGULATIONS. PLEASE BE ADVISED THE CITY OF EL SEGUNDO IS ADOPTING THE 2010 EDITIONS OF THE CALIFORNIA BUILDING AND FIRE CODES AND THE 2009 INTERNATIONAL FIRE CODE, EFFECTIVE JANUARY 1, 2011.

BUILDING SAFETY DIVISION CONDITIONS:

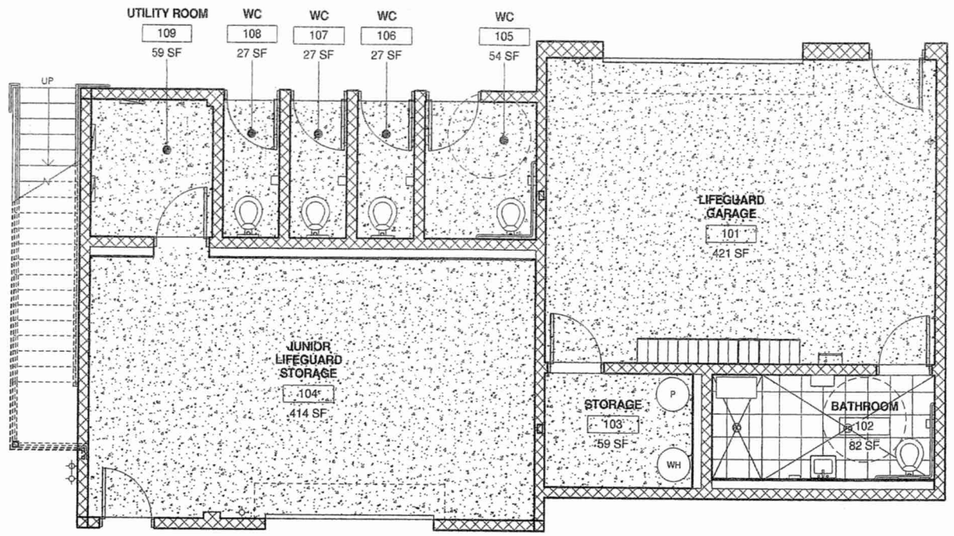
10. THE IDENTIFIED MEZZANINE AREA MAY ONLY BE USED FOR EQUIPMENT.
11. CALCULATIONS, DETAILS, AND A SOILS/GEOLOGICAL REPORT MUST BE PROVIDED TO THE SATISFACTION OF THE BUILDING OFFICIAL.
12. A DISABLED ACCESS PATH OF TRAVEL IS REQUIRED FROM DISABLED ACCESS PARKING TO THE LOWER LEVEL RESTROOMS AND BATHROOM OR PROVIDE EQUIVALENT FACILITATION.
13. DISABLED ACCESS AT THE UPPER LEVEL IS NOT REQUIRED AS LONG AS THERE IS NO PUBLIC ACCESS.
14. THE STRUCTURE SHALL BE "WET-FLOOD-PROOFED" TO THE SATISFACTION OF THE BUILDING OFFICIAL. THE "WET FLOOD-PROOFING" MUST SUBSTANTIALLY CONFORM WITH THE GUIDELINES IDENTIFIED IN FEDERAL EMERGENCY MANAGEMENT AGENCY TECHNICAL BULLETINS ONE AND TWO.

MISCELLANEOUS CONDITIONS:

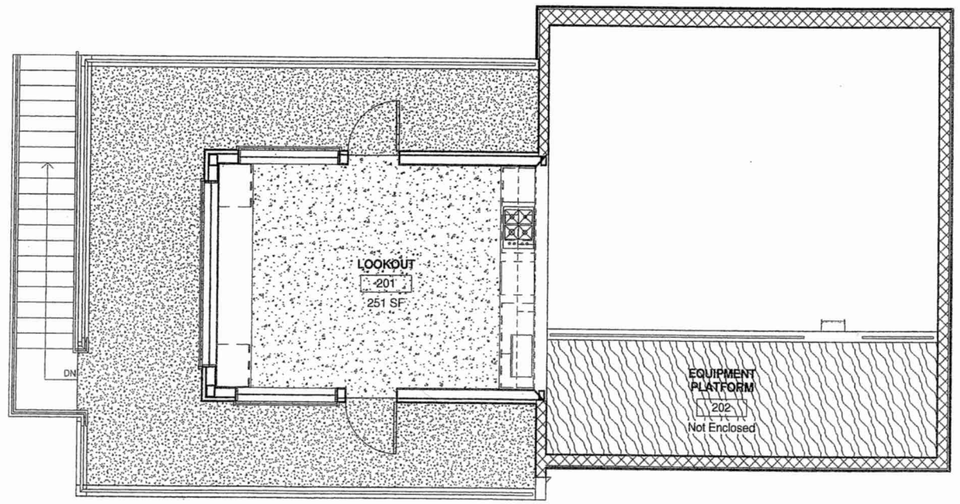
15. BEFORE THE CITY ISSUES A BUILDING PERMIT, A COPY OF THE CONDITIONS OF APPROVAL MUST BE INCLUDED WITH THE NOTES ON THE BUILDING PLANS.
16. ANY SUBSEQUENT REMODELING OF THE BUILDING MUST OBTAIN APPROVAL OF THE POLICE CHIEF OR DESIGNEE.

SECURITY CAMERA

1. THERE WILL BE A SECURITY CAMERA (INTERNET BASED/PAN/TILT/ZOOMINSTALLED AT THE LIFE GUARD STATION IN ACCORDANCE WITH THE EL SEGUNDO POLICE DEPARTMENT INSTRUCTIONS WITHOUT LIMITATION VIEWING OF THE BATHROOM DOORS.
2. SECURITY CAMERA SHALL ALSO INCLUDE VIEWING OF THE SHOWER/SINK AREA.
3. SECURITY CAMERA LOCATION IS SHOWN ON SHEET A-1.1, A-2.2, A-5.1, A-5.2 AND ELECTRICAL DRAWINGS.



1 GROUND FLOOR CODE PLAN
A3 | T-1.2 | 1/4" = 1'-0"



2 SECOND FLOOR CODE PLAN
A3 | T-1.2 | 1/4" = 1'-0"

PERMIT APPLICATION

SEPERATE PERMIT APPLICATION IS REQUIRED FOR THE FOLLOWING ITEMS:
- A. ELECTRICAL, MECHANICAL AND PLUMBING
- B. VAULT
- C. RETAINING WALL AND BLOCK WALLS

CODE ANALYSIS

CODE INTERPRETATION		
OCCUPANCY	BUSINESS GROUP B	304
CONSTRUCTION TYPE	VN	T-601
ZONING DISTRICT	M-2	
ALLOWABLE BUILDING HEIGHT	40'-0"	T-503
ALLOWABLE BUILDING AREA	9,000 SF	T-503
ALLOWABLE NUMBER OF STORIES	2	T-503
FIRE SPRINKLER INCREASE	NA	504.2
FIRE SPRINKLER AREA INCREASE	NA	506.3
FIRE RESISTANCE RATING	0	T-601
PROTECTED EXTERIOR OPENINGS		T-704.8
MAX TRAVEL DISTANCE WITHIN A STORY	300'-0"	T-1016
COMMON PATH OF EGRESS TRAVEL	75'-0"	1014.3
ONE EGRESS FROM SPACE REQUIRED		
	GROUP B: 49 OCCUPANTS	T-1015.1
	GROUP S: 29 OCCUPANTS	T-1015.1
MINIMUM NUMBER OF EXITS		T-1019.2
ACCESSIBLE EGRESS		1007.1
ACCESSIBLE AREAS		1105B.3.5

PROPOSED PROJECT

BUILDING AREA		
	GROUND FLOOR	1,111 SF
	SECOND FLOOR	251 SF
	TOTAL FLOOR AREA	1,362 SF
	SECOND FLOOR DECK AREA	494 SF
	TOTAL BUILDING AREA	1,856 SF
BUILDING HEIGHT	26'-6"	
NUMBER OF STORIES	2	
AUTOMATIC FIRE SPRINKLERS	NO	
SITE LOCATION	LOCAL COASTAL ZONE	
ENTITLEMENTS	CUP 10-02, VARIANCE 10-02, CDP 10-01	
WET FLOOD PROOFING CALCS		
	104 - JUNIOR LIFEGUARD STORAGE	414 SF
	109 - UTILITY ROOM	59 SF
	TOTAL AREA	473 SF
	WEST WALL OPENING AREA	504 SQ. IN.
	101 - LIFEGUARD GARAGE	421 SF
	102 - BATHROOM	82 SF
	103 - STORAGE	59 SF
	TOTAL AREA	562 SF
	EAST WALL OPENING AREA	588 SQ.IN.

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LEGEND

- 12" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL W/ EXTERIOR RIBBED METAL PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS AND INTERIOR FURRING, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL FURRING

BID DOCUMENTS

STATE OF CALIFORNIA — DONALD POWER — #014696 — EXPIRES 5/31/2011 — REGISTERED ARCHITECT

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A California Corporation | Vice-Montgomery, Arizona #21080 | Jerry Michael, KY #30088, LV #2291 | Jeff Fehre, LA #3944

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
CODE ANALYSIS

T-1.2
09/20/2010

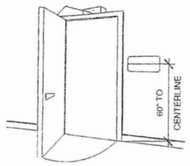
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APPROVED DATE ____
CITY ENGINEER R.E. ____

SHEET 2 OF 68
JOB NO. 1109531

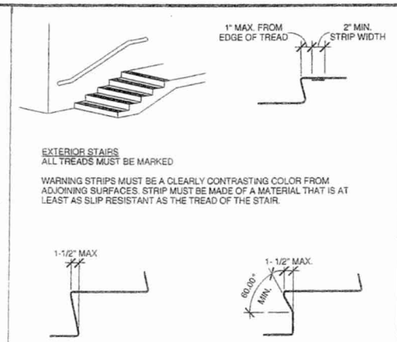
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PERMANENT SIGNAGE TO BE INSTALLED ON THE ALL ADJACENT TO THE LATCH SIDE OF THE DOOR. MOUNTING LOCATION MUST ALLOW A PERSON TO APPROACH WITHOUT ENCOURTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING PATH OF THE DOOR.

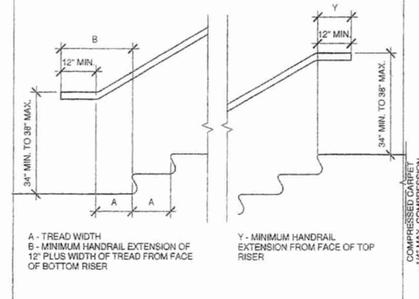
61 ROOM SIGNAGE
T-1.3 3" = 1'-0"



EXTERIOR STAIRS
ALL TREADS MUST BE MARKED

WARNING STRIPS MUST BE A CLEARLY CONTRASTING COLOR FROM ADJOINING SURFACES. STRIP MUST BE MADE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE TREAD OF THE STAIR.

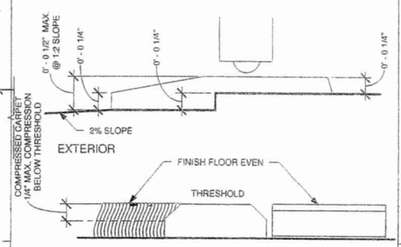
51 STAIRWAY TREADS
A-5.2 T-1.3 3" = 1'-0"



A - TREAD WIDTH
B - MINIMUM HANDRAIL EXTENSION OF 12" PLUS WIDTH OF TREAD FROM FACE OF BOTTOM RISER

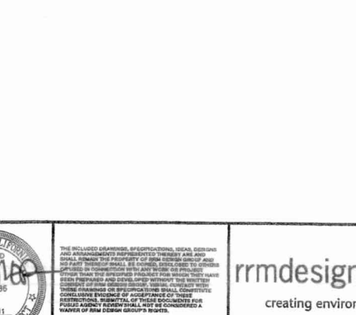
Y - MINIMUM HANDRAIL EXTENSION FROM FACE OF TOP RISER

41 HANRAIL AT STAIRS
A-5.2 T-1.3 1/2" = 1'-0"

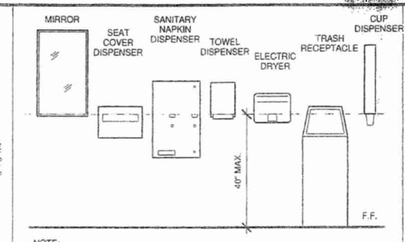


MAT CARPETING MUST CONSIST OF:
-LEVEL LOOP
-TEXTURED LOOP
-LEVEL CUT PILE, OR
-LEVEL CUT/UNCUT PILE

IF PILE HEIGHT EXCEEDS 1/4", THEN EDGES MUST HAVE BEVELED TRIM

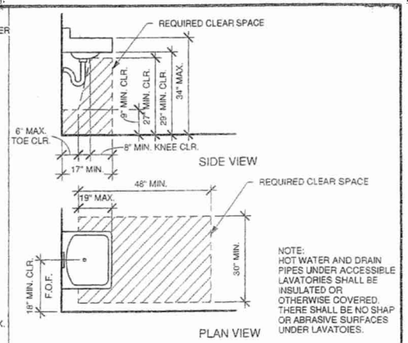


32 ACC. DOOR THRESHOLDS
T-1.3 12" = 1'-0"



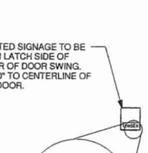
NOTE:
1. 30" X 48" MIN. CLEAR FLOOR OR GROUND SPACE REQUIRED TO ALLOW FOR OR PARALLEL APPROACH TO ACCESSORIES.
2. ALL OPERABLE PARTS OF FIXTURES AND ACCESSORIES TO BE LOCATED 40" MAX. A.F.F.
3.CONTROLS AND OPERATING MECHANISMS MUST OPERATE WITH ONE HAND AND NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF WRIST.
4. MAX. 5 POUND FORCE TO OPERATE CONTROLS.
5. LOCATE COAT HOOKS AND SHELVING WITHIN APPROPRIATE RACH RANGE (48" MAX. ABOVE FLOOR RECOMMENDED.)

21 ACC. RESTROOM ACCESSORIES
T-1.3 1/2" = 1'-0"



NOTE:
HOT WATER AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHAP OR ABRASIVE SURFACES UNDER LAVATOIES.

11 TYP. ACCESSIBLE LAVATORY
T-1.3 1/2" = 1'-0"

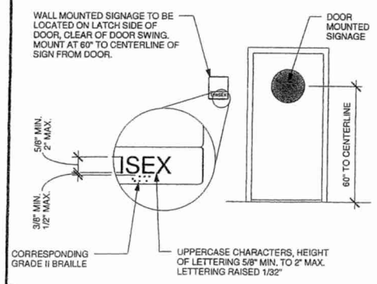


WALL SIGNAGE (TYP.)



DOOR MOUNTED SIGNAGE (TYP.)

PICTOGRAMS AND/OR LETTERING ARE NOT REQUIRED ON DOOR MOUNTED SIGNAGE.

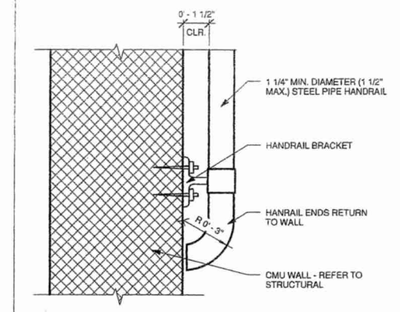


63 ACCESSIBLE SIGNAGE
T-1.3 3" = 1'-0"

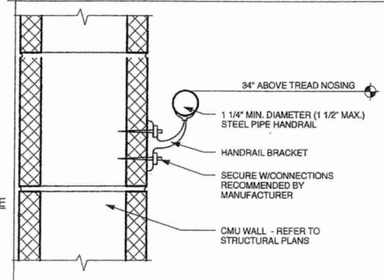
MAXIMUM VERTICAL ALLOWANCES

ALLOWABLE SLOPE AND CROSS SLOPE

53 PATH OF TRAVEL
T-1.3 1/4" = 1'-0"

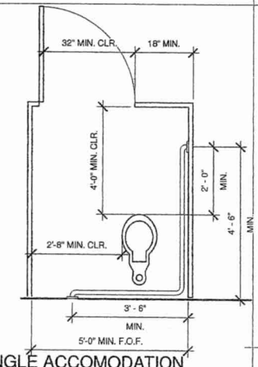


42 HANDRAIL END
A-5.2 T-1.3 3" = 1'-0"



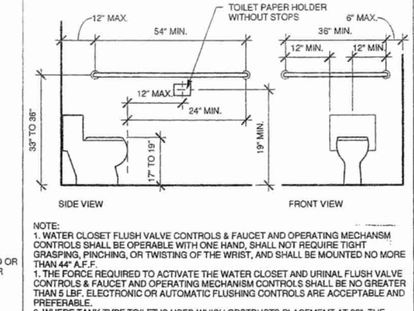
NOTE:
1) HANDRAIL TO HAVE SMOOTH SURCACE W/NO SHARP CORNERS
2) HANDRAILS TO ACCOMODATE 50 LBS/FT LATERAL LOAD

43 HANDRAIL ATTACHMENT AT WALL
A-5.2 T-1.3 3" = 1'-0"



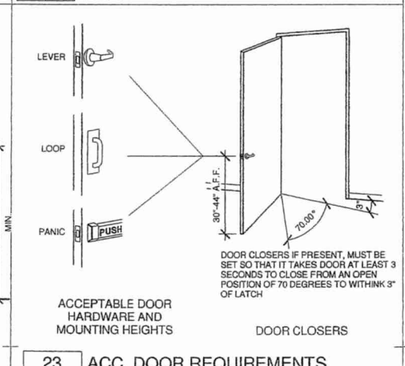
NOTE: TOTAL STALL DIMENSIONS MUST INCORPORATE CLEARANCES TO COMPLY WITH STATE AND FEDERAL REQUIREMENTS

33 ACC. SINGLE ACCOMODATION
A-2.1 T-1.3 1/2" = 1'-0"

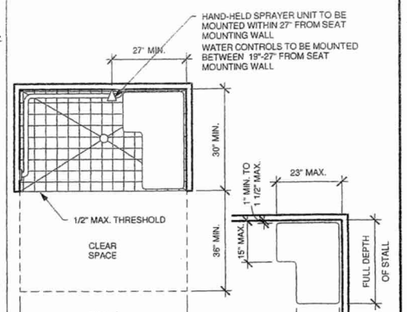


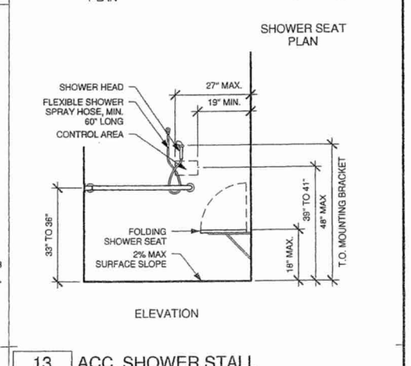
NOTE:
1. WATER CLOSET FLUSH VALVE CONTROLS & FAUCET AND OPERATING MECHANSM CONTROLS SHALL BE OPERABLE WITH ONE HAND, SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST, AND SHALL BE MOUNTED NO MORE THAN 44" A.F.F.
1. THE FORCE REQUIRED TO ACTIVATE THE WATER CLOSET AND URINAL FLUSH VALVE CONTROLS & FAUCET AND OPERATING MECHANISM CONTROLS SHALL BE NO GREATER THAN 5 LBF. ELECTRONIC OR AUTOMATIC FLUSHING CONTROLS ARE ACCEPTABLE AND PREFERABLE.
3. WHERE TANK TYPE TOILET IS USED WHICH OBSTRUCTS PLACEMENT AT 33", THE GRAB BAR MAY BE AS HIGH AS 36" MAINTAINING 1 1/2" CLEAR TO TANK.

22 ACC-TOILETS
T-1.3 1/2" = 1'-0"



23 ACC. DOOR REQUIREMENTS
T-1.3 1" = 1'-0"





13 ACC. SHOWER STALL
A-2.1 T-1.3 1/2" = 1'-0"

BID DOCUMENTS

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A California Corporation / Rita Montgomery, Architect #C13681 Jerry Kitchen, PE #38356, LS #8214 / Jeff Pelton, LA #3594

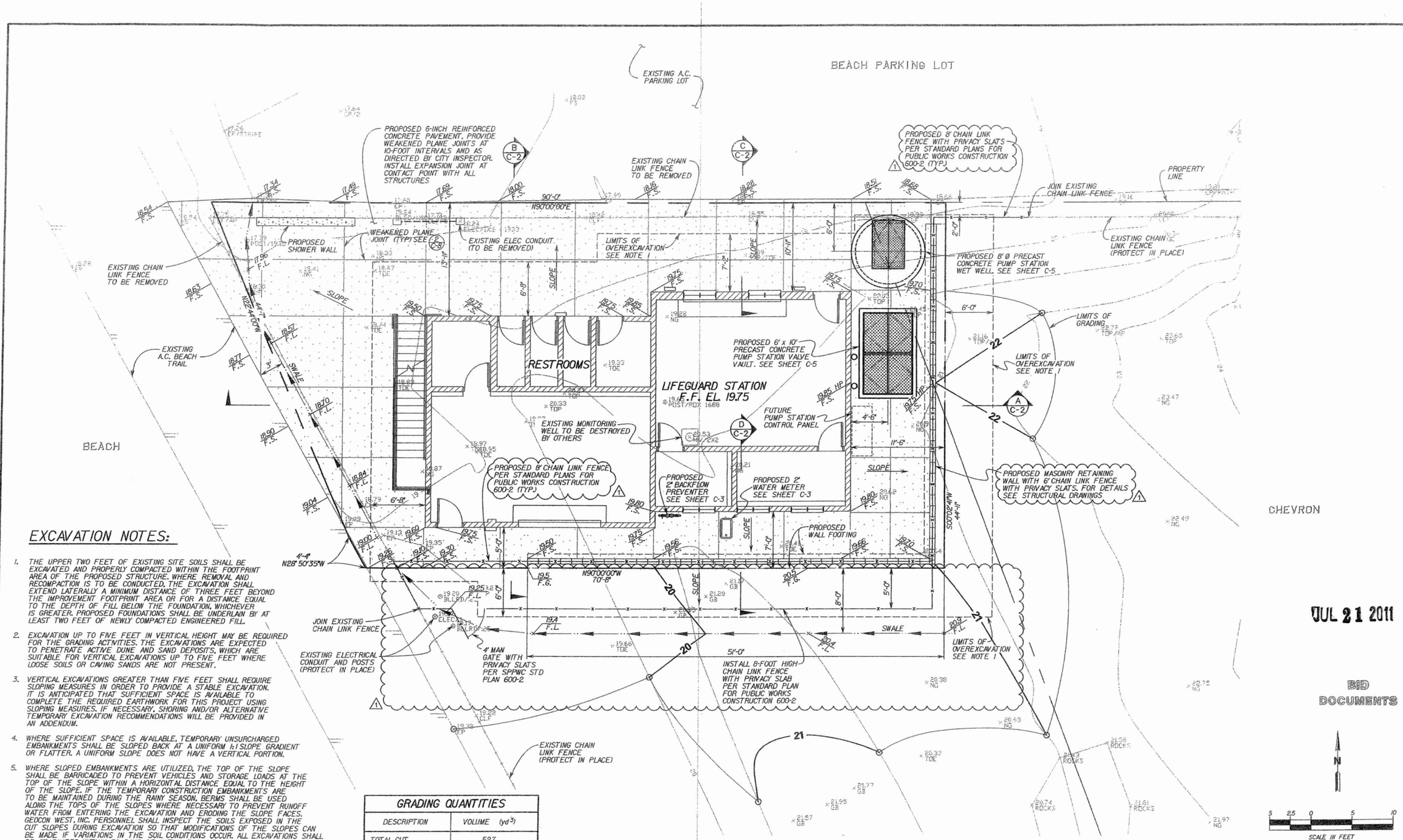
STATE OF CALIFORNIA
DONALD S. RUSSELL
#C14636
EXPIRES
5/31/2011
REGISTERED ARCHITECT
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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
EL SEGUNDO LS
ACCESSIBILITY DETAILS

PM
DRAWN SDR DATE
CHECK DATE
APPROVED DATE
CITY ENGINEER R.E.

T-1.3
09/20/2010
SHEET 3 OF 68
JOB NO. 1109531



EXCAVATION NOTES:

1. THE UPPER TWO FEET OF EXISTING SITE SOILS SHALL BE EXCAVATED AND PROPERLY COMPACTED WITHIN THE FOOTPRINT AREA OF THE PROPOSED STRUCTURE. WHERE REMOVAL AND RECOMPACTION IS TO BE CONDUCTED, THE EXCAVATION SHALL EXTEND LATERALLY A MINIMUM DISTANCE OF THREE FEET BEYOND THE IMPROVEMENT FOOTPRINT AREA OR FOR A DISTANCE EQUAL TO THE DEPTH OF FILL BELOW THE FOUNDATION, WHICHEVER IS GREATER. PROPOSED FOUNDATIONS SHALL BE UNDERLAIN BY AT LEAST TWO FEET OF NEWLY COMPACTED ENGINEERED FILL.
2. EXCAVATION UP TO FIVE FEET IN VERTICAL HEIGHT MAY BE REQUIRED FOR THE GRADING ACTIVITIES. THE EXCAVATIONS ARE EXPECTED TO PENETRATE ACTIVE DUNE AND SAND DEPOSITS, WHICH ARE SUITABLE FOR VERTICAL EXCAVATIONS UP TO FIVE FEET WHERE LOOSE SOILS OR CAVING SANDS ARE NOT PRESENT.
3. VERTICAL EXCAVATIONS GREATER THAN FIVE FEET SHALL REQUIRE SLOPING MEASURES IN ORDER TO PROVIDE A STABLE EXCAVATION. IT IS ANTICIPATED THAT SUFFICIENT SPACE IS AVAILABLE TO COMPLETE THE REQUIRED EARTHWORK FOR THIS PROJECT USING SLOPING MEASURES. IF NECESSARY, SHORING AND/OR ALTERNATIVE TEMPORARY EXCAVATION RECOMMENDATIONS WILL BE PROVIDED IN AN ADDENDUM.
4. WHERE SUFFICIENT SPACE IS AVAILABLE, TEMPORARY UNSURCHARGED EMBANKMENTS SHALL BE SLOPED BACK AT A UNIFORM 1:1 SLOPE GRADIENT OR FLATTER. A UNIFORM SLOPE DOES NOT HAVE A VERTICAL PORTION.
5. WHERE SLOPED EMBANKMENTS ARE UTILIZED, THE TOP OF THE SLOPE SHALL BE BARRICADED TO PREVENT VEHICLES AND STORAGE LOADS AT THE TOP OF THE SLOPE WITHIN A HORIZONTAL DISTANCE EQUAL TO THE HEIGHT OF THE SLOPE. IF THE TEMPORARY CONSTRUCTION EMBANKMENTS ARE TO BE MAINTAINED DURING THE RAINY SEASON, BERMS SHALL BE USED ALONG THE TOPS OF THE SLOPES WHERE NECESSARY TO PREVENT RUNOFF WATER FROM ENTERING THE EXCAVATION AND ERODING THE SLOPE FACES. GEOCON WEST, INC. PERSONNEL SHALL INSPECT THE SOILS EXPOSED IN THE CUT SLOPES DURING EXCAVATION SO THAT MODIFICATIONS OF THE SLOPES CAN BE MADE IF VARIATIONS IN THE SOIL CONDITIONS OCCUR. ALL EXCAVATIONS SHALL BE STABILIZED WITHIN 30 DAYS OF INITIAL EXCAVATION.

CONSTRUCTION PHASING NOTES:

CONTRACTOR SHALL CONSTRUCT NEW FENCING, AND WALLS AS THE FIRST PHASE OF WORK. NO EXISTING CHEVRON FENCING MAY BE REMOVED OR ANY SITE WORK STARTED UNTIL THE NEW FENCE IS IN PLACE. CONTRACTOR SHALL COORDINATE NEW FENCE AND WALL INSTALLATION WITH CHEVRON.

GRADING QUANTITIES	
DESCRIPTION	VOLUME (yd^3)
TOTAL CUT	52.7
TOTAL FILL	20.3
TOTAL GRADING WORK	32.4
OVEREXCAVATION AND ENGINEERED FILL	77.4 cy
TOTAL EXPORT (NO COMPACTION)	806.4 cy

JUL 21 2011

BID DOCUMENTS

SCALE IN FEET
1 Inch = 5 ft.

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AKM CONSULTING ENGINEERS
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IRVINE, CA. 92618
(949) 753-7333

REVISIONS		
NO.	DATE	BY
1	10-06-2010	J.L.

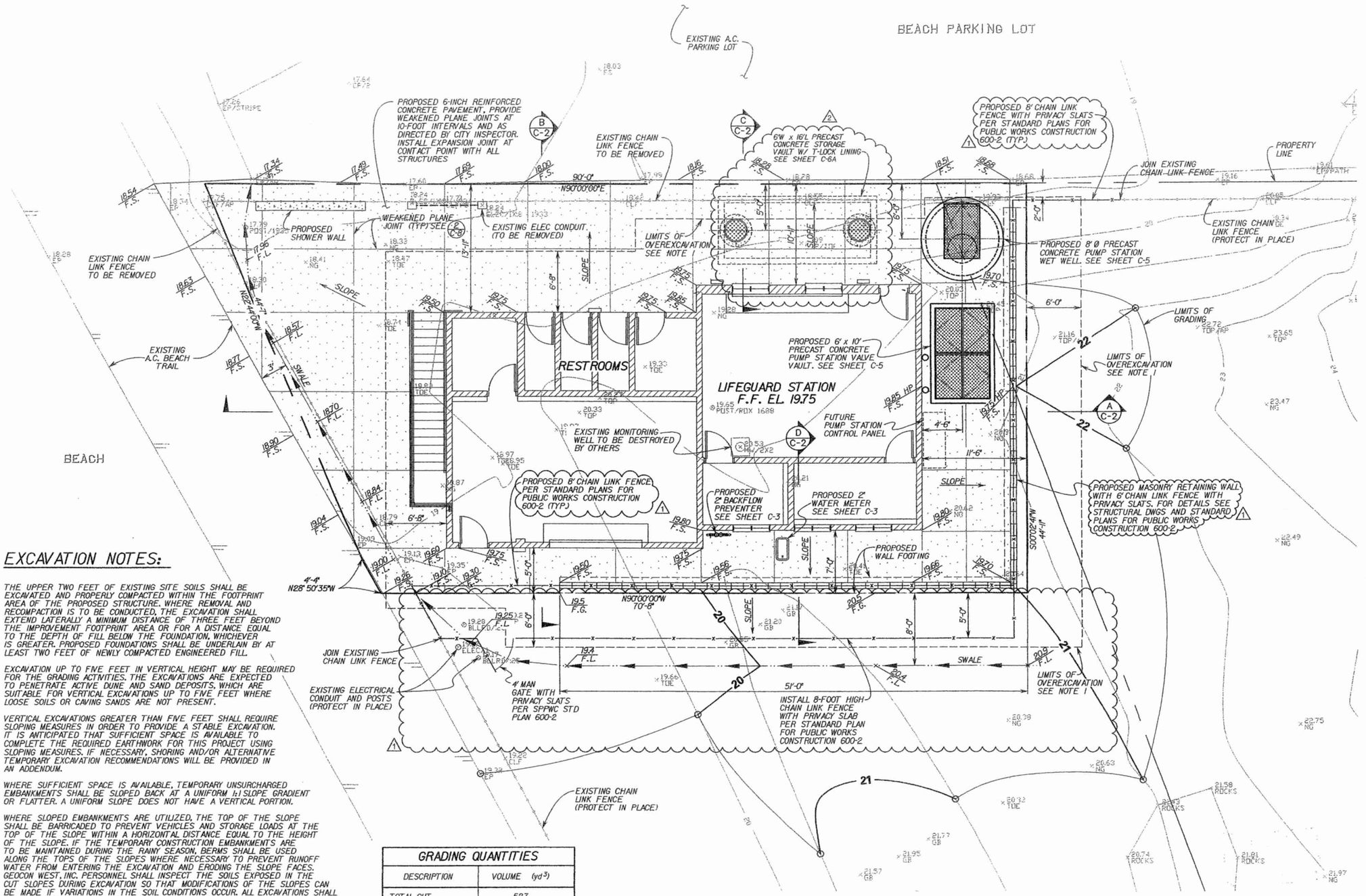
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
LIFEGUARD STATION
GRADING PLAN

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK Z.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

C-1
10/06/2010
SHEET 4 OF 66
JOB NO. 1109531

10/4/2010 R:\1109_El Segundo\PD_Planning\Lifeguard Pump Station\Phase 1\WC-C1-grdg.dwg



EXCAVATION NOTES:

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GRADING QUANTITIES

DESCRIPTION	VOLUME (yd^3)
TOTAL CUT	527
TOTAL FILL	203
TOTAL GRADING WORK	324
OVEREXCAVATION AND ENGINEERED FILL	774 cy
TOTAL EXPORT (NO COMPACTION)	806.4 cy

THE INCLUDED DRAWINGS, SPECIFICATIONS, IDEAS, DESIGNS AND ARRANGEMENTS REPRESENTED THEREIN ARE AND SHALL REMAIN THE PROPERTY OF AKM DESIGN GROUP AND NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIED PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF AKM DESIGN GROUP. VISUAL CONTACT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS. SUBMITTAL OF THESE DOCUMENTS FOR PUBLIC AGENCY REVIEW SHALL NOT BE CONSIDERED A WAIVER OF AKM DESIGN GROUP'S RIGHTS.

AKM CONSULTING ENGINEERS
553 WALD
IRVINE, CA. 92618
(949) 753-7333

REVISIONS		
NO.	DATE	BY
1	10-06-2010	J.L.
2	02-08-2011	J.L.

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
LIFEGUARD STATION
GRADING PLAN

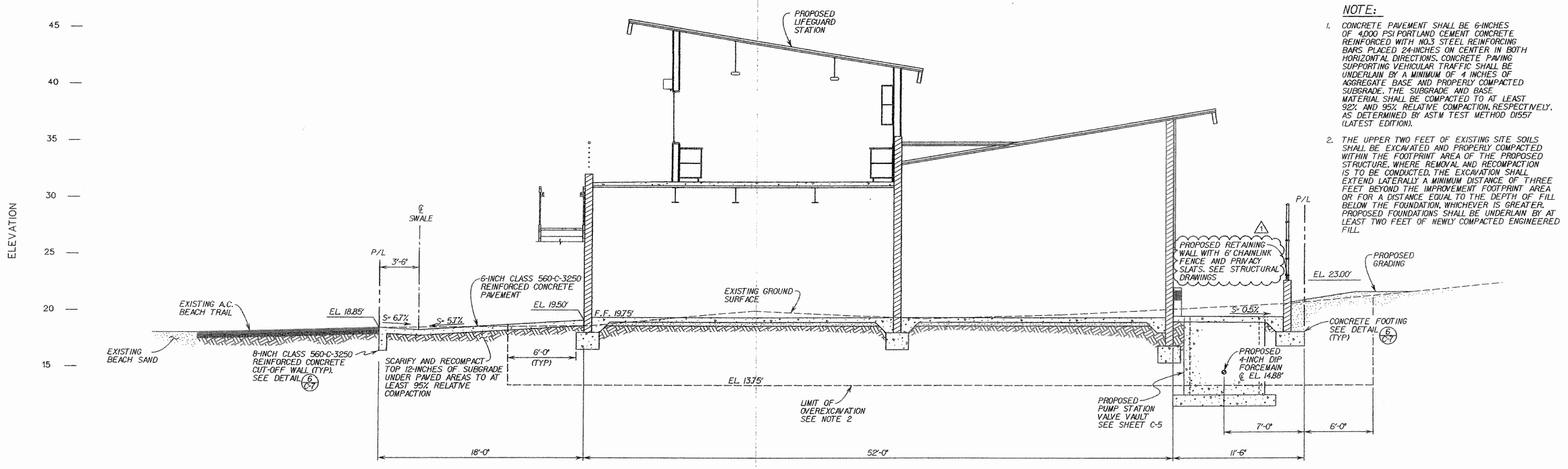
PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK Z.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

C-1
10/06/2010
SHEET 4 OF 68
JOB NO. 1109531

JUL 21 2011

105 Vista Del Mar
#2
B0148-11

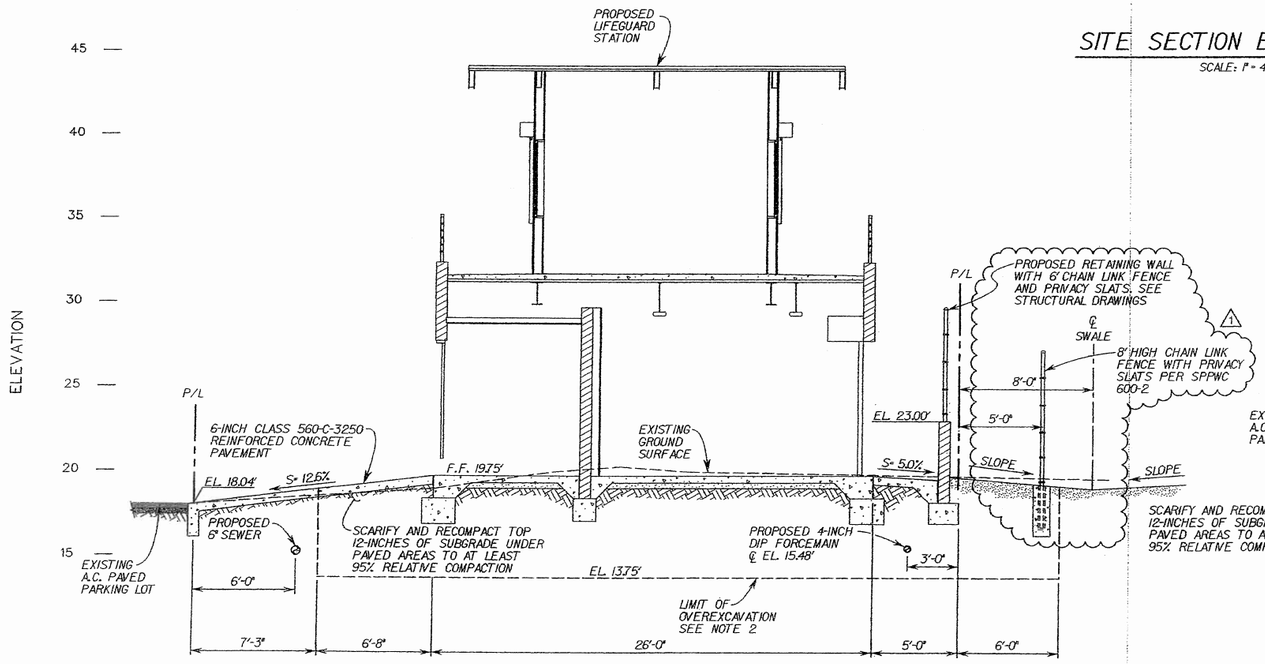


NOTE:

1. CONCRETE PAVEMENT SHALL BE 6-INCHES OF 4,000 PSI PORTLAND CEMENT CONCRETE REINFORCED WITH NO.3 STEEL REINFORCING BARS PLACED 24-INCHES ON CENTER IN BOTH HORIZONTAL DIRECTIONS. CONCRETE PAVING SUPPORTING VEHICULAR TRAFFIC SHALL BE UNDERLAIN BY A MINIMUM OF 4 INCHES OF AGGREGATE BASE AND PROPERLY COMPACTED SUBGRADE. THE SUBGRADE AND BASE MATERIAL SHALL BE COMPACTED TO AT LEAST 92% AND 95% RELATIVE COMPACTION, RESPECTIVELY, AS DETERMINED BY ASTM TEST METHOD D1557 (LATEST EDITION).
2. THE UPPER TWO FEET OF EXISTING SITE SOILS SHALL BE EXCAVATED AND PROPERLY COMPACTED WITHIN THE FOOTPRINT AREA OF THE PROPOSED STRUCTURE. WHERE REMOVAL AND RECOMPACTION IS TO BE CONDUCTED, THE EXCAVATION SHALL EXTEND LATERALLY A MINIMUM DISTANCE OF THREE FEET BEYOND THE IMPROVEMENT FOOTPRINT AREA OR FOR A DISTANCE EQUAL TO THE DEPTH OF FILL BELOW THE FOUNDATION, WHICHEVER IS GREATER. PROPOSED FOUNDATIONS SHALL BE UNDERLAIN BY AT LEAST TWO FEET OF NEWLY COMPACTED ENGINEERED FILL.

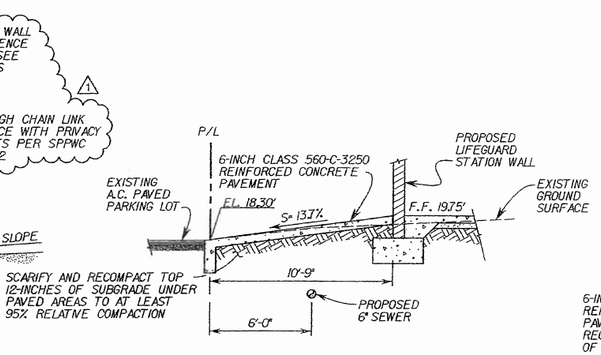
SITE SECTION EAST - WEST (A/C-1)

SCALE: 1" = 4'-0"



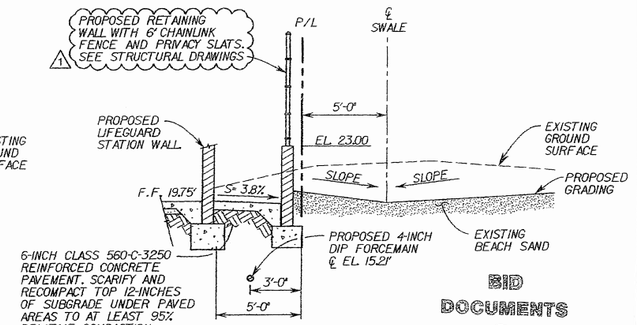
SITE SECTION NORTH - SOUTH (B/C-1)

SCALE: 1" = 4'-0"



PAVEMENT SECTION (C/C-1)

SCALE: 1" = 4'-0"



PAVEMENT SECTION (D/C-1)

SCALE: 1" = 4'-0"

JUL 21 2011

BID DOCUMENTS

REGISTERED PROFESSIONAL ENGINEER — JOHN A. LOWRY — 50282 — Exp. 6/30/11 — CIVIL — STATE OF CALIFORNIA — 10/6/10

THE INCLUDED DRAWINGS, SPECIFICATIONS, IDEAS, DESIGNS AND ARRANGEMENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE PROPERTY OF KSK DESIGN GROUP AND NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIED PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF KSK DESIGN GROUP. VISUAL CONTACT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS. SUBMITTAL OF THESE DOCUMENTS FOR PUBLIC AGENCY REVIEW SHALL NOT BE CONSIDERED A WAIVER OF KSK DESIGN GROUP'S RIGHTS.

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553 WALD
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(949) 753-7333

REVISIONS		
NO.	DATE	BY
1	10-06-2010	J.L.

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION
SITE SECTIONS

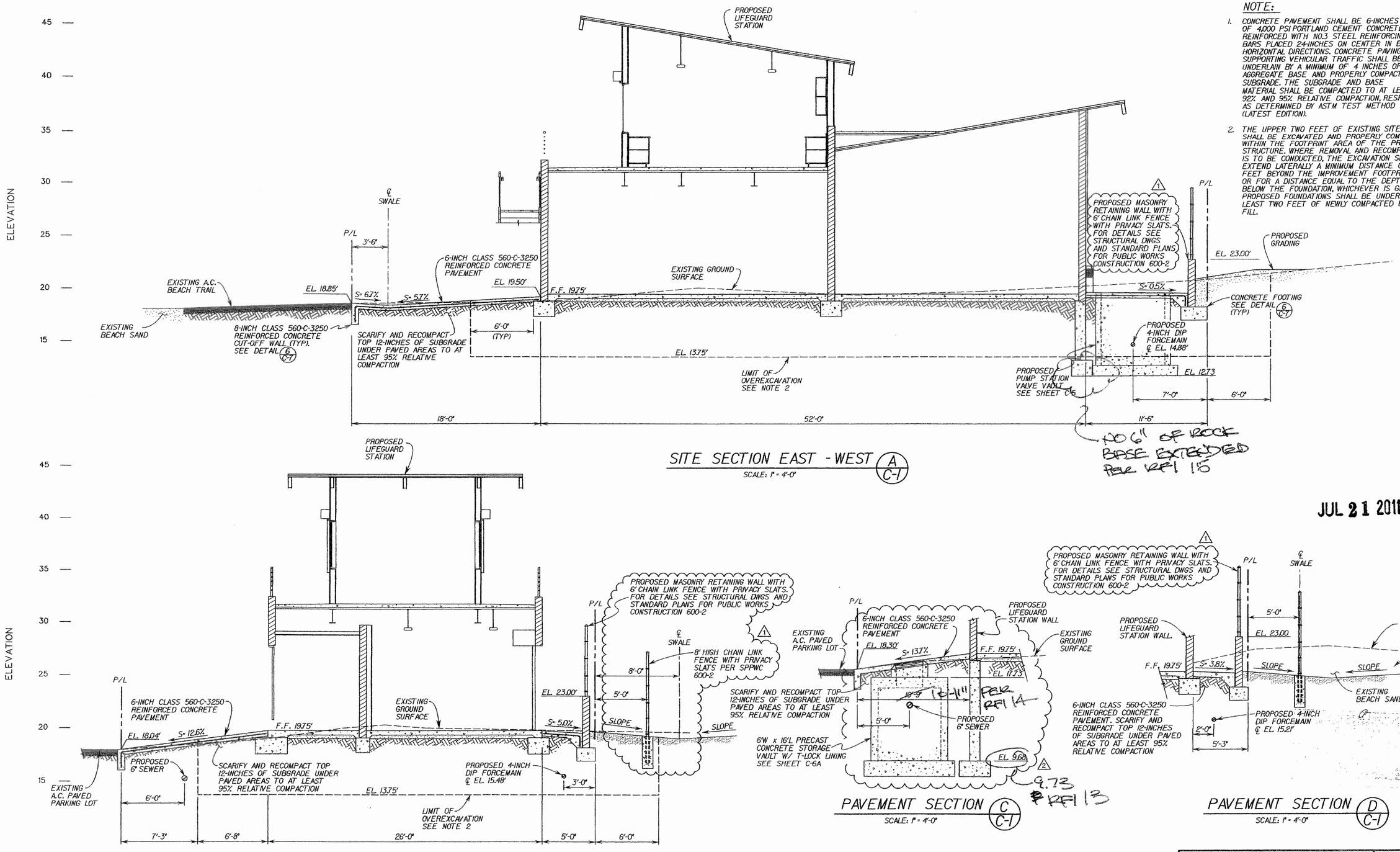
C-2
10/08/2010

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK J.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

SHEET 5 OF 68
JOB NO. 1109531

01/14/2010 I:\1109_Citywide\1109_Lifeguard Pump Station\Sheets\LVW_C-2_revised.dwg



SITE SECTION EAST - WEST (A/C-1)

SCALE: 1" = 4'-0"

NO 6" OF ROCK BASE EXTENDED PER RFI 15

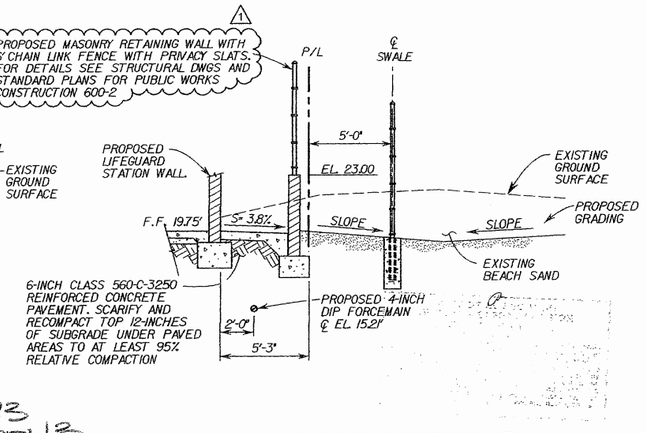
JUL 21 2011

SITE SECTION NORTH - SOUTH (B/C-1)

SCALE: 1" = 4'-0"

PAVEMENT SECTION (C/C-1)

SCALE: 1" = 4'-0"



PAVEMENT SECTION (D/C-1)

SCALE: 1" = 4'-0"

NOTE:

1. CONCRETE PAVEMENT SHALL BE 6-INCHES OF 4,000 PSI PORTLAND CEMENT CONCRETE REINFORCED WITH NO.3 STEEL REINFORCING BARS PLACED 24-INCHES ON CENTER IN BOTH HORIZONTAL DIRECTIONS. CONCRETE PAVING SUPPORTING VEHICULAR TRAFFIC SHALL BE UNDERLAIN BY A MINIMUM OF 4 INCHES OF AGGREGATE BASE AND PROPERLY COMPACTED SUBGRADE. THE SUBGRADE AND BASE MATERIAL SHALL BE COMPACTED TO AT LEAST 92% AND 95% RELATIVE COMPACTION, RESPECTIVELY, AS DETERMINED BY ASTM TEST METHOD D1557 (LATEST EDITION).
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REGISTERED PROFESSIONAL ENGINEER — No. GEE — JAMES L. LEE — CIVIL — STATE OF CALIFORNIA — 2/16/11

THE INCLUDED DRAWINGS, SPECIFICATIONS, IDEAS, DESIGNS AND ARRANGEMENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE PROPERTY OF MBK DESIGN GROUP AND NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIED PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF MBK DESIGN GROUP. VISUAL CONTACT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS. SUBMITTAL OF THESE DOCUMENTS FOR PUBLIC AGENCY REVIEW SHALL NOT BE CONSIDERED A WAIVER OF MBK DESIGN GROUP'S RIGHTS.

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(949) 753-7333

REVISIONS		
NO.	DATE	BY
1	10-06-2010	J.L.
2	02-08-2011	J.L.

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION

SITE SECTIONS

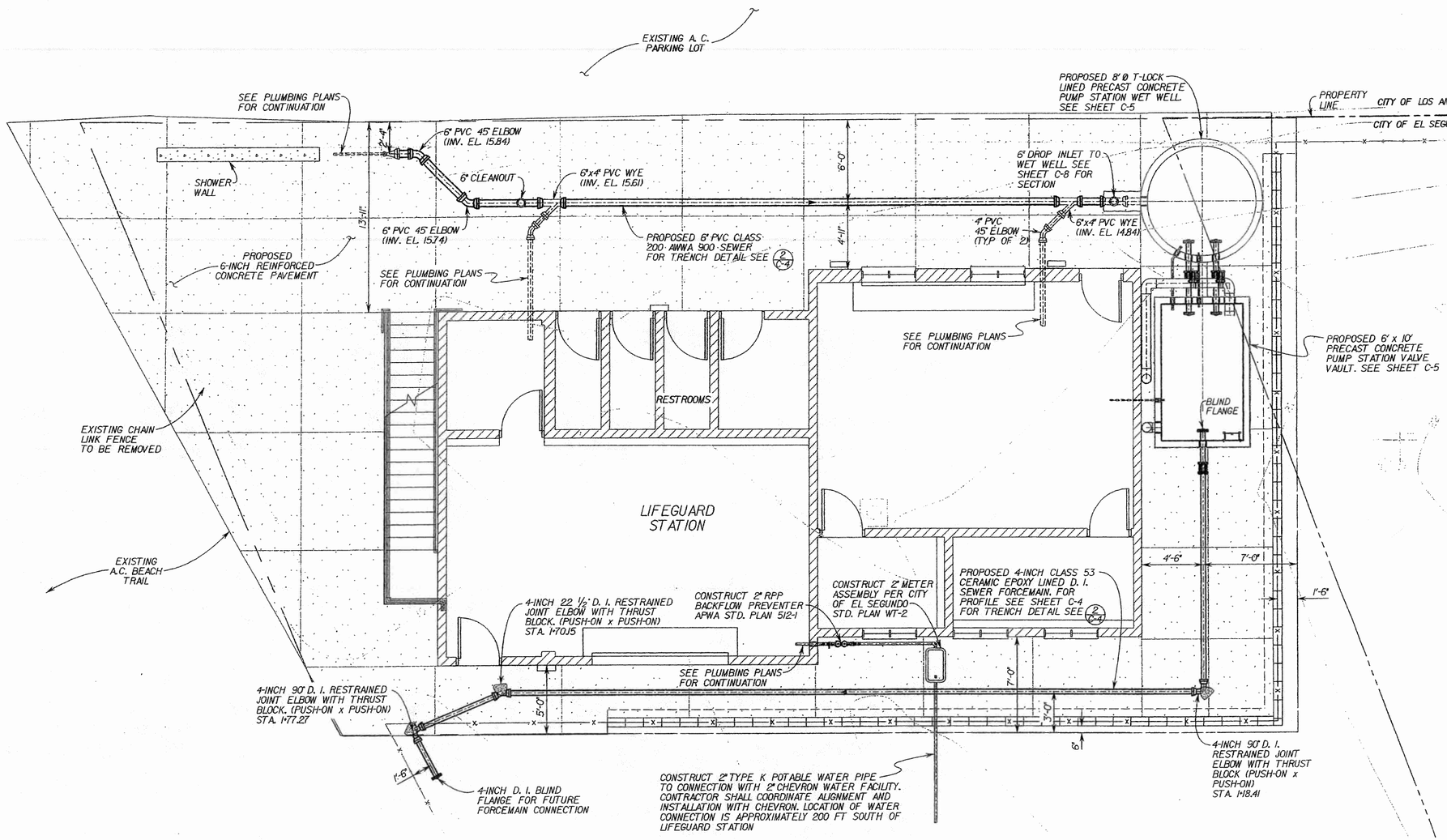
PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK Z.K. DATE 10/10

APPROVED DATE

CITY ENGINEER R.E.

C-2
10/06/2010
SHEET 5 OF 68
JOB NO. 1109531

2/16/2011 N:\Jobs\1109\Engineering\Design\Lifeguard Pump Station\Dwgs\11XX-C-2-design-sections.dgn



SITE AND PIPING PLAN

SCALE: 1" = 4'-0"

JUL 21 2011

BID DOCUMENTS

AKM CONSULTING ENGINEERS
583 WALD
IRVINE, CA. 92618
(949) 753-7333

THE INCLUDED DRAWINGS, SPECIFICATIONS, IDEAS, DESIGNS AND ARRANGEMENTS REPRESENTED THEREBY ARE AND SHALL REMAIN THE PROPERTY OF RBM DESIGN GROUP AND NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIED PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF RBM DESIGN GROUP. VISUAL CONTACT WITH THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS. SUBMITTAL OF THESE DOCUMENTS FOR PUBLIC AGENCY REVIEW SHALL NOT BE CONSIDERED A WAIVER OF RBM DESIGN GROUP'S RIGHTS.

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION
SEWER AND FORCEMAIN PLAN

PM XXX DATE
DRAWN XXX DATE
CHECK XXX DATE

APPROVED DATE
CITY ENGINEER R.E.

C-3
MM/DD/YYYY

SHEET X OF X
JOB NO. 0000000

J:\0000 Files\Admin\00 Internal Proj. Station\Proj. Info\C-3 siding.dgn

EXISTING A.C. PARKING LOT

PROPOSED 6'W x 16'L PRECAST CONCRETE STORAGE VAULT W/ T-LOCK LINING SEE SHEET C-6A

PROPOSED 8'Ø T-LOCK LINED PRECAST CONCRETE PUMP STATION WET WELL SEE SHEET C-5

PROPERTY LINE

CITY OF LOS ANGELES

CITY OF EL SEGUNDO

SEE PLUMBING PLANS FOR CONTINUATION

6" PVC 45° ELBOW (INV. EL. 15.84)

6" CLEANOUT

6"x4" PVC WYE (INV. EL. 15.61)

6" DROP INLET TO WET WELL SEE SHEET C-8 FOR SECTION

SHOWER WALL

6" PVC 45° ELBOW (INV. EL. 15.74)

4" PVC 45° ELBOW (TYP OF 2)

PROPOSED 6" PVC CLASS 200 AWWA 900 SEWER FOR TRENCH DETAIL SEE (2/C-4)

PROPOSED 6-INCH REINFORCED CONCRETE PAVEMENT

SEE PLUMBING PLANS FOR CONTINUATION

8-INCH PVC CLASS 200 CONNECTING PIPE (2 REQUIRED)

4" DROP INLET

SEE PLUMBING PLANS FOR CONTINUATION

1' 316 S.S. AERATION STSYEM PIPE

PROPOSED 6' x 10' PRECAST CONCRETE PUMP STATION VALVE VAULT. SEE SHEET C-5

BLIND FLANGE

FUTURE COMPRESSOR

RESTROOMS

EXISTING CHAIN LINK FENCE TO BE REMOVED

LIFEGUARD STATION

EXISTING A.C. BEACH TRAIL

PROPOSED 4-INCH CLASS 53 CERAMIC EPOXY LINED D. I. SEWER FORCEMAIN. FOR PROFILE SEE SHEET C-4 FOR TRENCH DETAIL SEE (2/C-4)

4-INCH 22 ½° D. I. RESTRAINED JOINT ELBOW WITH THRUST BLOCK. (PUSH-ON x PUSH-ON) STA. 1+70.15

CONSTRUCT 2" RPP BACKFLOW PREVENTER AFWA STD. PLAN 512-1

SEE PLUMBING PLANS FOR CONTINUATION

4-INCH 90° D. I. RESTRAINED JOINT ELBOW WITH THRUST BLOCK. (PUSH-ON x PUSH-ON) STA. 1+77.27

4-INCH D. I. BLIND FLANGE FOR FUTURE FORCEMAIN CONNECTION

CONSTRUCT 2" TYPE K POTABLE WATER PIPE TO CONNECTION WITH 2" CHEVRON WATER FACILITY. CONTRACTOR SHALL COORDINATE ALIGNMENT AND INSTALLATION WITH CHEVRON. LOCATION OF WATER CONNECTION IS APPROXIMATELY 200 FT SOUTH OF LIFEGUARD STATION

CONSTRUCT 2" METER ASSEMBLY PER CITY OF EL SEGUNDO STD. PLAN WT-2

4-INCH 90° D. I. RESTRAINED JOINT ELBOW WITH THRUST BLOCK (PUSH-ON x PUSH-ON) STA. 1+18.41

All Underground should be installed

JUL 21 2011.

SITE AND PIPING PLAN

SCALE: 1" = 4'-0"

2/20/2011 N:\930_P\Segundo\580_Lifeguard Pump Station\Phase IV\XX-C-3-Plans-ab.dgn

REGISTERED PROFESSIONAL ENGINEER — JOHN LOCKE — No. 053072 — CIVIL — STATE OF CALIFORNIA — 2/20/11

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AKM CONSULTING ENGINEERS
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IRVINE, CA. 92618
(949) 753-7333

REVISIONS		
NO.	DATE	BY
2	02-08-2011	J.L.

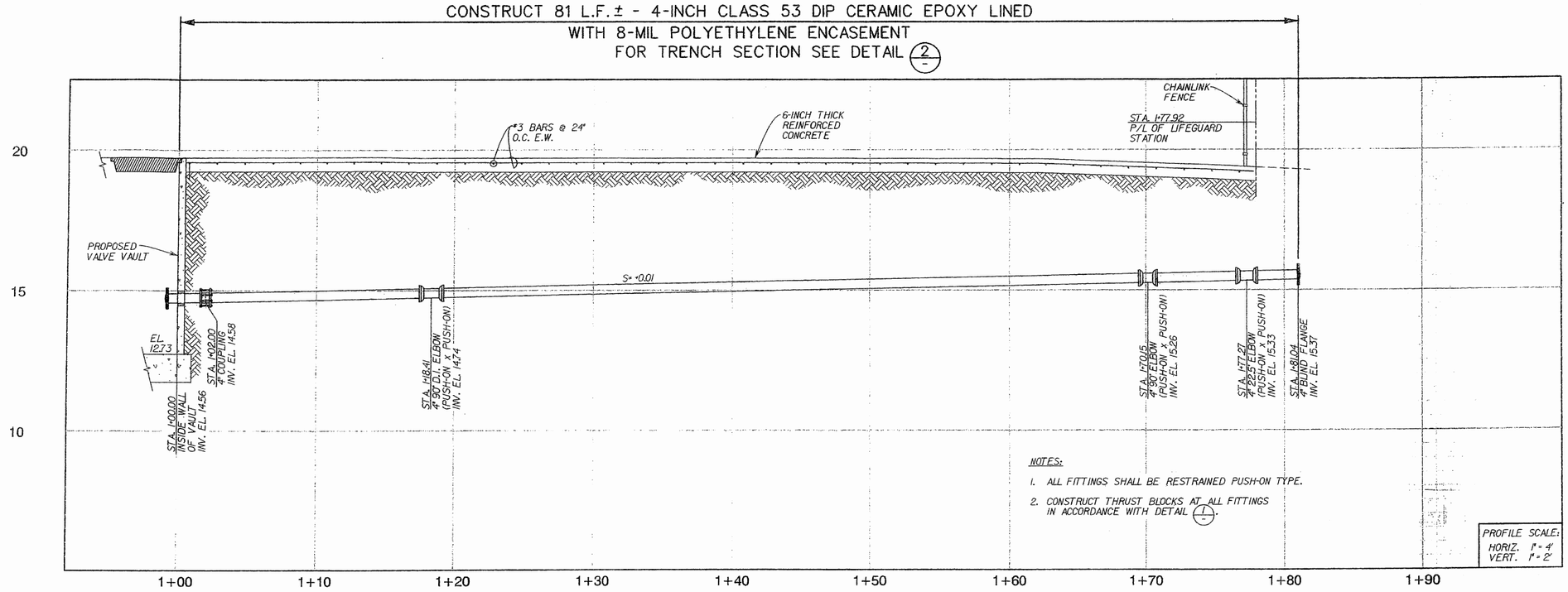
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION
SEWER AND FORCEMAIN PLAN

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK J.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

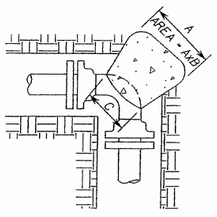
C-3
10/06/2010
SHEET X OF 68
JOB NO. 1109531



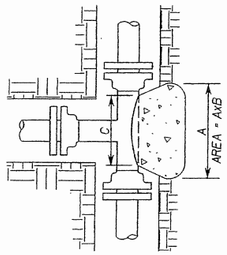
4-INCH D.I. FORCEMAIN PROFILE

SEE SHEET C-3 FOR PLAN

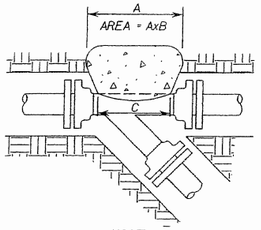
JUL 21 2011



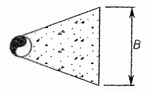
HORIZONTAL BEND



TEE



WYE



FOR HORIZONTAL BEND

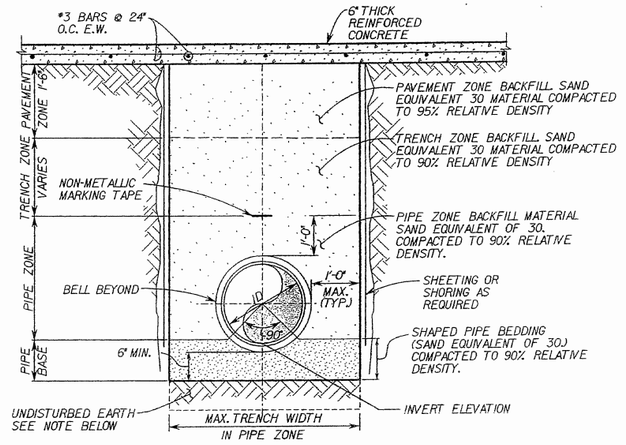
HORIZONTAL BENDS													
NOMINAL PIPE SIZE (INCHES)	TEST PRESSURE (PSI)	DEAD ENDS AND TEES			BENDS LESS THAN OR EQUAL TO ANGLE								ALL BENDS
					11-1/4°		22-1/2°		45°		90°		
		A	B	C	A	B	A	B	A	B	A	B	C
4"	200	1'-8"	1'-0"	4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-0"	2'-6"	1'-0"	6"
6"	200	2'-6"	1'-6"	6"	1'-0"	1'-0"	2'-0"	1'-0"	3'-0"	1'-0"	3'-6"	1'-6"	8"
8"	200	4'-6"	1'-6"	8"	1'-6"	1'-0"	3'-0"	1'-0"	3'-6"	1'-6"	5'-0"	2'-0"	10"
10"	200	5'-6"	2'-0"	10"	2'-0"	1'-0"	3'-0"	1'-6"	4'-0"	2'-0"	6'-0"	2'-6"	1'-0"
12"	200	7'-6"	2'-0"	1'-0"	2'-0"	1'-6"	3'-0"	2'-0"	4'-6"	2'-6"	7'-0"	3'-0"	1'-0"
16"	200	9'-0"	3'-0"	1'-4"	2'-4"	2'-0"	4'-6"	2'-0"	6'-0"	3'-6"	9'-0"	4'-6"	1'-4"

NOTES:

1. THRUST BLOCK SIZES ARE BASED ON A BEARING CAPACITY OF 1500 P.S.F. WITH A MINIMUM SOIL COVER OF 3'-0". IF SOIL COVER IS LESS THAN 3'-0", MULTIPLY BEARING AREA BY FACTOR OF 1.5 FOR SOIL COVER OF 2'-0" TO 3'-0", OR 3.0 FOR SOIL COVER OF 1'-0" TO 2'-0".
2. DIMENSIONS SHOWN REFER TO THRUST BLOCK TYPES SHOWN IN DETAIL, AND ARE MINIMUM VALUES ONLY.
3. CONCRETE MIX SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR 3000 PSI. STRENGTH AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C39.
4. ALL THRUST BLOCKS SHALL BE POURED SOLIDLY AGAINST FIRM, UNDISTURBED SOIL. THRUST BLOCKS PLACED IN AREAS OF DISTURBED SOIL SHALL BE FORMED.
5. IF SOILS HAVE BEEN PREVIOUSLY EXCAVATED AND BACKFILLED, CONTRACTOR SHALL NOTIFY RESIDENT ENGINEER WHO MAY DIRECT TO INCREASE THE DIMENSIONS SHOWN BY A FACTOR OF 1.5
6. CONCRETE POURED AGAINST PIPE FITTINGS SHALL NOT EXTEND BEYOND THE FITTING JOINTS WITHOUT THE APPROVAL OF THE RESIDENT ENGINEER

THRUST BLOCK DETAIL 1 TYP

NOT TO SCALE



NOTE:

IF UNSTABLE SOIL IS ENCOUNTERED, CONTRACTOR SHALL BRING THE ISSUE TO THE CITY'S ATTENTION BEFORE PROCEEDING FURTHER.

FORCEMAIN TRENCH DETAIL 2 TYP

NOT TO SCALE

BID DOCUMENTS

REGISTERED PROFESSIONAL ENGINEER JOHN M. LONG No. 50232 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA 9/10/10

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REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

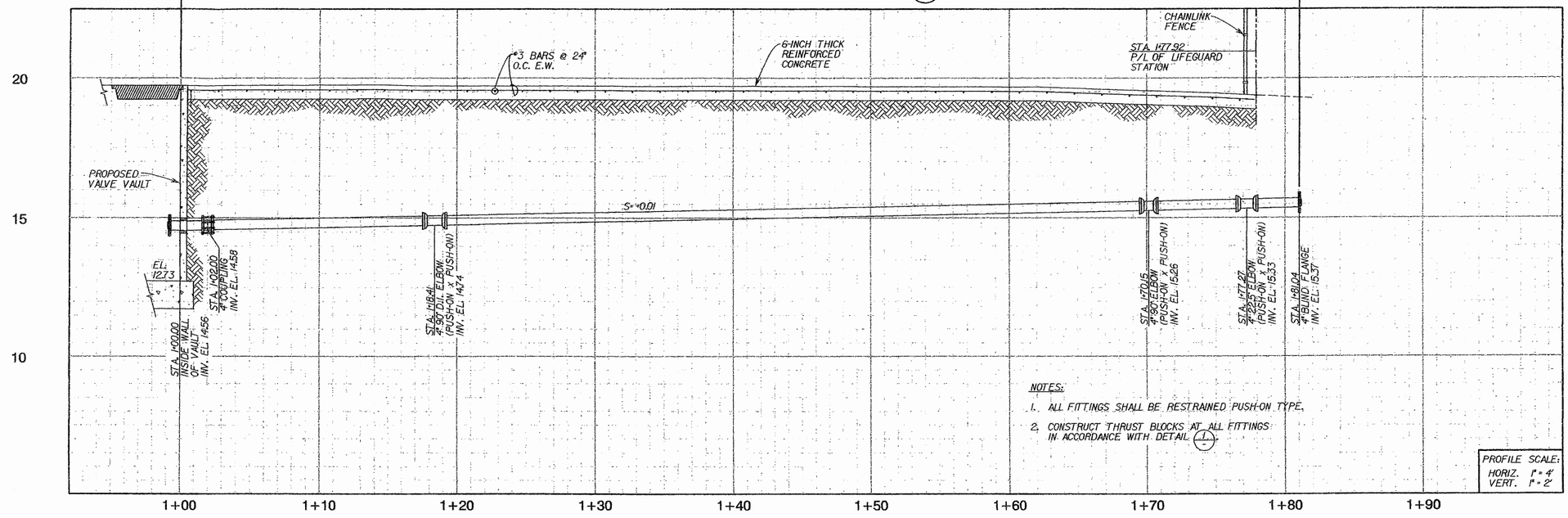
LIFEGUARD STATION
4-INCH FORCEMAIN PROFILE, THRUST BLOCK, AND TRENCH DETAILS

PM XXX DATE
DRAWN XXX DATE
CHECK XXX DATE
APPROVED DATE
CITY ENGINEER R.E.

C-4
MM/DD/YYYY
SHEET X OF X
JOB NO. 0000000

\\10.0.0.5\Server\Jobs\0000\Engineering\Proposed Pump Station\Phase 1\XXX-C-4_prof_sht.dgn

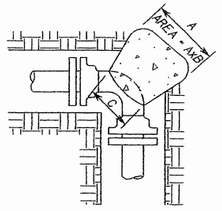
CONSTRUCT 81 L.F.± - 4-INCH CLASS 53 DIP CERAMIC EPOXY LINED
WITH 8-MIL POLYETHYLENE ENCASEMENT
FOR TRENCH SECTION SEE DETAIL (2)



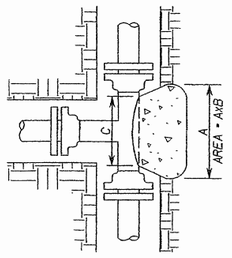
4-INCH D.I. FORCEMAIN PROFILE

SEE SHEET C-3 FOR PLAN

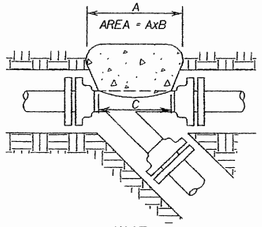
JUL 21 2011



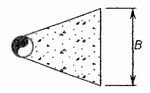
HORIZONTAL BEND



TEE



WYE



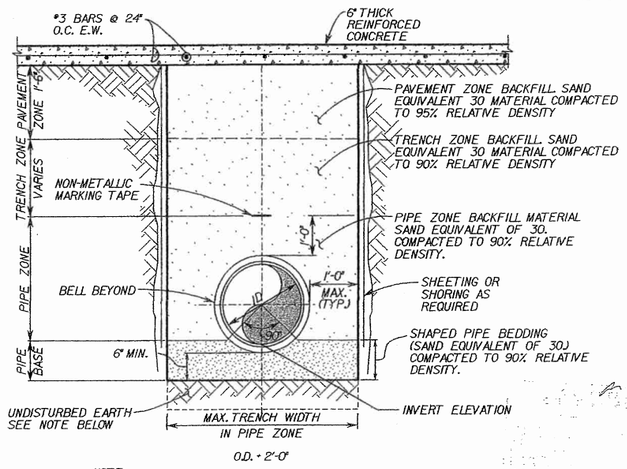
FOR HORIZONTAL BEND

HORIZONTAL BENDS													
NOMINAL PIPE SIZE (INCHES)	TEST PRESSURE (PSI)	DEAD ENDS AND TEES			BENDS LESS THAN OR EQUAL TO ANGLE								ALL BENDS
					11-1/4°		22-1/2°		45°		90°		
		A	B	C	A	B	A	B	A	B	A	B	C
4"	200	1'-8"	1'-0"	4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-0"	2'-6"	1'-0"	6"
6"	200	2'-6"	1'-6"	6"	1'-0"	1'-0"	2'-0"	1'-0"	3'-0"	1'-0"	3'-6"	1'-6"	8"
8"	200	4'-6"	1'-6"	8"	1'-6"	1'-0"	3'-0"	1'-0"	3'-6"	1'-6"	5'-0"	2'-0"	10"
10"	200	5'-6"	2'-0"	10"	2'-0"	1'-0"	3'-0"	1'-6"	4'-0"	2'-0"	6'-0"	2'-6"	1'-0"
12"	200	7'-6"	2'-0"	1'-0"	2'-0"	1'-6"	3'-0"	2'-0"	4'-6"	2'-6"	7'-0"	3'-0"	1'-0"
16"	200	9'-0"	3'-0"	1'-4"	2'-4"	2'-0"	4'-6"	2'-0"	6'-0"	3'-6"	9'-0"	4'-6"	1'-4"

NOTES:

1. THRUST BLOCK SIZES ARE BASED ON A BEARING CAPACITY OF 1500 P.S.F. WITH A MINIMUM SOIL COVER OF 3'-0". IF SOIL COVER IS LESS THAN 3'-0", MULTIPLY BEARING AREA BY FACTOR OF 1.5 FOR SOIL COVER OF 2'-0" TO 3'-0", OR 3.0 FOR SOIL COVER OF 1'-0" TO 2'-0".
2. DIMENSIONS SHOWN REFER TO THRUST BLOCK TYPES SHOWN IN DETAIL, AND ARE MINIMUM VALUES ONLY.
3. CONCRETE MIX SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR 3000 PSI. STRENGTH AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C39.
4. ALL THRUST BLOCKS SHALL BE POURED SOLIDLY AGAINST FIRM, UNDISTURBED SOIL. THRUST BLOCKS PLACED IN AREAS OF DISTURBED SOIL SHALL BE FORMED.
5. IF SOILS HAVE BEEN PREVIOUSLY EXCAVATED AND BACKFILLED, CONTRACTOR SHALL NOTIFY RESIDENT ENGINEER WHO MAY DIRECT TO INCREASE THE DIMENSIONS SHOWN BY A FACTOR OF 1.5
6. CONCRETE POURED AGAINST PIPE FITTINGS SHALL NOT EXTEND BEYOND THE FITTING JOINTS WITHOUT THE APPROVAL OF THE RESIDENT ENGINEER

THRUST BLOCK DETAIL (1 TYP)
NOT TO SCALE



NOTE:
IF UNSTABLE SOIL IS ENCOUNTERED, CONTRACTOR SHALL BRING THE ISSUE TO THE CITY'S ATTENTION BEFORE PROCEEDING FURTHER.

FORCEMAIN TRENCH DETAIL (2 TYP)
NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER — MARK LEWIS — No. 61301 — CIVIL — STATE OF CALIFORNIA
2/2/11

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IRVINE, CA. 92618
(949) 753-7333

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NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

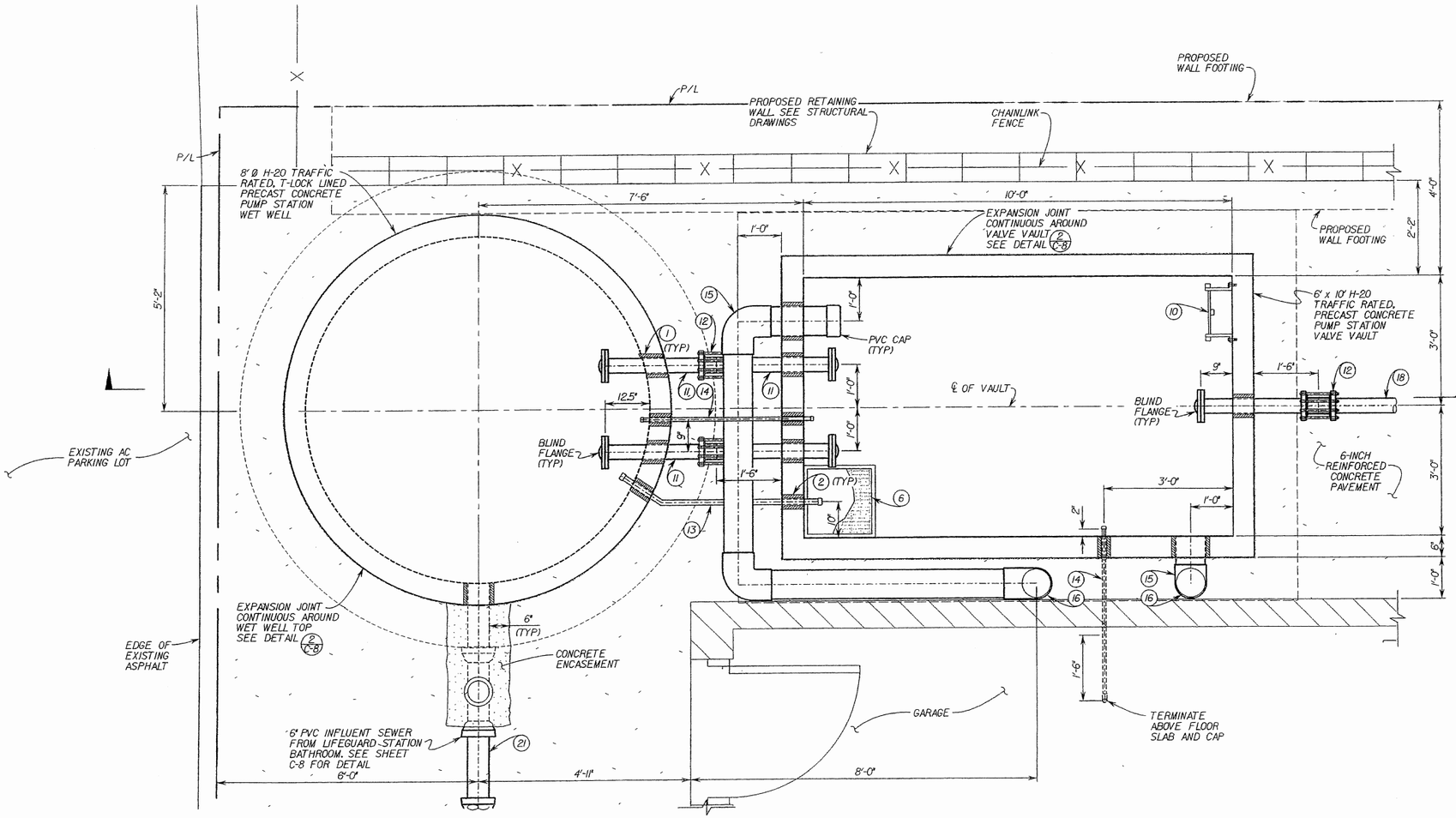
LIFEGUARD STATION
4-INCH FORCEMAIN PROFILE, THRUST BLOCK, AND TRENCH DETAILS

PM JL DATE 10/10
DRAWN B.G. DATE 10/10
CHECK J.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

C-4
MM/DD/YYYY
SHEET X OF 88
JOB NO. 1109531

2/2/2011 N:\1109_ELSegundo\Dgn_Lifeguard Perm Station\Phase 1\XX-C-4_prof_xtn.dgn



PUMP STATION WET WELL AND VALVE VAULT PIPING PLAN

SCALE: 3/4" = 1'-0"

LIST OF MATERIALS

ITEM	DESCRIPTION	SIZE	QTY
1	WET WELL PENETRATION PER DETAIL 2 ON SHEET C-7	AS REQ'D	-
2	VALVE VAULT PENETRATION PER DETAIL 1 ON SHEET C-7	AS REQ'D	-
3	WET WELL BASE JOINT PER DETAIL 5 ON SHEET C-7	-	AS REQ'D
4	WET WELL JOINT PER DETAIL 3 ON SHEET C-7	-	AS REQ'D
5	VALVE VAULT JOINT PER DETAIL 4 ON SHEET C-7	-	AS REQ'D
6	PRECAST CONCRETE SUMP WITH IRON GRATE	1.5' x 1.5'	1
7	CRUSHED ROCK	3/4"	AS REQ'D
8	ALUMINUM TWO DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH FALL PROTECTION GRATING PER DETAIL 1 ON SHEET C-8	6' x 4'	1
9	ALUMINUM FOUR DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH REMOVABLE BEAMS AND SAFETY GRATES. SEE DETAIL 4 ON SHEET C-9	10' x 6'	1
10	316 STAINLESS STEEL LADDER WITH SAFETY POST PER DETAIL 3 ON SHEET C-9	AS REQ'D	1
11	STD. WT. 316 STAINLESS STEEL PIPE	4"	AS REQ'D
12	SLEEVE TYPE COUPLING, 316 STAINLESS STEEL, DRESSER STYLE 38 WITH HARNESS RESTRAINT PER DETAIL 1 ON SHEET C-9	4"	3
13	SCH 80 PVC PIPE AND FITTINGS, SUMP PUMP DISCHARGE	1½"	AS REQ'D
14	AREATION PIPING AND FITTINGS, 316 STAINLESS STEEL 3000PSI.	1"	AS REQ'D
15	AIR DUCT, SCH 40 PVC PIPE AND FITTINGS	8"	-
16	AIR VENT TERMINAL PER DETAILS 2 ON SHEET C-9	8"	2
17	SLEEVE TYPE COUPLING	8"	2
18	FLANGED DUCTILE IRON PIPE CLASS 53 ANSI/AWWA C151/A21.15. CERAMIC EPOXY LINED (PROTECTO 401 LINING, 40 MILS)	4"	AS REQ'D
19	316 S.S. STEPS CAST INTO WET WELL WITH 304 S.S. SAFETY POST (BILCO LU-3 OR EQUAL)	-	AS REQ'D
20	HIGH LEVEL FLOAT SWITCH PER DETAIL 3 ON SHEET C-8	-	1
21	PVC CLASS 200 AWWA C900 PIPE	6"	AS REQ'D

NOTES:

1. PRECAST CONCRETE WET WELL AND VALVE VAULT SHALL BE DESIGNED TO RESIST FLOATATION. ASSUME GROUNDWATER LEVEL TO SURFACE.
2. THE EXTERIOR OF THE WETWELL AND VALVE VAULT SHALL BE COATED WITH 16 MILS OF COAL TAR EPOXY. ALL JOINTS SHALL BE WRAPPED WITH POLYETHYLENE TAPE.
3. ALL DUCTILE IRON PIPE SHALL BE CLASS 53 WITH CERAMIC EPOXY LINING. (GROOVED DUCTILE IRON PIPE SHALL BE CLASS 54).

JUL 21 2011

BID DOCUMENTS

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NO.	DATE	BY

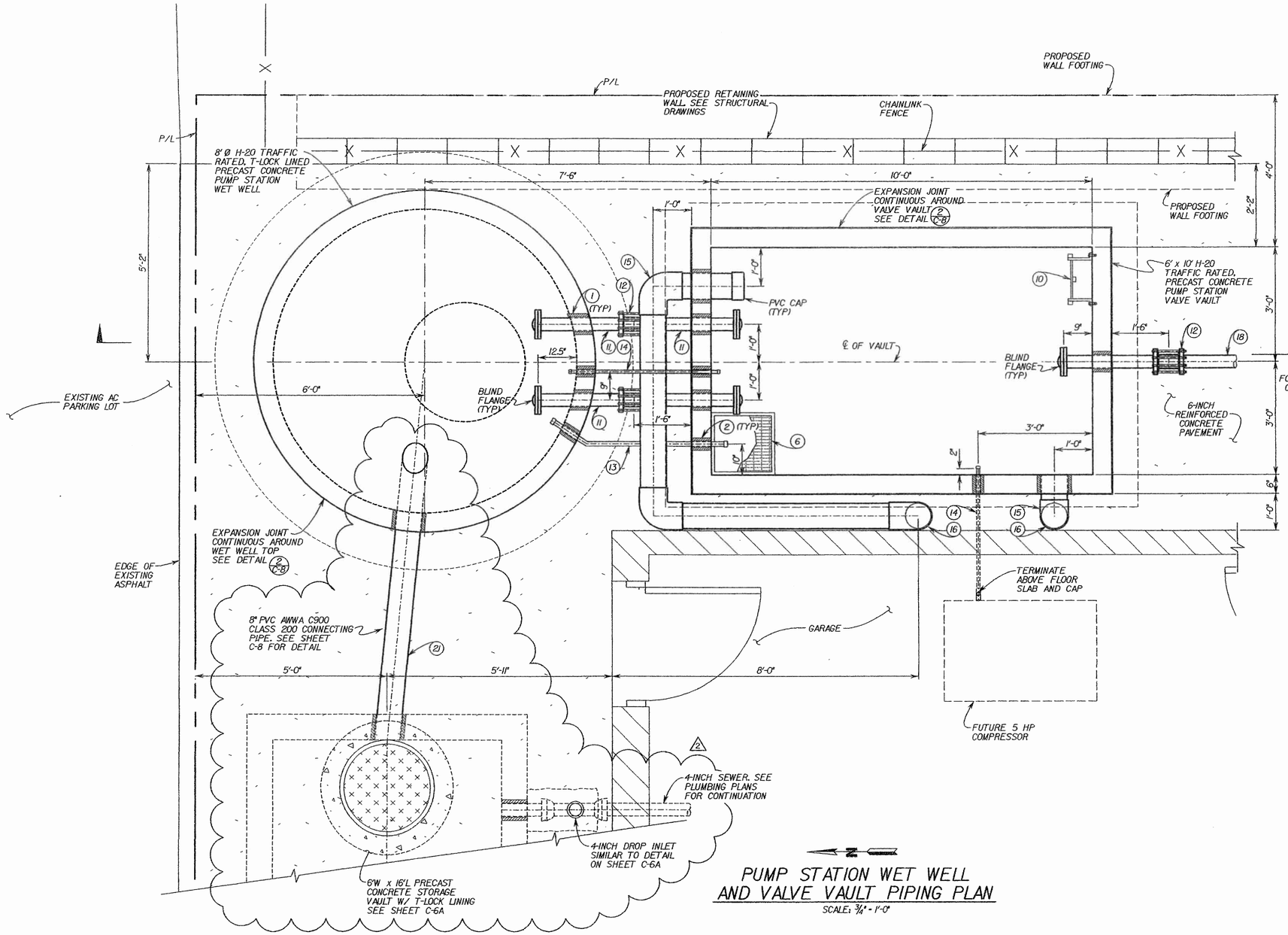
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION
PUMP STATION WET WELL AND VALVE VAULT PLAN

PM XXX DATE
DRAWN XXX DATE
CHECK XXX DATE
APPROVED DATE
CITY ENGINEER R.E.

C-5
MM/DD/YYYY
SHEET X OF X
JOB NO. 0000000

J:\2011 ES\Lifeguard\PW\Plans\Lifeguard Pump Station\Sheets\LPS C-5 mech wet.dgn



PUMP STATION WET WELL AND VALVE VAULT PIPING PLAN

SCALE: 3/4" = 1'-0"

LIST OF MATERIALS

ITEM	DESCRIPTION	SIZE	QTY
1	WET WELL PENETRATION PER DETAIL 2 ON SHEET C-7	AS REQ'D	-
2	VALVE VAULT PENETRATION PER DETAIL 1 ON SHEET C-7	AS REQ'D	-
3	WET WELL BASE JOINT PER DETAIL 5 ON SHEET C-7	-	AS REQ'D
4	WET WELL JOINT PER DETAIL 3 ON SHEET C-7	-	AS REQ'D
5	VALVE VAULT JOINT PER DETAIL 4 ON SHEET C-7	-	AS REQ'D
6	PRECAST CONCRETE SUMP WITH IRON GRATE	1.5' x 1.5'	1
7	CRUSHED ROCK	3/4"	AS REQ'D
8	ALUMINUM TWO DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH FALL PROTECTION GRATING PER DETAIL 1 ON SHEET C-8	6' x 4'	1
9	ALUMINUM FOUR DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH REMOVABLE BEAMS AND SAFETY GRATES. SEE DETAIL 4 ON SHEET C-9	10' x 6'	1
10	316 STAINLESS STEEL LADDER WITH SAFETY POST PER DETAIL 3 ON SHEET C-9	AS REQ'D	1
11	STD. WT. 316 STAINLESS STEEL PIPE	4"	AS REQ'D
12	SLEEVE TYPE COUPLING, 316 STAINLESS STEEL, DRESSER STYLE 38 WITH HARNESS RESTRAINT PER DETAIL 1 ON SHEET C-9	4"	3
13	SCH 80 PVC PIPE AND FITTINGS, SUMP PUMP DISCHARGE	1½"	AS REQ'D
14	AREATION PIPING AND FITTINGS. 316 STAINLESS STEEL 3000PSI.	1"	AS REQ'D
15	AIR DUCT. SCH 40 PVC PIPE AND FITTINGS	8"	-
16	AIR VENT TERMINAL PER DETAILS 2 ON SHEET C-9	8"	2
17	SLEEVE TYPE COUPLING	8"	2
18	FLANGED DUCTILE IRON PIPE CLASS 53 ANSI/AWWA C151/A21.15. CERAMIC EPOXY LINED (PROTECTO 401 LINING, 40 MILS)	4"	AS REQ'D
19	316 S.S. STEPS CAST INTO WET WELL WITH 304 S.S. SAFETY POST (BILCO LU-3 OR EQUAL)	-	AS REQ'D
20	HIGH LEVEL FLOAT SWITCH PER DETAIL 3 ON SHEET C-8	-	1
21	PVC CLASS 200 AWWA C900 PIPE	8"	AS REQ'D

NOTES:

1. PRECAST CONCRETE WET WELL, VALVE VAULT AND STORAGE TANK SHALL BE DESIGNED TO RESIST FLOATATION. ASSUME GROUNDWATER LEVEL TO SURFACE. (2)
2. THE EXTERIOR OF THE WET WELL, VALVE VAULT AND STORAGE TANK SHALL BE COATED WITH 16 MILS OF COAL TAR EPOXY. ALL JOINTS SHALL BE WRAPPED WITH POLYETHYLENE TAPE.
3. ALL DUCTILE IRON PIPE SHALL BE CLASS 53 WITH CERAMIC EPOXY LINING. (GROOVED DUCTILE IRON PIPE SHALL BE CLASS 54).

JUL 21 2011

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(949) 753-7333

REVISIONS		
NO.	DATE	BY
2	02-08-2011	J.L.

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

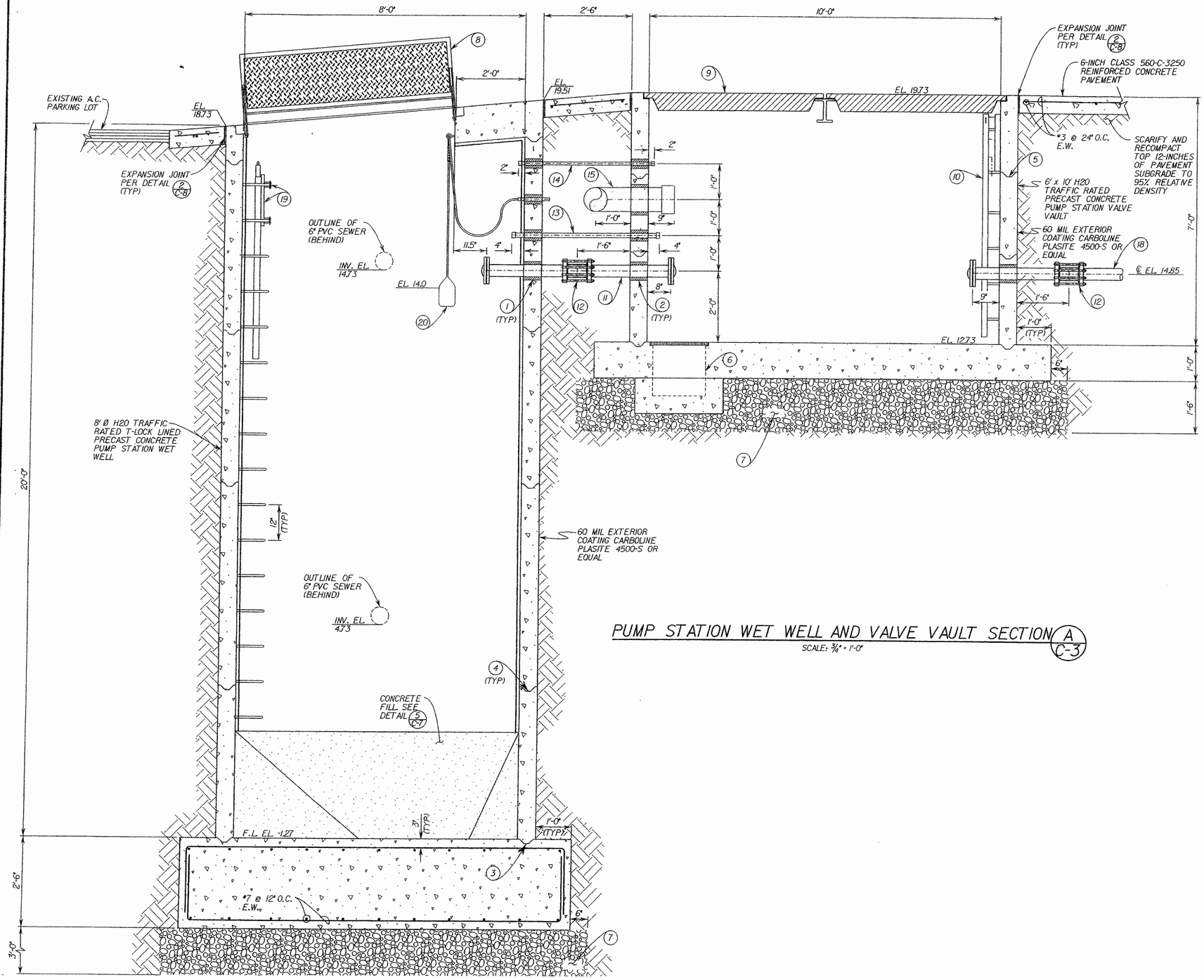
LIFEGUARD STATION
PUMP STATION WET WELL AND VALVE VAULT PLAN

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK Z.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

C-5
10/06/2010
SHEET X OF 68
JOB NO. 1109531

X:\JOBS\1109531 Lifeguard Pump Station Phase 1\XXX-C-5 mech sht.dgn



PUMP STATION WET WELL AND VALVE VAULT SECTION A/C-3

SCALE: 3/4" = 1'-0"

LIST OF MATERIALS

ITEM	DESCRIPTION	SIZE	QTY
1	WET WELL PENETRATION PER DETAIL 2 ON SHEET C-7	AS REQ'D	-
2	VALVE VAULT PENETRATION PER DETAIL 1 ON SHEET C-7	AS REQ'D	-
3	WET WELL BASE JOINT PER DETAIL 5 ON SHEET C-7	-	AS REQ'D
4	WET WELL JOINT PER DETAIL 3 ON SHEET C-7	-	AS REQ'D
5	VALVE VAULT JOINT PER DETAIL 4 ON SHEET C-7	-	AS REQ'D
6	PRECAST CONCRETE SUMP WITH IRON GRATE	1.5' x 1.5'	1
7	CRUSHED ROCK	3/4"	AS REQ'D
8	ALUMINUM TWO DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH FALL PROTECTION GRATING PER DETAIL 1 ON SHEET C-8	6' x 4'	1
9	ALUMINUM FOUR DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH REMOVABLE BEAMS AND SAFETY GRATES. SEE DETAIL 4 ON SHEET C-9	10' x 6'	1
10	316 STAINLESS STEEL LADDER WITH SAFETY POST PER DETAIL 3 ON SHEET C-9	AS REQ'D	1
11	STD. WT. 316 STAINLESS STEEL PIPE	4"	AS REQ'D
12	SLEEVE TYPE COUPLING, 316 STAINLESS STEEL, DRESSER STYLE 38 WITH HARNESS RESTRAINT PER DETAIL 1 ON SHEET C-9	4"	3
13	SCH 80 PVC PIPE AND FITTINGS, SUMP PUMP DISCHARGE	1 1/2"	AS REQ'D
14	AREATION PIPING AND FITTINGS, 316 STAINLESS STEEL 3000PSI.	1"	AS REQ'D
15	AIR DUCT, SCH 40 PVC PIPE AND FITTINGS	8"	-
16	AIR VENT TERMINAL PER DETAILS 2 ON SHEET C-9	8"	2
17	SLEEVE TYPE COUPLING	8"	2
18	FLANGED DUCTILE IRON PIPE CLASS 53 ANSI/AWWA C151/A21.15. CERAMIC EPOXY LINED (PROTECTO 401 LINING, 40 MILS)	4"	AS REQ'D
19	316 S.S. STEPS CAST INTO WET WELL WITH 304 S.S. SAFETY POST (BILCO LU-3 OR EQUAL)	-	AS REQ'D
20	HIGH LEVEL FLOAT SWITCH PER DETAIL 3 ON SHEET C-8	-	1
21	PVC CLASS 200 AWWA C900 PIPE	6"	AS REQ'D

NOTES:

1. PRECAST CONCRETE WET WELL AND VALVE VAULT SHALL BE DESIGNED TO RESIST FLOATATION. ASSUME GROUNDWATER LEVEL TO SURFACE.
2. THE EXTERIOR OF THE WETWELL AND VALVE VAULT SHALL BE COATED WITH 16 MILS OF COAL TAR EPOXY. ALL JOINTS SHALL BE WRAPPED WITH POLYETHYLENE TAPE.
3. ALL DUCTILE IRON PIPE SHALL BE CLASS 53 WITH CERAMIC EPOXY LINING. (GROOVED DUCTILE IRON PIPE SHALL BE CLASS 54).
4. CONTRACTOR SHALL PROVIDE PIPE SUPPORTS AS REQUIRED. ALL PIPE SUPPORTS SHALL BE 316 STAINLESS STEEL.

JUL 21 2011

BID DOCUMENTS

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PROFESSIONAL ENGINEER — ANNA A. LOAIZA — No. 39324 — Exp. 6/30/11 — CIVIL — STATE OF CALIFORNIA

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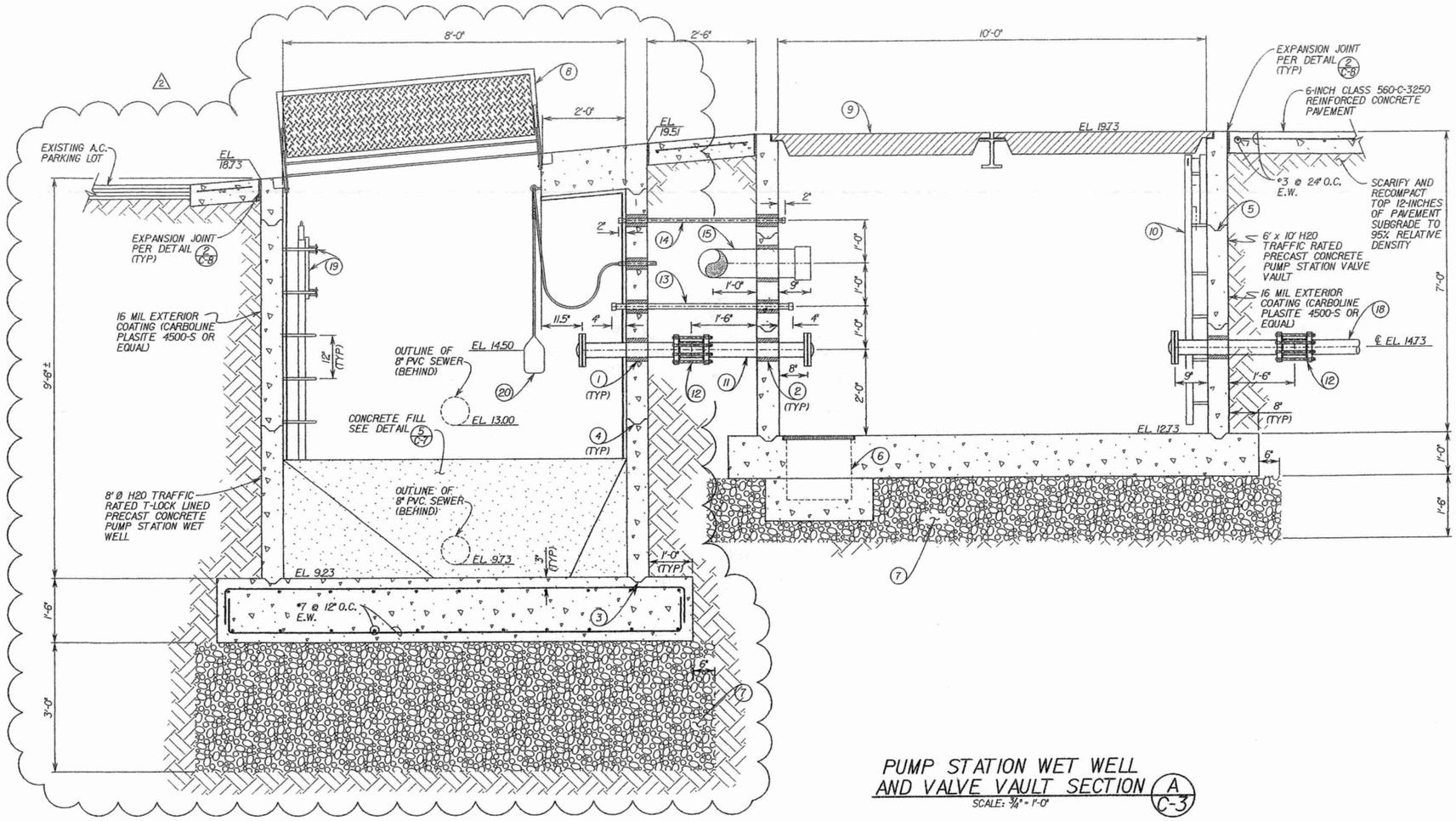
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION
PUMP STATION WET WELL AND VALVE VAULT SECTION

PM XXX DATE
DRAWN XXX DATE
CHECK XXX DATE
APPROVED DATE
CITY ENGINEER R.E.

C-6
MM/DD/YYYY
SHEET X OF X
JOB NO. 0000000

M:\2010\10-xx\10-xxx\Lifeguard Pump Station\Plans\LWV C-6.dwg, 11x17, 6/30/2011 4:15:00 PM



PUMP STATION WET WELL AND VALVE VAULT SECTION (A C-3)

SCALE: 3/8" = 1'-0"

LIST OF MATERIALS

ITEM	DESCRIPTION	SIZE	QTY
1	WET WELL PENETRATION PER DETAIL 2 ON SHEET C-7	AS REQ'D	-
2	VALVE VAULT PENETRATION PER DETAIL 1 ON SHEET C-7	AS REQ'D	-
3	WET WELL BASE JOINT PER DETAIL 5 ON SHEET C-7	-	AS REQ'D
4	WET WELL JOINT PER DETAIL 3 ON SHEET C-7	-	AS REQ'D
5	VALVE VAULT JOINT PER DETAIL 4 ON SHEET C-7	-	AS REQ'D
6	PRECAST CONCRETE SUMP WITH IRON GRATE	1.5' x 1.5'	1
7	CRUSHED ROCK	3/4"	AS REQ'D
8	ALUMINUM TWO DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH FALL PROTECTION GRATING PER DETAIL 1 ON SHEET C-8	6' x 4'	1
9	ALUMINUM FOUR DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH REMOVABLE BEAMS AND SAFETY GRATES. SEE DETAIL 4 ON SHEET C-9	10' x 6'	1
10	316 STAINLESS STEEL LADDER WITH SAFETY POST PER DETAIL 3 ON SHEET C-9	AS REQ'D	1
11	STD. WT. 316 STAINLESS STEEL PIPE	4"	AS REQ'D
12	SLEEVE TYPE COUPLING, 316 STAINLESS STEEL, DRESSER STYLE 38 WITH HARNESS RESTRAINT PER DETAIL 1 ON SHEET C-9	4"	3
13	SCH 80 PVC PIPE AND FITTINGS, SUMP PUMP DISCHARGE	1½"	AS REQ'D
14	AREATION PIPING AND FITTINGS. 316 STAINLESS STEEL 3000PSI.	1"	AS REQ'D
15	AIR DUCT, SCH 40 PVC PIPE AND FITTINGS	8"	-
16	AIR VENT TERMINAL PER DETAILS 2 ON SHEET C-9	8"	2
17	SLEEVE TYPE COUPLING	8"	2
18	FLANGED DUCTILE IRON PIPE CLASS 53 ANSI/AWWA C151/A21.51. CERAMIC EPOXY LINED (PROTECTO 401 LINING, 40 MILS)	4"	AS REQ'D
19	316 S.S. STEPS CAST INTO WET WELL WITH 304 S.S. SAFETY POST (BILCO LU-3 OR EQUAL)	-	AS REQ'D
20	HIGH LEVEL FLOAT SWITCH PER DETAIL 3 ON SHEET C-8	-	1
21	PVC CLASS 200 AWWA C900 PIPE	6"	AS REQ'D

NOTES:

1. PRECAST CONCRETE WET WELL AND VALVE VAULT SHALL BE DESIGNED TO RESIST FLOATATION. ASSUME GROUNDWATER LEVEL TO SURFACE.
2. THE EXTERIOR OF THE WETWELL AND VALVE VAULT SHALL BE COATED WITH 16 MILS OF COAL TAR EPOXY. ALL JOINTS SHALL BE WRAPPED WITH POLYETHYLENE TAPE.
3. ALL DUCTILE IRON PIPE SHALL BE CLASS 53 WITH CERAMIC EPOXY LINING. (GROOVED DUCTILE IRON PIPE SHALL BE CLASS 54).
4. CONTRACTOR SHALL PROVIDE PIPE SUPPORTS AS REQUIRED. ALL PIPE SUPPORTS SHALL BE 316 STAINLESS STEEL.

JUL 21 2011

REGISTERED PROFESSIONAL ENGINEER — No. C060045 — CIVIL — STATE OF CALIFORNIA — 7/20/11

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IRVINE, CA. 92618
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REVISIONS		
NO.	DATE	BY
2	02-08-2011	J.L.

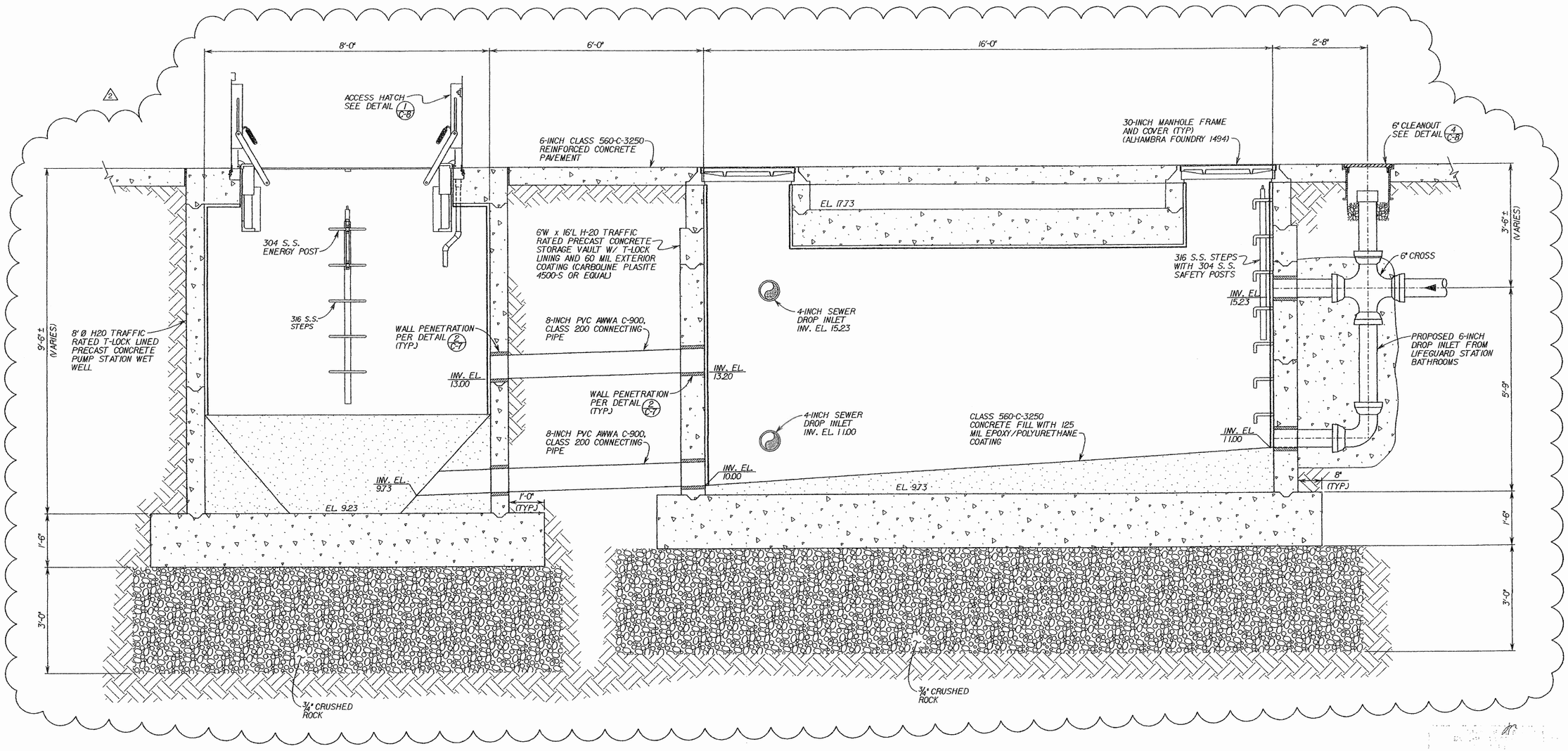
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
LIFEGUARD STATION
PUMP STATION WET WELL AND VALVE VAULT SECTION

C-6
10/06/2010

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK Z.K. DATE 10/10
APPROVED DATE
CITY ENGINEER R.E.

SHEET X OF 68
JOB NO. 1109531

7/20/2011 W:\3000_ElSegundo\900_Lifeguard Pump Station\Plans_PW\C-6_mstn_rev.dgn



SEWER DROP PIPE INTO PROPOSED STORAGE VAULT

SCALE: 1/2" = 1'-0"

JUL 21 2011

REGISTERED PROFESSIONAL ENGINEER JOHN LOADER No. C052022 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA 2/6/11

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(949) 753-7333

REVISIONS		
NO.	DATE	BY
2	02-08-2011	J.L.

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
LIFEGUARD STATION
SEWER DROP PIPE INTO PROPOSED STORAGE VAULT

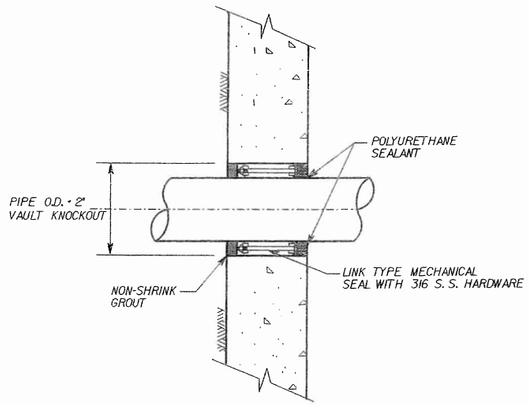
C-6A
10/08/2010

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK J.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

SHEET X OF 68
JOB NO. 1109531

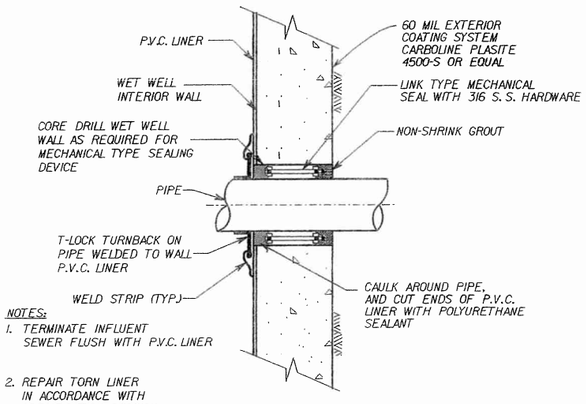
N:\1109\Drawings\PW\Lifeguard Comp Station\Phase II\C-6A sump.dgn



WALL PENETRATION DETAIL WITHOUT P.V.C. LINER (1)

NOT TO SCALE

C-5, C-6



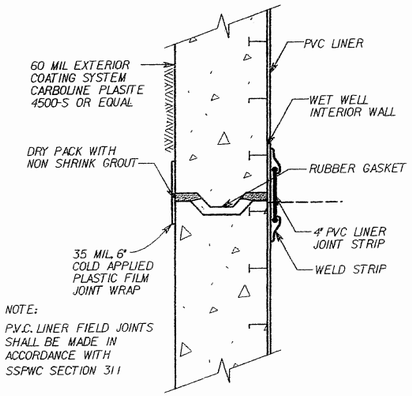
NOTES:

1. TERMINATE INFLUENT SEWER FLUSH WITH P.V.C. LINER
2. REPAIR TORN LINER IN ACCORDANCE WITH SPECIFICATION SECTION POLYVINYL CHLORIDE PLASTIC LINERS.

WALL PENETRATION DETAIL WITH "T" LOCK P.V.C. LINER (2)

NOT TO SCALE

C-5, C-6



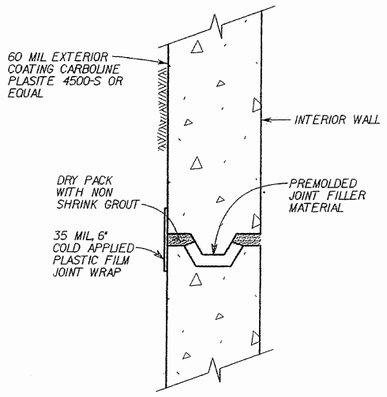
NOTE:

P.V.C. LINER FIELD JOINTS SHALL BE MADE IN ACCORDANCE WITH SSPWC SECTION 311

WET WELL JOINT DETAIL (3)

NOT TO SCALE

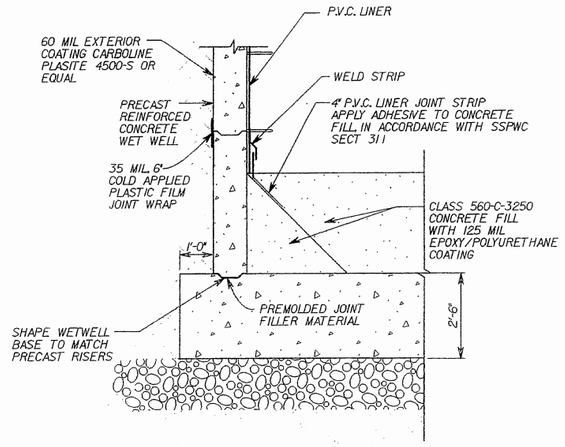
C-6



VALVE VAULT JOINT DETAIL (4)

NOT TO SCALE

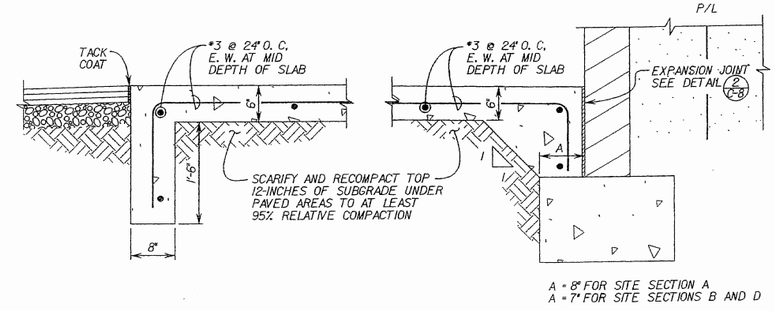
C-6



WET WELL BASE JOINT DETAIL (5)

NOT TO SCALE

C-6



A = 8" FOR SITE SECTION A
A = 7" FOR SITE SECTIONS B AND D

CUT-OFF WALL AND FOOTING DETAIL (6)

SCALE: 1" = 1'-0"

C-2

JUL 21 2011

BID DOCUMENTS

REGISTERED PROFESSIONAL ENGINEER JOHN A. LEVANTINO No. 50290 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA 9/7/10

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IRVINE, CA. 92618
(949) 753-7333

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION

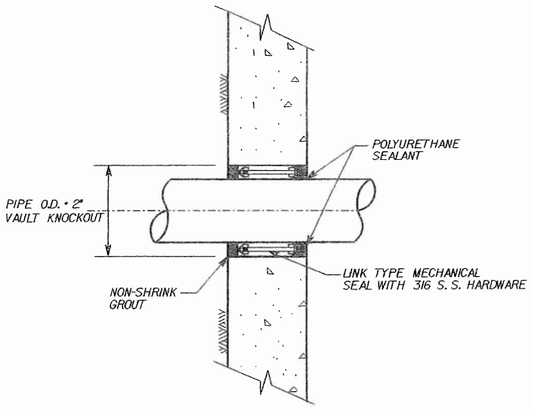
PUMP STATION WET WELL WALL PENETRATION, JOINT, AND BASE JOINT DETAILS

PM XXX DATE ____
DRAWN XXX DATE ____
CHECK XXX DATE ____

APPROVED DATE ____
CITY ENGINEER R.E. ____

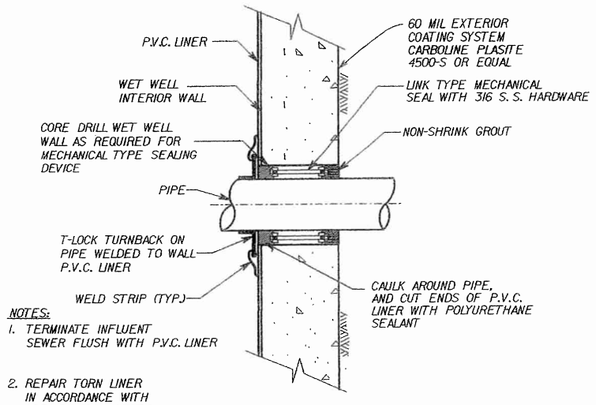
C-7
MM/DD/YYYY
SHEET X OF X
JOB NO. 0000000

J:\0930_ElSegundo\PS\PWA Redondo Pump Station\Phase 1\XX_C-7_details.dgn



WALL PENETRATION DETAIL WITHOUT P.V.C. LINER (1 / C-5, C-6)

NOT TO SCALE

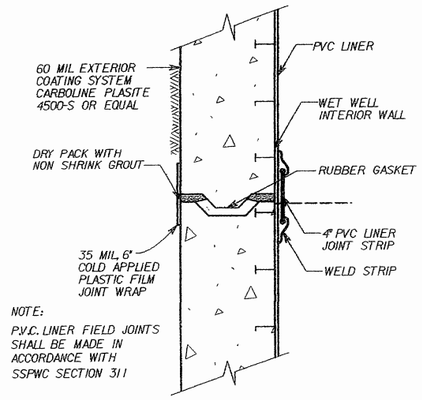


NOTES:

1. TERMINATE INFLUENT SEWER FLUSH WITH P.V.C. LINER
2. REPAIR TORN LINER IN ACCORDANCE WITH SPECIFICATION SECTION POLYVINYL CHLORIDE PLASTIC LINERS.

WALL PENETRATION DETAIL WITH "T" LOCK P.V.C. LINER (2 / C-5, C-6)

NOT TO SCALE

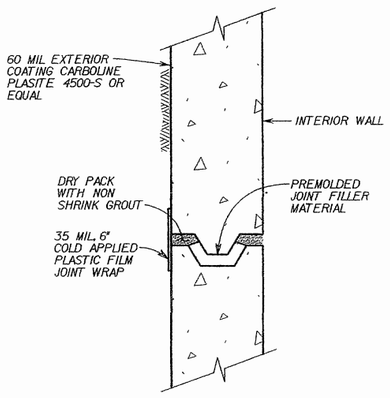


NOTE:

P.V.C. LINER FIELD JOINTS SHALL BE MADE IN ACCORDANCE WITH SSPWC SECTION 311

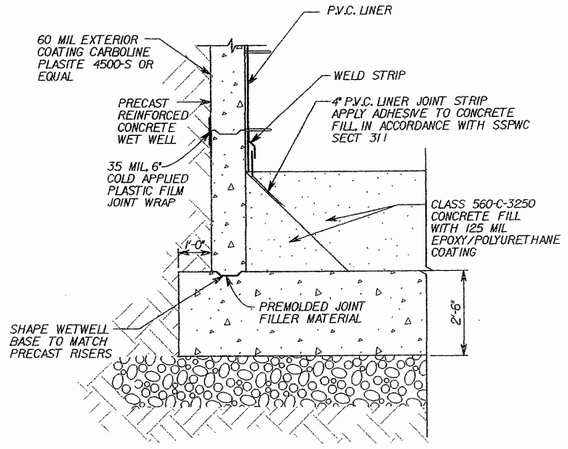
WET WELL JOINT DETAIL (3 / C-6)

NOT TO SCALE



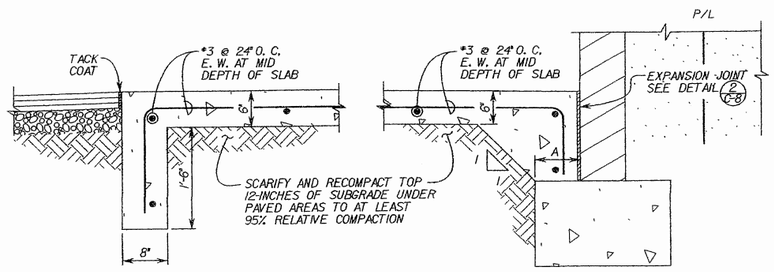
VALVE VAULT JOINT DETAIL (4 / C-6)

NOT TO SCALE



WET WELL BASE JOINT DETAIL (5 / C-6)

NOT TO SCALE



A = 8" FOR SITE SECTION A
A = 7" FOR SITE SECTIONS B AND D

CUT-OFF WALL AND FOOTING DETAIL (6 / C-2)

SCALE: 1" = 1'-0"

JUL 21 2011

REGISTERED PROFESSIONAL ENGINEER JOHN LEGARZA No. C056622 Exp. 6-30-11 CIVIL STATE OF CALIFORNIA

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION

PUMP STATION WET WELL WALL PENETRATION, JOINT, AND BASE JOINT DETAILS

PM	J.L.	DATE 10/10
DRAWN	B.G.	DATE 10/10
CHECK	Z.K.	DATE 10/10

APPROVED DATE

CITY ENGINEER R.E.

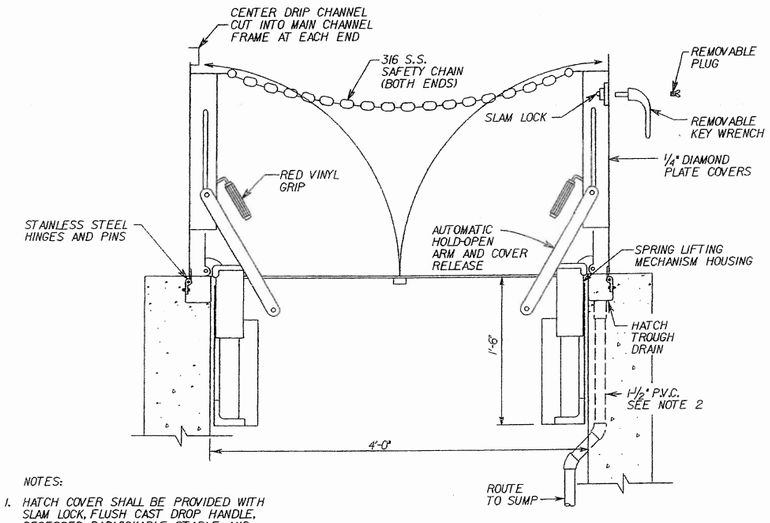
C-7

10/06/2010

SHEET X OF 68

JOB NO. 1109531

2/20/2011 N:\1000_El Segundo\1800_Lifeguard Pump Station\Plans_CVX\C-7_details.dgn, ldev

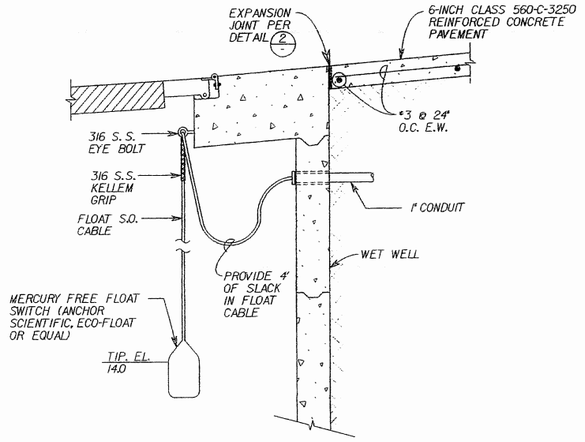


NOTES:

1. HATCH COVER SHALL BE PROVIDED WITH SLAM LOCK, FLUSH CAST DROP HANDLE, RECESSED PADLOCKABLE STAPLE AND TROUGH. COVERS SHALL BE SECURED TO THE FRAME WITH 1/2" 316 S.S. BOLTS.
2. PROVIDE 1 1/2" PVC SCH 80 DRAIN PIPE FROM HATCH TROUGH DRAIN TO SUMP.
3. HATCH COVER SHALL BE ALUMINUM.
4. HATCH COVER SHALL BE RATED FOR OCCASIONAL H20 TRAFFIC LOADING
5. ALL PARTS OF FRAME IN CONTACT WITH CONCRETE SHALL BE COATED WITH 16 MILS OF BITUMINOUS PAINT.
6. SHOWN FOR DOUBLE LEAF HATCH. SIMILAR FOR SINGLE LEAF HATCH.

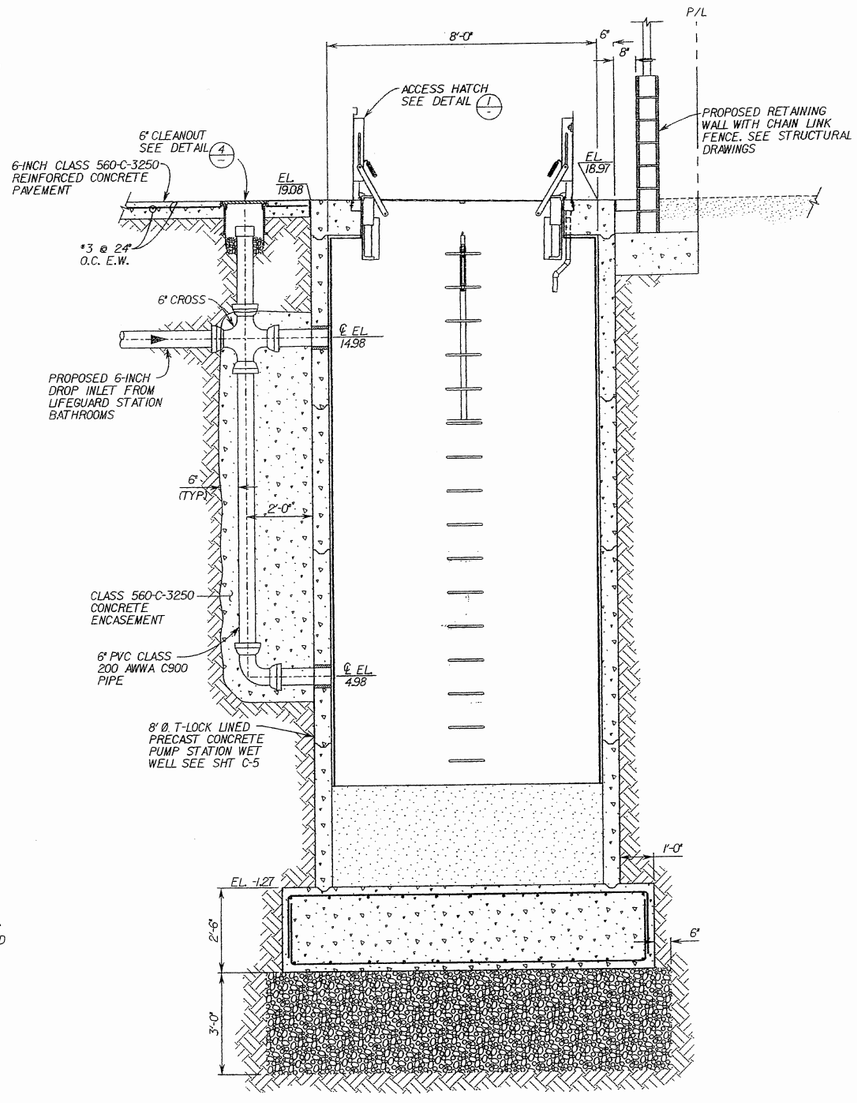
ACCESS HATCH DETAIL (1 / C-6)

NOT TO SCALE



HIGH LEVEL FLOAT SWITCH MOUNTING DETAIL (3 / C-6)

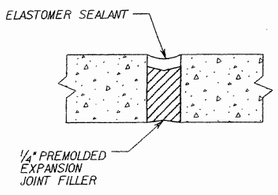
NOT TO SCALE



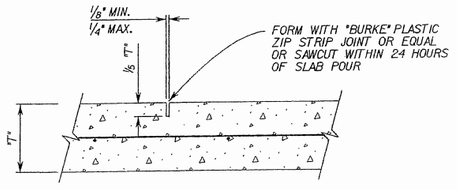
JUL 21 2011

NOTE

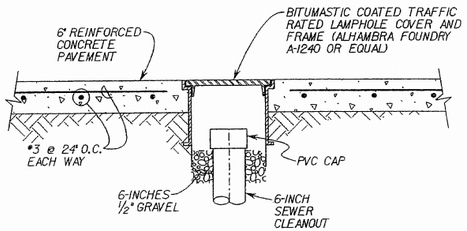
PLACE AS SHOWN OR CONTINUOUS ALONG PERIMETER OF ISOLATED SLAB W/ STRUCTURE, AND PIPE PENETRATIONS THROUGH SLAB



EXPANSION JOINT



WEAKENED PLANE JOINT



SEWER CLEANOUT DETAIL (4 / --)

NOT TO SCALE

SEWER DROP PIPE INTO PROPOSED WET WELL

SCALE: 1/2" = 1'-0"

PAVING JOINT DETAILS (2 / C-5, C-6)

NOT TO SCALE

BID DOCUMENTS

REGISTERED PROFESSIONAL ENGINEER JOHN A. LOADER 50292 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA 9/17/10

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NO.	DATE	BY

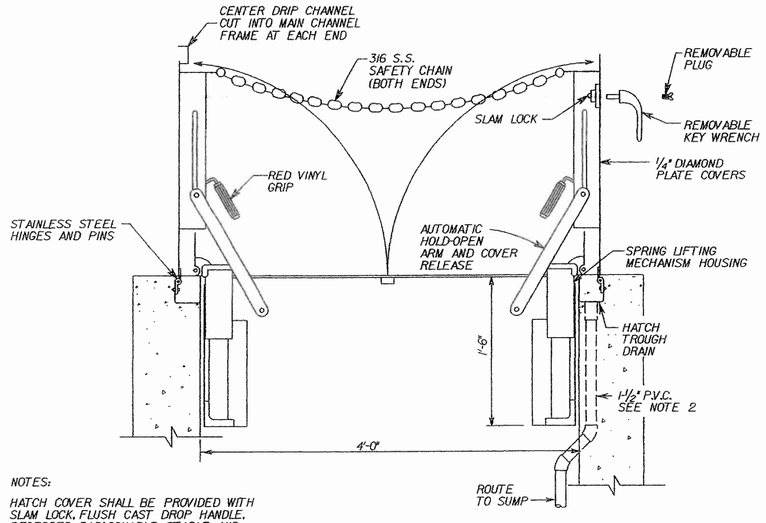
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION

PUMP STATION WET WELL ACCESS HATCH, FLOAT SWITCH, SEWER DROP PIPE, AND EXPANSION JOINT DETAILS

PM XXX DATE
DRAWN XXX DATE
CHECK XXX DATE
APPROVED DATE
CITY ENGINEER R.E.

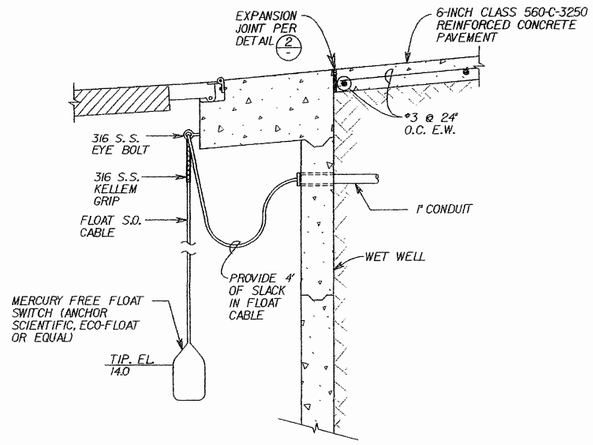
C-8
MM/DD/YYYY
SHEET X OF X
JOB NO. 0000000



NOTES:

1. HATCH COVER SHALL BE PROVIDED WITH SLAM LOCK, FLUSH CAST DROP HANDLE, RECESSED PADLOCKABLE STAPLE AND TROUGH. COVERS SHALL BE SECURED TO THE FRAME WITH 1/2" 316 S.S. BOLTS.
2. PROVIDE 1 1/2" PVC SCH 80 DRAIN PIPE FROM HATCH TROUGH DRAIN TO SUMP.
3. HATCH COVER SHALL BE ALUMINUM.
4. HATCH COVER SHALL BE RATED FOR OCCASIONAL H20 TRAFFIC LOADING
5. ALL PARTS OF FRAME IN CONTACT WITH CONCRETE SHALL BE COATED WITH 16 MILS OF BITUMINOUS PAINT.
6. SHOWN FOR DOUBLE LEAF HATCH. SIMILAR FOR SINGLE LEAF HATCH.

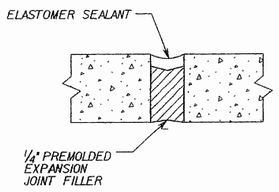
ACCESS HATCH DETAIL (1 / C-6)
NOT TO SCALE



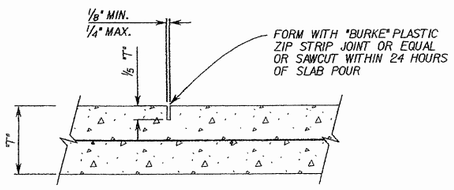
HIGH LEVEL FLOAT SWITCH MOUNTING DETAIL (3 / C-6)
NOT TO SCALE

NOTE

PLACE AS SHOWN OR CONTINUOUS ALONG PERIMETER OF ISOLATED SLAB W/ STRUCTURE, AND PIPE PENETRATIONS THROUGH SLAB

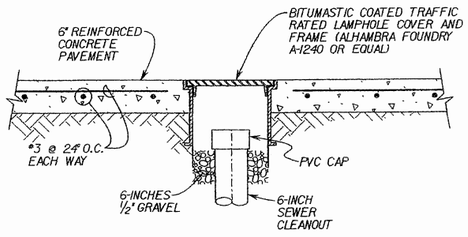


EXPANSION JOINT



WEAKENED PLANE JOINT

PAVING JOINT DETAILS (2 / C-5, C-6)
NOT TO SCALE



SEWER CLEANOUT DETAIL (4 / --)
NOT TO SCALE

JUL 21 2011

REGISTERED PROFESSIONAL ENGINEER JOHN LOADER No. C43214 CIVIL STATE OF CALIFORNIA — Exp. 6/30/11 — 2/10/11

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(949) 753-7333

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION
PUMP STATION WET WELL ACCESS HATCH, FLOAT SWITCH, AND EXPANSION JOINT DETAILS

C-8
10/06/2010

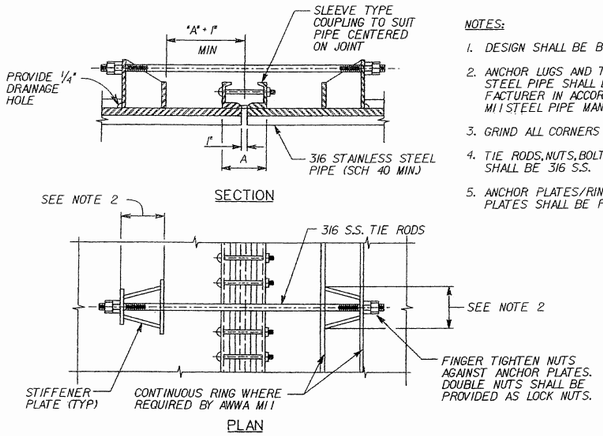
PM JL DATE 10/10
DRAWN B.G. DATE 10/10
CHECK J.K. DATE 10/10

APPROVED DATE
CITY ENGINEER R.E.

SHEET X OF 68

JOB NO. 1109531

2/10/2011 N:\1109_Lifeguard\1080 Lifeguard Pump Station\Plans\1109_C-8_detail 4th_2.dgn



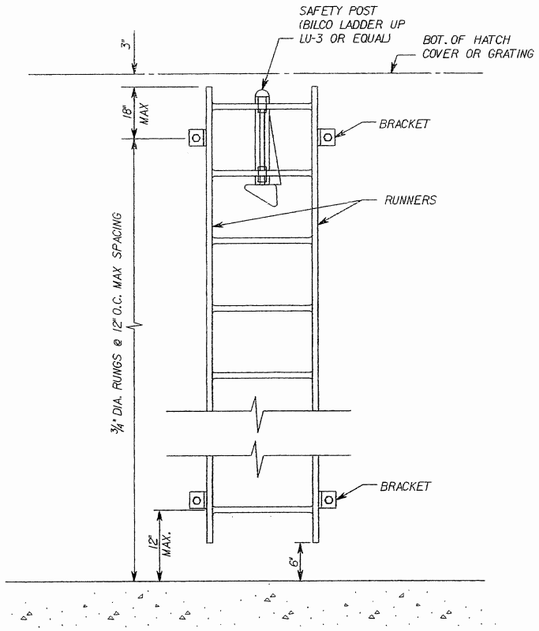
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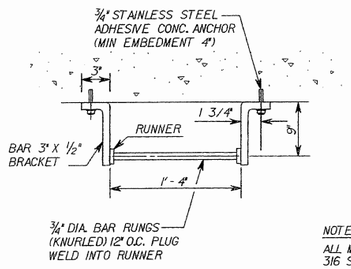
1. DESIGN SHALL BE BASED ON 100 PSI.
2. ANCHOR LUGS AND TIE RODS FOR STAINLESS STEEL PIPE SHALL BE DESIGNED BY PIPE MANUFACTURER IN ACCORDANCE WITH AWWA M11 STEEL PIPE MANUAL.
3. GRIND ALL CORNERS SMOOTH.
4. TIE RODS, NUTS, BOLTS, AND WASHERS SHALL BE 316 S.S.
5. ANCHOR PLATES/RINGS AND STIFFENER PLATES SHALL BE FACTORY WELDED.

SLEEVE COUPLING WITH HARNESS ASSEMBLY (1)

NOT TO SCALE

C-5, C-6



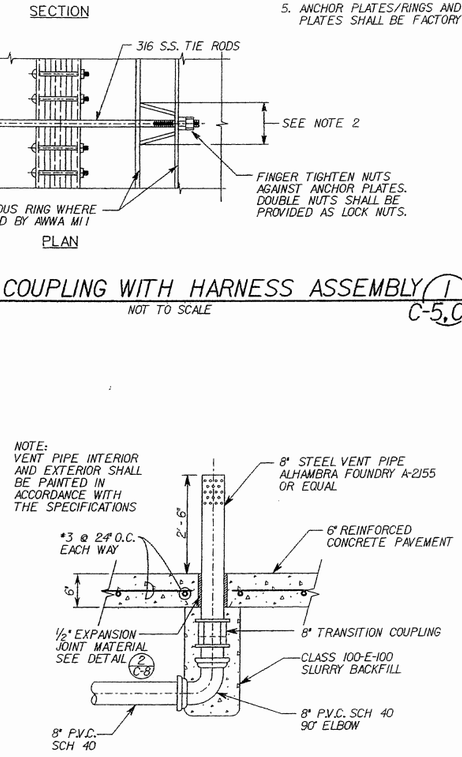


NOTE:
ALL MATERIAL SHALL BE 316 STAINLESS STEEL

LADDER DETAIL (3)

NOT TO SCALE

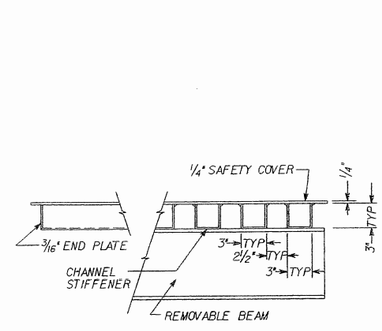
C-6



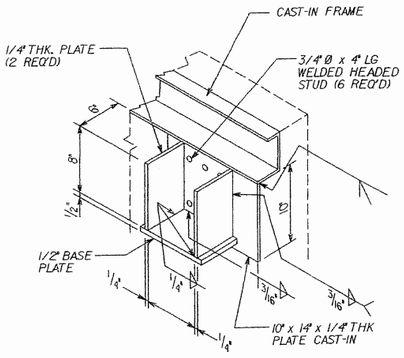
VENT PIPE DETAIL (2)

NOT TO SCALE

C-5

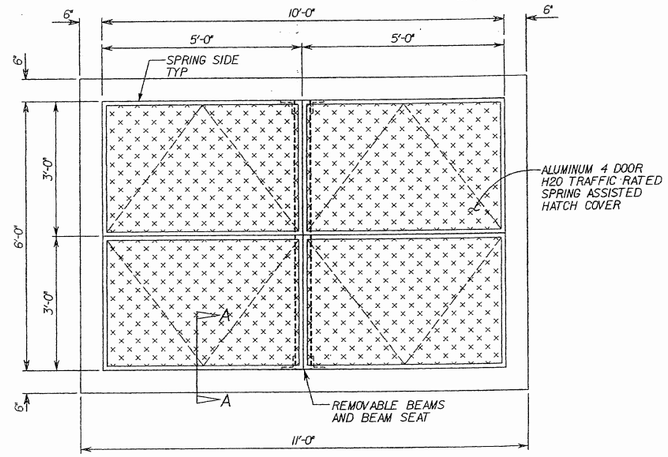


SECTION A-A



BEAM SEAT DETAIL

NTS



NOTES:

1. EACH HATCH COVER SHALL BE PROVIDED WITH SLAM LOCK, FLUSH CAST DROP HANDLE, RECESSED PADLOCKABLE STAPLE, AND TROUGH. COVERS SHALL BE SECURED TO THE FRAME WITH 1/2" 316 S.S. BOLTS.
2. PROVIDE 1 1/2" PVC SCH 80 DRAIN PIPE FROM HATCH TROUGH TO SUMP.
3. HATCHES SHALL BE PROVIDED WITH SAFETY GRATES.

VALVE VAULT COVER DETAIL (4)

NOT TO SCALE

C-6

JUL 21 2011

BID DOCUMENTS

REGISTERED PROFESSIONAL ENGINEER — ERIK A. LUNDQUIST — No. 58292 — Exp. 6/30/11 — CIVIL — STATE OF CALIFORNIA

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IRVINE, CA. 92618
(949) 753-7333

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION

PUMP STATION SLEEVE COUPLING, VENT PIPE, LADDER, AND VALVE VAULT COVER DETAIL

PM XXX DATE ___
DRAWN XXX DATE ___
CHECK XXX DATE ___

APPROVED DATE ___
CITY ENGINEER R.E. ___

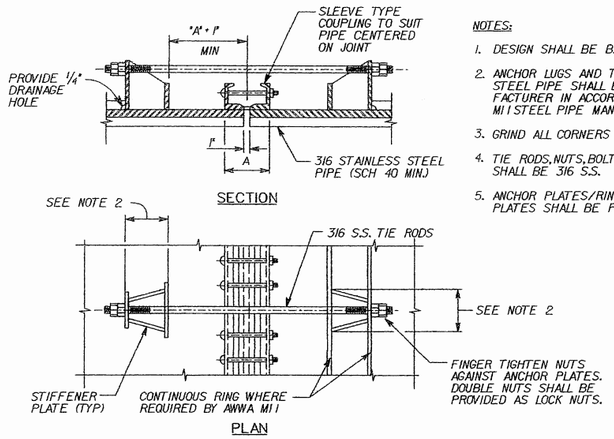
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MM/DD/YYYY

SHEET X OF X

JOB NO. 0000000

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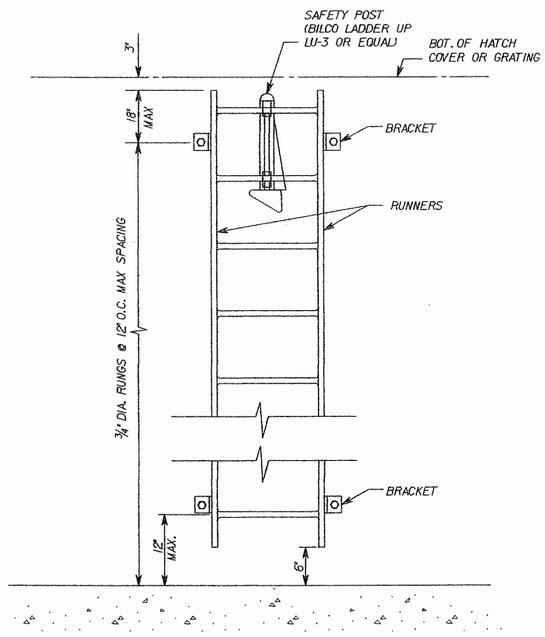
NOTES:

1. DESIGN SHALL BE BASED ON 100 PSI.
2. ANCHOR LUGS AND TIE RODS FOR STAINLESS STEEL PIPE SHALL BE DESIGNED BY PIPE MANUFACTURER IN ACCORDANCE WITH AWWA M11 STEEL PIPE MANUAL.
3. GRIND ALL CORNERS SMOOTH.
4. TIE RODS, NUTS, BOLTS, AND WASHERS SHALL BE 316 S.S.
5. ANCHOR PLATES/RINGS AND STIFFENER PLATES SHALL BE FACTORY WELDED.

SLEEVE COUPLING WITH HARNESS ASSEMBLY (1)

NOT TO SCALE

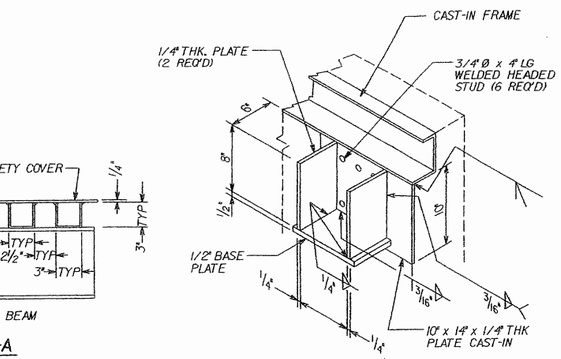
C-5, C-6



LADDER DETAIL (3)

NOT TO SCALE

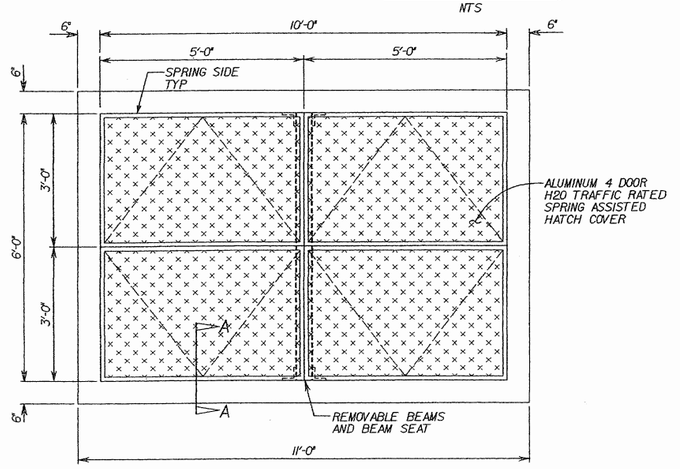
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SECTION A-A

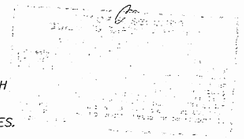
BEAM SEAT DETAIL

NTS



NOTES:

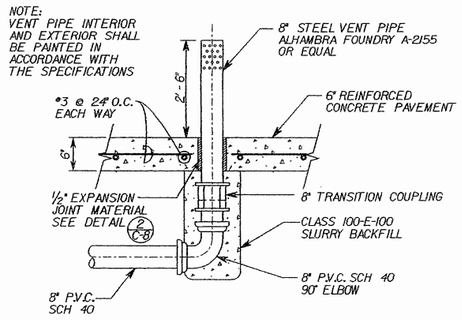
1. EACH HATCH COVER SHALL BE PROVIDED WITH SLAM LOCK, FLUSH CAST DROP HANDLE, RECESSED PADLOCKABLE STAPLE, AND TROUGH. COVERS SHALL BE SECURED TO THE FRAME WITH 1/2" 316 S.S. BOLTS.
2. PROVIDE 1 1/2" PVC SCH 80 DRAIN PIPE FROM HATCH TROUGH TO SUMP.
3. HATCHES SHALL BE PROVIDED WITH SAFETY GRATES.



VALVE VAULT COVER DETAIL (4)

NOT TO SCALE

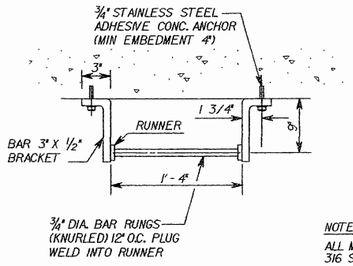
C-6



VENT PIPE DETAIL (2)

NOT TO SCALE

C-5



NOTE:

ALL MATERIAL SHALL BE 316 STAINLESS STEEL

JUL 21 2011

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

LIFEGUARD STATION

PUMP STATION SLEEVE COUPLING, VENT PIPE, LADDER, AND VALVE VAULT COVER DETAIL

PM J.L. DATE 10/10
DRAWN B.G. DATE 10/10
CHECK Z.K. DATE 10/10

APPROVED DATE

CITY ENGINEER R.E.

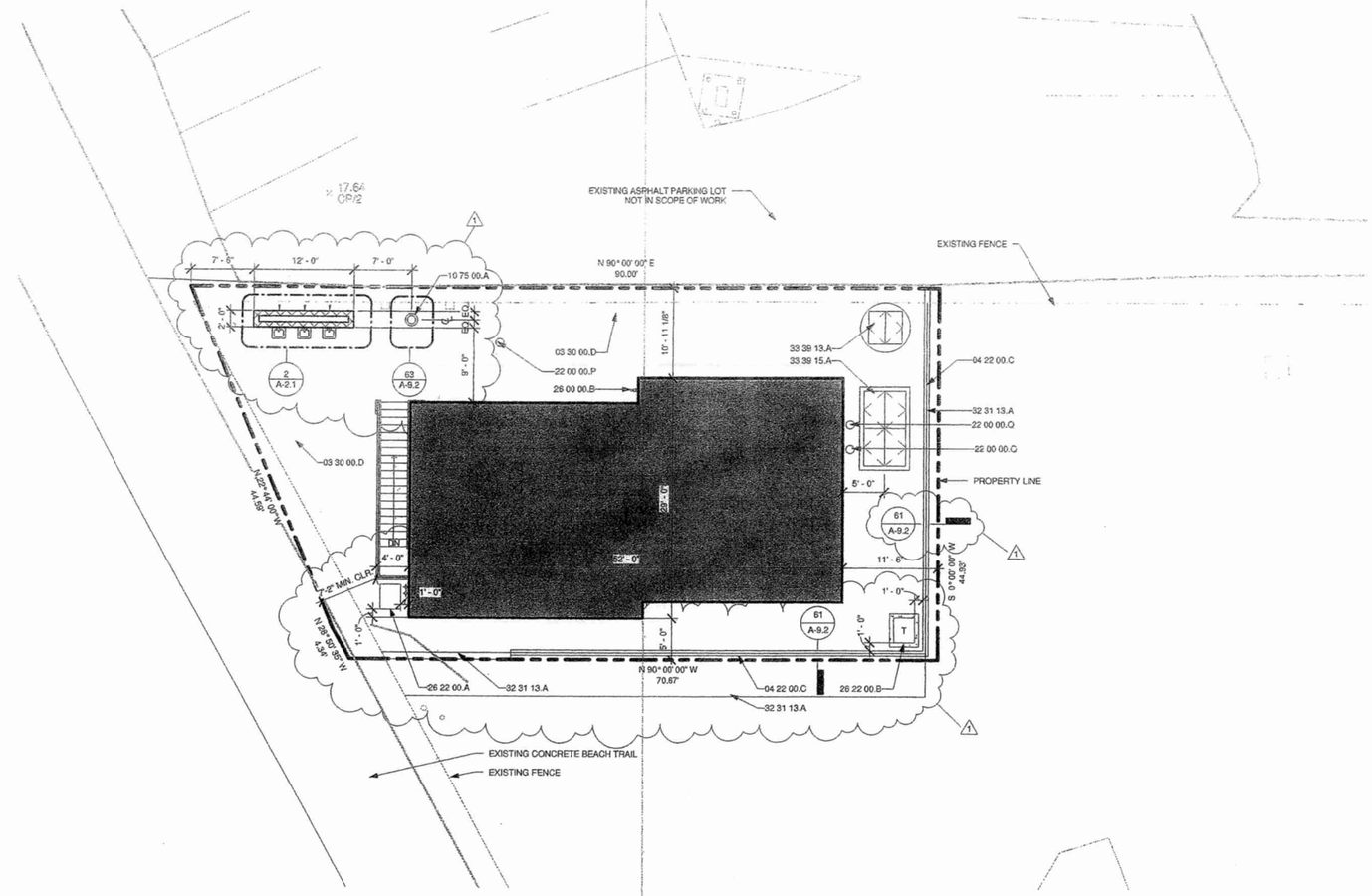
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10/06/2010

SHEET X OF 68

JOB NO. 1109531

2/20/2011 N:\RBK Projects\PD_Lifeguard Pump Station\Phase 1\XX-C-9-detail.dgn 3.4pp



1 OVERALL ARCHITECTURAL SITE PLAN
A-5.1 | A-1.1 1/8" = 1'-0"

GENERAL NOTES

1 REFER TO CIVIL PLANS FOR FURTHER INFORMATION.
2 REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
3 REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION.
4 REFER TO PLUMBING PLANS FOR FURTHER INFORMATION.

KEYNOTES

03 30 00.D	CONCRETE PAVING FOR VEHICULAR TRAFFIC. SEE CIVIL.
04 22 00.C	CMU RETAINING WALL, COLOR B. REFER TO CIVIL AND STRUCTURAL.
10 75 00.A	FLAG POLE
22 00 00.P	CLEAN OUT. REFER TO PLUMBING AND CIVIL.
22 00 00.Q	VENT PIPES. REFER TO PLUMBING AND CIVIL.
26 00 00.B	SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
26 22 00.A	TRANSFORMER HAND HOLE. REFER TO ELECTRICAL.
26 22 00.B	TRANSFORMER WITH CONCRETE HOUSEKEEPING PAD. REFER TO ELECTRICAL.
32 31 13.A	CHAIN LINK FENCE. REFER TO CIVIL.
33 39 13.A	PRECAST CONCRETE PUMP STATION WET WELL. REFER TO CIVIL.
33 39 15.A	PRECAST CONCRETE PUMP STATION VALVE VAULT. REFER TO CIVIL.

LEGEND

JUL 21 2011

BID DOCUMENTS

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
ARCHITECTURAL SITE PLAN

PM ____ DATE ____
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CHECK ____ DATE ____

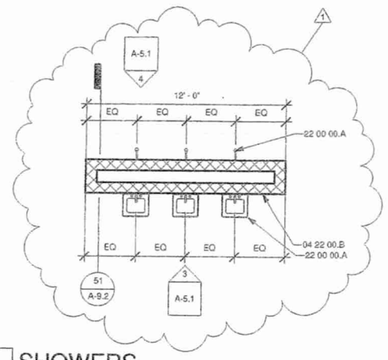
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10/06/10

SHEET 13 OF 68
JOB NO. 1109531

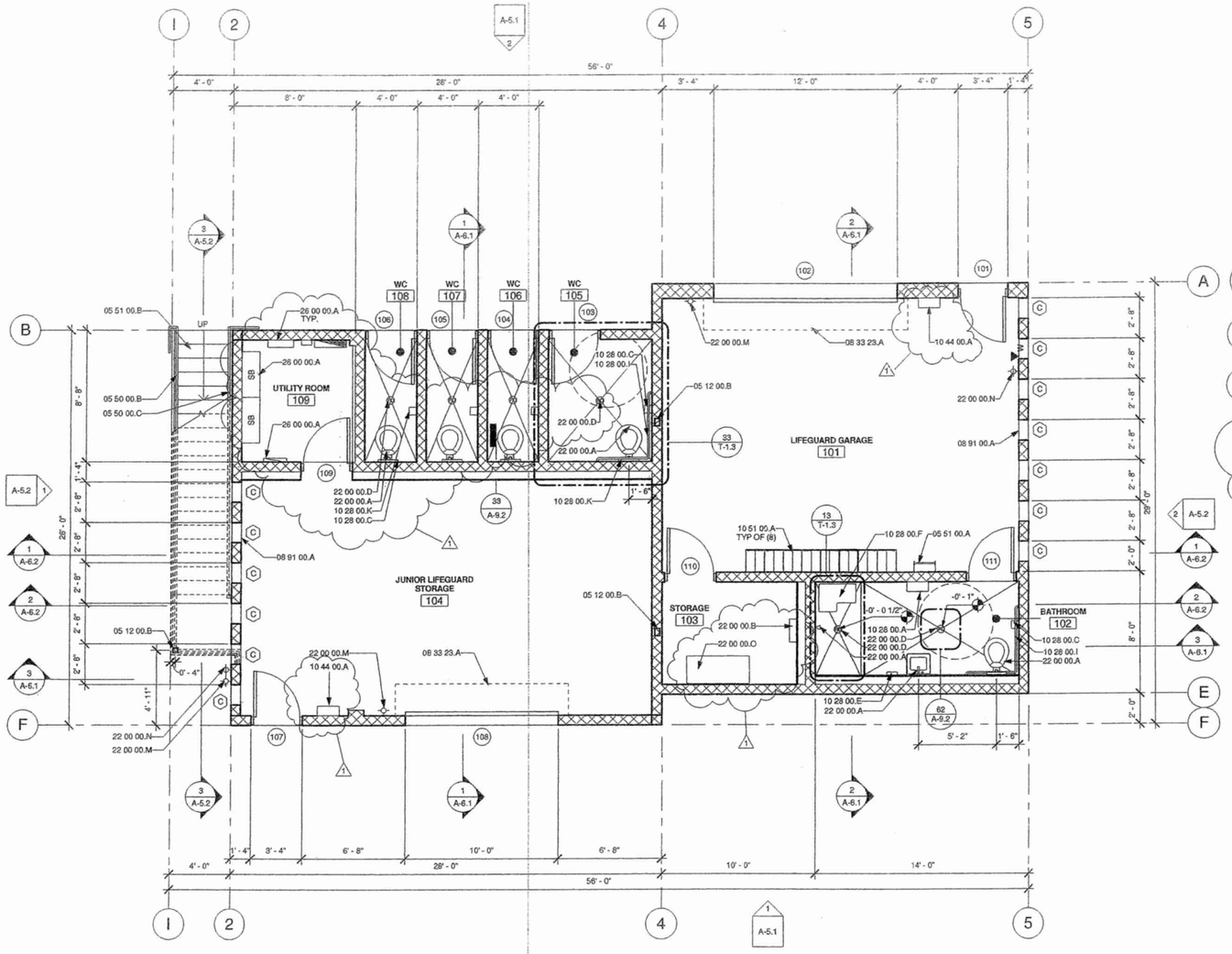
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2 SHOWERS

A3 | A-2.1 | 1/4" = 1'-0"



1 GROUND FLOOR PLAN

A3 | A-2.1 | 1/4" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
2. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
3. REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION.
4. REFER TO PLUMBING PLANS FOR FURTHER INFORMATION.
5. ALL FURNITURE AND EQUIPMENT IS BY OWNER AND IS SHOWN FOR COORDINATION PURPOSES ONLY.
6. REFER TO FINISH PLAN AND SCHEDULE FOR INTERIOR WALL, CEILING AND FLOOR FINISH INFORMATION.
7. DIMENSIONS ARE TO FACE OF FRAMING UNLESS SPECIFICALLY NOTED OTHERWISE.
8. PROVIDE ADEQUATE BLOCKING IN WALLS FOR CABINETS AND OTHER WALL MOUNTED ACCESSORIES INCLUDING BUT NOT LIMITED TO HANDRAILS, SHELVING AND BATHROOM FIXTURES.
9. PROVIDE FIRE BLOCKING FOR WALL CAVITIES THAT EXCEED CBC HEIGHT LIMITATION.
10. FIRE EXTINGUISHERS ARE TO BE LOCATED WITHIN THE 75 FOOT TRAVEL DISTANCE AND TO HAVE A MINIMUM RATING OF 2A:10BC. FIRE EXTINGUISHER LOCATIONS ARE TO BE FIELD VERIFIED BY THE FIRE DEPARTMENT INSPECTOR. (CCR T-19 SECTION 568).
11. INSTALL PLAINLY VISIBLE AND LEGIBLE SIGNS AT DOORS INTO ROOMS WITH ELECTICAL CONTROL PANELS STATING "ELECTRICAL ROOM." (CFC SECTION 605.3.1)
12. A RECESSED KNOX BOX IS TO BE INSTALLED ON THE BUILDING. THE LOCATION IS TO BE FIELD VERIFIED BY THE FIELD FIRE DEPARTMENT. (CFC SECTION 506.1)
13. ALL EQUIPMENT MUST BE A MINIMUM OF 2'-0" ABOVE ELEVATION 0'-0".
14. WET FLOORPROOFING PROVIDED AT 01-GROUND FLOOR, 0'-0". FOR EVERY SQUARE FOOT OF FLOOR AREA AT THE GOUND LEVEL, ONE SQUARE INCH OF WALL OPENING MUST BE PROVIDED. SEE WET FLOOR PROOFING CALCS ON T-1.2, CODE ANALYSIS.

KEYNOTES

04 22 00.B	CMU WALL. COLOR B. REFER TO STRUCTURAL.
05 12 00.B	STEEL COLUMN PER STRUCTURAL.
05 50 00.B	STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
05 50 00.C	STEEL HANDRAIL, PAINTED.
05 51 00.A	ACCESS LADDER.
05 51 00.B	STEEL STAIRS.
08 33 23.A	OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
10 28 00.A	SURFACE MOUNTED TOWEL DISPENSER/WASTE RECEPTACLE.
10 28 00.C	SURFACE MOUNTED TOILET TISSUE DISPENSER.
10 28 00.E	SOAP DISPENSER.
10 28 00.F	SHOWER BENCH.
10 28 00.I	GRAB BAR.
10 28 00.K	SURFACE MOUNTED SEAT COVER DISPENSER.
10 44 00.A	FIRE EXTINGUISHER IN SURFACE MOUNTED FIRE EXTINGUISHER CABINET
10 51 00.A	METAL LOCKERS W/ TOP SHELF, WALL MOUNTED.
22 00 00.A	PLUMBING FIXTURE. REFER TO PLUMBING.
22 00 00.B	ELECTRIC WATER HEATER. REFER TO PLUMBING.
22 00 00.D	FLOOR DRAIN. SLOPE FLOOR TO DRAIN . MIN 1/8" PER 1'-0". REFER TO PLUMBING.
22 00 00.M	HOSE BIB. REFER TO PLUMBING.
22 00 00.N	AIR COMPRESSOR CONNECTION. REFER TO PLUMBING.
22 00 00.O	AIR COMPRESSOR. REFER TO PLUMBING.
26 00 00.A	ELECTRICAL EQUIPMENT. REFER TO ELECTRICAL.

LEGEND

- 12" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL W/ EXTERIOR RIBBED METAL PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS AND INTERIOR FURRING, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL FURRING

JUL 21 2011

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A California Corporation | Nate Montgomery Architect #C-31886 | Larry Nichol, PE #59795, LS #8294 | Jeff Farber, LA #3344

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
GROUND FLOOR PLAN

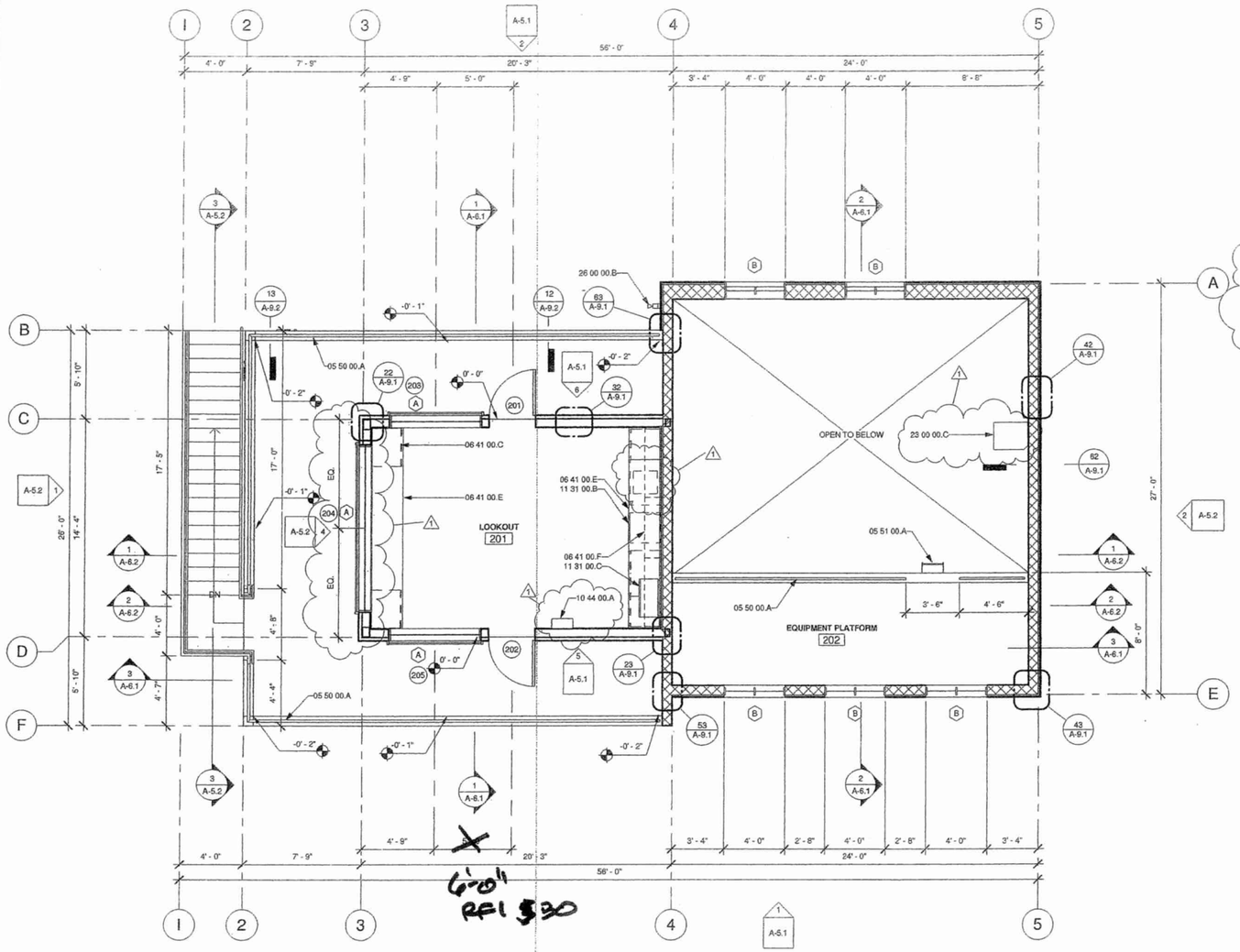
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SHEET 14 OF 68
JOB NO. 1109531

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1 SECOND FLOOR PLAN

A3 | A-2.2 | 1/4" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
2. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
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11. INSTALL PLAINLY VISIBLE AND LEGIBLE SIGNS AT DOORS INTO ROOMS WITH ELECTICAL CONTROL PANELS STATING "ELECTRICAL ROOM." (CFC SECTION 605.3.1)
12. A RECESSED KNOX BOX IS TO BE INSTALLED ON THE BUILDING. THE LOCATION IS TO BE FIELD VERIFIED BY THE FIELD FIRE DEPARTMENT. (CFC SECTION 506.1)
13. ALL EQUIPMENT MUST BE A MINIMUM OF 2'-0" ABOVE ELEVATION 0'-0".
14. WET FLOODPROOFING PROVIDED AT 01-GROUND FLOOR, 0'-0". FOR EVERY SQUARE FOOT OF FLOOR AREA AT THE GOUND LEVEL, ONE SQUARE INCH OF WALL OPENING MUST BE PROVIDED. SEE WET FLOOR PROOFING CALCS ON T-1.2, CODE ANALYSIS.

KEYNOTES

05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 51 00.A	ACCESS LADDER.
06 41 00.C	BASE CABS W/ DRAWERS, DOORS & PULL OUT SHELVING
06 41 00.E	COUNTERTOP WITH BACKSPLASH.
06 41 00.F	UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVING.
10 44 00.A	FIRE EXTINGUISHER IN SURFACE MOUNTED FIRE EXTINGUISHER CABINET
11 31 00.B	UNDER CABINET REFRIGERATOR. OWNER FURNISHED AND INSTALLED.
11 31 00.C	MICROWAVE. OWNER FURNISHED AND INSTALLED.
23 00 00.C	WALL-MOUNTED HEATER. REFER TO MECHANICAL.
26 00 00.B	SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.

LEGEND

- 12" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL W/ EXTERIOR RIBBED METAL PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS, REFER TO STRUCTURAL PLANS
- 8" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS AND INTERIOR FURRING, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL FURRING

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A California Corporation / Nolan Montgomery, Audrey Mitchell, Jerry Michael, PE #33886, LS #9294 / Jeff Fisher, LA #3244

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
SECOND FLOOR PLAN

PM DATE
DRAWN SDR DATE
CHECK DATE

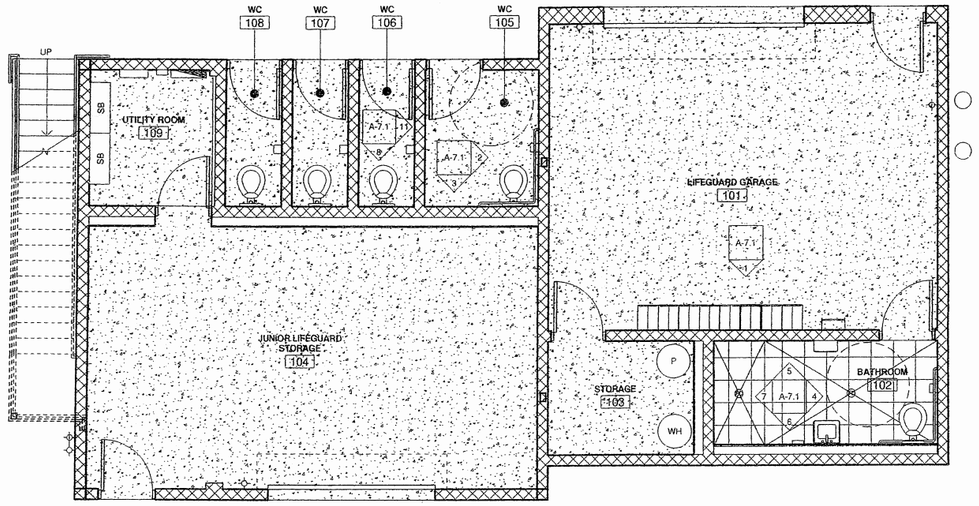
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10/08/10

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JOB NO. 1109531

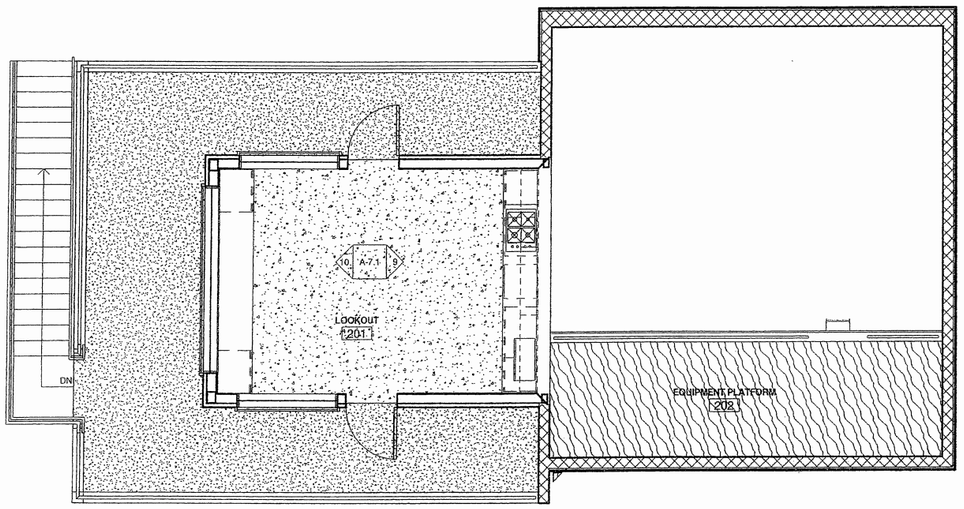
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1 GROUND FLOOR FINISH PLAN

A3 | A-2.3 | 1/4" = 1'-0"



2 SECOND FLOOR FINISH PLAN

A3 | A-2.3 | 1/4" = 1'-0"

FINISH SCHEDULE

NUMBER	NAME	FLOOR FINISH	CEILING FINISH	BASE FINISH	WAINSCOT FINISH	WALL FINISH NORTH	WALL FINISH SOUTH	WALL FINISH EAST	WALL FINISH WEST	COMMENTS
101	LIFEGUARD GARAGE	SCON	B.O.S.	CTB	-	CMU	CMU	CMU	CMU	
102	BATHROOM	CT	B.O.S.	CTB	CTW	CMU/CTW	CTW/GBP	CMU	CMU/CTW	
103	STORAGE	SCON	B.O.S.	CTB	-	CMU	CMU	GBP	CMU	
104	JUNIOR LIFEGUARD STORAGE	SCON	B.O.S.	CTB	-	GBP	CMU	CMU	CMU	
105	WC	SCON	GBP	-	-	CMU	CMU	CMU	CMU	
106	WC	SCON	GBP	-	-	CMU	CMU	CMU	CMU	
107	WC	SCON	GBP	-	-	CMU	CMU	CMU	CMU	
108	WC	SCON	GBP	-	-	CMU	CMU	CMU	CMU	
109	UTILITY ROOM	SCON	GBP	CTB	-	CMU	CMU	CMU	CMU	
201	LOOKOUT	PCON	B.O.S.	CTB	-	GBP	GBP	GBP	GBP	
202	EQUIPMENT PLATFORM	PLY	B.O.S.	-	-	-	CMU	CMU	CMU	

COMMENTS

1

LEGEND

CONCRETE

CERAMIC TILE

ELASTOMERIC MEMBRANE

PLYWOOD

GENERAL NOTES

ABBREVIATIONS

BASE
CTB BULLNOSED CERAMIC TILE BASE

CEILING
B.O.S. BOTTOM OF STRUCTURE, PAINT FINISH
GBP GYPSUM BOARD, PAINT FINISH

FLOORS
CT CERAMIC TILE
PCON POLISHED CONCRETE
PLY PLYWOOD
SCON SEALED CONCRETE

WAINSCOT
CTW CERAMIC TILE WAINSCOT

WALLS
CMU CEMENT MASONRY UNITS
GBP GYPSUM BOARD, PAINT FINISH

JUL 21 2011

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DONALD CAREY MILLER
No. C-29135
REGISTERED ARCHITECT
EXPIRES 5/31/2011

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A California Corporation | Peter Montgomery, Architect #C31561 Jerry Michel, PE #36556, LS #8761 Jeff Pecko, LA #5414

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EL SEGUNDO LS
FINISH PLANS

PM
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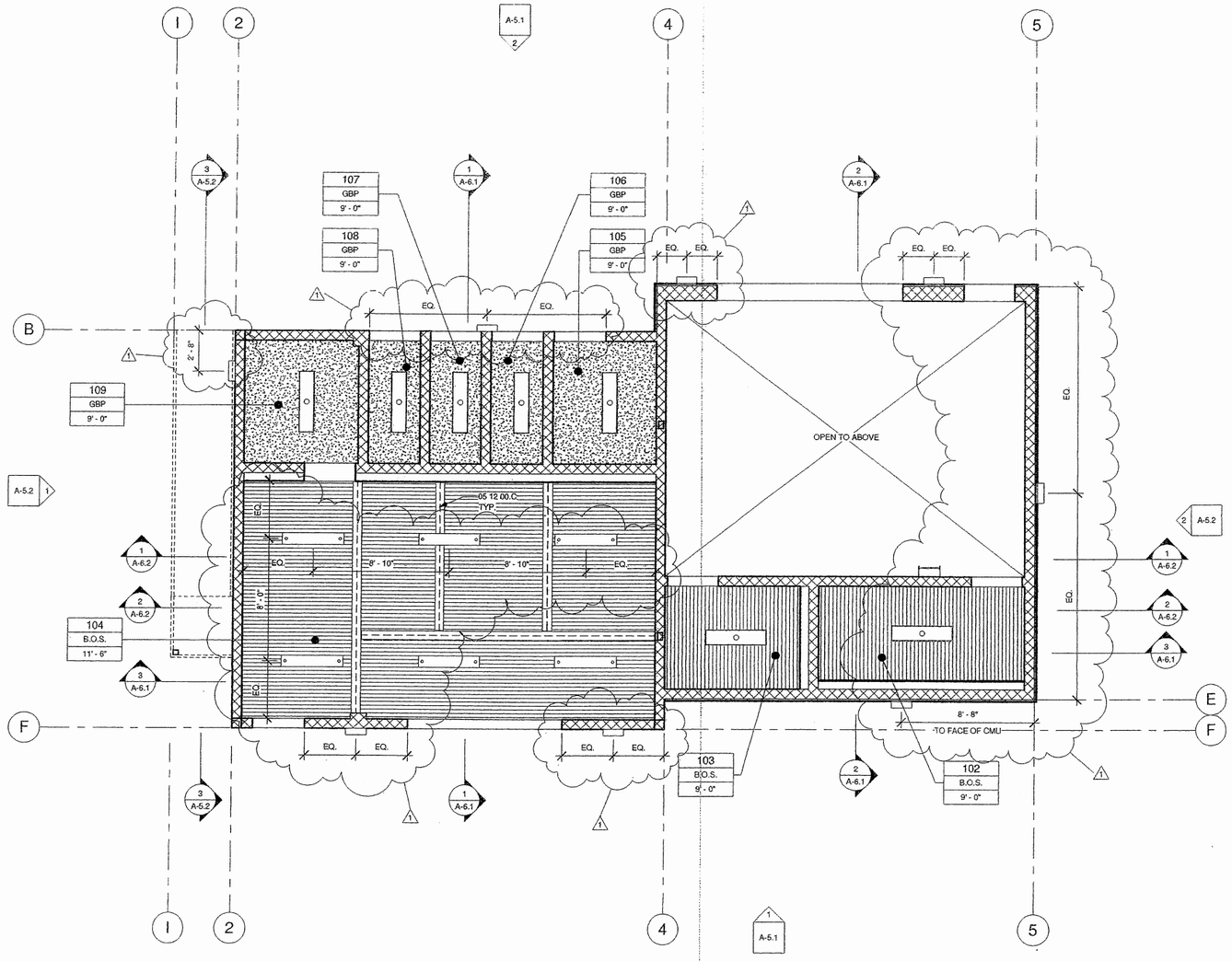
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SHEET 16 OF 68

JOB NO. 1109531

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1 GROUND FLOOR RCP

A3 | A-3.1 | 1/4" = 1'-0"

GENERAL NOTES

1. BORDERS AT LAY-IN ACOUSTICAL CEILING PANELS SHALL BE CUT TO MATCH FACTORY EDGE PROFILE. NO EXPOSED FASTENERS SHALL BE PERMITTED INCLUDING POP RIVETS AND TAPPETS.
2. HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UON.
3. ALL LIGHT FIXTURES ARE TO BE INSTALLED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN. ARCHITECT TO REVIEW CEILING LAYOUT INCLUDING BULKHEADS AND GRID PRIOR TO INSTALLATION.
4. LIGHT FIXTURE TYPES, QUANTITIES AND LOCATIONS ONLY ARE NOTED ON ARCHITECTURAL REFLECTED CEILING PLANS. SPECIFICATIONS, SWITCHING, EXIT LIGHTS, EMERGENCY LIGHTING, LIFE SAFETY EQUIPMENT, AND CIRCUITING ARE NOTED ON ENGINEERING DOCUMENTS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL ARCHITECTURAL AND ENGINEERING DRAWINGS.
5. DIMENSIONED LIGHT FIXTURES ARE FROM FINISHED FACE OF PARTITIONS TO CENTERLINE OF FIXTURE AND FROM CENTERLINE OF FIXTURE TO CENTERLINE OF FIXTURE. ALL FIXTURES SHALL BE INSTALLED IN CENTER OF CEILING TILE UNLESS NOTED OTHERWISE. ANY DISCREPANCIES WITH LIGHT FIXTURES, SWITCHES, THERMOSTATS, OR DIFFUSERS AS TO LOCATION BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS OR BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE CLARIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH INSTALLATION.

KEYNOTES

05 12 00.C STEEL BEAM PER STRUCTURAL.

ABBREVIATIONS

BASE
CTB BULLNOSED CERAMIC TILE BASE

CEILING
B.O.S. BOTTOM OF STRUCTURE, PAINT FINISH
GBP GYPSUM BOARD, PAINT FINISH

FLOORS
CT CERAMIC TILE
PCON POLISHED CONCRETE
PLY PLYWOOD
SCON SEALED CONCRETE

WAINSCOT
CTW CERAMIC TILE WAINSCOT

WALLS
CMU CEMENT MASONRY UNITS
GBP GYPSUM BOARD, PAINT FINISH

JUL 21 2011

LEGEND

101 — ROOM NUMBER
00 00 00.000 — MATERIAL
0' - 0" — CEILING HEIGHT

GYPSUM BOARD

BID DOCUMENTS

EXPOSED METAL DECK, REFER TO STRUCTURAL PLANS FOR ORIENTATION

PENDANT MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS

CEILING MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS

WALL MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS

WALL

STRUCTURAL BEAM, REFER TO STRUCTURAL PLANS

STRUCTURAL FRAMING, REFER TO STRUCTURAL PLANS

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
GROUND FLOOR RCP

A-3.1
10/06/10

SHEET 17 OF 68

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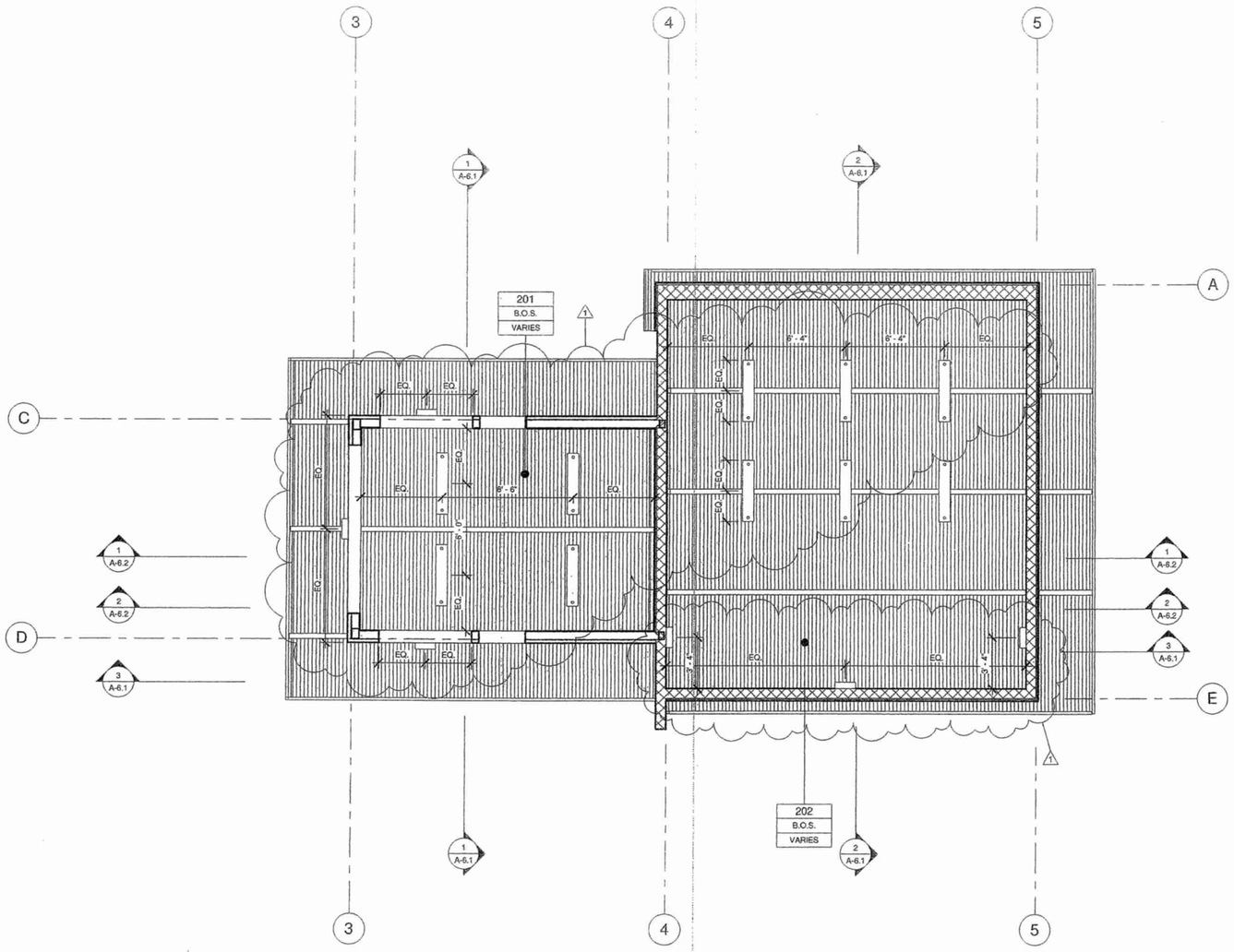
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1 SECOND FLOOR RCP
A3 | A-3.2 1/4" = 1'-0"

GENERAL NOTES

1. BORDERS AT LAY-IN ACOUSTICAL CEILING PANELS SHALL BE CUT TO MATCH FACTORY EDGE PROFILE. NO EXPOSED FASTENERS SHALL BE PERMITTED INCLUDING POP RIVETS AND TAPPETS.
2. HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UON.
3. ALL LIGHT FIXTURES ARE TO BE INSTALLED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN. ARCHITECT TO REVIEW CEILING LAYOUT INCLUDING BULKHEADS AND GRID PRIOR TO INSTALLATION.
4. LIGHT FIXTURE TYPES, QUANTITIES AND LOCATIONS ONLY ARE NOTED ON ARCHITECTURAL REFLECTED CEILING PLANS. SPECIFICATIONS, SWITCHING, EXIT LIGHTS, EMERGENCY LIGHTING, LIFE SAFETY EQUIPMENT, AND CIRCUITING ARE NOTED ON ENGINEERING DOCUMENTS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL ARCHITECTURAL AND ENGINEERING DRAWINGS.
5. DIMENSIONED LIGHT FIXTURES ARE FROM FINISHED FACE OF PARTITIONS TO CENTERLINE OF FIXTURE AND FROM CENTERLINE OF FIXTURE TO CENTERLINE OF FIXTURE. ALL FIXTURES SHALL BE INSTALLED IN CENTER OF CEILING TILE UNLESS NOTED OTHERWISE. ANY DISCREPANCIES WITH LIGHT FIXTURES, SWITCHES, THERMOSTATS, OR DIFFUSERS AS TO LOCATION BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS OR BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE CLARIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH INSTALLATION.

KEYNOTES

ABBREVIATIONS

BASE	
CTB	BULLNOSED CERAMIC TILE BASE
CEILING	
B.O.S.	BOTTOM OF STRUCTURE, PAINT FINISH
GBP	GYPSUM BOARD, PAINT FINISH
FLOORS	
CT	CERAMIC TILE
PCON	POLISHED CONCRETE
PLY	PLYWOOD
SCON	SEALED CONCRETE
WAINSCOT	
CTW	CERAMIC TILE WAINSCOT
WALLS	
CMU	CEMENT MASONRY UNITS
GBP	GYPSUM BOARD, PAINT FINISH

JUL 21 2011

LEGEND

- 101 — ROOM NUMBER
- 00 00 00.000 — MATERIAL
- 0' - 0" — CEILING HEIGHT
- GYPSUM BOARD
- EXPOSED METAL DECK, REFER TO STRUCTURAL PLANS FOR ORIENTATION
- PENDANT MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- CEILING MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- WALL MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS (WALL)
- STRUCTURAL BEAM, REFER TO STRUCTURAL PLANS
- STRUCTURAL FRAMING, REFER TO STRUCTURAL PLANS

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EL SEGUNDO LS
SECOND FLOOR RCP

A-3.2
10/06/10

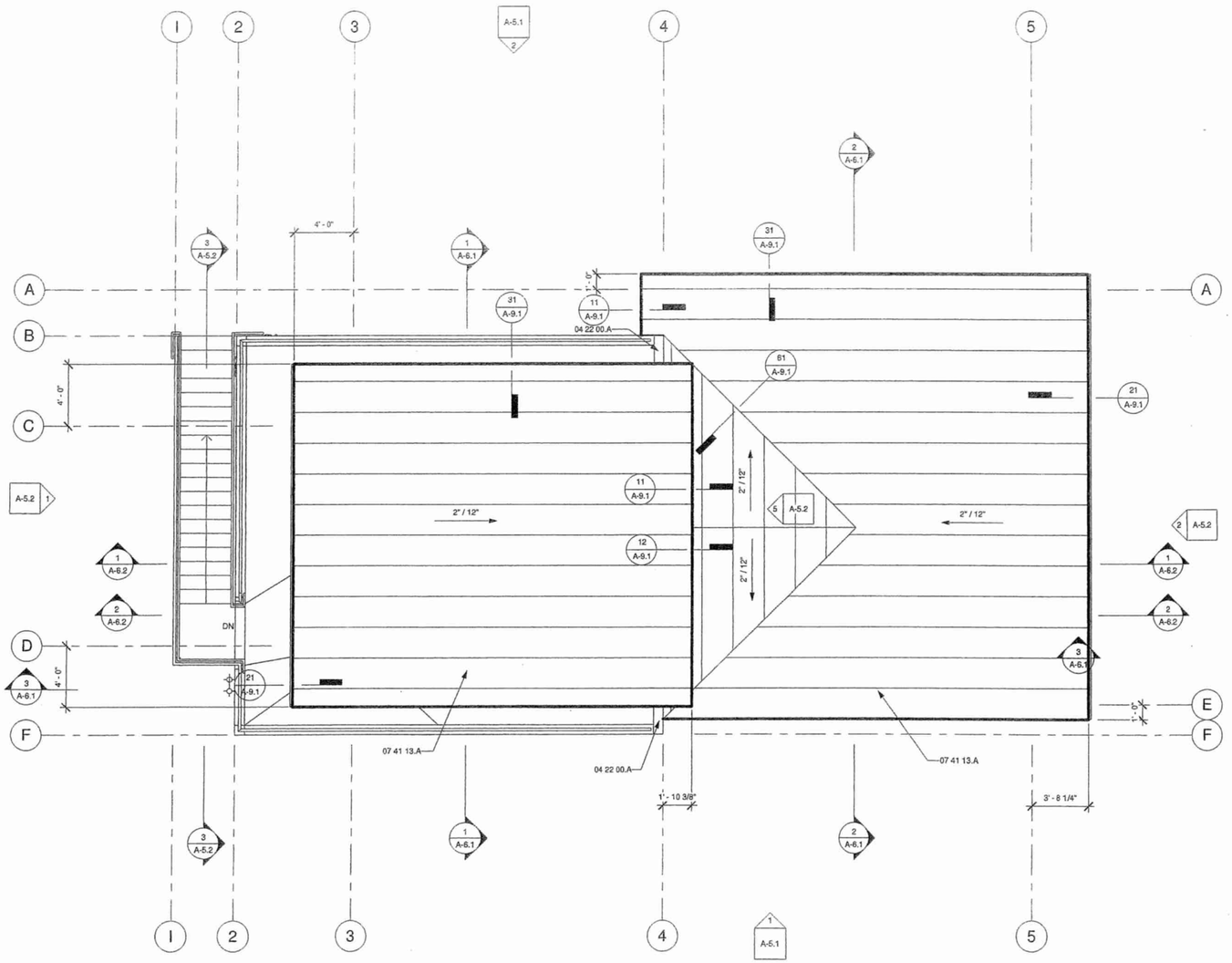
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JOB NO. 1109531

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1 ROOF PLAN

A3 | A-4.1 1/4" = 1'-0"

GENERAL NOTES

1. REFER TO STRUCTURAL PLANS FOR ROOF FRAMING INFORMATION INCLUDING MEMBER SIZES AND CONNECTION HARDWARE.
2. REFER TO ELECTRICAL PLANS FOR POWER DISTRIBUTION TO ROOF MOUNTED EQUIPMENT.
3. REFER TO MECHANICAL PLANS FOR ROOF MOUNTED EQUIPMENT LOCATION AND TYPE.
4. REFER TO PLUMBING PLANS FOR ROOF VENT PENETRATION.
5. PROVIDE A MINIMUM OF 1 INCH OF AIRSPACE BETWEEN THE INSULATION AND ROOF SHEATHING.

KEYNOTES

04 22 00.A CMU WALL, COLOR A. REFER TO STRUCTURAL.
07 41 13.A STANDING SEAM METAL ROOF PANEL.

LEGEND

JUL 21 2011

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CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
ROOF PLAN

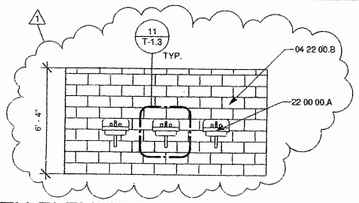
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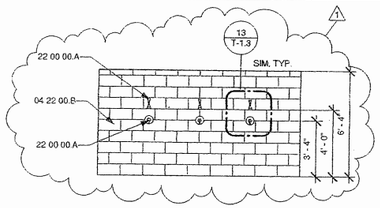
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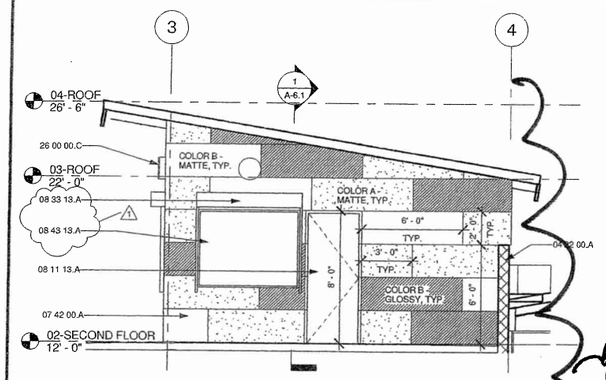
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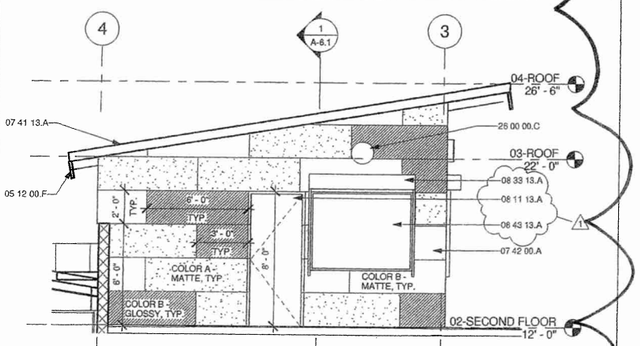
3 SOUTH ELEVATION-SHOWER
A-2.1 | A-5.1 1/4" = 1'-0"



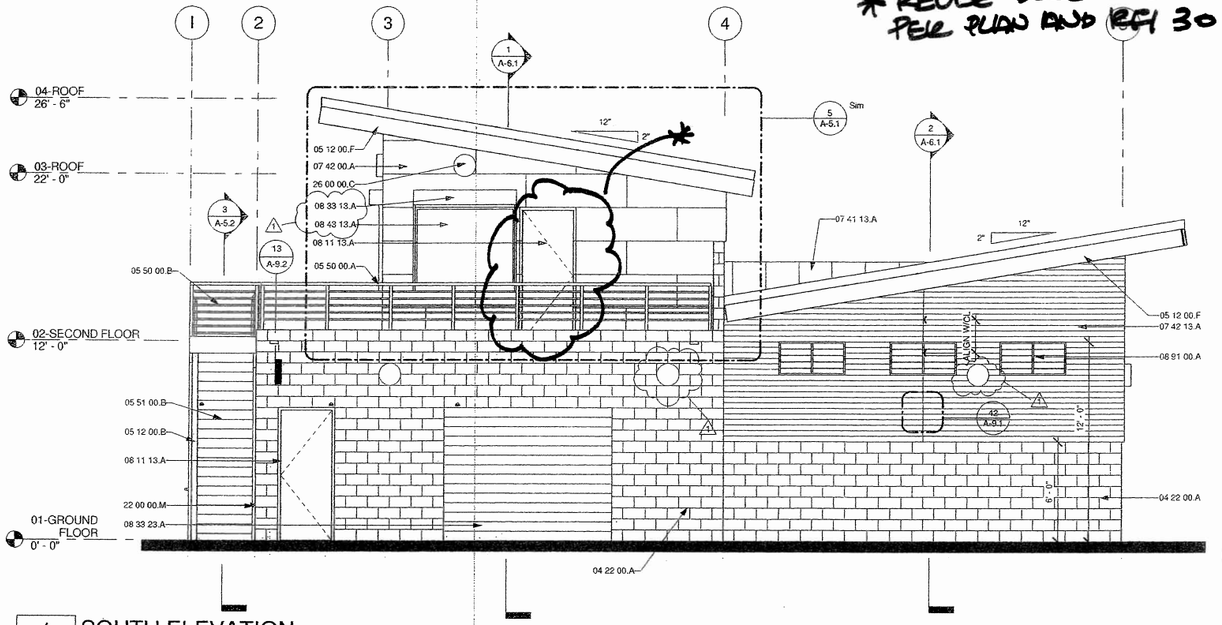
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A-2.1 | A-5.1 1/4" = 1'-0"



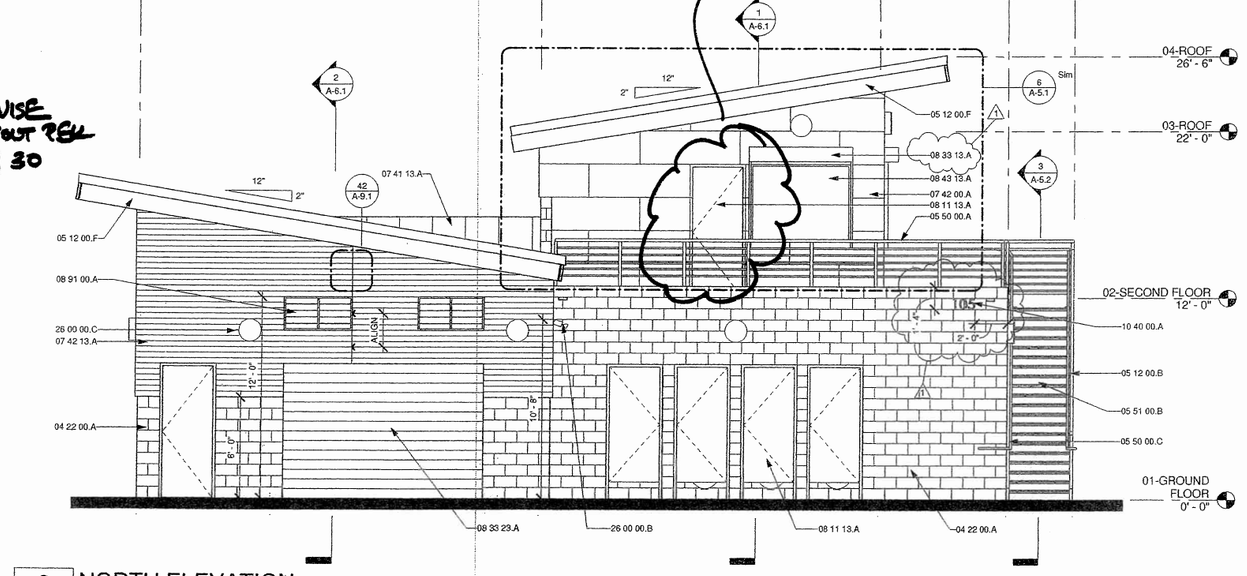
5 SOUTH ELEVATION-LOOKOUT
A-2.2 | A-5.1 1/4" = 1'-0"



6 NORTH ELEVATION-LOOKOUT
A-2.2 | A-5.1 1/4" = 1'-0"



1 SOUTH ELEVATION
A-1.1 | A-5.1 1/4" = 1'-0"



2 NORTH ELEVATION
A-1.1 | A-5.1 1/4" = 1'-0"

* REVISE DOOR LOCATION PER PLAN AND RFI 30

REVISE LAYOUT PER RFI 30

GENERAL NOTES

KEYNOTES

04 22 00.A	CMU WALL. COLOR A. REFER TO STRUCTURAL.
04 22 00.B	CMU WALL. COLOR B. REFER TO STRUCTURAL.
05 12 00.B	STEEL COLUMN PER STRUCTURAL.
05 12 00.F	STEEL FRAMING PER STRUCTURAL.
05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 50 00.B	STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
05 50 00.C	STEEL HANDRAIL. PAINTED.
05 51 00.B	STEEL STAIRS.
07 41 13.A	STANDING SEAM METAL ROOF PANEL
07 42 00.A	SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL. ALIGN PANELS HORIZONTALLY.
07 42 13.A	HORIZONTAL METAL PANELS.
08 11 13.A	HOLLOW METAL DOOR & FRAME. REFER DOOR SCHEDULE
08 33 13.A	OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
08 33 23.A	OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE.
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
10 40 00.A	BUILDING IDENTIFICATION NUMBERS.
22 00 00.A	PLUMBING FIXTURE. REFER TO PLUMBING.
22 00 00.M	HOSE BIB. REFER TO PLUMBING.
26 00 00.B	SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.

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EL SEGUNDO LS
EXTERIOR ELEVATIONS

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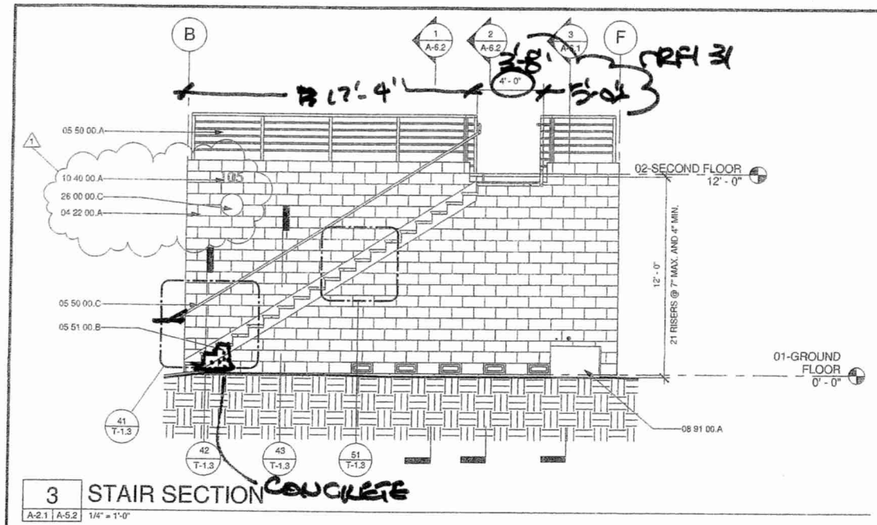
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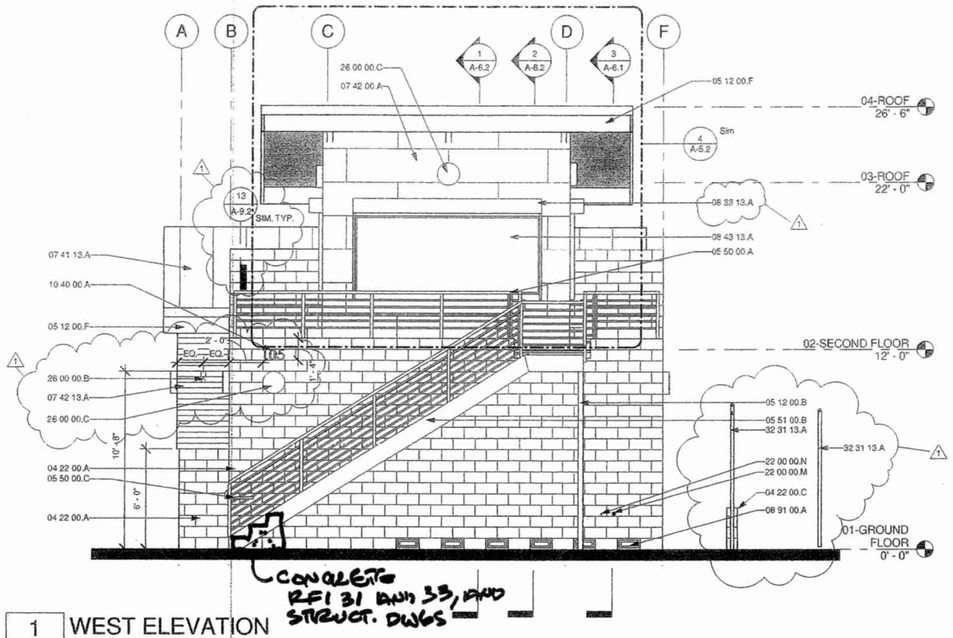
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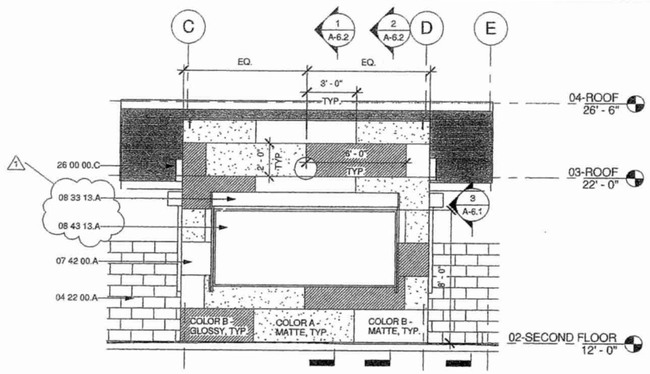
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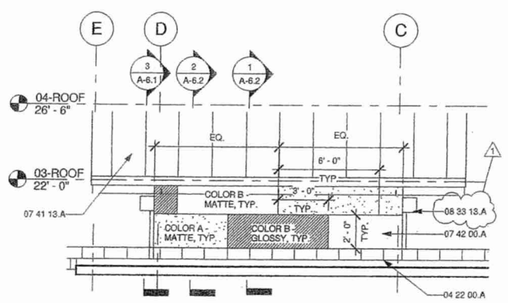
3 STAIR SECTION
A-2.1 | A-5.2 1/4" = 1'-0"



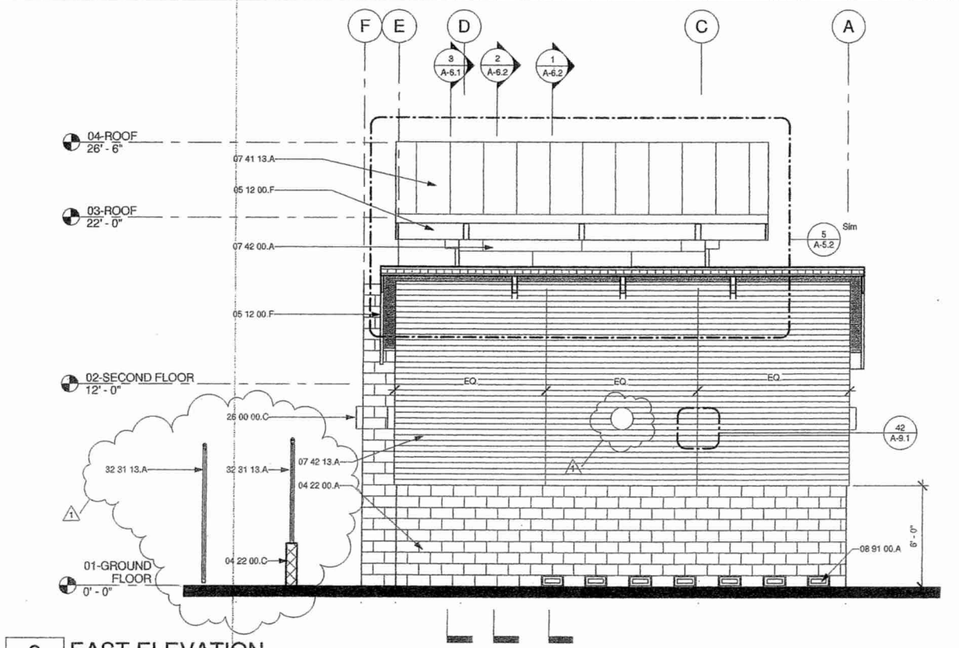
1 WEST ELEVATION
A-2.1 | A-5.2 1/4" = 1'-0"



4 WEST ELEVATION-LOOKOUT
A-2.2 | A-5.2 1/4" = 1'-0"



5 EAST ELEVATION-LOOKOUT
A-2.3 | A-5.2 1/4" = 1'-0"



2 EAST ELEVATION
A-2.1 | A-5.2 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

04 22 00.A	CMU WALL. COLOR A. REFER TO STRUCTURAL.
04 22 00.C	CMU RETAINING WALL. COLOR B. REFER TO CIVIL AND STRUCTURAL.
05 12 00.B	STEEL COLUMN PER STRUCTURAL
05 12 00.F	STEEL FRAMING PER STRUCTURAL.
05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 50 00.C	STEEL HANDRAIL, PAINTED.
05 51 00.B	STEEL STAIRS.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
07 42 00.A	SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL. ALIGN PANELS HORIZONTALLY.
07 42 13.A	HORIZONTAL METAL PANELS.
08 33 13.A	OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
10 40 00.A	BUILDING IDENTIFICATION NUMBERS
22 00 00.M	HOSE BIB. REFER TO PLUMBING.
22 00 00.N	AIR COMPRESSOR CONNECTION. REFER TO PLUMBING.
26 00 00.B	SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.
32 31 13.A	CHAIN LINK FENCE. REFER TO CIVIL.

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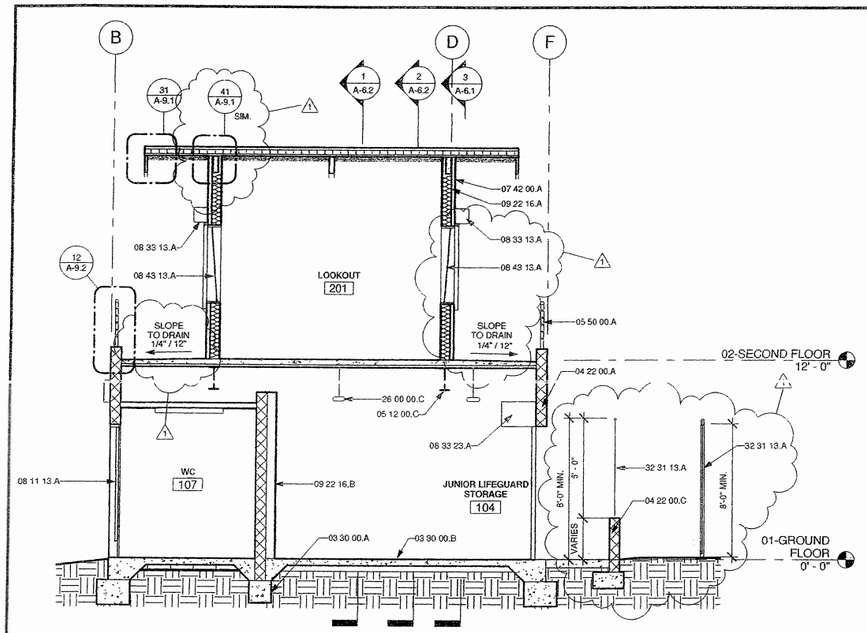
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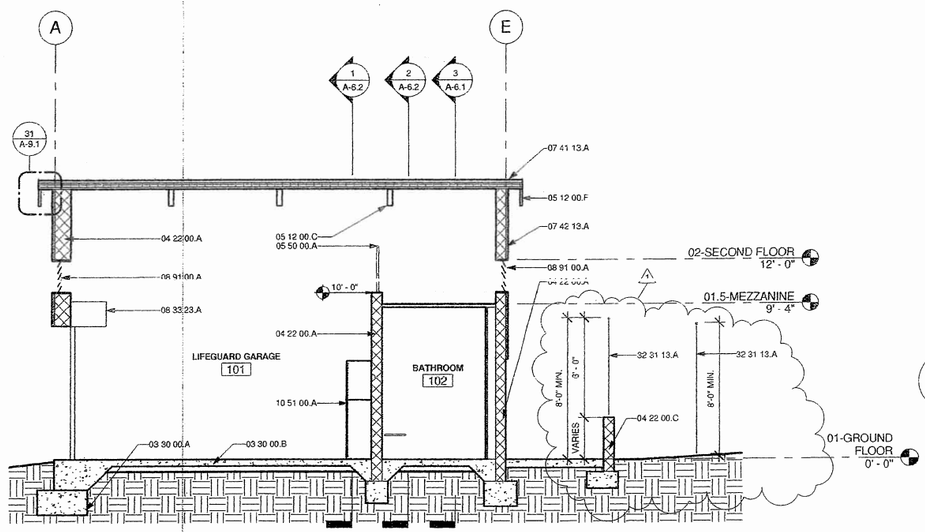
SHEET 21 OF 68
JOB NO. 1109531

FILE NO.

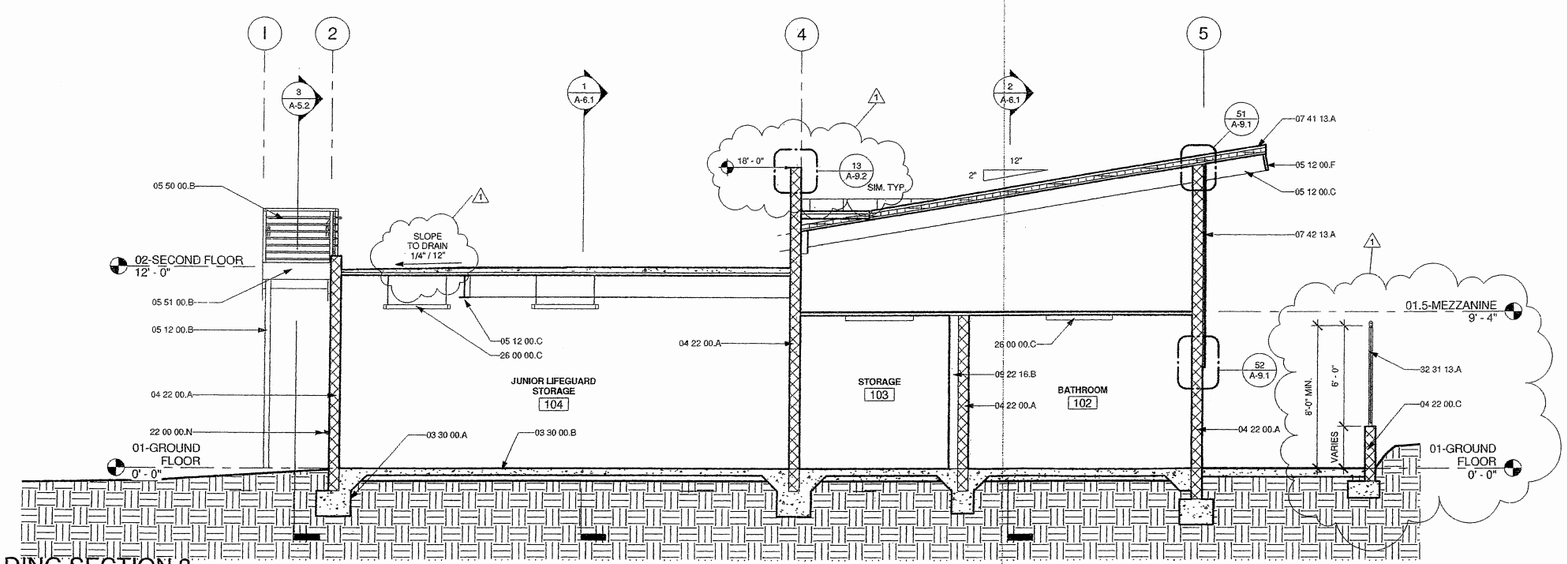
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1 BUILDING SECTION 1
A-2.1 | A-6.1 1/4" = 1'-0"



2 BUILDING SECTION 2
A-2.1 | A-6.1 1/4" = 1'-0"



3 BUILDING SECTION 3
A-2.1 | A-6.1 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

03 30 00.A	CONCRETE FOOTING. REFER TO STRUCTURAL.
03 30 00.B	CONCRETE SLAB. REFER TO STRUCTURAL.
04 22 00.A	CMU WALL, COLOR A. REFER TO STRUCTURAL.
04 22 00.C	CMU RETAINING WALL, COLOR B, REFER TO CIVIL AND STRUCTURAL.
05 12 00.B	STEEL COLUMN PER STRUCTURAL.
05 12 00.C	STEEL BEAM PER STRUCTURAL.
05 12 00.F	STEEL FRAMING PER STRUCTURAL.
05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 50 00.B	STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
05 51 00.B	STEEL STAIRS.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
07 42 00.A	SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL. ALIGN PANELS HORIZONTALLY.
07 42 13.A	HORIZONTAL METAL PANELS.
08 11 13.A	HOLLOW METAL DOOR & FRAME. REFER DOOR SCHEDULE
08 33 13.A	OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
08 33 23.A	OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE.
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
09 22 16.A	METAL STUD WALL FRAMING. REFER TO STRUCTURAL PLANS.
09 22 16.B	METAL STUD FURRING AT INTERIOR CMU WALL.
10 51 00.A	METAL LOCKERS W/ TOP SHELF, WALL MOUNTED.
22 00 00.N	AIR COMPRESSOR CONNECTION. REFER TO PLUMBING.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.
32 31 13.A	CHAIN LINK FENCE. REFER TO CIVIL.

LEGEND

JUL 21 2011

BID DOCUMENTS

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A California Corporation | Victor Montgomery, Architect #C14656 | Jerry Mikel, PE #49598, LS #62261 | Jeff Reiter, LA #3944

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
BUILDING SECTIONS

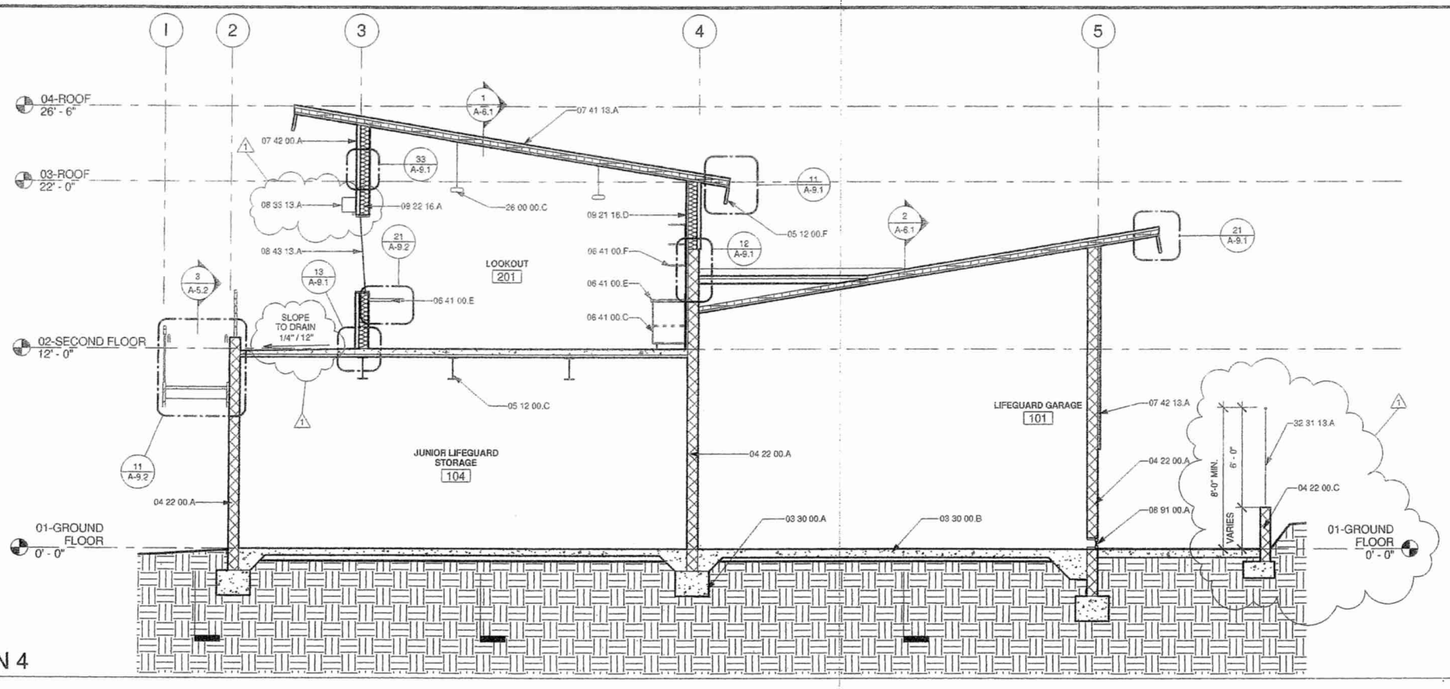
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PIM DATE
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CHECK DATE
APPROVED DATE
CITY ENGINEER R.E.

SHEET 22 OF 68
JOB NO. 1109531

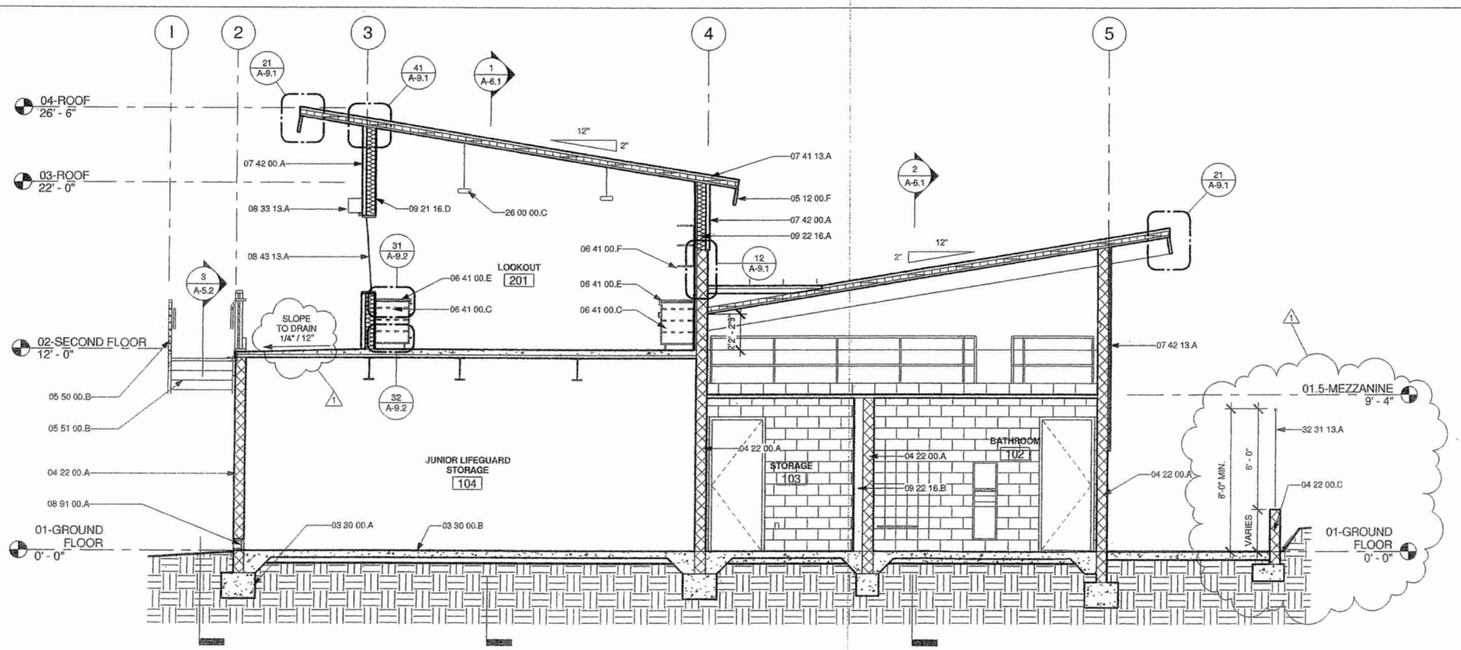
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1 BUILDING SECTION 4

A-2.1 | A-6.2 1/4" = 1'-0"



2 BUILDING SECTION 5

A-2.1 | A-6.2 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

03 30 00.A	CONCRETE FOOTING. REFER TO STRUCTURAL.
03 30 00.B	CONCRETE SLAB. REFER TO STRUCTURAL.
04 22 00.A	CMU WALL. COLOR A. REFER TO STRUCTURAL.
04 22 00.C	CMU RETAINING WALL. COLOR B. REFER TO CIVIL AND STRUCTURAL.
05 12 00.C	STEEL BEAM PER STRUCTURAL.
05 12 00.F	STEEL FRAMING PER STRUCTURAL.
05 50 00.B	STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
05 51 00.B	STEEL STAIRS.
06 41 00.C	BASE CABS W/ DRAWERS, DOORS & PULL OUT SHELVING.
06 41 00.E	COUNTERTOP WITH BACKSPLASH.
06 41 00.F	UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVING.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
07 42 00.A	SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL. ALIGN PANELS HORIZONTALLY.
07 42 13.A	HORIZONTAL METAL PANELS.
08 33 13.A	OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
09 21 16.D	GYPSUM BOARD WALL FINISH.
09 22 16.A	METAL STUD WALL FRAMING. REFER TO STRUCTURAL PLANS.
09 22 16.B	METAL STUD FURRING AT INTERIOR CMU WALL.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.
32 31 13.A	CHAIN LINK FENCE. REFER TO CIVIL.

LEGEND

JUL 21 2011

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
BUILDING SECTIONS

PM ____ DATE:____
DRAWN SDR DATE:____
CHECK ____ DATE:____

APPROVED DATE:____

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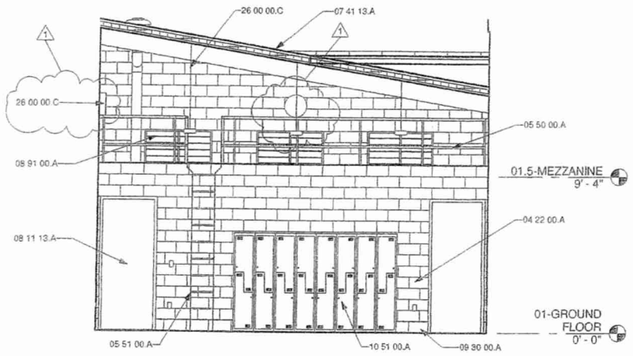
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10/06/10

SHEET 23 OF 68

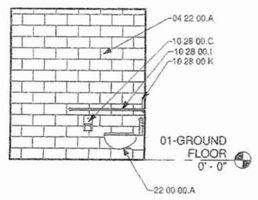
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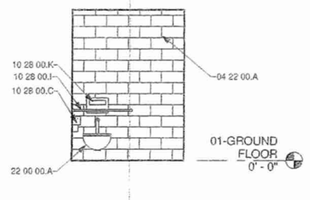
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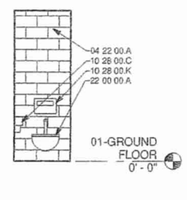
1 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 101-S



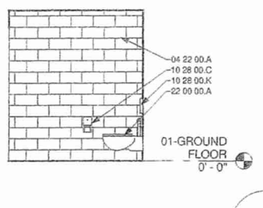
2 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 105-E



3 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 105-S



8 | A-1.1 | A-7.1 | 1/4" = 1'-0" — TYP. WC-S

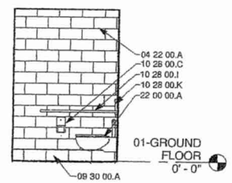


11 | A-1.1 | A-7.1 | 1/4" = 1'-0" — TYP. WC-E

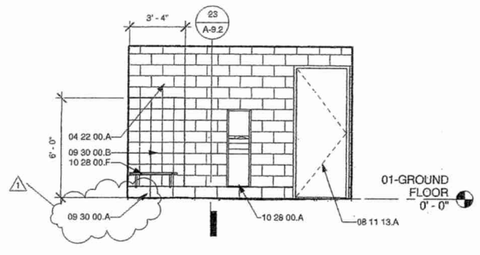
GENERAL NOTES

KEYNOTES

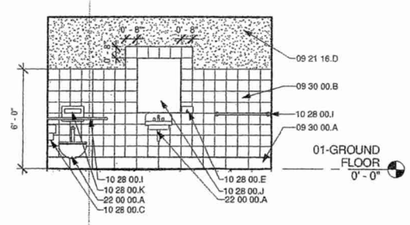
04 22 00.A	CMU WALL. COLOR A. REFER TO STRUCTURAL.
05 12 00.C	STEEL BEAM PER STRUCTURAL.
05 50 00.A	STEEL GUARDRAIL. PAINTED.
05 51 00.A	ACCESS LADDER.
06 41 00.C	BASE CABS W/ DRAWERS, DOORS & PULL OUT SHELVING.
06 41 00.E	COUNTERTOP WITH BACKSPLASH.
06 41 00.F	UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVING.
07 41 13.A	STANDING SEAM METAL ROOF PANEL.
08 11 13.A	HOLLOW METAL DOOR & FRAME. REFER DOOR SCHEDULE
08 43 13.A	ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
08 91 00.A	METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
09 21 16.D	GYPSUM BOARD WALL FINISH.
09 30 00.A	CERAMIC TILE WALL BASE.
09 30 00.B	CERAMIC TILE WAINSCOT.
10 28 00.A	SURFACE MOUNTED TOWEL DISPENSER/WASTE RECEPTACLE.
10 28 00.C	SURFACE MOUNTED TOILET TISSUE DISPENSER.
10 28 00.E	SOAP DISPENSER.
10 28 00.F	SHOWER BENCH.
10 28 00.I	GRAB BAR.
10 28 00.J	WALL MOUNTED MIRROR.
10 28 00.K	SURFACE MOUNTED SEAT COVER DISPENSER.
10 51 00.A	METAL LOCKERS W/ TOP SHELF, WALL MOUNTED.
11 31 00.B	UNDER CABINET REFRIGERATOR. OWNER FURNISHED AND INSTALLED.
11 31 00.C	MICROWAVE. OWNER FURNISHED AND INSTALLED.
22 00 00.A	PLUMBING FIXTURE. REFER TO PLUMBING.
26 00 00.C	LIGHT FIXTURE. REFER TO ELECTRICAL.



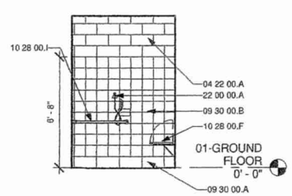
4 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 102-E



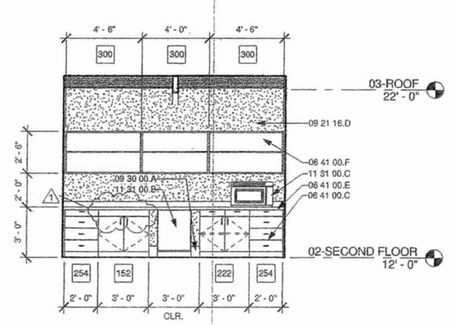
5 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 102-N



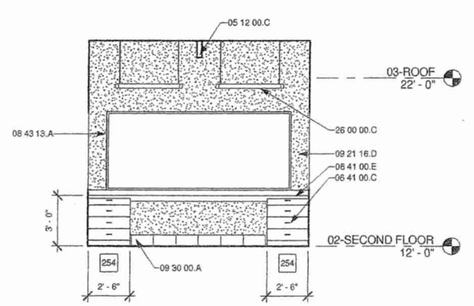
6 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 102-S



7 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 102-W



9 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 201-E



10 | A-1.1 | A-7.1 | 1/4" = 1'-0" — 201-W

LEGEND

JUL 21 2011

BID DOCUMENTS

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
INTERIOR ELEVATIONS

A-7.1
10/06/10

SHEET 24 OF 68

JOB NO. 1109531

PM ____ DATE ____
DRAWN SDR DATE ____
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FILE NO. ____

STATE OF CALIFORNIA DONALD K. KAISER RC14656 EXPIRES 5/31/2011 REGISTERED ARCHITECT

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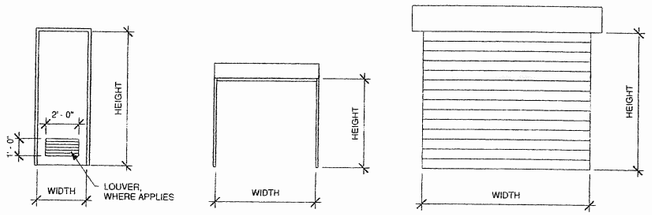
GENERAL NOTES

1. REFER TO DOOR AND HARDWARE SCHEDULE FOR EXTENT, TYPE AND ADDITIONAL NOTES. ACCEPTABLE WOOD DOOR MANUFACTURERS TO BE WEYERHAEUSER, EGGERS, MOHAWK OR ARCHITECT APPROVED EQUAL. GENERAL CONTRACTOR SHALL PROVIDE A HARDWARE SCHEDULE AND CATALOGUE CUTS FOR ALL FINISH HARDWARE FOR APPROVAL BY THE ARCHITECT INDICATING LOCATION OF HARDWARE SET, CROSS-REFERENCED TO INDICATIONS ON DRAWINGS, MANUFACTURER'S NAME AND PRODUCT NUMBER, FINISH, AND OTHER SIMILAR INFORMATION DESCRIBING HARDWARE TO BE PROVIDED. ITEMS OF HARDWARE NOT DEFINITELY SPECIFIED, BUT NEEDED FOR SATISFACTORY INSTALLATION OF HARDWARE SHALL BE PROVIDED. SUCH ITEMS SHALL BE OF TYPE AND QUALITY SUITABLE FOR SERVICE NEEDED AND COMPARABLE TO ADJACENT HARDWARE.
2. ALL DOORS SHALL BE SET 6" OFF ADJACENT PERPENDICULAR WALL, UON. DOORS SHALL NOT BE UNDERCUT, UON. ALL LEVERS, PULLS, AND LOCKS ARE TO BE PROVIDED PER THE SCHEDULE. ALL HINGES AND OTHER MISCELLANEOUS EXPOSED HARDWARE SHALL BE IN SIMILAR AND COMPATIBLE FINISHES AS INDICATED ON HARDWARE SCHEDULE.
3. GENERAL CONTRACTOR SHALL COORDINATE KEYING SYSTEM WITH OWNER (BUILDING MANAGEMENT), LANDLORD, AND ARCHITECT. GENERAL CONTRACTOR SHALL COORDINATE SECURITY SYSTEM WITH SYSTEM VENDOR AND SCHEDULED HARDWARE AND THE SUBMITTAL OF ALL SECURITY HARDWARE SPECIFICATIONS AND CUT SHEETS TO THE PROPER AUTHORITIES FOR REVIEW AND APPROVAL DURING BUILDING PERMIT PROCESS.
4. PROVIDE HARDWARE, DOOR PULLS, HINGES, CLOSERS, ELECTROMAGNETIC DEVICES, ETC. NEEDED TO PROVIDE A FULL AND COMPLETE INSTALLATION. PROVIDE SILENCERS AT METAL FRAME DOORS. PROVIDE FLOOR MOUNTED DOOR STOPS UNLESS EXISTING CONDITIONS REQUIRE WALL MOUNTED. ENSURE ADEQUATE BLOCKING FOR WALL MOUNTED STOPS. SUBMIT TO ARCHITECT FOR APPROVAL.
5. PROVIDE 4 1/2 X 4 1/2, FULL MORTISE, TEMPLATE, 5-KNUCKLE, HEAVY DUTY, BUTTON TIP HINGES WITH NON-RISING LOOSE PINS AND ANTI-FRICTION, BALL TYPE BEARING. DOORS WITH LOCKSETS SHALL BE FURNISHED WITH NON-REMOVABLE PINS HINGES. PROVIDE 1-1/2" PAIR HINGES FOR DOORS UP TO 90" IN HEIGHT. ADD 1 HINGE FOR EVERY ADDITIONAL 30" IN HEIGHT.
6. HEAVY DUTY CYLINDRICAL LOCKSETS AND LATCHSETS SHALL CONFORM TO ANSI A156.2, SERIES 4000, GRADE 1. FUNCTIONS AS LISTED IN SCHEDULE. HEAVY DUTY MORTISE LOCKSETS AND LATCHSETS, LEVERS SHALL CONFORM TO ANSI A156.13 SERIES, 1000, GRADE 1. OVERHEAD CLOSERS SHALL BE SURFACE MOUNTED OR CONCEALED OVERHEAD AS NOTED IN THE HARDWARE SCHEDULE AND SHALL BE HEAVY DUTY, FULLY HYDRAULIC, RACK AND PINION ACTION AND SIZED TO BE IN COMPLIANCE WITH REQUIREMENTS FOR ACCESSIBILITY FOR HANDICAPPED AND RECOMMENDATIONS OF MANUFACTURER. FURNISH COMPLETE WITH ALL NECESSARY HARDWARE. FURNISH 2 KEYS PER LOCK WITH A MAXIMUM OF 8 KEYS PER KEYED ALIKE SET. BEFORE FINAL COMPLETION, ADJUST HARDWARE SO THAT DOORS OPERATE IN PERFECT ORDER. TEST AND ADJUST HARDWARE FOR QUIET, SMOOTH OPERATION AND ADJUST CLOSERS FOR PROPER OPERATION. AT FINAL COMPLETION, PROPERLY TAG AND IDENTIFY KEYS AND DELIVER TO OWNER.
7. EXIT DOORS TO HAVE SINGLE ACTING HARDWARE WITH NO SPECIAL KNOWLEDGE TO OPERATE. (CFC SECTION 1008.1.8)

HARDWARE SCHEDULE

HW SET: 001				
4 EA	HINGE	3CB1 4.5 X 4.5	630	IVE
1 EA	STOREROOM LOCK	LV9480L 17A	630	SCH
1 EA	CYLINDER	CYLINDER(S) AS REQD	626	C-R
1 EA	SURFACE CLOSER	4011 SRI	689	LCN
1 EA	KICK PLATE	8400 10"X2" LDW	630	IVE
1 EA	SECURITY FLOOR STOP	FS18L	BLK	IVE
1 SET	SEALS	129NSS	630	NGP
1 EA	DOOR SWEEP	200NSS	630	NGP
1 EA	THRESHOLD	THRESHOLD PER DETAIL	AL	NGP
HW SET: 002				
3 EA	HINGE	3CB1HW 4.5 X 4.5	630	IVE
1 EA	PRIVACY LOCK	LV9496L 17A L583-363	630	SCH
1 EA	CYLINDER	CYLINDER(S) AS REQUIRED	626	C-R
1 EA	SURFACE CLOSER	4011 DEL SRI X ST3135	689	LCN
1 EA	WALL STOP	WS407CVX X MASONRY ANCHORS	630	IVE
3 EA	SILENCER	SR64/65/66 AS REQD	GRY	IVE
1 EA	RESTROOM SIGN	SB443/444/445 AS REQD	BLU	SBH
HW SET: 003				
3 EA	HINGE	3CB1HW 4.5 X 4.5	630	IVE
1 EA	PRIVACY LOCK	LV9496L 17A L583-363	630	SCH
1 EA	CYLINDER	CYLINDER(S) AS REQD	626	C-R
1 EA	SURFACE CLOSER	404 1T SRI	689	LCN
1 EA	WALL STOP	WS407CVX X MASONRY ANCHORS	630	IVE
3 EA	SILENCER	SR64/65/66 AS REQD	GRY	IVE
1 EA	RESTROOM SIGN	SB443/444/445 AS REQD	BLU	SBH
HW SET: 004				
4 EA	HINGE	3CB1 4.5 X 4.5 NRP SH	630	IVE
1 EA	CLASSROOM LOCK	LV9070L 17A	630	SCH
1 EA	CYLINDER	CYLINDER(S) AS REQD	626	C-R
1 EA	SURFACE CLOSER	4111 SHCUSH SRI	689	LCN
1 EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1 SET	SEALS	129NSS	630	NGP
1 EA	DOOR SWEEP	200NSS	630	NGP
1 EA	THRESHOLD	THRESHOLD PER DETAIL	AL	NGP
1EA	LOCK GUARD	LG12	630	IVE
HW SET: 005				
4 EA	HINGE	3CB1 4.5 X 4.5	630	IVE
1 EA	CLASSROOM LOCK	L9070L 17A	630	SCH
1 EA	CYLINDER	CYLINDER(S) AS REQD	626	C-R
1EA	SECURITY FLOOR STOP	FS18L	BLK	IVE
1 EA	SEALS	129NSS	630	NGP
1 SET	DOOR SWEEP	200NSS	630	NGP
1 EA	THRESHOLD	THRESHOLD PER DETAIL	AL	NGP
1 EA				
HW SET: 006				
4 EA	HINGE	3CB1 4.5 X 4.5	630	IVE
1 EA	PRIVACY LOCK	L9040 17A L583-363	630	SCH
1 EA	SURFACE CLOSER	4011 DEL SRI	689	LCN
1 EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1 EA	SECURITY FLOOR STOP	FS18L	BLK	IVE
1 SET	SEALS	129NSS	630	NGP
1 EA	DOOR SWEEP	200NSS	630	NGP
1 EA	THRESHOLD	THRESHOLD PER DETAIL	AL	NGP
1 EA	RESTROOM SIGN	SB443/444/445 AS REQD	BLU	SBH
HW SET: 007				
0	ALL HARDWARE BY DOOR MANUFACTURER DOOR SIZES VARY			B/O
MISC:				
6 EA	CYLINDER	CYLINDER(S) AS REQD FOR PADLOCKS	626	C-R
6 EA	PADLOCK	KS43D3200	452	SCH

DOOR TYPES

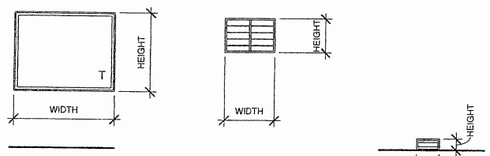


A
BASIC FLUSH DOOR

B
STEEL OVERHEAD COILING COUNTER DOOR

C
STEEL OVERHEAD COILING DOOR

WINDOW TYPES



A
ALUMINUM STOREFRONT WINDOW W/ ANGLED GLAZING

B
ALUMINUM LOUVRE

C
ALUMINUM LOUVRE

DOOR SCHEDULE

NO.	TYPE	SIZE WIDTH	SIZE HEIGHT	DOOR MATERIAL	FRAME MATERIAL	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	HARDWARE SET	NOTES
101	A	3' - 0"	7' - 10"	HM	HM	33/A-9.3	22,23/A-9.3	43/A-9.3	001	
102	C	12' - 0"	8' - 0"	STL	STL	51/A-9.3	42,52/A-9.3	43/A-9.3	007	7
103	A	3' - 0"	7' - 10"	HM	HM	21/A-9.3	22/A-9.3	43/A-9.3	002	3, 5
104	A	3' - 0"	7' - 10"	HM	HM	21/A-9.3	22/A-9.3	43/A-9.3	003	3, 6
105	A	3' - 0"	7' - 10"	HM	HM	21/A-9.3	22/A-9.3	43/A-9.3	003	3, 6
106	A	3' - 0"	7' - 10"	HM	HM	21/A-9.3	22/A-9.3	43/A-9.3	003	3, 6
107	A	3' - 0"	7' - 10"	HM	HM	21/A-9.3	22/A-9.3	43/A-9.3	001	
108	C	10' - 0"	8' - 0"	STL	STL	41/A-9.3	42/A-9.3	43/A-9.3	007	7
109	A	3' - 0"	7' - 10"	HM	HM	31/A-9.3	32/A-9.3	43/A-9.3	005	2
110	A	3' - 0"	7' - 10"	HM	HM	31/A-9.3	32/A-9.3	43/A-9.3	005	1,2
111	A	3' - 0"	7' - 10"	HM	HM	31/A-9.3	32/A-9.3	43/A-9.3	006	2
201	A	3' - 0"	7' - 10"	HM	HM	11/A-9.3	12/A-9.3	13/A-9.3	004	
202	A	3' - 0"	7' - 10"	HM	HM	11/A-9.3	12/A-9.3	13/A-9.3	004	
203	B	6' - 0"	5' - 0"	STL	STL	61/A-9.3	62/A-9.3	63/A-9.3	007	7
204	B	11' - 0"	5' - 0"	STL	STL	61/A-9.3	62/A-9.3	63/A-9.3	007	7
205	B	6' - 0"	5' - 0"	STL	STL	61/A-9.3	62/A-9.3	63/A-9.3	007	7

DOOR NOTES

1. PROVIDE 24" X 12" DOOR LOUVRE, HIGH AND LOW
2. PROVIDE 3/4" UNDERCUT.
3. PROVIDE 12" UNDERCUT.
4. EXIT DOOR-PROVIDE PANIC HARDWARE TO BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF KEY, TOOL, OR ANY SPECIAL KNOWLEDGE OR EFFORT PER 2007 CBC, SECTION 1003.1.9
5. RESTROOM & ACCESSIBILITY SIGNAGE.
6. RESTROOM SIGNAGE.
7. PROVIDE INTERIOR LOCKING DEVICE IN THE FORM OF A PADLOCK

WINDOW SCHEDULE

NO.	TYPE	SIZE WIDTH	SIZE HEIGHT	HEAD HEIGHT	Frame Material	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	NOTES
01	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
02	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
03	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
04	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
04	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
06	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
07	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
08	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
09	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
10	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
11	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
12	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
13	C	1' - 4"	0' - 8"	0' - 8"	ALUM.	53/A-9.2	51/A-9.2	53/A-9.2	
21	A	6' - 0"	4' - 8"	8' - 0"	ALUM.	61/A-9.3	62/A-9.3	63/A-9.3	1,2
22	A	6' - 0"	4' - 8"	8' - 0"	ALUM.	61/A-9.3	62/A-9.3	63/A-9.3	1,2
23	A	11' - 0"	4' - 8"	8' - 0"	ALUM.	61/A-9.3	62/A-9.3	63/A-9.3	1,2
24	B	4' - 0"	2' - 0"	0' - 0"	ALUM.	41-A-9.2	42-A-9.2	43/A-9.2	
25	B	4' - 0"	2' - 0"	0' - 0"	ALUM.	41-A-9.2	42-A-9.2	43/A-9.2	
26	B	4' - 0"	2' - 0"	0' - 0"	ALUM.	41-A-9.2	42-A-9.2	43/A-9.2	
27	B	4' - 0"	2' - 0"	0' - 0"	ALUM.	41-A-9.2	42-A-9.2	43/A-9.2	
28	B	4' - 0"	2' - 0"	0' - 0"	ALUM.	41-A-9.2	42-A-9.2	43/A-9.2	

WINDOW NOTES

1. PROVIDE ANGLED GLAZING FOR GLARE REDUCTION.
2. TEMPERED SAFETY GLAZING

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REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
DOOR AND WINDOW SCHEDULES

PM ____ DATE ____
DRAWN SDR DATE ____
CHECK ____ DATE ____

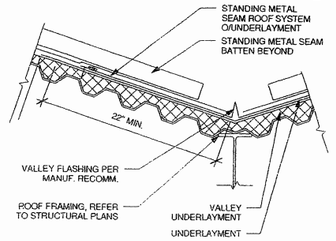
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CITY ENGINEER R.E. ____

A-8.1
09/20/2010

SHEET 25 OF 68

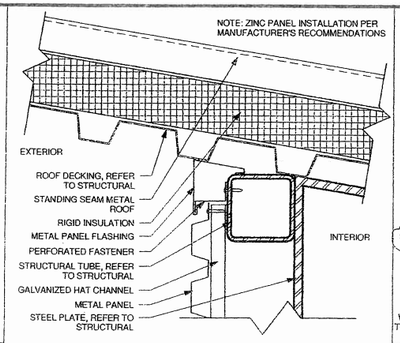
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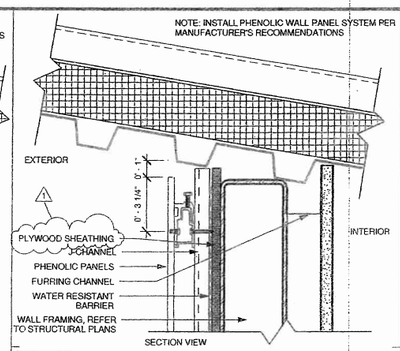


NOTE 1: DIMENSIONS & WATERPROOFING SAME BOTH SIDES OF VALLEY
NOTE 2: ATTACHMENT & COMPONETS OF STANDING SEAM METAL ROOF SYSTEM PER MANUFACTURER'S RECOMMENDATIONS

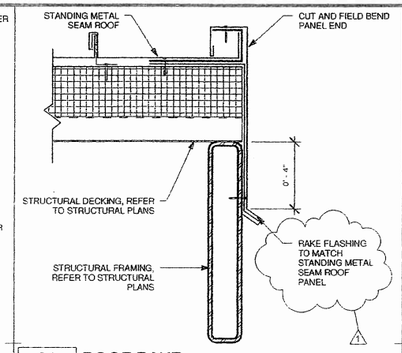
61 STANDING SEAM VALLEY
A-4.1 | A-9.1 1 1/2" = 1'-0"



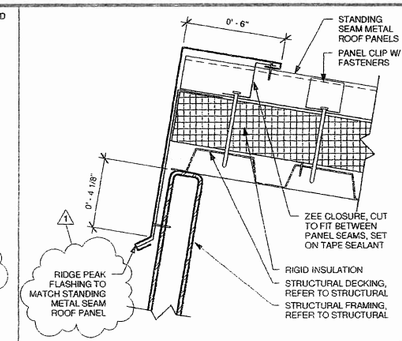
51 METAL PANEL-TOP TERMINATION
A-6.1 | A-9.1 3" = 1'-0"



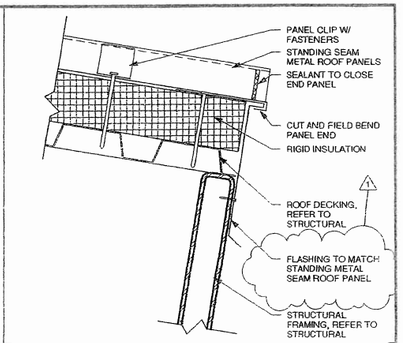
41 PHENOLIC PANEL-TOP OF WALL
A-6.1 | A-9.1 3" = 1'-0"



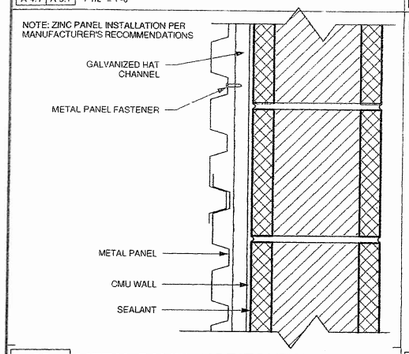
31 ROOF RAKE
A-4.1 | A-9.1 3" = 1'-0"



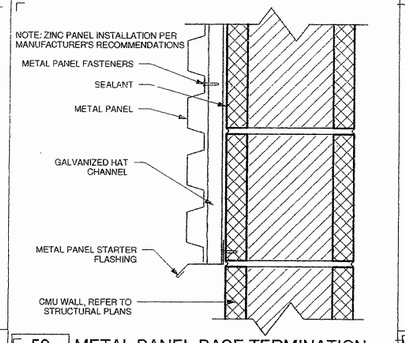
21 ROOF RIDGE
A-4.1 | A-9.1 3" = 1'-0"



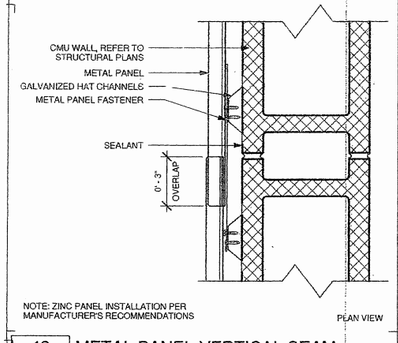
11 EAVE
A-4.1 | A-9.1 3" = 1'-0"



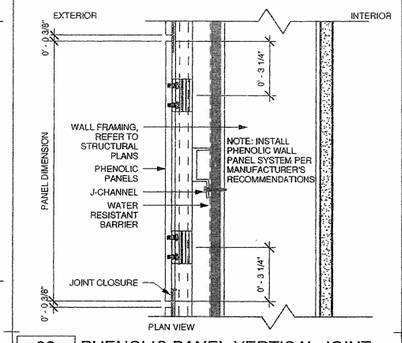
62 METAL PANEL-HORIZONTAL SEAM
A-2.2 | A-9.1 3" = 1'-0"



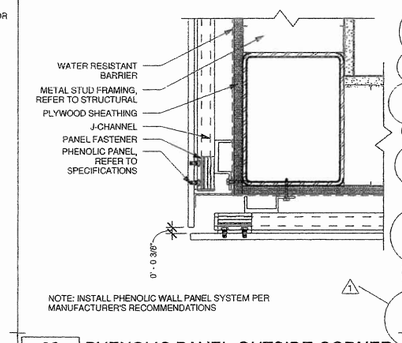
52 METAL PANEL-BASE TERMINATION
A-6.1 | A-9.1 3" = 1'-0"



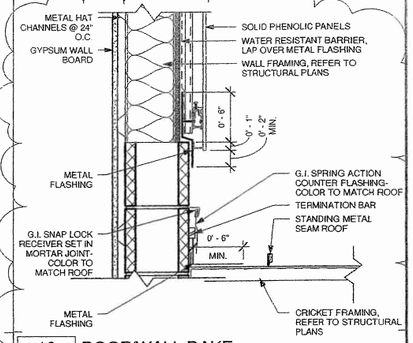
42 METAL PANEL-VERTICAL SEAM
A-2.2 | A-9.1 3" = 1'-0"



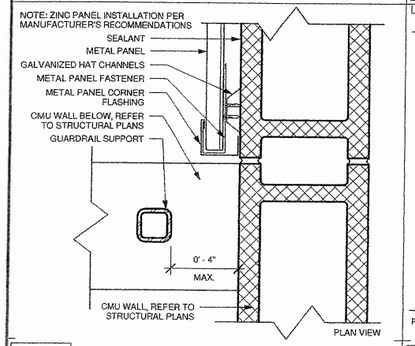
32 PHENOLIC PANEL-VERTICAL JOINT
A-2.2 | A-9.1 3" = 1'-0"



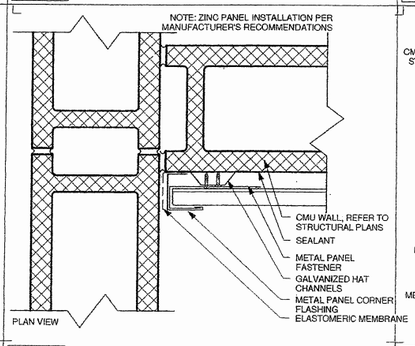
22 PHENOLIC PANEL-OUTSIDE CORNER
A-2.2 | A-9.1 3" = 1'-0"



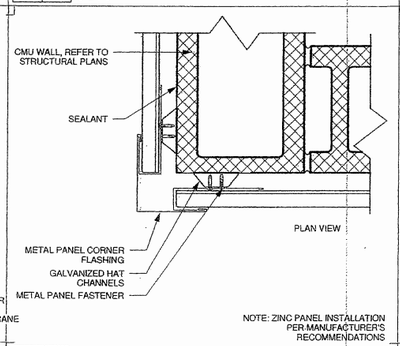
12 ROOF/WALL RAKE
A-4.1 | A-9.1 1 1/2" = 1'-0"



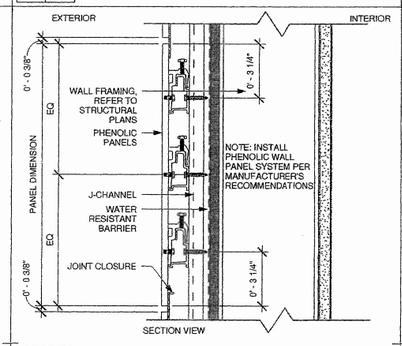
63 METAL PANEL-END TERMINATION
A-2.2 | A-9.1 3" = 1'-0"



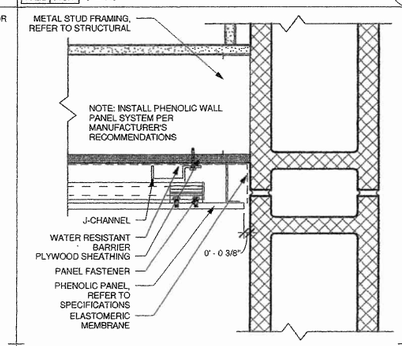
53 METAL PANEL-END TERMINATION
A-2.2 | A-9.1 3" = 1'-0"



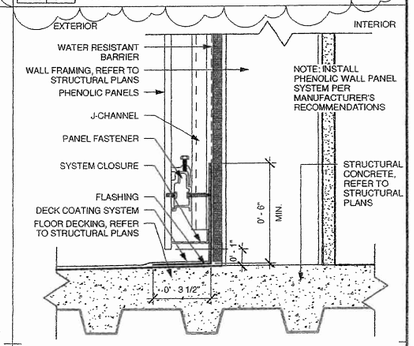
43 METAL PANEL-OUTSIDE CORNER
A-2.2 | A-9.1 3" = 1'-0"



33 PHENOLIC PANEL-HORIZONTAL JOINT
A-6.2 | A-9.1 3" = 1'-0"



23 PHENOLIC PANEL-END TERMINATION
A-2.2 | A-9.1 3" = 1'-0"



13 WALL @ CONC. DECK
A-6.2 | A-9.1 3" = 1'-0"

JUL 21 2011

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1	10/06/2010	KA

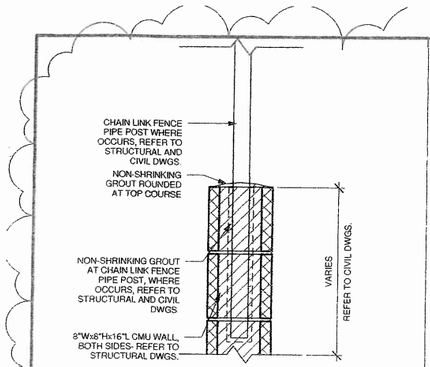
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
EL SEGUNDO LS
EXTERIOR DETAILS

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CHECK ____ DATE ____
APPROVED ____ DATE ____
CITY ENGINEER R.E. ____

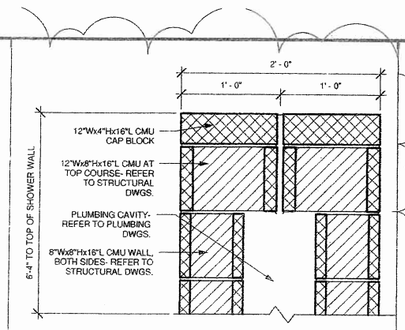
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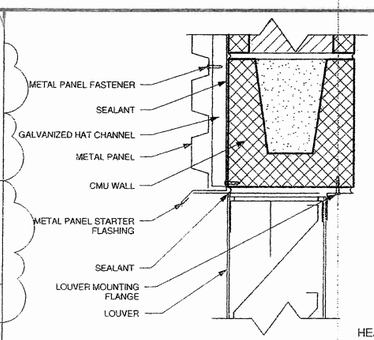
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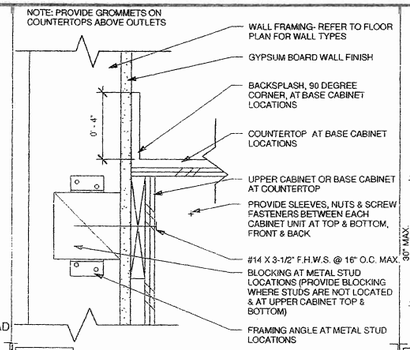
61 CMU RETAINING WALL CAP
A-1.1 | A-9.2 1 1/2" = 1'-0"



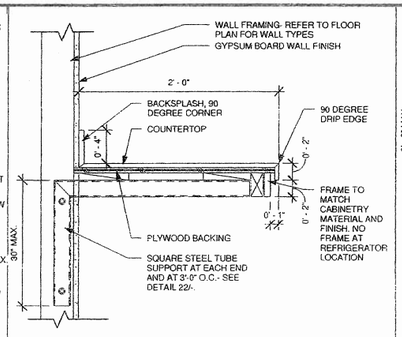
51 CMU SHOWER WALL CAP
A-2.1 | A-9.2 1 1/2" = 1'-0"



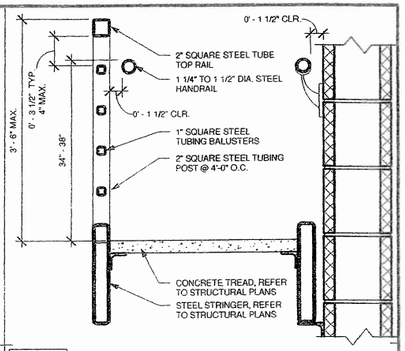
41 LOUVER HEAD
A-9.2 3" = 1'-0"



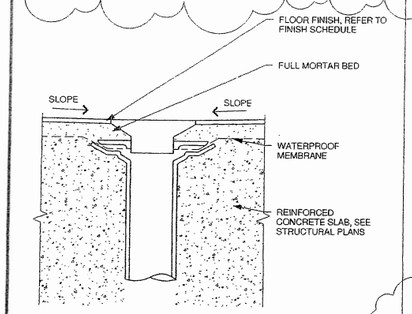
31 BASE CAB. ANCHOR @ COUNTERTOP
A-6.2 | A-9.2 3" = 1'-0"



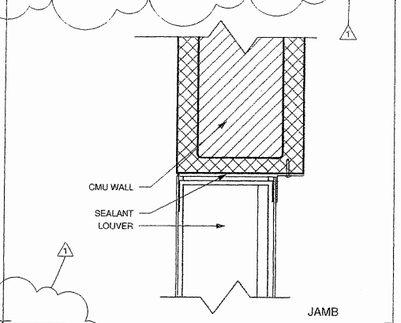
21 COUNTERTOP ANCHOR
A-6.2 | A-9.2 1 1/2" = 1'-0"



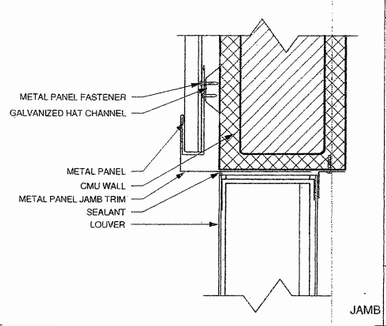
11 GUARDRAIL @ STAIR
A-6.2 | A-9.2 1 1/2" = 1'-0"



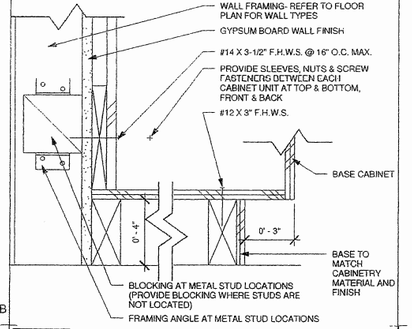
62 FLOOR DRAIN
A-2.1 | A-9.2 3" = 1'-0"



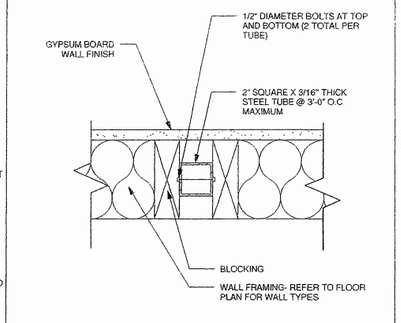
52 LOUVER JAMB- FLOODPROOFING
A-9.2 3" = 1'-0"



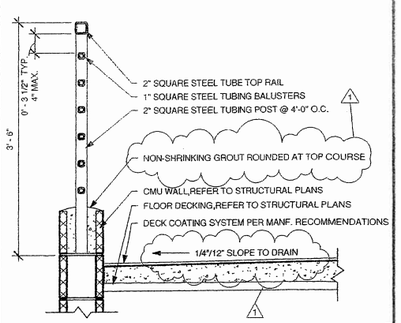
42 LOUVER JAMB
A-9.2 3" = 1'-0"



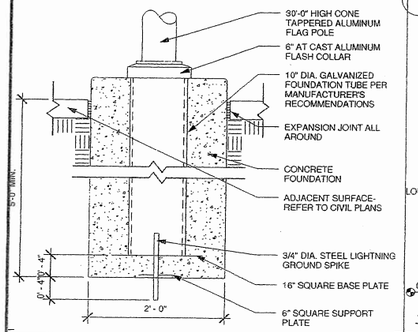
32 BASE CAB. ANCHOR @ BASE
A-6.2 | A-9.2 3" = 1'-0"



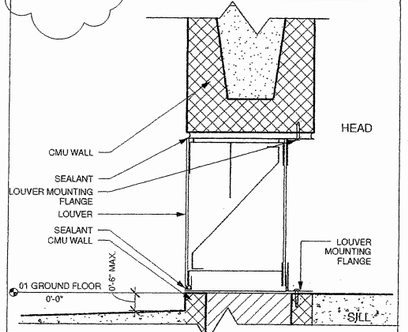
22 COUNTERTOP SUPPORT
A-9.2 3" = 1'-0"



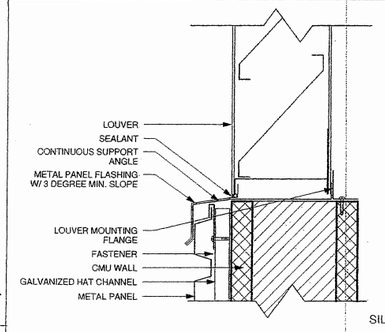
12 GUARDRAIL
A-2.2 | A-9.2 1" = 1'-0"



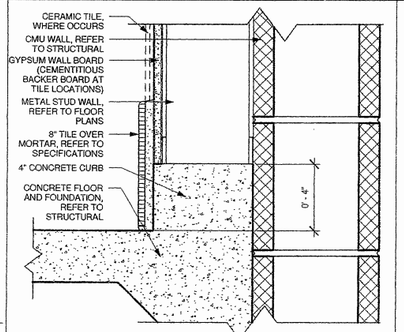
63 FLAG POLE BASE
A-1.1 | A-9.2 1" = 1'-0"



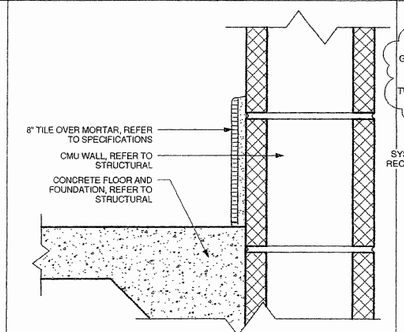
53 LOUVER HEAD/SILL-FLOODPROOFING
A-9.2 3" = 1'-0"



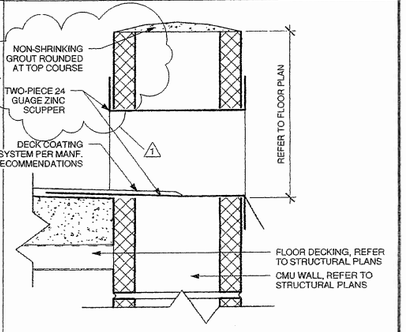
43 LOUVER SILL
A-9.2 3" = 1'-0"



33 TILE BASE @ STUD WALL
A-2.1 | A-9.2 3" = 1'-0"



23 TILE BASE @ CMU
A-7.1 | A-9.2 3" = 1'-0"



13 SCUPPER
A-2.2 | A-9.2 3" = 1'-0"

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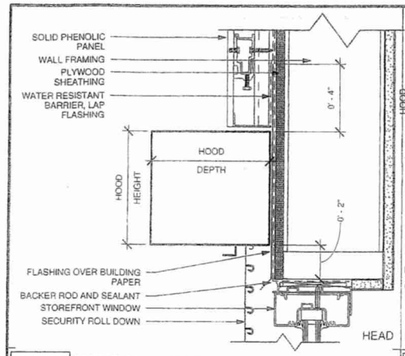
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
EL SEGUNDO LS
INTERIOR & EXTERIOR DETAILS

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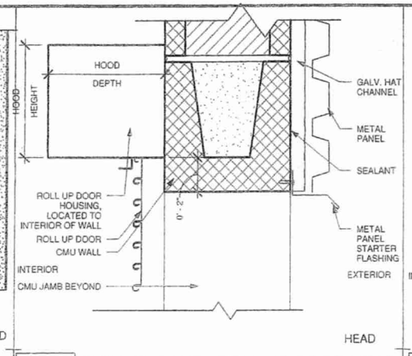
A-9.2
10/06/10
SHEET 27 OF 68
JOB NO. 1109531

FILE NO. ____

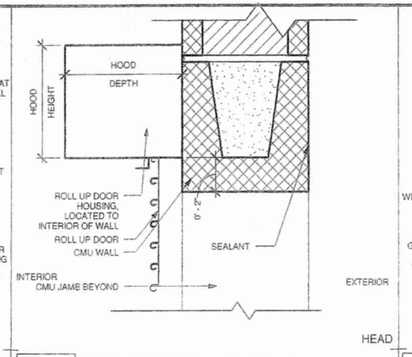
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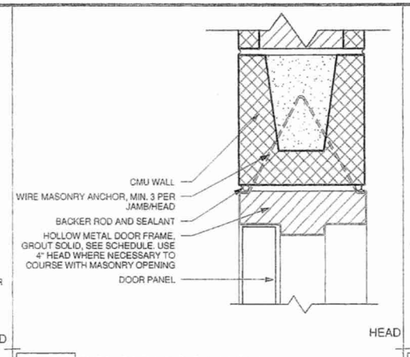
61 WINDOW HEAD
A-9.3 3" = 1'-0"



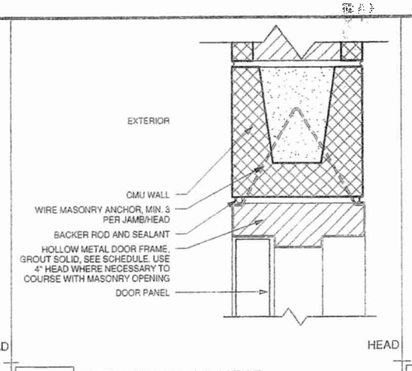
51 EXT MTL PANEL ROLL UP DOOR HEAD
A-9.3 3" = 1'-0"



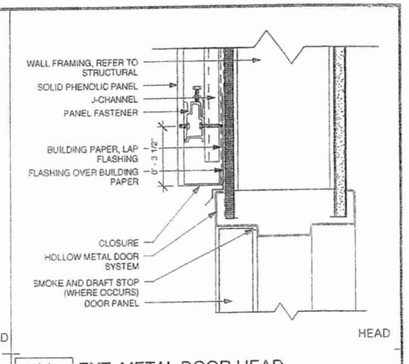
41 EXT. CMU ROLL UP DOOR HEAD
A-9.3 3" = 1'-0"



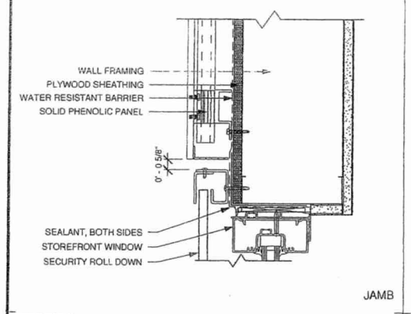
31 INT. CMU DOOR HEAD
A-9.3 3" = 1'-0"



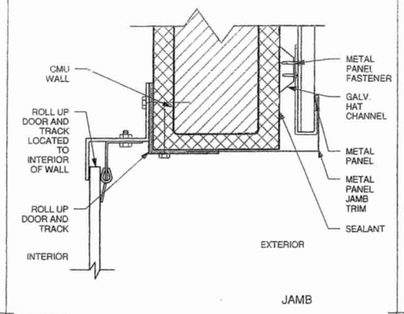
21 EXT. CMU DOOR HEAD
A-9.3 3" = 1'-0"



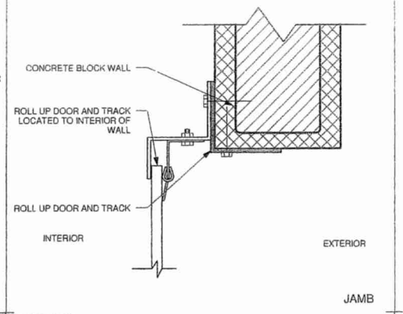
11 EXT. METAL DOOR HEAD
A-9.3 3" = 1'-0"



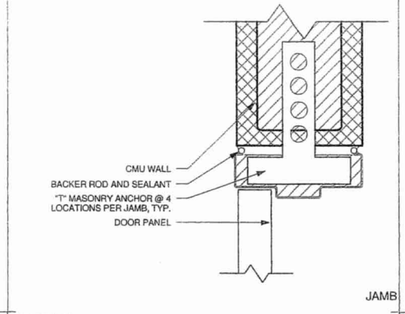
62 WINDOW JAMB
A-9.3 3" = 1'-0"



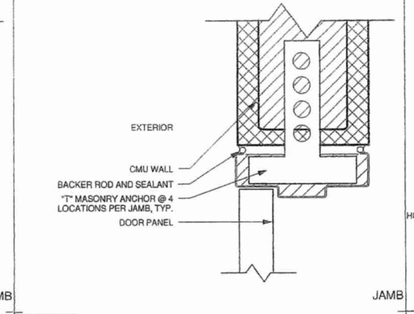
52 EXT MTL PANEL ROLL UP DOOR JAMB
A-9.3 3" = 1'-0"



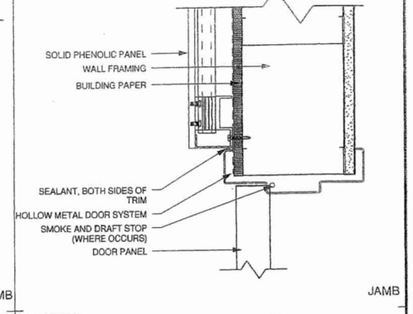
42 EXT. CMU ROLL UP DOOR JAMB
A-9.3 3" = 1'-0"



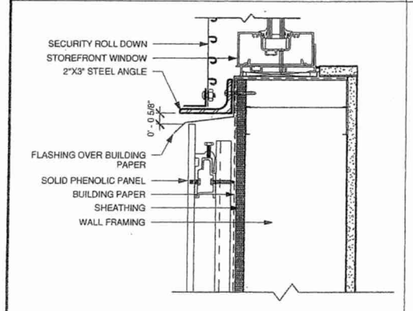
32 INT. CMU DOOR JAMB
A-9.3 3" = 1'-0"



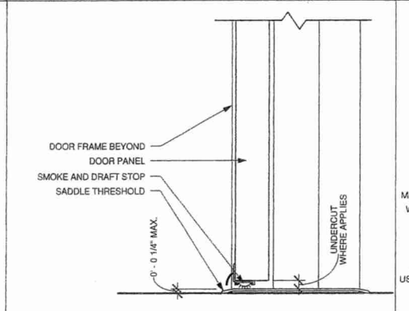
22 EXT. CMU DOOR JAMB
A-9.3 3" = 1'-0"



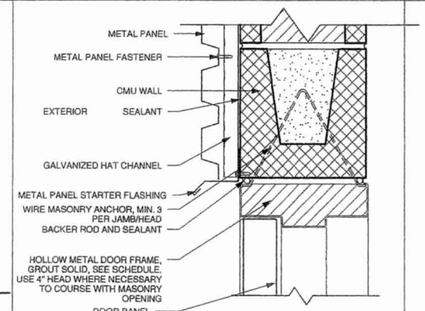
12 EXT. METAL DOOR JAMB
A-9.3 3" = 1'-0"



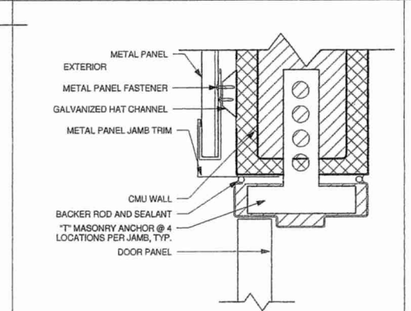
63 WINDOW SILL
A-9.3 3" = 1'-0"



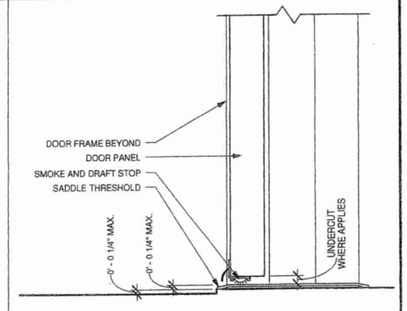
43 CMU DOOR THRESHOLD
A-9.3 3" = 1'-0"



33 EXT. METAL PANEL DOOR HEAD
A-9.3 3" = 1'-0"



23 EXT. METAL PANEL DOOR JAMB
A-9.3 3" = 1'-0"



13 EXT. METAL DOOR THRESHOLD
A-9.3 3" = 1'-0"

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A California Corporation Mark Montgomery, AIA #C14836 Jerry Michal, PE #3938, LS #5751 | Jeff Fisher, LA #5414

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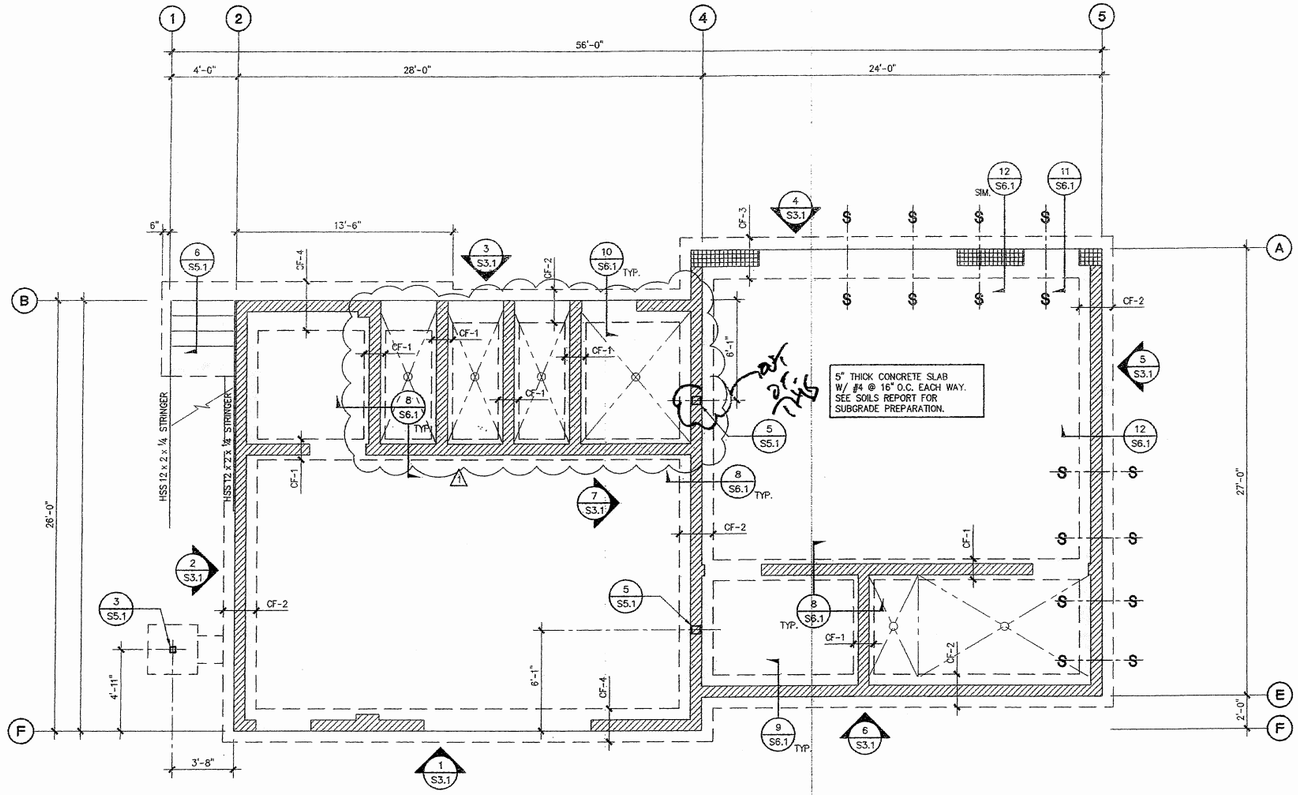
EL SEGUNDO LS
DOOR AND WINDOW DETAILS

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DRAWN SDR DATE ____
CHECK ____ DATE ____

APPROVED DATE ____
CITY ENGINEER R.E. ____

A-9.3
09/20/2010
SHEET 28 OF 68
JOB NO. 1109531

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FOUNDATION PLAN

NORTH

FOUNDATION NOTES:

1. SEE GENERAL NOTES ON SHEET "S4.1".
2. FOR TYPICAL CONCRETE DETAILS SEE SHEET "S4.3". TYPICAL MASONRY DETAILS SEE SHEET "S6.1".
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
4. VERIFY ALL DIMENSIONS, DEPRESSIONS, PITS, SLOPES, CURBS, STEPS, ETC. WITH ARCHITECTURAL AND/OR MEP DRAWINGS.
5. DATUM ELEVATION OF [0'-0"] IS AT THE HIGHEST POINT OF SLAB ON GRADE.
6. VERIFY WITH ARCH. OR CIVIL DRAWINGS THE EXTENT OF EXTERIOR SLAB ON GRADE.
7. EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE, NO MATERIAL IS TO BE EXCAVATED UNNECESSARILY.
8. SPECIAL INSPECTION IS REQUIRED FOR PLACEMENT OF ALL CONCRETE AND MASONRY WALLS.
9. INDICATES 8" CMU WALLS.
10. INDICATES 12" CMU WALLS.
11. INDICATES CONCRETE WALLS.
12. INDICATES STEPPED FOOTING PER DETAIL "11/S4.3".
13. CF-X INDICATES CONTINUOUS FOOTING, SEE SCHEDULE IN DETAIL "7/S6.1" FOR SIZE AND REINF.
14. FOR TYPICAL STAIR DETAILS SEE "S7.1".

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EL SEGUNDO, CA

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STRUCTURAL ENGINEERS
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949.461.7007 / 949.461.7008-Fax

REGISTERED PROFESSIONAL ENGINEER
ROBERT D. SCHENCKEL
No. S 2568
EXP. 9-30-12
STRUCTURAL
STATE OF CALIFORNIA

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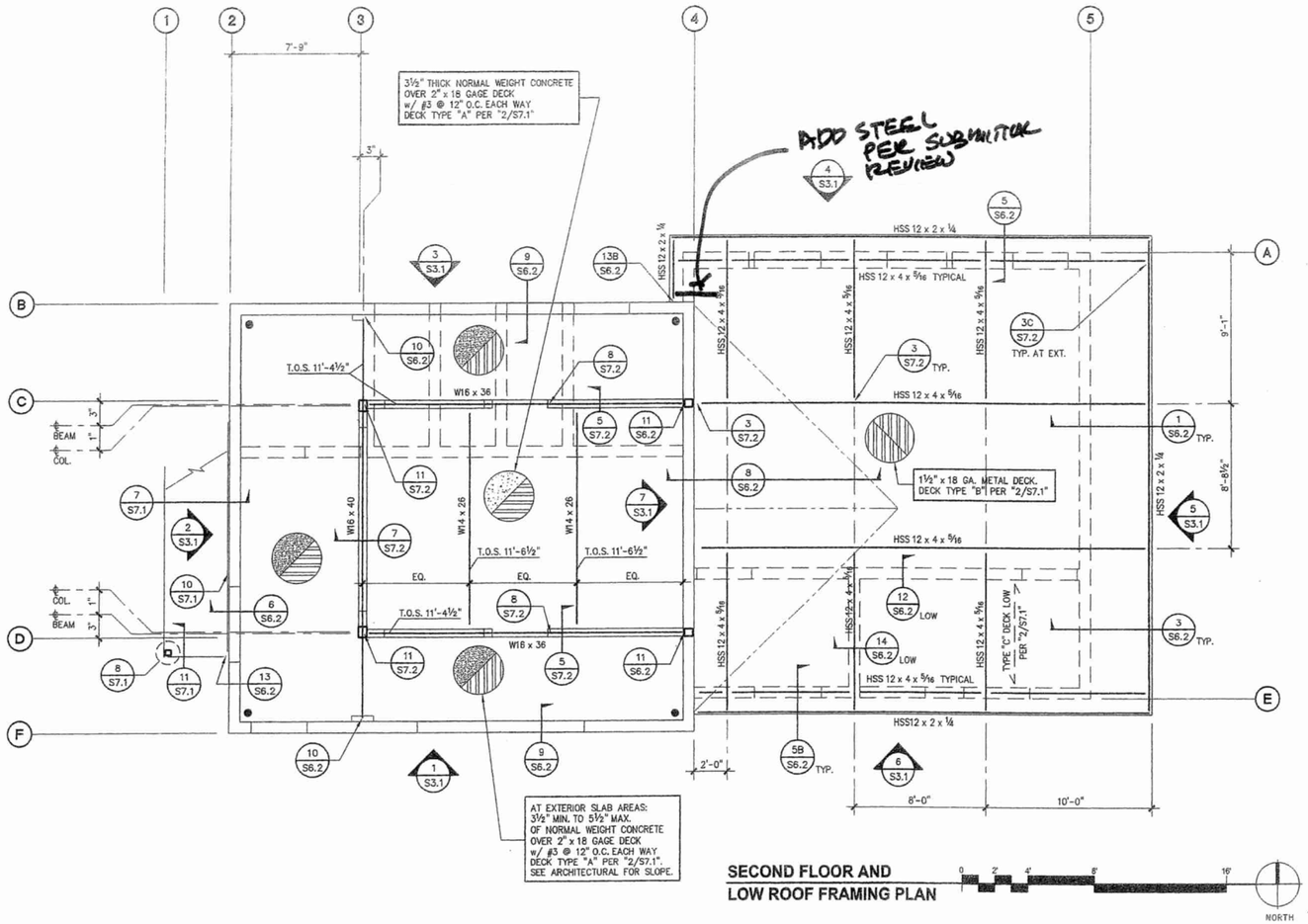
EL SEGUNDO LS
FOUNDATION PLAN

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S-2.1
05/04/2010
SHEET 29 OF 68
JOB NO. 1109531

FILE NO. ____



SECOND FLOOR AND LOW ROOF FRAMING PLAN

0 2' 4' 8' 16'

NORTH

FLOOR FRAMING NOTES:

1. FOR GENERAL NOTES SEE SHEET "S4.1"
2. FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
3. NOMINAL SECOND LEVEL FLOOR LINE DATUM ELEVATION IS +12'-0".
4. ELEVATIONS OF TOP OF STEEL WIDE FLANGE BEAMS AT SECOND FLOOR LEVEL ARE INDICATED THUS: T.O.S. X'-X"
   THEY ARE MEASURED FROM NOMINAL FINISH SLAB ON GRADE ELEVATION OF [0'-0"].
5. INDICATES STEEL DECK, CONCRETE FILL AND SPAN DIRECTION PER SCHEDULE "2/S7.1". FOR STEEL DECK GENERAL NOTES SEE SHEET S4.1. PLACEMENT OF CONCRETE SHALL BE PER "4/S7.1"
6. ALL BEAMS AND GIRDERS WHICH ARE COVERED BY STEEL DECK AND CONCRETE FILL SHALL HAVE ¾"ø WELDED HEADED STUDS WITH A MAXIMUM SPACING OF 12" ON CENTER U.N.O. REFER TO DETAILS "3/S7.1" & "5/S7.1".
7. FOR TYPICAL BEAM TO COLUMN CONNECTION AND BEAM TO BEAM CONNECTION SEE DETAILS ON S7.2.
8. FOR TYPICAL STEEL DECK AND SLAB PENETRATIONS WHERE NOT SPECIFICALLY NOTED ON PLAN, SEE SHEET "S7.1".
9. ALL EXPOSED STEEL SHALL BE GALVANIZED.
10. FOR SMALL OPEININGS IN FLOOR DECK SEE DETAIL 6/S7.1.

ROOF FRAMING NOTES:

1. FOR GENERAL NOTES SEE SHEET "S4.1"
2. FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
3. INDICATES STEEL DECK AND SPAN DIRECTION. STEEL DECK PER SCHEDULE "2/S7.1". FOR STEEL DECK GENERAL NOTES ON SHEET S4.1
4. FOR TYPICAL BEAM TO COLUMN CONNECTION AND BEAM TO BEAM CONNECTION SEE DETAILS ON "S7.2".
5. BEAMS SHALL BE EQUALLY SPACED BETWEEN COLUMNS UNLESS NOTED OTHERWISE.
6. CAP ENDS OF ALL HSS WITH ¼" PLATE.
7. ALL EXPOSED STEEL SHALL BE GALVANIZED.
8. FOR SMALL OPEININGS IN ROOF DECK SEE DETAIL 9/S7.1.

JUL 21 2011

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NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
SECOND FLOOR & LOW ROOF FRAMING PLAN

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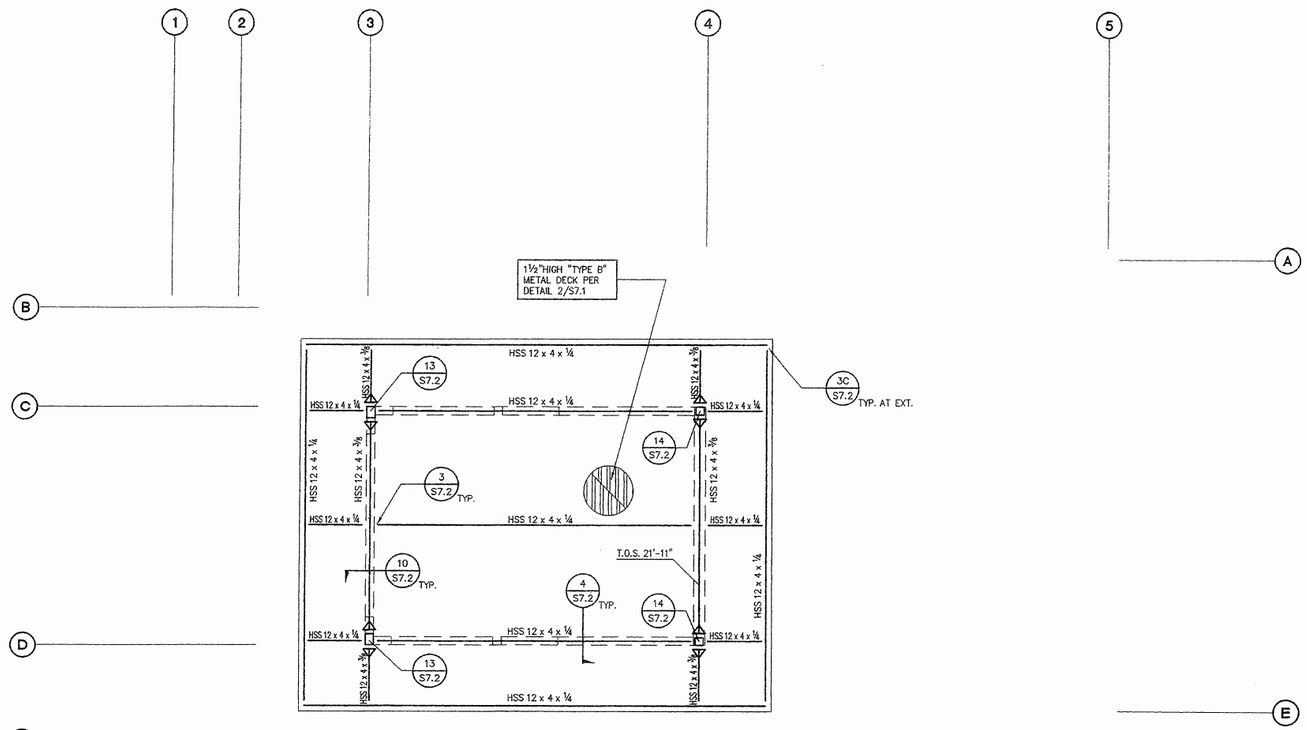
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CITY ENGINEER R.E. ____

S-2.2
05/04/2010
SHEET 39 OF 58
JOB NO. 1109531

PLAN CHECK RESUBMITTAL

ROOF FRAMING NOTES:

1. FOR NOTES SEE SHEET "S2.2"
2. INDICATES MOMENT CONNECTIONS OF BEAMS TO COLUMNS. SEE DETAIL "13/S7.2" & "14/S7.2".



HIGH ROOF FRAMING PLAN 0 2' 4' 8' 16'

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PROJECT ADDRESS:
EL SEGUNDO, CA

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HIGH ROOF FRAMING PLAN

S-2.3
05/04/2010

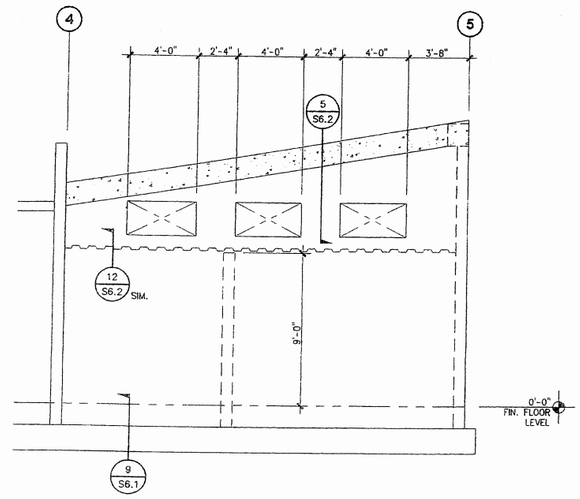
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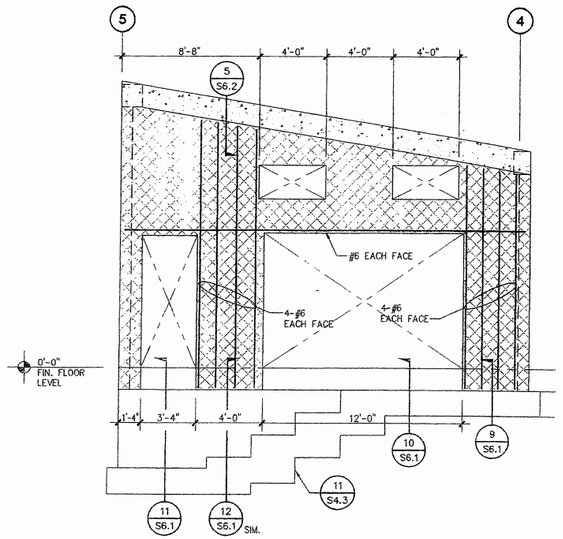
SHEET 31 OF 68
JOB NO. 1109531

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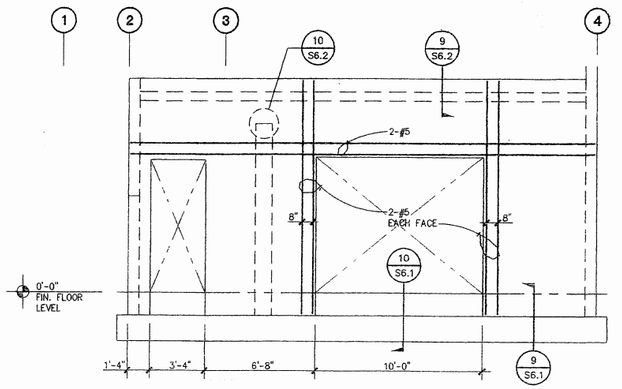
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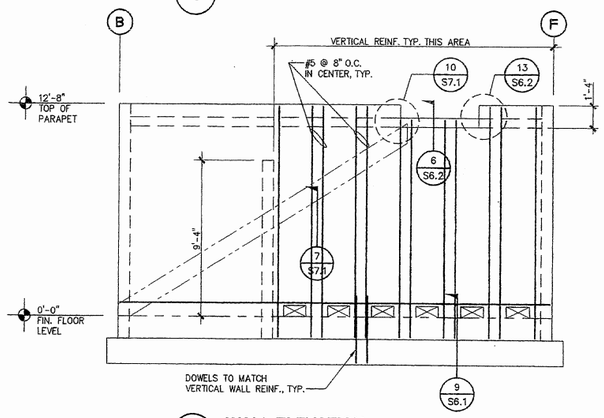
6 WALL ELEVATION



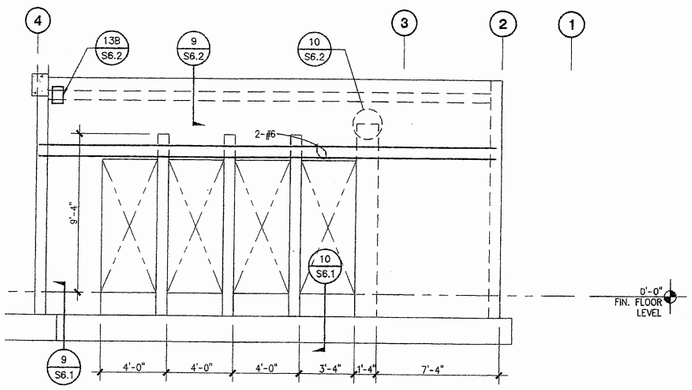
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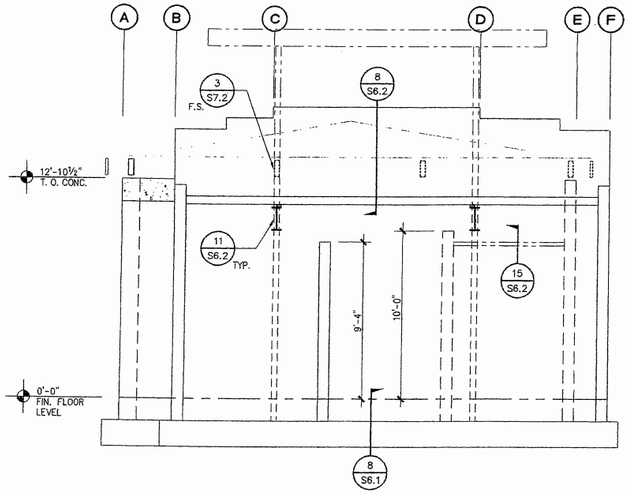
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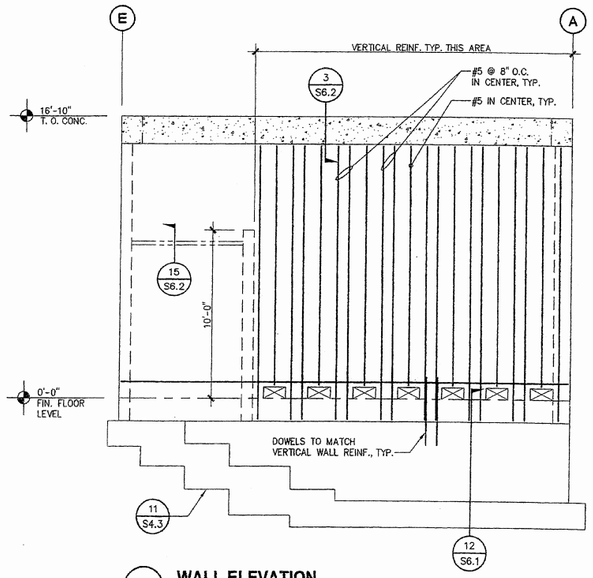
2 WALL ELEVATION



3 WALL ELEVATION



7 WALL ELEVATION



5 WALL ELEVATION

TYPICAL WALL NOTES:

1. SEE GENERAL NOTES SHEET "S4.1" FOR MASONRY AND REINFORCEMENT NOTES.
2. SEE SHEET "S6.1" FOR TYPICAL MASONRY DETAILS.
3. ALL WALLS SHALL BE 8" THICK AND SOLID GROUTED U.N.O.
4. ▨ INDICATES CONCRETE WALLS, LINTELS, AND PILASTERS.
5. ▩ INDICATES 12" CMU WALLS.
6. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY: f'm = 1,500 PSI (SPECIAL INSPECTION REQUIRED).
7. ALL MORTAR JOINTS SHALL BE FULLY BEDDED.
8. PROVIDE 2-#5 CONTINUOUS AT TOP OF PARAPET AND IN FIRST COURSE.
9. TYPICAL WALL REINFORCING U.N.O.:
   FOR 8" CMU: #5 @ 16" O.C. VERTICAL IN CENTER
   #5 @ 24" O.C. HORIZONTAL IN CENTER
   FOR 12" CMU: #5 @ 16" O.C. VERTICAL EACH FACE
   #5 @ 24" O.C. HORIZONTAL EA. FACE
10. TYPICAL REINFORCING AT WALL JAMB AND WALL ENDS FOR FOR 8" CMU 2-#5 EACH SIDE OF EACH OPENING AND ENDS PER "1/S6.1".
11. REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY WIRE POSITIONERS OR OTHER SUITABLE DEVICES AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS NOR 10'-0" O.C.
12. MAINTAIN 2" CLEAR FROM FACE OF MASONRY TO ALL REINFORCING.
13. SPECIAL INSPECTION PER CBC REQUIRED FOR ALL MASONRY.
14. ALL DIMENSIONS ARE TO FACE OF MASONRY (FOM). CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS INCLUDING CLEAR OPENING DIMENSIONS AND LOCATIONS WITH ARCHITECTURAL PLANS, MECHANICAL PLANS AND DOOR AND WINDOW MANUFACTURER FOR REQUIRED CLEARANCE PRIOR TO ANY WALL CONSTRUCTION. NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
15. CONTRACTOR SHALL COORDINATE AND VERIFY ALL EMBEDDED BOLTS AND PLATES PRIOR TO ANY WALL CONSTRUCTION.

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
WALL ELEVATIONS

S-3.1
05/04/2010

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APPROVED ____ DATE ____
CITY ENGINEER R.E. ____

SHEET 32 OF 68
JOB NO. 1109531

FILE N: ____

VI. ABBREVIATIONS

ø	DIAMETER
&	AND
@	AT
A.B.	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AIS:	AMERICAN IRON AND STEEL INSTITUTE
ARCH.	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWS	AMERICAN WELDING SOCIETY
BLDG.	BUILDING
BM.	BEAM
BOT. OR (B)	BOTTOM
℄	CENTER LINE
C.B.	COLUMN BASE
C.G.	CENTER OF GRAVITY
C.J.	CONSTRUCTION JOINT
C.J.P.	COMPLETE JOINT PENETRATION
CLR.	CLEAR
CMU.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONN.	CONNECTION
CONT.	CONTINUOUS
CTR.	CENTER
CTSK	COUNTERSUNK
DET.	DETAIL
DWG.	DRAWING
(E)	EXISTING
EA.	EACH
E.F.	EACH FACE
EL / ELEV.	ELEVATION
E.W.	EACH WAY
EXT.	EXTERIOR
FDN.	FOUNDATION
FIN.	FINISH
FLR	FLOOR
F.O.C.	FACE OF CONCRETE
F.S.	FAR SIDE
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
GLB	GLUE LAM BEAM
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
HSB	HIGH STRENGTH BOLT
HT.	HEIGHT
I.C.C.	INTERNATIONAL CODE COUNCIL
INT.	INTERIOR
JT.	JOINT
KM.	KILOMETER
LG.	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT. WT.	LIGHT WEIGHT
M.B.	MACHINE BOLT
MAX.	MAXIMUM
MECH.	MECHANICAL
MFR.	MANUFACTURER
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
NDS	NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION
(N)	NEW
N.I.C.	NOT IN CONTRACT
NOM.	NOMINAL
N.S.	NEAR SIDE
NTS.	NOT TO SCALE
O.C.	ON CENTER
OPG.	OPENING
OPP.	OPPOSITE
P.A.F.	POWER ACTUATED FASTENER
℗	PLATE
P.J.P.	PARTIAL JOINT PENETRATION
PT	POST-TENSIONED
PT.	POINT
REF.	REFERENCE
REINF.	REINFORCEMENT
REQ.	REQUIRED
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.C.D.	SEE CIVIL DRAWINGS
S.E.D.	SEE ELECTRICAL DRAWINGS
S.M.D.	SEE MECHANICAL DRAWINGS
S.P.D.	SEE PLUMBING DRAWINGS
SC	SLIP-CRITICAL JOINT PER ASTM SPECS
SCHED.	SCHEDULE
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SJI	STEEL JOIST INSTITUTE
SMRF	SPECIAL MOMENT RESISTING FRAME
SPEC.	SPECIFICATION
SQ.	SQUARE
ST	SNUG-TIGHTENED JOINT PER ASTM
STAGG.	STAGGERED
STD.	STANDARD
STL.	STEEL
STRUCT.	STRUCTURAL
SYM.	SYMMETRICAL
(T)	TOP
T&B	TOP AND BOTTOM
THD.	THREADED
T.L.	TOP OF LEDGER
T.O.C.	TOP OF CONCRETE
T.O.N.	TOP OF NAILER
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
W/O	WITHOUT
W.H.S.	WELDED HEADED STUD
W.P.	WORK POINT
WT.	WEIGHT

E. STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

STEEL	DESCRIPTION	ASTM GRADE	MIN. Fy
WF SHAPES	TYPICAL U.N.O.	A992	50 KSI
MISC. SHAPES	ANGLES, CHANNELS, WT	A36	36 KSI
PLATES	⅜" AND THICKER	A572	50 KSI
PLATES	LESS THAN ⅜" THICK	A36	36 KSI
HOLLOW STRUCTURAL SECTIONS (HSS)	TYPICAL U.N.O.	A500, GRADE "B"	46 KSI
PIPES	TYPICAL U.N.O.	A53, GRADE "B"	35 KSI

2. ALL MAIN MEMBERS SHALL HAVE BOLTS CONFORMING TO ASTM A325. MACHINE BOLTS AND ANCHOR BOLTS SHALL CONFORM TO ASTM A307, GRADE "A" UNLESS NOTED OTHERWISE.
3. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE "AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" WITH THE EXCEPTION OF SECTIONS "3.1" AND "3.2" WHERE REFERENCES TO "STRUCTURAL DESIGN DRAWINGS" SHOULD BE REVISED TO REFERENCE "DESIGN DRAWINGS" THEREBY INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DRAWINGS.
4. WELDING OF STRUCTURAL STEEL SHALL BE BY THE SHIELDED METAL ARC (SMAW), FLUX CORED ARC (FCAW) OR OTHER APPROVED PROCESS PER AWS D1.1 USING APPROVED E70XX ELECTRODES OR ELECTRODE-FLUX COMBINATIONS CAPABLE OF DEPOSITING WELD METAL WITH A MAXIMUM DIFFUSABLE HYDROGEN CONTENT OF 8 MILLILITERS (ml) PER 100 GRAMS (HB) OF WELD METAL.
5. ALL STRUCTURAL STEEL FABRICATION SHALL BE DONE IN A LICENSED SHOP APPROVED BY THE BUILDING DEPARTMENT AND ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS.
6. UNLESS NOTED OTHERWISE, ALL METAL CONTACT EDGES SHALL RECEIVE MINIMUM SIZE FILLET WELDS PER AISC TABLE J2.4.
7. ALL STRUCTURAL STEEL EXPOSED TO EARTH SHALL HAVE 3" CONCRETE COVER.
8. WELDED SHEAR STUD CONNECTORS SHALL BE AWS D1.1 "TYPE B" HEADED STUDS MANUFACTURED FROM ASTM A108, GRADE 1015 OR 1020, COLD FINISHED CARBON STEEL. DIMENSIONS SHALL COMPLY WITH AWS D1.1 FOR SIZES SPECIFIED.
9. STRUCTURAL STEEL INDICATED AS ARCHITECTURAL EXPOSED (AESS) SHALL COMPLY WITH SECTION 10 OF THE LATEST AISC CODE OF PRACTICE FOR STEEL CONSTRUCTION.
10. ALL STRUCTURAL STEEL, MISCELLANEOUS METALS, METAL EMBEDS, AND BOLTS WITH EXPOSED SURFACES (EXTERIOR OR INTERIOR CONDITIONS) SHALL BE GALVANIZED.
11. ALL STEEL NOTED AS GALVANIZED SHALL BE HOT DIPPED ZINC COATED GALVANIZED AND SHALL COMPLY WITH ASTM A123/A 123M. ALL DAMAGED GALVANIZING SHALL BE REPAIRED AND SHALL COMPLY WITH ASTM A780.

F. STEEL DECKING

1. STEEL DECKING SHALL BE OF THE TYPES AND GAUGES AS INDICATED ON THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS EXCEPT WHERE INDICATED OTHERWISE ON THE DRAWINGS.
2. STEEL DECKING AND FLASHING SHALL BE FABRICATED OF SHEET METAL CONFORMING TO ASTM A446.
3. STEEL DECKING TO BE GALVANIZED IN ACCORDANCE WITH ASTM A525 G90 COATING DESIGNATION.
4. ALL NECESSARY ACCESSORY ITEMS SUCH AS CLOSURES, INSULATION CLIPS, ROOF SUMP RECESSES, ETC., SHALL BE GALVANIZED, FURNISHED AND AND INSTALLED AS REQUIRED.
5. WELDING OF STEEL DECKING SHALL CONFORM TO AWS D1.1.
6. ALL WELDS AND ABRASIONS SHALL BE GIVEN A PROTECTIVE COAT OF "GALVALLOY", "DRY-GALV", "GALVICON" OR APPROVED EQUAL.
7. ALL METAL DECK SUPPORTING CONCRETE SLAB SHALL HAVE VENT TABS FOR CONCRETE VENTILATION. UNLESS NOTED OTHERWISE.
8. CONDUITS OR PIPES SHALL NOT BE PLACED IN CONCRETE FILL OVER METAL DECK

G. LIGHT GAUGE STEEL FRAMING

1. ALL STUDS AND TRACKS SHALL BE FORMED FROM STANDARD COMMERCIAL STEEL WITH A MINIMUM YIELD POINT PER PLANS CONFORMING TO EITHER ASTM A611 GRADE "C", ASTM A570 OR ASTM A653-SS.
2. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY OR AT AN ANGLE AS REQUIRED TO SQUARELY FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY IN POSITION UNTIL PROPERLY FASTENED.
3. STUDS AND TRACKS SHALL BE ATTACHED BY WELDING AND SELF DRILLING SCREWS AS NOTED ON THE DRAWINGS.
4. BUTT WELDS OR SPLICES SHALL BE USED AT ALL JOINTS IN TRACK. SPLICES IN STUDS OR BRACES SHALL NOT BE PERMITTED. ALL WELDS SHALL BE FILLET, PLUG, BUTT OR SEAM WELDS. STUDS BURNED THROUGH BY WELDING SHALL BE PROVIDED WITH A SUITABLE STITCH PLATE OF SAME GAUGE.
5. STEEL STUDS SHALL BE AS MANUFACTURED PER THE STEEL STUD MANUFACTURERS ASSOCIATION IN ACCORDANCE WITH ICC-ES REPORT No. ER-4943P UNLESS APPROVED OTHERWISE.
6. RUNNER TRACKS SHALL BE THE SAME GAGE AS STUDS SUPPORTED, UNLESS OTHERWISE NOTED. TRACKS SHALL BE FASTENED TO STRUCTURE AT 24" O.C. MAXIMUM UNLESS OTHERWISE NOTED.
7. PROVIDE BLOCKING OF WALL STUDS AT 4'- 0" O.C. MAXIMUM WHERE SHEATHING IS NOT PRESENT ON BOTH SIDES OF STUDS.
8. WHERE NECESSARY, STEEL STUDS SHALL BE COORDINATED WITH GLAZING MANUFACTURER, MECHANICAL, ELECTRICAL AND ALL OTHER TRADES.
9. ALL LIGHT GAUGE STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A525 G90 COATING DESIGNATION.

H. STRUCTURAL WOOD

1. ALL WOOD MEMBERS SHALL BE DOUGLAS FIR (DF) OR LARCH GRADE MARKED BY A RECOGNIZED GRADING AGENCY (WCLA, WWPA, OR WCLIB).
2. PLYWOOD SHEATHING SHALL BE DOUGLAS FIR CONFORMING TO "PRODUCT STANDARD PS1-83", AND SHALL BE GRADE MARKED BY APA.
3. WOOD GRADES (UNLESS NOTED OTHERWISE):
   (A). FOR HORIZONTAL MEMBERS: LEDGERS AND RAFTERS.....GRADE #1
4. UNLESS OTHERWISE SPECIFIED, ALL NAILING SHALL CONFORM TO THE LATEST EDITION OF THE C.B.C.
5. ALL NAILS SHALL BE STANDARD COMMON NAILS, UNLESS NOTED OTHERWISE.
6. ALL FRAMING HARDWARE SHALL BE AS MANUFACTURED BY "SIMPSON COMPANY" OR ENGINEER APPROVED EQUAL.

B. REINFORCED CONCRETE

1. CEMENT SHALL CONFORM TO ASTM C-150, SEE NOTE "5" BELOW FOR CEMENT TYPE REQUIRED BASED ON CONCRETE USE. FLY ASH NOT ALLOWED.
2. AGGREGATES SHALL CONFORM TO ASTM C-33 FOR STRUCTURAL NORMAL-WEIGHT CONCRETE (1" MAXIMUM SIZE)
3. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C-94.
4. CONCRETE DESIGN MIXES SHALL BE IN ACCORDANCE WITH SEC. 1905 OF THE C.B.C. AND SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF CALIFORNIA, AND HIRED BY CONTRACTOR.
5. ALL CONCRETE SHALL SATISFY BOTH THE MINIMUM STRENGTH REQUIREMENT AND MAXIMUM WATER-CEMENT RATIO BY WEIGHT AS FOLLOWS;

CONCRETE USE	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS F'c	MAXIMUM WATER CEMENT RATIO BY WEIGHT	CEMENT TYPE
CONCRETE OVER METAL DECK	4,000 PSI	0.45	II
FOOTINGS & SLAB	4,500 PSI	0.45	V
BOND BEAMS	4,000 PSI	0.45	II

6. THE SLUMP SHALL BE 4" FOR ALL CONCRETE WORK.
7. ADMIXTURES MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
8. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT.
9. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, REVEALS, SCUPPERS, ORNAMENTS, CLIPS OR TEXTURES REQUIRED TO BE CAST INTO CONCRETE AND LOCATIONS AND EXTENTS OF DEPRESSIONS, CURBS AND RAMPS.
10. PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE NOTED. CONCRETE FORM TOLERANCES SHALL BE WITHIN ACI STANDARDS.
11. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE SECURED IN POSITION AND INSPECTED BY THE LOCAL BUILDING DEPARTMENT INSPECTOR PRIOR TO THE POURING OF ANY CONCRETE.
12. LOCATION OF ALL CONSTRUCTION JOINTS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING REINFORCING STEEL.
13. THE AGGREGATE GRADATION FOR CONCRETE MIXES FOR SLABS-ON-GRADE AND METAL DECK FILL SHALL RETAIN, BY WEIGHT, 8% MINIMUM TO 18% MAXIMUM ON EACH SIEVE SIZE EXCLUDING 1½" AND NO. 100.

C. REINFORCING STEEL

1. BAR REINFORCEMENT SHALL CONFORM TO:
   ASTM A615, GRADE 60 . . . . . ALL REBAR U.N.O.
   ASTM A706, GRADE 60 . . . . . ALL JAMB BARS
   ASTM A706, GRADE 60 . . . . . ALL WELDED REBAR
2. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
4. REINFORCING DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE" LATEST EDITION.
5. LAPS AT BAR SPLICES SHALL BE PER TYPICAL DETAILS OR AS NOTED OTHERWISE ON THE PLANS FOR CONCRETE AND 40 BAR DIA. OR 18" MIN., FOR MASONRY UNLESS NOTED OTHERWISE.
6. VERTICAL BARS IN WALLS SHALL BE ACCURATELY POSITIONED AT THE CENTER OF WALL, UNLESS OTHERWISE NOTED ON DETAILS, & SHALL BE TIED IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIA.
7. REINFORCING STEEL SHALL BE PROVIDED WITH THE FOLLOWING AMOUNTS OF CONCRETE COVER, UNLESS NOTED OTHERWISE:
   CONCRETE DEPOSITED AGAINST EARTH . . . . . 3"
   CONCRETE FORMED EXPOSED TO EARTH OR WEATHER . . . 2"
   COLUMN REINFORCING (INCLUDING COLUMN TIES) . . . . . 1½"
   BEAMS AND GIRDERS . . . . . 1½"
   SLAB (#11 OR SMALLER) . . . . . ¾"
8. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE OR GROUT.
9. UNLESS OTHERWISE NOTED IN DETAILS, FURNISH #3 SPACER TIES AT APPROXIMATELY 2'-6" ON CENTER IN ALL BEAMS AND FOOTINGS TO SECURE REINFORCING STEEL IN PLACE.

D. CONCRETE MASONRY

1. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY: f'm = 1,500 PSI.
2. UNITS: MEDIUM WEIGHT OPEN END BLOCKS CONFORMING TO ASTM C90, GRADE N, TYPE I.
3. REINFORCING STEEL: ASTM A615, GRADE 60.
4. MORTAR: ASTM C270, TYPE M. f'c = 2500 PSI FOR f'm= 1,500 PSI
5. GROUT: COMPRESSIVE STRENGTH OF 2,000 PSI FOR f'm = 1,500 PSI BLOCK ALL CELLS SHALL BE FULLY GROUTED.
6. GROUTING OF ANY WALL SECTION SHALL BE COMPLETED IN ONE DAY WITH NO INTERRUPTIONS GREATER THAN ONE HOUR.
7. BETWEEN GROUT POURS A HORIZONTAL CONSTRUCTION JOINT SHALL BE FORMED BY STOPPING MASONRY AT THE SAME ELEVATION WITH THE GROUT STOPPING 1½" BELOW A MORTAR JOINT, EXCEPT AT BOND BEAMS THE GROUT POUR SHALL BE STOPPED A MINIMUM ½" BELOW THE TOP OF THE MASONRY.
8. CLEAN OUTS SHALL BE PROVIDED FOR ALL GROUT POURS OVER 5 FEET IN HEIGHT: CLEAN OUTS SHALL BE PROVIDED IN THE BOTTOM COURSE AT ALL VERTICAL BARS, BUT SHALL NOT BE SPACED MORE THAN 32" ON CENTER. CLEAN OUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING.
9. MASONRY UNITS MAY BE LAID TO THE FULL HEIGHT OF THE GROUT POUR AND GROUT SHALL BE PLACED IN A CONTINUOUS POUR IN LIFTS NOT EXCEEDING 6'-0".
10. VERTICAL CONTROL JOINT FOR WALLS SHALL BE PLACED AT SPACINGS NOT TO EXCEED 50 FEET. REFER TO ARCHITECTURAL DRAWINGS FOR CONTROL JOINT DETAILS AT EXTERIOR FINISHES.

III. TESTING AND INSPECTION

A. OWNER'S TESTING AGENCY SHALL PERFORM THE FOLLOWING TESTS AND SUBMIT APPROPRIATE REPORTS TO THE ARCHITECT, ENGINEER AND BUILDING DEPARTMENT. REFER TO SHEET S4.2 FOR ADDITIONAL REQUIREMENTS.

B. PERFORM CONCRETE TESTING FOR CONCRETE IN ACCORDANCE WITH ACI 318.
   1. MAKE AND CURE A MINIMUM OF THREE SPECIMEN CYLINDERS ACCORDING TO ASTM C31 AT A FREQUENCY FOR EACH CLASS OF CONCRETE PLACED EACH DAY OF NOT LESS THAN ONCE PER DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS, NOR LESS THAN ONCE FOR EACH 5,000 SQ. FT.
   2. RETAIN ONE CYLINDER FOR SEVEN-DAY TEST AND MINIMUM TWO FOR THE 28 DAY TEST. TEST FOR SPECIFIED STRENGTH AND ANY EARLY STRENGTHS FOR POST TENSIONED CONCRETE ACCORDING TO ASTM C39.

C. PERFORM CMU WALL TESTING IN ACCORDANCE WITH CBC SECTION 2105.

D. PERFORM NONDESTRUCTIVE TESTING FOR ALL COMPLETE PENETRATION AND PARTIAL PENETRATION JOINT FIELD WELDS.

E. SPECIAL INSPECTOR SHALL SUBMIT REGULAR INSPECTION REPORTS PER C.B.C. SECTION 1704.

F. ALL CONSTRUCTION AND INSPECTION SHALL COMPLY WITH THE HEALTH AND SAFETY CODE, CHAPTER 2; "ESSENTIAL SERVICES BUILDINGS SEISMIC SAFETY ACT OF 1986".

IV. DESIGN BASIS

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE (CBC), 2007 EDITION.

B. VERTICAL LIVE LOADS:

AREA	LIVE LOAD (1)	
	UNIFORM	CONCENTRATED
ROOF	20 PSF	——
FLOOR	60 PSF	2000 LBS.
MEZZANINE	75 PSF	——

NOTES:
(1) THE CONDITION OF UNIFORM OR CONCENTRATED LIVE LOAD PRODUCING THE GREATER STRESS OR DEFLECTION GOVERNS DESIGN. UNIFORM AND CONCENTRATED LIVE LOADS ARE NOT ADDITIVE U.N.O.
(2) THE MINIMUM DESIGN UNIFORM LIVE LOAD IS REDUCED BASED ON MEMBER TRIBUTARY AREA IN ACCORDANCE WITH CBC SECTION 1607.
(3) OFFICE AREA DESIGN LOADING INCLUDES 20 PSF UNIFORM PARTITION LOAD IN ADDITION TO LIVE LOAD IN ACCORDANCE WITH CBC SECTION 1607.5.
(4) CONCENTRATED LIVE LOAD PLACED UPON ANY AREA 2½ FEET SQUARE IN ACCORDANCE WITH CBC SECTION 1607.4.

C. LATERAL LOADS:
   1. SEISMIC:
      IMPORTANCE FACTOR, I = 1.0
      SEISMIC DESIGN CATEGORY = D
      OCCUPANCY CATEGORY = IV
      SITE CLASS = D
      MAPPED MCE SPECTRAL RESPONSE ACCELERATION, S_S = 1.586g
      MAPPED MCE SPECTRAL RESPONSE ACCELERATION, S_1 = 0.643g
      SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{DS} = 1.057g
      SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{D1} = 0.643g
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
      SEISMIC RESPONSE COEFFICIENT, C_S = 0.211g
      TOTAL DESIGN BASE SHEAR E = 32.7 KIPS.

      STRUCTURAL SYSTEM COEFFICIENT "R" AS FOLLOWS:

BASIC STRUCTURAL SYSTEM	LATERAL-FORCE-RESISTING SYSTEM	R
BEARING WALL	SPECIAL REINFORCED CONCRETE MASONRY SHEAR WALLS	5.0
BUILDING FRAME	ORDINARY STEEL MOMENT FRAME	3.0

   2. WIND
      BASIC WIND SPEED = 85 MPH
      EXPOSURE = D
      IMPORTANCE FACTOR = 1.0
      INTERNAL PRESSURE COEFFICIENT = ± 0.18
      DESIGN WIND PRESSURE TO COMPONENTS AND CLADDING P = 25.5 PSF

V. MATERIALS

A. FOUNDATION

1. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR ALLOWABLE FOUNDATION LOADS;

MINIMUM FOOTING WIDTH	MINIMUM FOOTING DEPTH BELOW FINISH GRADE	ALLOWABLE NET SOIL PRESSURE
12"	18"	2000 PSF

200 PSF AND 400 PSF INCREASES FOR EACH ADDITIONAL FOOT OF WIDTH AND DEPTH, RESPECTIVELY, UP TO A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF.

PROPOSED LIFEGUARD TOWER SOUTHWEST CORNER OF GRAND AVENUE AND VISTA DEL MAR, EL SEGUNDO, CALIFORNIA
BY GEOCON WEST, INC.
REPORT NO. A8718-06-01, DATED MARCH 11, 2010

2. A QUALIFIED SOIL ENGINEER SHALL VERIFY THAT CONSTRUCTION AT THE SITE IS IN ACCORDANCE WITH GENERALLY ACCEPTED GEOTECHNICAL PRACTICES AND THE GEOTECHNICAL REPORT. FINISHED EXCAVATION FOR FOUNDATION SHALL BE NEAT AND TRUE TO LINE WITH ALL LOOSE MATERIAL AND STANDING WATER REMOVED FROM EXCAVATIONS.
3. PRIOR TO PLACING CONCRETE, EXCAVATIONS SHALL BE CHECKED AND APPROVED BY A QUALIFIED SOILS ENGINEER FOR COMPLIANCE WITH THE GEOTECHNICAL REQUIREMENTS.
4. ALL FILL MATERIAL IS TO BE APPROVED BY THE SOILS ENGINEER AND SHALL BE COMPACTED TO MINIMUM 90% OF OPTIMUM DENSITY OR AS REQUIRED BY THE GEOTECHNICAL REPORT. INSPECTION IS REQUIRED DURING FILL AND COMPACTION.
5. ANY UTILITY LINES ENTERING UNDER THE BUILDING SHALL HAVE A NON-PERVIOUS BACKFILL MATERIAL USED AT THE BUILDING PERIMETER TO ELIMINATE ANY TRANSMISSION OF SUBSURFACE MOISTURE PENETRATION UNDER THE BUILDING THROUGH THE UTILITY TRENCH.
6. CLASS 2 AGGREGATE BASE SHALL BE PER STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

I. GENERAL

A. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY, AND THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND THEY SHALL BE IN ACCORDANCE WITH ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

C. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN OR OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING AND SAFETY NETS. CONTRACTOR, AT HIS OWN EXPENSE, SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECTION OF SAME IN THE FIELD. OBSERVATION VISITS BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE.

D. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, AND CONFIRMING THAT WORK IS BUILDABLE AS SHOWN BEFORE PROCEEDING WITH CONSTRUCTION. IF THERE ARE ANY QUESTIONS REGARDING THESE OR OTHER COORDINATION ITEMS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH ANY WORK.

E. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK AND NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

F. ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH WORK SO INVOLVED.

G. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS. WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

H. NO PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, OR OTHER ITEMS UNLESS OTHERWISE NOTED ON STRUCTURAL PLANS. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, OR OTHER ITEMS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS.

I. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.

J. HOLES AND OPENINGS THROUGH WALLS, FLOORS AND ROOFS FOR DUCTS, PIPING AND VENTILATIONS SHALL BE COORDINATED BY THE CONTRACTOR WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.

K. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE CALLED FOR OR SHOWN.

L. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY LICENSES AND PERMITS. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL LAWS GOVERNING THE WORK.

M. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BEFORE BEGINNING WORK. SPECIAL CARE SHALL BE TAKEN TO PROTECT UTILITIES THAT ARE TO REMAIN IN SERVICE DURING CONSTRUCTION.

N. ALL FINISHES, STRUCTURAL ELEMENTS AND ARCHITECTURAL FEATURES AFFECTED BY CONSTRUCTION ARE TO BE REPAIRED AND/OR REPLACED TO MATCH EXISTING CONSTRUCTION.

O. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE COMPLETION OF ALL WORK SHOWN, DESCRIBED OR REASONABLY IMPLIED, BUT NOT LIMITED TO THAT EXPLICITLY IN THE CONTRACT DOCUMENTS.

P. REFER TO DRAWINGS BY OTHERS FOR INFORMATION NOT SHOWN ON THE STRUCTURAL DRAWINGS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   1. MECHANICAL EQUIPMENT SEISMIC ANCHORAGE AND BRACING - SEE MECHANICAL DRAWINGS AND DEFERRED CONTRACTOR SUBMITTAL.
   2. VERTICAL SUPPORT AND LATERAL BRACING FOR SUSPENDED UTILITY PIPING AND MECHANICAL DUCTING - SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND DEFERRED CONTRACTOR SUBMITTAL.
   3. MISCELLANEOUS STEEL FABRICATION - SEE ARCHITECTURAL DRAWINGS AND/OR DEFERRED CONTRACTOR SUBMITTAL.

II. QUALITY CONTROL

A. THE FOLLOWING WORK REQUIRES TESTS AND/OR INSPECTIONS. FOR SPECIFIC REQUIREMENTS SEE SPECIFICATION AND SHEET S4.2. INSPECTIONS SHALL BE MADE IN ACCORDANCE WITH C.B.C. APPENDIX SECTION 109 AND CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR RETAINED BY THE OWNER. CONTRACTOR SHALL PROVIDE A WRITTEN STATEMENT OF RESPONSIBILITY FOR THE SPECIAL INSPECTION AS PER SECTION 1706 OF THE CODE.
   1. FOOTING EXCAVATION.
   2. SOIL COMPACTION.
   3. PLACEMENT OF REINFORCING STEEL, METAL EMBEDS AND ANCHOR BOLTS.
   4. CONCRETE.
   5. ADHESIVE DOWELS.
   6. STEEL
   7. METAL DECK
   8. FIELD WELDING: REBAR, STRUCTURAL STEEL, METAL DECK, WELDED STUDS.
   9. HIGH STRENGTH BOLTS.
   10. CONCRETE MASONRY TYPICAL U.N.O.

B. A PARTIAL LISTING OF REQUIRED STRUCTURAL SUBMITTALS FOLLOWS. REFER TO THE SPECIFICATIONS AND SHEET S4.2 FOR COMPLETE SUBMITTAL REQUIREMENTS.
   1. CONCRETE MIX DESIGNS
   2. GROUT MIX DESIGNS.
   3. REINFORCING STEEL SHOP DRAWINGS
   4. CONSTRUCTION AND CONTROL JOINT LAYOUT FOR CONCRETE SLABS ON GRADE.
   5. STRUCTURAL STEEL SHOP DRAWINGS
   6. MANUFACTURER'S DATA FOR INSERTS, GROUT AND ADHESIVE.

JUL 21 2011

BID DOCUMENTS

PROJECT ADDRESS:
EL SEGUNDO, CA

RSSE STRUCTURAL ENGINEERS
RSSE Structural Engineers Inc.
27042 Towne Centre Dr.
Suite 235
Foothill Ranch, CA 92610
949.461.7007 / 949.461.7008-Fax

CITY OF EL SEGUNDO
BUILDING SAFETY DIVISION
350 MAINS STREET, EL SEGUNDO, CA 90245
TEL. (310) 524-2300 FAX. (310) 322-4869

STRUCTURAL OBSERVATION PROGRAM
AND ENGINEERING OF RECORD
STRUCTURAL OBSERVATION

PROJECT ADDRESS: _____ PERMIT APPL. NO.: _____

DESCRIPTION OF WORK: _____

OWNER: _____ ARCHITECT: _____ ENGINEER: _____

STRUCTURAL OBSERVATION PROGRAM
(ONLY CHECKED ITEMS ARE REQUIRED)

FIRM OR INDIVIDUAL TO BE RESPONSIBLE FOR THE STRUCTURAL OBSERVATION
NAME: _____ CALIF. REGISTRATION: _____

FOUNDATION	WALL	FRAME	DIAPHRAGM
● FOOTING, STEM WALLS, PIERS	○ CONCRETE	● STEEL MOMENT FRAME	○ CONCRETE
○ MAT FOUNDATION	● MASONRY	○ STEEL BRACED FRAME	● STEEL DECK
○ CAISSON, PILES, GRADE BEAMS	○ WOOD	○ CONCRETE MOMENT FRAME	○ WOOD
○ STEP, P/RETAINING FOUNDATION HELISOIL SPECIAL ANCHORS	○ OTHERS: CONNECTIONS TO (1) CONCRETE WALL	○ MASONRY WALL FRAME	○ OTHERS
○ OTHERS:		○ OTHERS: REPAIR OF STEEL TRUSSES & CONNECTIONS	

DECLARATION BY OWNER
I, THE OWNER OF THE PROJECT, DECLARE THAT THE ABOVE LISTED FIRM OR INDIVIDUAL IS HIRED BY ME TO BE THE STRUCTURAL OBSERVER.
SIGNATURE: Maryann M Jones DATE: 4/20/10

DECLARATION BY ARCHITECT OR ENGINEER OF RECORD
I, THE ARCHITECT OR ENGINEER OF RECORD FOR THE PROJECT, DECLARE THAT THE ABOVE LISTED FIRM OR INDIVIDUAL IS STIPULATED BY ME TO BE RESPONSIBLE FOR THE STRUCTURAL OBSERVATION.
SIGNATURE: DOYLER C 17536 LICENSE NO. 9/26/16 DATE

8 CONCRETE CONSTRUCTION (CBC SECTION 1704.4, TABLE 1704.4, AND ACI 318)

8.1 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION AS FOLLOWS:

A. DURING THE PLACEMENT OF REINFORCEMENT AND CONCRETE IN SEISMIC FORCE RESISTING MOMENT FRAMES AND SEISMIC SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F (IN ACCORDANCE WITH CBC 1616), AND ALL STRUCTURES CONSTRUCTED IN WIND EXPOSURE CATEGORIES A, B, C, AND D (AS REQUIRED IN CBC 1706).

B. PRIOR TO AND DURING THE INSTALLATION OF ADHESIVE/GROUTED ANCHORS AND EMBEDMENTS.

C. DURING THE MOLDING OR CONSTRUCTION OF CONCRETE TEST CYLINDERS, BEAMS, OR CORES.

D. PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND ANCHOR BOLTS.

8.2 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION AS FOLLOWS:

A. AT THE START AND DURING EACH PHASE OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.

B. ANCHORAGES FOR EQUIPMENT AND NON-STRUCTURAL COMPONENTS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F (CBC 1707).

C. REINFORCEMENT VERIFICATION PRIOR TO CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE.

D. DURING THE PLACEMENT OF CONCRETE (ONLY WHERE PERMITTED BY CODE AND ACI 318)

E. AT SUCH FREQUENCY AS NECESSARY TO CLEARLY CONFIRM THE PLACEMENT OF TIES, HOOPS, STIRRUPS, CONNECTIONS, AND ANY ADDITIONAL SPECIFIED REINFORCEMENT (I.E. AT OPENINGS, BEAMS, CORNERS, COLUMNS, PIERS AND CAISSONS) BEFORE THEY ARE COVERED.

F. DURING SAMPLING OF CONCRETE AT DISCHARGE FROM MIXER.

G. VERIFICATION OF DELIVERED MIX DESIGN BEFORE ANY CONCRETE IS PLACED.

H. VERIFICATION OF THE TRAVEL TIME AND ROTATIONS OF THE DRUM OF THE DELIVERED MIX BEFORE ANY CONCRETE IS PLACED. (ASTM C94)

I. MAINTENANCE OF SPECIFIED/APPROVED CURING TEMPERATURE AND TECHNIQUES.

9 MASONRY CONSTRUCTION (CBC SECTION 1704.5 AND 2104)

9.1 THE SPECIAL INSPECTOR SHALL VERIFY COMPLIANCE OF THE FOLLOWING, PRIOR TO CONSTRUCTION:

A. CERTIFICATES OF COMPLIANCE FOR MATERIALS USED IN MASONRY CONSTRUCTION. (CBC 1708.1)

B. PROPORTIONS OF MATERIALS – INCLUDING ADMIXTURES – IN MORTAR AND GROUT.

C. F'M PRIOR TO CONSTRUCTION, AND FOR EVERY 5,000 SQ. FT. DURING CONSTRUCTION. (CBC 1708.1)

9.2 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION AS FOLLOWS:

A. DURING PLACEMENT OF ALL MASONRY NON-OPEN END UNITS, REINFORCEMENT, CONNECTORS.

B. DURING INSTALLATION AND IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS.

C. DURING ALL GROUTING OPERATIONS.

D. DURING PREPARATION AND TAKING OF PRISMS OR TEST SPECIMENS.

E. DURING WELDING OF REINFORCING STEEL.

9.3 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION AS FOLLOWS:

A. AT THE START AND DURING EACH PHASE OF THE PROJECT TO CONFIRM MATERIAL CERTIFICATIONS AND TESTING REQUIREMENTS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.

B. AT SUCH FREQUENCY AS NECESSARY, TO VERIFY THAT THE CLEANLINESS, MORTAR PROJECTIONS AND REINFORCEMENT CLEARANCES WITHIN GROUT SPACES, CONFORM TO THE MINIMUM REQUIREMENTS.

C. TO VERIFY THAT THE GROUT POURS AND CONSTRUCTION JOINTS ARE IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.

D. TO VERIFY THAT ALL DOWELS, ANCHOR BOLTS, EMBED PLATES, INSERTS, AND ANY OTHER DETAILS OF ANCHORAGE TO MASONRY ARE SECURED IN PLACE.

E. TO VERIFY TYPE, SIZE AND LOCATION OF STRUCTURAL ELEMENTS INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.

F. TO VERIFY PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 F) OR HOT WEATHER (TEMPERATURE ABOVE 90 F).

10 LIGHT FRAMED CONSTRUCTION (CBC SECTION 1704 AND 1707)

10.1 SHOP FABRICATED ASSEMBLIES (CBC 1704.2): THE SPECIAL INSPECTOR SHALL VERIFY THE QUALITY AND WORKMANSHIP FOR THE FABRICATION OF STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES. THE SPECIAL INSPECTOR SHALL REVIEW THE FABRICATOR'S DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES FOR COMPLETENESS AND ADEQUACY. APPROVAL TO WAIVER SPECIAL INSPECTION REQUIREMENTS OF FABRICATED MEMBERS SHALL BE BASED ON REVIEW OF THE FABRICATOR'S WRITTEN AND PROCEDURAL QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED SPECIAL INSPECTION AGENCY.

10.2 CONSTRUCTION (CBC 1704.3, 1704.4, 2210, 2304 AND 2308)

10.2.1 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION TO VERIFY THE FOLLOWING FOR COMPLIANCE TO APPROVED PLANS AND CODE REQUIREMENTS:

A. ROOF DIAPHRAGM TO BLOCKING OR TOP TRACK FASTENER SIZE AND SPACING.
B. FIELD INSTALLATION AND CONNECTION DETAILS, NAILING, BOLTING, ANCHORING, DRILLING, CUTTING, NOTCHING, BLOCKING AND BRIDGING.
C. INSTALLATION AND LOCATION OF DRAG STRUT, DIAPHRAGM COLLECTOR, BRACES, ANCHORS AND HOLD DOWNS.
D. SHEAR WALL (BOUNDARY AND FIELD) FASTENING DETAILS.
E. OPENING/PENETRATION LOCATIONS AND REQUIREMENTS FOR SUPPLEMENTAL STRAPPING WITH BLOCKING.
F. ACCEPTABILITY OF BLOCKING FIT, CONNECTION, SIZE, LOCATION AND ORIENTATION.
G. WELDING AND FRAMING CONSTRUCTION FOR PROPER FIT OF JOINTS AND CONNECTIONS.
H. CONNECTION HARDWARE: SUCH AS STRAPS, ANGLES, HANGERS, FRAMING CLIPS AND FASTENERS (NAIL, BOLT, LAG, OR SCREW) FOR COMPLIANCE WITH SPACING, EDGE DISTANCE, SIZE PENETRATION, AND GAGE REQUIREMENTS.

7 STEEL CONSTRUCTION (CBC SECTION 1704.3 AND TABLE 1704.3)

7.1 SUBMITTALS

7.1.1 THE CONTRACTOR SHALL PROVIDE COPIES OF THE SUBMITTALS REVIEWED BY THE RDP TO EACH SPECIAL INSPECTOR

7.1.2 THE SPECIAL INSPECTOR SHALL OBTAIN COPIES OF THE FOLLOWING SUBMITTALS FOR THEIR REVIEW:

A. SHOP AND ERECTION DRAWINGS.
B. WELDING PROCEDURE SPECIFICATIONS (WPS).
C. MANUFACTURER'S MILL CERTIFICATE
D. MILL TEST REPORTS
E. CHARPY V-NOTCH (CVN) IMPACT TEST REPORTS
F. WELDERS CERTIFICATES

7.2 WELDING (IN COMPLIANCE WITH AWS D1.1)

7.2.1 THE SPECIAL INSPECTOR SHALL:

A. ASCERTAIN THAT ALL FABRICATION AND ERECTION BY WELDING IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED CONSTRUCTION DOCUMENTS, THE BUILDING CODE AND AWS STANDARDS.
B. VERIFY THAT ONLY MATERIALS AND PROCEDURES CONFORMING TO THE REQUIREMENTS OF AWS, AISC OR ASTM, AND SPECIFIED ON APPROVED PLANS ARE USED.
C. REVIEW ALL WELDING PROCEDURE SPECIFICATION (WPS). VISUALLY INSPECT THE PREPARATIONS, WELDING PROCESS, ELECTRODES AND EQUIPMENT USED, FOR COMPLIANCE; AND VERIFY THE VARIABLES ARE WITHIN ESTABLISHED PARAMETERS.
D. VERIFY THAT INDIVIDUAL QUALIFICATION OF WELDERS, WELDING OPERATORS AND TACK WELDERS ARE CURRENT, AND IN ACCORDANCE WITH THE WORK TO BE PERFORMED.
E. VERIFY THAT THE FILLER METAL FOR DEMAND CRITICAL WELDS AND ALL WELDS IN MEMBERS AND CONNECTIONS IN THE SEISMIC LOAD RESISTING SYSTEM, AS DESIGNATED IN THE CONTRACT DOCUMENTS, MEETS THE MINIMUM CHARPY V-NOTCH TOUGHNESS REQUIREMENTS. (AWS D1.8.)
F. VISUALLY INSPECT ALL WELDS AND VERIFY THAT ALL DISCONTINUITIES (SUCH AS THOSE CREATED BY ERRORS/FABRICATION/OR ERECTION OPERATIONS) ARE REPAIRED.

7.2.2 PERIODIC INSPECTIONS ARE PERMITTED DURING WELDING OF THE FOLLOWING ITEMS, PROVIDED VISUAL INSPECTION IS CONDUCTED PRIOR TO COMPLETION AND/OR SHIPMENT OF SHOP WELDS:

A. SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16 IN.
B. FLOOR AND ROOF DECK WELDING.
C. WELDED STUDS IN STRUCTURAL DIAPHRAGM OR COMPOSITE SYSTEMS.
D. WELDED SHEET STEEL FOR COLD-FORMED STEEL FRAMING STUDS AND JOISTS.
E. STAIR AND RAILING SYSTEMS.

7.2.3 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION FOR SHOP AND FIELD WELDING PER CBC 1707 AND AISC 341. CONTINUOUS INSPECTION IS ALSO REQUIRED FOR SINGLE-PASS FILLET WELDS EXCEEDING 5/16", MULTI-PASS WELDS, GROOVE WELDS, WHERE SPECIFICALLY INDICATED ON DRAWINGS, AND OTHER WELDS NOT LISTED FOR PERIODIC INSPECTION.

7.2.4 EXCEPT FOR SPECIAL MOMENT-RESISTING FRAMES, SPECIAL CONCENTRIC BRACED FRAMES, OR ECCENTRIC BRACED FRAMES, SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS PERFORMED ON THE PREMISES OF A FABRICATOR CURRENTLY REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION PER SECTION CBC 1704.2, UNLESS OTHERWISE REQUIRED BY THE RDP.

7.2.5 PROVIDE NON-DESTRUCTIVE TESTING FOR FULLY RESTRAINED CONNECTIONS BY ULTRASONIC TESTING OR BY RADIOGRAPHY, UNLESS REQUIRED OTHERWISE IN AWS D1.1 OR AS SPECIFIED BY THE RDP:

A. COMPLETE JOINT PENETRATION GROOVE WELDS.
B. PARTIAL PENETRATION GROOVE WELDS IN COLUMN SPLICES.
C. BASE METAL THICKER THAN 1-1/2 INCHES WHERE SUBJECT TO THROUGH-THICKNESS WELD SHRINKAGE STRAINS.
D. OTHER NON-DESTRUCTIVE TESTING AS REQUIRED BY AISC 341 AND THE RDP.

7.2.6 REQUIRED VERIFICATION AND INSPECTION FOR STEEL CONSTRUCTION AS DETAILED IN CBC TABLE 1704.3.

7.3 HIGH STRENGTH BOLTING

7.3.1 HIGH STRENGTH BOLTING SHALL BE INSTALLED IN ACCORDANCE WITH THE "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC), UNLESS OTHERWISE NOTED ON THE APPROVED PLANS AND SPECIFICATIONS.

7.3.2 THE SPECIAL INSPECTOR SHALL:

A. DETERMINE THAT THE SPECIFIED REQUIREMENTS FOR BOLTS, NUTS, WASHERS AND PAINT; BOLTED PARTS; INSTALLATION AND TIGHTENING STANDARDS ARE MET.
B. OBSERVE THE PRE-INSTALLATION TESTING AND CALIBRATION PROCEDURES (WHEN SUCH PROCEDURES ARE REQUIRED OR SPECIFIED). THE CALIBRATED WRENCH TIGHTENING INSTALLATION PROCEDURE SHALL BE CALIBRATED DAILY FOR EACH BOLT DIAMETER, LENGTH AND GRADE USING FASTENER ASSEMBLIES THAT ARE BEING INSTALLED.
C. VERIFY THAT THE SELECTED PROCEDURE FOR INSTALLATION IS PROPERLY USED TO TIGHTEN BOLTS, AND TO ACHIEVE THE REQUIRED PRETENSION (WHEN SPECIFIED).

7.3.3 IN BOLTED CONNECTIONS THAT ARE SLIP-CRITICAL OR REQUIRE PRETENSIONING, THE SPECIAL INSPECTOR SHALL DETERMINE THAT ALL AREAS ON THE FAYING SURFACE BETWEEN BOLTS ARE FREE OF PAINT OR ZINC-COATING, UNLESS QUALIFIED/TESTED IN ACCORDANCE WITH THE 2004 RCSC SPECIFICATION APPENDIX A AND APPROVED BY THE RDP.

7.3.4 SNUG-TIGHT AND PRETENSIONED BEARING CONNECTIONS, IDENTIFIED AS NOT BEING SLIP-CRITICAL NEED NOT BE INSPECTED FOR BOLT TENSION, OTHER THAN TO ENSURE THAT ALL PLIES OF THE CONNECTED MATERIALS HAVE BEEN DRAWN TOGETHER IN FIRM CONTACT.

7.3.5 PERIODIC INSPECTION FOR BOLTED CONNECTIONS MAY BE PERFORMED IN ACCORDANCE WITH AISC SPECIFICATIONS AND CBC 1704.3.3.2, INCLUDING:

A. THE TURN-OF-NUT METHOD WITH MATCH-MARKING TECHNIQUES.
B. THE DIRECT TENSION INDICATOR METHOD.
C. THE ALTERNATE DESIGN FASTENERS (TWIST-OFF BOLTS).
D. JOINTS DESIGNATED AS SNUG TIGHT.

7.3.6 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS MONITORING FOR :

A. TURN-OF-NUT METHOD WITHOUT MATCH-MARKING.
B. PRETENSIONING USING THE CALIBRATED WRENCH METHOD.

4 SPECIAL INSPECTIONS

4.1 THE SPECIAL INSPECTOR OR INSPECTION AGENCY RETAINED FOR CONDUCTING INSPECTIONS SHALL NOT BE EMPLOYED DIRECTLY OR INDIRECTLY BY THE CONTRACTOR.

4.2 THE SPECIAL INSPECTOR SHALL NOTIFY THE BUILDING OFFICIAL PRIOR TO INSPECTION COMMENCEMENT, DOCUMENT INSPECTION RECORDS AND FURNISH THEM TO THE BUILDING OFFICIAL AND TO THE RDP IN RESPONSIBLE CHARGE. (CBC 1704.1.2).

4.3 THE INSPECTION REPORT SHALL INDICATE THAT THE WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS INCLUDING, BUT NOT LIMITED TO THE FOLLOWINGS:

A. PROJECT ADDRESS.

B. PERMIT NUMBER AND THE AUTHORITIES HAVING JURISDICTION.

C. DATE OF INSPECTION.

D. DESCRIPTION OF INSPECTIONS PERFORMED, APPLICABLE STANDARD, AND LOCATION (BUILDING ID, GRID LINES, AND ELEVATION OR FLOOR LEVEL).

E. STATEMENT THAT THE WORK INSPECTED CONFORMS TO APPROVED PLANS AND SPECIFICATIONS.

F. LIST OF DISCREPANCIES, UNRESOLVED DEVIATIONS, AND EXCLUSIONS OR ADDITIONS TO APPROVED PLANS AND SPECIFICATIONS AUTHORIZED BY THE RDP.

G. CORRECTIONS TO PREVIOUSLY LISTED ITEMS.

H. LIST OF TEST SPECIMENS TAKEN, TEST RESULTS AND MILL CERTIFICATIONS RECEIVED.

I. NAME, INSPECTION LICENSE OR IDENTIFICATION NUMBER, AND SIGNATURE OF SPECIAL INSPECTOR PERFORMING THE INSPECTION.

4.4 ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE BUILDING OFFICIAL AND TO THE RDP (CBC 1704.1.2)

4.5 TEST AND INSPECTION REPORTS SHALL BE SUBMITTED WITHIN FIVE (5) WORKING DAYS OF THE INSPECTION OR THE OBTAINING THE RESULTS OF THE TEST.

4.6 DEVIATION LOG: EACH SPECIAL INSPECTOR SHALL MAINTAIN A LOG OF WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THIS DEVIATION LOG SHALL INCLUDE REFERENCE TO THE ORIGINAL TEST, INSPECTION, OR OBSERVATION REPORT. THE SUBSEQUENT DATES OF RE-INSPECTION OR RETESTING, AND THE DATE THE CORRECTED WORK WAS VERIFIED TO BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE DEVIATION LOG SHALL BE UPDATED DAILY AND SUBMITTED AT MONTHLY INTERVALS. (CBC 1704.1.2)

4.7 UPON COMPLETION OF THE PROJECT, EACH SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT TO THE RDP AND THE BUILDING OFFICIAL, STATING THAT THE WORK REQUIRING SPECIAL INSPECTIONS WAS COMPLETED IN SUBSTANTIAL CONFORMANCE TO THE APPROVED PLANS, SPECIFICATIONS AND THE APPLICABLE PROVISIONS OF THE CODE. ANY WORK NOT IN COMPLIANCE SHALL BE DESCRIBED IN THE REPORT (CBC 1704.1.2 ASCE 7-05 SECTION 11A.4).

5 STRUCTURAL OBSERVATION

5.1 THE PURPOSE OF STRUCTURAL OBSERVATION IS TO ENSURE THAT THE STRUCTURAL SYSTEM IS CONSTRUCTED IN GENERAL CONFORMANCE WITH CONSTRUCTION DOCUMENTS. (CBC 1702)

5.2 STRUCTURAL OBSERVATION CONSISTING OF VISIBLE OBSERVATION OF THE STRUCTURAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS FOR GENERAL CONFORMANCE TO THE APPROVED STRUCTURAL PLANS AND SPECIFICATIONS SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD AT SIGNIFICANT REPRESENTATIVE CONSTRUCTION STAGES AS DETERMINED BY THE STRUCTURAL ENGINEER OF RECORD.

5.3 OBSERVED DEFICIENCIES:

5.3.1 OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING.

5.3.2 THE CONTRACTOR SHALL RESOLVE ALL IDENTIFIED DEFICIENCIES TO THE SATISFACTION OF THE STRUCTURAL OBSERVER.

5.3.3 AT THE CONCLUSION OF THE PROJECT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED (1709.1).

6 CONTRACTOR RESPONSIBILITIES

6.1 NOTIFICATIONS: THE CONTRACTOR SHALL COORDINATE THE TESTING, INSPECTION, AND STRUCTURAL OBSERVATION SERVICES WITH THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR AND TESTING AGENCY 24 HOURS IN ADVANCE, AND THE STRUCTURAL OBSERVER 48 HOURS IN ADVANCE OF REQUIRED OBSERVATIONS FOR SCHEDULING PURPOSES. FAILURE BY THE CONTRACTOR TO MEET OBSERVATION SCHEDULES MAY REQUIRE REMOVAL OF ANY SUBSEQUENT WORK FOR OBSERVATION. THE CONTRACTOR SHALL BE LIABLE FOR EXPENSES ENTAILED IN THE REMOVAL AND REPLACEMENT OF ANY MATERIAL REQUIRED TO ALLOW INSPECTION OR STRUCTURAL OBSERVATION.

6.2 THE CONTRACTOR SHALL REPAIR AND/OR REPLACE WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE CHOICE OF REPAIR OR REPLACEMENT IS SUBJECT TO THE APPROVAL OF THE OWNER, THE RDP, THE ENGINEER RESPONSIBLE FOR THE STRUCTURAL DESIGN, AND THE AUTHORITIES HAVING JURISDICTION IN WHICH THE PROJECT IS CONSTRUCTED.

A. CONTRACTOR SHALL ENGAGE AN ENGINEER OR ARCHITECT TO PREPARE REPAIR AND/OR REPLACEMENT PROCEDURES.

B. THE ENGINEER OR ARCHITECT SHALL BE REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE ENGINEER OR ARCHITECT SELECTED SHALL BE SUBJECT TO THE APPROVAL OR REJECTION OF THE RDP, AUTHORITIES HAVING JURISDICTION, AND OWNER.

C. PROCEDURES SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE BY THE RDP, ENFORCEMENT AGENCY, AND OWNER BEFORE PROCEEDING WITH CORRECTIVE ACTION.

6.3 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS OF:

A. REVIEW OF PROPOSED REPAIR AND/OR REPLACEMENT PROCEDURES BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND THE INSPECTORS AND TESTING AGENCIES

B. REPAIR OR REPLACEMENT OF WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS.

C. RE-TESTING AND RE-INSPECTION OF MATERIALS, WORK, AND/OR PRODUCTS THAT DO NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS AND SHOP DRAWINGS/SUBMITTAL DATA.

6.4 SUBMITTALS:

A. SUBMIT SHOP DRAWINGS, DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S FIELD REPORTS, AND OTHER QUALITY CONTROL SUBMITTALS AS REQUIRED BY THE CONTRACT DOCUMENTS FOR REVIEW BY THE RDP.

1 DEFINITIONS

1.1 APPROVED AGENCY: THE APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, AND APPROVED BY THE RDP AND THE BUILDING OFFICIAL. (CBC 1702.1).

1.2 APPROVED FABRICATOR: A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES WITHOUT SPECIAL INSPECTION; AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL AND THE RDP (CBC 1704.2.2).

1.3 CERTIFICATE OF COMPLIANCE: A CERTIFICATE STATING THAT THE MATERIALS AND PRODUCTS MEET SPECIFIED STANDARDS OR THE WORK WAS DONE IN COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS (CBC 1702).

1.4 RDP: REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF THE PROJECT. A REGISTERED DESIGN PROFESSIONAL SHALL BE A REGISTERED STRUCTURAL ENGINEER, A REGISTERED CIVIL ENGINEER, OR A LICENSED ARCHITECT HOLDING A VALID CERTIFICATE TO PRACTICE IN THE STATE OF CALIFORNIA.

1.5 SPECIAL INSPECTOR: A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL AND RDP, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION (CBC 1704.1). THE SPECIAL INSPECTOR SHALL HAVE ACTUAL PERSONAL KNOWLEDGE, OBTAINED BY PERSONAL INSPECTION OF THE WORK OF CONSTRUCTION.

1.6 SPECIAL INSPECTION: INSPECTION OF THE MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS (CBC 106, 1702 & 1704). THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS BY THE BUILDING OFFICIAL (CBC 109).

1.7 SPECIAL INSPECTION, CONTINUOUS: CONSTANT, FULL-TIME INSPECTION OF THE WORK OF CONSTRUCTION, IN ALL STAGES OF ITS PROGRESS, BY THE APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED, TO ENSURE THAT THE REQUIREMENTS OF THE APPROVED PLANS AND SPECIFICATIONS ARE BEING COMPLETELY EXECUTED. (CBC 1702)

1.8 SPECIAL INSPECTION, PERIODIC: PART-TIME OR INTERMITTENT INSPECTION OF WORK OF CONSTRUCTION BY THE APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE WORK HAS BEEN OR IS BEING PERFORMED AND AT COMPLETION OF THE WORK. (CBC 1702)

1.9 STRUCTURAL OBSERVATION: VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY THE DESIGNATED STRUCTURAL OBSERVER FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM (CBC 106.3.4.1, 1702 & 1709). STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS REQUIRED PER CBC 109 & 1704.

1.10 STRUCTURAL OBSERVER: THE STRUCTURAL OBSERVER SHALL BE THE INDIVIDUAL RESPONSIBLE FOR THE DESIGN OF THE STRUCTURAL SYSTEMS; ALTERNATIVELY, THE STRUCTURAL OBSERVER SHALL BE A PROFESSIONAL ENGINEER DESIGNATED BY EITHER THE RDP OR PROFESSIONAL ENGINEER DELEGATED RESPONSIBILITY FOR THE DESIGN OF THE STRUCTURAL SYSTEMS OF THE BUILDING. THE STRUCTURAL OBSERVER SHALL BE EMPLOYED BY THE OWNER, THE RDP, OR THE PROFESSIONAL ENGINEER DELEGATED RESPONSIBILITY FOR THE DESIGN OF THE STRUCTURAL SYSTEMS OF THE BUILDING.

2 GENERAL REQUIREMENTS AND PREPARATION

2.1 THIS INSPECTION AND OBSERVATION PROGRAM HAS BEEN DEVELOPED WITH THE UNDERSTANDING THAT THE OWNER SHALL DESIGNATE A RESPONSIBLE INDIVIDUAL OR FIRM, ACCEPTABLE TO THE RDP AND BUILDING OFFICIAL, TO OVERSEE AND COORDINATE THE IMPLEMENTATION OF THE PROGRAM, AND MONITOR THE SPECIAL INSPECTION ACTIVITIES ON THE JOB SITE TO ASSURE THAT THE SPECIAL INSPECTORS PERFORM THEIR DUTIES, AS DESCRIBED HEREIN.

2.2 THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS, INSPECTION AGENCIES OR FIRMS, APPROVED BY THE RDP AND THE BUILDING OFFICIAL, TO PROVIDE INSPECTION DURING CONSTRUCTION ON THE TYPES OF WORK REQUIRING SPECIAL INSPECTION (CBC 1704.1).

2.3 THE OWNER OR ITS DESIGNEE SHALL EMPLOY MATERIALS TESTING LABORATORY/TESTING AGENCY AS APPROVED BY THE RDP AND THE BUILDING OFFICIAL TO PERFORM TESTS SPECIFIED IN THIS SECTION.

3 TESTING AND APPROVALS

3.1 THE APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY UNDER THE RESPONSIBLE CHARGE OF A LICENSED PROFESSIONAL ENGINEER, REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, AND APPROVED BY THE RDP AND THE BUILDING OFFICIAL.

3.2 THE APPROVED AGENCY RETAINED FOR CONDUCTING TESTS SHALL NOT BE EMPLOYED DIRECTLY OR INDIRECTLY BY THE CONTRACTOR.

3.3 THE APPROVED AGENCY SHALL HAVE ADEQUATE EQUIPMENT AND PERSONNEL TO MEASURE, EXAMINE, TEST, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS AND VERIFY CONFORMANCE WITH CONSTRUCTION DOCUMENTS AND APPLICABLE STANDARDS. (CBC 1703.1)

A. ALL EQUIPMENT NECESSARY TO PERFORM REQUIRED TESTS SHALL BE PERIODICALLY CALIBRATED PER THE REFERENCED STANDARDS AND AS RECOMMENDED BY THE MANUFACTURER.

B. THE APPROVED AGENCY SHALL EMPLOY EXPERIENCED PERSONNEL, EDUCATED IN CONDUCTING, SUPERVISING AND EVALUATING TESTS, AND/OR INSPECTIONS.

3.4 APPROVAL OF ANY MATERIAL, APPLIANCE, EQUIPMENT, SYSTEM OR METHOD OF CONSTRUCTION MEETING THE REQUIREMENTS OF THIS CODE, SHALL BE IN WRITING. A RECORD OF SUCH APPROVAL SHALL BE KEPT ON FILE IN THE BUILDING OFFICIAL'S OFFICE. SUCH APPROVAL RECORDS SHALL ALSO INCLUDE THE CONDITIONS AND LIMITATIONS OF THE APPROVAL.(CBC 1703.2, 1703.3)

3.5 THE APPROVED AGENCY SHALL MAINTAIN A RECORD OF TESTS PERFORMED IN SUFFICIENT DETAIL TO VERIFY COMPLIANCE WITH THE TEST STANDARD. (CBC 1703.5.1)

3.6 TEST REPORTS BY THE APPROVED AGENCY SHALL BE PROVIDED TO THE RDP AND THE BUILDING OFFICIAL TO DETERMINE THAT THE CONSTRUCTION MATERIALS COMPLY WITH APPLICABLE CODE REQUIREMENTS. (CBC 1703.2)

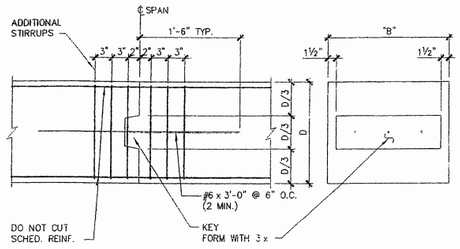
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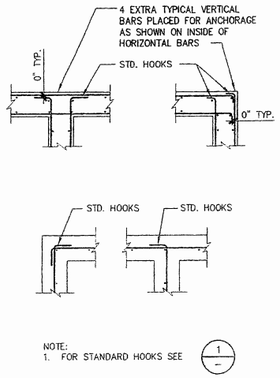
BID DOCUMENTS

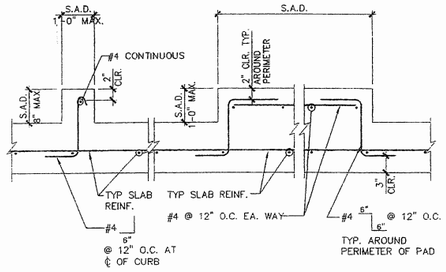
PROJECT ADDRESS:
EL SEGUNDO, CA

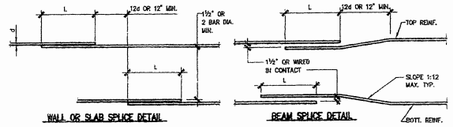
RSSE INC
STRUCTURAL ENGINEERS
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THE INCLUDED DRAWINGS, SPECIFICATION, AND/OR DESIGNS ARE INSTRUMENTS REPRESENTING THE SERVICE AND WORK PERFORMED BY THE ARCHITECT AND/OR ENGINEER AND AS SUCH REMAIN THEIR PROPERTY



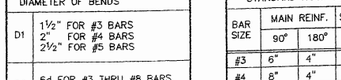






REINFORCEMENT LAP SPLICE LENGTH "L"								
CONCRETE STRENGTH	F'c = 2500 PSI		F'c = 3000 PSI		F'c = 4000 PSI		F'c = 4500 PSI	
BAR SIZE	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	2'-7"	2'-0"	2'-4"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"
#4	3'-5"	2'-8"	3'-1"	2'-5"	2'-8"	2'-1"	2'-7"	2'-0"
#5	4'-3"	3'-3"	3'-11"	3'-0"	3'-4"	2'-7"	3'-2"	2'-6"
#6	5'-1"	3'-11"	4'-8"	3'-7"	4'-0"	3'-1"	3'-10"	2'-11"
#7	7'-5"	5'-9"	6'-9"	5'-3"	5'-11"	4'-6"	5'-7"	4'-3"
#8	8'-6"	6'-6"	7'-9"	6'-0"	6'-9"	5'-2"	6'-4"	4'-11"
#9	9'-6"	7'-4"	8'-9"	6'-9"	7'-7"	5'-10"	7'-2"	5'-6"
#10	10'-7"	8'-2"	9'-8"	7'-5"	8'-5"	6'-6"	8'-11"	6'-1"

NOTES:
1. THE LAP SPLICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
2. WHERE CLEAR SPACE BETWEEN BARS IS LESS THAN 2 BAR DIAMETERS AND/OR THE CLEAR COVER IS LESS THAN ONE BAR DIAMETER, THE LAP SPLICE SHALL BE INCREASED BY 50%
3. WHERE LIGHTWEIGHT AGGREGATE CONCRETE IS USED, INCREASE LAP SPLICE LENGTH BY 30%
4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
5. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
6. SPLICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.

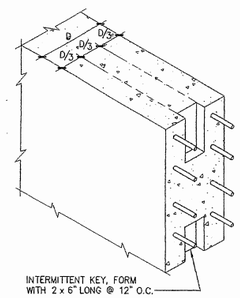


DIAMETER OF BENDS	
D1	1½" FOR #3 BARS 2" FOR #4 BARS 2½" FOR #5 BARS
D2	6d FOR #3 THRU #8 BARS 8d FOR #9, #10 & #11 BARS

"D1" - FOR STIRRUPS, TIES AND WALL REINF. AT OPENINGS
"D2" - FOR ALL OTHERS

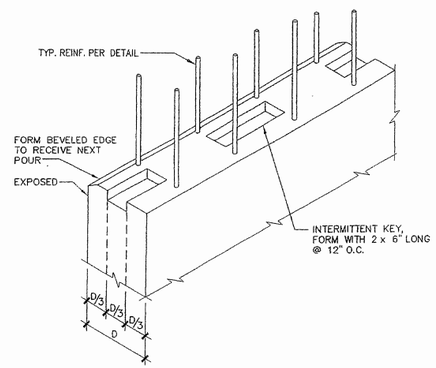
STANDARD HOOK LENGTHS "h"				
BAR SIZE	MAIN REINF.		STIRRUP & TIE HOOKS	
	90°	180°	90°	135°
#3	6"	4"	3"	4½"
#4	8"	4"	4"	6"
#5	9½"	4½"	5"	7½"
#6	11½"	5½"	11½"	10"
#7	13½"	6½"	13½"	11½"
#8	15"	7"	15"	13"
#9	18"	9"	-	-
#10	20"	10"	-	-
#11	22"	11"	-	-

13 BEAMS AND GRADE BEAMS CONSTRUCTION JOINTS



NOTES:
1. SEE REBAR LAP SPLICES AND INDIVIDUAL DETAILS FOR INFORMATION NOT NOTED.
2. SEE SPECIFICATIONS FOR JOINT ROUGHENING REQUIREMENTS.

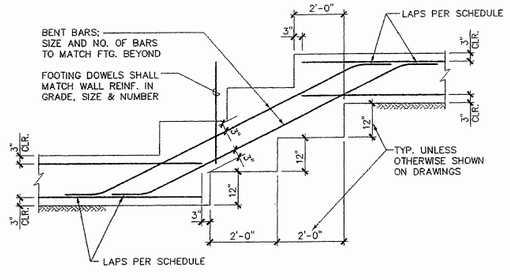
(A) VERTICAL JOINT



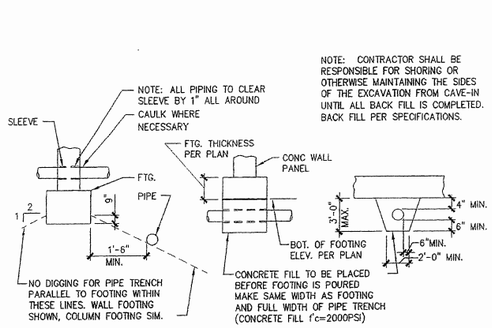
(B) HORIZONTAL JOINT

15 CONSTRUCTION JOINT IN CONCRETE WALL

10 CONCRETE WALL AND FOOTING INTERSECTIONS

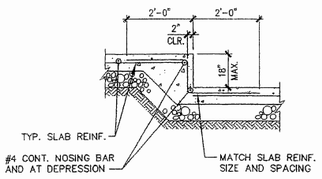


11 STEPS IN CONTINUOUS FOOTING

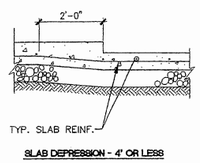


12 PIPE CLEARANCE AT FOOTING

7 TYPICAL CURB AND RAISED PAD DETAILS

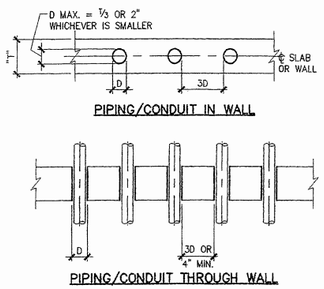


SLAB DEPRESSION - GREATER THAN 4'



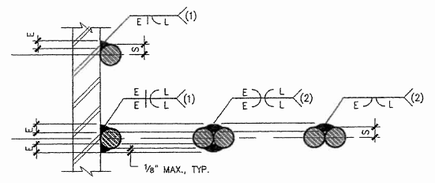
SLAB DEPRESSION - 4' OR LESS

8 SLAB-ON-GRADE DEPRESSION



9 PIPING AND CONDUIT IN OR THROUGH SLAB OR WALL

5 REBAR OFFSET AND LAP SPLICE



MINIMUM EFFECTIVE WELD SIZES & LENGTHS				
NOM. BAR SIZE	TYPE 1		TYPE 2	
	SIZE (E) (IN)	LENGTH (L) (IN)	SIZE (E) (IN)	LENGTH (L) (IN)
3	3/32	4	1/8	4
4	1/8	6	5/32	6
5	1/8	8	3/16	6
6	5/32	10	1/4	6
7	3/16	12	9/32	8
8	7/32	12	5/16	10
9	1/4	14	11/32	10
10	1/4	18	3/8	14
11	1/4	22	13/32	16

NOTES :
(1) EFFECTIVE THROAT E = 0.45 FOR TYPE (1).
(2) EFFECTIVE THROAT E = 0.65 FOR TYPE (2).
(3) USE E70XX ELECTRODES FOR GRADE 40 BARS; USE E90XX ELECTRODES FOR GRADE 60/ A706 BARS.
(4) WELDS BOTH SIDES OF BAR MAY BE 50% LENGTH (L) PER TABLE, 3" MINIMUM.
(5) WELDABILITY OF ASTM A615 GR. 60 BARS TO BE DETERMINED PER ASTM TO VERIFY CONFORMANCE WITH AWS D1.2. PREHEAT REQUIRED FOR GRADE 60 BARS PER AWS D1.5, SECTION 5.2.
(6) A706 BARS MAY BE USED IN LIEU OF GRADE 40.

6 TYPICAL REINFORCEMENT WELDS

1 STANDARD HOOKS

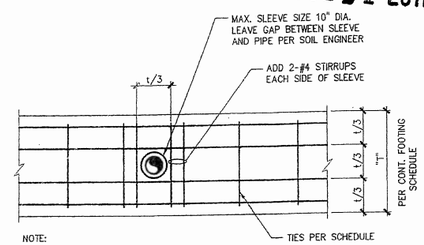


REINFORCEMENT DEVELOPMENT LENGTH												
CONCRETE STRENGTH		F'c = 2500 PSI			F'c = 3000 PSI			F'c = 4000 PSI			F'c = 4500 PSI		
BAR SIZE	h	Ld		Lhb	Ld		Lhb	Ld		Lhb	Ld		Lhb
		TOP BARS	OTHER BARS		TOP BARS	OTHER BARS		TOP BARS	OTHER BARS		TOP BARS	OTHER BARS	
#3	6"	2'-0"	1'-6"	7"	1'-10"	1'-5"	7"	1'-7"	1'-3"	6"	1'-6"	1'-2"	6"
#4	8"	2'-8"	2'-0"	10"	2'-5"	1'-10"	9"	2'-1"	1'-7"	8"	2'-0"	1'-6"	7"
#5	10"	3'-3"	2'-6"	1'-0"	3'-0"	2'-4"	11"	2'-7"	2'-0"	10"	2'-6"	1'-11"	9"
#6	12"	3'-11"	3'-0"	1'-2"	3'-7"	3'-9"	1'-1"	3'-1"	2'-5"	11"	2'-11"	2'-3"	11"
#7	14"	5'-9"	4'-5"	1'-5"	5'-3"	4'-0"	1'-3"	4'-6"	3'-6"	1'-1"	4'-3"	3'-4"	1'-0"
#8	16"	6'-6"	5'-0"	1'-7"	6'-0"	4'-7"	1'-5"	5'-2"	4'-0"	1'-3"	4'-11"	3'-9"	1'-2"
#9	19"	4'-1"	5'-8"	1'-9"	6'-8"	5'-2"	1'-7"	5'-10"	4'-6"	1'-5"	5'-6"	4'-3"	1'-4"
#10	22"	8'-0"	6'-3"	1'-11"	7'-6"	6'-9"	1'-9"	6'-6"	5'-0"	1'-7"	6'-1"	4'-8"	1'-6"

NOTES:
1. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

2 REBAR DEVELOPMENT LENGTH

JUL 21 2011



NOTE:
1. DO NOT CUT REINFORCING.
2. SLEEVE TO BE PLACED IN MIDDLE THIRD OF FOOTING DEPTH.

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3 SLEEVE THRU FOOTING & GRADE BEAM

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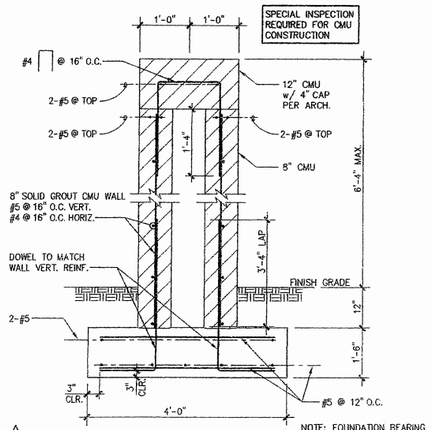
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TYPICAL CONCRETE DETAILS

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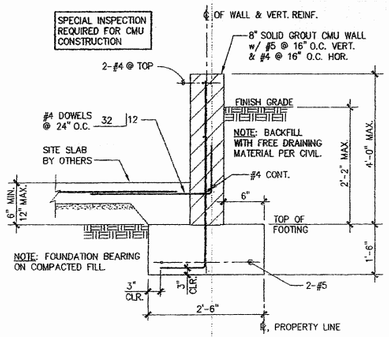
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JOB NO. 1109531

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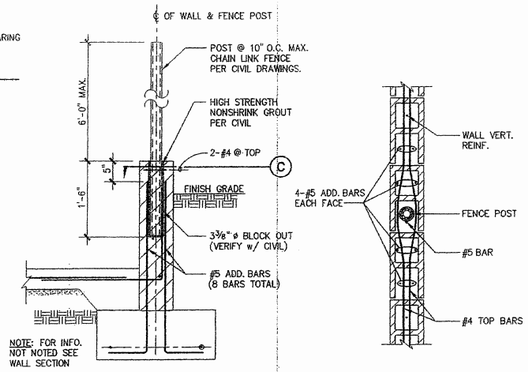
10 1017 10101 S43/ 04/29/10



1 10 **FREE STANDING SITE SHOWER WALL**



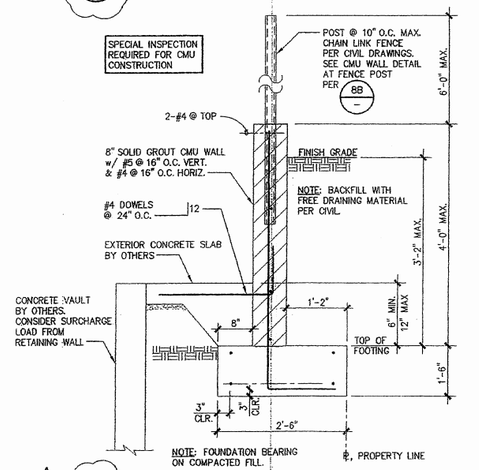
A **TYPICAL WALL SECTION**



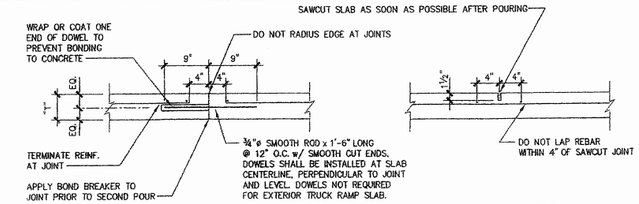
B **SECTION AT FENCE POST**

C **SECTION**

8 **SOUTH SITE RETAINING WALL DETAIL**



9 **EAST SITE RETAINING WALL DETAIL**



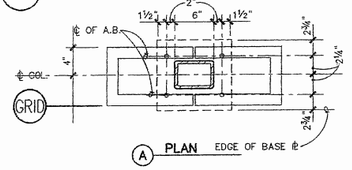
CONSTRUCTION JOINT "A"
DOWELED CONSTRUCTION JOINT

CONTROL JOINT "B"
SAW CUT CONTROL JOINT

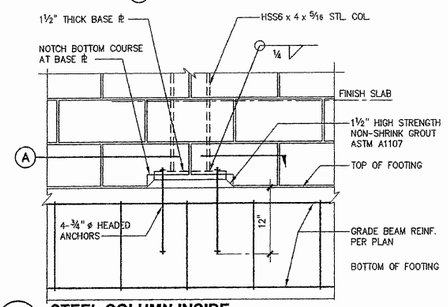
NOTES:

1. SLABS MAY BE POURED IN STRIPS 52'-0" WIDE MAXIMUM, WITH CONSTRUCTION JOINTS OR CONTROL JOINTS IN PERPENDICULAR DIRECTION AT A MAXIMUM DISTANCE OF 18'-0" BETWEEN JOINTS.
2. CONSTRUCTION JOINTS SHALL OCCUR IN AT LEAST ONE DIRECTION AND SHALL BE SPACED NO FURTHER APART THAN 52'-0" (INTERMEDIATE CONTROL JOINTS SHALL OCCUR AT MIN. 18'-0" O.C.)
3. SAWCUT CONTROL JOINTS MAY BE USED IN BOTH DIRECTIONS AND SPACED AT 18'-0"
4. SAWCUT JOINTS SHALL BE MADE IMMEDIATELY AFTER FINISHING OPERATION AND PRIOR TO DRYING SHRINKAGE. SAW CUT JOINTS SHALL BE MADE WITH "EARLY ENTRY" SAW EQUIPMENT.
5. DISCONTINUE REINFORCING UNDER ANY COLUMN LINE CONTROL OR CONSTRUCTION JOINT.
6. FINISHING OF SLAB CONCRETE SHALL BE DONE AFTER SURFACE BLEED WATER HAS EVAPORATED.
7. CONCRETE SHALL HAVE AIR ENTERTAINMENT OF 2% TO 3% BY VOLUME.
8. MOISTEN SUB-GRADE PRIOR TO PLACING CONCRETE.
9. APPLY MEMBRANE CURING TO SLAB ON GRADE IMMEDIATELY AFTER FINISHING OPERATION.

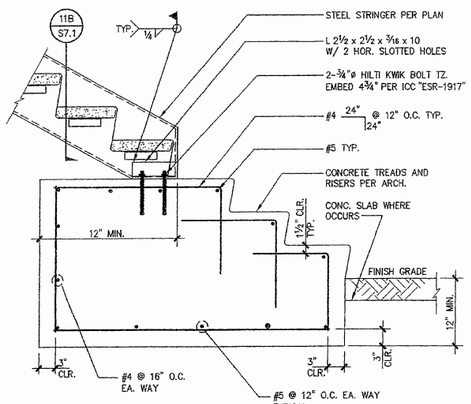
4 **SLAB CONSTRUCTION JOINTS**



A **PLAN** EDGE OF BASE ℄

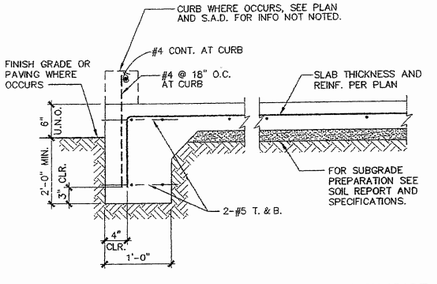


5 **STEEL COLUMN INSIDE CMU WALL**



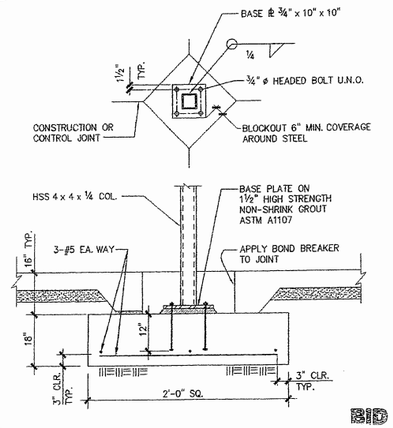
6 **STAIR LANDING DETAIL**

JUL 21 2011



EDGE OF SLAB **TYPICAL SLAB ON GRADE**

2 **TYPICAL SLAB EDGE**



3 **COLUMN BASE/PAD FOOTING**

BID DOCUMENTS

10/05/2010 12:17PM K:\2010\10101\10101_S51.dwg, CONCRETE

PROJECT ADDRESS:
EL SEGUNDO, CA

10 101/ 10101_S51/ 10/05/10

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REGISTERED PROFESSIONAL ENGINEER ROBERT D. SCHEER 18568 EXP 6-30-12 STRUCTURAL STATE OF CALIFORNIA
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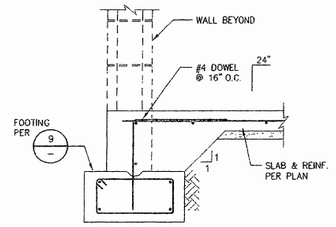
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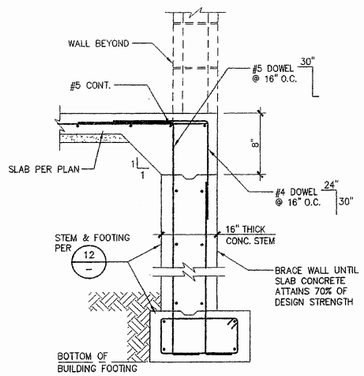
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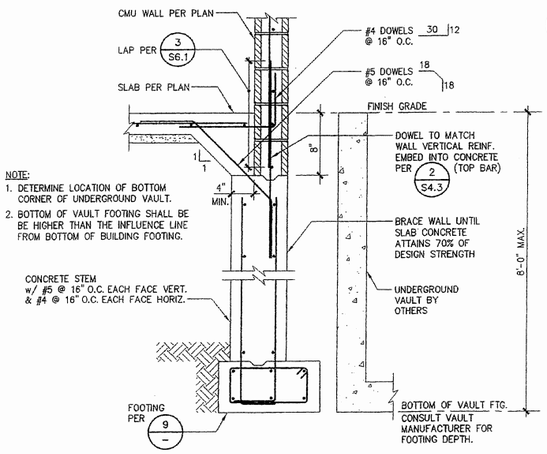
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10 FOOTING DETAIL AT OPENINGS



11 DETAIL AT STEPPED FOOTING



12 DEEPENED FOOTING AT UNDERGROUND VAULT

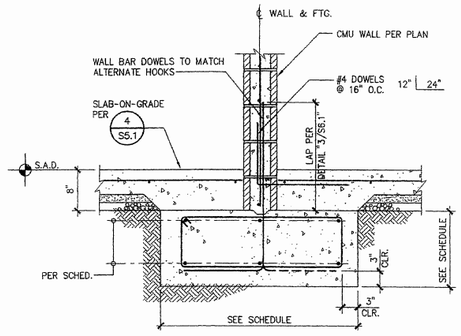
CONTINUOUS FOOTING SCHEDULE

MARK	SIZE W x D	REINFORCING STEEL			
		LONGITUDINAL BARS		TIES[4]	
		TOP	BOTTOM	SIZE/SPACING	VERT. LEGS
CF-1	1'-4" x 1'-4"	2-#6	2-#6	-----	-----
CF-2	2'-0" x 1'-6"	2-#6	2-#6	#4 @ 1'-0" O.C.	(2)
CF-3	3'-0" x 1'-6"	3-#6	3-#6	#4 @ 1'-0" O.C.	(2)
CF-4	3'-0" x 2'-6"	4-#7	4-#7	#4 @ 1'-0" O.C.	(4)

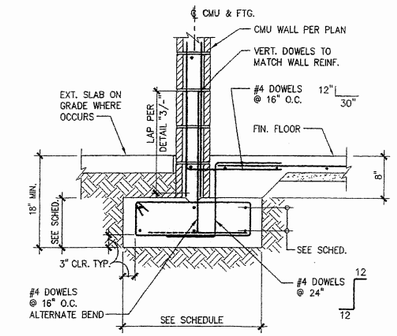
NOTES:

1. TYPICAL LONGITUDINAL REINFORCEMENT AND TIES PER SCHEDULE APPLY THE FULL LENGTH OF CONTINUOUS FOOTING U.N.O. STAGGER LAP SPLICES 2'-0" MINIMUM.
2. ALL LONGITUDINAL BARS TO TERMINATE WITH STD. 90° HOOKS AT ENDS OF CONTINUOUS FOOTINGS.
3. CONTINUOUS FOOTINGS AT INTERSECTIONS AND WHERE TERMINATING AT PAD FOOTINGS SHALL EXTEND LONGITUDINAL REBAR THE FULL WIDTH OF INTERSECTING FOOTING AND TERMINATE WITH STANDARD HOOKS TYP. U.N.O.
4. TIES MAY BE 2-PIECE SETS CONSISTING OF "U" STIRRUP WITH 135° HOOKS ENCLOSING OUTER MOST LONGIT. BARS AND CAP TIE WITH ALTERNATING 135° AND 90° HOOKS AT EACH END.

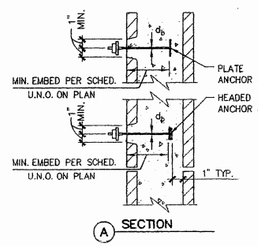
7 CMU WALL FOOTING SCHEDULE



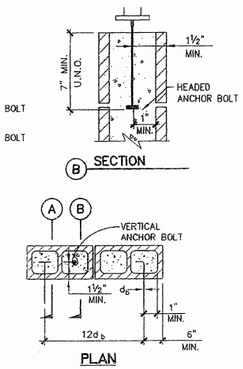
8 INTERIOR CMU WALL FOOTING



9 EXTERIOR CMU WALL FOOTING

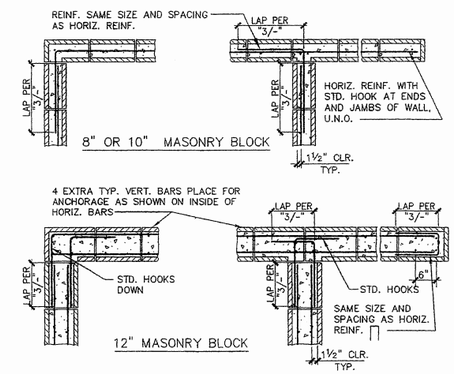


BOLT SIZE	MIN. EMBED.
½"	4"
⅝"	4"
¾"	5"
⅞"	6"
1"	7"



NOTE:
MINIMUM BOLT SPACING SHALL BE 12 BOLT DIAMETERS WITH A MINIMUM EDGE DISTANCE OF 6 DIAMETERS AND WITH A MINIMUM OF 6" TO END OF WALL.

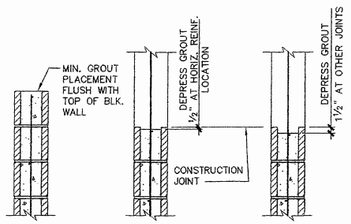
4 TYPICAL CMU ANCHOR BOLT (A.B.) LAYOUT



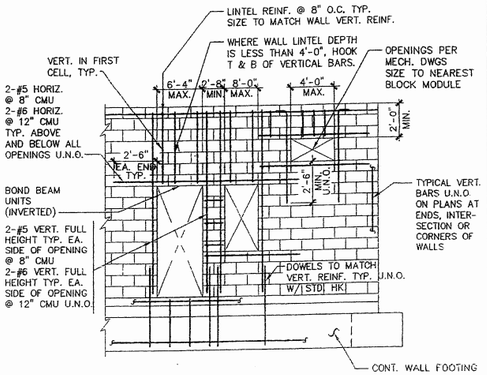
NOTES:

1. GROUT ALL CELLS SOLID.
2. USE DOUBLE OPEN END BLOCKS TYP., USE SINGLE OPEN END UNITS AT CORNERS.

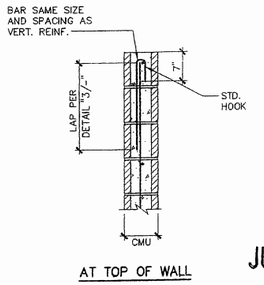
5 CMU WALL INTERSECTIONS TYPICAL



6 TYPICAL GROUT CONSTRUCTION JOINTS

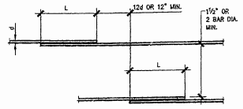


1 TYPICAL CMU WALL REINFORCEMENT AT OPENINGS



AT TOP OF WALL

2 TOP OF CMU WALL



WALL SPLICE DETAIL

REINFORCEMENT LAP SPLICE LENGTH "L"		
CMU STRENGTH	F'm = 1500 PSI	F'm = 3000 PSI
BAR SIZE		
#3	1'-4"	1'-0"
#4	2'-2"	1'-6"
#5	3'-4"	2'-4"
#6	6'-2"	4'-5"
#7	8'-5"	5'-11"
#8	12'-8"	8'-11"
#9	16'-0"	11'-4"

NOTES:

1. THE LAP SPLICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
2. DEVELOPMENT LENGTH OF EPOXY-COATED BARS SHALL BE TAKEN AS 150 PERCENT OF THE SCHEDULED LENGTH.
3. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
4. SPLICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.
5. LAP SPLICE IN MASONRY SHALL BE MIN. 48 BAR DIA.

3 MASONRY LAP SPLICE

JUL 21 2011

BID DOCUMENTS

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EL SEGUNDO LS
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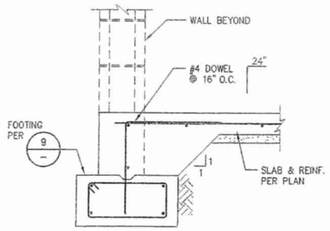
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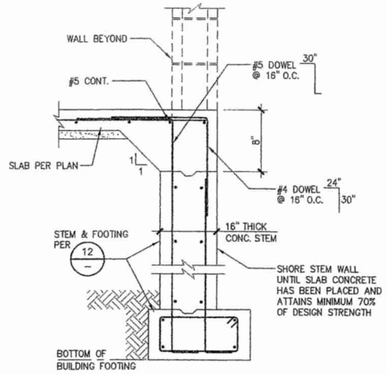
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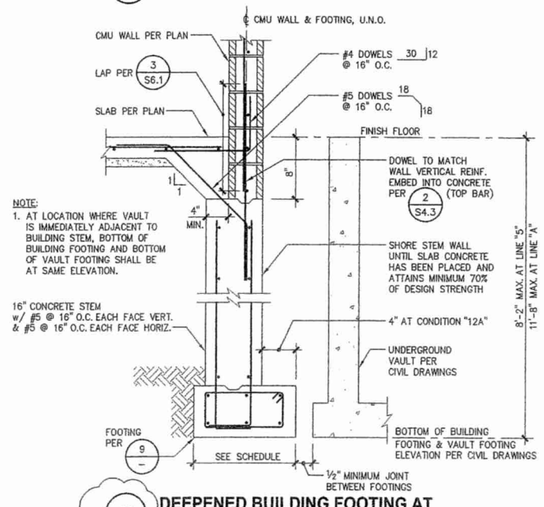
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10 FOOTING DETAIL AT OPENINGS



11 DETAIL AT STEPPED FOOTING



12 DEEPENED BUILDING FOOTING AT UNDERGROUND VAULT

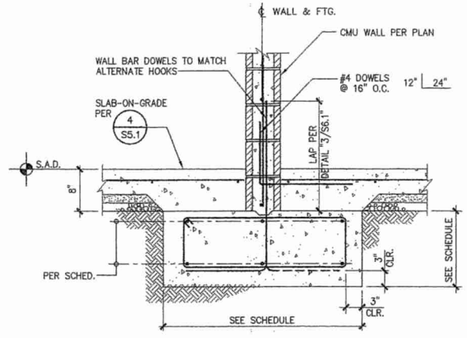
CONTINUOUS FOOTING SCHEDULE

MARK	SIZE W x D	REINFORCING STEEL			
		LONGITUDINAL BARS		TIES[4]	
		TOP	BOTTOM	SIZE/SPACING	VERT. LEGS
CF-1	1'-4" x 1'-4"	2-#5	2-#5	-----	-----
CF-2	2'-0" x 1'-6"	2-#6	2-#6	#4 @ 1'-0" O.C.	(2)
CF-3	3'-0" x 1'-6"	3-#6	3-#6	#4 @ 1'-0" O.C.	(2)
CF-4	3'-0" x 2'-6"	4-#7	4-#7	#4 @ 1'-0" O.C.	(4)

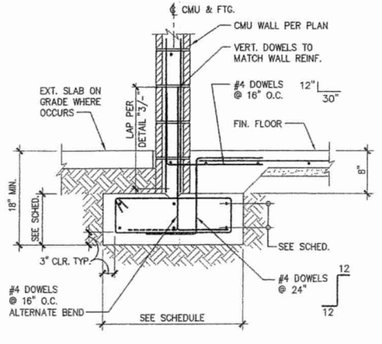
NOTES:

1. TYPICAL LONGITUDINAL REINFORCEMENT AND TIES PER SCHEDULE APPLY THE FULL LENGTH OF CONTINUOUS FOOTING U.N.O. STAGGER LAP SPLICES 2'-0" MINIMUM.
2. ALL LONGITUDINAL BARS TO TERMINATE WITH STD. 90° HOOKS AT ENDS OF CONTINUOUS FOOTINGS.
3. CONTINUOUS FOOTINGS AT INTERSECTIONS AND WHERE TERMINATING AT PAD FOOTINGS SHALL EXTEND LONGITUDINAL REBAR THE FULL WIDTH OF INTERSECTING FOOTING AND TERMINATE WITH STANDARD HOOKS TYP. U.N.O.
4. TIES MAY BE 2-PIECE SETS CONSISTING OF "U" STIRRUP WITH 135° HOOKS ENCLOSING OUTER MOST LONGIT. BARS AND CAP TIE WITH ALTERNATING 135° AND 90° HOOKS AT EACH END.

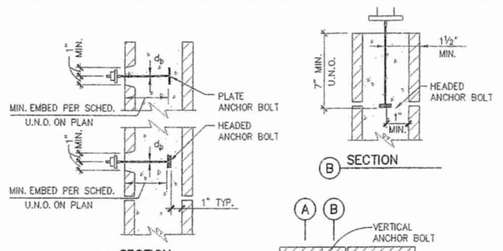
7 CMU WALL FOOTING SCHEDULE



8 INTERIOR CMU WALL FOOTING



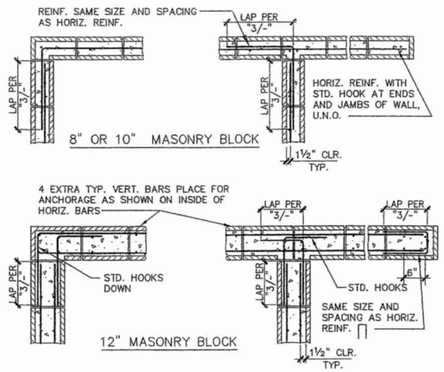
9 EXTERIOR CMU WALL FOOTING



BOLT SIZE	MIN. EMBED.
½"	4"
⅝"	4"
¾"	5"
⅞"	6"
1"	7"

NOTE:
MINIMUM BOLT SPACING SHALL BE 12 BOLT DIAMETERS WITH A MINIMUM EDGE DISTANCE OF 6 DIAMETERS AND WITH A MINIMUM OF 6" TO END OF WALL.

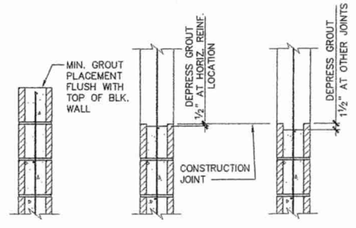
4 TYPICAL CMU ANCHOR BOLT (A.B.) LAYOUT



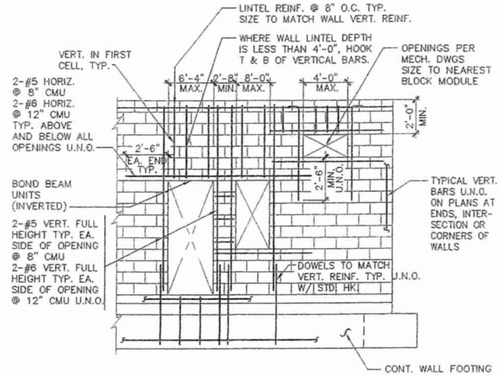
NOTES:

1. GROUT ALL CELLS SOLID.
2. USE DOUBLE OPEN END BLOCKS TYP., USE SINGLE OPEN END UNITS AT CORNERS.

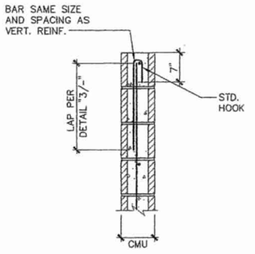
5 CMU WALL INTERSECTIONS TYPICAL



6 TYPICAL GROUT CONSTRUCTION JOINTS

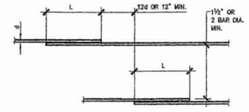


1 TYPICAL CMU WALL REINFORCEMENT AT OPENINGS



AT TOP OF WALL JUL 21 2011

2 TOP OF CMU WALL



WALL SPLICE DETAIL

REINFORCEMENT LAP SPLICE LENGTH "L"		
CMU STRENGTH	f'm = 1500 PSI	f'm = 3000 PSI
BAR SIZE		
#3	1'-4"	1'-0"
#4	2'-2"	1'-8"
#5	3'-4"	2'-4"
#6	6'-2"	4'-5"
#7	8'-5"	6'-11"
#8	12'-8"	8'-11"
#9	16'-0"	11'-4"

NOTES:

1. THE LAP SPLICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
2. DEVELOPMENT LENGTH OF EPOXY-COATED BARS SHALL BE TAKEN AS 150 PERCENT OF THE SCHEDULED LENGTH.
3. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
4. SPLICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.
5. LAP SPLICE IN MASONRY SHALL BE MIN. 48 BAR DIA.

3 MASONRY LAP SPLICE

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REGISTERED PROFESSIONAL ENGINEER ROBERT D. SCHERER No. 3568 FEB 11 STRUCTURAL STATE OF CALIFORNIA EXP. 3-31-12

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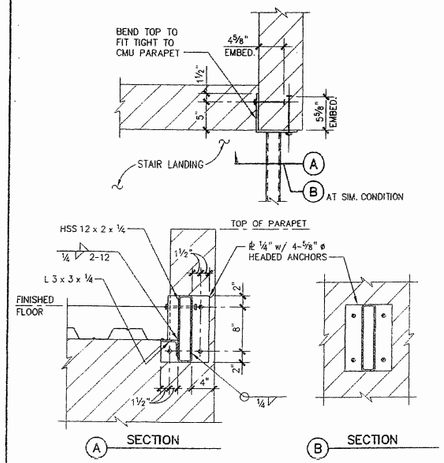
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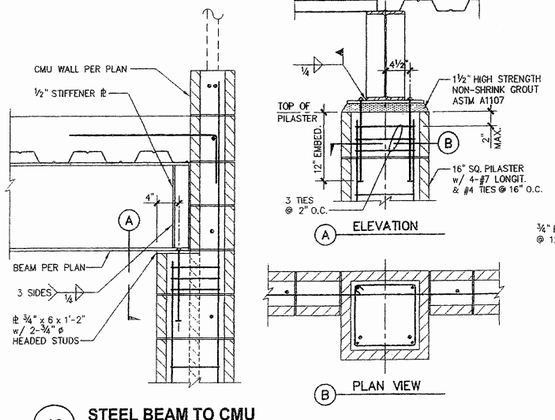
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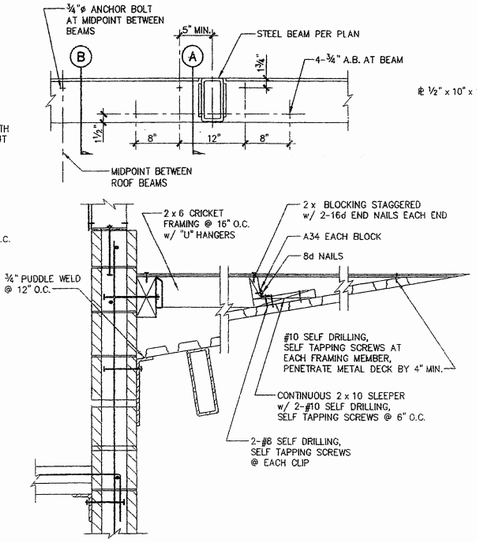
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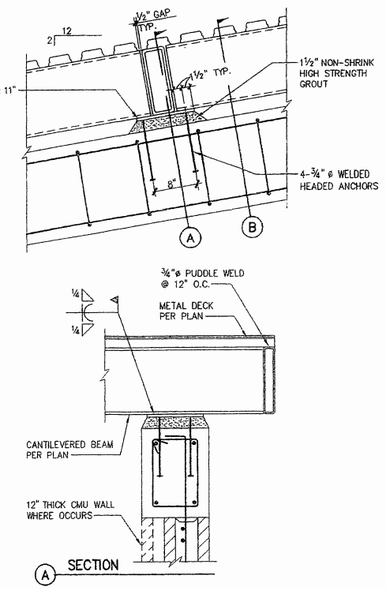


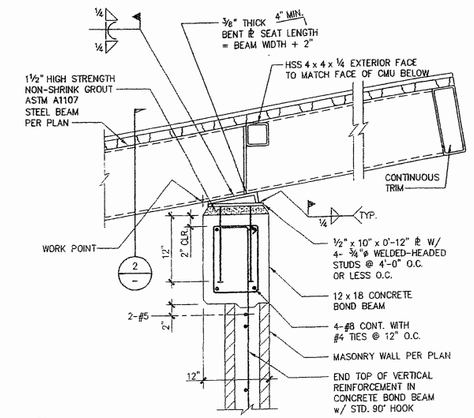
13 STAIR BEAM TO CMU WALL CONNECTION



10 STEEL BEAM TO CMU PILASTER CONNECTION

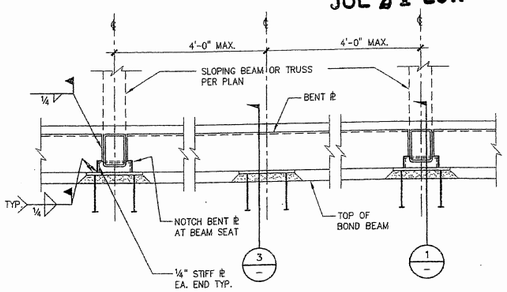




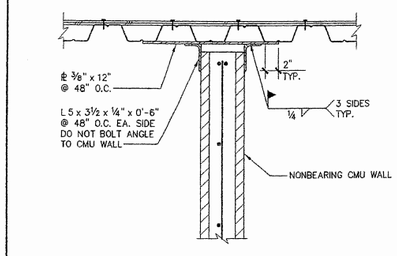


1 TYPICAL EAVE DETAIL

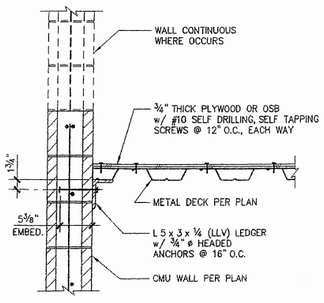
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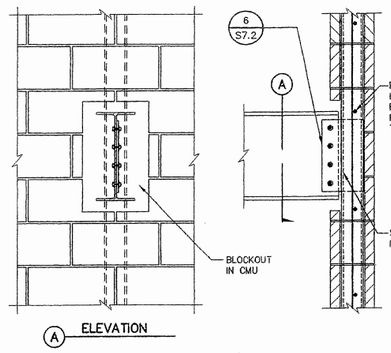
2 ELEVATION AT TOP OF CONCRETE BOND BEAM



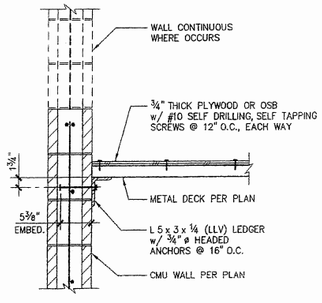
14 TOP OF NON-BEARING CMU WALL



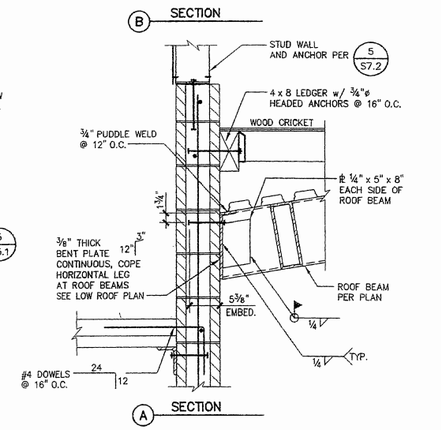
15 WALL SECTION



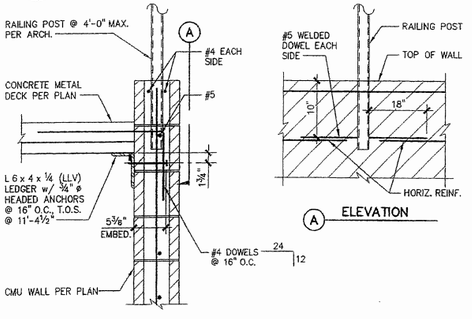
11 BEAM TO STEEL COLUMN INSIDE CMU WALL CONNECTION



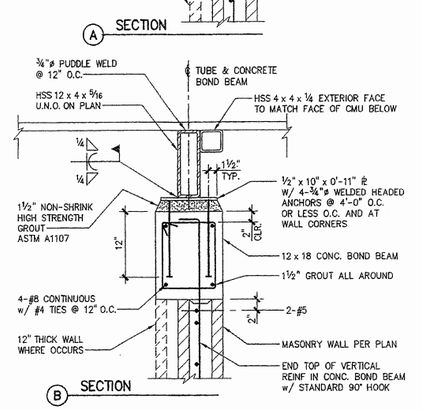
12 WALL SECTION



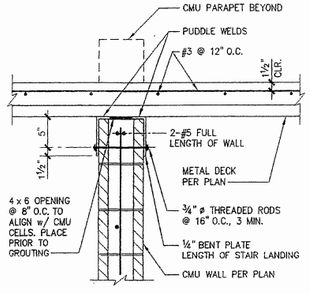
8 LOW ROOF TO WALL CONNECTION



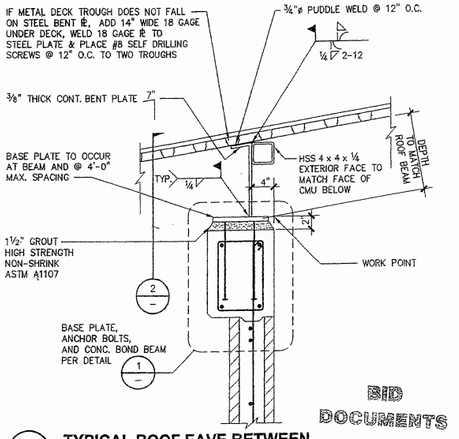
9 WALL SECTION



5 SECTION AT WALL ON RAKE SIDE OF ROOF



6 DECK OVER WALL AT STAIR LANDING



3 TYPICAL ROOF EAVE BETWEEN STEEL BEAMS

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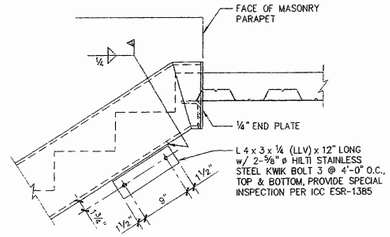
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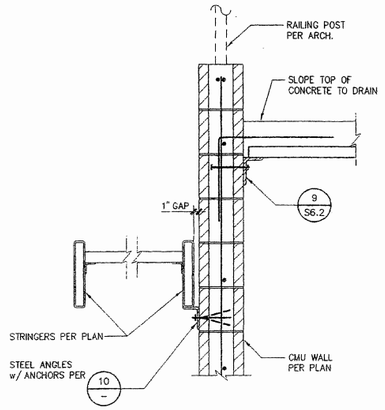
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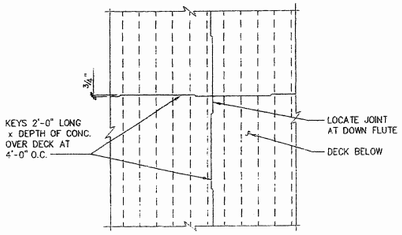
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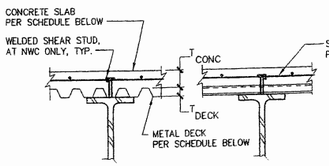






NOTES:
1. SLAB REINF. CONT. THRU JOINT U.N.O.
2. SAW CUT, PLASTIC STRIP OR OTHER SIMILAR CONTROL JOINT SHALL NOT BE USED.

4 CONSTRUCTION JOINT AT CONCRETE FILL OVER STEEL DECK



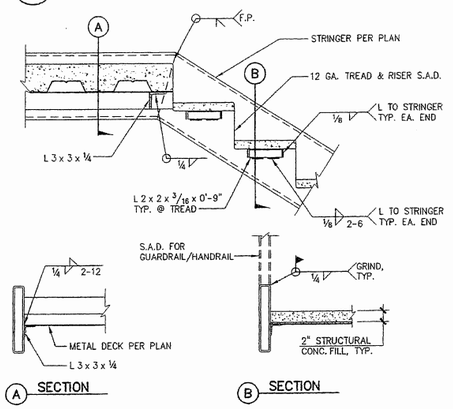
METAL DECK					CONCRETE SLAB		DECK WELD ATTACHMENT		
TYPE	LOCATION	DECK	T DECK	GAUGE	T CONC.	REINFORCEMENT	AT SUPPORT	AT PARALLEL SUPPORT	AT SIDE LAPS
A	FLOOR	W2-36 FORMLOK VENTED	2"	18	3½" NWC	#3 @ 12" O.C. EACH WAY	4 WELDS PER 36" SHEET	½"ø WELDS @ 12" O.C.	TOP SEAM WELD @ 24" O.C.
B	ROOF	HSB-36	1½"	18	—	———	6 WELDS PER 36" SHEET	½"ø WELDS @ 12" O.C.	BUTTON PUNCH @ 24" O.C.
C	MEZZANINE	W2-36 FORMLOK VENTED	2"	18	—	———	4 WELDS PER 36" SHEET	½"ø WELDS @ 12" O.C.	TOP SEAM WELD @ 24" O.C.

* NWC = NORMAL WEIGHT CONCRETE @ 145 PCF, f'c=4,000 PSI

NOTES:
1. WELD ATTACHMENT FOR STEEL DECK AT SUPPORT MEMBER SHALL BE ARC SEAM OR SPOT (PUDDLE) WELDS AND SHALL HAVE AN EFFECTIVE FUSION AREA TO SUPPORTING MEMBER AT LEAST EQUIVALENT TO ⅜ INCH BY 1 INCH LONG OR ½" IN DIAMETER, RESPECTIVELY. TWO LINES OF WELD REQUIRED AT ALL DRAG LINES FULL LENGTH OR WIDTH OF BUILDING.
2. SHEAR STUDS WELDED THROUGH THE DECK, WITH A MINIMUM CLEARANCE OF 1" FROM THE EDGE OF THE DECK TO THE STUD CENTER LINE, MAY BE SUBSTITUTED ONE FOR ONE FOR A DECK WELD.
3. WELD ATTACHMENT FOR STEEL DECK PANEL SEAMS AT SIDE LAPS WHERE SPECIFIED SHALL BE SEAM WELDS WITH A MINIMUM LENGTH OF 1½" AT SPACING PER SCHEDULE ABOVE.
4. SCREWS SHALL BE #12-14 SELF-DRILLING SELF-TAPPING TYPE.
5. VERCO "PUNCHLOK SYSTEM" WITH "VSC" CONNECTIONS MAY BE SUBSTITUTED FOR TOP SEAM WELDS AT SIDE LAPS WITH DECK RECEIVING NWC.
6. DECKING SHALL BE CONTINUOUS OVER 3 OR MORE SUPPORTS WHEREVER POSSIBLE. OTHERWISE PROVIDE SHORING AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. SPLICES SHALL BE LOCATED OVER SUPPORTS.
7. STEEL DECKING TO BE AS NOTED: VERCO DECKS PER I.C.C. REPORT No. ER-2078P OR AEP (ASC) PER ICC REPORT No. ESR-2409 WITH MINIMUM SECTION PROPERTIES PER FOOT OF WIDTH AS FOLLOWS:

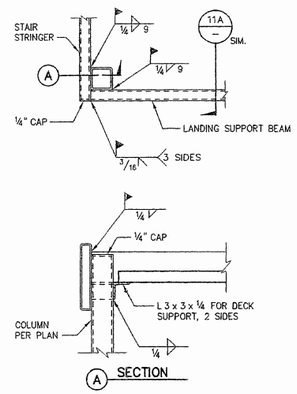
DECK TYPE	GAUGE	I(in⁴)	+S(in³)	-S(in³)	GALVANIZING
W2-36	18	0.555	0.510	0.511	G90 ZINC COATING
HSB-36	18	0.302	0.322	0.335	G90 ZINC COATING

10 STAIR DETAIL

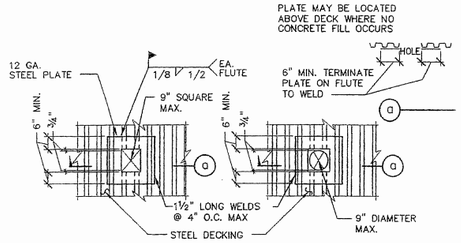


11 TYPICAL STAIR DETAIL

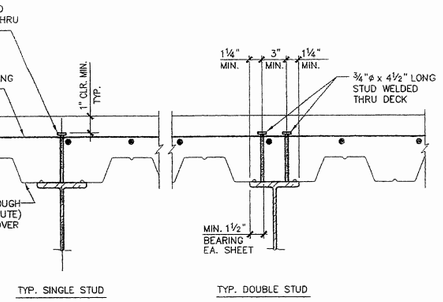
7 STAIR DETAIL



8 STAIR DETAIL

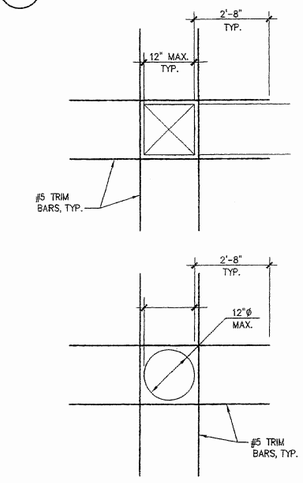


9 SMALL OPEININGS IN STEEL DECK



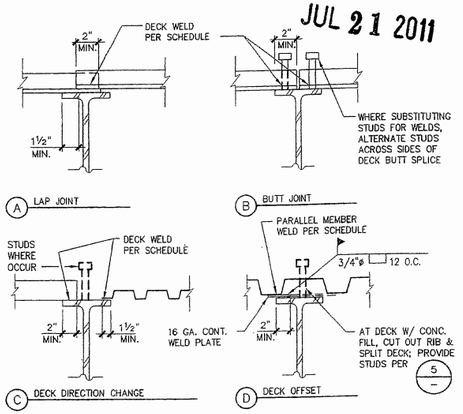
NOTES:
1. ALL STUDS TO BE ¾"ø x (LENGTH PER PLAN) WELDED HEADED STUD U.N.O.
2. SPLIT DECK LONGITUDINALLY WHERE REQ'D. TO ENLARGE TROUGH.
3. PROVIDE DOUBLE STUDS WHERE SINGLE STUD SPACING WOULD BE LESS THAN 4½" O.C.

5 SHEAR STUD DETAIL



6 TYPICAL TRIM BARS AROUND OPENING IN METAL DECK

2 STEEL DECK SCHEDULE AND NOTES



NOTES:
1. SEE STEEL DECK NOTES AND DECK SCHEDULE FOR COMPLETE INFORMATION.

3 TYPICAL DECK WELDING DETAIL

JUL 21 2011

BID DOCUMENTS

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CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
STEEL DETAILS

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CITY ENGINEER R.E. ____

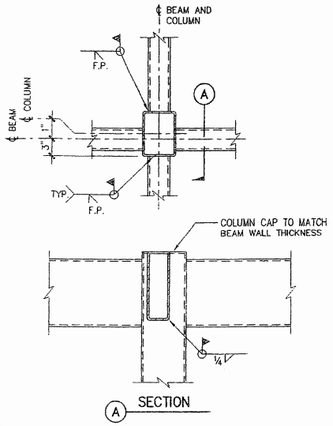
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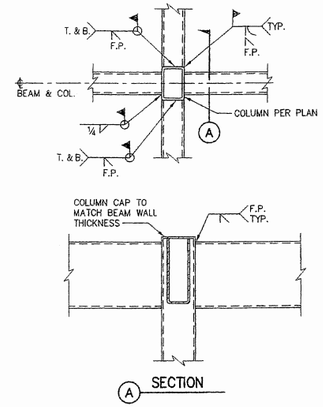
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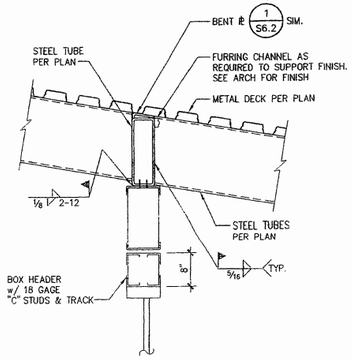
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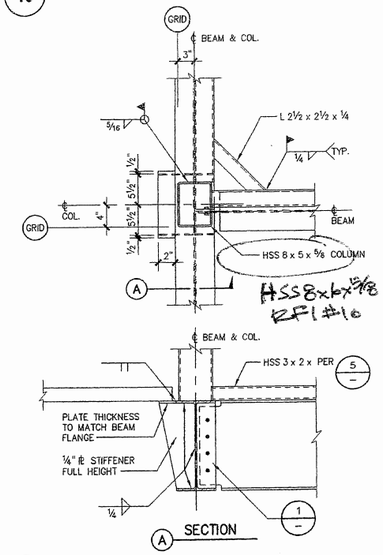
13 STEEL BEAM TO COLUMN MOMENT CONNECTION



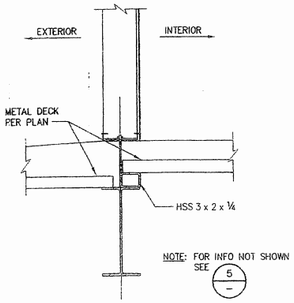
14 STEEL BEAM TO COLUMN MOMENT CONNECTION



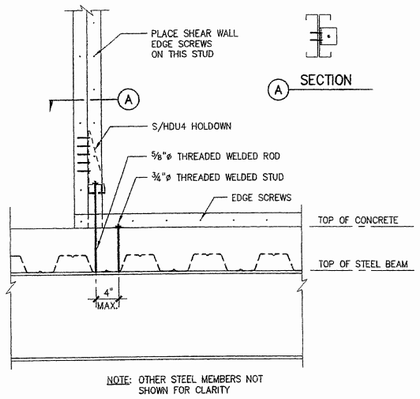
10 SECTION AT METAL STUD LINTEL



11 COLUMN TO STEEL BEAM CONNECTION

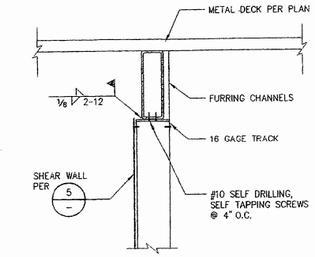


7 SECTION AT INTERIOR / EXTERIOR DECK TRANSITION

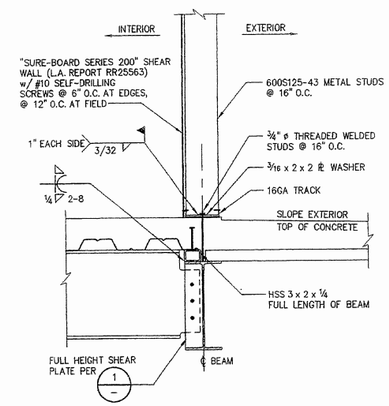


NOTE: OTHER STEEL MEMBERS NOT SHOWN FOR CLARITY

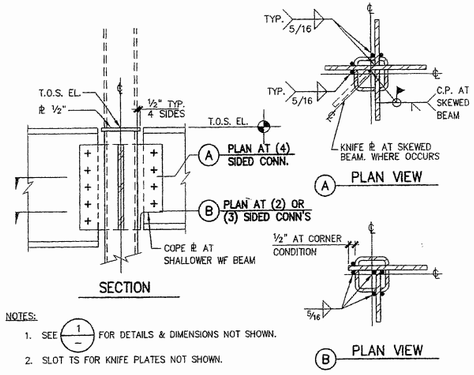
8 HOLDOWN CONNECTION TO STEEL BEAM



4 TOP OF SHEAR WALL TO ROOF BEAM CONNECTION

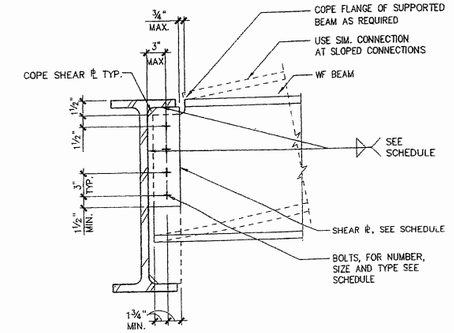


5 SECTION AT INTERIOR / EXTERIOR DECK TRANSITION



NOTES:
1. SEE 1 — FOR DETAILS & DIMENSIONS NOT SHOWN.
2. SLOT TS FOR KNIFE PLATES NOT SHOWN.

6 TYPICAL BEAM TO HSS COLUMN CONNECTION

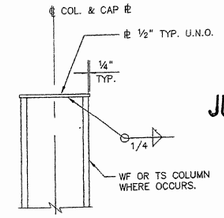


BEAM CONNECTION SCHEDULE

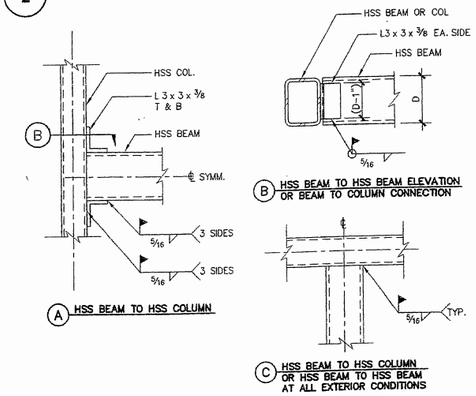
DEPTH OR SIZE OF BEAM	NO. OF BOLTS (2) ⅞"ø A325SC U.N.O.	SHEAR PLATE	WELD (1) SIZE
8",10",C8	2	¼"	¼"
12",14", C12, MC12	3	⅜"	5/16"
16"	4	⅜"	5/16"
18"	5	⅜"	5/16"
21"	6	⅜"	5/16"
24"	7	½"	5/16"
27"	8	⅝"	5/16"

NOTES:
(1) USE COMPLETE PENETRATION WELDS AT ALL SKEWED CONNECTIONS WHERE AISC PRE-QUALIFIED FILLET WELDS ARE NOT POSSIBLE
(2) REFER TO FRAMING PLANS FOR INCREASED BOLTING REQUIRED ON FRAME LINES WHERE NOTED.

1 TYPICAL BEAM TO BEAM CONNECTION



2 TYPICAL COLUMN CAP



3 TYPICAL HSS TO HSS CONNECTION

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REGISTERED PROFESSIONAL ENGINEER — No. S3953 — RENEW 30-11 — STATE OF CALIFORNIA

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PLAN CHECK RESUBMITTAL

GENERAL NOTES

1. THE SEISMIC BRACING AND ANCHORAGE OF ELECTRICAL CONDUITS, BUS DUCT, WIREWAY, AND CABLE TRAY SHALL BE IN ACCORDANCE WITH THE OSHPD ANCHORAGE PRE-APPROVAL NO. R-0010, THE SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEM", R-0120 UNISTRUT "SEISMIC BRACING SYSTEMS".

2. EQUIPMENT ANCHORAGE NOTE

ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2007 CBC, SECTION 1614A.1.13 AND ASCE 7-05 SECTIONS 13.3, 13.4 & 13.6.

THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS:

A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.
B FURNITURE REQUIRED TO BE ATTACHED IN ACCORDANCE WITH PART 2, TITLE 24, C.C.R.
C TEMPORARY OR MOVABLE EQUIPMENT.
D. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS.
E. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.

ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, AND 13.6.5.5, ITEM 6, RESPECTIVELY.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL COMPLY WITH ONE OF THE OSHPD PRE- APPROVALS WITH AN OPA #, SUCH AS MASON INDUSTRIES (OPA 349), OR ISAT (OPA 485) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

COPIES OF THE MANUAL SHALL BE ON THE JOBSITE PRIOR TO STARTING HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

3. ALL ELECTRICAL PREFABRICATED EQUIPMENT SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER THAT ALL PORTIONS, ELEMENTS, SUB-ASSEMBLIES AND/OR PARTS OF SAID EQUIPMENT, AND THE EQUIPMENT AS A WHOLE INCLUDING ITS ATTACHMENTS, WILL RESIST A LOAD WHICH EXCEEDS THE FORCE LEVEL USED TO RESTRAIN AND ANCHOR THE EQUIPMENT TO THE SUPPORTING STRUCTURE.

4. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATORIES (UL) AND BEAR THEIR LABEL, OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY WHERE UL DOES NOT HAVE A LISTING. CUSTOM MADE EQUIPMENT SHALL HAVE COMPLETE TEST DATA SUBMITTED BY THE MANUFACTURER ATTESTING TO ITS SAFETY. IN ADDITION, THE MATERIALS, EQUIPMENT, AND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:

AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)
INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
AMERICAN STANDARD ASSOCIATION (ASA)
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)
CALIFORNIA ELECTRICAL CODE (CEC) - 2001 EDITION
CALIFORNIA CODE OF REGULATIONS TITLE 24 (CCR)
INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
ALL LOCAL CODES HAVING JURISDICTION.

WHERE THE CODES HAVE DIFFERENT LEVELS OF REQUIREMENTS, THE MOST STRINGENT RULE SHALL APPLY.

5. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS, OR A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS AND SPECIFICATIONS. HE SHALL CHECK THE DRAWINGS OF THE OTHER TRADES AND SHALL CAREFULLY READ THE ENTIRE SPECIFICATIONS AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM DOING THE WORK IN COMPLETE ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL ATTACH ALL REFERENCED OR APPLICABLE SECTIONS OF SPECIFICATIONS TO PLANS FOR THIS SUBMITTAL.

7. ALL UTILITY WORK (POWER, TELEPHONE, AND CABLE TELEVISION) SHALL BE IN COMPLIANCE WITH THESE DRAWINGS AND THE REQUIREMENTS OF THE SERVING UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE SERVING UTILITY TO RECEIVE COMPLETE INFORMATION ON THEIR REQUIREMENTS PRIOR TO THE SUBMISSION OF THE BID. THE ACT OF SUBMITTING THE BID SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO INSTALL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY AND THE CONTRACT DOCUMENTS.

8. ALL ITEMS SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCTS, CONCRETE PADS, TRANSFORMERS, RISERS, MANHOLES, PULL BOXES, AND PROTECTIVE COVERING FROM SERVICE LOCATION SHALL BE PROVIDED AND INSTALLED, AND SHALL BE VERIFIED WITH THE SERVING UTILITY COMPANY. THE CONTRACTOR SHALL INSTALL THE SERVICE IN COMPLIANCE WITH THE SERVING UTILITY COMPANY, AND SHALL PAY ALL CHARGES LEVIED BY THE SERVING UTILITY COMPANY FOR HIS SERVICE EXCEPT THE FIRST BILLING DEPOSIT. WHERE THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE, THE DOCUMENTS SHALL GOVERN.

9. 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.

10. 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. BUILDING AUTHORITY.

11. THE CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE RECORD SET OF DRAWINGS. THESE PRINTS SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS. THIS SET OF DRAWINGS SHALL BE KEPT ON THE JOB SITE AND SHALL BE USED ONLY AS A RECORD SET. THIS SHALL NOT BE CONSTRUED AS AUTHORIZATION FOR THE CONTRACTOR TO MAKE CHANGES IN THE LAYOUT WITHOUT DEFINITE INSTRUCTION IN EACH CASE. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE CONTRACT DRAWINGS SHALL BE OBTAINED FROM THE ARCHITECT, AND ALL CHANGES AS NOTED ON THE RECORD SET OF DRAWINGS SHALL BE INCORPORATED THEREON WITH BLACK INK IN A NEAT, LEGIBLE, UNDERSTANDABLE AND PROFESSIONAL MANNER. FAILURE TO KEEP RECORD DRAWINGS UP-TO-DATE SHALL CONSTITUTE CAUSE FOR WITHHOLDING OF PROGRESS PAYMENTS.

12. IN SOME INSTANCES, IT MAY BE NECESSARY TO DEFER WORK IN CERTAIN AREAS AND LOCATIONS UNTIL SUCH TIME AS EXISTING FACILITIES CAN BE TEMPORARILY OR PERMANENTLY REARRANGED BY THE OWNER. THEREFORE, WHENEVER IT BECOMES NECESSARY FOR THE CONTRACTOR TO PERFORM WORK UNDER THIS CONTRACT IN EXISTING AREAS IN WHICH THE OWNER'S WORK IS BEING PERFORMED, THE CONTRACTOR SHALL ADVISE THE ARCHITECT AND THE OWNER RELATIVE TO THIS REQUIREMENT AND SHALL FOLLOW CLOSELY THE DIRECTIVE ISSUED BY THE ARCHITECT INSOFAR AS TIME AND PROCEDURE ARE CONCERNED. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL PREMIUM TIME TO WHICH HE MAY BE SUBJECTED FOR PERFORMING WORK IN SUCH PROCEDURE AND AT SUCH TIMES AS MAY BE NECESSARY TO CAUSE THE LEAST INTERFERENCE WITH THE OPERATIONS OF THE OWNER.

13. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM HOWEVER, WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ARCHITECT 14 CALENDER DAYS PRIOR TO THE OUTAGE. ANY OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANELBOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS.

14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS OR SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION OR WHERE SAID FEEDERS OR SYSTEMS REQUIRE EMERGENCY STANDBY POWER.

15. SHOP DRAWINGS SHALL BE SUBMITTED WITHIN THIRTY DAYS AFTER AWARD OF THE CONTRACT. THE CONTRACTOR SHALL SUBMIT EIGHT COPIES OF A COMPLETE LIST OF MATERIALS AND EQUIPMENT INCLUDING MANUFACTURER AND MODEL NUMBER PROPOSED FOR THE JOB. SHOP DRAWINGS SHALL INCLUDE JOB DESCRIPTION, ARCHITECT AND ENGINEER IDENTIFICATION, AND ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS, AND MANUFACTURER'S BROCHURES. SHOP DRAWINGS SHALL BE SUBMITTED FOR ITEMS LISTED IN SPECIFICATIONS. PARTIAL, INCOMPLETE, OR UNBOUND SUBMITTALS WILL BE RETURNED WITHOUT REVIEW. CONTRACTOR SHALL SUBMIT A SCHEDULE OF ALL SHOP DRAWINGS AND SUBMITTALS WHICH ARE TO BE REVIEWED WITHIN FIFTEEN CALENDER DAYS OF CONTRACT AWARD.

16. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.

17. THE CONTRACTOR SHALL FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF SUBSTANTIAL COMPLETION.

18. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND TO COORDINATE WITH THE MECHANICAL, FIRE PROTECTION AND PLUMBING DRAWINGS FOR DUCTS, LINES AND EQUIPMENT.

19. ALL EQUIPMENT MOUNTED ON ROOF FOR CONNECTION OF HVAC EQUIPMENT SHALL BE MOUNTED ON UNISTRUT STANDS UTILIZING APPROVED PITCH POCKETS, FLASHING, ETC.

20. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.

21. COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT. DISCONNECT SWITCHES, STARTERS, WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS SHALL BE PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.

22. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE WALLS OR FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAWCUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL APPROVED.

23 CONNECTIONS TO VIBRATING EQUIPMENT AND SEISMIC SEPARATIONS SHALL BE MADE WITH LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS.

PROVIDE A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN FLEXIBLE CONDUIT RUNS. MAXIMUM LENGTH SHALL BE SIX FEET UNLESS OTHERWISE NOTED.

24. EQUIPMENT OUTLETS, LIGHTING FIXTURES, CONDUIT, WIRE, AND CONNECTION METHODS IN HVAC AIR-PLENUMS SHALL BE APPROVED FOR USE IN PLENUMS AND SHALL CONFORM TO THE CEC.

25 ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.

26. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED IN WALLS, OR 18" BELOW BOTTOM SLAB ON GRADE UNLESS NOTED OTHERWISE.

27. THE CONTRACTOR SHALL STRATEGICALLY LOCATE BOXES, ETC., IN AN ACCESSIBLE CEILING SPACE OR PROVIDE AN ACCESS PANEL FOR INACCESSIBLE CEILING SYSTEMS.

28. COORDINATE REQUIRED ACCESS DOORS IN NON-ACCESSIBLE CEILINGS TO SUIT FIELD CONDITIONS. THE EXACT SIZES AND PHYSICAL LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL BE PROVIDED IN OTHER SECTIONS OF THE SPECIFICATIONS ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.

29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAWCUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO PERFORM HIS WORK. ATTENTION IS CALLED TO THE FACT THAT THERE ARE EXISTING UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING FOR HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED BY HIM OR HIS WORK.

30. WHENEVER A DISCREPANCY ARISES ON THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT.

31 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILING. WHERE FIXTURES ARE RECESSED IN PLASTER OR DRYWALL CEILINGS, THEY SHALL BE COMPLETE WITH NECESSARY MOUNTING HARDWARE AND PLASTER FRAMES.

32 ALL RECESSED LIGHTING FIXTURES, SPEAKERS, RECEPTACLES, SWITCHES, ETC., MOUNTED IN THE FIRE RATED CEILINGS OR WALLS SHALL BE ENCLOSED WITH AN APPROVED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL.

33. UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIES, SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED MATERIAL SECURELY INSTALLED.

STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILINGS, OR AREA SEPARATION UNLESS THEY:

OCCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER. IN THIS CASE, ONLY ONE OUTLET BOX NEED TO PROTECTED BY AN APPROVED FIRESTOP MATERIAL OR DETAIL TO CORRECT THIS CONDITION.

OCCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA. IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL.

STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER STEEL UTILITY OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.

FIRESTOPPING MATERIAL: MPP-1 MOLDABLE PUTTY PADS
3M CONTRACTOR PRODUCTS
MINNEAPOLIS, MN
3M TEST REPORT NO. 1167
DATED AUGUST 21, 1987

FSP FIRESTOP PUTTY PADS
HEVI-DUTY NELSON PRODUCTS
TULSA, OK

FLAMESAFE FSP 1077 FIRESTOP PADS
INTERNATIONAL PROTECTIVE COATINGS
OAKHURST, NJ

STEEL UTILITY BOXES WHICH EXCEED 100 SQUARE INCHES IN AREA SHALL BE PROTECTED BY ENCASEMENT.

UTILITY AND ELECTRICAL OUTLETS OR BOXES SHALL BE SECURELY FASTENED TO THE STUD OF FRAMING OF THE WALL PARTITION OR CEILING ASSEMBLY. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE GYPSUM BOARD DOES NOT EXCEED 1/8 INCH. IN SMOKE WALLS OR PARTITIONS, THE 1/8 INCH CLEARANCE SHALL BE FILLED WITH AN APPROVED FIRE-RATED SEALANT.

34. ARCHITECTURAL REFLECTED CEILING PLANS INDICATING THE LOCATION OF LIGHTING FIXTURES SHALL TAKE PRECEDENCE OVER THE LOCATIONS OF SAME SHOWN ON THE ELECTRICAL DRAWINGS. INSTALL THE LIGHTING FIXTURES IN ANY GIVEN AREA TO AGREE WITH THE REFLECTED CEILING PLANS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

35. THE EXACT LOCATIONS AND MOUNTING HEIGHTS OF LIGHTING FIXTURES LOCATED IN MECHANICAL EQUIPMENT SPACES AND PENTHOUSES SHALL BE COORDINATED IN THE FIELD BEFORE INSTALLATION TO AVOID INTERFERENCE WITH DUCTS, PIPING, AND OTHER MECHANICAL EQUIPMENT. WHEN LOCATIONS AND MOUNTING HEIGHTS ARE DETERMINED, OBTAIN APPROVAL FROM THE ARCHITECT.

DRAWING LIST

DWG.NO.	DESCRIPTION
E-0.1	GENERAL NOTES
E-0.2	GENERAL NOTES & LEGEND
E-0.3	TITLE 24 CALCULATIONS & LIGHTING FIXTURE SCHEDULE
E-0.4	TITLE 24 CALCULATIONS
E-0.5	SINGLE LINE DIAGRAM
E-0.6	DETAILS
E-1.1	ELECTRICAL SITE PLAN
E-2.1	GROUND FLOOR LIGHTING PLAN
E-2.2	SECOND FLOOR LIGHTING PLAN
E-3.1	GROUND FLOOR POWER PLAN
E-3.2	SECOND FLOOR POWER PLAN
E-4.1	GROUND FLOOR SIGNAL PLAN
E-4.2	SECOND FLOOR SIGNAL PLAN
E-5.1	GROUND FLOOR FIRE ALARM PLAN
E-5.2	SECOND FLOOR FIRE ALARM PLAN
E-6.1	FIRST AND SECOND FLOOR LIGHTING CALCULATIONS

JUL 21 2011

INTERMEDIATE DUTY GRID SYSTEM: ALL FIXTURES SUPPORTED ON INTERMEDIATE DUTY GRID SYSTEMS SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR TAUT 12 GAUGE WIRES EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE.

SURFACE MOUNTED FIXTURES: SUPPORT SURFACE MOUNTED LIGHT FIXTURES BY AT LEAST TWO POSITIVE DEVICES WHICH SURROUND THE CEILING RUNNER AND WHICH ARE EACH SUPPORTED FROM THE STRUCTURE ABOVE BY A 12 GAUGE WIRE. SPRING CLIPS OR CLAMPS THAT CONNECT ONLY TO THE RUNNER ARE NOT ACCEPTABLE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT FEET OR LONGER.

PENDANT MOUNTED FIXTURES: SUPPORT PENDANT MOUNTED LIGHT FIXTURES DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLES PASSING THROUGH EACH PENDANT HANGER, AND CAPABLE OF SUPPORTING FOUR TIMES THE WEIGHT OF THE FIXTURE.

SUSPENDED DRYWALL CEILINGS:

ALL RECESSED OR DROP-IN LIGHT FIXTURES SHALL BE SUPPORTED DIRECTLY BY MAIN RUNNERS OR BY SUPPLEMENTAL FRAMING WHICH IS SUPPORTED BY MAIN RUNNERS. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE CEILING CONTRACTOR TO PROVIDE APPROPRIATE FRAMING AND LOCATION FOR FIXTURES.

SURFACE MOUNTED FIXTURES SHALL BE ATTACHED TO A MAIN RUNNER WITH A POSITIVE CLAMPING DEVICE MADE OF MATERIAL WITH A MINIMUM OF 14 GAUGE. ROTATIONAL SPRING CATCHES SHALL NOT BE ALLOWED.

EXISTING CEILING FIXTURES REMOVED TO ACCOMPLISH THE WORK SHALL BE REINSTALLED AS FOR NEW WORK.

37. REFER TO SINGLE LINE DIAGRAM AND FEEDER SCHEDULES FOR CONDUIT AND CONDUCTOR SIZE TO PANELS, TRANSFORMERS, MECHANICAL AND PLUMBING EQUIPMENT, ETC. CONDUIT RUNS MAY NOT BE SHOWN ON DRAWINGS, BUT ARE PART OF THIS CONTRACT.

GENERAL NOTES CONTINUED ON SHEET E0.2

APPLICABLE CODES AND STANDARDS

- 2007 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1
- 2007 CALIFORNIA BUILDING CODE (CBC)
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2
  (2006 INTERNATIONAL BUILDING CODE (IBC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA ELECTRICAL CODE (CEC)
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3
  (2005 NATIONAL ELECTRICAL CODE (NEC) W/CALIFORNIA AMENDMENTS)
- 2005 CALIFORNIA ENERGY CODE
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2007 CALIFORNIA FIRE CODE (CFC)
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9
  (2006 INTERNATIONAL FIRE CODE (IFC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA REFERENCED STANDARDS CODE
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
- AMERICANS WITH DISABILITIES ACT (ADA)
  TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG)
  1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE
- CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

BID DOCUMENTS

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REVISIONS

NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
GENERAL NOTES

PM ____ DATE ____
DRAWN SM DATE ____
CHECK NI DATE ____

APPROVED DATE ____
CITY ENGINEER R.E

E-0.1
05/04/2010

SHEET ____ OF ____
JOB NO. 1109531

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GENERAL NOTES

38. STRAIGHT FEEDER, BRANCH CIRCUIT, AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS.

39. MAXIMUM NUMBER OF CONDUCTORS IN OUTLET OR JUNCTION BOXES SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE, ARTICLE 370-6, BUT IN NO CASE SHALL CONTAIN MORE THAN THE FOLLOWING NUMBER OF #12 AWG CONDUCTORS FOR THE SIZE OF BOX INDICATED. THE MINIMUM SIZE OUTLET OR JUNCTION BOX PERMITTED IN A WALL IS FOUR INCHES SQUARE BY 1-1/2 INCHES DEEP

4" SQ. BY 1-1/2" D	=	9	CONDUCTORS
4" SQ. BY 2-1/8" D	=	13	CONDUCTORS
4 11/16" SQ. BY 1-1/2" D	=	11	CONDUCTORS
4 11/16" SQ. BY 2-1/8" D	=	18	CONDUCTORS

ALL OUTLET BOXES CONTAINING MORE THAN ONE DEVICE SHALL BE GANGED TWO DEVICES DOUBLE GANGED, MINIMUM

40 WHERE MULTI-HOMERUNS ARE INDICATED ON DRAWINGS INDICATING THE SAME PANELBOARD CIRCUIT NUMBER, PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING AND ROUTE ONE SET OF WIRES TO CIRCUIT BREAKERS.

41. THE NUMERALS SHOWN AT TOP OF LIGHT FIXTURE IDENTIFICATION SYMBOLS INDICATING THE NUMBER OF LIGHT FIXTURES REQUIRED SHALL NOT BE USED BY THE CONTRACTOR FOR HIS QUANTITY TAKE-OFF AT BIDDING, NOR FOR DETERMINATION OF HOW MANY FIXTURES WILL BE INSTALLED. THE CONTRACTOR SHALL INSTALL A LIGHT FIXTURE WHEREVER A FIXTURE OUTLET IS SHOWN ON THE DRAWINGS.

42. RECESSED PANELS AND CABINETS SHALL HAVE FIVE SPARE 3/4 INCH CONDUITS STUBBED UP INTO AN ACCESSIBLE CEILING SPACE AND CAPPED UNLESS OTHERWISE NOTED.

43. IDENTIFICATION NAMEPLATES SHALL BE MICARTA 1/8 INCH THICK AND OF APPROVED SIZE WITH BEVELLED EDGES AND ENGRAVED WHITE LETTERS A MINIMUM OF 1/4 INCH HIGH ON BLACK BACKGROUND. NAMEPLATES SHALL BE PROVIDED FOR ALL CIRCUITS IN THE SERVICE DISTRIBUTION AND POWER DISTRIBUTION SWITCHBOARDS OR PANELBOARDS, MOTOR CONTROL CENTERS, LIGHTING DISTRIBUTION PANELBOARDS, SEPARATELY MOUNTED STARTING SWITCHES, DISCONNECTING SWITCHES, MOTOR CONTROL PUSHBUTTON STATIONS, SELECTOR SWITCHES, TRANSFORMERS, TERMINAL CABINETS, TELEPHONE CABINETS, ETC. ALL NAMEPLATES SHALL BE ATTACHED WITH SCREWS. PULL BOXES, JUNCTION BOXES, AND DEVICE BOXES SHALL BE MARKED WITH A PERMANENT MARKER.

44 THE EXACT LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN. UNLESS OTHERWISE NOTED, MOUNT ELECTRICAL DEVICES AT THE FOLLOWING HEIGHTS:

WALL SWITCH	+4'-0"	SET VERTICALLY
CONVENIENCE RECEPTACLE	+1'-6"	SET VERTICALLY
TELEPHONE/DATA OUTLETS	+1'-6"	SET VERTICALLY.
OUTLETS AT COUNTERS	+6"	ABOVE COUNTERS WITHOUT SPLASHES OR CENTERED IN SPLASH SET HORIZONTALLY

REVIEW ARCHITECTURAL ELEVATIONS OF CASEWORK. OUTLETS MOUNTED ABOVE OR BELOW, OR ADJACENT TO CASEWORK SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS, PRIOR TO FINAL ROUGH-IN. ELECTRICAL DRAWINGS SHALL GOVERN NUMBER AND TYPE OF OUTLETS. HOWEVER, LOCATIONS SHALL BE AS INDICATED ON ARCHITECTURAL ELEVATIONS. PROVIDE CONDUIT, WIRES, AND OUTLETS FOR WORK REQUIRED IN CASEWORK INSTALLATIONS. REFERENCE ARCHITECTURAL DETAILS FOR METHOD OF ROUTING CONDUIT WITHIN CASEWORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT-OUTS IN TILE OR COUNTER SPLASHES WHERE RECEPTACLES, OUTLETS, ETC., OCCUR. PROVIDE BOX EXTENSIONS THROUGH ALL CASEWORK. FINISH FLUSH WITH FACE OF SPLASH, CABINET, ETC.

MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO CENTER OF DEVICES AND EQUIPMENT UNLESS OTHERWISE NOTED. BOXES INSTALLED IN LOCATIONS NOT APPROVED BY THE ARCHITECT SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

45. DRAWINGS ARE DIAGRAMMATIC ONLY. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER SECTIONS. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, OR MECHANICAL ITEMS OR FEATURES.

46. WHERE FIXTURES ARE SHOWN TO BE DUAL SWITCHED, SWITCH Sa SHALL CONTROL THE TWO OUTSIDE LAMPS IN EACH FIXTURE, Sb SHALL CONTROL THE REMAINING LAMPS IN EACH FIXTURE.

47. THE EQUIPMENT GROUNDING CONDUCTOR SHOWN ON CONDUIT RUNS SHALL RUN CONTINUOUS FROM PANEL TO LAST OUTLET. THIS WIRE SHALL BE PIGTAILED IN EACH OUTLET FOR CONNECTION TO BOX AND DEVICE SO THAT IF DEVICE IS REMOVED, GROUND WILL NOT BE INTERRUPTED. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSULATED GREEN CONDUCTORS - ALTERNATE METHODS OF IDENTIFICATION SHALL NOT BE USED. CONTRACTOR SHALL NOTIFY ELECTRICAL ENGINEER TO EXAMINE CONDUCTOR INSTALLATION PRIOR TO INSTALLATION OF DEVICES.

48. REFERENCE ARCHITECTURE AND STRUCTURAL DRAWINGS FOR HOUSEKEEPING PADS.

49. OPERATING ROOMS, DELIVERY ROOMS, EMERGENCY TRAUMA ROOMS, AND SIMILARLY USED SUITES SHALL USE NON-FLAMMABLE ANESTHETICS.

50. FURNISH AND INSTALL POWER DISTRIBUTION PANELBOARDS AS INDICATED ON THE DRAWINGS. PANELBOARDS SHALL COMPLY WITH NEMA STANDARD FOR PANELBOARDS AND FEDERAL SPECIFICATION W-P-115A. PANELBOARDS SHALL BE COMPLETE WITH COPPER BUS BARS AND 40 DEGREE CELSIUS THERMAL MAGNETIC BOLT-ON TYPE CIRCUIT BREAKERS AS INDICATED ON DRAWINGS. PANELBOARDS SHALL BE SQUARE D OR EQUAL BY SIEMENS, ITE, WESTINGHOUSE, OR GENERAL ELECTRIC.

51. RECEPTACLES SHALL BE HOSPITAL GRADE, 20 AMP, NEMA 5-20R GROUNDING TYPE HUBBELL #8300, OR EQUAL BY PASS & SEYMOUR OR GENERAL ELECTRIC. COLOR SHALL BE SELECTED BY ARCHITECT. EMERGENCY RECEPTACLES SHALL BE RED IN COLOR.

52. SWITCHES SHALL BE 20 AMP, 120/277 VOLT RATED SILENT TYPE SPECIFICATION GRADE HUBBELL OR EQUAL BY PASS & SEYMOUR OR GENERAL ELECTRIC. COLOR SHALL BE SELECTED BY ARCHITECT. EMERGENCY SWITCHES SHALL BE RED IN COLOR.

53. DEVICE PLATES SHALL BE NYLON FOR THE NUMBER OF GANGS AND TYPE OF OPENINGS NECESSARY, HUBBELL OR EQUAL BY PASS & SEYMOUR OR GENERAL ELECTRIC. COLOR SHALL BE SELECTED BY ARCHITECT. EMERGENCY RECEPTACLE PLATES SHALL BE RED IN COLOR. PLATES SHALL BE ENGRAVED WITH PANEL AND CIRCUIT NUMBER.

54. RIGID GALVANIZED STEEL CONDUIT SHALL BE FULL WEIGHT TREADED TYPE ALUMINUM OR STEEL. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS OR CEILING SPACES WHERE NOT SUBJECT TO MECHANICAL DAMAGE. PVC SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB OR BELOW GRADE. FLEXIBLE STEEL CONDUIT MAY BE USED AT FIXTURE AND OUTLET CONNECTIONS WITH NO RUNS LONGER THAN SIX FEET. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL CONDUIT RUNS.

55. RIGID GALVANIZED STEEL CONDUIT FITTINGS SHALL BE THREADED AND THOROUGHLY GALVANIZED. ELECTRICAL METALLIC TUBING (EMT) CONDUIT FITTINGS SHALL BE STEEL, RAINTIGHT THREADLESS COMPRESSION TYPE. DIE CAST, SET SCREW, OR INDENTER TYPES ARE NOT ACCEPTABLE. FLEXIBLE STEEL CONDUIT FITTINGS SHALL BE MALLEABLE IRON CLAMP, SQUEEZE TYPE OR STEEL TWIST-IN TYPE WITH INSULATED THROAT. SET SCREW TYPE IS NOT ACCEPTABLE.

56. FOR SMALL AC MOTORS NOT HAVING BUILT-IN THERMAL OVERLOAD PROTECTION, PROVIDE MANUAL MOTOR STARTERS WITH OVERLOAD HEATER ELEMENTS SIZED TO THE NAMEPLATE CURRENT RATING OF THE MOTOR. SMALL AC MOTORS WITH BUILT-IN THERMAL OVERLOAD PROTECTION, PROVIDE A HORSEPOWER RATED TOGGLE TYPE DISCONNECT SWITCH.

57. SAFETY SWITCHES SHALL BE HEAVY DUTY NEMA TYPE HD BY SQUARE D, SIEMENS, GENERAL ELECTRIC OR WESTINGHOUSE. SWITCHES SHALL BE RATED FOR THE NUMBER OF POLES, VOLTAGE, CURRENT AND HORSEPOWER RATING AS REQUIRED. PROVIDE FUSE PROTECTION BASED ON THE MOTOR NAMEPLATE RATINGS.

58. TERMINAL CABINETS SHALL BE GALVANIZED CODE SHEET STEEL, FLUSH OR SURFACE MOUNTED AS INDICATED ON THE DRAWINGS, OF IDENTICAL MANUFACTURE AS BRANCH CIRCUIT PANELS. FLUSH MOUNTED CABINETS SHALL BE PRIMED AND PAINTED. FINISH COLOR AS SELECTED BY ARCHITECT.

59. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY AND UL LISTED UNLESS NOTED OTHERWISE. CONDUCTORS #12 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS # 10 AWG AND LARGER SHALL BE STRANDED.

60. JUNCTION AND PULL BOXES: FOR INTERIOR DRY LOCATIONS, BOXES SHALL BE GALVANIZED ONE-PIECE, DRAWN STEEL, KNOCKOUT TYPE WITH REMOVABLE MACHINE SCREW SECURED COVERS. FOR OUTSIDE, DAMP, OR SURFACE LOCATIONS, BOXES SHALL BE HEAVY CAST ALUMINUM OR CAST IRON WITH REMOVABLE, GASKETED, NON-FERROUS MACHINE SCREW SECURED COVERS. BOXES SHALL BE SIZED FOR THE NUMBER AND SIZES OF CONDUCTORS AND CONDUIT ENTERING THE BOX AND EQUIPPED WITH PLASTER EXTENSION RINGS WHERE REQUIRED. BOXES SHALL BE LABELED TO INDICATE PANEL AND CIRCUIT NUMBER, OR TYPE OF SIGNAL OR COMMUNICATIONS SYSTEM.

61. BALLASTS SHALL BE ELECTRONIC TYPE 265 M.A., HIGH POWER FACTOR, U.L. LISTED CLASS "P", AND THERMALLY PROTECTED. FIXTURE SHALL HAVE A PRIMARY INPUT VOLTAGE AS SHOWN ON THE ELECTRICAL PLANS AND SCHEDULES.

62. LAMPS: ALL FIXTURES SHALL BE SUPPLIED WITH LAMPS OF PROPER SIZE AND TYPE.

INCANDESCENT LAMPS SHALL BE NEW, RATED FOR 130 VOLTS, 60 CYCLES, AC OPERATION AND SHALL BE GENERAL SERVICE INSIDE FROSTED UNLESS SPECIFICALLY NOTED OTHERWISE.

FLUORESCENT LAMPS SHALL BE RAPID START ENERGY SAVING TYPE, GENERAL ELECTRIC WATT-MISER OR EQUAL BY SYLVANIA OR PHILIPS UNLESS NOTED OTHERWISE.

FIXTURES WITH DIMMING BALLASTS SHALL USE STANDARD 40 WATT NON-ENERGY SAVING TYPE RAPID START LAMPS BY GE, SYLVANIA OR PHILIPS.

MERCURY VAPOR, METAL HALIDE AND HIGH PRESSURE SODIUM LAMPS SHALL BE AS RECOMMENDED BY THE FIXTURE MANUFACTURER AND AS INDICATED IN THE FIXTURE SCHEDULE.

63. WHERE LIGHTING FIXTURES REQUIRE THE USE OF ACRYLIC PLASTIC LENSES, THEY SHALL BE 100 PERCENT VIRGIN ACRYLIC THERMOPLASTIC NOT LESS THAN 0.125 INCHES THICK WITH AN UNPENETRATED DEPTH OF NOT LESS THAN 0.045 INCHES EQUAL TO KSH-K12 UNLESS NOTED OTHERWISE.

64. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS, SPECIFICATIONS AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT IN GENERAL CHARGE OF DESIGN AND THE SIGNATURE OF THE ARCHITECT OR PROFESSIONAL ENGINEER WHO HAS BEEN DELEGATED RESPONSIBILITY COVERING THE WORK SHOWN ON A PARTICULAR PLAN OR SPECIFICATION, AND APPROVED BY OSHPD. THE FIRE ALARM SYSTEM INDICATED IN THESE DRAWINGS SHALL BE USED FOR BIDDING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT FIRE ALARM SYSTEM SHOP DRAWINGS TO OSHPD FOR APPROVAL PRIOR TO INSTALLATION. SYSTEM SHALL MEET THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.

65. SIGNAL AND COMMUNICATIONS SYSTEMS (INTERCOM, TELEPHONE, DATA, PAGING, CORRECTIVE CLOCK, NURSE CALL AND CODE BLUE SYSTEMS): PROVIDE A COMPLETE AND OPERABLE EXTENSION TO THE EXISTING SYSTEMS AS INDICATED ON THE DRAWINGS. THESE SYSTEMS SHALL BE PROVIDED AS A SINGLE SUBCONTRACT UNDER THE ELECTRICAL CONTRACT. IN THE INTEREST OF MAINTENANCE CONVENIENCE AND CAPABILITY, THE NEW EQUIPMENT SHALL MATCH THAT OF EXISTING SYSTEMS AS INSTALLED IN ADJACENT AREAS. ALL EQUIPMENT AND CABLE SHALL BE PROVIDED BY THE AUTHORIZED DISTRIBUTOR. PROVIDE ALL BACKBOXES PER MANUFACTURER'S REQUIREMENTS. SUBMIT ENGINEERED SHOP DRAWINGS FOR EACH SIGNAL AND COMMUNICATION SYSTEM TO THE ARCHITECT FOR REVIEW.

66. SEE DETAIL SHEET E0.8 FOR TYPICAL DETAILS FOR LIGHT FIXTURE SUPPORT, PANEL BOARD MOUNTING AND UNDERGROUND CONDUIT.

LEGEND

SYMBOL	DESCRIPTION
	GENERAL SYMBOLS
———	CONDUIT RUN, CONCEALED IN CEILING, WALLS OR UNDER FLOORS.
- - - - - - -	CONDUIT RUN EXPOSED.
—— ——	CONDUIT RUN UNDERGROUND.
———›	CONDUIT STUBBED OUT AND CAPPED. PULL LINE IN PLACE.
AIC	"AMPERES INTERRUPTING CAPACITY"
RMS	"ROOT MEAN SQUARED"
KW	"KILOWATT"
KVA	"KILOVOLT - AMPERES"
V	"VOLTS"
A	"AMPS"
WP	WEATHERPROOF, NEMA 3R
KWH	KILOWATT HOURS
AFF	ABOVE FINISHED FLOOR
O.C.	"ON CENTER"
UNO	UNLESS NOTED OTHERWISE
C.O.	"CONDUIT ONLY". PROVIDE PULL ROPE FOR ALL EMPTY CONDUIT.
C.	"CONDUIT", WITH CONDUCTORS AS REQUIRED BY DRAWINGS OR SPECIFICATIONS.
B-1,3	CONDUIT HOMERUN TO PANELBOARD. LETTER AND NUMERALS INDICATE ELECTRICAL PANEL AND CIRCUIT NUMBER.
	SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD.
L1	PANEL DESIGNATION.
	SURFACE MOUNTED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS.
J	JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR FLUSH IN WALL WITH BLANK COVER PLATE TO MATCH DEVICE PLATES.
	SINGLE LINE DIAGRAM SYMBOLS
100AF 70AT 3P	MOLDED CASE CIRCUIT BREAKER. "AF" INDICATES AMPERE FRAME, "AT" INDICATES AMPERE TRIP RATING AND NUMBER OF POLES AS INDICATED. SUBSCRIPT INDICATES TYPE.
	NO SUBSCRIPT — THERMAL MAGNETIC NA — NON-AUTOMATIC MO — MAGNETIC ONLY CL — CURRENT LIMITING SS — SOLID STATE EM — ELECTRONIC METERING PACKING
	VOLTAGE TRANSFORMER. FLOOR MOUNTED, COPPER WOUND, DRY TYPE UNLESS SPECIFIED OTHERWISE.
M	UTILITY METER SOCKET, WITH C.T.s, CLIPS, ETC., PER SERVING UTILITY COMPANY.
	GROUND, "GRD".
GFI	"GROUND FAULT INTERRUPTER"
GFP	GROUND FAULT PROTECTION DEVICE.
GFS	GROUND FAULT SENSOR.
	LIGHTING SYMBOLS
1,1a 1a	FLUORESCENT LIGHT FIXTURE OUTLET. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. HALF SHADED FIXTURE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.
	FLUORESCENT STRIP FIXTURE. LOWER CASE LETTER INDICATES CONTROLLING SWITCH. NUMERAL INDICATES CIRCUIT.
1,1a 1a	BRACKET OR WALL MOUNTED LIGHT FIXTURE AND OUTLET, HID, FLUORESCENT OR INCANDESCENT. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED FIXTURE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.
Q 21 106 +9'-0"	LIGHTING FIXTURE IDENTIFICATION SYMBOL. LETTER INDICATES FIXTURE TYPE. NUMERALS IN LOWER HALF OF HEXAGON INDICATE FIXTURE WATTAGE (INCLUDING BALLAST WHERE APPLICABLE). NUMERAL OUTSIDE TOP OF HEXAGON INDICATES NUMBER OF FIXTURES REQUIRED. NUMERAL OUTSIDE BOTTOM OF HEXAGON INDICATES MOUNTING HEIGHT FROM FLOOR TO BOTTOM OF FIXTURE. OMISSION OF MOUNTING HEIGHT INDICATES CEILING MOUNTING.
S	WALL MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR. MOUNT AT + 48 INCHES.
OS	OCCUPANCY SENSOR COMPLETE WITH ALL POWER SUPPLIES, RELAY PACKS AND CONNECTIONS. REFER TO SPECIFICATIONS FOR TYPE AND DESCRIPTION.
3K Sa	SWITCH. LOWER CASE LETTER AT BOTTOM INDICATES OUTLETS CONTROLLED. CAPITAL SUPERSCRIPT INDICATES SWITCH TYPE. NO SUPERSCRIPT - SINGLE POLE SWITCH 3 - THREE WAY M - MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION

SYMBOL	DESCRIPTION
	POWER SYMBOLS
	DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE.
	DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE.
	ELECTRIC RANGE RECEPTACLE. COORDINATE WITH RANGE MANUFACTURER FOR TYPE.
100AS (T) 60AFU	FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING. "AFU" INDICATES FUSE AMPERE RATING.
	SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER MOTOR.
— OHP —	OVERHEAD POWER LINE.
	FIRE ALARM SYMBOLS
	FIRE ALARM SYSTEM CONDUIT RUN. 3/4 INCH CONDUIT MINIMUM UNLESS INDICATED OTHERWISE ON DRAWINGS. REFER TO DRAWINGS AND SPECIFICATIONS FOR REQUIRED WIRING.
F	FIRE ALARM PULL STATION. MOUNT AT +48 INCHES UNLESS OTHERWISE NOTED.
	FIRE ALARM COMBINATION HORN/VISUAL STROBE. MOUNT AT +80 INCHES ABOVE HIGHEST FLOOR LEVEL IN ROOM OR 6 INCHES BELOW CEILING, WHICHEVER IS LOWER. VISUALS SHALL BE 30 CANDELA (75 CD ON AXIS) U.N.O. 15 CD OR 110 CD DEVICES SHALL BE PROVIDED AS PER NFPA 72.
H WP	FIRE ALARM HORN, WEATHERPROOF, MOUNT +90" AFG TO TOP OF DEVICE. (1)
FACP	FIRE ALARM CONTROL PANEL, "FACP". REFER TO SPECIFICATIONS.
F	FIRE ALARM VISUAL STROBE. MOUNT AT +80 INCHES ABOVE HIGHEST FLOOR LEVEL IN ROOM OR 6 INCHES BELOW CEILING, WHICHEVER IS LOWER.
SD	PHOTOELECTRIC TYPE SMOKE DETECTOR MOUNTED ON CEILING OR WALL PER DRAWINGS. ASTERISK (*) ADJACENT INDICATES RELAY BASED AND LISTED FOR DOOR CONTROL
HD	HEAT DETECTOR MOUNTED ON CEILING OR WALL PER DRAWINGS. COMBINATION RATE OF RISE AND 135 DEGREES C FIXED TEMPERATURE TYPE.
	TELEPHONE SYSTEM SYMBOLS
	TELEPHONE TERMINAL BACKBOARD "TTB". 3/4 INCH SANDED AND PAINTED CPX PLYWOOD, 4' X 8' UNLESS NOTED OTHERWISE.
— T —	TELEPHONE CONDUIT RUN WITH PULL LINE IN PLACE. "T" INDICATES 3/4 INCH CONDUIT ONLY, "T1" INDICATES 1 INCH CONDUIT ONLY, "T2" INDICATES 1-1/4 INCH CONDUIT ONLY.
W	TELEPHONE OUTLET. MOUNT AT +48 INCHES TO CENTER UNLESS OTHERWISE NOTED. CONDUIT ONLY WITH PULL LINE TO TELEPHONE TERMINAL BACKBOARD.
— OHT —	OVERHEAD TELEPHONE LINE.
	COMPUTER SYSTEM SYMBOLS
— CD —	COMPUTER SYSTEM CONDUIT RUN. 3/4 INCH CONDUIT MINIMUM STUBBED UP INTO CEILING SPACE UNLESS OTHERWISE INDICATED ON DRAWINGS.
	COMPUTER OUTLET, MOUNT AT +15 INCHES TO CENTER UNLESS OTHERWISE NOTED.
	COMBINATION VOICE/DATA OUTLET. 4S BOX WITH 2 GANG RING AND PLATE. ENGRAVE PLATE "VOICE" AND "DATA" OVER RESPECTIVE JACKS. VERIFY TYPE OF JACK WITH SYSTEM SUPPLIER
	PUBLIC ADDRESS SYSTEM SYMBOLS
— S —	SOUND SYSTEM CONDUIT RUN. 3/4 INCH CONDUIT MINIMUM UNLESS INDICATED OTHERWISE ON DRAWINGS. REFER TO DRAWINGS AND SPECIFICATIONS FOR REQUIRED WIRING.
VC	VOLUME CONTROL. MOUNT AT +48 INCHES UNLESS OTHERWISE NOTED.
MC	MICROPHONE OUTLET WITH PROPER CONNECTOR.
S	PROJECTION TYPE SPEAKER HORN.
	SECURITY AND INTRUSION SYSTEM SYMBOLS
— SI —	SECURITY/INTRUSION SYSTEM CONDUIT. RUN 3/4 INCH CONDUIT MINIMUM UNLESS OTHERWISE NOTED. REFER TO SPECIFICATIONS FOR REQUIRED WIRING.
K	DIGITAL KEY PAD FOR SECURITY SYSTEM. MOUNT AT +48 INCHES ON CENTER. REFER TO SPECIFICATIONS.
CR	ACCESS CONTROL CARD READER STATION. REFER TO SPECIFICATIONS.
	PASSIVE INFRARED MOTION DETECTOR. REFER TO SPECIFICATIONS. MOUNT PER MANUFACTURER'S REQUIREMENTS.
DC	INTRUSION DETECTION DOOR SWITCH. CONCEALED IN DOOR FRAME, ROLLER BALL TYPE UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS. ROUTE WIRING THROUGH STEEL DOOR FRAME.

JUL 21 2011

BID DOCUMENTS

PROJECT ADDRESS:
EL SEGUNDO, CA

TTG TMAD TAYLOR & GAINES
• STRUCTURAL • MECHANICAL • ELECTRICAL • CIVIL
800 North Ferrari Lane, Suite 100
Ontario, California 91764
Phone: 909.477.6915 Fax: 909.477.6916
www.tmadtg.com Project No. 2010.030.00

REGISTERED PROFESSIONAL ENGINEER — NESTOR C. IGNACIO — No. E18894 — Exp. 6-30-2011 — ELECTRICAL — STATE OF CALIFORNIA

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A California Corporation | New York/Kansas, Architect #041660 | Reno/Mohnet, PE #3035, LEED AP | Mill Valley, CA #3388

REVISIONS		
NO.	DATE	BY
1	10/06/2010	MD

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
GENERAL NOTES & LEGEND

PM
DRAWN SM DATE
CHECK NI DATE
APPROVED DATE
CITY ENGINEER R.E. DATE

E-0.2
10/06/2010
SHEET OF
JOB NO. 1109531

FILE NO.

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CERTIFICATE OF COMPLIANCE (Part 1 of 4) LTG-1C

Project Name		Date
El Segundo Life Guard Station		*8/10/2010*
Project Address	**Climate Zone**	**Total Cond. Floor Area** / **Unconditioned Floor Area**
El Segundo	*6*	*1,865* / *0*

GENERAL INFORMATION

Building Type:	☑ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel Guest Room		
☐ School	☐ Relocatable Public School	☑ Conditioned Spaces	☐ Unconditioned Spaces		
Phase of Construction:	☑ New Construction	☐ Addition	☐ Alteration		
Method of Compliance:	☐ Complete Building	☑ Area Category	☐ Tailored		

Documentation Author's Declaration Statement

I certify that this Certificate of Compliance documentation is accurate and complete

Name	*Nestor Ignacio, P.E.*	Signature	
Company	*TMAD Taylor & Gaines*	Date	*8/10/2010*
Address	*800 North Ferrari Lane, Suite 100*	CEA # / CEPE #	
City/State/Zip	*Ontario, CA 91764*	Phone	*(909) 477-6915*

The Principal Lighting Designer's Declaration Statement

- I am eligible under Division 3 of the California Business and Professional Code to accept responsibility for the lighting design.
- This Certificate of Compliance identifies the lighting features and performance specifications required for compliance with Title 24, Pages 1 and 6 of the California Code of Regulations.
- The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name	*Nestor Ignacio, P.E*	Signature	
Company	*TMAD TAYLOR & GAINES*	Phone	*909-477-6915*
Address	*800 NORTH FERRARI LN. #100*	License #	*E16934*
City/State/Zip	*ONTARIO, CA 91764*	Date	*8/10/2010*

Lighting Mandatory Measures
Indicate location on building plans of Mandatory Measures Note Block: *E-0.4*

LIGHTING COMPLIANCE FORMS & WORKSHEETS (check box if worksheets is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

☑	LTG-1C Pages 1 through 4	Certificate of Compliance. All Pages required on plans for all submittals.
☑	LTG-2C	Lighting Controls Credit Worksheet
☑	LTG-3C	Indoor Lighting Power Allowance
☐	LTG-4C Pages 1 through 4	Tailored Method Worksheet
☐	LTG-5C Pages 1 and 2	Line Voltage Track Lighting Worksheet

CERTIFICATE OF COMPLIANCE (Part 2 of 4) LTG-1C

Project Name	Date
El Segundo Life Guard Station	*8/10/2010*

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Installation Certificate, LTG-1- INST (Retain a copy and verify form is completed and signed.) **Field Inspector** ☐

Certificate of Acceptance, LTG-2A (Retain a copy and verify form is completed and signed.) **Field Inspector** ☐

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces installed Lighting Power listed on this Lighting Schedule is only for:

☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

☑ The actual indoor lighting power listed below includes all installed permanent and portable lighting systems in accordance with §146(a).

☑ Only for offices: Up to the first 0.2 watts per square foot of portable lighting shall not be required to be included in the calculation of actual indoor lighting power density in accordance with the Exception to §146(a). All portable lighting in excess of 0.2 watts per square foot is totaled below

	Luminaire (Type, Lamps, Ballasts)		Installed Watts						
A	B	C	D	E	F	G	H		
Room or Item Tag	Complete Luminaire Description (e.g. # lamps & ballasts, CBTR, and dimmable electronic ballasts)	Special Features	Watts per Luminaire	Here wattage Was determined: CEC Default From: HAS	Here wattage Was determined: Acceptance Test (Enter "ATR" or "ATP")	Number of Luminaires	Installed Watts (C x D x E)	Field Inspector: Pass	Field Inspector: Fail
A1	(2) 4 ft Fluorescent T8 Rapid Start Elec	☐	113.0	☑	☐	4	372	☐	☐
A2	(2) 4 ft Fluorescent T8 Rapid Start Elec	☐	62.0	☑	☐	12	744	☐	☐
A3	(2) 4 ft Fluorescent T8 Rapid Start Elec	☐	62.0	☑	☐	2	124	☐	☐
A4	(1) 4 ft Fluorescent T8 Rapid Start Elec	☐	32.0	☑	☐	3	169	☐	☐
B	(2) 13w Compact Fluorescent Quad 2 Pin	☐	36.0	☑	☐	3	108	☐	☐
		☐		☐	☐	

LIGHTING MANDATORY MEASURES: NONRESIDENTIAL — LTG-MM

Project Name: *El Segundo Life Guard Station* — Date: *8/10/2010*

Indoor Lighting Measures:

§131(d):	**Shut-off Controls**	
1	This automatic control shall meet the requirements of Section 119 and may be an occupancy sensor, automatic time switch, or other device capable of automatically shutting off the lighting.	
2	Override for Building Lighting Shut-off: The automatic building shut-off system is provided with a manual, accessible override switch in sight of the lights. The area of override is not to exceed 5,000 square feet.	
§119(h):	Automatic Control Devices Certified: All automatic control devices specified are certified. All alternate equipment shall be certified and installed as directed by the manufacturer.	
§111:	Fluorescent Ballast and Luminaires Certified: All fluorescent fixtures specified for the project are certified and listed in the Directory. All installed fixtures shall be certified.	
§131(a):	Individual Room/Area Controls: Each room and area in this building is equipped with a separate switch or occupancy sensor device for each area with floor-to-ceiling walls.	
§131(b):	Uniform Reduction for Individual Rooms: All rooms and areas greater than 100 square feet and more than 0.8 watts per square foot of lighting load shall be controlled with bi-level switching for uniform reduction of lighting within the room.	
§131(c):	Daylight Area Control: All rooms with windows and skylights that are greater than 250 square feet and that allow for the effective use of daylight in the area shall have 50% of the lamps in each daylit area controlled by a separate switch, or the effective use of daylight cannot be accomplished because the windows are continuously shaded by a building on the adjacent lot. Diagram of shading during different times of the year is included on plans.	
§131(e):	Display Lighting. Display lighting shall be separately switched on circuits that are 20 amps or less.	

Outdoor Lighting Measures:

§130(c)1:	Mandatory lighting power determination for medium base sockets without permanently installed ballasts
§132(a):	All permanently installed luminaires with lamps rated over 100 Watts either have a lamp efficacy of at least 60 lumens per Watt or are controlled by a motion sensor.
§132(b):	All Luminaires with lamps rated greater than 175 Watts in hardscape area including parking lots, building entrances, canopies, and all outdoor sales areas meet the Cutoff Requirements
§132(c)1:	All permanently installed outdoor lighting meets the control requirements listed
§132(c):	Building facades, parking lots, garages, canopies, and outdoor sales areas meet the Multi-Level Lighting Requirements listed

CERTIFICATE OF COMPLIANCE (Part 1 of 4) — OLTG-1C

Project Name: *El Segundo Life Guard Station* — Date: *8/10/2010*

Project Address: *El Segundo, CA* — Total Illuminated Area: *370*

GENERAL INFORMATION

Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration

Documentation Author's Declaration Statement

I certify that this Certificate of Compliance documentation is accurate and complete.

Name: *Nestor Ignacio, P.E.*	Signature
Company: *TMAD Taylor & Gaines*	Date: *8/10/2010*
Address: *800 North Ferrari Lane, Suite 100*	CEA #: GEPE #:
City/State/Zip: *Ontario, CA 91764*	Phone: *(909) 477-6915*

Principal Lighting Designer's Declaration Statement

- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the lighting design.
- This Certificate of Compliance identifies the lighting features and performance specifications required for compliance with Title 24, Pages 1 and 6 of the California Code of Regulations.
- *The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.*

Name: *Nestor Ignacio, P.E.*	Signature
Company: *TMAD TAYLOR & GAINES*	Phone: *909/477-6915*
Address: *800 NORTH FERRARI LN #100*	License #: *E16934*
City/State/Zip: *ONTARIO, CA 91764*	Date: *8/10/10*

Principal Lighting Designer's Declaration

☑ I certify that this Certificate of Compliance documentation is accurate and complete, and accounts for all outdoor lighting power, including building mounted, pole mounted, as well as all other lighting designed for the site, and that Additional Lighting Power Allowances for Specific Applications or Additional Lighting Power Allowances for Ordinance Requirements have not been counted more than one time for the same area, in accordance with Section 147 of the Standards.

Outdoor Lighting Mandatory Measures
Indicate location on building plans of Mandatory Measures Note Block: _____

LIGHTING COMPLIANCE FORMS & WORKSHEETS (check box if worksheets is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

☑	OLTG-1C	Certificate of Compliance. All 4 pages required on plans for all submittals.
☑	OLTG-2C	(Pages 1 of 3) Lighting Wattage Allowances for General Hardscape, Sales Frontage, or Ornamental Lighting. Optional on plans.
☐	OLTG-2C	(Pages 2 of 3) Lighting Wattage Allowance for Par Application or Per Area. Optional on plans.
☐	OLTG-2C	(Pages 3 of 3) Additional Lighting Power Allowance for Ordinance Requirements. Optional on plans.

CERTIFICATE OF COMPLIANCE (Part 2 of 4) — OLTG-1C

Project Name: *El Segundo Life Guard Station* — Date: *8/10/2010*

COMPLIANCE FIXTURE / LIGHTING CONTROL SCHEDULE and FIELD INSPECTION CHECKLIST

INSTALLATION CERTIFICATE, OLTG-1INST (Retain a copy and verify form is completed and signed.) — Field Inspection ☐

CERTIFICATE OF ACCEPTANCE, OLTG-2A (Retain a copy and verify form is completed and signed.) — Field Inspection ☐

Luminaire Schedule

A	B	C	D	E	F	G	H	I
Name or Item Tag	Luminaire Description,[1] See footnote below (i.e. : 1 lamp pole-top shoe-box 400 watt metal halide)	Cutoff Designation	Watts per Luminaire	Special Features	How wattage was determined. Default from NLCP (D) or Equivalent to Allowance (D x E)	Number of Luminaires	Installed Watts (D X G)	Field Inspector[2] Pass	Fail
B	☑ 12w Compact Fluorescent Quad 2 Pin		36.0	☐	☑ ☐ ☐	11	396	☐	☐
				☐	☐ ☐ ☐			☐	☐
				☐	☐ ☐ ☐			☐	☐
				☐	☐ ☐ ☐			☐	☐
				☐	☐ ☐ ☐			☐	☐
				☐	☐ ☐ ☐			☐	☐
				☐	☐ ☐ ☐			☐	☐
				☐	☐ ☐ ☐			☐	☐

Enter total into OLTG-1C; Page 4 of 4; Row H; Total Installed Watts: 396

1. Type of luminaire (i.e.; post top, wall pack, surface, shoe box); for non-incandescent luminaires, indicate nominal lamp wattage and lamp type (i.e.: fluorescent, incandescent, HID); ballast type (i.e.: electronic or magnetic); number of lamps and number of ballasts per luminaire. For incandescent luminaires, the luminaire wattage listed in column D shall be the maximum rated wattage on a permanent factory-installed label on the luminaire, **NOT the wattage of the lamp (bulb) used, in accordance with Section 130(d) or e).**
2. If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

EXEMPT LUMINAIRES — Field Inspection ☐

Name or Symbol	Description of exempt luminaires in accordance with §147

MANDATORY CONTROLS — Field Inspection ☐

#	Description	Location	#	Description	Location

SPECIAL FEATURES INSPECTION CHECKLIST (See Page 2 of 4 of OLTG-1C)

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Field Inspector Notes or Discrepancies:

CERTIFICATE OF COMPLIANCE (Part 3 of 4) — OLTG-1C

Project Name: *El Segundo Life Guard Station* — Date: *8/10/2010*

A. OUTDOOR LIGHTING ZONE

OUTDOOR LIGHTING ZONE: ☐ OLZ 1 ☐ OLZ 2 ☑ OLZ 3 ☐ OLZ 4

Is the Outdoor Lighting Zone: ☑ Defaults in accordance with §10-114, or ☐ Amended by JHA

Complete the information below if the default Outdoor Lighting Zone has been amended by the local jurisdiction having authority (JHA):

☐ The site is a government designated park, recreational area, wildlife preserve, or portion thereof, and has been designated as LZ2 or LZ3, in accordance with Table 10-114-A, because the site is contained within such a zone.

☐ The local jurisdiction having authority has officially adopted a change to the State Default Lighting Zone and has notified the Energy Commission by providing the materials required in §10-114(d) to the Executive Director.

☐ The adopted change is posted on the Energy Commission website.

B. ADDITIONAL LIGHTING POWER ALLOWANCE FOR ORDINANCE REQUIREMENTS

Are additional lighting power allowances for ordinance in Table 147-C used? ☐ Yes ☑ No

Complete the information below if additional lighting power allowances for ordinance requirements are used.

☐ The local jurisdiction having authority has officially adopted specific outdoor light levels which are expressed as average or minimum footcandle levels, by following a public process that allowed for formal public notification, review, and comment about the proposed change.

☐ The local jurisdiction having authority which adopted specific outdoor light levels and has notified the Commission by providing the following materials required §10-114(d) to the Executive Director.

C. ACCEPTANCE FORMS

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for the Lighting system OLTG-2A. The designer is required to check the acceptance tests and list all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. If all the lighting system or control of a certain type requires a test, list the different lighting and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately. Forms can be grouped by type of Luminaire controlled.

Enforcement Agency:

Systems Acceptance. Before Occupancy Permit is granted for a newly constructed building or space or when ever new lighting system with controls is installed in the building or space shall be certified as meeting the Acceptance Requirements. The OLTG-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the OLTG-2A for each different lighting luminaire control(s) must be provided to the owner of the building for their records.

Certificate of Acceptance

Equipment Requiring Testing	Luminaires Controlled: Description	Qty of Like Controls	Location	OLTG-2A Outdoor Lighting Acceptance Tests

1. Insert: OMS for Outdoor Motion Sensor; OLSC for Outdoor Lighting Shutoff Controls. OP for Outdoor Photocontrol; ATS for Astronomical Time Switch; and, STS for Standard (non-astronomical) Time Switch acceptance.

CERTIFICATE OF COMPLIANCE (Part 4 of 4) — OLTG-1C

Project Name: *El Segundo Life Guard Station* — Date: *8/10/2010*

ALLOWED AND INSTALLED OUTDOOR LIGHTING POWER

		Lighting Wattage Power Allowance
A	Lighting power allowance for general hardscape (from OLTG-2C Page 1 of 3)	*804*
B	Specific application lighting wattage allowance per unit length (from OLTG-2C Page 1 of 3)	*0*
C	Specific application lighting wattage allowance for ornamental lighting (from OLTG-2C Page 1 of 3)	*0*
D	Specific application lighting wattage allowance per application (from OLTG-2C Page 2 of 3)	*0*
E	Specific application lighting wattage allowance per area (from OLTG-2C Page 2 of 3)	*0*
F	Specific application lighting wattage allowance for ordinance requirements (from OLTG-2C Page 3 of 3)	*0*
G	Total Allowed Wattage = Sum of rows A through F:	*804*
H	Total installed watts (from Compliance Fixture Schedule. (from OLTG-2C Page 1 of 3)	*396*
Complies if wattage in row H is less than or equal to the wattages in row G		☑ Yes ☐ No

OUTDOOR LIGHTING WORKSHEET (Part 1 of 3) — OLTG-2C

Project Name: *El Segundo Life Guard Station* — Date: *8/10/2010*

A. LIGHTING POWER ALLOWANCE FOR GENERAL HARDSCAPE

AREA WATTAGE ALLOWANCE (AWA)			LINEAR WATTAGE ALLOWANCE (LWA)				
A: Illuminated Hardscape Area	B: AWA Per Square Foot	C: AWA (A X B)	D: Perimeter Length of General Hardscape	E: LWA Per Linear Foot	F: LWA (D X E)	G: IWA (Watts)	H: TOTAL GENERAL HARDSCAPE LIGHTING ALLOWANCE (C + F + G)
370	*0.092*	*34*	*0*	*0.820*	*0*	*770*	*804*

Enter total into OLTG-1C Page 4 of 4, Row A: Lighting Power Allowance for General Hardscape: *804*

☑ Yes AWA, LWA, and IWA from Table 147-A was used as appropriate for the Outdoor Lighting Zone.

B. SPECIFIC APPLICATION LIGHTING WATTAGE ALLOWANCE PER UNIT LENGTH (Available only for sales frontage)

DETERMINE WATTAGE ALLOWANCE				LUMINAIRE TYPE		DESIGN WATTS			
A: Specific Lighting Application	B: Linear Foot of Frontage	C: Sales Frontage Allowance for OLZ (Watts per LF)	D: Wattage Allowance (B X C)	E: Name or Symbol	F: Luminaire Type	G: Lumin QTY	H: Watts Per Luminaire	I: Design Watts (G X H)	J: Allowed Watts Minimum of D or I

Enter total into OLTG-1C; Page 4 of 4; Row B: Specific Application Lighting Wattage Allowance Per Unit Length: *0*

C. SPECIFIC APPLICATION WATTAGE ALLOWANCE FOR ORNAMENTAL LIGHTING

DETERMINE WATTAGE ALLOWANCE				LUMINAIRE TYPE		DESIGN WATTS			
A: Specific Lighting Application	B: Square foot of Hardscape	C: Ornamental Lighting Allowance for OLZ (Watts per ft²)	D: Wattage Allowance (B X C)	E: Name or Symbol	F: Luminaire Type	G: Lumin QTY	H: Watts Per Luminaire	I: Design Watts (G X H)	J: Allowed Watts Minimum of D or I

Enter total into OLTG-1C; Page 4 of 4; Row C: Specific Application Wattage for Ornamental Lighting: *0*

JUL 21 2011

BID DOCUMENTS

PROJECT ADDRESS:
EL SEGUNDO, CA

TMAD TAYLOR & GAINES
• STRUCTURAL • MECHANICAL • ELECTRICAL • CIVIL
800 North Ferrari Lane, Suite 100
Ontario, California 91764
Phone: 909.477.6915 Fax: 909.477.6916
www.tmadte.com Project No. 2010.030.00

REGISTERED PROFESSIONAL ENGINEER — NESTOR C. IGNACIO — Lic. E16934 — Exp. 6-30-2011 — ELECTRICAL — STATE OF CALIFORNIA

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A California Corporation (Victor Montgomery, Architect #C31082; Jerry McGraw, PE #30852, LS #8218) and Taylor Lin #2544

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
TITLE 24 CALCULATIONS

PM ___ DATE ___
DRAWN SM DATE ___
CHECK NI DATE ___

APPROVED DATE ___
CITY ENGINEER R.E. ___

E-0.4
05/04/2010
SHEET ___ OF ___
JOB NO. 1109531

3/30/2010 5:24:27 PM
J:\2010\1109531 - El Segundo Lifeguard\Revit\Documents\1109531-MEP-model_Revit.rvt

MOUNTING: SURFACE — PANEL-LG — LOCATION: UTILITY ROOM 109

VOLTAGE: 120/208V,3P,4W — 10,000 AIC SYM — 225 AMP BUS — 225A-3P MCB

NOTE	DESCRIPTION	VOLT-AMPERES A	B	C	LITE	RECP	MISC	POLE	BKR	CIRC	CIRC	BKR	POLE	MISC	RECP	LITE	VOLT-AMPERES A	B	C	DESCRIPTION	NOTE
	RM 101 & 102	1077						1	20	1	2	20	1		6		1080			RECEP RM 109,04,03,01	
	RM 109,108,107,106,105,103,102		832					1	20	3	4	20	1		5			900		RECEP RM 109,04,02,01	
	EXTERIOR LIGHTS			273				1	20	5	6	20	1		6				1080	RECEP RM 104,01	
	LIGHTING CONTROL PNL	500				1	1	20	7	8		20	1							SPARE	
1	FACP		500				1	1	20	9	10	20	1							SPARE	
	FUTURE VAULT EXH FAN			1176				1	20	11	12	20	1							SPARE	
	FUTURE VAULT LIGHT	150						1	20	13	14	20	1		3		540			RECEP RM 201,202	
	FUTURE VAULT SUMP PUMP		1176					1	20	15	16	20	1		3			540		RECEP ROM 201,202	
	FUTURE VAULT FLOW METER			100				1	20	17	18	20	1		1				1000	GENERAL APPLICANCE	
	FUTURE VAULT OUTLET	500						1	20	19	20	20	1		1					SPARE	
	FUTURE PUMP STA OUTLET		500					1	20	21	22	20	1		1			1000		GENERAL APPLICANCE	
	FUTURE PUMP STA CONTROL PANEL			100				1	20	23	24	20	1		1				1000	GENERAL APPLICANCE	
	FUTURE PUMP STA POWER MONITOR	100						1	20	25	26	20	1		1		1000			GENERAL APPLICANCE	
	SPARE							1	20	27	28	20	1							SPARE	
	SPARE							1	20	29	30	20	1							SPARE	
	SPACE									31	32	20	1							SPARE	
	SPACE									33	34	20	1							SPARE	
	SPACE									35	36	20	1							SPARE	
	SPACE									37	38									SPACE	
	SPACE									39	40									SPACE	
	SPACE									41	42									SPACE	
	SUBTOTAL	2327	3008	1649													2620	2440	3080	SUBTOTAL	
																	4947	5448	4729	VA PER PHASE	
																		15.1 KVA		TOTAL CONNECTED LOAD	

CONTINUOUS LOAD, 2182 VA X 1.25 = 2728 VA
+ OTHER LOAD = 12942 VA
TOTAL LOAD = 15670 VA
OR = 44 AMPS

28 CONVENIENCE OUTLETS
2 MISCELLANEOUS OUTLETS

NOTES

1. PROVIDE LOCK-ON DEVICE
2.
3.
4.

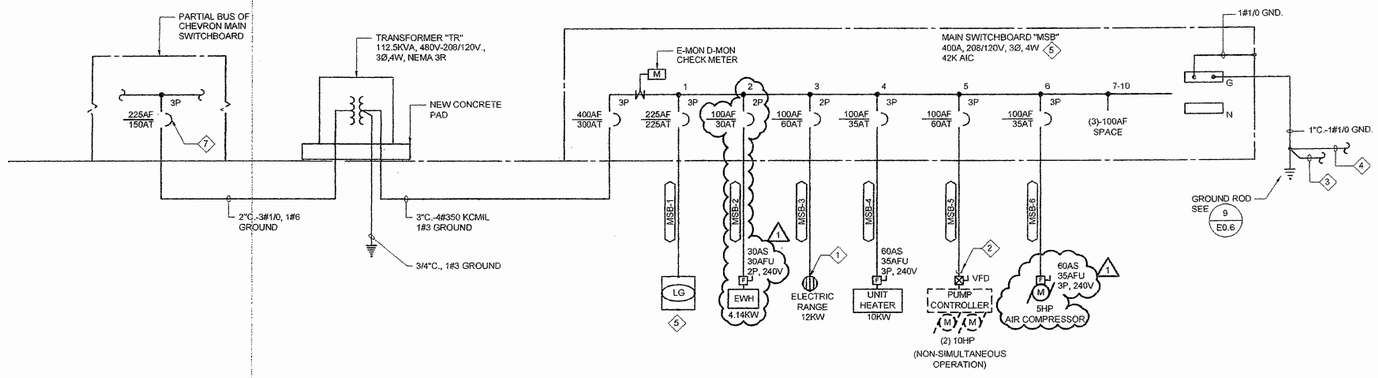
MS - LOAD SUMMARY & FEEDER SCHEDULE — LOCATION: ELECTRICAL ROOM

ENCLOSURE: NEMA-3R — LIFE SAFETY BRANCH — 400 AMP BUS

VOLTAGE: 120/208V,3P,4W — 42,000 AIC SYM, MINIMUM — 300 AMP MAIN CB

FEEDER NUMBER	FEEDER FROM	FEEDER TO	NO. OF SETS	CONDUIT (INCHES)	CONDUCTORS (AWG)	GROUND (AWG)	CONNECTED LOAD AMPS	CONNECTED LOAD KVA	FEEDER LENGTH*	VOLTAGE DROP	REMARKS
MSB-1	MSB	LG	1	2 1/2"	4 #4/0	4	41.95	15.12		0.00%	
MSB-2	MSB	EWH	1	3/4"	2 # 10	10	19.90	4.14	1		
MSB-3	MSB	ELEC. RANGE	1	1 1/4"	3 # 4	8	33.31	12.00			
MSB-4	MSB	UNIT HTR	1	1"	2 # 8	10	27.76	10.00			
MSB-5	MSB	PUT. PUMP CONT.	1	2"			30.81	11.10			FUTURE
MSB-6	MSB	AIR COMP.	1	1"	3 # 8	10	16.65	6.00			
								58.36	SUBTOTAL		
								8.40	25% OF LARGEST MOTOR		
							185.32	66.76	TOTAL LOAD		

* FEEDER LENGTH IN FEET ARE INDICATED FOR VOLTAGE DROP CALCULATION ONLY AND SHALL NOT BE USED FOR QUANTITY TAKEOFFS.



KEY NOTES

1. ELECTRICAL RANGE OUTLET PROVIDE/INSTALL MATCHING CORD AND PLUG.
2. CONDUIT STUB-OUT FOR FUTURE EQUIPMENT CONNECTION
3. INSTALL 1 INCH CONDUIT WITH #1/0 GROUNDING ELECTRODE CONDUCTOR TO UFER GROUND SYSTEM CABLE. UFER GROUND SYSTEM SHALL BE 40 FEET OF #1/0 BARE COPPER GROUND WITH 3/4 INCH ROUND BY 10 FEET SOLID COPPER GROUND ROD AT EACH END OF 1/0 BARE COPPER CABLE.
4. INSTALL 1 INCH CONDUIT - ONE #1/0 TO ACCESSIBLE COLD WATER LINES & BUILDING STEEL FRAME. CONNECT TO WATER MAIN AT BACKFLOW PREVENTER AT SERVICE ENTRY. REFER TO PLUMBING DRAWINGS FOR LOCATIONS. CONNECT USING APPROVED GROUNDING CLAMPS.
5. FURNISH GROUND BUS IN EACH BRANCH CIRCUIT PANEL. ALL PANELS 208/120 VOLT, SHALL HAVE THE FEEDER EQUIPMENT GROUNDING CONDUCTOR AND BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR CONNECTED TO GROUND BUS. FURNISH EQUIPMENT GROUNDING CONDUCTOR IN EVERY FEEDER AND BRANCH CIRCUIT, RUN TO LAST OUTLET AND CONNECT TO BUS. CONDUIT GROUND IS NOT ACCEPTABLE AS A SUBSTITUTE, TYPICAL ALL PANELS AND SWITCHBOARDS.
6. INSTALL FEEDER CONDUIT EQUIPMENT GROUNDING CONDUCTOR, BRANCH FEEDER EQUIPMENT GROUNDING CONDUCTORS, AND PANEL FRAME GROUND STRAP TO FULL LENGTH COPPER GROUND BUS. DO NOT JUMPER NEUTRAL AND GROUND BUSES IN PANELS. TYPICAL FOR ALL DISTRIBUTION PANELS AND MOTOR CONTROLLER
7. PROVIDE/INSTALL NEW CIRCUIT BREAKER IN CHEVRON MAIN SWITCHBOARD. NEW CIRCUIT BREAKER SHALL BE COMPATIBLE WITH THE CHEVRON'S MAIN SWITCHBOARD.

JUL 21 2011

BID DOCUMENTS

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PROJECT ADDRESS:
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REGISTERED PROFESSIONAL ENGINEER — HECTOR C. IGNACIO JR. — Lic. E16934 Exp. 6-30-2011 — ELECTRICAL

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NO.	DATE	BY
1	10/06/2010	MD

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
SINGLE LINE DIAGRAM

PM — DRAWN SM DATE — CHECK NI DATE — APPROVED DATE — CITY ENGINEER R.E.

E-0.5
10/06/2010
SHEET OF
JOB NO. 1109531

FILE NO.

PANEL-LG

MOUNTING: SURFACE — LOCATION: UTILITY ROOM 109

VOLTAGE: 120/208V,3P,4W — 10,000 AIC SYM — 225 AMP BUS — 225A-3P MCB

NOTE	DESCRIPTION	VOLT-AMPERES A	B	C	LITE	RECP	MISC	POLE	BKR	CKT	CKT BKR	POLE	MISC	RECP	LITE	VOLT-AMPERES A	B	C	DESCRIPTION	NOTE
	RM 101 & 102	1077						1	20	1, 2	20	1			6	1080			RECEP RM 109,04,03,01	
	RM 109,108,107,106,105,103,102		632					1	20	3, 4	20	1			5		900		RECEP RM 109,04,02,01	
	EXTERIOR LIGHTS			273				1	20	5, 6	20	1			6			1080	RECEP RM 104,01	
	LIGHTING CONTROL PNL	500					1	1	20	7, 8	20	1							SPARE	
1	FACP		500				1	1	20	9, 10	20	1							SPARE	
	FUTURE VAULT EXH FAN			1176				1	20	11, 12	20	1							SPARE	
	FUTURE VAULT LIGHT	150						1	20	13, 14	20	1			3	540			RECEP RM 201,202	
	FUTURE VAULT SUMP PUMP		1176					1	20	15, 16	20	1			3		540		RECEP ROM 201,202	
	FUTURE VAULT FLOW METER			100				1	20	17, 18	20	1			1			1000	GENERAL APPLICANCE	
	FUTURE VAULT OUTLET	500						1	20	19, 20	20	1			1				SPARE	
	FUTURE PUMP STA OUTLET		500					1	20	21, 22	20	1			1		1000		GENERAL APPLICANCE	
	FUTURE PUMP STA CONTROL PANEL			100				1	20	23, 24	20	1			1			1000	GENERAL APPLICANCE	
	FUTURE PUMP STA POWER MONITOR	100						1	20	25, 26	20	1			1	1000			GENERAL APPLICANCE	
	SPARE							1	20	27, 28	20	1							SPARE	
	SPARE							1	20	29, 30	20	1							SPARE	
	SPACE									31, 32	20	1							SPARE	
	SPACE									33, 34	20	1							SPARE	
	SPACE									35, 36	20	1							SPARE	
	SPACE									37, 38									SPACE	
	SPACE									39, 40									SPACE	
	SPACE									41, 42									SPACE	
	SUBTOTAL	2327	3008	1649												2620	2440	3080	SUBTOTAL	
																4947	5448	4729	VA PER PHASE	
																	15.1	KVA	TOTAL CONNECTED LOAD	

CONTINUOUS LOAD, 2162 VA X 1.25 = 2728 VA
+ OTHER LOAD = 12942 VA
TOTAL LOAD = 15670 VA
OR = 44 AMPS

28 CONVENIENCE OUTLETS
2 MISCELLANEOUS OUTLETS

NOTES
1. PROVIDE LOCK-ON DEVICE
2.
3.
4.

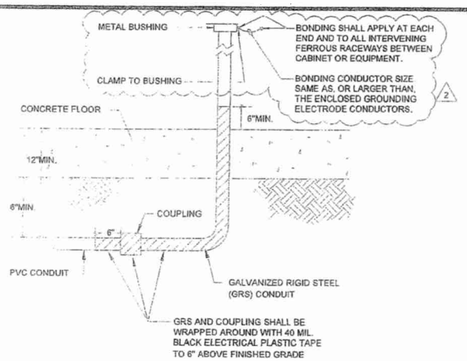
MS - LOAD SUMMARY & FEEDER SCHEDULE

LOCATION: ELECTRICAL ROOM

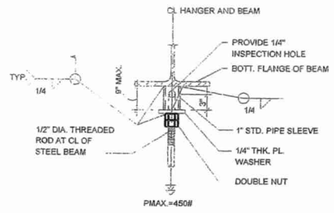
ENCLOSURE: NEMA-3R — LIFE SAFETY BRANCH — 400 AMP BUS

VOLTAGE: 120/208V,3P,4W — 42,000 AIC SYM, MINIMUM — 300 AMP MAIN CB

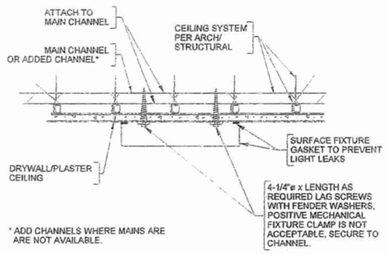
FEEDER NUMBER	FROM	TO	NO. OF SETS	CONDUIT (INCHES)	CONDUCTORS (AWG)	GROUND (AWG)	CONNECTED LOAD AMPS	KVA	FEEDER LENGTH*	VOLTAGE DROP	REMARKS
MSB-1	MSB	LG	1	2 1/2"	4 # 4/0	4	41.98	15.12		0.00%	
MSB-2	MSB	EWH	1	3/4"	2 # 10	10	19.90	4.14			
MSB-3	MSB	ELEC. RANGE	1	1 1/4"	3 # 4	8	33.31	12.00			
MSB-4	MSB	UNIT HTR	1	1"	2 # 8	10	27.76	10.00			
MSB-5	MSB	FUT. PUMP CONT.	1	2"	C.O.	-	30.81	11.10			FUTURE
MSB-6	MSB	AIR COMP.	1	1"	3 # 8	10	16.65	6.00			



CONDUIT INSTALLED BELOW CONCRETE INSIDE BUILDING DETAIL | NTS - | 7

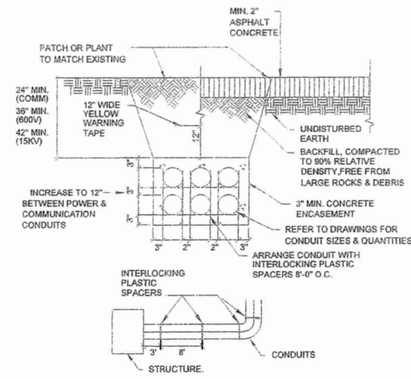


HANGER ATTACHMENT DETAIL | NTS - | 8

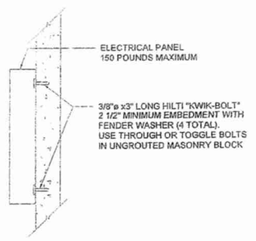


NOTE:
REFER TO GENERAL NOTE #36 SHEET E0.1.
* COORDINATE ALL CEILING LOCATIONS WITH CEILING CONTRACTOR & REFLECTED CEILING PLAN.

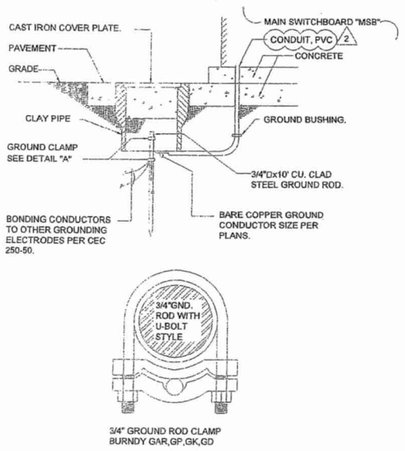
SURFACE MOUNTED LIGHT FIXTURE DETAIL | NTS - | 5



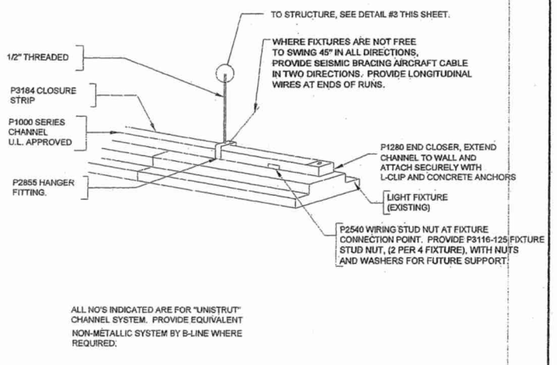
UNDERGROUND MULTI-CONDUIT PLAEMENT DETAIL | NTS | 3



SURFACE MOUNTED PANEL DETAIL | NTS | 1

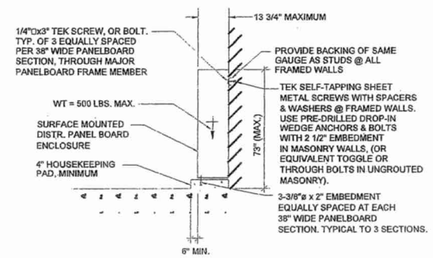


GROUND ROD DETAIL | NTS - | 9

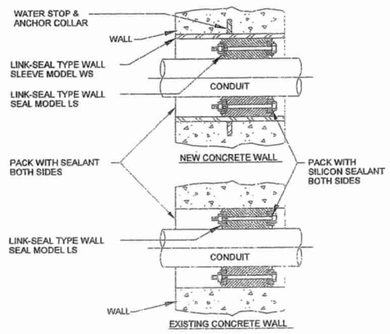


ALL NO'S INDICATED ARE FOR "UNISTRUT" CHANNEL SYSTEM. PROVIDE EQUIVALENT NON-METALLIC SYSTEM BY B-LINE WHERE REQUIRED.

PENDANT MTD. IND. FLUOR. SUPPORT DET. | NTS - | 6



SWITCHBOARD ANCHORAGE DETAIL | NTS | 4



CONDUIT PENETRATION THRU CONCRETE WALL DETAIL | NTS | 2

JUL 21 2011

BID DOCUMENTS

ADDENDUM NO. 2
OCTOBER 22, 2010

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A Delaware Corporation | Mike Montgomery, Architect #21564 | Jerry Mabee, PE #23392, LS #8282 | Jeff Ferber, LA #2561

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NO.	DATE	BY
2	10/22/2010	RA

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
EL SEGUNDO LS
DETAILS

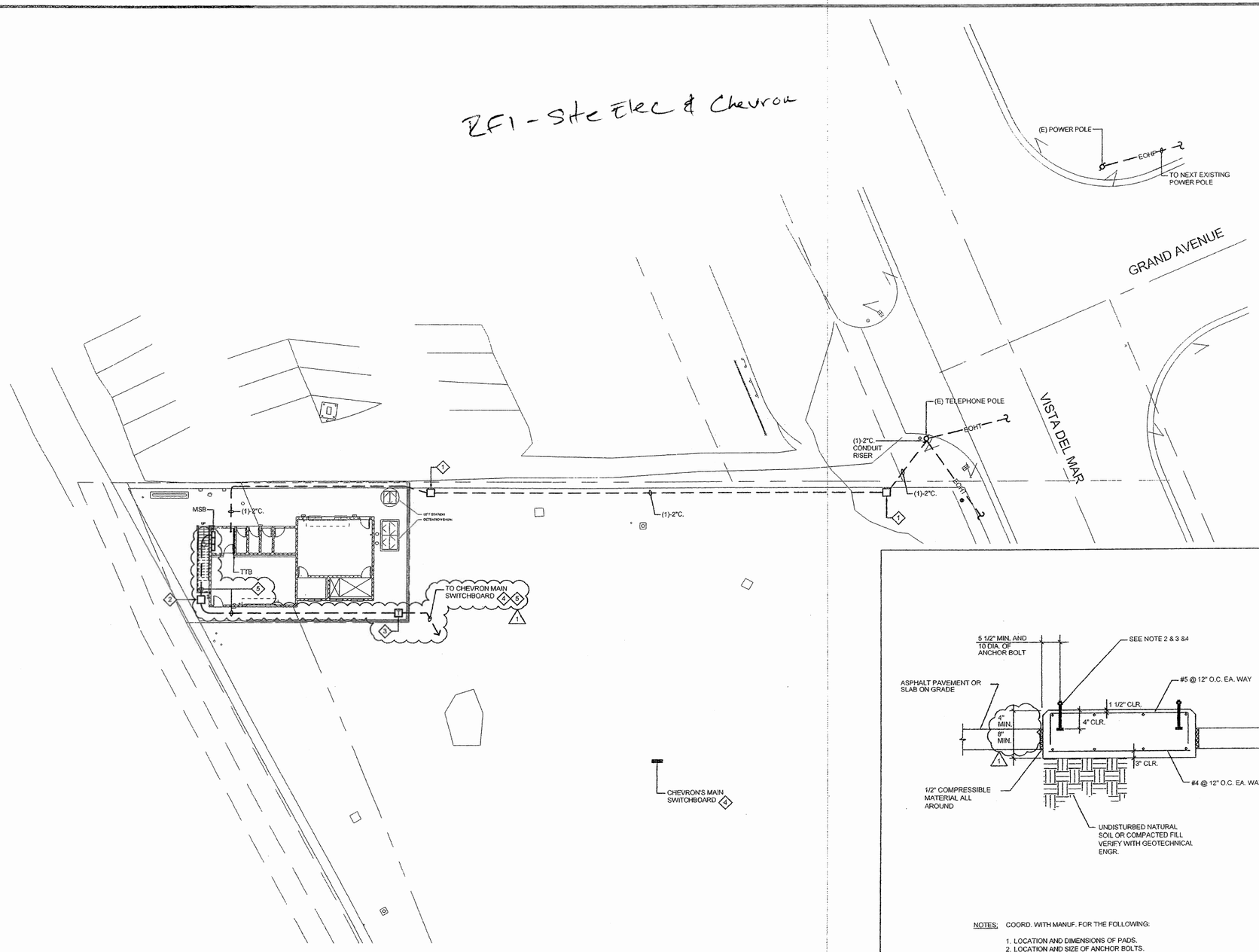
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RF1 - Site Elec & Chevron



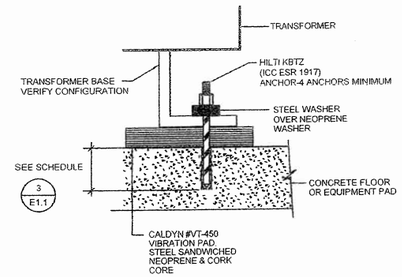
1 POWER SITE PLAN

A-1.1 1/16" = 1'-0"

KEY NOTES

1. PROVIDE/INSTALL 2'x3'x3' CONCRETE PULLBOX FOR TELEPHONE SERVICE. COORDINATE WITH TELEPHONE COMPANY, SEE 2/E1.1.
2. PROVIDE/INSTALL 2.5'x3'x5' UNDERGROUND CONCRETE PULLBOX FOR POWER. SEE 2/E1.1.
3. REMOVE EXISTING UNUSED TRANSFORMER. PROVIDE NEW TRANSFORMER ON CONCRETE PAD, SEE 1/E1.1
4. CONNECT TO CHEVRON'S MAIN SWITCHBOARD. VERIFY EXACT LOCATION OF MAIN SWITCHBOARD IN THE FIELD.
5. SEE SINGLE LINE DIAGRAM ON E-0.5 FOR CONDUIT & WIRE SIZES

JUL 21 2011

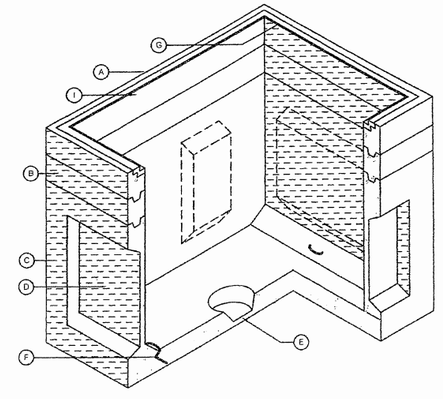


TRANSFORMER MOUNTING DETAIL | NTS | 1

NOTES: COORD. WITH MANUF. FOR THE FOLLOWING:

1. LOCATION AND DIMENSIONS OF PADS.
2. LOCATION AND SIZE OF ANCHOR BOLTS.
3. DETAILS OF SUPPORTS, ISOLATORS OR OTHERS.
4. LOCATION OF RAIL FOOTPRINT AND ANCHORAGE.

CONCRETE EQUIPMENT PAD | NTS | 3



- (A) - TOP SECTION
- (B) - EXTENSION SECTION
- (C) - BOTTOM SECTION
- (D) - KNOCKOUT
- (E) - SUMP
- (F) - PULL IRONS
- (G) - ARMOR FRAME
- (I) - TRAFFIC RATED STEEL COVER
- (J) 3/4"Ø x 10'-0" COPPER CLAD GROUND ROD, GROUND ALL EXPOSED METAL PARTS WITH BARE COPPER #6 MINIMUM.

o ASSEMBLY TO BE PLACED ON 12" BASE COMPACTED ROCK TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURE ON FLOOR

UNDERGROUND CONCRETE PULLBOX | NTS | 2

BID DOCUMENTS

PROJECT ADDRESS:
EL SEGUNDO, CA

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NO.	DATE	BY
1	10/06/2010	MD

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

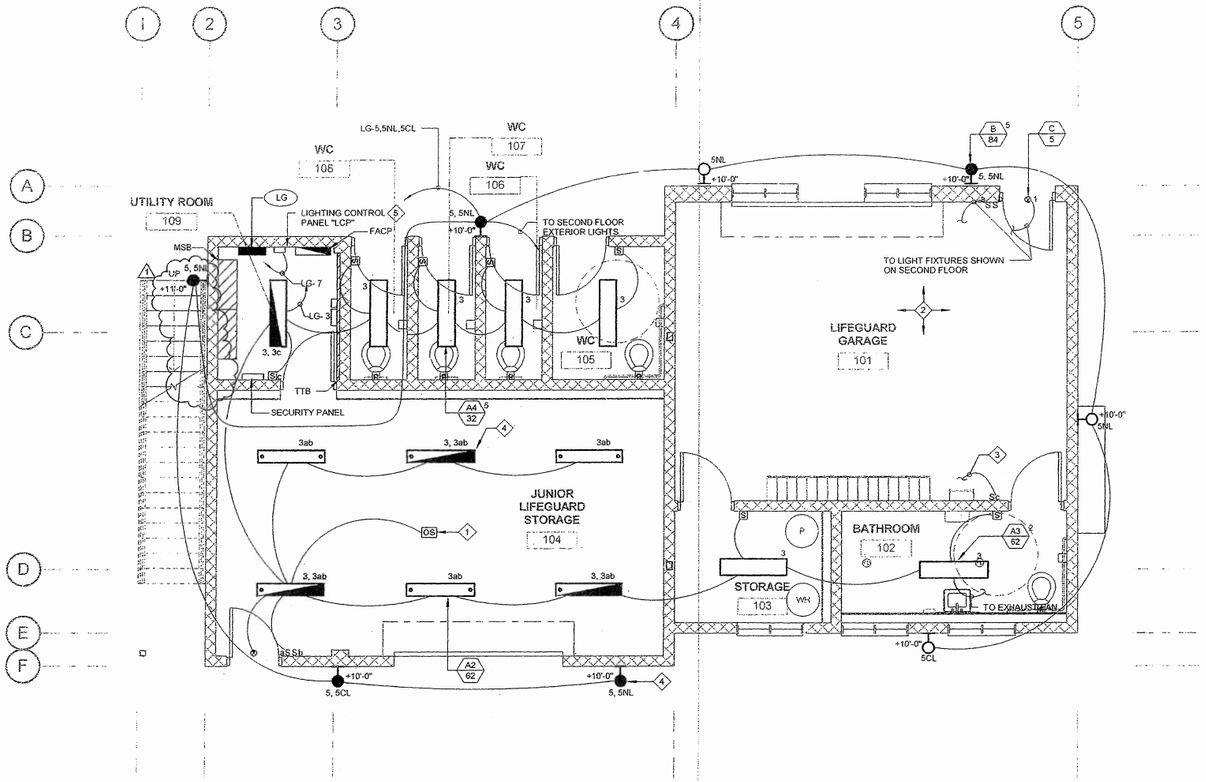
EL SEGUNDO LS
ELECTRICAL SITE PLAN

PM
DRAWN SM DATE
CHECK NI DATE
APPROVED DATE
CITY ENGINEER R.E.

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SHEET OF
JOB NO. 1109531

FILE NO.

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KEY NOTES

1. MOUNT ON BOTTOM OF STRUCTURAL BEAM.
2. LIGHTING FIXTURES FOR THIS AREA ARE SHOWN ON SECOND FLOOR, SEE E2.2.
3. UP TO MEZZANINE LIGHT FIXTURES.
4. PROVIDE 90 MINUTE EMERGENCY BATTERY PACK AT ALL SHADED LIGHT FIXTURES, TYPICAL.
5. LIGHTING CONTROL PANEL "LCP" SHALL BE LUTRON "XPS4-12FT"

"LCP" NOTES:

1. OPERATION SHALL BE AS FOLLOWS:
   NIGHT LIGHT (NL) = ON BY PHOTOCELL, OFF BY PHOTOCELL
   CURFUEW LIGHT (CL) = ON BY PHOTOCELL, OFF BY TIME SWITCH, (OBTAIN SETTING FROM OWNER)
2. VERIFY MANUFACTURER WIRING REQUIREMENT FOR LUTRON "XPS4-12FT".

JUL 21 2011

BID DOCUMENTS

1 GROUND FLOOR LIGHTING PLAN
E-2.1 1/4" = 1'-0"

10/5/2010 3:44:43 PM
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PROJECT ADDRESS:
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• STRUCTURAL
• MECHANICAL
• ELECTRICAL
• CIVIL
800 North Ferrari Lane, Suite 100
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www.tmadtg.com Project No. 2010.030.00

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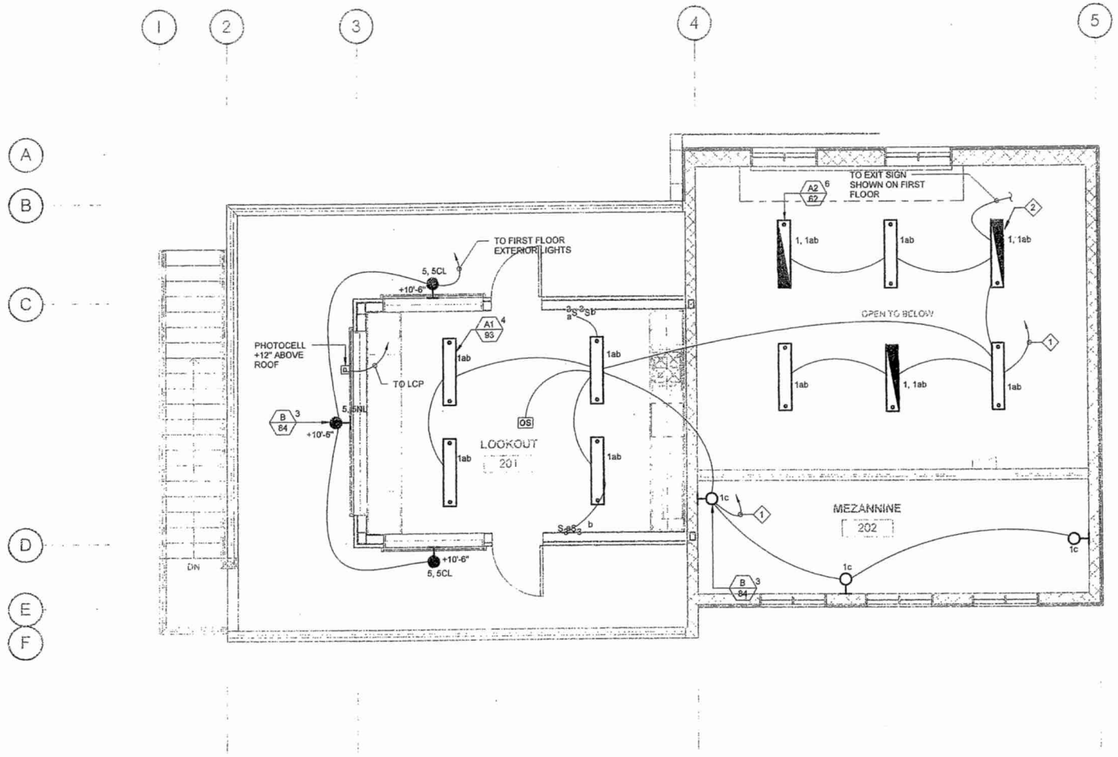
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
GROUND FLOOR LIGHTING PLAN

E-2.1
10/06/2010

PM DRAWN SM DATE CHECK NI DATE
APPROVED DATE
CITY ENGINEER R.E.
SHEET OF
JOB NO. 1109531

FILE NO.



"LCP" NOTES:

1 OPERATION SHALL BE AS FOLLOWS:
NIGHT LIGHT (NL) = ON BY PHOTOCELL, OFF BY PHOTOCELL
CURFUEW LIGHT (CL) = ON BY PHOTOCELL, OFF BY TIME SWITCH,
(OBTAIN SETTING FROM OWNER)

2. VERIFY MANUFACTURER WIRING REQUIREMENT FOR LUTRON "XPS4-12FT".

KEY NOTES

1 TO LIGHT SWITCH SHOWN ON FIRST FLOOR, SEE SHEET E2.1.

2 PROVIDE 90 MINUTE EMERGENCY BATTERY PACK AT ALL SHADED LIGHT FIXTURES, TYPICAL.

JUL 21 2011

BID DOCUMENTS

1 SECOND FLOOR LIGHTING PLAN
E-2.2 1/4" = 1'-0"

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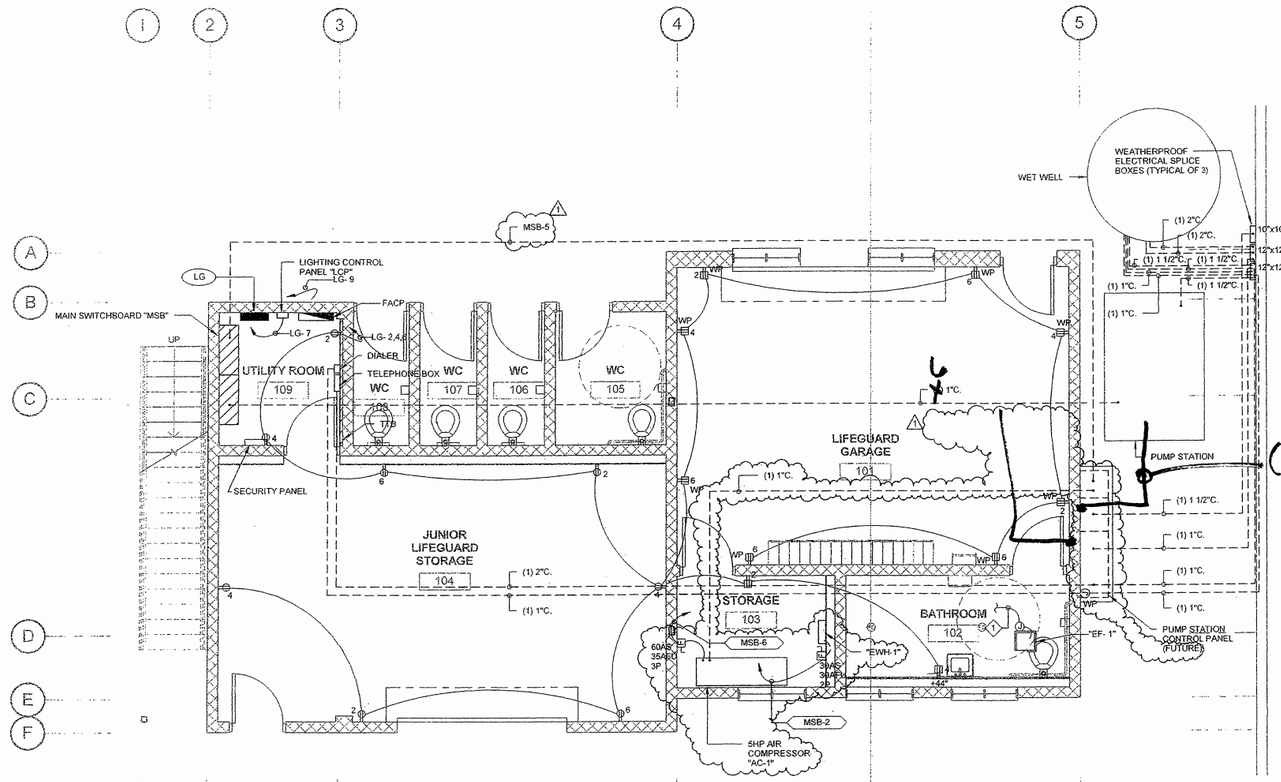
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CALIFORNIA ENGINNERING DIVISION
EL SEGUNDO LS
SECOND FLOOR LIGHTING PLAN

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CHECK NI DATE
APPROVED DATE
CITY ENGINEER R.E.

E-2.2
05/04/2010
SHEET OF
JOB NO. 1109531
FILE NO.



KEY NOTES

1 INTERCONNECT WITH LIGHT SWITCH SEE SHEET E2.1

JUL 21 2011

BID DOCUMENTS

1 GROUND FLOOR POWER PLAN
E-3.1 1/4" = 1'-0"

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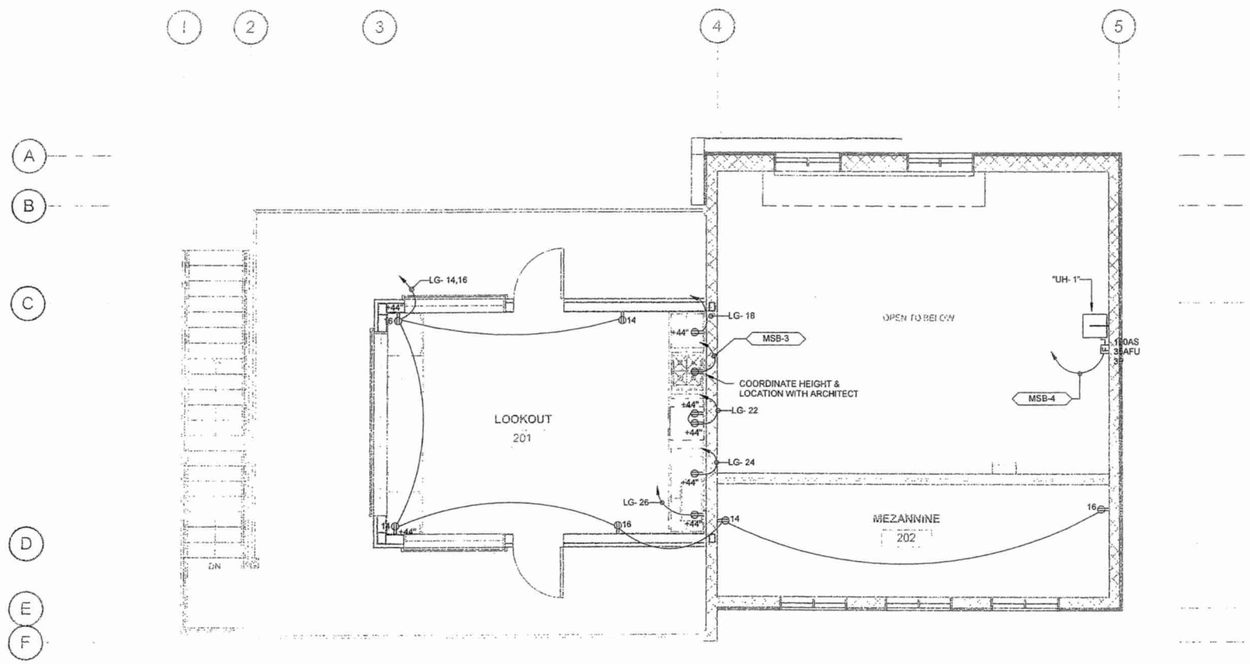
EL SEGUNDO LS
GROUND FLOOR POWER PLAN

PM DATE
DRAWN SM DATE
CHECK MI DATE

APPROVED DATE
CITY ENGINEER R.E.

E-3.1
10/06/2010
SHEET OF
JOB NO. 1109531

FILE NO.



1 SECOND FLOOR POWER PLAN
E-3.2 1/4" = 1'-0"

KEY NOTES

JUL 21 2011

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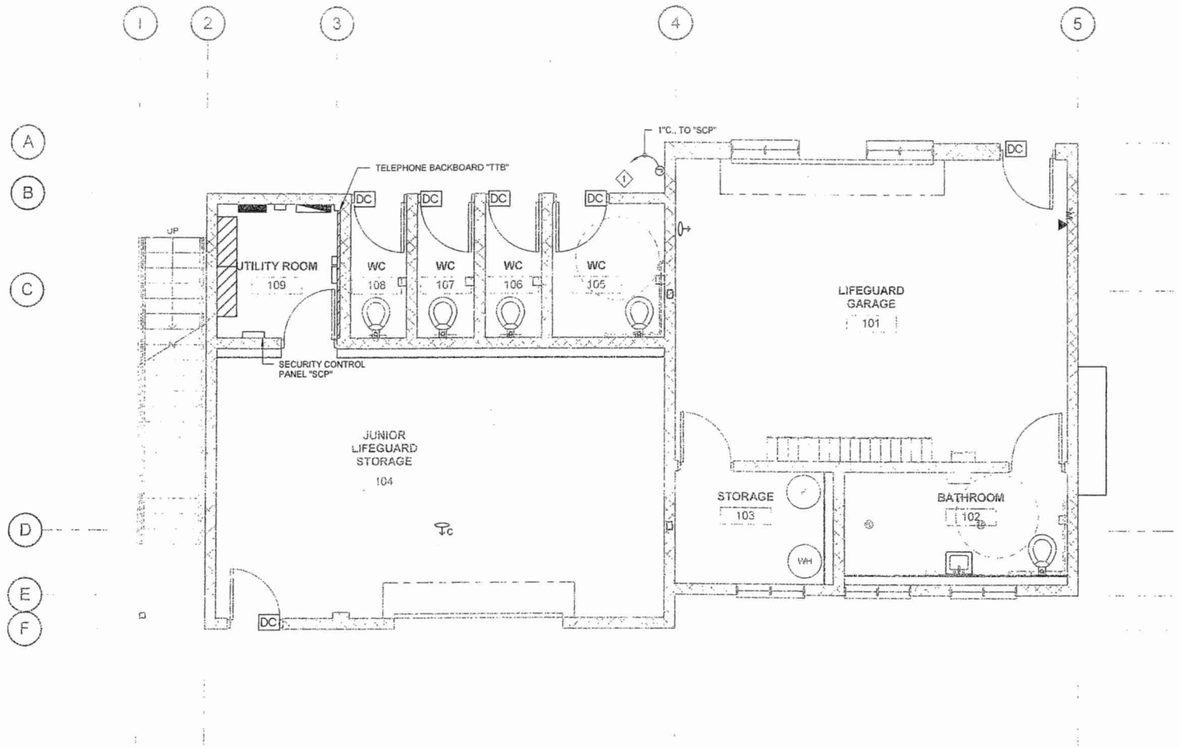
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EL SEGUNDO LS
SECOND FLOOR POWER PLAN

PM ___ DATE ___
DRAWN SM DATE ___
CHECK NI DATE ___

APPROVED DATE ___
CITY ENGINEER R.E. ___

E-3.2
05/04/2010
SHEET ___ OF ___
JOB NO. 1109531

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1 GROUND FLOOR SIGNAL PLAN
E-4.1 1/4" = 1'-0"

KEY NOTES

1 JUNCTION BOX FOR SURVELLANCE CAMERA. VERIFY EXACT LOCATION AND HEIGHT WITH THE OWNER/ARCHITECT. SURVELLANCE CAMERA AND CABLES SHALL BE PROVIDED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR.

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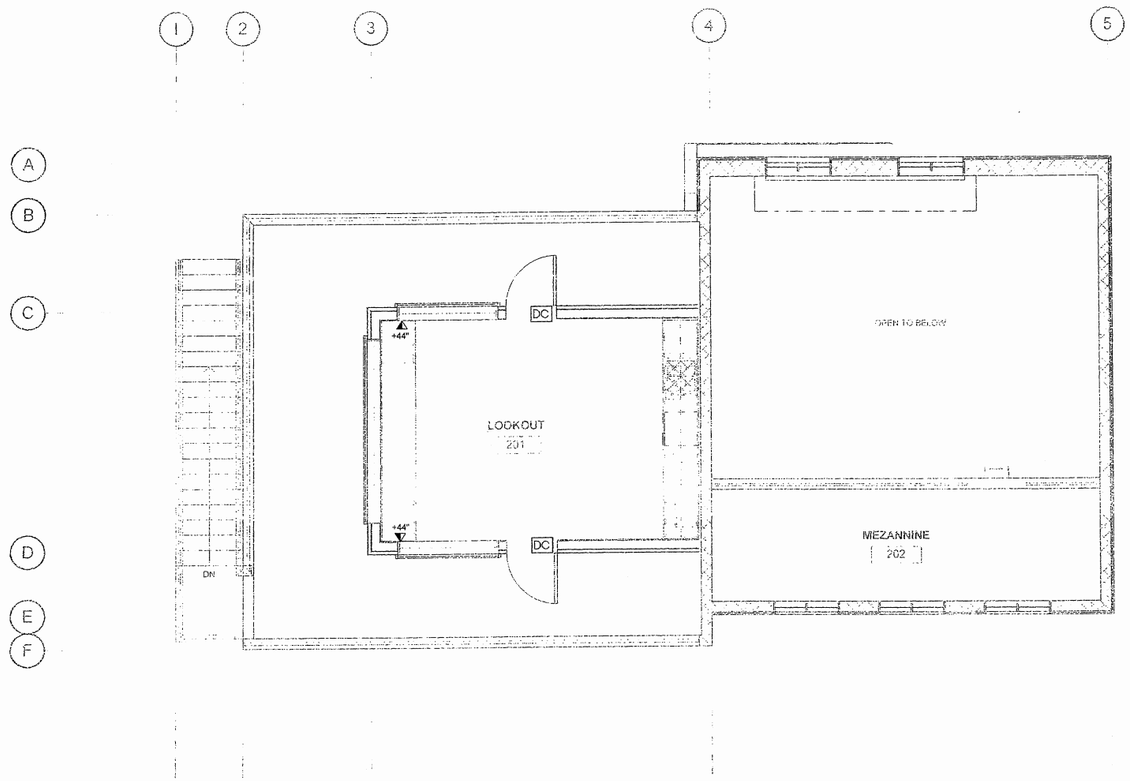
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EL SEGUNDO LS
GROUND FLOOR SIGNAL PLAN

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E-4.1
05/04/2010
SHEET OF
JOB NO. 1109531

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1 SECOND FLOOR SIGNAL PLAN
E-4.2 1/4" = 1'-0"

KEY NOTES ◈

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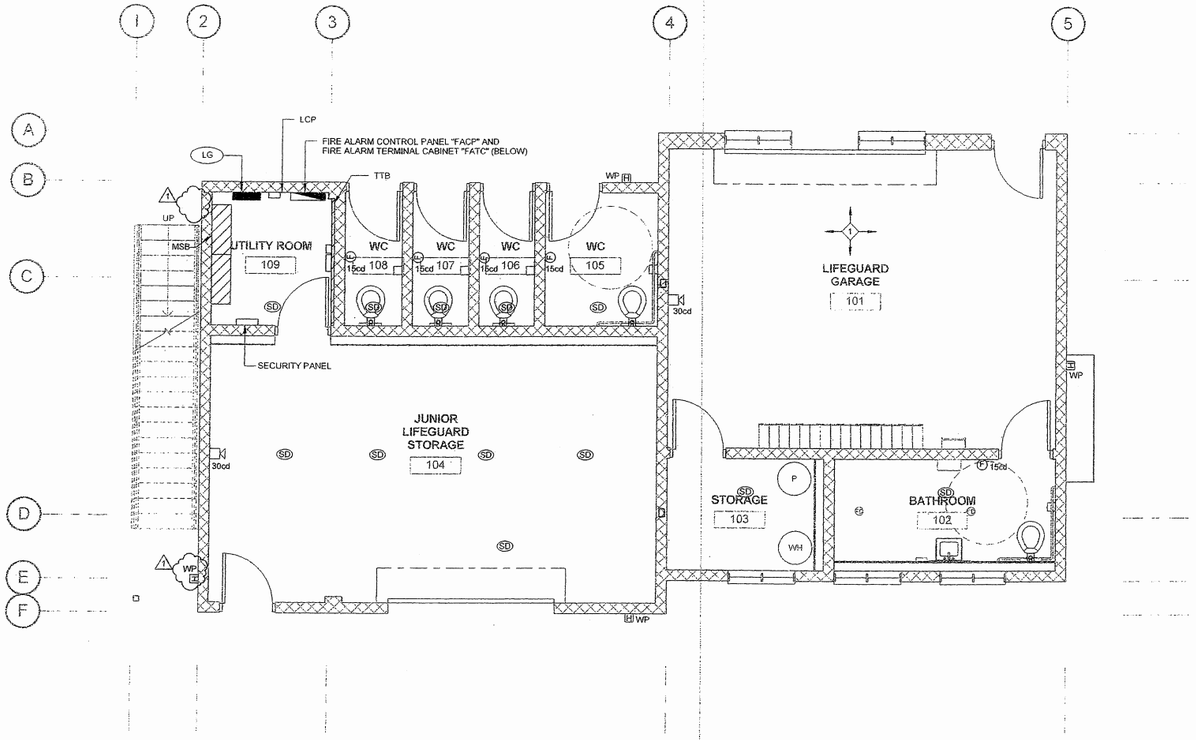
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CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
SECOND FLOOR SIGNAL PLAN

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DRAWN SM DATE
CHECK NI DATE
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CITY ENGINEER R.E.

E-4.2
05/04/2010
SHEET OF
JOB NO. 1109531

FILE



1 GROUND FLOOR FIRE ALARM PLAN
E-5.1 1/4" = 1'-0"

KEY NOTES

1 SMOKE DETECTORS IN THIS ROOM ARE SHOWN ON SECOND FLOOR, SEE E5.2

JUL 21 2011

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PROJECT ADDRESS:
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CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
GROUND FLOOR FIRE ALARM PLAN

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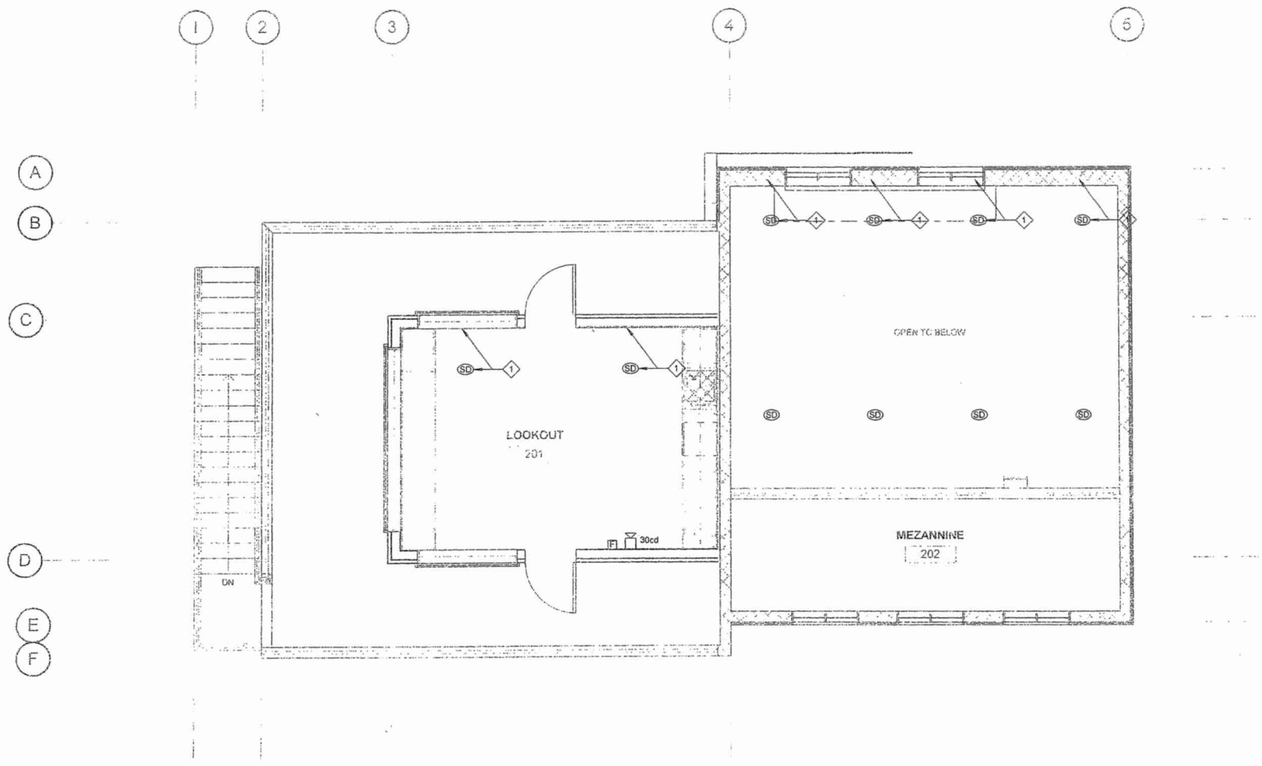
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FILE NO. ____

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KEY NOTES

1 SMOKE DETECTOR TO BE MOUNTED WITHIN 3 FEET OF WALL.



1 SECOND FLOOR FIRE ALARM PLAN
E-5.2 1/4" = 1'-0"

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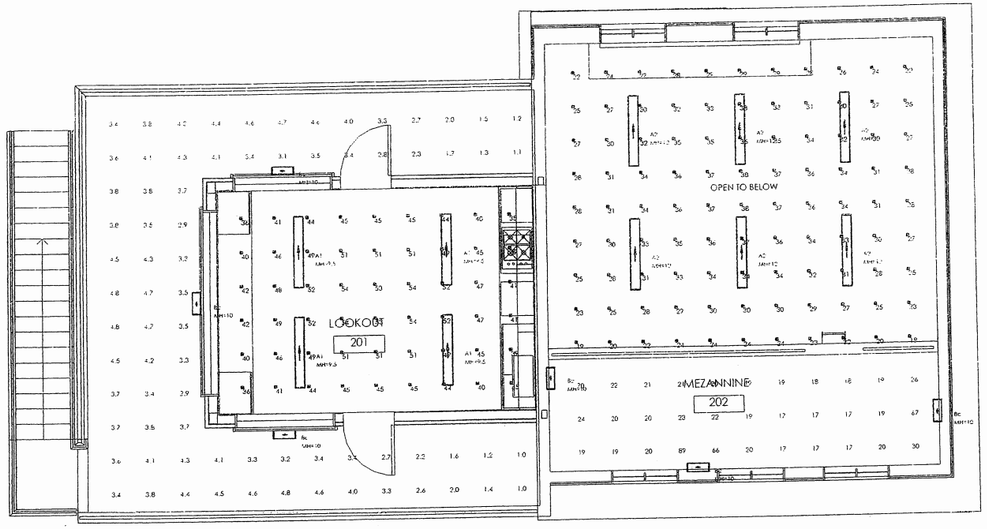
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EL SEGUNDO LS
SECOND FLOOR FIRE ALARM PLAN

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JOB NO. 1109531
NO.

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Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Lumens	Description	LLD	BF	LLF
	4	A1	SINGLE	4375	MOBILE // VLP1-S-4-3-2D-EB-MWV-F1-1/2-P44_pasted to 3 lamps	1	0.88	0.748
	9	A2	SINGLE	2650	MOBILE // VLP1-S-4-2-2D-EB-MWV-F1-1/2-P44	1	0.88	0.748
	6	Bc	SINGLE	3200	MOBILE // A-RS-W-240-NF-E-B-120-E-D-E	1	1	0.900

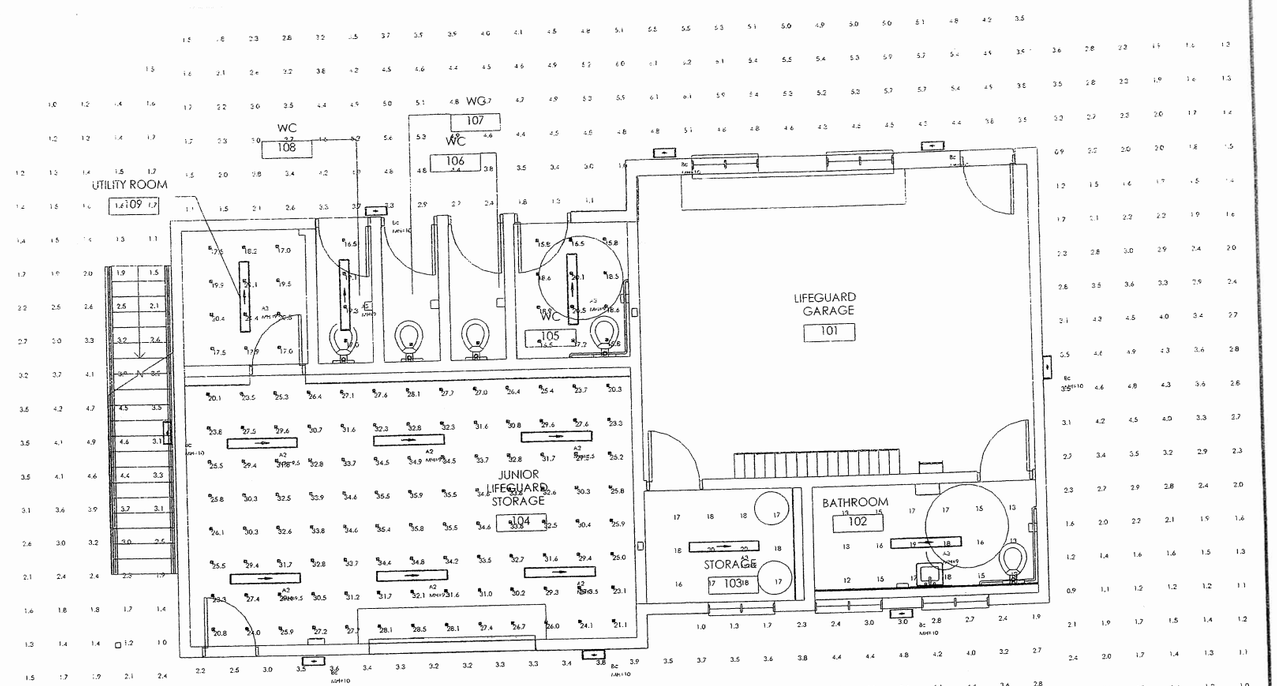
Numeric Summary							
Label	Calctype	Units	Avg	Max	Min	Avg/Min	Max/Min
Control_Floor	Illuminance	Fc	45.81	54	35	1.31	1.54
Lifeguard Garage 101_Floor	Illuminance	Fc	29.69	38	18	1.65	2.11
Mezzanine 202_Floor	Illuminance	Fc	36.42	89	17	1.85	5.24
Hallway_Floor	Illuminance	Fc	3.40	4.9	1.0	3.40	4.90

Jobname:
Report no.: Control Chan
Attn:
Report by: Erma Legaspi / Application Engineer
713-477-1687 elegaspi@spmlocal.com
PHILIPS REAL Lighting Products
www.gpsocal.com
Mounting Ht.: See Drawing
Reference: 8/5/2010
Filename: El Segundo Lifeguard Station_2nd Fl_8.5.dd3
Date: 8/5/2010

-----Disclaimer-----
Luminaire data is obtained according to IES procedures under controlled laboratory conditions. Field results may differ from computer predictions due to many uncontrollable factors such as:
Line Voltage Variations, Lamp Performance, and Jobsite Conditions.

2 LIGHTING CALCULATIONS - SECOND FLOOR

E-6.1 1/4" = 1'-0"



Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Lumens	Description	LLD	BF	LLF
	6	A1	SINGLE	2850	MOBILE // VLP1-S-4-2-2D-EB-MWV-F1-1/2-P44	1	0.88	0.748
	5	A3	SINGLE	2850	MOBILE // VLP1-S-4-2-2D-EB-MWV-F1-1/2	1	0.88	0.748
	6	Bc	SINGLE	3200	MOBILE // A-RS-W-240-NF-E-B-120-E-D-E	1	1	0.900

Numeric Summary							
Label	Calctype	Units	Avg	Max	Min	Avg/Min	Max/Min
JL Storage 104_Floor	Illuminance	Fc	29.66	35.9	24.1	1.48	1.79
Utility Room 109_Floor	Illuminance	Fc	18.98	21.4	17.0	1.117	1.26
WC 108_Floor	Illuminance	Fc	17.98	19.3	16.5	1.09	1.17
WC 106_Floor	Illuminance	Fc	17.23	20.5	15.8	1.12	1.30
Storage 103_Floor	Illuminance	Fc	17.83	20	16	1.11	1.25
Bathroom 102_Floor	Illuminance	Fc	18.28	19	12	1.27	1.58
South_Ground	Illuminance	Fc	4.19	6.3	1.0	4.19	6.30
West_Ground	Illuminance	Fc	2.37	4.9	1.0	2.37	4.90
North_Ground	Illuminance	Fc	4.16	6.2	1.0	4.16	6.20
East_Ground	Illuminance	Fc	2.35	4.9	0.9	2.61	5.44

Jobname:
Report no.: Control Chan
Attn:
Report by: Erma Legaspi / Application Engineer
713-477-1687 elegaspi@spmlocal.com
PHILIPS REAL Lighting Products
www.gpsocal.com
Mounting Ht.: See Drawing
Reference: 8/5/2010
Filename: El Segundo Lifeguard Station_1st Fl_8.5.dd3
Date: 8/5/2010

-----Disclaimer-----
Luminaire data is obtained according to IES procedures under controlled laboratory conditions. Field results may differ from computer predictions due to many uncontrollable factors such as:
Line Voltage Variations, Lamp Performance, and Jobsite Conditions.

1 LIGHTING CALCULATIONS - FIRST FLOOR

E-6.1 1/4" = 1'-0"

JUL 21 2011

BID DOCUMENTS

PROJECT ADDRESS:
EL SEGUNDO, CA

TMAD TAYLOR & GAINES
• STRUCTURAL • MECHANICAL • ELECTRICAL • CIVIL
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REGISTERED PROFESSIONAL ENGINEER NESTOR C. IGNACIO JR. Lic. E 16934 Exp. 6-30-2011 ELECTRICAL STATE OF CALIFORNIA

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REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
FIRST AND SECOND FLOOR
LIGHTING CALCULATIONS

PM DATE
DRAWN Author DATE
CHECK Check DATE

APPROVED DATE
CITY ENGINEER R.E.

E-6.1
05/04/2010
SHEET OF
JOB NO. 1109531

7/20/2010 3:29:50 PM
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GENERAL NOTES

1. ALL INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK, THIS CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL DIMENSIONS, SIZES, REQUIRED CLEARANCES, AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF ALL EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK AND TO THE WORK OF OTHER TRADES.

2. CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS IN LAYING OUT HIS WORK. EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BLDG.

3. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH CHAPTER 6 OF THE CMC, 2007 EDITION AND SMACNA 1995 EDITION

4. ALL BRACING OF DUCTS AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH "SMACNA" GUIDELINES AS FOR SEISMIC RESTRAINTS OF MECHANICAL AND PLUMBING SYSTEMS. WHERE BRACING DETAILS ARE NOT SHOWN ON DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE TO THE APPROVAL OF THE ARCHITECT, THE STRUCTURAL ENGINEER, AND THE DSA FIELD ENGINEER. A COPY OF THE GUIDELINES PUBLISHED BY "SMACNA" AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.

5. ALL FRESH AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10' FROM ANY SANITARY VENT, EXHAUST FAN DISCHARGE AND FLUE OF OTHER FURNACES. WHEN NECESSARY EXTEND VENTS OR PROVIDE ADDITIONAL FRESH AIR INTAKE DUCTWORK AS DIRECTED BY THE ENGINEER.

6. THE INSTALLATION OF VALVES, THERMOMETERS, GAUGES, CLEANOUTS, DAMPERS, DUCT ACCESS DOORS OR OTHER INDICATING EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED.

7. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.

8. THE SIZES, WEIGHTS AND CAPACITIES OF ALL EQUIPMENT SCHEDULES ON THE DRAWING HAVE BEEN CAREFULLY COMPUTED. SHOULD EQUAL ITEMS BY DIFFERENT MANUFACTURERS BE SUBMITTED FOR APPROVAL, ALL SUCH SUBMITTALS SHALL INCLUDE 1/4 INCH SCALE SHOP DRAWINGS SHOWING METHOD OF INSTALLATION. PROVIDE LOAD RATINGS AND SEISMIC CALCULATIONS AS APPROVED BY A REGISTERED STRUCTURAL ENGINEER WITH EACH SUBMITTAL

9. REQUIRED ROUTINE MAINTENANCE ACTION SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL, WHICH MAY BE LIMITED TO IDENTIFYING BY TITLE AND/OR PUBLICATION NUMBER THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF PRODUCT. ONE COPY OF THIS INFORMATION SHALL BE FURNISHED BY THE CONTRACTOR TO THE OWNER.

10. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE PLANS 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.

11. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM, TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.

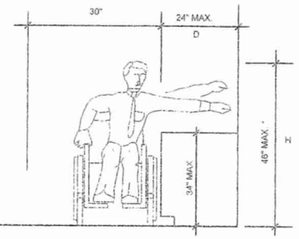
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DO ALL CORING, SAW CUTTING, PATCHING AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY FOR HIM TO PENETRATE FOR HIS WORK. ALL OPENINGS SHALL BE SEALED TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING PENETRATED.

13. CUTTING, BORING, SAW CUTTING OR DRILLING THROUGH THE STRUCTURAL ELEMENTS IS NOT TO BE STARTED UNTIL THE THE DETAILS HAVE BEEN REVIEW AND APPROVED BY THE ARCHITECT, IF THE DETAILS DO NOT SHOW OR CONFORM TO THE APPROVED DRAWINGS.

14. WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF MECHANICAL EQUIPMENT MATERIAL ARISES ON THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON DRAWINGS AND/OR IN THE SPECIFICATION TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ENGINEER.

15. BEFORE BIDDING THE PROJECT THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE CLEARANCES AVAILABLE TO BRING THE SPECIFIED EQUIPMENT AND MATERIAL TO THE SITE

THERMOSTAT HEIGHT SCHEDULE



(1)

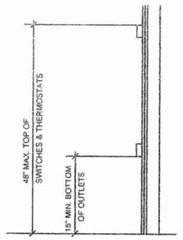
MAXIMUM SIDE REACH OVER OBSTRUCTION

THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION
* 44" MAX. WHEN FRONT APPROACH ONLY CBC FILE 11B-5C

SIDE REACH
FIGURE 11B-5D

CORRESPONDING REACH HEIGHTS FOR GIVEN DEPTHS:

WHEN D = 10" OR LESS, H = 54" MAX.
WHEN D = 11" H = 53.5" MAX.
WHEN D = 12" H = 53.0" MAX.
WHEN D = 13" H = 52.5" MAX.
WHEN D = 14" H = 51.5" MAX.
WHEN D = 15" H = 51.0" MAX.
WHEN D = 16" H = 50.5" MAX.
WHEN D = 17" H = 50.0" MAX.
WHEN D = 18" H = 49.5" MAX.
WHEN D = 19" H = 49.0" MAX.
WHEN D = 20" H = 48.5" MAX.
WHEN D = 21" H = 47.5" MAX.
WHEN D = 22" H = 47.0" MAX.
WHEN D = 23" H = 46.5" MAX.
WHEN D = 24" H = 46.0" MAX.



NOTES:

ELECTRICAL OUTLETS AND SWITCHES SHALL BE MOUNTED A MAXIMUM OF 48" ABOVE FINISH FLOOR, MEASURED TO THE TOP OF THE ELECTRICAL BOX RATHER THAN THE CENTERLINE. (CBC SECTION 1117B.6.5).

(IF DESIRED, A SINGLE DIMENSION OF 46" ABOVE FINISH FLOOR, TO CENTERLINE OF CONTROLS OR BOX WILL BE ACCEPTABLE FOR EITHER SWITCHES/OUTLETS AS WELL AS FOR THERMOSTATS AND SIMILAR CONTROLS).

THE MINIMUM MOUNTING HEIGHT FOR SWITCHES AND OUTLETS IS 15" ABOVE FINISH FLOOR. MEASURED TO THE BOTTOM OF ELECTRICAL BOX RATHER THAN CENTERLINE.

LEGEND

SYMBOL	ABBREV.	DESCRIPTION
		SQUARE OR RECTANGULAR DUCT
		ROUND DUCT
		FLEXIBLE ROUND DUCT
UP (OR DN.)		DUCT SLOPE DIRECTION
		DUCT UP OR DOWN
		DUCT TRANSITION
		RADIUS ELBOW (* FIG. 2-2)
		RECTANGULAR/SQUARE DUCT THROAT ELBOW WITH VANES (* FIG. 2-2)
OR		SQUARE 45° ENTRY BRANCH CONNECTION (* FIG. 2-6)
OR		RECTANGULAR DUCT PARALLEL FLOW BRANCH (* FIG. 2-7)
OR		DUCT TAKE-OFF FROM BOTTOM
OR		DUCT TAKE-OFF FROM TOP
	MVD	NEW MANUAL VOLUME DAMPER
	CR	CEILING REGISTER (RETURN OR OUTSIDE AIR)
	CD	CEILING DIFFUSER (SUPPLY AIR)
	CR	CEILING REGISTER (EXHAUST AIR)
OR		SUPPLY AIR DUCT UP THRU FLOOR OR ROOF
		RETURN OR OUTSIDE AIR DUCT UP THRU FLOOR OR ROOF
OR		EXHAUST AIR DUCT UP THRU FLOOR OR ROOF
2	LVR	DOOR LOUVER AND SQUARE FOOT AREA
	S.P.	STATIC PRESSURE
	DIA	ROUND (DIAMETER)
	CFM	CUBIC FEET OF AIR PER MINUTE
	EA OR EXH.	EXHAUST
	TYP	TYPICAL
		EQUIPMENT NUMBER
T	T'STAT.	THERMOSTAT WITH ZONE NUMBER
TS		TIMER SWITCH

* REFERS TO "SMACNA" HVAC DUCT CONSTRUCTION STANDARDS

DRAWING LIST

DWG.NO.	DESCRIPTION
M-0.1	GENERAL NOTES, LEGEND, DRAWING LIST AND SCHEDULE
M-0.2	TITLE 24
M-2.1	GROUND FLOOR HVAC PLAN
M-2.2	SECOND FLOOR HVAC PLAN
M-2.3	ROOF HVAC PLAN
M-3.0	DETAILS

APPLICABLE CODES & STANDARDS

- 2007 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24 PART 1
- 2007 CALIFORNIA BUILDING CODE (CBC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2007 INTERNATIONAL BUILDING CODE (IBC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA ELECTRICAL CODE (CEC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3 (2007 NATIONAL ELECTRICAL CODE (NEC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA MECHANICAL CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4 (2007 UNIFORM MECHANICAL CODE (UMC) W/CALIFORNIA AMENDMENTS
- 2007 CALIFORNIA PLUMBING CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5 (2007 UNIFORM PLUMBING CODE (UPC) W/CALIFORNIA AMENDMENTS)
- 2008 CALIFORNIA ENERGY EFFICIENCY STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2007 CALIFORNIA FIRE CODE (CFC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9 (2007 INTERNATIONAL FIRE CODE (IFC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA REFERENCED STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
- AMERICANS WITH DISABILITIES ACT (ADA) TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG) 1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE
- CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

EXHAUST FAN SCHEDULE

ITEM NO.	MANUFACTURER & MODEL NO.	SERVICE AREA	CFM	PD	POWER (HP)	MOTOR (HP)	FAN RPM	TSPD (FPM)	MOTOR VOLTAGE	APPROX. UNIT WT.= LBS.	DETAIL	REMARKS
EF 1	COOK QN-182	BATHROOM 102	140	.2	95.2 W	-	1200	2397	115-1-60	25	2 M3.0	COMPLETE WITH BIRD SCREEN, BACKDRAFT DAMPER AND ROOF CAP WITH SLOPE TYPE CURB MOUNT PR8 (PROVIDE BAKED POLYSTER POWDER COATING ON ROOF CAP). INTERCONNECT WITH LIGHT SWITCH

ELECTRIC, FAN-TYPE UNIT HEATER SCHEDULE

ITEM NO.	MANUFACTURER & MODEL NO.	AREA SERVED	BTU/HR OUTPUT	CFM	POWER KW	ELECTRICAL DATA					OPER. WT. (LBS)	DETAIL	REMARKS
						RPM	HP	VOLTS	PH	HZ			
UH 1	REZNOR EGHB-10	LIFEGUARD GARAGE 101	34,120	700	10	1550	1/20	208	3	60	60	1 M3.0	COMPLETE WITH WALL MOUNTED THERMOSTAT, 24V RELAY KIT AND WALL MOUNTING BRACKETS.

JUL 21 2011

BID DOCUMENTS

PROJECT ADDRESS:
EL SEGUNDO, CA

TMAD TAYLOR & GAINES
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www.tmadtg.com Project No. 2010.030.00

REGISTERED PROFESSIONAL ENGINEER CHRIS E. RADTKE No. M24519 Exp. 9/30/10 MECHANICAL CALIFORNIA

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A Colorado Corporation (Victor Montgomery #433676) Jerry Nichols, PE #39241 LS #7376 | Jeff Arthur, LA #3341

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
GENERAL NOTES, LEGEND, DRAWING LIST AND SCHEDULE

PM DATE
DRAWN AC DATE
CHECK CR DATE
APPROVED DATE
CITY ENGINEER R.E. DATE

M-0.1
05/04/2010
SHEET OF
JOB NO. 1109531

FILE NO.

RUNCUT V3.1 - AP File: C:\Documents and Settings\tlesser\My Documents\1109531-MER-model_tlesser.rpt

2008 ENERGY EFFICIENCY STANDARDS
MANDATORY MEASURES - HVAC

ALL OCCUPANCIES-MECHANICAL MANDATORY REQUIREMENTS FOR THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF SYSTEMS, AND EQUIPMENT
SECTION 110 - SYSTEMS AND EQUIPMENT-GENERAL

SECTIONS 111, 112 AND 115 ESTABLISH REQUIREMENTS FOR THE MANUFACTURE, CONSTRUCTION, AND INSTALLATION OF CERTAIN SYSTEMS AND EQUIPMENT COMPONENTS THAT ARE INSTALLED IN BUILDINGS REGULATED BY TITLE 24, PART 6. SYSTEMS, EQUIPMENT AND BUILDING COMPONENTS LISTED BELOW MAY BE INSTALLED ONLY IF:
(A) THE MANUFACTURER HAS CERTIFIED THAT THE SYSTEM OR EQUIPMENT COMPONENT COMPLIES WITH THE APPLICABLE MANUFACTURE PROVISIONS OF SECTIONS 111, 112 AND 115; AND
(B) THE SYSTEM, EQUIPMENT OR BUILDING COMPONENT COMPLIES WITH THE APPLICABLE INSTALLATION PROVISIONS OF SECTIONS 111, 112 AND 115
NO SYSTEM, EQUIPMENT OR BUILDING COMPONENT COVERED BY THE PROVISIONS OF SECTIONS 111, 112 AND 115 THAT IS NOT CERTIFIED OR THAT FAILS TO COMPLY WITH THE APPLICABLE INSTALLATION REQUIREMENTS MAY BE INSTALLED IN A BUILDING REGULATED BY TITLE 24, PART 6.
THE SYSTEMS AND EQUIPMENT COMPONENTS COVERED ARE:
APPLIANCES REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS (SECTION 111).

OTHER SPACE-CONDITIONING EQUIPMENT (SECTION 112)
GAS APPLIANCES (SECTION 115)

SECTION 111 - MANDATORY REQUIREMENTS FOR APPLIANCES REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS
ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY REGULATIONS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE. SEE APPENDIX 1-A FOR AVAILABILITY OF DIRECTORIES OF CERTIFIED APPLIANCES

SECTION 112 - MANDATORY REQUIREMENTS FOR SPACE-CONDITIONING EQUIPMENT CERTIFICATION BY MANUFACTURERS
ANY SPACE-CONDITIONING EQUIPMENT LISTED IN THIS SECTION MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE EQUIPMENT COMPLIES WITH ALL THE APPLICABLE REQUIREMENTS OF THIS SECTION.

(A) EFFICIENCY
EQUIPMENT SHALL MEET THE APPLICABLE REQUIREMENTS TABLE 112-A THROUGH TABLE 112-M, SUBJECT TO THE FOLLOWING:
1. IF MORE THAN ONE STANDARD IS LISTED IN TABLE 112-A THROUGH TABLE 112-M, THE EQUIPMENT SHALL MEET ALL THE STANDARDS LISTED; AND
2. IF MORE THAN ONE TEST METHOD IS LISTED IN TABLE 112-A THROUGH TABLE 112-M, THE EQUIPMENT SHALL COMPLY WITH THE APPLICABLE STANDARD WHEN TESTED WITH EACH TEST METHOD; AND
3. WHERE EQUIPMENT CAN SERVE MORE THAN ONE FUNCTION, SUCH AS BOTH HEATING AND COOLING, OR BOTH SPACE HEATING AND WATER HEATING, IT SHALL COMPLY WITH ALL THE REQUIREMENTS APPLICABLE TO EACH FUNCTION; AND
4. WHERE A REQUIREMENT IS FOR EQUIPMENT RATED AT ITS "MAXIMUM RATED CAPACITY" OR "MINIMUM RATED CAPACITY," THE CAPACITY SHALL BE AS PROVIDED FOR AND ALLOWED BY THE CONTROLS, DURING STEADY-STATE OPERATION

EXCEPTION TO SECTION 112
(A): WATER-COOLED CENTRIFUGAL WATER-CHILLING PACKAGES THAT ARE NOT DESIGNED FOR OPERATION AT ARI STANDARD 550 TEST CONDITIONS OF 44°F LEAVING CHILLED WATER TEMPERATURE AND 85°F ENTERING CONDENSER WATER TEMPERATURE SHALL HAVE A MINIMUM FULL LOAD COP RATING AS SHOWN IN TABLE 112-H, TABLE 112-I, AND TABLE 112-J, AND A MINIMUM NPLV RATING AS SHOWN IN TABLE 112-K, TABLE 112-L, AND TABLE 112-M. THE TABLE VALUES ARE ONLY APPLICABLE OVER THE FOLLOWING FULL LOAD DESIGN RANGES:

LEAVING CHILLER WATER TEMP. 40 TO 48°F
ENTERING CONDENSER WATER TEMP. 75 TO 85°F
CONDENSING WATER TEMP. RISE 5 TO 15°F

(B) CONTROLS FOR HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS

HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL HAVE CONTROLS:

1. THAT PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE; AND
2. 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.

EXCEPTION TO SECTION 112
(B): THE CONTROLS MAY ALLOW SUPPLEMENTARY HEATER OPERATION DURING:

A. DEFROST; AND
B. TRANSIENT PERIODS SUCH AS START-UPS AND FOLLOWING ROOM THERMOSTAT SETPOINT ADVANCE, IF THE CONTROLS PROVIDE PREFERENTIAL RATE CONTROL, INTELLIGENT RECOVERY, STAGING, RAMPING OR ANOTHER CONTROL MECHANISM DESIGNED TO PRECLUDE THE UNNECESSARY OPERATION OF SUPPLEMENTARY HEATING.

(C) GAS- AND OIL-FIRED FURNACE STANDBY LOSS CONTROLS

GAS-FIRED AND OIL-FIRED FORCED AIR FURNACES WITH INPUT RATINGS ≥225,000 BTU/H SHALL ALSO HAVE AN INTERMITTENT IGNITION OR INTERRUPTED DEVICE (IID), AND HAVE EITHER POWER VENTING OR A FLUE DAMPER. A VENT DAMPER IS AN ACCEPTABLE ALTERNATIVE TO A FLUE DAMPER FOR FURNACES WHERE COMBUSTION AIR IS DRAWN FROM THE CONDITIONED SPACE. ALL FURNACES WITH INPUT RATINGS ≥225,000 BTU/H, INCLUDING ELECTRIC FURNACES, THAT ARE NOT LOCATED WITHIN THE CONDITIONED SPACE SHALL HAVE JACKET LOSSES NOT EXCEEDING 0.75% OF THE INPUT RATING

SECTION 115 - NATURAL GAS CENTRAL FURNACES, COOKING EQUIPMENT, AND POOL AND SPA HEATERS: PILOT LIGHTS PROHIBITED
ANY NATURAL GAS SYSTEM OR EQUIPMENT LISTED BELOW MAY BE INSTALLED ONLY IF IT DOES NOT HAVE A CONTINUOUSLY BURNING PILOT LIGHT:
(A) FAN-TYPE CENTRAL FURNACES.
(B) HOUSEHOLD COOKING APPLIANCES.

EXCEPTION TO SECTION 115 (B):
HOUSEHOLD COOKING APPLIANCES WITHOUT AN ELECTRICAL SUPPLY VOLTAGE CONNECTION AND IN WHICH EACH PILOT CONSUMES LESS THAN 150 BTU/HR.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 5) MECH-1C

Project Name: *El Segundo Life Guard Station* | Date: *5/4/2010*
Project Address: *El Segundo* | Climate Zone: *6* | Total Cond. Floor Area: *590* | Addition Floor Area: *n/a*

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces (affidavit)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☐ Overall Envelope TDV Energy ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: *0 deg*

HVAC SYSTEM DETAILS

Equipment[2]	Inspection Criteria	FIELD INSPECTION ENERGY CHECKLIST Meets Criteria or Requirements: Special Feature[1]	Pass	Fail[3]
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	*UH-1*	☐	☐	☐
Equipment Type[4]:	Other	☐	☐	☐
Number of Systems	*1*	☐	☐	☐
Max Allowed Heating Capacity	*56,526 Btu/hr*	☐	☐	☐
Minimum Heating Efficiency	*3.50 HSPF*	☐	☐	☐
Max Allowed Cooling Capacity	*n/a*	☐	☐	☐
Cooling Efficiency	*n/a*	☐	☐	☐
Duct Location/ R-Value	*n/a*	☐	☐	☐
Duct Leakage Testing - If Yes, a MECH-4A must be submitted	*No*	☐	☐	☐
Economizer	*No Economizer*	☐	☐	☐
Thermostat	*n/a*	☐	☐	☐
Fan Control	*Constant Volume*	☐	☐	☐

Equipment[2]	Inspection Criteria	FIELD INSPECTION ENERGY CHECKLIST: Special Feature[1]	Pass	Fail[3]
Item or System Tags (i.e. AC-1, RTU-1, HP-1)		☐	☐	☐
Equipment Type[4]:		☐	☐	☐
Number of Systems		☐	☐	☐
Max Allowed Heating Capacity		☐	☐	☐
Minimum Heating Efficiency		☐	☐	☐
Max Allowed Cooling Capacity		☐	☐	☐
Cooling Efficiency		☐	☐	☐
Duct Location/ R-Value		☐	☐	☐
Duct Leakage Testing - If Yes, a MECH-4A must be submitted		☐	☐	☐
Economizer		☐	☐	☐
Thermostat		☐	☐	☐
Fan Control		☐	☐	☐

1. Indicate special feature DETAILS on Page 2 of the Inspection Checklist Form.
2. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.
3. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form.
4. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or split), Hydronic, PTAC, or other.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 2 of 5) MECH-1C

Project Name: *El Segundo Life Guard Station* | Date: *5/4/2010*

SPECIAL FEATURES INSPECTION CHECKLIST

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

n/a

Discrepancies:

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 3 of 5) MECH-1C

Project Name: *El Segundo Life Guard Station* | Date: *5/4/2010*

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and listed all equipment that requires an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Building Departments:

Systems Acceptance: Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.
Systems Acceptance: Before occupancy permit is granted, All newly installed HVAC equipment must be tested using the Acceptance Requirements.

The MECH-1C form is not considered a completed form and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for **ALL** newly installed equipment. In addition a Certificate of Acceptance forms shall be submitted to the building department that certifies plans, specifications, installation, certificates, and operating and maintenance information meet the requirements of §10-103(b) and Title-24 Part 6. The building inspector must receive the properly filled out and signed forms before the building can receive final occupancy.

TEST DESCRIPTION		MECH-2A	MECH-3A	MECH-4A	MECH-5A	MECH-6A	MECH-7A	MECH-8A	MECH-9A	MECH-10A	MECH-11A
Equipment Requiring Testing or Verification	Qty	Outdoor Ventilation For VAV & CAV	Constant Volume & Single-Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation DCV	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
Reznor EGHB-10	1	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 4 of 5) MECH-1C

Project Name: *El Segundo Life Guard Station* | Date: *5/4/2010*

TEST DESCRIPTION		MECH-12A Fault Detection & Diagnostics for DX Units	MECH-13A Automatic Fault Detection & Diagnostics for Air & Zone	MECH-14A Distributed Energy Storage DX AC Systems	MECH-15A Thermal Energy Storage (TES) Systems	
Equipment Requiring Testing	Qty					Test Performed By:
Reznor EGHB-10	1	☐	☐	☐	☐	
		☐	☐	☐	☐	
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CERTIFICATE OF COMPLIANCE (Part 5 of 5) MECH-1C

Project Name: *El Segundo Life Guard Station* | Date: *5/4/2010*

Documentation Author's Declaration Statement

I certify that this Certificate of Compliance documentation is accurate and complete

Name: Andy Cloud | Signature:
Company: TTG | Date: *5/4/2010*
Address: 800 North Ferrari Lane #100 | CEA # / CEPE #:
City/State/Zip: Ontario, Ca 91764 | Phone: 909.477.6915

The Principal Mechanical Designer's Declaration Statement

- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the mechanical design
- This Certificate of Compliance identifies the mechanical features and performance specifications required for compliance with Title-24, Parts 1 and 6 of the California Code of Regulations.
- The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name: Chris E. Radtke, P.E. | Signature:
Company: *TTG* | Date: *5/4/2010*
Address: *800 North Ferrari Lane, #100* | License #: *M24519*
City/State/Zip: *Ontario, CA 91764* | Phone: *909.477.6915*

Mandatory Measures
Indicate location on building plans of Note Block for Mandatory Measures

MECHANICAL COMPLIANCE FORMS & WORKSHEETS (check box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the 2008 Nonresidential Manual.
Note: The Enforcement Agency may require all forms to be incorporated onto the building plans.

- ☑ MECH-1C Certificate of Compliance. Required on plans for all submittals.
- ☑ MECH-2C Mechanical Equipment Summary is required for all submittals
- ☑ MECH-3C Mechanical Ventilation and Reheat is required for all submittals with mechanical ventilation.
- ☑ MECH-4C Fan Power Consumption is required for all prescriptive submittals.

NOTE:
BESIDES TESTING AND BALANCING, THE CONTRACTOR IS RESPONSIBLE TO PERFORM ALL TESTS INCLUDED IN MECH-1-C PART 3 FORMS THIS SHEET

JUL 21 2011

BID DOCUMENTS

PROJECT ADDRESS:
EL SEGUNDO, CA

TTG TMAD TAYLOR & GAINES
• STRUCTURAL • MECHANICAL • ELECTRICAL • CIVIL
800 North Ferrari Lane, Suite 100
Ontario, California 91764
Phone: 909.477.6915 Fax: 909.477.6916
www.tmadtg.com Project No. 2010.030.00

REGISTERED PROFESSIONAL ENGINEER CHRIS E. RADTKE No. M24519 Exp. 6/30/10 STATE OF CALIFORNIA

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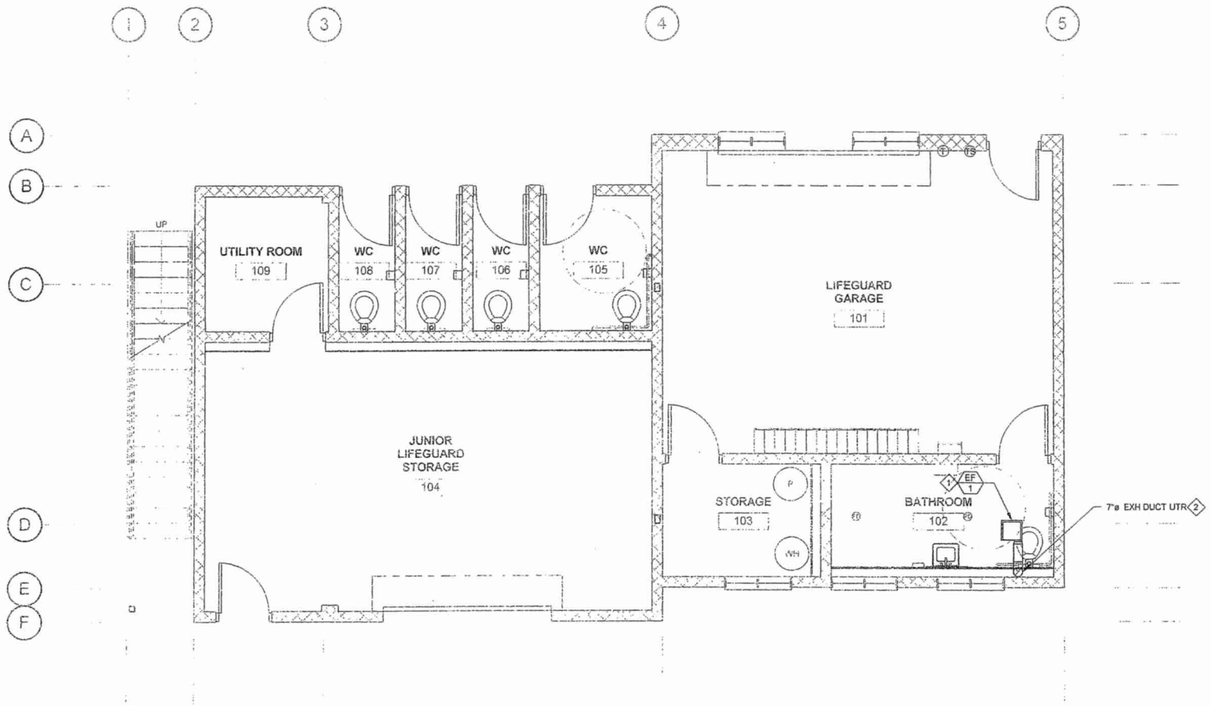
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NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
EL SEGUNDO LS
TITLE 24

PM ___ DATE ___
DRAWN AC DATE ___
CHECK CR DATE ___
APPROVED DATE ___
CITY ENGINEER R.E. ___

M-0.2
05/04/2010
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1 GROUND FLOOR HVAC PLAN
M-2.1 1/4" = 1'-0"

KEY NOTES

1. FOR EQUIPMENT DETAIL REFERENCE SEE EQUIPMENT SCHEDULE ON M-0.1
2. FOR DUCT WORK SUPPORT, SEE DETAIL 3/M-3.0

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• STRUCTURAL
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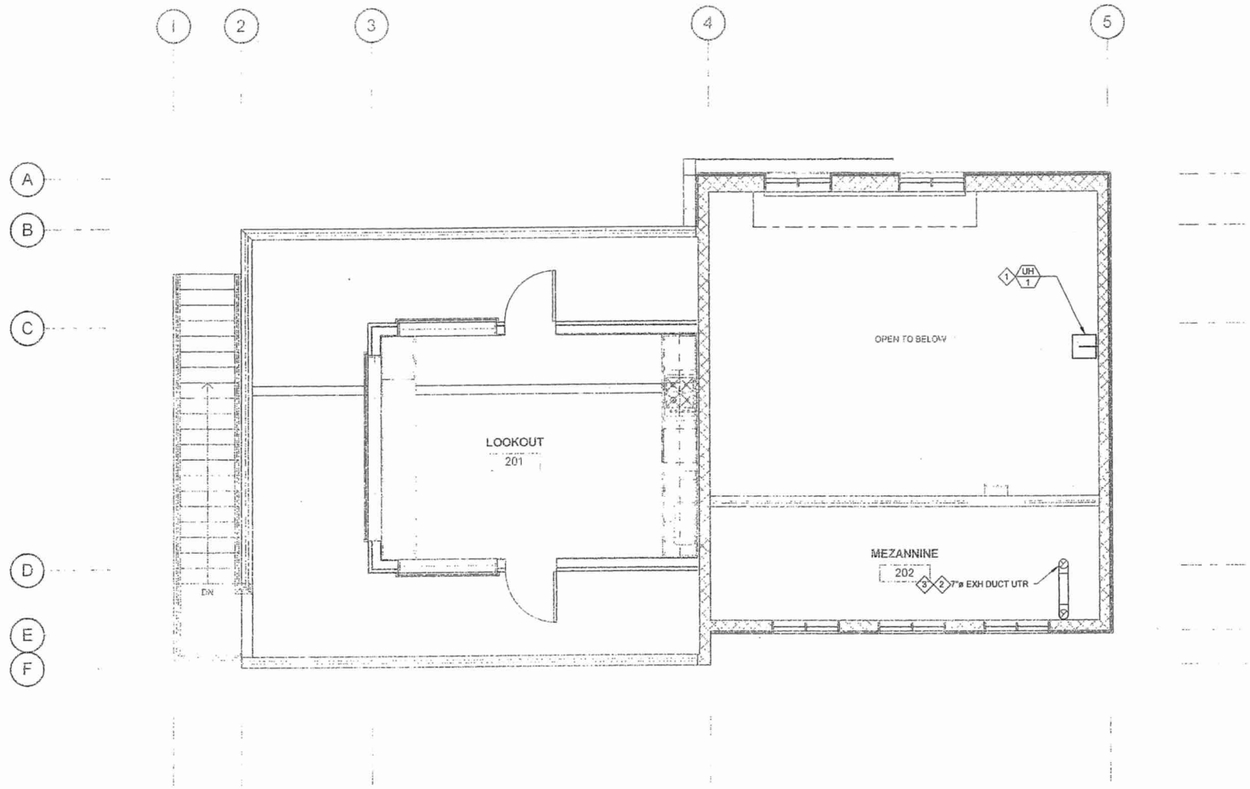
EL SEGUNDO LS
GROUND FLOOR HVAC PLAN

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CHECK CR DATE ___

APPROVED DATE ___
CITY ENGINEER R.E. ___

M-2.1
05/04/2010
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1 SECOND FLOOR HVAC PLAN
M-2.2 1/4" = 1'-0"

KEY NOTES

1 FOR EQUIPMENT DETAIL REFERENCE SEE EQUIPMENT SCHEDULE ON M-0.1

2 FOR DUCT WORK SUPPORT, SEE DETAIL 3/M-3.0

3 FOR DUCT THRU ROOF SE DETAIL 2/M-3.0

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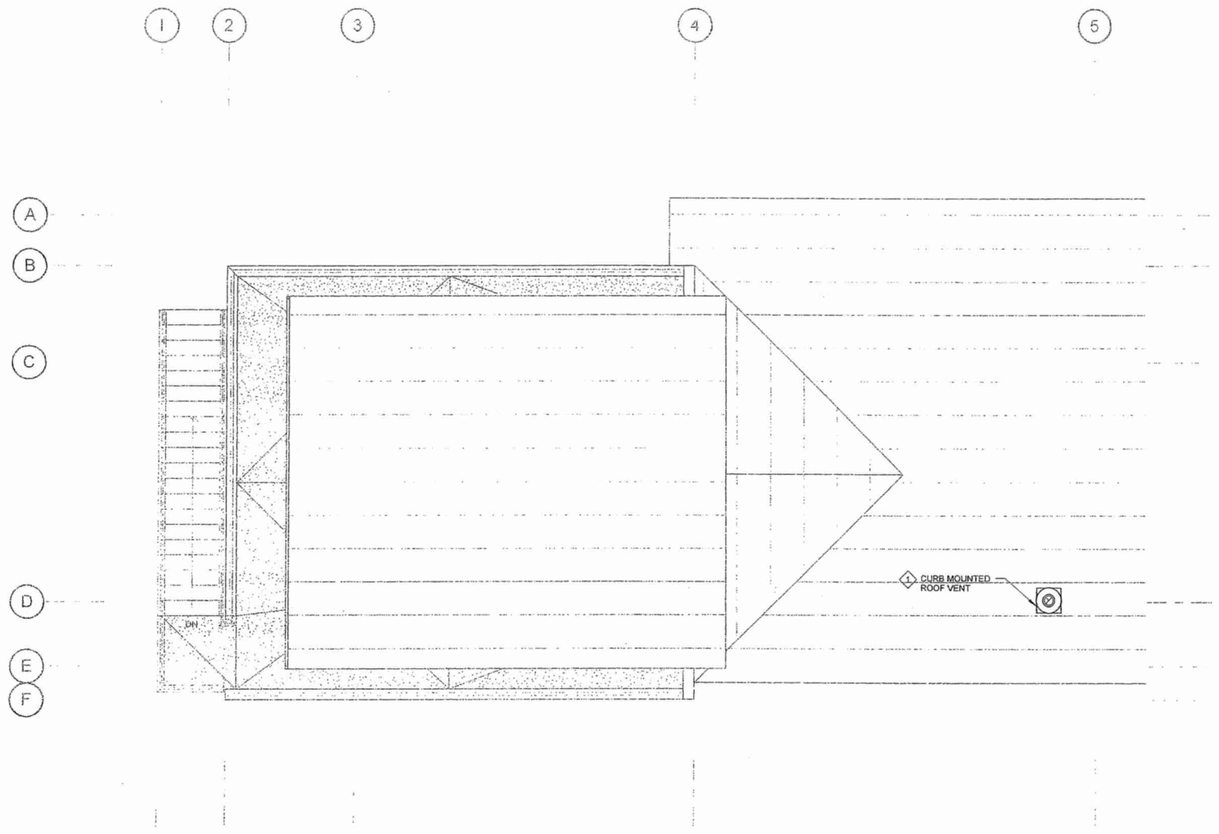
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SECOND FLOOR HVAC PLAN

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CHECK CR DATE

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KEY NOTES

1 FOR VENT ON ROOF SEE DETAIL 2/M-3.0

1 M-2.3 ROOF PLAN
1/4" = 1'-0"

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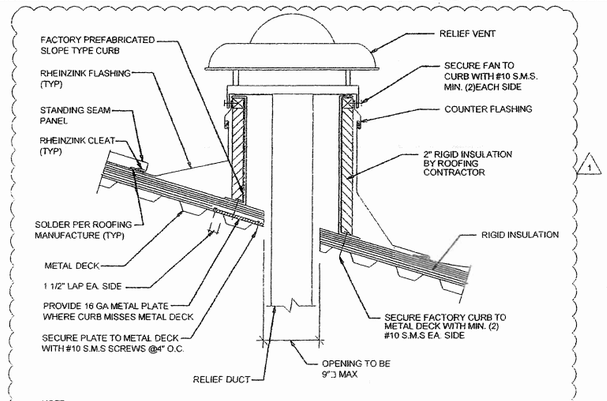
EL SEGUNDO LS
ROOF HVAC PLAN

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NOTE:
CONTRACTOR TO FOLLOW ROOFING MANUFACTURER'S INSTRUCTIONS

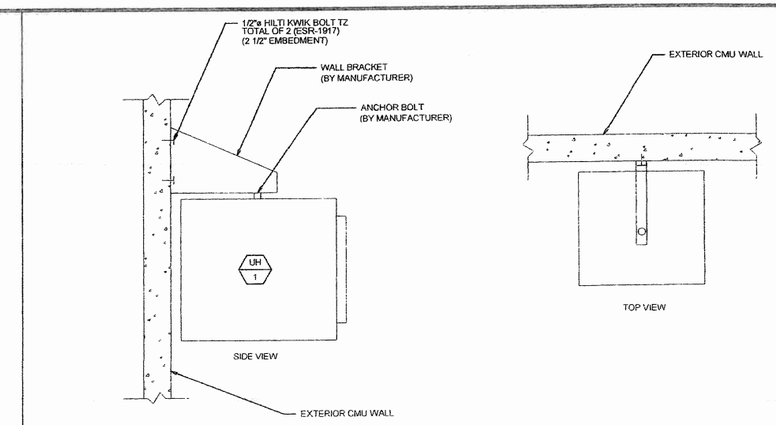
RELIEF VENT MOUNTING DETAIL

NTS | 7

T	THERMOSTAT BY UNIT MANUFACTURER
MS	MAGNETIC STARTER WITH H.O.A. SWITCH INTEGRAL 120V CONTROL POWER TRANSFORMER, 120V HOLDING COIL AND AUXILIARY CONTACTS FURNISHED, INSTALLED AND WIRED BY DIVISION 26 ELECTRICAL.
	EQUIPMENT FURNISHED AND INSTALLED UNDER ELECTRICAL (DIVISION 26).
	EQUIPMENT FURNISHED AND INSTALLED UNDER MECHANICAL (DIVISION 23)
	LINE VOLTAGE WIRING AND CONDUIT FURNISHED UNDER ELECTRICAL (DIVISION 26)
	LOW VOLTAGE WIRING AND CONDUIT FURNISHED AND INSTALLED UNDER MECHANICAL (DIVISION 23).
DISC	DISCONNECT SWITCH, BY ELECTRICAL.
CB	CIRCUIT BREAKER, BY ELECTRICAL.

CONTROL WIRING LEGEND

NTS | 4



UNIT HEATER SUPPORT DETAIL

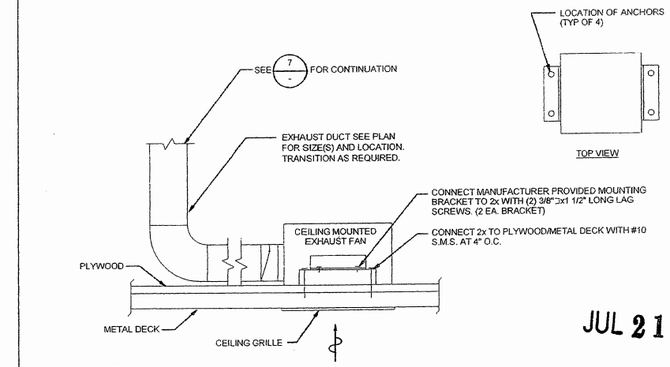
NTS | 1

DETAIL NOTES:

1. ALL WIRING AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY DIVISION 26 - ELECTRICAL. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COMPLETE DETAILS.
2. THERMOSTAT FURNISHED BY UNIT MANUFACTURER AND INSTALLED BY MECHANICAL CONTRACTOR.
3. SEE CONTROL WIRING LEGEND #1 THIS SHEET.

UNIT HEATER CONTROL WIRING DIAGRAM

NTS | 5



NOTES:

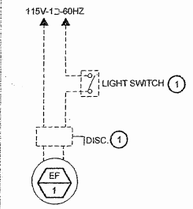
1. ALL EXHAUST OUTLETS SHALL BE 10'-0" FROM ANY OPENINGS OR AIR INTAKES.
2. SEE MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.

CEILING MOUNTED EXHAUST FAN MOUNTING DETAIL

NTS | 2

DETAIL NOTES:

1. ALL WIRING AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY DIVISION 26 - ELECTRICAL. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COMPLETE DETAILS.
2. SEE CONTROL WIRING LEGEND #1 THIS SHEET.

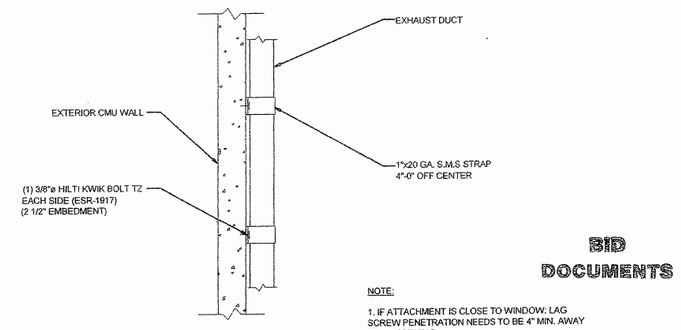


SINGLE PHASE EXHAUST FANS TO LIGHT SWITCH TYP. FOR EF-1

2

EXHAUST FAN CONTROL WIRING DIAGRAM

NTS | 6



NOTE:

1. IF ATTACHMENT IS CLOSE TO WINDOW: LAG SCREW PENETRATION NEEDS TO BE 4" MIN. AWAY FROM OPENING.

BID DOCUMENTS

DUCT WALL SUPPORT

NTS | 3

JUL 21 2011

PROJECT ADDRESS:
EL SEGUNDO, CA

TMAD TAYLOR & GAINES
- STRUCTURAL
- MECHANICAL
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Phone: 909.477.6915 Fax: 909.477.6916
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REGISTERED PROFESSIONAL ENGINEER CHRIS E. RADTKE No. M24519 Exp. 6/30/10 STATE OF CALIFORNIA

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1	10/06/2010	VR

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
DETAILS

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DRAWN AC DATE
CHECK CR DATE
APPROVED DATE
CITY ENGINEER R.E.

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10/06/2010
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GENERAL NOTES

1. ALL WORK AND MATERIAL SHALL COMPLY WITH THE LATEST; CALIFORNIA BUILDING CODE, CALIFORNIA PLUMBING CODE, 2007 CALIFORNIA ADMINISTRATIVE CODE TITLE 24, CALIFORNIA STATE FIRE MARSHAL, APPLICABLE LOCAL CODES, AMENDMENTS AND REQUIREMENTS. ALL APPROVED ASTM, ACI, AND AITC DESIGNATIONS SHALL BE AMENDED TO MOST RECENT DATE.
2. PROVIDE ALL SYSTEM COMPONENTS AND APPURTENANCES FOR A FULLY OPERATIONAL, CODE COMPLIANT INSTALLATION.
3. ALL WORK AND MATERIALS INDICATED ON THE THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
4. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.
5. PRIOR TO BIDDING, CONTRACTORS SHALL BECOME FAMILIAR WITH ALL PROJECT DOCUMENTS AND SURVEY THE SITE TO BECOME AWARE OF ALL EXISTING CONDITIONS AND SHALL NOTIFY THE OWNER IN WRITING ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN WITHIN THE DRAWINGS. NO EXTRA COMPENSATION SHALL BE AWARDED FOR THE CONTRACTOR'S FAILURE TO ALLOW FOR ANY EXISTING CONDITIONS THAT EFFECT HIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSIDERED EVIDENCE OF THE FACT THAT THE CONTRACTOR IS FULLY AWARE OF THESE CONDITION AND IS ABLE TO COMPLETE ALL WORK REQUIRED.
6. THE CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL AND STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL CONFIRM ALL NECESSARY DIMENSIONS, SYSTEM COMPONENT SPACE REQUIREMENTS, AND POINTS OF CONNECTIONS TO ALL EXISTING SYSTEM COMPONENTS. FIXTURES, AND EQUIPMENT.
7. THESE DRAWINGS AND LAYOUTS ARE DIAGRAMMATIC TO SHOW DESIGN INTENT AND INDICATE THE FINISHED REQUIREMENTS FOR THE PLUMBING SYSTEMS. IF NECESSARY, THE CONTRACTOR SHALL MAKE ANY MINOR ADJUSTMENTS TO THE SYSTEM OR ITS APPURTENANCES TO AVOID ANY CONFLICTS WITH BUILDING STRUCTURE OR THE WORK OF OTHER TRADES. IF DUE TO; ARCHITECTURAL, MECHANICAL, ELECTRICAL, OR STRUCTURAL INTERFERENCE, THE RETENTION OF EXISTING FACILITIES, OR FOR OTHER REASONS, THE CONTRACTOR MAY DESIRE TO INSTALL THE WORK IN A MANNER DIFFERENT FORM THAT SHOWN. SUCH CHANGES SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO IMPLEMENTATION.
8. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WHETHER SHOWN WITHIN THE DRAWINGS OR NOT AND SHALL PROTECT THEM FROM ANY DAMAGE. CONTRACTOR PAY FOR ALL REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY THE WORK.
9. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES TO ENSURE THAT THE PLUMBING SYSTEM IS FULLY COORDINATED WITH ALL OTHER TRADES, VERIFY ALL EXISTING UTILITIES; LOCATION, SIZE, DEPTH, PRESSURE AND AVAILABILITY PRIOR TO STARTING WORK.
10. COORDINATE WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING ANY PLUMBING EQUIPMENT REQUIRING AN ELECTRICAL CONNECTION FOR AVAILABLE VOLTAGES PRIOR TO PURCHASING SAID EQUIPMENT.
11. NO PLUMBING INSTALLATION THAT IS NOT DIRECTLY NECESSARY FOR ELECTRICAL ROOMS SHALL BE PLACED OR PASS THROUGH THE ELECTRICAL ROOM.
12. KEEP ALL PIPING CLEAR OF ALL LOAD BEARING FOOTINGS.
13. UNDERGROUND STEEL PIPING, BOLTS, FLANGES, JOINTS AND COUPLINGS SHALL BE GIVEN HIGH QUALITY PROTECTIVE COATING SUCH AS 40 MIL EXTRUDED POLYETHYLENE, 20 MIL PLASTIC TAPE OVER PRIMER PER AWWA STANDARD C209 OR HOT APPLIED COAL TAR ENAMEL OR TAPE PER AWWA C203.
14. WHERE METALLIC PIPING PENETRATES CONCRETE STRUCTURE, SUCH AS FLOOR OR WALL, RUBBER SEALS, OR OTHER DIELECTRIC MATERIAL SHALL BE USED TO PREVENT PIPE CONTACT WITH CONCRETE AND REINFORCING STEEL.
15. PENETRATION OF RATED ASSEMBLIES SHALL BE FIRE STOPPED USING AN APPROVED MATERIAL BY UL AND SHALL HAVE AN F OR T RATING AS DETERMINED BY TESTS CONDUCTED IN ACCORDANCE WITH UBC.
16. ALL PIPE PENETRATIONS THAT ARE REQUIRED TO PASS THROUGH STRUCTURAL FOOTINGS, MEMBERS AND WALLS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO MAKING SUCH PENETRATIONS.
17. PROVIDE PIPE SLEEVES FOR ALL PIPING PASSING TROUGH MASONRY OR CONCRETE WALLS. ALL ANNULAR SPACE SHALL BE CAULKED APPROPRIATELY.
18. HANGING, SUPPORT AND SEISMIC BRACING OF PLUMBING PIPING GREATER THAN 12 INCHES FROM THE HANGING SURFACE SHALL COMPLY WITH THE GUIDELINES FOR SEISMIC RESTRAINTS FOR PLUMBING SYSTEMS IN THE LATEST EDITION OF SMACNA. WHERE BRACING AND ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, THE STRUCTURAL ENGINEER, AND THE CITY OF EL SEGUNDO FIELD ENGINEER. A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY CITY OF EL SEGUNDO SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB SITE AT ALL TIMES. INDEPENDENTLY ENGINEERED SYSTEMS MAY ALSO BE UTILIZED IF DESIGNED AND STAMPED BY A LICENSED CALIFORNIA STRUCTURAL ENGINEER.
19. WHERE THERE IS A DISCREPANCY BETWEEN THE DRAWINGS AND THE PROJECT SPECIFICATIONS OR BUILDING STANDARDS, THE ARCHITECTS SHALL BE NOTIFIED OF THIS DISCREPANCY PRIOR TO PROCEEDING WITH THE WORK.
20. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, AND FEES REQUIRED FOR THE INSTALLATION AND APPROVAL OF THE FIRE PROTECTION AND PLUMBING WORK. THIS WOULD INCLUDING, BUT NOT LIMITED TO; CITY OF EL SEGUNDO DEPARTMENT OF BUILDING AND SAFETY, AND DEPARTMENT OF WATER AND POWER.
21. IF ANY EQUIPMENT OR MATERIAL FOR WHICH THE CONTRACTOR IN PLANNING ON UTILIZING IS DIFFERENT FROM THAT SPECIFIED SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL. THE SUBMITTAL SHALL INDICATE THAT THE SUBMITTED IS A SUBSTITUTION AND THE CREDIT DUE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF ALL OTHER CHANGES RESULTING FROM THE SUBSTITUTION INCLUDING CHANGES IN THE WORK OF OTHER TRADES NECESSARY TO ACCOMMODATE THE REQUESTED SUBSTITUTION.

GENERAL NOTES (CONTINUED)

22. THE CONTRACTOR SHALL PROVIDE A COORDINATED SET OF SHOP DRAWINGS AND PRODUCT DATA ACCORDING TO THE SPECIFICATIONS FOR REVIEW AND APPROVAL PRIOR TO THE STARTING OF WORK AND THE PROCUREMENT OF ANY MATERIALS.
23. THE CONTRACTOR SHALL PROVIDE A COMPLETE AS-BUILT DRAWINGS PRIOR TO COMPLETION OF THE PROJECT FOR REVIEW BY THE ARCHITECT AND/OR ENGINEER.
24. ALL SYMBOLS SHOWN ON THE SYMBOL LIST ARE NOT NECESSARILY USED ON THIS PROJECT.
25. ALL PLANS APPROVED BY GOVERNING AGENCIES SHALL BE KEPT IN A SECURE PLACE AND SHALL NOT BE USED BY WORKMEN. THE CONTRACTOR SHALL PROVIDE ALL SUBCONTRACTORS' CONSTRUCTION SETS REFLECTING SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS, ON PREMISES AT ALL TIMES. UNDER CARE OF THE JOB SUPERINTENDENT.
26. THE CONTRACTOR OR SUBCONTRACTORS SHALL NOT TAKE SCALE MEASUREMENTS FROM THE DRAWINGS. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. DETAIL DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
27. ALL PLUMBING, AND ELECTRICAL WORK SHALL BE ANCHORED AND SUPPORTED PER SMACNA GUIDELINES. PLUMBING PIPES SHALL BE SUPPORTED AND BRACED PER 2007 UNIFORM PLUMBING CODE, SECTION 316. ELECTRICAL WORK SHALL BE SUPPORTED AND BRACED PER C.E.C.
28. PIPING, AND EQUIPMENT SHALL BE SEISMICALLY BRACED ACCORDANCE WITH GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPE SYSTEMS PUBLISHED BY SMACNA FOR SEISMIC LEVEL "A". CONNECTIONS, HANGERS, BRACED MEMBERS, AND ANCHORAGE SHALL MEET SMACNA REQUIREMENTS FOR SEISMIC LEVEL "A."
29. CONTRACTOR SHALL PROVIDE AND INSTALL ANY NECESSARY BLOCKING, BACKING, FURRING, AND FRAMING FOR ELECTRICAL, PLUMBING, EQUIPMENT, FIXTURES, AND OTHER MISCELLANEOUS ITEMS REQUIRING SAME.
30. CONTRACTORS IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. CONTRACTOR SHALL MAINTAIN STRUCTURAL INTEGRITY OF ALL WORK UNTIL ALL WORK IS COMPLETE.
31. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL REPLACEMENT OR REMEDY OF ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP WHICH APPEARS WITHIN ONE YEAR AFTER THE ACCEPTANCE OF THE WORK UNDER THIS CONTRACT, EXCEPT AS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.
32. CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING FINISHES THAT ARE AFFECTED BY THE WORK.
33. PAINT ALL EXPOSED PIPING TO MATCH BACKGROUND OR AS DIRECTED BY THE ARCHITECT.

PLUMBING NOTES

1. THE CONTRACTOR SHALL PROVIDE A COMPLETE PLUMBING SYSTEM FOR THOSE AREAS INDICATED ON THE DRAWINGS, INCLUDING BUT NOT LIMITED TO, FIXTURE ROUGH-INS AND ALL UTILITY PIPING.
2. PROVIDE ROUGH-INS, EXTEND ALL PIPING (WASTE, VENT, COLD WATER, HOT WATER, ETC.) TO ALL FIXTURES AND APPLIANCES AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY ALL FIXTURE HEIGHTS PRIOR TO ROUGH-IN, SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND EXACT LOCATION OF ALL PLUMBING FIXTURES.
4. PLUMBING FIXTURES FOR DISABLED PERSONS SHALL BE MOUNTED AT REQUIRED HEIGHTS AND WITH ALL RELATED ACCESSORIES AS REQUIRED BY THE CALIFORNIA OFFICE OF THE STATE ARCHITECT AND AMERICANS WITH DISABILITIES ACT (ADA). ALL FIXTURE TRAPS, PIPING AND VALVES UNDER THE FIXTURE SHALL BE INSULATED WITH A FACTORY PERFORMED INSTALLATION.
5. PIPING WRAP BELOW ACCESSIBLE FIXTURES SHALL COVER P-TRAP, TAILPIECE, OFFSET AND HOT WATER SUPPLY AND STOPS THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES. THE COLD WATER SUPPLY SHALL ALSO BE WRAPPED TO COVER ANY SHARP OR ABRASIVE SURFACES.
6. RUN ALL PLUMBING PIPING AS HIGH AS POSSIBLE TO STRUCTURE AND COORDINATE ROUTING WITH OTHER TRADES
7. ALL PIPE BRANCH CONNECTIONS SHALL OFFSET. NO "BULL HEAD" CONNECTIONS WILL BE ALLOWED
8. THE CONTRACTOR SHALL PROVIDE CHROME PLATED ANGLE STOPS ON ALL PLUMBING FIXTURES AND ISOLATION VALVES ON ALL EQUIPMENT
9. SECURE ALL ESCUTCHEONS TIGHT TO WALL, OR SPUD.
10. SECURE WATER CLOSET BOLT CAPS TO BOLT HEADS WITH SILICONE SEALANT.
11. COORDINATE INSTALLATION OF WATER CLOSET FLUSH VALVES WITH GRAB BAR AT ACCESSIBLE LOCATIONS. IF REQUIRED PROVIDE OFFSET SPUD CONNECTION AT NO ADDITIONAL COST.
12. ALL SHUT-OFF VALVES, WATER HAMMER ARRESTORS AND TRAP PRIMERS SHALL BE ACCESSIBLE
13. PROVIDE AND INSTALL WATER HAMMER ARRESTERS WITH ACCESS PANELS OF REQUIRED SIZE AT ALL QUICK CLOSING VALVES INCLUDING CLOTHES WASHERS AND DISHWASHERS, MANUFACTURER AND MODEL NUMBER SHALL BE PER SPECIFICATIONS AND SIZES AND LOCATION PER PDI STANDARD WH-201.
14. CONTRACTOR SHALL PROVIDE TRAP PRIMER CONNECTIONS TO ALL FLOOR DRAINS AND FLOOR SINKS WHETHER OR NOT SHOWN ON THE PLANS.
15. ALL SHUTOFF VALVES BELOW GRADE SHALL BE INSTALLED IN CONCRETE YARD BOXES WITH NAME AND SERVICE CAST IN RAISED LETTERS ON TOP OF CAST IRON COVER.
16. NOT ALL OF THE ACCESS PANELS MAY BE IDENTIFIED ON THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED ACCESS PANELS. THE CONTRACTOR SHALL PROVIDE ACCESS PANELS IN WALLS AND HARD LID CEILINGS FOR SHUT-OFF VALVES, TRAP PRIMERS AND WATER HAMMER ARRESTERS. THE ACCESS PANEL SHALL BE OF SUFFICIENT SIZE TO ACCESS THESE DEVICES. THE CONTRACTOR SHALL MAKE EVERY EFFORT NOT TO LOCATE THE ITEMS REQUIRING ACCESS ABOVE THE AREAS OF GYPSUM BOARD CEILING WITHOUT PRIOR APPROVAL OF THE ARCHITECT. PROPOSED ACCESS PANEL LOCATIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.
17. ALL FAUCETS, STOPS AND SUPPLIES SHALL HAVE FIELD SERVICABLE AND REPAIRABLE COMPRESSION CARTRIDGE.
18. NON REPAIRABLE CERAMIC DISC FAUCET CARTRIDGES ARE NOT TO BE USED.
19. ALL FAUCET BODIES MUST BE MANUFACTURED OF ALL BRASS MATERIAL, COPPER OR PLASTIC WATERWAYS ARE NOT TO BE USED.
20. ALL MOUNTING HARDWARE MUST BE OF METAL OR STEEL. NO PLASTIC HARDWARE TO BE USED.
21. ALL LAVATORIES SHALL HAVE CLEANOUTS.
22. ALL CLEANOUTS SHALL BE ACCESSIBLE. CLEANOUTS SHALL BE INSTALLED PER LATEST EDITION OF CALIFORNIA PLUMBING CODE SECTIONS 707 AND 719.
23. THE CONTRACTOR SHALL PROVIDE WALL CLEANOUTS IN FINISHED AREAS WITH ACCESS COVERS. THE COLOR AND FINISH TYPE SHALL BE COORDINATED AND APPROVED BY THE ARCHITECT.
24. THE CONTRACTOR SHALL INSULATE INDIRECT DRAIN LINES FROM MECHANICAL EQUIPMENT, REFRIGERATORS, FREEZERS, ICE BINS, ETC., TO PREVENT CONDENSATION. INSULATION SHALL ALSO BE PLACED ON THE WASTE PIPING AND DRAIN BODY RECEIVING THE INDIRECT WASTE.
25. ALL SHOWER VALVES SHALL EACH HAVE HOT AND COLD WATER CHECK STOPS AND MAXIMUM TEMPERATURE LIMIT STOPS. AT INLET TO EACH SHOWER HEAD, NOT PROVIDED WITH A THERMOSTAT MIXING VALVE, PROVIDE AN ANTISCALD SAFETY VALVE WHICH SHALL AUTOMATICALLY SHUT DOWN WATER FLOW WITHIN 5 SECONDS AFTER THE WATER TEMPERATURE REACHES 110°F AND BEFORE IT EXCEEDS 120°F TO RESIDUAL TRICKLE OF LESS THEN 0.5 GPM; SIMILAR TO MEMORY METALS INC. MODEL V-110.
26. A MINIMUM 1/2" CLEARANCE SHALL BE PROVIDED AROUND PIPES AT ALL PENETRATIONS THROUGH WALLS AND ROOF. THE GAP SHALL BE PACKED TIGHTLY WITH LOOSE, LIGHTWEIGHT INSULATION THROUGH NON RATED WALLS, AND APPROVED U.L. LISTED FIRE RATED MATERIAL RATED WALLS TO MATCH WALL RATING.
27. PROVIDE PIPING ISOLATION ON STUD WALL 1/4" FELT OR NEOPRENE ISOLATION, OR APPROVED SMWF ISOLATOR.
28. DOMESTIC WATER HEATERS SHALL BE CERTIFIED AND LISTED BY THE CALIFORNIA ENERGY COMMISSION.
29. ALL HOT WATER SUPPLY PIPING SHALL BE INSULATED PER ENERGY CODE. INSULATE ALL FITTINGS, VALVES, STRAINERS, ETC., BY EITHER PREFABRICATION OR BY FABRICATING FITTINGS FROM METERED SEGMENTS OF PIPE INSULATION TO AN EQUAL THICKNESS OF ADJOINING PIPE INSULATION.
30. SERVICE WATER HEATING SYSTEM SHALL BE EQUIPPED WITH AUTOMATIC TEMPERATURE CONTROLS CAPABLE OF ADJUSTMENT FROM THE LOWEST TO THE HIGHEST ACCEPTABLE TEMPERATURE SETTING.

PLUMBING NOTES (CONTINUED)

31. ALL WATER FAUCETS AND SHOWER HEADS SHALL BE PROVIDED WITH CODE APPROVED FLOW RESTRICTORS. LAVATORY FAUCETS AND SINK FAUCETS (NOT INCLUDING SERVICE SINK FAUCETS) SHALL MEET THE FLOW REQUIREMENTS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS AND SPECIFICATIONS.
32. ALL PLUMBING FIXTURES SHALL BE CERTIFIED TO THE CALIFORNIA ENERGY COMMISSION - A.E.S. SECTION 1605.1 TABLE H-1 (WATER CLOSET 1.6 GPF, SHOWER HEAD 2.5 GPM AND LAVATORY 2.2 GPM)
33. POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE IN ACCORDANCE WITH THE METHOD SET FORTH IN THE LATEST EDITION OF THE CALIFORNIA PLUMBING CODE OR AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION, WHICHEVER IS MORE RESTRICTIVE.
34. ALL STORM DRAINS AND OVERFLOW DRAINS TO BE SLOPED 2% UNLESS OTHERWISE NOTED
35. ALL VENTS THRU ROOF SHALL BE MINIMUM OF THREE FEET VERTICALLY OR TEN FEET HORIZONTALLY FROM AIR CONDITIONING EQUIPMENT FRESH AIR INTAKES, WINDOWS, DOORS OR OTHER OPENING, AND SHALL COMPLY WITH SECTION 906 (VENT TERMINATION) OF THE CURRENT CALIFORNIA PLUMBING CODE.
36. SEAL AND FLASH ALL PENETRATIONS THROUGH ROOF WATERTIGHT. FLASHING SHALL BE ELMDOR/STONEMAN 900 SERIES, 4 POUND SEAMLESS LEAD WITH 6" SKIRT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND FLASH PER ROOFING MATERIAL MANUFACTURER'S RECOMMENDATIONS.
37. CONTRACTOR TO PROVIDE WATER TIGHT SEAL AROUND ALL NEW PENETRATIONS THRU ROOF REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS OF ALL PENETRATIONS THRU ROOF.
38. ALL SOIL AND WASTE PIPING TO BE SLOPED 2% UNLESS OTHERWISE NOTED.
39. ALL BURRED ENDS OF (WATER) PIPING AND TUBING SHALL BE REAMED TO THE FULL BORE OF THE PIPE OR TUBE AND ALL CHIPS SHALL BE REMOVED (SEE CALIFORNIA PLUMBING CODE, 2007 EDITION). ADDITIONALLY, TOOLS USED IN CUTTING OR REAMING SHALL BE KEPT FREE FROM OIL OR GREASE AND WHERE SUCH CONTAMINATION HAS OCCURRED, THE ITEMS AFFECTED SHALL BE REWORKED AND RINSED.
40. ROUGH-INS, CONNECTIONS AND TERMINATION OF PLUMBING WORK SHALL BE SEQUENCED IN COORDINATION WITH THE PROJECT SCHEDULE AND THE OWNERS OTHER CONTRACTORS AND VENDORS.
41. COORDINATE NEW WASTE PIPING BELOW FLOOR WITH THE EXISTING AND/OR NEW CONDITIONS.
42. CONTRACTOR TO BED ALL PIPING WITHIN THE BUILDING IN SAND AND FILL TO 6 INCHES ABOVE TOP OF PIPE, COMPACT TO 95%, BACKFILL TRENCH WITH NATIVE SOIL AND COMPACT TO 95%, AND INSTALL A VAPOR BARRIER BELOW THE CONCRETE SLAB. THE VAPOR BARRIER SHALL BE APPROPRIATELY SEALED TO THE EXISTING VAPOR BARRIER.
43. CONTRACTOR TO BED ALL PIPING OUTSIDE THE BUILDING IN A BEDDING AND COVERAGE MATERIAL HAVING A SAND EQUIVALENT OF GREATER THAN 30 SAND, FILL TO 6 INCHES ABOVE TOP OF PIPE, COMPACT TO 95%, PLACE A MARKER TAPE ON TOP OF THE 6-INCH FILL MATERIAL, AND BACKFILL TRENCH WITH NATIVE SOIL AND COMPACT TO 95%.

DRAWING LIST

DWG.NO.	DESCRIPTION
P-0.1	COVER SHEET
P-0.2	SCHEDULES AND CALCULATIONS
P-2.1	GROUND FLOOR PLUMBING PLAN
P-2.2	SECOND FLOOR PLUMBING PLAN
P-2.3	ROOF PLUMBING PLAN
P-3.1	DETAILS

LEGEND

SYMBOL	ABBREV.	DESCRIPTION
	S OR W	SEWER OR WASTE BELOW GRADE
	S OR W	SEWER OR WASTE ABOVE GRADE
	V	SANITARY VENT
	CW	COLD WATER
	HW	HOT WATER
CA	CA	COMPRESSED AIR
	HB	HOSE BIBB
	FD	FLOOR DRAIN
	WCO	WALL CLEANOUT
	CO	CLEANOUT
	FCO	FLOOR CLEANOUT
	COTG	CLEANOUT TO GRADE
	SOV	SHUT OFF VALVE
	SOV/YB	SHUT OFF VALVE IN YARD BOX
		VALVE/COCK IN RISE/DROP
X / X		PLUMBING FIXTURE IDENTIFICATION
X / X		PLUMBING EQUIPMENT IDENTIFICATION
	&	AND
	ABV	ABOVE
	AP	ACCESS PANEL
	BEL	BELOW
	FU	FIXTURE UNIT(S) (CODE)
	GR	GRADE OR GROUND
	MAX	MAXIMUM
	MIN	MINIMUM
	TYP	TYPICAL
	VTR	VENT THRU ROOF

JUL 21 2011

APPLICABLE CODES AND STANDARDS

- 2007 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1
- 2007 CALIFORNIA BUILDING CODE (CBC)
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2
  (2006 INTERNATIONAL BUILDING CODE (IBC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA ELECTRICAL CODE (CEC)
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3
  (2005 NATIONAL ELECTRICAL CODE (NEC) W/CALIFORNIA AMENDMENTS)
- 2005 CALIFORNIA ENERGY CODE
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2007 CALIFORNIA FIRE CODE (CFC)
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9
  (2006 INTERNATIONAL FIRE CODE (IFC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA REFERENCED STANDARDS CODE
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
- AMERICANS WITH DISABILITIES ACT (ADA)
  TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG)
  1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE
- CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS
  CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

BID DOCUMENTS

N:\20.CAD\TTG_PROJECTS\2010\2010-030-00\RVT\PLUMBING CAD\P0-1.DWG 8/10/2010 10:32 AM

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EL SEGUNDO, CA

TTG Thinking Through Green
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Ontario, California 91764
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www.tmadta.com Project No. 2010.030.00

- STRUCTURAL
- MECHANICAL
- ELECTRICAL
- CIVIL

REGISTERED PROFESSIONAL ENGINEER — CORTE E. RASTOVICH — No. M24519 — Exp. 9/30/10 — MECHANICAL — STATE OF CALIFORNIA

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REVISIONS

NO.	DATE	BY

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
COVER SHEET

P-0.1
05/04/2010

PM ____ DATE ____
DRAWN ____ DATE ____
CHECK ____ DATE ____

APPROVED DATE ____
CITY ENGINEER R.E. ____

SHEET ____ OF ____
JOB NO. 1109531
NO. ____

DOMESTIC WATER FIXTURE UNIT LOADS

BUILDING

FIXTURE	QUANTITY	FIXTURE UNITS REQUIRED EA.		FIXTURE UNIT TOTAL	
		CW	HW	CW	HW
WATER CLOSET	5	5	-	25	-
EXTERIOR LAVATORY	3	1	-	3	-
EXTERIOR SHOWER	3	2	-	6	-
LAVATORY	1	1	1	1	1
SHOWER	1	2	2	2	2
HOSE BIBB	3	2.5+1	-	4.5	-
TOTAL				41.5	3

(FLUSH VALVE FIXTURE UNITS)

HYDRAULIC WATER CALCULATION

TOTAL DEMAND (GPM): 41.5 FU = 47 GPM
BLDG. SERVICE SIZE: 2"
MINIMUM PRESSURE NEEDED AT BUILDING 36.37 PSI

PRESSURE LOSSES: 36.37
LOSS DUE TO BLDG. HEIGHT: HEIGHT (FT.) 5 x 0.433: 2.17 - 2.17
34.20
PRESSURE REQUIRED AT FIXTURE: FLUSH VALVE = 30 PSI - 30
OTHER LOSSES: - NA
REMAINING PRESSURE AVAILABLE (PSI) 4.20

PRESSURE AVAILABLE FOR FRICTION LOSS (PSI)
AVAILABLE PSI: 4.20 * 100 = PSI/100 FT. 3
LENGTH OF PIPE RUN+50% FOR FITTINGS: 140

DOMESTIC COLD WATER SIZING

PIPE SIZE	FLOW RATE (GPM)	VELOCITY (FT/SEC.)	FIXTURE UNITS	
			FLUSH TANK	FLUSH VALVE
1/2"	2.02	2.78	1	-
3/4"	5.28	3.50	6	-
1"	10.64	4.14	13	-
1 1/4"	18.51	4.73	26	-
1 1/2"	29.23	5.27	51	12
2"	57.88	6.0	160	66
2 1/2"	89.25	6.0	320	190
3"	127.40	6.0	516	409
4"	223.99	6.0	1018	1009
6"	501.83	6.0	1018	1009

PIPE MATERIAL: TYPE L COPPER
MAXIMUM ACCEPTABLE PRESSURE LOSS: 3.0 PSI/100 FT.
MAXIMUM ACCEPTABLE VELOCITY: 6 FT./SEC.

DOMESTIC HOT WATER SIZING

PIPE SIZE	FLOW RATE (GPM)	VELOCITY (FT/SEC.)	FIXTURE UNITS	
			FLUSH TANK	FLUSH VALVE
1/2"	2.02	2.78	1	-
3/4"	5.28	3.50	6	-
1"	10.29	4.0	13	-
1 1/4"	15.67	4.0	21	-
1 1/2"	22.18	4.0	34	-
2"	38.59	4.0	78	-
2 1/2"	59.50	4.0	170	-
3"	84.93	4.0	294	-

PIPE MATERIAL: TYPE L COPPER
MAXIMUM ACCEPTABLE PRESSURE LOSS: 3.0 PSI/100 FT.
MAXIMUM ACCEPTABLE VELOCITY: 4 FT./SEC.

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	W	TRAP	V	CW	HW	REMARKS
WC 1	WATER CLOSET (STANDARD)	4"	INT.	2"	1 1/2"	-	ACORN PENAL-WARE 1680 SERIES, MODEL NUMBER 1680-W-1-ULF-FVBO-SW, WALL MOUNTED, TYPE 304 STAINLESS STEEL, EXTERIOR POLISHED TO A SATIN FINISH, ELONGATED BOWL, HYDRAULIC FLUSH VALVE. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
WC 2	WATER CLOSET (ACCESSIBLE)	4"	INT.	2"	1 1/2"	-	ACORN PENAL-WARE 1680, SERIES MODEL NUMBER 1680-W-1-ULF-FVBO-ADA-SW, WALL MOUNTED, TYPE 304 STAINLESS STEEL, EXTERIOR POLISHED TO A SATIN FINISH, ELONGATED BOWL, HYDRAULIC FLUSH VALVE. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
WC 3	WATER CLOSET (ACCESSIBLE)	4"	INT.	2"	1 1/2"	-	AMERICAN STANDARD AFWALL, ELONGATED FLUSH VALVE, MODEL NUMBER 2257.103, WALL MOUNTED, VITREOUS CHINA, ELONGATED BOWL, WITH OLSONITE #95CT OPEN FRONT SEAT. BATTERY POWERED SLOAN FLUSH VALVE C2 ROYAL II MODEL NO. 111. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
L 1	LAVATORY (ACCESSIBLE)	2"	1 1/2"	1 1/2"	1/2"	-	ACORN PENAL-WARE ,1652FA SERIES, MODEL NUMBER 1652-ADA-FA-1-LF-3-M-OF, WALL HUNG, 14 3/4"x 9 1/2" X 4 1/2" DEEP, T YPE 304 STAINLESS STEEL, EXPOSED SURFACE POLISHED TO A SATIN FINISH, WITH STANDARD P-TRAP WASTE OUTLET, BUBBLER, PUSH BUTTON VALVE USING ATMOSPHERIC AIR, VALVE IS METERING. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
L 2	LAVATORY (ACCESSIBLE)	2"	1 1/2"	1 1/2"	1/2"	1/2"	AMERICAN STANDARD, LUCERNE, MODEL NUMBER 0356.012, WALL HUNG, 20"x18" VITREOUS CHINA BOWL, AMERICAN STANDARD DRAIN MODEL NO. 2411.015, CHICAGO FAUCET MODEL NO. 2200-4E2805CP, LA PATTERN P-TRAP WITH ACCESSIBLE INSULATION WRAP BY PLUMBEREX "HANDY SHIELD MAXX" MODEL NO. 2003. MEETS AST E84-07 TESTING STANDARD 25 FLAME SPREAD/450 SMOKE INDEX. CHICAGO SUPPLY & STOPS MODEL NO. 1017CP. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
SH 1	SHOWER (ACCESSIBLE)	-	-	-	3/4"	3/4"	ACORN, PENAL-WARE 1741FA SERIES, MODEL NO. 1741-3-F, PUSHBUTTON PANEL IS 14 GAGE, TYPE 304 STAINLESS STEEL, EXTERIOR SURFACE POLISHED TO A SATIN FINISH, SHOWER HEAD AND PUSHBUTTON ESCUTCHEON ARE CHROME PLATED BRASS, PUSH BUTTON VALVE USING ATMOSPHERIC AIR, VALVE IS METERING. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
SH 2	SHOWER (ACCESSIBLE)	-	-	-	3/4"	3/4"	SYMMONS, SAFETYMIX PRESSURE BALANCING MIXING VALVE, MODEL NO. 1-25-FSB-X, INLET STOPS, LEVEL HANDLE, STANDARD ALL BRASS SUPER FLOW SHOWER HEAD WITH 2.5 GPM FLOW RESTRICTOR. DELUXE ARM AND FLANGE, FD-1 DRAIN. LESS TRAP PRIMER. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
HB 1	HOSE BIBB (INTERIOR)	-	-	-	3/4"	-	ACORN, MODEL NUMBER 8151. RECESSED WALL HOSE BOX WITH VACUUM BREAKER. 18 GA. STAINLESS STEEL BOX. 16 GA. FLANGE WITH POLISHED NO.4 SATIN FINISH. CARTRIDGE OPERATED, VANDAL RESISTANT LOCKSHIELD VALVE, SCREWDRIVER STOP. 16 GA. SATIN FINISH DOOR WITH CYLINDER LOCK.
HB 2	HOSE BIBB (EXTERIOR)	-	-	-	3/4"	-	ACORN MODEL # 8104. RECESSED WALL HOSE BOX WITH VACUUM BREAKER. LUMALOY BOX AND FRAME. REMOVABLE WALL FLANGE. FRAME DOOR WITH ANODIZED, SATIN FINISH. DOOR WITH CAM LATCH, CARTRIDGE OPERATED VALVE. SCREWSRIVER STOP. VANDAL RESISTANT LOCKSHIELD BONNET.
FD 1	FLOOR DRAIN	2"	2"	2"	-	-	J.R. SMITH MODEL NO. 2005-A, DUCO CAST BODY, ROUND NICKEL-BRONZE HEEL PROOF ADJUSTABLE 6" STRAINER GRATE WITH DOUBLE DRAINAGE FLANGE, WEEP HOLES, 2" HUBLESS. PROVIDE WITH TRAP PRIMER CONNECTION.

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	REMARKS
EWH 1	ELECTRIC WATER HEATER	STIEBEL ELTRON , TANKLESS ELECTRIC, MODEL NUMBER 223422. 4.14 KW, 208 V, 1 PH, 60 HZ, 66°F RECOVERY GALLONS PER HOUR. 16 5/8"x 14 1/2"x 4 5/8" DEEP.
WHA 1	WATER HAMMER ARRESTOR	PRECISION PLUMBING PRODUCTS. SC OR SWA SERIES. NOTE: INSTALL AT EACH PLUMBING FIXTURE OR BATTERY OF PLUMBING FIXTURES. INSTALL ON BOTH HOT AND COLD WATER BRANCH LINES IN AN UP RIGHT POSITION AS CLOSE AS POSSIBLE TO THE VALVE OR VALVES BEING SERVED. SIZE AND LOCATION PER P.D.I. STANDARD WH-201.
TP 1	AUTOMATIC TRAP PRIMER	PRECISION PLUMBING PRODUCTS "PPP" MODEL #P2-500 AND MODEL #DU-2 DISTRIBUTION BOX AS REQUIRED FOR MULTIPLE FLOOR DRAIN APPLICATIONS. TRAP PRIMER SHALL BE CONSTRUCTED OF CORROSION RESISTANT BRASS. PROVIDE AND INSTALL 1/2" COPPER PIPE FROM UNIT TO FLOOR DRAIN, ISOLATION VALVE AND ACCESS PANEL. TRAP PRIMER TO TAP OFF OF RECLAIMED WATER LINES ONLY.
AC 1	AIR COMPPRESOR AND TANK	SULLAIR "SHOPTEK" MODEL NO. ST-410, ELECTRIC DRIVEN, SINGLE STAGE, LUBRICATED, ROTARY SCREW COMPRESSOR TOTAL PACKAGE INCLUDES: INLET AIR FILTER, PRESSURE RELIEF, FLUID LEVEL SIGHT GLASS, AIR/FLUID SEPARATOR, CHECK VALVE, BELT DRIVE, COLLING FUBRICATING SYSTEM, DRAIN VALVE, 2 GALLON ASME RECEIVER, AND BELT GUARDS; 5HP, 208V, 3Ø.
AO 1	AIR OUTLET	"ARO" MODEL NO. 210, PART NO. ARCF22, FEMALE COUPLER, 1/4" BODY SIZE, 18CFM WITH "ARO" AIR 2000 PIGGYBACK FILTER/REGULATOR PART NO. P29221-614, GAUGE, FILTER WITH METAL BOWL AND SIGHT GLASS, 93 CFM, 1/4" PORT SIZE.
AL 1	AIR LINE	GRAINGER MODEL NO. PR14-10B-B, COILHOSE PNEUMATICS AIR HOSE, SWIVEL, 1/4" ID, 10 FOOT, BLUE.

PIPE MATERIAL SCHEDULE

SERVICE		MATERIAL	CAST IRON PIPE, FITTINGS CISPI 301, SERVICE WEIGHT	COPPER TYPE "K" FITTINGS ASME B16.18	COPPER TYPE "L" ASTM B88 FITTINGS ASME B16.18	COPPER TYPE "L" ASTM B88 FITTINGS ASME B16.18	COPPER TYPE "L" ASTM B819	POLY-AL-POLY ASTM F1281	BLACK STEEL SCHEDULE 40 ASTM A53 FITTINGS ANSI B16.3	BLACK STEEL SCHEDULE 40 ASTM A795 FITTINGS ANSI B16.4	BLACK STEEL ASTM A53 SCHEDULE 40 VICTAULIC COUPLINGS	GALV. STEEL SCHEDULE 40 VICTAULIC COUPLINGS	NO-LEAD PEWTERLESS ASTM D2243 SDR13.5 FITTINGS ASTM D2683 OR D3261	CAST IRON AHS/ANWA C151 FITTINGS ANSI/ANWA C110 JOINTS ANSI/ANWA C111	SCHEDULE 40 ABS ASTM D2751, SDR 35 FITTINGS SOLVENT WELD ABS ASTM D2751	REMARKS
WATER (CW) (HW)	ABV. GR.			•												95/5 SOLDER, GRADE 95TA. LEAD FREE.
	BEL. GR.		•													
WASTE/SOIL AND VENT	ABV. GR.	•														
	BEL. GR.	•														

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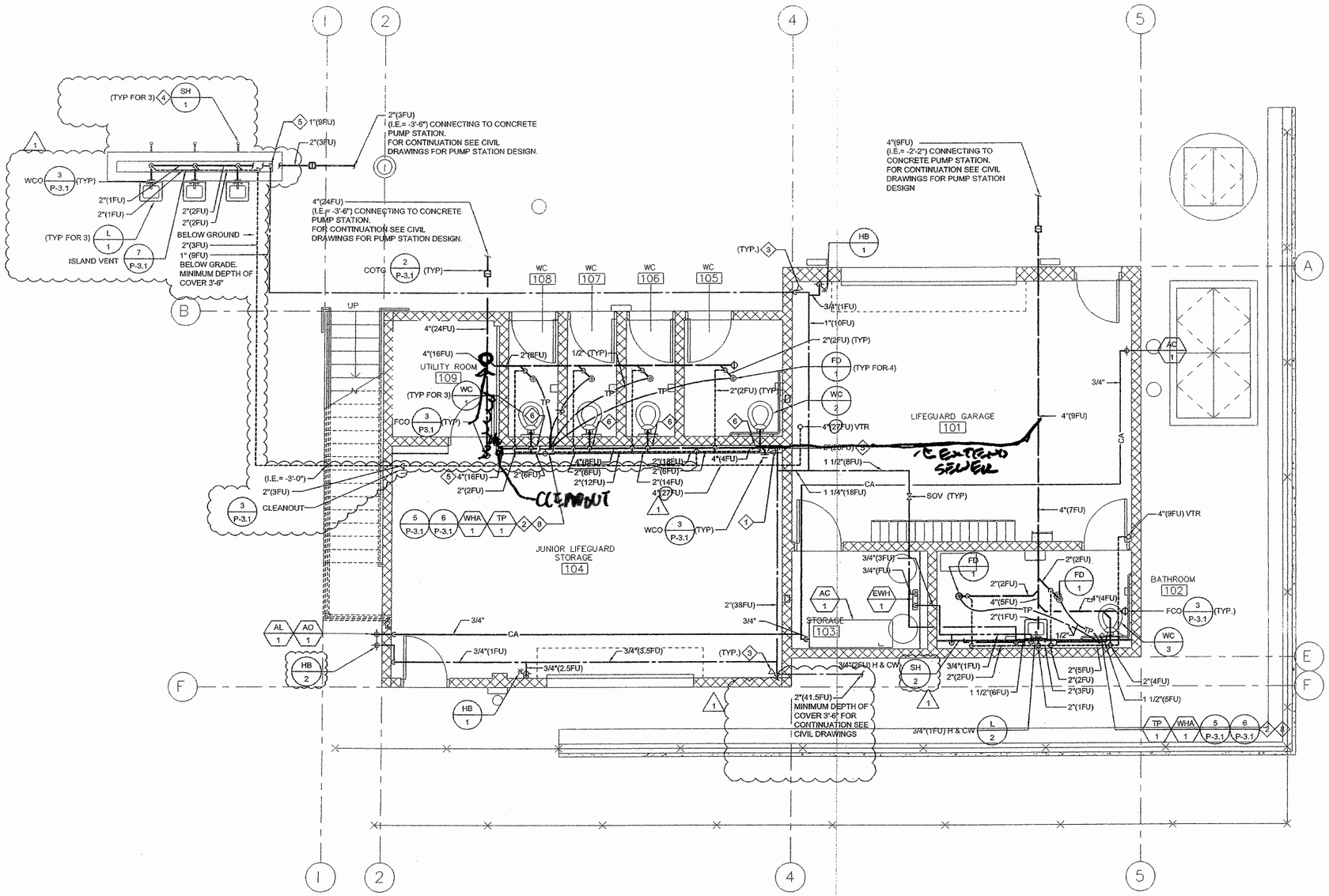
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1 FLOOR PLAN
P-2.1 1/4" = 1'-0"

KEY NOTES

1. PROVIDE A SHUT-OFF VALVE IN THE VERTICAL SUPPLY BEHIND AN ACCESS PANEL.
2. PROVIDE A COMMON ACCESS PANEL IN JUNIOR LIFEGUARD STORAGE TO ACCESS WATER HAMMER ARRESTOR AND TRAP PRIMER.
3. PROVIDE AN EXPOSED SHUT-OFF VALVE IN THE VERTICAL SUPPLY.
4. PROVIDE ACCESS PANEL ABOVE LAVATORIES TO ACCESS SHOWER VALVES.
5. PROVIDE A FULL SIZED HEADER TO ALL FIXTURES.
6. PROVIDE ACCESS PANELS IN THE JUNIOR LIFEGUARD STORAGE 104 FOR EACH WATER CLOSET TO PROVIDE ACCESS TO THE CONCEALED FLUSHVALVES AND PROVIDE OPENINGS IN THE BLOCK WALL FOR THE INSTALLATION OF THE MANUAL ACTIVATION OF THE WATER CLOSETS.

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PLUMBING GROUND FLOOR PLAN

P-2.1
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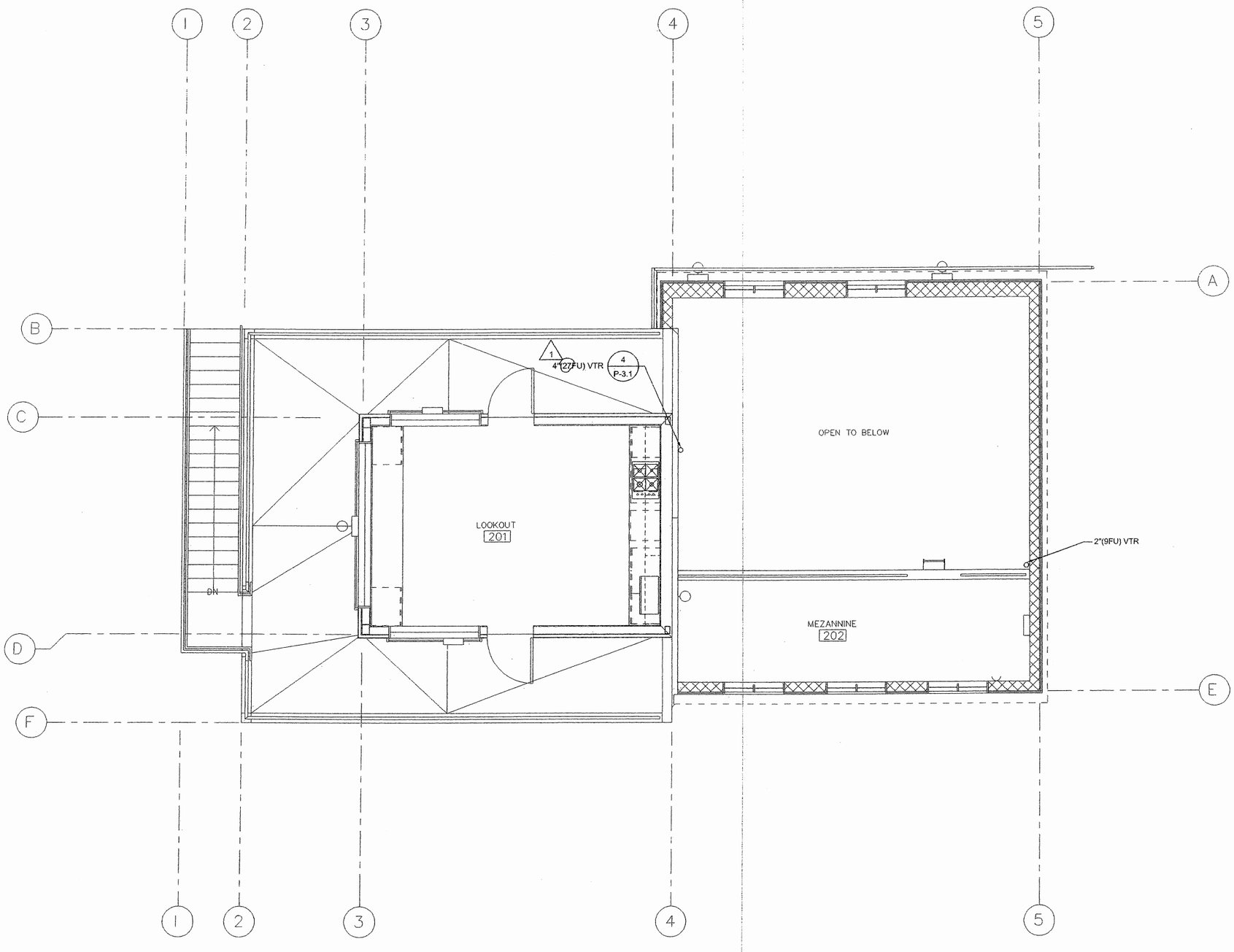
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1 SECOND FLOOR PLAN
P-2.2 1/4" = 1'-0"

KEY NOTES ◈

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PLUMBING SECOND FLOOR PLAN

P-2.2
10/06/2010

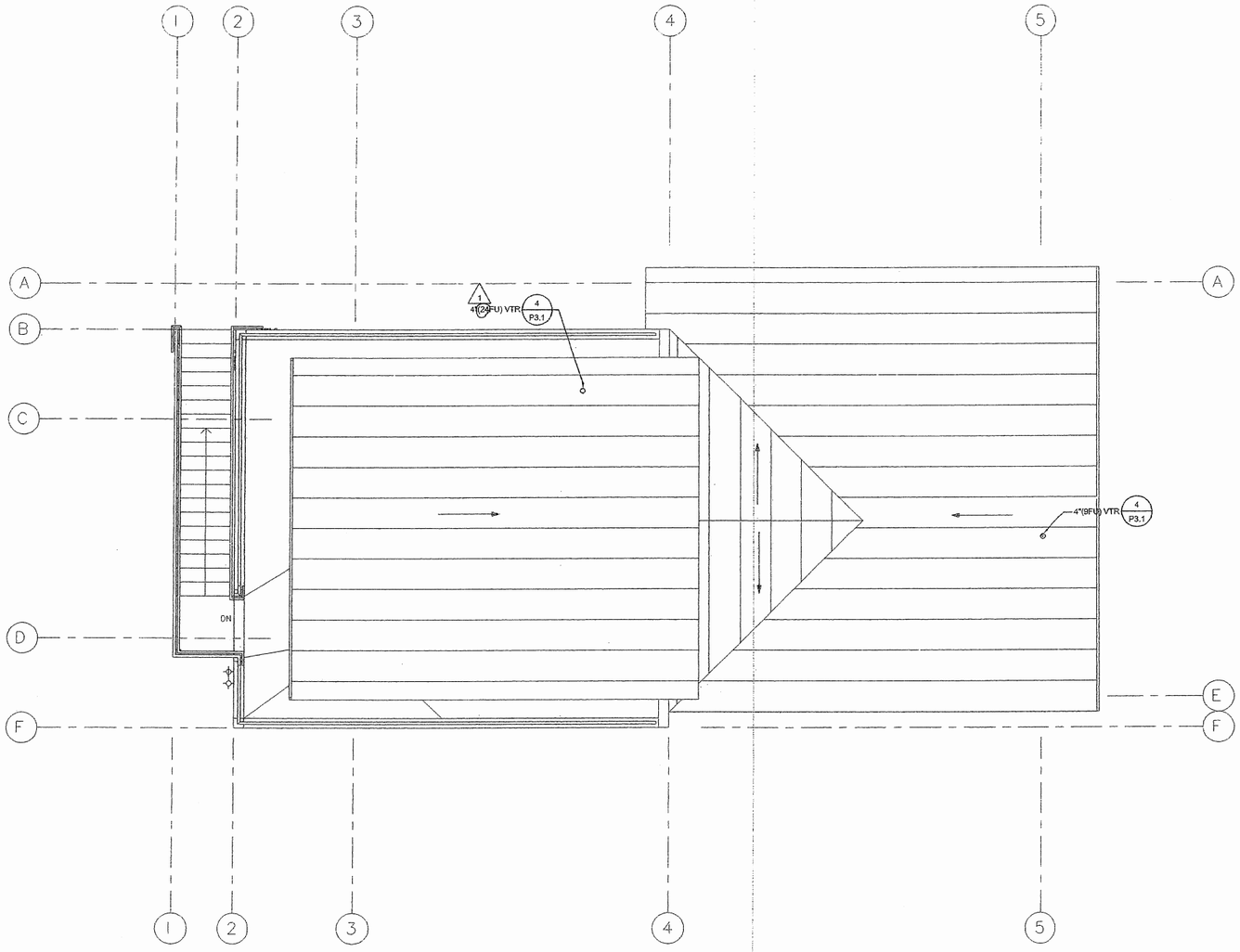
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KEY NOTES ◈



1 ROOF PLAN
P-2.3 1/4" = 1'-0"

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PLUMBING ROOF PLAN

P-2.3
10/06/2010

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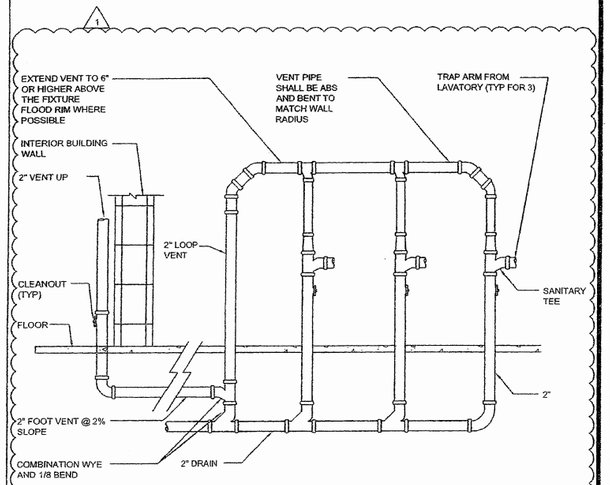
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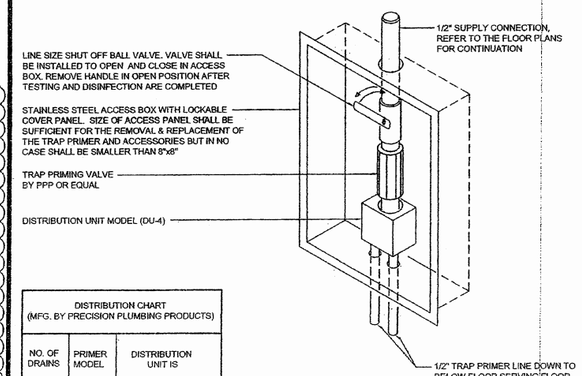
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ISLAND DETAIL

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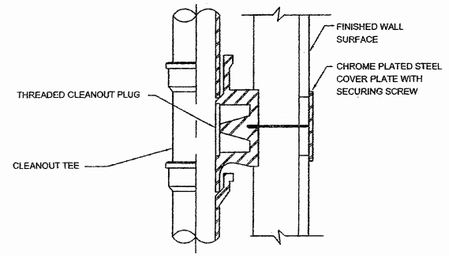


DISTRIBUTION CHART (MFG. BY PRECISION PLUMBING PRODUCTS)		
NO. OF DRAINS	PRIMER MODEL	DISTRIBUTION UNIT IS
1	P-2	NOT REQUIRED
2	P-2	DU-4
3	P-1	DU-4
4	P-1	DU-4

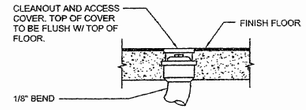
NOTE:
GROUP VALVES AND SIMILAR EQUIPMENT IN COMMON ACCESS PANELS WHEN APPLICABLE. ALL ITEMS SHALL BE FULLY OPERATIONAL AND SERVICEABLE.

TRAP PRIMER IN ACCESS BOX

NTS | 5



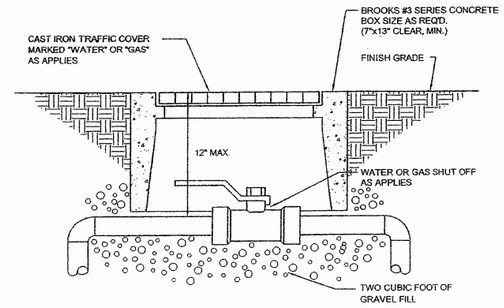
WALL CLEANOUT



FLOOR CLEANOUT

WALL AND FLOOR CLEANOUT

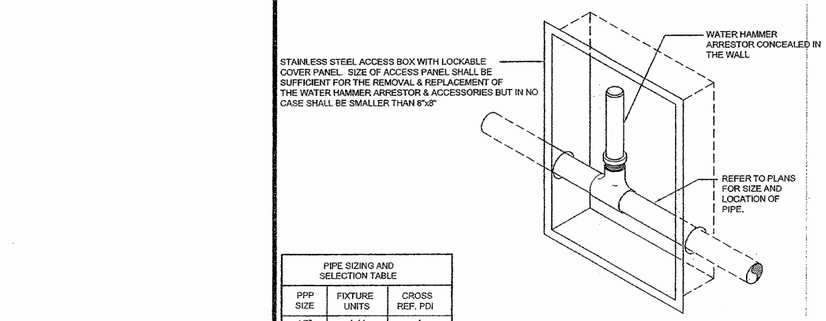
NTS | 3



NOTE:
SHUT OFF VALVE SHALL BE RATED FOR SERVICES CONNECTED.

EXTERIOR SHUT OFF VALVE IN YARD BOX

NTS | 1



PIPE SIZING AND SELECTION TABLE		
PPP SIZE	FIXTURE UNITS	CROSS REF. PDI
1/2"	1-11	A
3/4"	12-32	B
1"	33-60	C
1 1/4"	61-113	D
1 1/2"	114-154	E
2"	155-330	F

NOTE:
GROUP VALVES AND SIMILAR EQUIPMENT IN COMMON ACCESS PANELS WHEN APPLICABLE. ALL ITEMS SHALL BE FULLY OPERATIONAL AND SERVICEABLE.

FINAL SIZING AND MODEL SELECTION SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

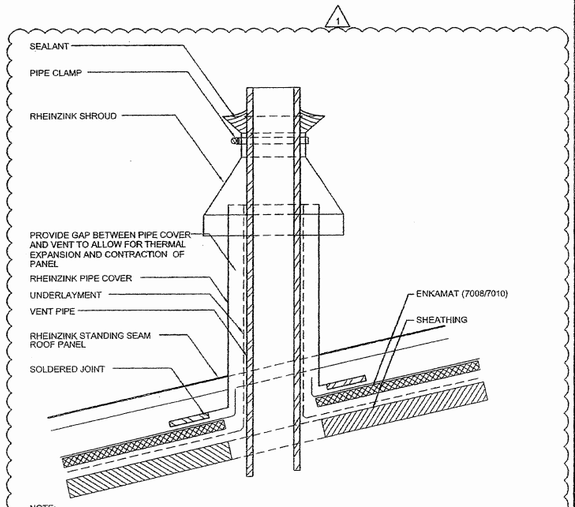
WATER HAMMER ARRESTOR SHALL BE INSTALLED IN AN UPRIGHT POSITION

WATER HAMMER ARRESTOR SHALL BE INSTALLED AT EACH QUICK CLOSING FAUCET OR FLUSH VALVE UNLESS USED IN A BANK OF FIXTURES.

WHEN INSTALLING ON A BANK OF FIXTURES THE WATER HAMMER ARRESTOR SHALL BE INSTALLED BEFORE THE LAST FIXTURE ON THE BANK.

WATER HAMMER ARRESTOR

NTS | 6



NOTE:
INFORMATION AND DETAILS HEREIN ARE ONLY A BASELINE FOR SYSTEM DESIGN AND INSTALLATION. MODIFICATION TO MEET PROJECT REQUIREMENTS IS THE RESPONSIBILITY OF THE DESIGNER AND ARCHITECT. RHEINZINK AMERICA STAFF ARE AVAILABLE TO ASSIST THE DESIGNER AND ARCHITECT IN THIS PROCESS.

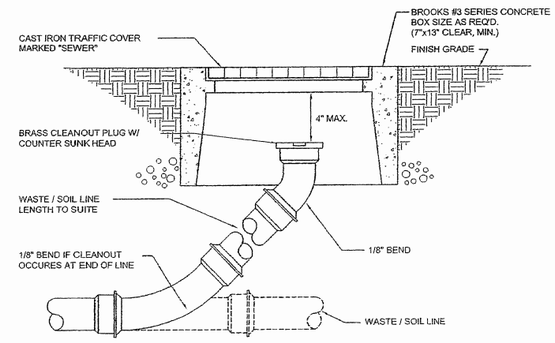
FASTENER: RECOMMENDATIONS:
STAINLESS STEEL
CLIMA SEAL
CLIMACOAT

STANDING SEAM PANEL REQUIRE A MINIMUM OF 2:12 SLOPE. STANDING SEAM PANEL SYSTEMS REQUIRE RHEINZINK PROROOFING OR ENKAMAT 7008/7010

VENT THROUGH ROOF

NTS | 4

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EXTERIOR CLEANOUT IN YARDBOX

NTS | 2

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A California Corporation | Kate Montgomery, Architect #C31093 | Jerry Mroczek, PE #34826, LS #8294 | Jeff Fetzer, LA #3444

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1	10/06/2010	AD

CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION

EL SEGUNDO LS
COVER SHEET

P-3.1
10/06/2010

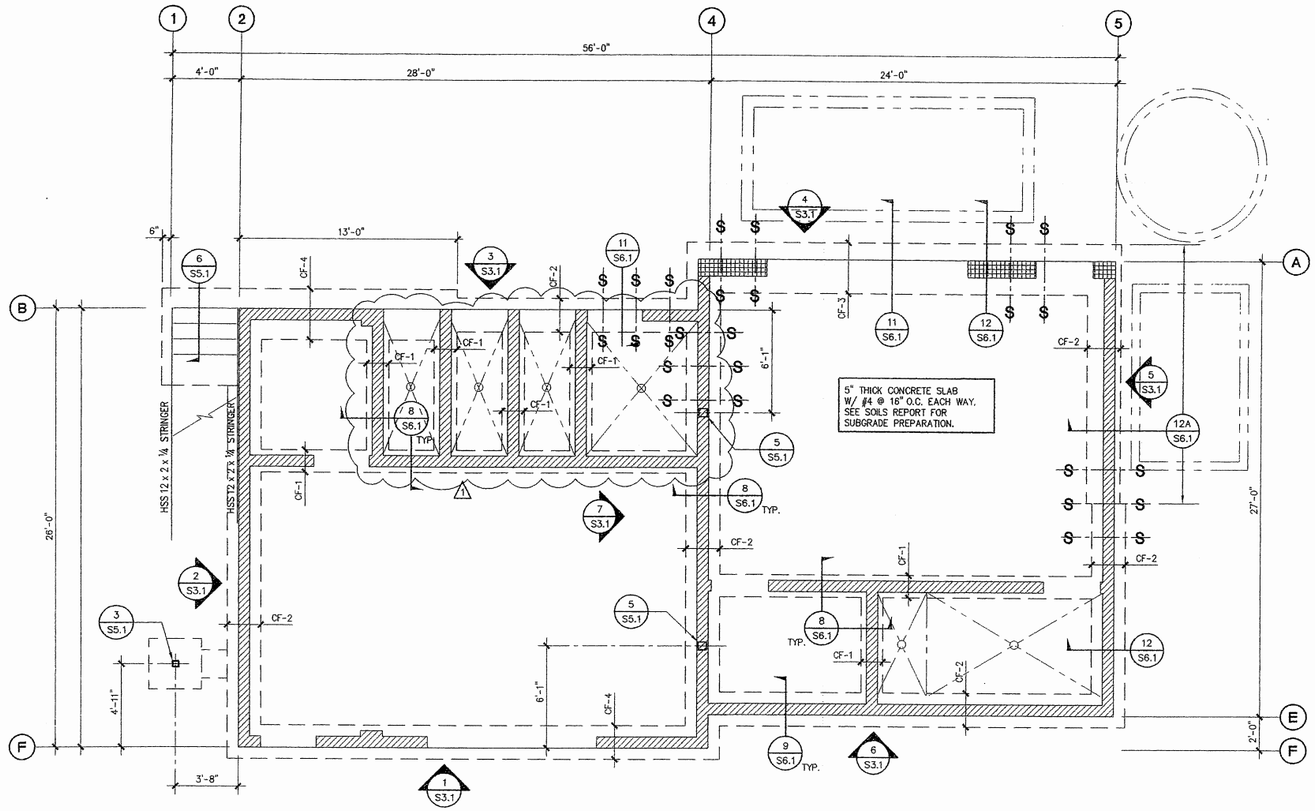
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CITY ENGINEER R.E. ____

SHEET ____ OF ____
JOB NO. 1109531

FILE NO. ____

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FOUNDATION NOTES:

1. SEE GENERAL NOTES ON SHEET "S4.1".
2. FOR TYPICAL CONCRETE DETAILS SEE SHEET "S4.3", TYPICAL MASONRY DETAILS SEE SHEET "S6.1".
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
4. VERIFY ALL DIMENSIONS, DEPRESSIONS, PITS, SLOPES, CURBS, STEPS, ETC. WITH ARCHITECTURAL AND/OR MEP DRAWINGS.
5. DATUM ELEVATION OF [0'-0"] IS AT THE HIGHEST POINT OF SLAB ON GRADE.
6. VERIFY WITH ARCH. OR CIVIL DRAWINGS THE EXTENT OF EXTERIOR SLAB ON GRADE.
7. EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE, NO MATERIAL IS TO BE EXCAVATED UNNECESSARILY.
8. SPECIAL INSPECTION IS REQUIRED FOR PLACEMENT OF ALL CONCRETE AND MASONRY WALLS.
9. INDICATES 8" CMU WALLS.
10. INDICATES 12" CMU WALLS.
11. INDICATES CONCRETE WALLS.
12. INDICATES STEPPED FOOTING PER DETAIL "11/S4.3".
13. CF-X INDICATES CONTINUOUS FOOTING, SEE SCHEDULE IN DETAIL "7/S6.1" FOR SIZE AND REINF.
14. FOR TYPICAL STAIR DETAILS SEE "S7.1".

JUL 21 2011

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REGISTERED PROFESSIONAL ENGINEER ROBERT D. SCHEIBEL 2569 STRUCTURAL STATE OF CALIFORNIA EXP. 3-31-12

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2	02/08/11	

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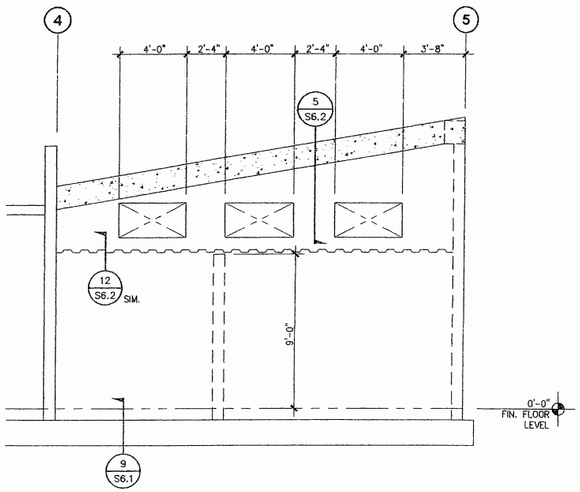
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FOUNDATION PLAN

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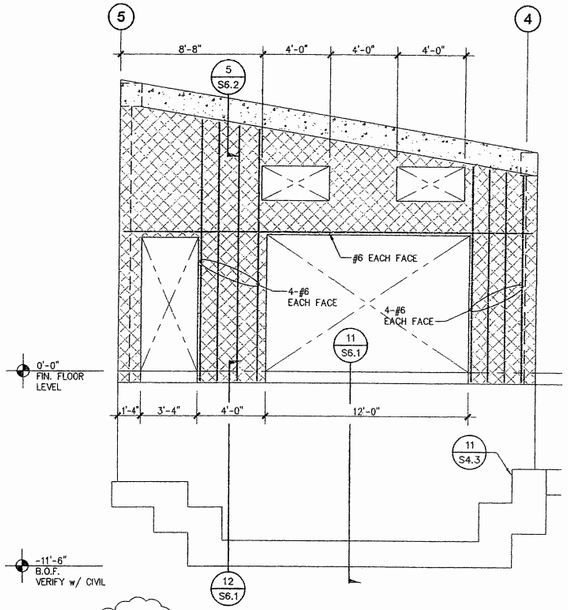
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SHEET 29 OF 66
JOB NO 1109531

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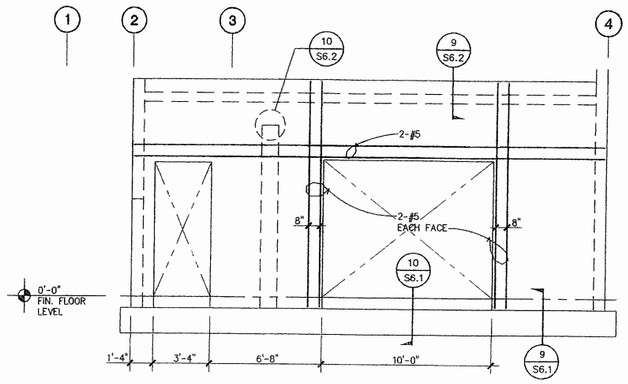
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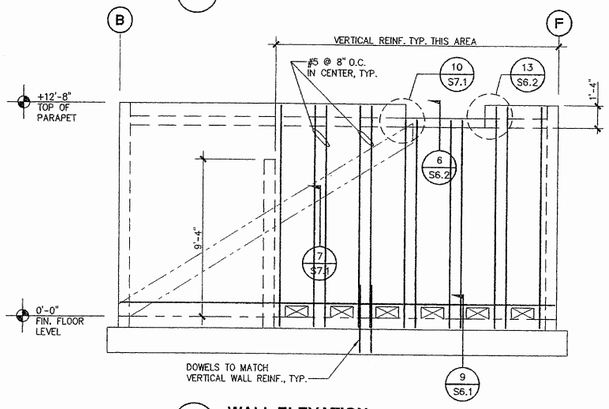
6 WALL ELEVATION



4 WALL ELEVATION

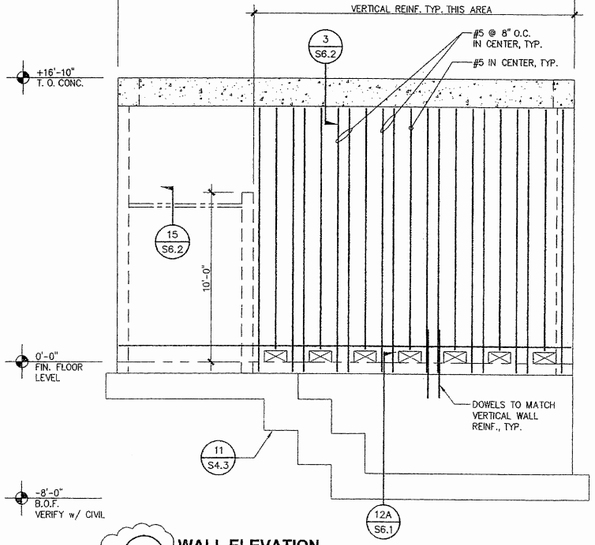


1 WALL ELEVATION

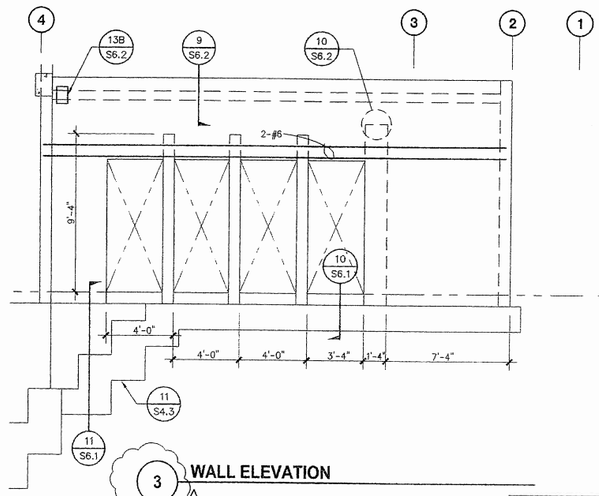


2 WALL ELEVATION

7 WALL ELEVATION



5 WALL ELEVATION



3 WALL ELEVATION

TYPICAL WALL NOTES:

1. SEE GENERAL NOTES SHEET "S4.1" FOR MASONRY AND REINFORCEMENT NOTES.
2. SEE SHEET "S6.1" FOR TYPICAL MASONRY DETAILS.
3. ALL WALLS SHALL BE 8" THICK AND SOLID GROUTED U.N.O.
4. INDICATES CONCRETE WALLS, LINTELS, AND PILASTERS.
5. INDICATES 12" CMU WALLS.
6. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY: f'm = 1,500 PSI (SPECIAL INSPECTION REQUIRED).
7. ALL MORTAR JOINTS SHALL BE FULLY BEDDED.
8. PROVIDE 2-#5 CONTINUOUS AT TOP OF PARAPET AND IN FIRST COURSE.
9. TYPICAL WALL REINFORCING U.N.O.:
   FOR 8" CMU: #5 @ 16" O.C. VERTICAL IN CENTER
   #5 @ 24" O.C. HORIZONTAL IN CENTER
   FOR 12" CMU: #5 @ 16" O.C. VERTICAL EACH FACE
   #5 @ 24" O.C. HORIZONTAL EA. FACE
10. TYPICAL REINFORCING AT WALL JAMB AND WALL ENDS FOR FOR 8" CMU 2-#5 EACH SIDE OF EACH OPENING AND ENDS PER "1/S6.1".
11. REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY WIRE POSITIONERS OR OTHER SUITABLE DEVICES AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS NOR 10'-0" O.C.
12. MAINTAIN 2" CLEAR FROM FACE OF MASONRY TO ALL REINFORCING.
13. SPECIAL INSPECTION PER CBC REQUIRED FOR ALL MASONRY.
14. ALL DIMENSIONS ARE TO FACE OF MASONRY (FOM). CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS INCLUDING CLEAR OPENING DIMENSIONS AND LOCATIONS WITH ARCHITECTURAL PLANS, MECHANICAL PLANS AND DOOR AND WINDOW MANUFACTURER FOR REQUIRED CLEARANCE PRIOR TO ANY WALL CONSTRUCTION. NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
15. CONTRACTOR SHALL COORDINATE AND VERIFY ALL EMBEDDED BOLTS AND PLATES PRIOR TO ANY WALL CONSTRUCTION.

JUL 21 2011

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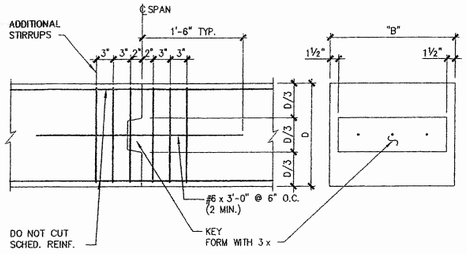
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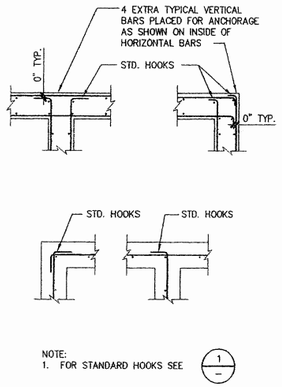
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WALL ELEVATIONS

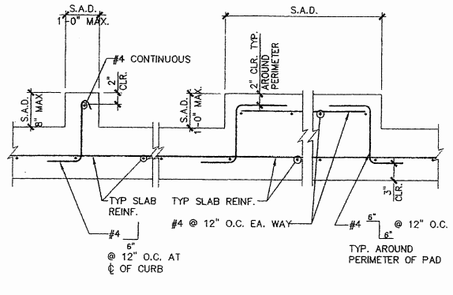
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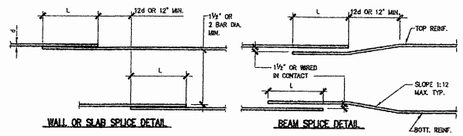
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SHEET 32 OF 68
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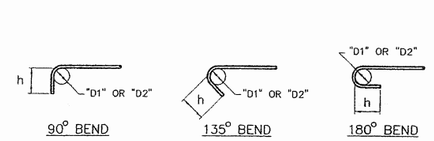






REINFORCEMENT LAP SPLICE LENGTH "L"								
CONCRETE STRENGTH	F'c = 2500 PSI		F'c = 3000 PSI		F'c = 4000 PSI		F'c = 4500 PSI	
BAR SIZE	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	2'-7"	2'-0"	2'-4"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"
#4	3'-5"	2'-8"	3'-1"	2'-5"	2'-8"	2'-1"	2'-7"	2'-0"
#5	4'-3"	3'-3"	3'-11"	3'-0"	3'-4"	2'-7"	3'-2"	2'-6"
#6	5'-1"	3'-11"	4'-8"	3'-7"	4'-0"	3'-1"	3'-10"	2'-11"
#7	7'-5"	5'-9"	6'-9"	5'-3"	5'-11"	4'-6"	5'-7"	4'-3"
#8	8'-6"	6'-6"	7'-9"	6'-0"	6'-9"	5'-2"	6'-4"	4'-11"
#9	9'-6"	7'-4"	8'-9"	6'-9"	7'-7"	5'-10"	7'-2"	5'-6"
#10	10'-7"	8'-2"	9'-8"	7'-5"	8'-5"	6'-6"	8'-11"	6'-1"

NOTES:
1. THE LAP SPLICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
2. WHERE CLEAR SPACE BETWEEN BARS IS LESS THAN 2 BAR DIAMETERS AND/OR THE CLEAR COVER IS LESS THAN ONE BAR DIAMETER, THE LAP SPLICE SHALL BE INCREASED BY 50%
3. WHERE LIGHTWEIGHT AGGREGATE CONCRETE IS USED, INCREASE LAP SPLICE LENGTH BY 30%
4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
5. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
6. SPLICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.

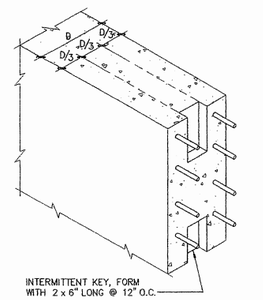


DIAMETER OF BENDS	
D1	1½" FOR #3 BARS 2" FOR #4 BARS 2½" FOR #5 BARS
D2	6d FOR #3 THRU #8 BARS 8d FOR #9, #10 & #11 BARS

"D1" - FOR STIRRUPS, TIES AND WALL REINF. AT OPENINGS
"D2" - FOR ALL OTHERS

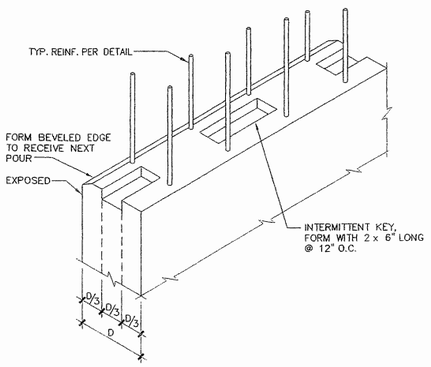
STANDARD HOOK LENGTHS "h"				
BAR SIZE	MAIN REINF.		STIRRUP & TIE HOOKS	
	90°	180°	90°	135°
#3	6"	4"	3"	4½"
#4	8"	4"	4"	6"
#5	9½"	4½"	5"	7½"
#6	11½"	5½"	11½"	10"
#7	13½"	6½"	13½"	11½"
#8	15"	7"	15"	13"
#9	18"	9"	-	-
#10	20"	10"	-	-
#11	22"	11"	-	-

13 BEAMS AND GRADE BEAMS CONSTRUCTION JOINTS



NOTES:
1. SEE REBAR LAP SPLICES AND INDIVIDUAL DETAILS FOR INFORMATION NOT NOTED.
2. SEE SPECIFICATIONS FOR JOINT ROUGHENING REQUIREMENTS.

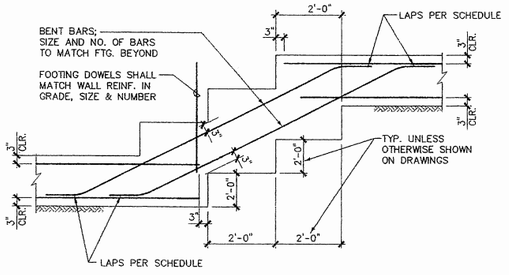
A VERTICAL JOINT



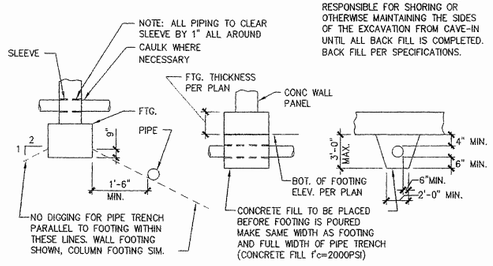
B HORIZONTAL JOINT

15 CONSTRUCTION JOINT IN CONCRETE WALL

10 CONCRETE WALL AND FOOTING INTERSECTIONS



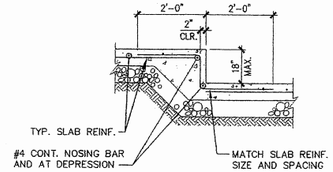
11 STEPS IN CONTINUOUS FOOTING



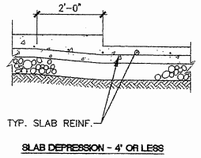
NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING OR OTHERWISE MAINTAINING THE SIDES OF THE EXCAVATION FROM CAVE-IN UNTIL ALL BACK FILL IS COMPLETED. BACK FILL PER SPECIFICATIONS.

12 PIPE CLEARANCE AT FOOTING

7 TYPICAL CURB AND RAISED PAD DETAILS

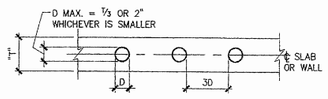


SLAB DEPRESSION - GREATER THAN 4"

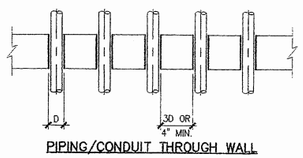


SLAB DEPRESSION - 4" OR LESS

8 SLAB-ON-GRADE DEPRESSION



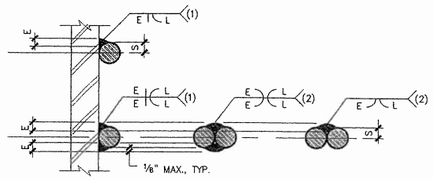
PIPING/CONDUIT IN WALL



PIPING/CONDUIT THROUGH WALL

9 PIPING AND CONDUIT IN OR THROUGH SLAB OR WALL

5 REBAR OFFSET AND LAP SPLICE



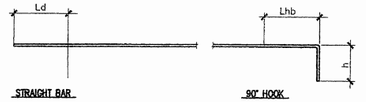
TYPE 1 TYPE 2

MINIMUM EFFECTIVE WELD SIZES & LENGTHS				
NOM. BAR SIZE	TYPE 1		TYPE 2	
	SIZE (E) (IN)	LENGTH (L) (IN)	SIZE (E) (IN)	LENGTH (L) (IN)
3	3/32	4	1/8	4
4	1/8	6	5/32	6
5	1/8	8	3/16	6
6	5/32	10	1/4	6
7	3/16	12	9/32	8
8	7/32	12	5/16	10
9	1/4	14	11/32	10
10	1/4	18	3/8	14
11	1/4	22	13/32	16

NOTES :
(1) EFFECTIVE THROAT E = 0.4S FOR TYPE (1).
(2) EFFECTIVE THROAT E = 0.6S FOR TYPE (2).
(3) USE E70XX ELECTRODES FOR GRADE 40 BARS; USE E90XX ELECTRODES FOR GRADE 60/ A706 BARS.
(4) WELDS BOTH SIDES OF BAR MAY BE 50% LENGTH (L) PER TABLE, 3" MINIMUM.
(5) WELDABILITY OF ASTM A615 GR. 60 BARS TO BE DETERMINED PER ASTM TO VERIFY CONFORMANCE WITH AWS D1.2. PREHEAT REQUIRED FOR GRADE 60 BARS PER AWS D1.5, SECTION 5.2.
(6) A706 BARS MAY BE USED IN LIEU OF GRADE 40.

6 TYPICAL REINFORCEMENT WELDS

1 STANDARD HOOKS

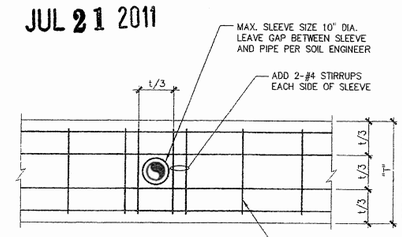


REINFORCEMENT DEVELOPMENT LENGTH												
CONCRETE STRENGTH		F'c = 2500 PSI			F'c = 3000 PSI			F'c = 4000 PSI			F'c = 4500 PSI		
BAR SIZE	h	Ld		Lhb	Ld		Lhb	Ld		Lhb	Ld		Lhb
		TOP BARS	OTHER BARS		TOP BARS	OTHER BARS		TOP BARS	OTHER BARS		TOP BARS	OTHER BARS	
#3	6"	2'-0"	1'-6"	7"	1'-10"	1'-5"	7"	1'-7"	1'-3"	6"	1'-6"	1'-2"	6"
#4	8"	2'-8"	2'-0"	10"	2'-5"	1'-10"	9"	2'-1"	1'-7"	8"	2'-0"	1'-6"	7"
#5	10"	3'-3"	2'-6"	1'-0"	3'-0"	2'-4"	11"	2'-7"	2'-0"	10"	2'-6"	1'-11"	9"
#6	12"	3'-11"	3'-0"	1'-2"	3'-7"	3'-9"	1'-1"	3'-1"	2'-5"	11"	2'-11"	2'-3"	11"
#7	14"	5'-9"	4'-5"	1'-5"	5'-3"	4'-0"	1'-3"	4'-6"	3'-6"	1'-1"	4'-3"	3'-4"	1'-0"
#8	16"	6'-6"	5'-0"	1'-7"	6'-0"	4'-7"	1'-5"	5'-2"	4'-0"	1'-3"	4'-11"	3'-9"	1'-2"
#9	19"	4'-1"	5'-8"	1'-9"	6'-8"	5'-2"	1'-7"	5'-10"	4'-6"	1'-5"	5'-6"	4'-3"	1'-4"
#10	22"	8'-0"	6'-3"	1'-11"	7'-6"	6'-9"	1'-9"	6'-6"	5'-0"	1'-7"	6'-1"	4'-8"	1'-6"

NOTES:
1. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

2 REBAR DEVELOPMENT LENGTH

JUL 21 2011



NOTE:
1. DO NOT CUT REINFORCING.
2. SLEEVE TO BE PLACED IN MIDDLE THIRD OF FOOTING DEPTH.

3 SLEEVE THRU FOOTING & GRADE BEAM

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27042 Towne Centre Dr.
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Foothill Ranch, CA 92610
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REGISTERED PROFESSIONAL ENGINEER ROSSEN D. SCHNEIDER 2568 STRUCTURAL STATE OF CALIFORNIA EXP 3-31-12

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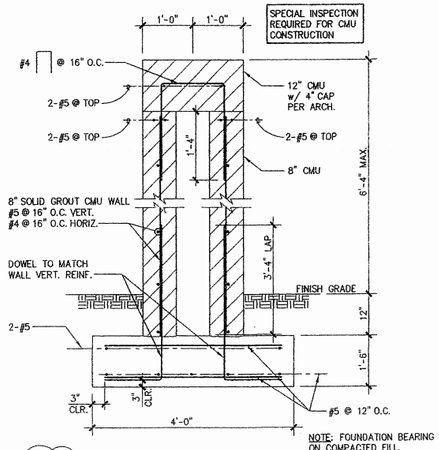
CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
EL SEGUNDO LS
TYPICAL CONCRETE DETAILS

S-4.3
05/04/2010
SHEET 35 OF 68
JOB NO. 1109531

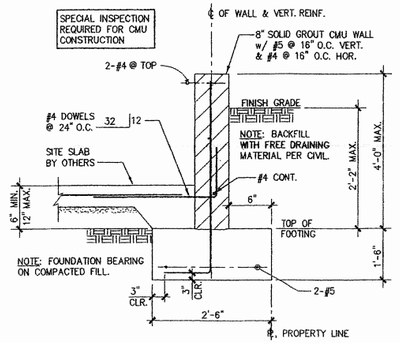
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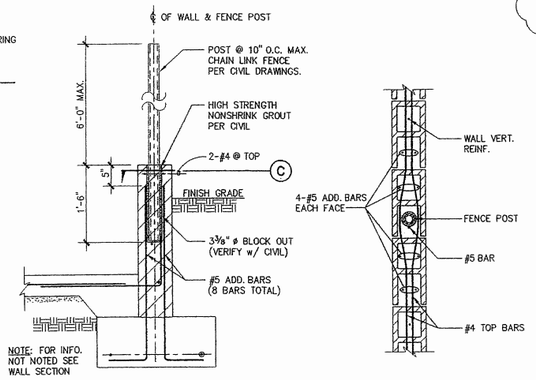
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10 / 1 **FREE STANDING SITE SHOWER WALL**



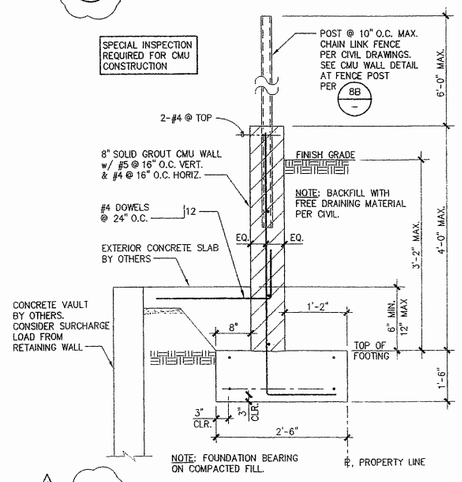
A **TYPICAL WALL SECTION**



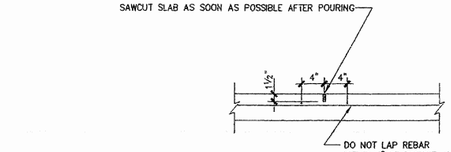
B **SECTION AT FENCE POST**

C **SECTION**

8 / 1 **SOUTH SITE RETAINING WALL DETAIL**



1 / 9 **EAST SITE RETAINING WALL DETAIL**



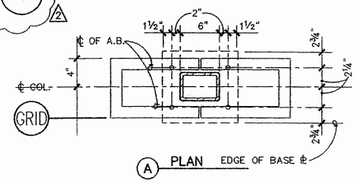
CONTROL JOINT "B"
SAW CUT CONTROL JOINT

NOTES:

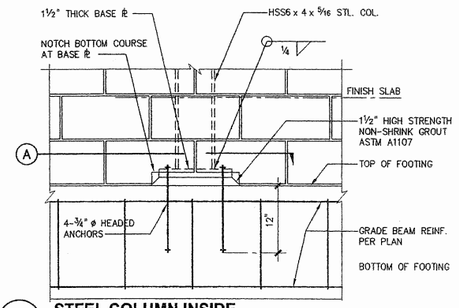
1. SAWCUT CONTROL JOINTS MAY BE USED IN BOTH DIRECTIONS AND SPACED AT 14'-0" MAX.
2. SAWCUT JOINTS SHALL BE MADE IMMEDIATELY AFTER FINISHING OPERATION AND PRIOR TO DRYING SHRINKAGE. SAW CUT JOINTS SHALL BE MADE WITH "EARLY ENTRY" SAW EQUIPMENT.
3. FINISHING OF SLAB CONCRETE SHALL BE DONE AFTER SURFACE BLEED WATER HAS EVAPORATED.
4. CONCRETE SHALL HAVE AIR ENTERTAINMENT OF 2% TO 3% BY VOLUME.
5. MOISTEN SUB-GRADE PRIOR TO PLACING CONCRETE.
6. APPLY MEMBRANE CURING TO SLAB ON GRADE IMMEDIATELY AFTER FINISHING OPERATION.

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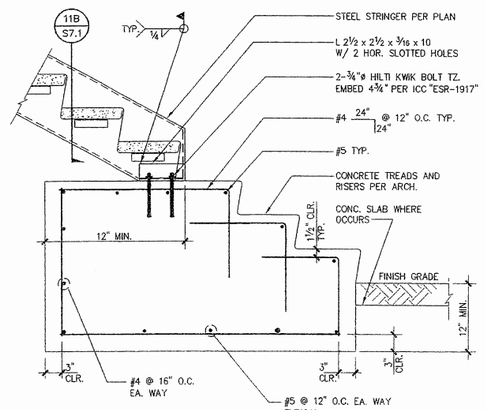
4 / 2 **TYPICAL SLAB CONSTRUCTION JOINTS**



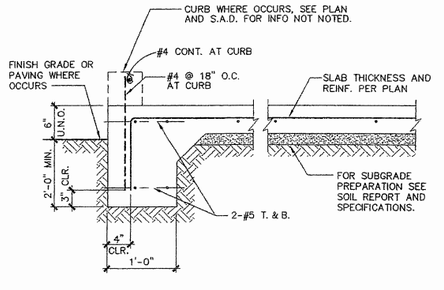
A **PLAN** EDGE OF BASE ℄



5 / 1 **STEEL COLUMN INSIDE CMU WALL**

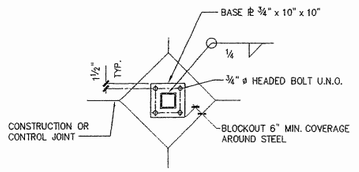


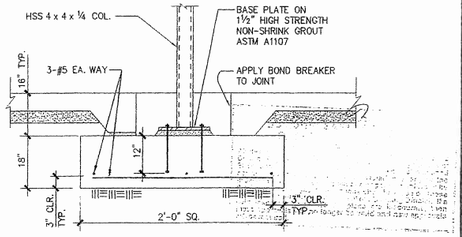
6 / 1 **STAIR LANDING DETAIL**



EDGE OF SLAB **TYPICAL SLAB ON GRADE**

2 **TYPICAL SLAB EDGE**





3 **COLUMN BASE/PAD FOOTING**

PROJECT ADDRESS:
EL SEGUNDO, CA

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CITY OF EL SEGUNDO
CALIFORNIA ENGINNERING DIVISION
EL SEGUNDO LS
DETAILS

S-5.1
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SHEET 36 OF 68

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