TORRANCE TRANSIT PARK AND RIDE REGIONAL TERMINAL
30% CONSTRUCTION DRAWINGS

PERFORMANCE DRAWINGS - NOT FOR CONSTRUCTION

30% CONSTRUCTION DRAWINGS
SEPTEMBER 26, 2012

CITY OF TORRANCE
TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL

465 CRENSHAW BLVD.
TORRANCE, CA 90503

RNL
333 SOUTH GRAND AVENUE,
SUITE 1480
LOS ANGELES, CA 90071
213-955-9775 t
866-398-2616 f

SUSTAINABILITY CONSULTANT
AMBIENT ENERGY
130 West 5th Ave.
Denver, CO 80204
303-278-1532

MEP ENGINEER
GLUMAC
617 W 7th St,
Suite 500
Los Angeles, CA 90017
213-239-8866

LIGHTING DESIGNER
RNL
1050 17th St,
Suite A200
Denver, CO 80265
303-295-1717

ARCHITECT
RNL
333 South Grand Ave
Suite 1480
Los Angeles, CA 90071
213-955-9775

STRUCTURAL ENGINEER
MIYAMOTO
700 South Flower Street,
Suite 1010
Los Angeles, CA 90017
213-362-7778

LANDSCAPE ARCHITECT
RNL
333 South Grand Ave
Suite 1480
Los Angeles, CA 90071
213-955-9775

GEOTECHNICAL ENGINEER
DIAZ YOURMAN & ASSOCIATES
1616 East 17th Street
Santa Ana, CA 92705-8509
714-245-2920

CIVIL ENGINEER
PSOMAS
3111 Camino Del Rio North
Suite 702
San Diego, CA 92108
619-961-2800

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY TO THE ENTIRE SET OF DRAWINGS AND ARE NOT SPECIFIC TO ANY ONE DISCIPLINE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS WITH REQUIREMENTS OF THE CONTRACT BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS, WHICH MIGHT AFFECT THE WORK OF THAT PARTY.

THE WORK DESCRIBED BY THE DRAWINGS OF ANY ONE DISCIPLINE MAY BE AFFECTED BY THE WORK DESCRIBED ON DRAWINGS OF ANOTHER DISCIPLINE AND MAY REQUIRE REFERENCE TO THE DRAWINGS OF ANOTHER DISCIPLINE. PARTIAL SETS OF DRAWINGS ARE INCOMPLETE AND SHOULD NOT BE DISTRIBUTED OR UTILIZED BY THE CONTRACTOR.

THE DRAWINGS AND SPECIFICATIONS ESTABLISH DETAILED MINIMUM REQUIREMENTS FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT.

THE CONTRACTOR SHALL ENDEAVOR TO IDENTIFY AND NOTIFY IN WRITING TO THE ARCHITECT CONFLICTS BETWEEN THE WORK OF DIFFERENT PARTIES, AND DISCREPANCIES BETWEEN THE DOCUMENTS AND THE ACTUAL CONDITIONS AT THE EARLIEST POSSIBLE DATE SO AS TO ALLOW REASONABLE AND ADEQUATE TIME FOR THE CONFLICT TO BE RESOLVED WITHOUT DELAYING THE WORK. ALL DEVIATIONS FROM THAT WHICH IS REQUIRED BY THE CONTRACT DOCUMENTS MUST BE APPROVED IN ADVANCE BY THE ARCHITECT AND OWNER PRIOR TO PROCEEDING.

THE GENERAL NOTES, SYMBOLS AND DEFINITIONS APPLICABLE TO EACH DISCIPLINE CAN BE FOUND AT THE FRONT OF EACH DISCIPLINE'S SET OF DRAWINGS AND IS LISTED AS PART OF THE OVERALL PROJECT INDEX OF DRAWINGS.

BASIC FIRE PROTECTION AND EXITING CONCEPTS ARE ILLUSTRATED BY THE LIFE SAFETY AND CODE PLANS ON THE "G" SERIES SHEETS. THE CONTRACTOR SHALL BE FAMILIAR WITH REQUIREMENTS AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH REFERENCED FIRE RATED ASSEMBLY TESTS AND STANDARDS. SEE ALSO A____ SERIES SHEETS FOR PARTITION TYPES.

THE ARCHITECTURAL DRAWINGS ESTABLISH, COORDINATE AS WELL AS TAKE PRECEDENCE FOR THE FINISHED APPEARANCE AND EXACT LOCATION OF ALL EXPOSED ELEMENTS OF THE WORK OF ALL TRADES, INCLUDING THAT WORK WHICH IS ILLUSTRATED PRIMARILY ON DRAWINGS OF OTHER DISCIPLINES.

THE DRAWINGS MAY MAKE REFERENCE TO AND/OR ILLUSTRATE ITEMS WHICH ARE NOT PART OF THE WORK OF THE CONTRACT. THESE "NOT IN CONTRACT" ITEMS AS INDICATED ARE REFERENCED AND/OR ILLUSTRATED FOR THE CONTRACTORS REFERENCE, INFORMATION AND COORDINATION ONLY.

THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL APPLICABLE LAWS, CODES, REGULATIONS AND ORDINANCES OF THE PLACE (CITY, COUNTY, DISTRICT AND STATE) WHERE THE PROJECT IS LOCATED - ALTHOUGH SUCH REQUIREMENTS MAY NOT BE REFLECTED BY THESE DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND SIMILAR RELEASES REQUIRED FOR THE CONSTRUCTION AND OCCUPANCY OF THE PROJECT. THE CONTRACTOR SHALL FURNISH COPIES OF ALL SUCH ITEMS TO THE OWNER AND ARCHITECT WITHIN 10 DAYS OF RECEIPT OF SUCH ITEMS. IF PERMITS ARE ISSUED SUBJECT TO CERTAIN CONDITIONS OR REVISIONS TO THE WORK OR IF PERMITS ARE DELAYED FOR ANY REASON, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ARCHITECT.

THE CONTRACTOR SHALL COORDINATE AND OBTAIN ALL REQUIRED INSPECTIONS OF WORK, INCLUDING THAT PERFORMED BY OWNER. CONTRACTOR SHALL REGULARLY UPDATE OWNER AND ARCHITECT REGARDING THE STATUS OF INSPECTIONS.

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MAINTAIN AND PROTECT NEW WORK AS WELL AS EXISTING SYSTEMS AND ELEMENTS WHICH ARE TO REMAIN. ANY DAMAGE TO SUCH SYSTEMS AND ELEMENTS SHALL BE IMMEDIATELY REPAIRED IN A MANNER ACCEPTABLE TO THE ARCHITECT. IF SATISFACTORY REPAIRS CANNOT BE MADE, THE CONTRACTOR SHALL REPLACE SYSTEMS AND ELEMENTS WITH "NEW" PRODUCTS ACCEPTABLE TO THE ARCHITECT. ALL REPAIRS AND REPLACEMENT COSTS SHALL BE THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR.

GENERAL NOTES

THE CONTRACTOR SHALL COORDINATE ALL WORK WITH APPLICABLE UTILITY PROVIDERS.

SOME DRAWINGS ARE TYPICALLY SCHEMATIC IN NATURE. MODIFICATIONS IN ELEMENTS (SUCH AS DUCTS, PIPING, CONDUIT, WIRING, ETC) MAY BE REQUIRED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.

THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL CHASE SIZES WITH MECHANICAL SUB-CONTRACTOR.

THE DRAWINGS SHALL NOT BE REPRODUCED FOR SUBMITTALS. DRAWINGS OR PORTIONS THEREOF USED FOR SUBMITTALS WILL BE REJECTED AND RETURNED TO THE CONTRACTOR WITHOUT THE APPROVAL OF THE ARCHITECT.

THE CONTRACTOR SHALL PROVIDE AND COORDINATE ALL BLOCK-OUTS, SLEEVES, INSERTS, BOLTS, PLATES, ETC. FOR ALL TRADES PRIOR TO PLACING CONCRETE OR MASONRY.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS, METHODS AND SEQUENCES OF CONSTRUCTION.

THE CONTRACTOR SHALL PROMPTLY REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION AND DEMOLITION DEBRIS. THE CONTRACTOR SHALL OBTAIN APPROVAL OF OWNER FOR DETAILS RELATED TO ALL SITE ACCESS AND REMOVAL PLANS.

THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH OWNER'S PROCEDURES FOR MAINTAINING A SECURE SITE AND BUILDING.

EACH INSTALLER SHALL EXAMINE THE SUBSTRATE CONDITION AND/OR SITE CONDITIONS WHICH AFFECT THE QUALITY OF EACH PRODUCT TO BE INSTALLED. IF ANY CONDITIONS EXIST WHICH WILL HAVE A DETRIMENTAL EFFECT ON THE QUALITY OF THE INSTALLATION, THE INSTALLER SHALL IMMEDIATELY ADVISE THE CONTRACTOR. INSTALLATION SHALL NOT PROCEED UNTIL THE UNSATISFACTORY CONDITIONS ARE CORRECTED. INSTALLATION OF PRODUCTS SHALL SIGNIFY ACCEPTANCE BY THE INSTALLER OF THE SUBSTRATE CONDITIONS.

THE CONTRACTOR SHALL MAINTAIN CURRENT/UPDATED RECORD DRAWINGS ON SITE AT ALL TIMES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL COORDINATION EFFORTS AND ASSIGNMENT OF RESPONSIBILITY OF WORK OF ALL SUBCONTRACTORS FOR ALL PORTIONS OF WORK RELATED TO THE ENTIRETY OF THE CONTRACT DOCUMENTS.

FOR THE PURPOSE OF PRICING/ESTIMATES, WHEN THERE IS A CONFLICT/DISCREPANCY IN THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR IS TO PRICE THE HIGHER COST ITEM.

DO NOT SCALE DRAWINGS.

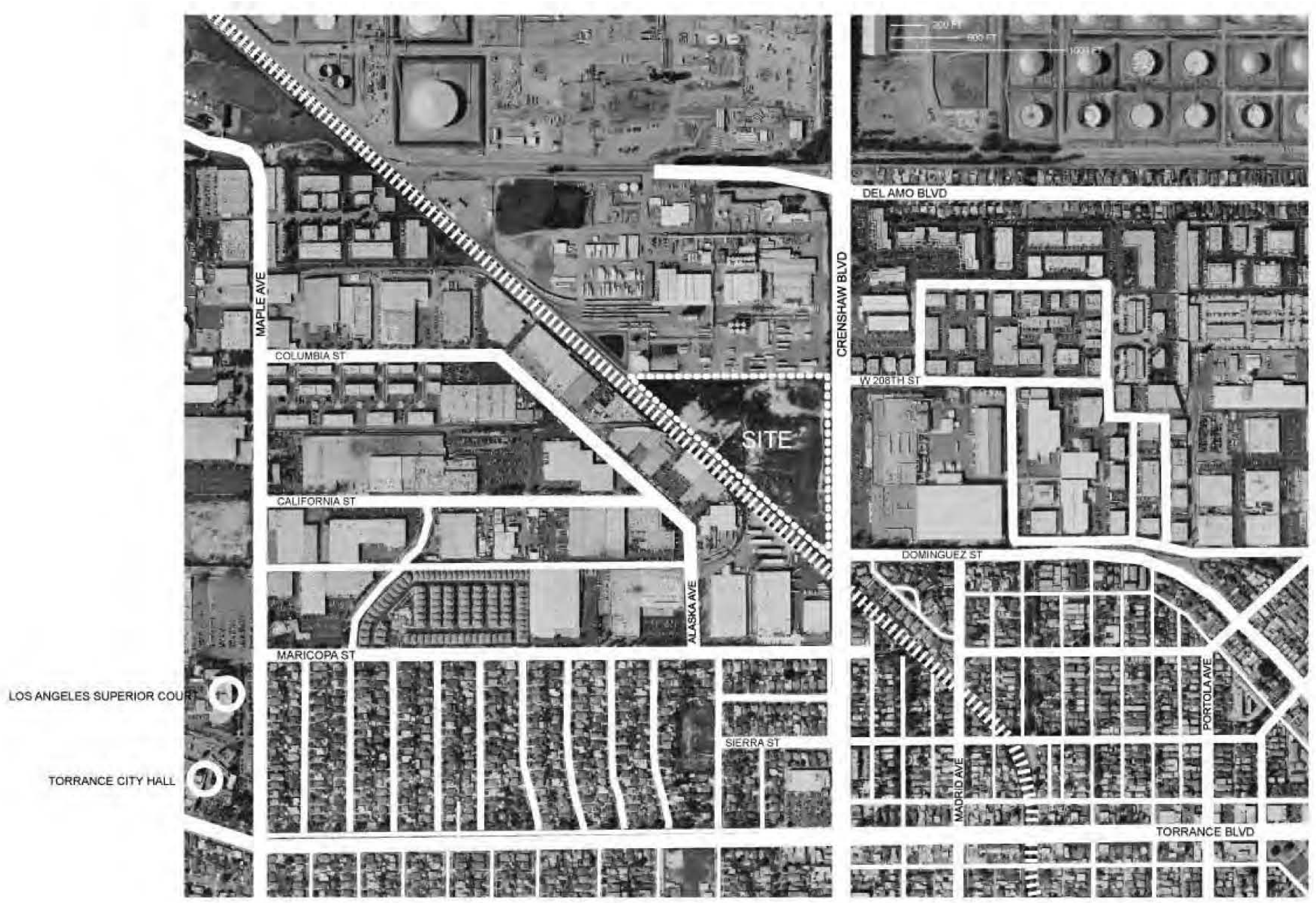
ALL FINISH MATERIALS SHALL CONFORM TO I.B.C. FOR FLAME SPREAD AND SMOKE DEVELOPMENT, REFER TO SPECIFIC MATERIAL SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS. SEE SHEET G____ FOR ADDITIONAL CODE REQUIREMENTS.

EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND/OR VISUAL FIELD SURVEYS. THE CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT THE SITE PRIOR TO SUBMITTING A BID. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

THE CONTRACTOR SHALL COORDINATE INFORMATION THAT IS PART OF ONE OR MORE SEPARATE BID PACKAGES WITH ADDITIONAL INFORMATION ISSUED IN THIS BID PACKAGE. THE MULTIPLE BID PACKAGES, AS OCCURS, SHALL CONSTITUTE A COMPLETE PROJECT.

THE CONTRACTOR SHALL COORDINATE ALL LOCATIONS AND SIZES OF HOUSEKEEPING PADS WITH MECHANICAL AND ELECTRICAL SUB-CONTRACTORS.

THE GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LOUVERS.



ABBREVIATIONS

AB	ANCHOR BOLT
ACT	ACOUSTICAL TILE
ADJ	ADJACENT/ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE NO.
ALUM	ALUMINUM
ANOD	ANODIZED
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPD	APPROVED
APPROX	APPROXIMATELY
ARCH	ARCHITECT
ASSY	ASSEMBLY
AUTO	AUTOMATIC/AUTOMATION
AVG	AVERAGE
AWI	AMERICAN WOODWORKING INSTITUTE
AWT	ACCOUSTICAL WALL TREATMENT
B/B	BACK TO BACK
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BLST	BALLAST
BM	BEAM/BENCH MARK
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT UP ROOFING
C / C	CENTER TO CENTER
CAB	CABINET
CB	CATCH BASIN
CBB	CEMEMTITOUS BACKER BOARD
CEM	CEMENT
CEM PLAS	CEMENT PLASTER
CER	CERAMIC
CF	CUBIC FOOT / FEET
CF/CI	CONTRACTOR FURNISHED/CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/OWNER INSTALLED
CFLG	COUNTER FLASHING
CFMF	COLD FORMED METAL FRAMING
CG	CORNER GUARD
CIP	CAST IN PLACE
CJ	CONTROL JOINT / CONSTRUCTION JOINT
CL	CENTERLINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CLT	CLEAT
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
COND	CONDITION
CONST	CONSTRUCTION
CONT	CONTINUE / CONTINUATION / CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
COP	COPING
CORR	CORRIDOR
CPT	CARPET
CSK	COUNTER SUNK
CT	CERAMIC TILE
CTR	CENTER
CU FT	CUBIC FOOT / CUBIC FEET
CU YD	CUBIC YARDS
CW	COLD WATER
D	DEPTH / DEEP
DBL	DOUBLE
DEG	DEGREE
DEL	DELETE
DEMO	DEMOLITION
DET	DETAIL
DETN	DETENTION
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPENSER
DMPF	DAMPPROOFING
DN	DOWN
DR	DOOR / DRAIN
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
E	EAST
EA	EACH
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL	REFERENCE ELEVATION
EL	EASEMENT LINE
ELEC	ELECTRIC / ELECTRICAL
ELEV	ELEVATOR / ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER / ENGINEERING
EOS	EDGE OF SLAB
EPDM	ETHYLENE PROPYLENE DIENE MONOMOR
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EST	ESTIMATE
ETC	ET CETERA
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXP	EXPOSED / EXPAND / EXPANSION
EXT	EXTERIOR / EXTERNAL / EXTINGUISHER
F / F	FACE TO FACE
F F EL	FINISHED FLOOR ELEVATION
FA	FIRE ALARM / FACE AREA / FRESH AREA
FACP	FIRE ALARM CONTROL PANEL
FD	FLOOR DRAIN
FDTN	FOUNDATION
FDV	FIRE DEPARTMENT VALVE CABINET
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF INSUL	FOIL BACKED INSULATION
FH	FIRE HYDRANT / FIRE HOSE
FHC	FIRE HOSE CABINET
FIN	FINISH
FIN GR	FINISHED GRADE
FIXT	FIXTURE
FL	FLOW LINE / FLOOR LINE
FLR	FLOOR / FLOORING
FLUOR	FLUORESCENT
FR	FRAME / FIRE RATED / FIRE RETARTANT
FT	FOOT / FEET / FIRE TREATED / FULLY TEMPERED
FTG	FOOTING
FURG	FURRING
FURN	FURNISH / FURNITURE
FUT	FUTURE
FVC	FIRE VALVE CABINET
GA	GAGE
GAL	GALLONS
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERAL / GENERATOR
GI	GALVANIZED IRON
GL	GLASS / GROUND LEVEL
GLZ	GLAZING
GND	GROUND
GYP BD	GYPSUM BOARD
GYP SHTG	GYPSUM SHEATHING BOARD.
HC	HANDICAPPED ACCESSIBLE / HOLLOW CORE
HD	HEAD / HEAVY DUTY
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT / HORSEPOWER / HIGH PRESSURE
HT	HEIGHT

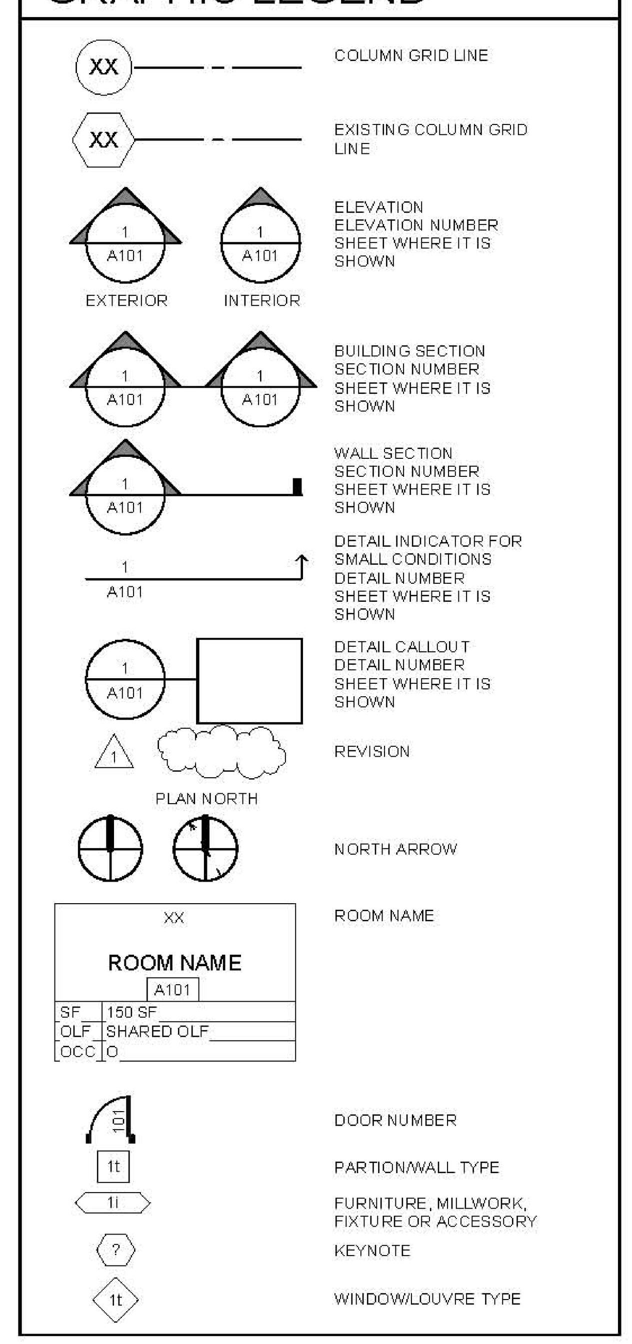
ABBREVIATIONS

HVAC	HEATING VENTILATION AND AIR CONDITIONING
HW	HOT WATER
HWH	HOT WATER HEATER
ID	INSIDE DIAMETER / INTERIOR DESIGN
IF	INSIDE FACE / INTAKE FAN
IN	INCHES
INCAND	INCANDESCENT
INCL	INCLUDING
INSTL	INSTALL
INSUL	INSULATE / INSULATION
INT	INTERIOR / INTERNAL
INV	INVERT
INV EL	INVERT ELEVATION
J BOX	JUNCTION BOX
JAN	JANITOR
JAN CLO	JANITOR CLOSET
JT	JOINT
KIT	KITCHEN
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LBS	POUNDS
LF	LINEAR FEET
LH	LEFT HAND
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LPT	LOW POINT
LT	LIGHT
LTG	LIGHTING
LVR	LOUVER
MAINT	MAINTENANCE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFG	MANUFACTURING
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	METAL LATH
MO	MASONRY OPENING
MOD BIT	MODIFIED BITUMEN
MR	MOISTURE RESISTANT
MS	MOP SINK
MTD	MOUNTED
MTL	METAL
MULL	MULLION
N	NORTH
N/A	NOT APPLICABLE
NCOMBL	NONCOMBUSTIBLE
NEG	NEGATIVE
NIC	NOT IN CONTACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O/O	OUT TO OUT
OA	OVERALL / OUTSIDE AIR
OC	ON CENTER
OD	OUTSIDE DIAMETER / OUTSIDE DIMENSION
OF	OUTSIDE FACE
OF/CI	OWNER FURNISHED/CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/OWNER INSTALLED
OFF	OFFICE
OH	OPPOSITE HAND / OVERHEAD / OVERHANG
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
ORN	ORNAMENTAL
ORS	OVERFLOW ROOF SCUPPER
PAT	PATTERN
PBD	PARTICLE BOARD
PCC	PRECAST CONCRETE
PERF	PERFORATED
PERM	PERMANENT
PL	PLATE / PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER / PLASTIC
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POL	POLISHED
PR	PAIR / PIPE RAIL
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PRELIM	PRELIMINARY
PREP	PREPARATION
PROJ	PROJECT
PT	PAINT / PRESSURE TREATED
PT CONC	POST TENSION CONCRETE
PTD	PAINTED / PAPER TOWEL DISPENSER
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QT	QUARRY TILE
QTY	QUANTITY
R	RADIUS / RISER
RA	RETURN AIR
RB	RUBBER BASE / RESILIENT BASE
RBR	RUBBER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REBAR	REINFORCED STEEL BAR
REC	RECESSED
REF	REFERENCE / REFRIGERATOR
REINF	REINFORCED / REINFORCEMENT
REM	REMOVE
REQD	REQUIRED
REV	REVISION
RGD INS	RIGID INSULATION
RH	RIGHT HAND
RL	ROOF LEADER
RLG	RAILING
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RP	REFERENCE POINT
RTG	RATING
RTU	ROOF TOP UNIT
RVL	REVEAL
S	SOUTH
SALV	SALVAGE
SAN	SANITARY
SB	SPLASH BLOCK
SCHED	SCHEDULE / SCHEDULED
SCHEM	SCHEMATIC
SCP	SCUPPER
SCWD	SOLID CORE WOOD DOOR
SEC	SECOND
SECT	SECTION
SF	SQUARE FOOT / SQUARE FEET / SUPPLY FAN
SGL	SINGLE
SHT	SHEET
SHT MTL FLASH	SHEET METAL FLASHING
SHTHG	SHEATHING
SIM	SIMILAR
SLNT	SEALANT
SM	SHEET METAL / SMALL / SURFACE MOUNTED
SMACNA	SHEET METAL AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION
SPEC	SPECIFICATION(S)
SPLY	SUPPLY
SPRT	SUPPORT
SQ	SQUARE
SST	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STL JST	STEEL JOIST
STOR	STORAGE
STRUCT	STRUCTURAL

ABBREVIATIONS

SURF	SURFACE
SUSP	SUSPENDED
SYMM	SYMMETRICAL
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TBD	TO BE DETERMINED
TEL	TELEPHONE
TEMP	TEMPERATURE / TEMPORARY
TERR	TERRAZZO
THK	THICK / THICKNESS
THRES	THRESHOLD
THRU	THROUGH
TMPD GL	TEMPERED GLASS
TO	TOP OF ____
TOC	TOP OF CONCRETE / TOP OF CURB
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOP	TOP OF PARAPET / TOP OF PAVEMENT
TOS	TOP OF STEEL / TOP OF SLAB
TOW	TOP OF WALL
TRTD	TREATED
TS	TUBE STEEL
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UC	UNDERCUT
UL	UNDERWRITER'S LABORATORIES
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
UTIL	UTILITY
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VNR	VENEER
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	WEST / WIDTH / WIDE
W/	WITH
W/O	WITHOUT
WBL	WOOD BLOCKING
WC	WATER CLOSET / WALL COVERING
WD	WOOD / WOOD DOOR
WDW	WINDOW
WF	WIDE FLANGE
WGL	WIRED GLASS
WH	WATER HEATER / WEEP HOLE
WP	WATERPROOFING / WORKING POINT
WR	WATER RESISTANT / WEATHER RESISTANT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD / YARDS

GRAPHIC LEGEND



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E-005	ELECTRICAL OUTDOOR TITLE-24
E-006	ELECTRICAL LIGHTING FIXTURE SCHEDULE
E-101	ELECTRICAL SITE PLAN
E-110	ELECTRICAL WEST BUILDING POWER PLAN
E-111	ELECTRICAL EAST BUILDING POWER PLAN - LEVEL 1
E-112	ELECTRICAL EAST BUILDING POWER PLAN - LEVEL 2
E-113	ELECTRICAL WEST BUILDING ROOF POWER PLAN
E-114	ELECTRICAL EAST BUILDING ROOF POWER PLAN
E-115	ELECTRICAL WEST BUILDING LIGHTING PLAN
E-116	ELECTRICAL - EAST BUILDING LIGHTING PLANS - LEVELS 1 & 2

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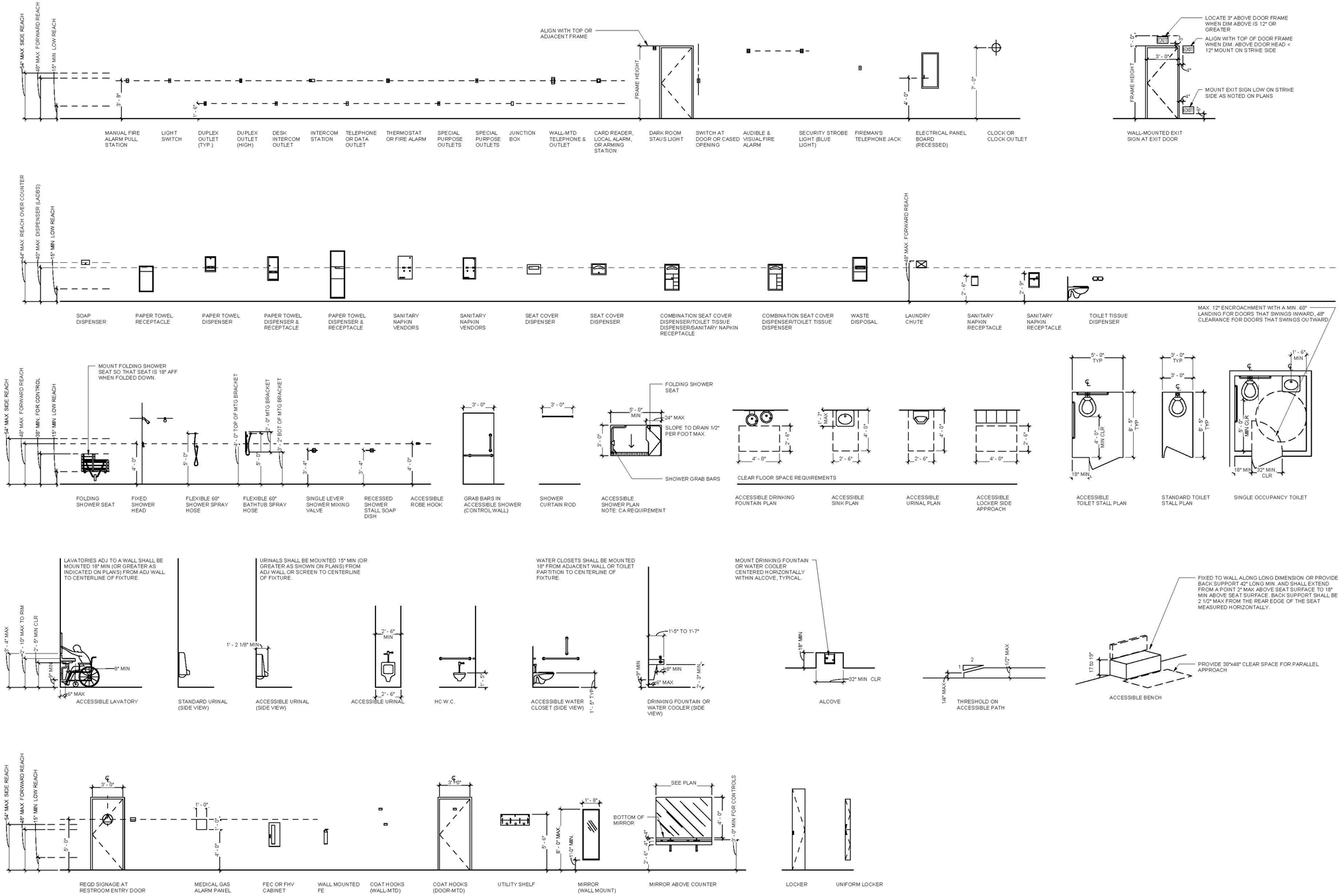
No	REVISION/SUBMISSION	DATE

PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/8" = 1'-0"

VICINITY MAP, DRAWING INDEX

G-001



NOTE: AT LEAST 5% (NOT LESS THAN 1) LOCKERS SHALL BE ACCESSIBLE. PROVIDE 30"X48" CLEAR SPACE FOR PARALLEL APPROACH.

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TYPICAL FIXTURE MOUNTING HEIGHTS

G-003

216 SIGNS (SCOPING REQUIREMENTS)
216.2 DESIGNATIONS. INTERIOR AND EXTERIOR SIGNS IDENTIFYING PERMANENT ROOMS AND SPACES SHALL COMPLY WITH 703.1 (GENERAL), 703.2 (RAISED CHARACTERS), AND 703.5 (VISUAL CHARACTERS). WHERE PICTOGRAMS ARE PROVIDED AS DESIGNATIONS OF PERMANENT INTERIOR ROOMS AND SPACES, THE PICTOGRAMS SHALL COMPLY WITH 703.6 AND SHALL HAVE TEXT DESCRIPTORS COMPLYING WITH 703.2 (RAISED CHARACTERS) AND 703.5 (VISUAL CHARACTERS).
EXCEPTION: EXTERIOR SIGNS THAT ARE NOT LOCATED AT THE DOOR TO THE SPACE THEY SERVE SHALL NOT BE REQUIRED TO COMPLY WITH 703.2.

[ADVISORY 216.2 SECTION 216.2 APPLIES TO SIGNS THAT PROVIDE DESIGNATIONS, LABELS, OR NAMES FOR INTERIOR ROOMS OR SPACES WHERE THE SIGN IS NOT LIKELY TO CHANGE OVER TIME. EXAMPLES INCLUDE INTERIOR SIGNS LABELING RESTROOMS, ROOM AND FLOOR NUMBERS OR LETTERS, AND ROOM NAMES.]

216.3 DIRECTIONAL AND INFORMATIONAL SIGNS. SIGNS THAT PROVIDE DIRECTION TO OR INFORMATION ABOUT INTERIOR SPACES AND FACILITIES OF THE SITE SHALL COMPLY WITH 703.5 (VISUAL CHARACTERS).

[ADVISORY 216.3 DIRECTIONAL AND INFORMATIONAL SIGNS. INFORMATION ABOUT INTERIOR SPACES AND FACILITIES INCLUDES RULES OF CONDUCT, OCCUPANT LOAD, AND SIMILAR SIGNS. SIGNS PROVIDING DIRECTION TO ROOMS OR SPACES INCLUDE THOSE THAT IDENTIFY EGRESS ROUTES.]

216.4 MEANS OF EGRESS
216.4.1 EXIT DOORS. DOORS AT EXIT PASSAGEWAYS, EXIT DISCHARGE, AND EXIT STAIRWAYS SHALL BE IDENTIFIED BY TACTILE SIGNS COMPLYING WITH 703.1 (GENERAL), 703.2 (RAISED CHARACTERS), AND 703.5 (VISUAL CHARACTERS).

216.4.2 AREAS OF REFUGE. SIGNS TO PROVIDE INSTRUCTIONS IN AREAS OF REFUGE SHALL COMPLY WITH 703.5 (VISUAL CHARACTERS).

216.4.3 DIRECTIONAL SIGNS. SIGNS TO PROVIDE DIRECTIONS TO ACCESSIBLE MEANS OF EGRESS SHALL COMPLY WITH 703.5 (VISUAL CHARACTERS).

216.5 PARKING. ACCESSIBLE PARKING SPACES SHALL BE IDENTIFIED BY SIGNS. PARKING SPACE IDENTIFICATION SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SIGNS IDENTIFYING VAN PARKING SPACES SHALL CONTAIN THE DESIGNATION "VAN ACCESSIBLE". SIGNS SHALL BE 60 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE MEASURED TO THE BOTTOM OF THE SIGN.

216.6 ENTRANCES. WHERE NOT ALL ENTRANCES COMPLY WITH 404, ENTRANCES COMPLYING WITH 404 SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. DIRECTIONAL SIGNS COMPLYING WITH 703.5 (VISUAL CHARACTERS) THAT INDICATE THE LOCATION OF THE NEAREST ENTRANCE COMPLYING WITH 404 SHALL BE PROVIDED AT ENTRANCES THAT DO NOT COMPLY WITH 404.
404. DOORS, DOORWAYS, AND GATES THAT ARE PART OF AN ACCESSIBLE ROUTE.

216.7 ELEVATORS. WHERE EXISTING ELEVATORS DO NOT COMPLY WITH 407, ELEVATORS THAT DO COMPLY WITH 407 SHALL BE CLEARLY IDENTIFIED WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.

216.8 TOILET ROOMS AND BATHING ROOMS. WHERE EXISTING TOILET OR BATHING ROOMS ARE NOT ACCESSIBLE, DIRECTIONAL SIGNAGE INDICATING THE LOCATION OF THE NEAREST TOILET ROOM OR BATHING ROOM COMPLYING WITH 603 WITHIN THE FACILITY SHALL BE PROVIDED. SIGNS SHALL COMPLY WITH 703.5 (VISUAL CHARACTERS) AND SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.

703 SIGNS (TECHNICAL REQUIREMENTS)
703.1 GENERAL. SIGNS SHALL COMPLY WITH 703. WHERE BOTH VISUAL AND TACTILE CHARACTERS ARE REQUIRED, EITHER ONE SIGN WITH BOTH VISUAL AND TACTILE CHARACTERS, OR TWO SEPARATE SIGNS, ONE WITH VISUAL, AND ONE WITH TACTILE CHARACTERS, SHALL BE PROVIDED.

703.2 RAISED CHARACTERS. RAISED CHARACTERS SHALL COMPLY WITH 703.2 AND SHALL BE DUPLICATED IN BRAILLE COMPLYING WITH 703.3. RAISED CHARACTERS SHALL BE INSTALLED IN ACCORDANCE WITH 703.4.

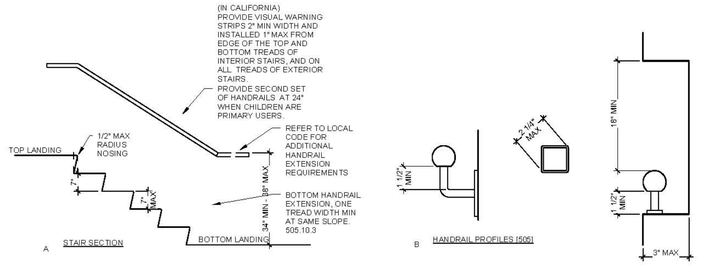
703.3 BRAILLE. BRAILLE SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH 703.3 AND 703.4.

703.4 INSTALLATION HEIGHT AND LOCATION. SIGNS WITH TACTILE CHARACTERS SHALL COMPLY WITH 703.4.
703.4.1 HEIGHT ABOVE FINISH FLOOR OR GROUND. TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER.
EXCEPTION: TACTILE CHARACTERS FOR ELEVATOR CAR CONTROLS SHALL NOT BE REQUIRED TO COMPLY WITH 703.4.1.
703.4.2 LOCATION. WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE.

703.6 PICTOGRAMS
703.6.1 PICTOGRAM FIELD. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6 INCHES (150 MM) MINIMUM. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD.
703.6.3 TEXT DESCRIPTORS. PICTOGRAMS SHALL HAVE TEXT DESCRIPTORS LOCATED DIRECTLY BELOW THE PICTOGRAM FIELD. TEXT DESCRIPTORS SHALL COMPLY WITH 703.2 (RAISED CHARACTERS), 703.3 (AND 703.4 (INSTALLATION HEIGHT AND LOCATION).

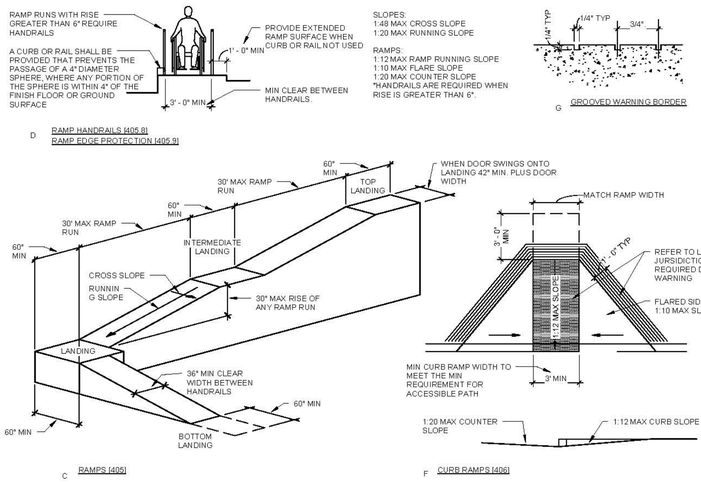
703.7 SYMBOLS OF ACCESSIBILITY. SYMBOLS OF ACCESSIBILITY SHALL COMPLY WITH 703.7.
1. INTERNATIONAL SYMBOL OF ACCESSIBILITY
2. INTERNATIONAL SYMBOL OF TTY
3. INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS
4. VOLUME CONTROL TELEPHONE

SIGN
NTS

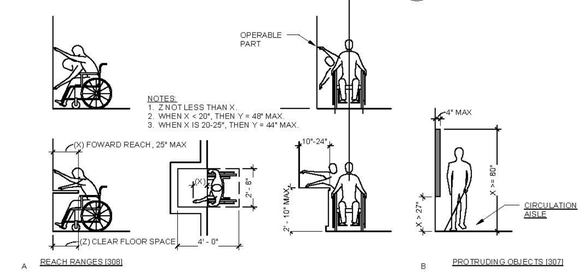


STAIR AND HANDRAIL
NTS

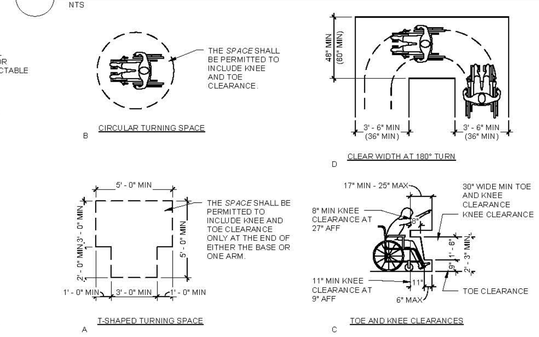
HANDRAIL PROFILE
3" = 1'-0"



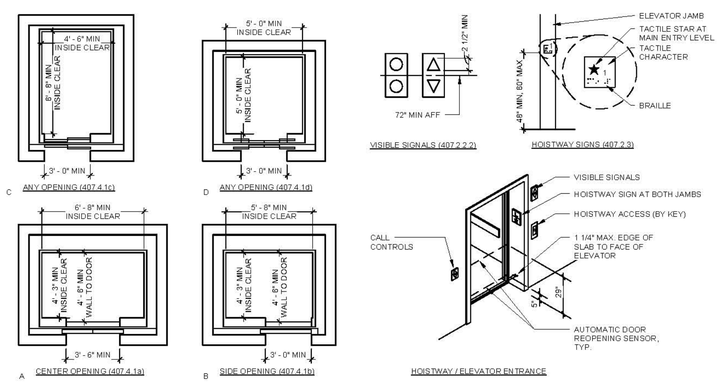
RAMP
NTS



REACH RANGES AND PROTRUDING OBJECTS
NTS



WHEEL CHAIR TURNING SPACE AND TOE AND KNEE CLEARANCES
1/4" = 1'-0"



407 ELEVATORS
407.1 GENERAL. ELEVATORS SHALL COMPLY WITH 407 AND WITH ASME A17.1

407.2.1 CALL CONTROLS. WHERE ELEVATOR CALL BUTTONS OR KEYPADS ARE PROVIDED, THEY SHALL COMPLY WITH 407.2.1 AND 309.4. CALL BUTTONS SHALL BE RAISED OR FLUSH. 407.2.1.1 HEIGHT. CALL BUTTONS AND KEYPADS SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308, MEASURED TO THE CENTERLINE OF THE HIGHEST OPERABLE PART.
407.2.1.2 SIZE. CALL BUTTONS SHALL BE ¾ INCH (19 MM) MINIMUM IN THE SMALLEST DIMENSION.
407.2.1.3 CLEAR FLOOR OR GROUND SPACE. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED AT CALL CONTROLS.

407.2.2.1 VISIBLE AND AUDIBLE SIGNALS. A VISIBLE AND AUDIBLE SIGNAL SHALL BE PROVIDED AT EACH HOISTWAY ENTRANCE TO INDICATE WHICH CAR IS ANSWERING A CALL AND THE DIRECTION OF TRAVEL.

407.2.2.2 VISIBLE SIGNALS. VISIBLE SIGNAL FIXTURES SHALL BE CENTERED AT 72 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND. THE VISIBLE SIGNAL ELEMENTS SHALL BE 2 ½" MINIMUM MEASURED ALONG THE VERTICAL CENTERLINE OF THE ELEMENT. SIGNALS SHALL BE VISIBLE FROM THE FLOOR AREA ADJACENT TO THE HALL CALL BUTTON.

407.2.2.3 AUDIBLE SIGNALS.
AUDIBLE SIGNALS SHALL SOUND ONCE FOR THE UP DIRECTION AND TWICE FOR THE DOWN DIRECTION.

407.2.3 HOISTWAY SIGNS
407.2.3.1 FLOOR DESIGNATION. FLOOR DESIGNATIONS COMPLYING WITH 703.2 AND 703.4.1 SHALL BE PROVIDED ON BOTH JAMBS OF ELEVATOR HOISTWAY ENTRANCES. FLOOR DESIGNATIONS SHALL BE PROVIDED IN BOTH TACTILE CHARACTERS AND BRAILLE. TACTILE CHARACTERS SHALL BE 2" HIGH MINIMUM. A TACTILE STAR SHALL BE PROVIDED ON BOTH JAMBS AT THE MAIN ENTRY LEVEL.

407.3 ELEVATOR DOOR REQUIREMENTS. HOISTWAY AND CAR DOORS SHALL COMPLY WITH 407.3.

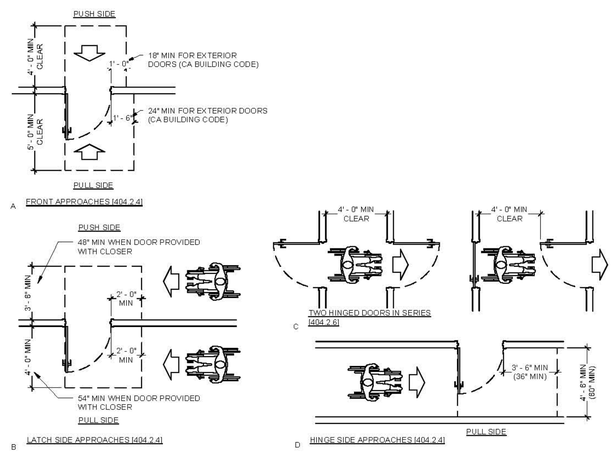
407.3.3 REOPENING DEVICE. ELEVATOR DOORS SHALL BE PROVIDED WITH A REOPENING DEVICE COMPLYING WITH 407.3.3 THAT SHALL STOP AND REOPEN A CAR DOOR AND HOISTWAY DOOR AUTOMATICALLY IF THE DOOR BECOMES OBSTRUCTED BY AN OBJECT OR PERSON.
407.3.3.1 HEIGHT. THE DEVICE SHALL BE ACTIVATED BY SENSING AN OBSTRUCTION PASSING THROUGH THE OPENING AT 5" NOMINAL AND 29" NOMINAL ABOVE THE FINISH FLOOR.

407.4 ELEVATOR CAR REQUIREMENTS. ELEVATOR CARS SHALL COMPLY WITH 407.4.
407.4.1 CAR DIMENSIONS. INSIDE DIMENSIONS OF ELEVATOR CARS AND CLEAR WIDTH OF ELEVATOR DOORS SHALL COMPLY WITH TABLE 407.4.1.

407.4.6 ELEVATOR CAR CONTROLS.
ELEVATOR CAR CONTROLS SHALL COMPLY WITH 407.4.6 AND 309.4.

NOTE:
SEE REQUIREMENTS FROM LOCAL JURISDICTIONS HAVING AUTHORITY.

ELEVATOR
NTS



FLOOR CLEARANCE
1/4" = 1'-0"

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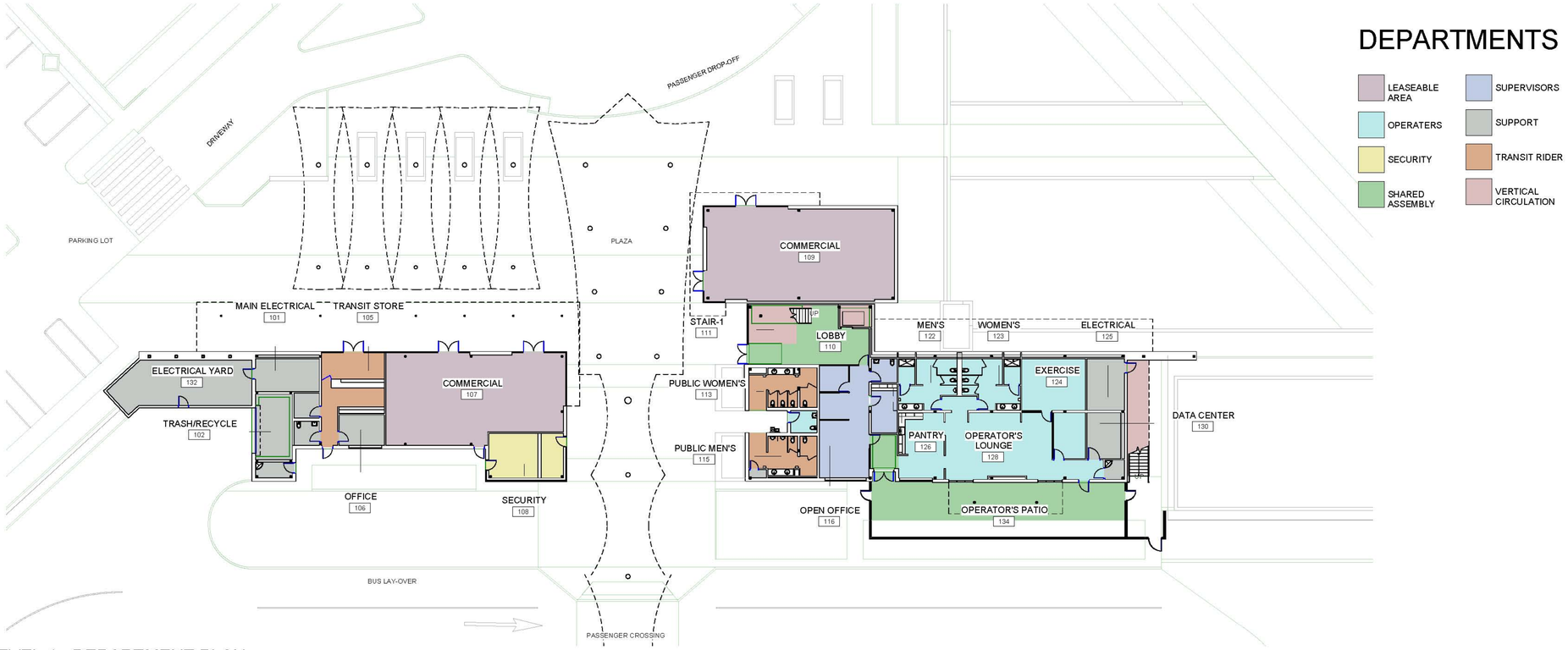
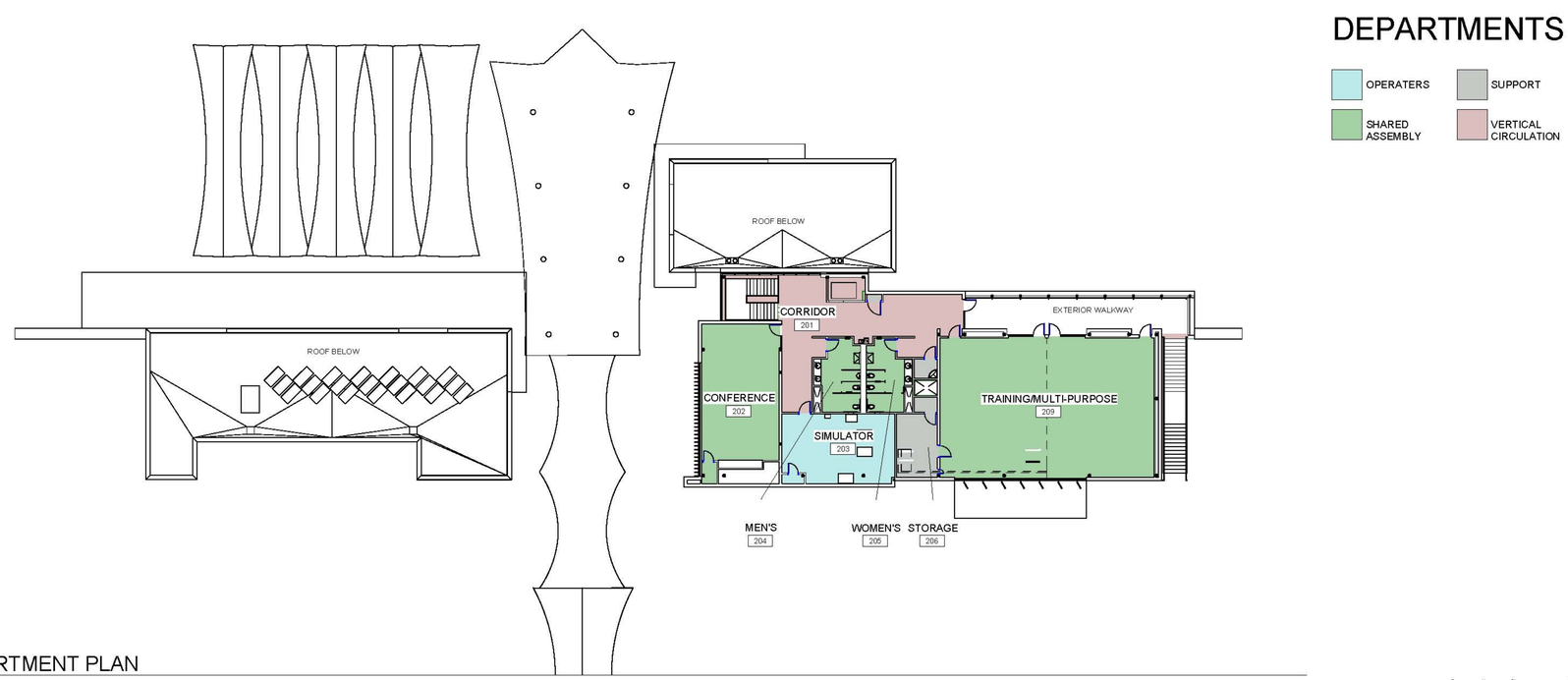
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: As indicated

TYPICAL ACCESIBLE DETAILS

G-004



1 LEVEL 1 - DEPARTMENT PLAN
1/16" = 1'-0"



2 LEVEL 2 - DEPARTMENT PLAN
1/16" = 1'-0"

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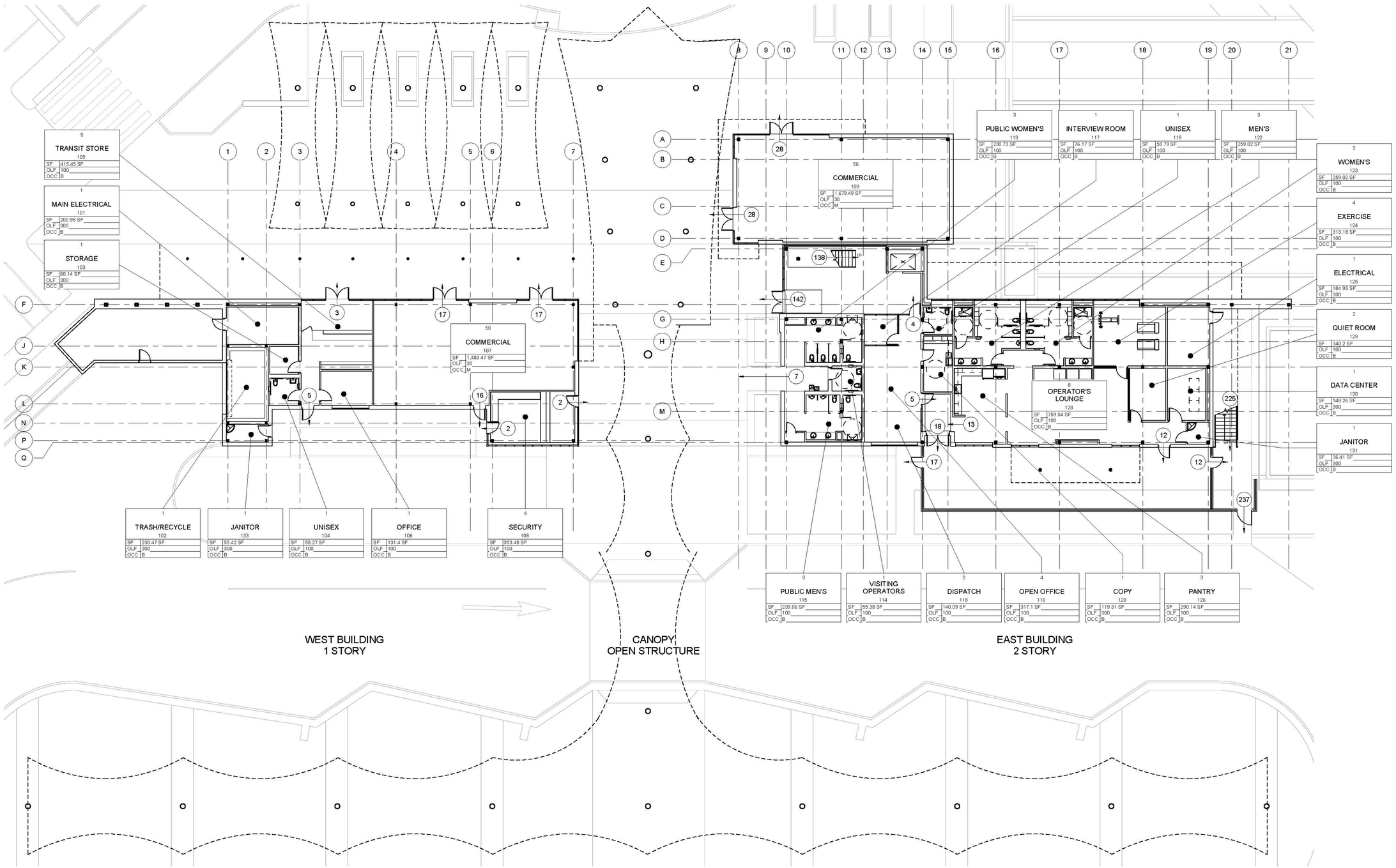
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/16" = 1'-0"

DEPARTMENT PLANS

G-101

CODE LEGEND

ROUTE A	TRAVEL PATH TO EXIT
EXTINGUISHER ROUTE	TRAVEL PATH TO EXTINGUISHER
path length MAX BLDG DIAG	BUILDING DIAGONAL
XX ROOM NAME A101	OCCUPANCY CLASIFICATION
SF 150 SF	AREA
OLF SHARED OLF	OCUPANCY LOAD FACTOR
OCC O	NUMBER OF OCCUPANTS
0	QUANTITY OF EXITING OCCUPANTS



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

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SCALE: As indicated

EGRESS PLAN - LEVEL 1

G-110

CODE LEGEND

ROUTE A	TRAVEL PATH TO EXIT
EXTINGUISHER ROUTE	TRAVEL PATH TO EXTINGUISHER
path length MAX BLDG DIAG	BUILDING DIAGONAL
XX ROOM NAME A101	OCCUPANCY CLASIFICATION
SF 150 SF	AREA
OLF SHARED OLF	OCUPANCY LOAD FACTOR
OCC O	NUMBER OF OCCUPANTS
0	QUANTITY OF EXITING OCCUPANTS

TORRANCE TRANSIT REGIONAL PARK & RIDE
BUILDING CODE INFORMATION

GOVERNING CODES:
CALIFORNIA BUILDING CODE 2010

BUILDING DESCRIPTION:
TWO BUILDING TRANSIT STATION WITH OPEN CANOPY WALKWAY STRUCTURE. MIXED OCCUPANCY

BUILDING USE AND OCCUPANCY:

B:	TRANSIT OFFICE
M:	RETAIL SPACE
A-3:	TRANSIT PLATFORM, MEETING ROOM

PROPOSED CONSTRUCTION TYPE:

II-B NONCOMBUSTABLE, NOT RATED

BUILDING ALLOWABLE AREAS AND HEIGHTS:

	AREA PER FLOOR	HEIGHT STORIES	HEIGHT FEET
B:	23,000 SF	5	55
M:	12,500 SF	2	55
A-3:	9,500 SF	2	55

BUILDING AREA INCREASES:

	W/ FRONTAGE	W/ SPRINKLERS
B:	30,250 SF	76,250 SF
M:	21,875 SF	46,875 SF
A-3:	16,625 SF	35,625 SF

OPEN SPACE EXCEEDING 30 FEET FOR 100% OF PERIMETER PROVIDED
AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED AT EAST AND WEST BUILDING
CANOPY REQUIREMENT FOR SPRINKLERS TO BE REVIEWED WITH AHJ

PROPOSED AREAS SITE TOTAL:

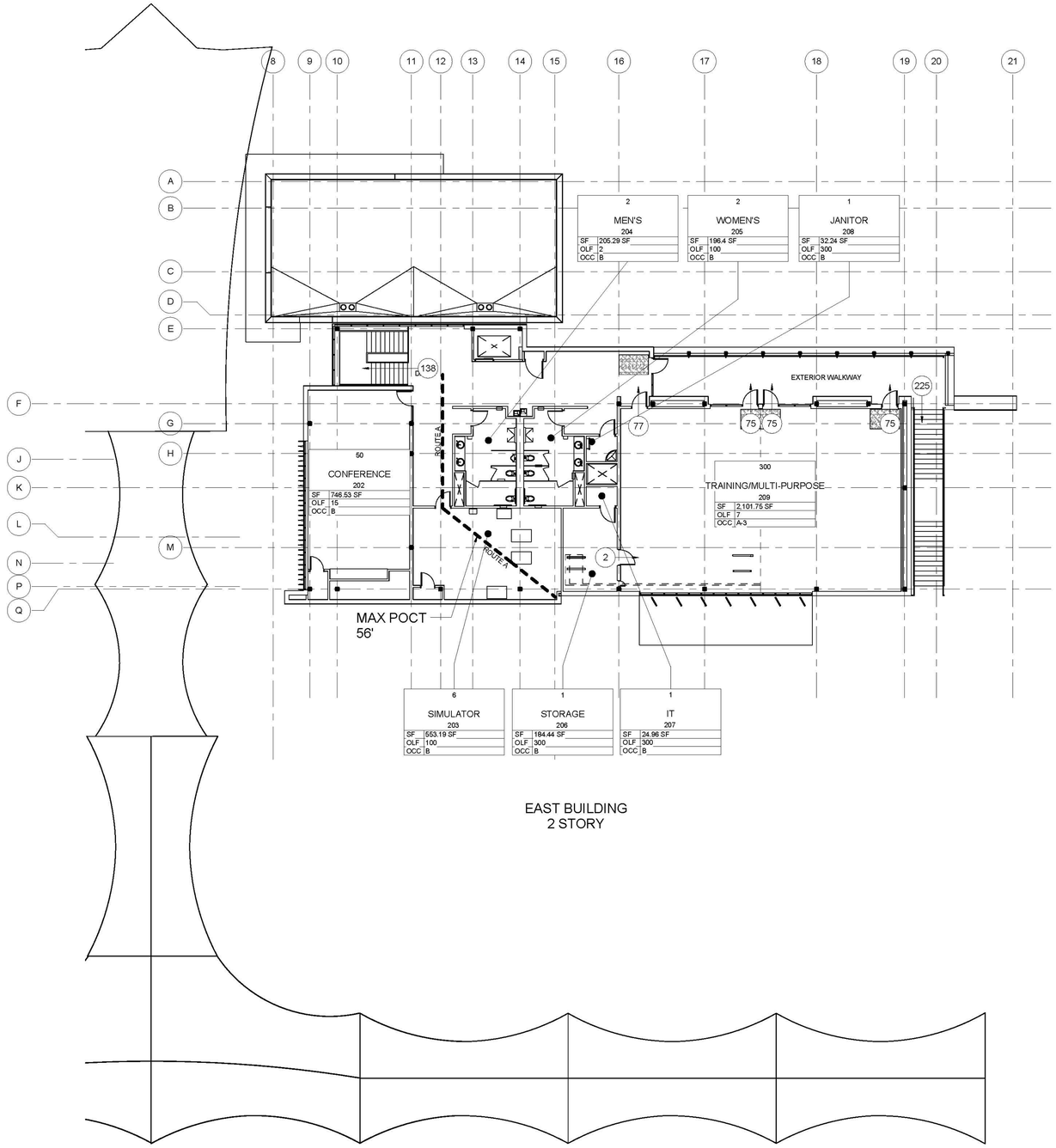
OCC:	1ST FLOOR	2ND FLOOR	TOTAL
B:	11,243 SF	4,413 SF	15,656 SF
M:	3,163 SF		3,163 SF
A-3:	15,025 SF	2,102 SF	17,127 SF
TOTAL:	29, 431 SF	6,515 SF	35,946 SF

FIRST FLOOR AREA LESS THAN 35,625 SF ALLOWED FOR A-3

PROPOSED AREAS BY BUILDING:

OCC:		EAST BLDG	WEST BLDG	CANOPY
B:	1	7,590 SF	3,653 SF	
	2	4,413 SF		
M:	1	1,680 SF	1,483 SF	
	2			
A-3:	1			15,025 SF
	2	2,102 SF		
TOTAL:		15,785 SF	5,136 SF	15,025 SF

EXTERIOR WALL SEPARATION DISTANCE 40 FEET BETWEEN BUILDINGS - 0 HR
CANOPY NO EXTERIOR WALLS



2 BUILDING EGRESS PLAN - LEVEL 2
3/32" = 1'-0"

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CODE INFORMATION & EGRESS PLAN - LEVEL 2

G-111

LEED CREDIT SUMMARY

SUSTAINABLE SITES

PREREQ 1 CONSTRUCTION ACTIVITY POLLUTION PREVENTION
CREATE AND IMPLEMENT AN EROSION AND SEDIMENTATION CONTROL PLAN FOR ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROJECT. THE ESC PLAN SHALL CONFORM TO THE EROSION AND SEDIMENTATION REQUIREMENTS OF THE 2003 EPA CONSTRUCTION GENERAL PERMIT OR LOCAL EROSION AND SEDIMENTATION CONTROL STANDARDS AND CODES, WHICHEVER IS MORE STRINGENT.

CREDIT 1 SITE SELECTION
DO NOT DEVELOP BUILDINGS, HARDSCAPE, ROADS OR PARKING AREAS ON PORTIONS OF SITES THAT MEET ANY ONE OF THE FOLLOWING CRITERIA:
-PRIME FARMLAND AS DEFINED BY AMERICAN FARMLAND TRUST
-LOWER THAN 5 FEET ABOVE THE 100 YEAR FLOOD PLAIN
-HABITAT FOR THREATENED OR ENDANGERED SPECIES
-WITHIN 100 FEET OF WETLANDS AS DEFINED BY 40 CFR, PARTS 230-233 AND PART 22
-WITHIN 50 FEET OF A WATER BODY WHICH COULD SUPPORT FISH OR RECREATION
-PUBLIC PARKLAND UNLESS EQUAL LAND IS ACCEPTED IN TRADE

CREDIT 2 DEVELOPMENT DENSITY & COMMUNITY CONNECTIVITY
OPTION 2: COMMUNITY CONNECTIVITY: CONSTRUCT ON A PREVIOUSLY DEVELOPED SITE AND WITHIN 1/2 MILE OF A RESIDENTIAL ZONE OR NEIGHBORHOOD WITH AN AVERAGE DENSITY OF 10 UNITS PER ACRE NET AND WITHIN ½ MILE OF AT LEAST 10 BASIC SERVICES AND WITH PEDESTRIAN ACCESS BETWEEN THE BUILDING AND THE SERVICES.

CREDIT 3 BROWNFIELD REDEVELOPMENT
N/A (PHASE II ESA NOT CONDUCTED ONSITE)

CREDIT 4.1 ALTERNATIVE TRANSPORTATION, PUBLIC TRANSPORTATION ACCESS
OPTION 2: BUS STOP PROXIMITY: LOCATE PROJECT WITHIN 1/4 MILE WALKING DISTANCE OF ONE OR MORE STOPS FOR TWO OR MORE PUBLIC OR CAMPUS BUS LINES USABLE BY BUILDING OCCUPANTS

CREDIT 4.2 ALTERNATIVE TRANSPORTATION, BICYCLE STORAGE AND CHANGING ROOMS
PROVIDE SECURE BICYCLE RACKS AND/OR STORAGE FOR 5% OR MORE OF ALL BUILDING USERS, AND PROVIDE SHOWER AND CHANGING FACILITIES IN THE BUILDING FOR 0.5% OF FULL-TIME EQUIVALENT (FTE) OCCUPANTS.

CREDIT 4.3 ALTERNATIVE TRANSPORTATION, LOW-EMITTING AND FUEL-EFFICIENT VEHICLES
OPTION 1: PROVIDE PREFERRED PARKING FOR LOW-EMITTING AND FUEL-EFFICIENT VEHICLES FOR 5% OF THE TOTAL VEHICLE PARKING CAPACITY OF THE SITE.

CREDIT 4.4 ALTERNATIVE TRANSPORTATION, PARKING CAPACITY
OPTION 4: FOR PROJECTS WITH NO MINIMUM LOCAL ZONING REQUIREMENTS, PROVIDE 25% FEWER PARKING SPACES THAN THE APPLICABLE STANDARD LISTED IN 2003 ITE "PARKING GENERATION STUDY"

CREDIT 5.1 SITE DEVELOPMENT, PROTECT OR RESTORE OPEN SPACE
N/A (NOT ENOUGH LANDSCAPING AREA AVAILABLE TO MEET CREDIT REQUIREMENTS)

CREDIT 5.2 SITE DEVELOPMENT, MAXIMIZE OPEN SPACE
PROVIDE VEGETATED OPEN SPACE AREA ADJACENT TO THE BUILDING THAT IS EQUAL TO THE BUILDING FOOTPRINT

CREDIT 6.1 STORMWATER MANAGEMENT, QUANTITY CONTROL
CASE 1: EXISTING IMPERVIOUSNESS IS LESS THAN OR EQUAL TO 50%
NO NET INCREASE IN POST-DEVELOPMENT PEAK DISCHARGE RATE AND QUANTITY
CASE 2: EXISTING IMPERVIOUSNESS IS GREATER THAN 50%
IMPLEMENT STORMWATER MANAGEMENT PLAN THAT RESULTS IN 25% DECREASE IN THE VOLUME OF STORM WATER RUNOFF

CREDIT 6.2 STORMWATER MANAGEMENT, QUALITY CONTROL
TREATMENT SYSTEMS DESIGNED TO REMOVE 80% OF AVERAGE ANNUAL POST DEVELOPMENT TOTAL SOLIDS (TSS), AND 40% OF THE ANNUAL POST DEVELOPMENT PHOSPHORUS (TP) BY IMPLEMENTING EPA'S GUIDANCE SPECIFYING MANAGEMENT MEASURES FOR SOURCES OF NON-POINT POLLUTION IN COASTAL WATERS (EPA 840-B-92-002 1/93)

CREDIT 7.1 LANDSCAPE AND EXTERIOR DESIGN TO REDUCE HEAT ISLANDS, NON-ROOF
OPTION 1: PROVIDE COMBINATION OF STRATEGIES FOR 50% OF THE SITE HARDSCAPE:
- PROVIDE SHADE FROM EXISTING TREE CANOPY OR WITHIN FIVE YEARS OF LANDSCAPE
- PROVIDE SHADE FROM ARCHITECTURAL STRUCTURES THAT HAVE A SRI OF AT LEAST 29
- USE HARDSCAPE PAVING MATERIALS WITH AN SRI OF AT LEAST 29.
- USE AN OPEN GRID PAVEMENT SYSTEM THAT IS AT LEAST 50% PERVIOUS

CREDIT 7.2 LANDSCAPE AND EXTERIOR DESIGN TO REDUCE HEAT ISLANDS, ROOF
OPTION 1: USE ROOFING MATERIALS HAVING A SOLAR REFLECTANCE INDEX (SRI) EQUAL TO OR GREATER THAN THE VALUES IN THE TABLE BELOW FOR A MINIMUM OF 75% OF THE ROOF SURFACE.
LOW-SLOPED ROOF (SLOPE ≤ 2:12) = SRI VALUE ≥ 78
STEEP-SLOPED ROOF (SLOPE ≥ 2:12) = SRI VALUE > 29

CREDIT 8 LIGHT POLLUTION REDUCTION
N/A. (LIGHT TRESPASS OCCURS ALONG THE LEED BOUNDARY DUE TO SIGHT CONSTRAINTS.)

WATER EFFICIENCY

PREREQ 1 WATER USE REDUCTION
EMPLOY STRATEGIES THAT IN AGGREGATE USE 20% LESS WATER THAN THE WATER USE BASELINE CALCULATED FOR THE BUILDING AFTER MEETING ALL APPLICABLE CODES AND REQUIREMENTS.

CREDIT 1 WATER EFFICIENT LANDSCAPING
OPTION 1: REDUCE POTABLE WATER CONSUMPTION FOR IRRIGATION BY 50% FROM CALCULATED MIDSUMMER BASELINE CASE.

CREDIT 2 INNOVATIVE WASTEWATER TECHNOLOGIES
N/A (POTABLE WATER USAGE REDUCTION WILL NOT MEET CREDIT STANDARDS WITHOUT TREATING WASTEWATER ON-SITE)

CREDIT 3 WATER USE REDUCTION
EMPLOY STRATEGIES THAT IN AGGREGATE USE 30-40% LESS WATER THAN THE WATER USE BASELINE CALCULATED FOR THE BUILDING AFTER MEETING ALL APPLICABLE CODES AND REQUIREMENTS.

ENERGY AND ATMOSPHERE

PREREQ 1 FUNDAMENTAL COMMISSIONING OF THE BUILDING ENERGY SYSTEMS
COMMISSIONING PROCESS ACTIVITIES SHALL BE COMPLETED BY THE COMMISSIONING TEAM, IN ACCORDANCE WITH THE LEED-NC 2009 RATING SYSTEM REQUIREMENTS. COMMISSIONING PROCESS ACTIVITIES SHALL BE COMPLETED FOR THE FOLLOWING ENERGY-RELATED SYSTEMS:
- HVAC&R SYSTEMS AND ASSOCIATED CONTROLS
- LIGHTING AND DAYLIGHTING CONTROLS
- DOMESTIC HOT WATER SYSTEMS
- RENEWABLE ENERGY SYSTEMS

PREREQ 2 MINIMUM ENERGY PERFORMANCE
OPTION 1: WHOLE BUILDING SIMULATION: DEMONSTRATE A 10% IMPROVEMENT FOR NEW BUILDINGS IN THE PROPOSED BUILDING PERFORMANCE RATING COMPARED TO THE BASELINE BUILDING PERFORMANCE RATING PER ASHRAE/IESNA STANDARD 90.1-2007 (WITH ERRATA BUT WITHOUT ADDENDA) BY A WHOLE BUILDING PROJECT SIMULATION USING THE BUILDING PERFORMANCE RATING METHOD IN APPENDIX G OF THE STANDARD.

PREREQ 3 FUNDAMENTAL REFRIGERANT MANAGEMENT
ZERO USE OF CFC-BASED REFRIGERANTS IN NEW BASE BUILDING HVAC&R SYSTEMS. WHEN REUSING EXISTING BASE BUILDING HVAC EQUIPMENT, COMPLETE A COMPREHENSIVE CFC PHASE-OUT CONVERSION PRIOR TO PROJECT COMPLETION.

CREDIT 1 OPTIMIZE ENERGY PERFORMANCE
OPTION 1: WHOLE BUILDING SIMULATION: DEMONSTRATE A PERCENTAGE IMPROVEMENT FOR NEW BUILDINGS IN THE PROPOSED BUILDING PERFORMANCE RATING COMPARED TO THE BASELINE BUILDING PERFORMANCE RATING PER ASHRAE/IESNA STANDARD 90.1-2007 (WITH ERRATA BUT WITHOUT ADDENDA) BY A WHOLE BUILDING PROJECT SIMULATION USING THE BUILDING PERFORMANCE RATING METHOD IN APPENDIX G OF THE STANDARD.

CREDIT 2 ON-SITE RENEWABLE ENERGY
USE ON-SITE RENEWABLE ENERGY SYSTEMS TO OFFSET BUILDING ENERGY COST. PV PANELS FOR RTU SOLAR ASSIST WILL BE PROVIDED.

CREDIT 3 ENHANCED COMMISSIONING
VERIFY AND ENSURE THAT THE ENTIRE BUILDING IS DESIGNED, CONSTRUCTED, AND CALIBRATED TO OPERATE AS INTENDED.

CREDIT 4 ENHANCED REFRIGERANT MANAGEMENT
SELECT REFRIGERANTS AND HVAC&R THAT MINIMIZE OR ELIMINATE THE EMISSION OF COMPOUNDS THAT CONTRIBUTE TO OZONE DEPLETION AND CLIMATE CHANGE. INSTALL BASE BUILDING LEVEL HVAC AND REFRIGERATION EQUIPMENT AND FIRE SUPPRESSION SYSTEMS THAT DO NOT CONTAIN CFCs, HCFCs OR HALON.

CREDIT 5 MEASUREMENT AND VERIFICATION
OPTION 1: DEVELOP AND IMPLEMENT A MEASUREMENT & VERIFICATION (M&V) PLAN CONSISTENT WITH OPTION D: CALIBRATED SIMULATION (SAVINGS ESTIMATION METHOD 2)
OPTION 2: ENERGY CONSERVATION MEASURE ISOLATION, AS SPECIFIED IN THE INTERNATIONAL PERFORMANCE MEASUREMENT & VERIFICATION PROTOCOL (IPMVP) VOLUME III: CONCEPTS AND OPTIONS FOR DETERMINING ENERGY SAVINGS IN NEW CONSTRUCTION. PROVIDE A PROCESS FOR CORRECTIVE ACTION TO ENSURE ENERGY SAVINGS ARE REALIZED IF THE RESULTS OF THE M & V PLAN INDICATE THAT ENERGY SAVINGS ARE NOT BEING ACHIEVED.

CREDIT 6 GREEN POWER
ENGAGE IN AT LEAST A 2 YEAR RENEWABLE ENERGY CONTRACT TO PROVIDE AT LEAST 35% OF THE BUILDING'S ELECTRICITY FROM RENEWABLE SOURCES, AS DEFINED BY THE CENTER FOR RESOURCE SOLUTIONS (CRS) GREEN-E ENERGY PRODUCTS CERTIFICATION REQUIREMENTS.

MATERIALS AND RESOURCES

PREREQ 1 STORAGE AND COLLECTION OR RECYCLABLES
PROVIDE AN EASILY ACCESSIBLE AREA THAT SERVES THE ENTIRE BUILDING AND IS DEDICATED TO THE COLLECTION AND STORAGE OF NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS, AND METALS.

CREDIT 1.1 BUILDING REUSE, MAINTAIN EXISTING WALLS, FLOORS & ROOF
N/A

CREDIT 1.2 BUILDING REUSE, MAINTAIN INTERIOR NON-STRUCTURAL ELEMENTS
N/A

CREDIT 2 CONSTRUCTION WASTE MANAGEMENT
50% - 1 POINT, 75% - 2 POINTS
RECYCLE AND/OR SALVAGE NON-HAZARDOUS CONSTRUCTION AND DEMOLITION DEBRIS. DEVELOP AND IMPLEMENT A CONSTRUCTION WASTE MANAGEMENT PLAN THAT, AT A MINIMUM, IDENTIFIES THE MATERIALS TO BE DIVERTED FROM DISPOSAL AND WHETHER THE MATERIALS WILL BE SORTED ON-SITE OR COMMINGLED. CALCULATE BY WEIGHT OR VOLUME, CONSISTENT THROUGHOUT.

CREDIT 3 MATERIAL REUSE
5% - 1 POINT, 10% - 2 POINTS
USE SALVAGED, REFURBISHED OR REUSED MATERIALS SUCH THAT THE SUM OF THESE MATERIALS CONSTITUTES AT LEAST 5% OR 10% (COST) OF THE TOTAL VALUE OF MATERIALS ON THE PROJECT

CREDIT 4 RECYCLED CONTENT
10% - 1 POINT, 20% - 2 POINTS
USE MATERIALS WITH RECYCLED CONTENT SUCH THAT THE SUM OF POST-CONSUMER RECYCLED CONTENT PLUS ONE-HALF OF THE PRE-CONSUMER CONTENT CONSTITUTES AT LEAST
10% OR 20% (COST) OF THE TOTAL VALUE OF THE MATERIALS IN THE PROJECT

CREDIT 5 LOCAL/REGIONAL MATERIALS
10% - 1 POINT, 20% - 2 POINTS
USE BUILDING MATERIALS OR PRODUCTS THAT HAVE BEEN EXTRACTED, HARVESTED OR RECOVERED, AND WELL AS MANUFACTURED, WITHIN 500 MILES OF THE PROJECT SITE FOR A MINIMUM OF
10% OR 20% (COST) OF THE TOTAL MATERIALS VALUE

CREDIT 6 RAPIDLY RENEWABLE MATERIALS
USE RAPIDLY RENEWABLE BUILDING MATERIALS AND PRODUCTS (MADE FROM PLANTS THAT ARE TYPICALLY HARVESTED WITHIN A TEN-YEAR CYCLE OR SHORTER) FOR 2.5% OF THE TOTAL VALUE OF ALL BUILDING MATERIALS AND PRODUCTS USED IN THE PROJECT, BASED ON COST.

CREDIT 7 CERTIFIED WOOD
USE A MINIMUM OF 50% OF WOOD BASED MATERIALS CERTIFIED IN ACCORDANCE WITH THE FOREST STEWARDSHIP COUNCIL GUIDELINES FOR WOOD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO STRUCTURAL FRAMING AND SUCH GENERAL DIMENSIONAL FRAMING, FLOORING, SUB-FLOORING, WOOD DOORS AND FINISHES.

INDOOR ENVIRONMENTAL QUALITY

PREREQ 1 MINIMUM IAQ PERFORMANCE
FOR MECHANICALLY VENTILATED SPACES MEET THE MINIMUM REQUIREMENTS OF SECTIONS 4 THROUGH 7 OF ASHRAE 62.1-2007, VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY (WITH ERRATA BUT WITHOUT ADDENDA). MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED USING THE VENTILATION RATE PROCEDURE OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT. NATURALLY VENTILATED BUILDINGS SHALL COMPLY WITH ASHRAE 62.1-2007 (WITH ERRATA BUT WITHOUT ADDENDA) PARAGRAPH 5.1.

PREREQ 2 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL
OPTION 1: PROHIBIT SMOKING IN THE BUILDING AND PROHIBIT ON-PROPERTY SMOKING WITHIN 25 FEET OF ENTRIES, OUTDOOR AIR INTAKES AND OPERABLE WINDOWS. PROVIDE SIGNAGE TO EITHER ALLOW SMOKING IN DESIGNATED AREAS, PROHIBIT SMOKING IS DESIGNATED AREAS, OR PROHIBIT SMOKING ON THE ENTIRE PROPERTY.

CREDIT 1 OUTDOOR AIR DELIVERY MONITORING
INSTALL A PERMANENT MONITORING SYSTEM THAT PROVIDES FEEDBACK ON SPACE VENTILATION PERFORMANCE IN A FORM THAT AFFORDS OPERATIONAL ADJUSTMENTS AND CONFIGURE ALL MONITORING EQUIPMENT TO GENERATE AN ALARM WHEN THE CONDITIONS VARY BY 10% OR MORE FROM SET POINT.

CREDIT 2 INCREASE VENTILATION EFFECTIVENESS, ASHRAE 62.1-2004
FOR MECHANICALLY VENTILATED BUILDINGS, INCREASE BREATHING ZONE OUTDOOR AIR VENTILATION RATES TO ALL OCCUPIED SPACES BY AT LEAST 30% ABOVE THE MINIMUM RATES BY ASHRAE STANDARD 62.1-2004 OR FOR NATURALLY VENTILATED BUILDINGS, DESIGN NATURAL VENTILATION SYSTEMS FOR OCCUPIED SPACES TO MEET THE RECOMMENDATIONS SET FORTH IN THE CARBON TRUST GOOD PRACTICE GUIDE 237.

CREDIT 3.1 CONSTRUCTION IAQ MANAGEMENT PLAN, DURING CONSTRUCTION
DURING CONSTRUCTION MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE SMACNA IAQ GUIDELINE FOR OCCUPIED BUILDINGS UNDER CONSTRUCTION, 1995, AND PROTECT STORED ON-SITE OR INSTALLED ABSORPTIVE MATERIALS FROM MOISTURE DAMAGE AND REPLACE ALL FILTRATION MEDIA IMMEDIATELY PRIOR TO OCCUPANCY. FILTRATION MEDIA SHALL HAVE A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8 AS DETERMINED BY ASHRAE 52.2-1999

CREDIT 3.2 CONSTRUCTION IAQ MANAGEMENT PLAN, BEFORE OCCUPANCY
BEFORE OCCUPANCY CONDUCT A BUILDING FLUSH-OUT MEETING SPECIFIC REQUIREMENTS OR CONDUCT A BASELINE INDOOR AIR QUALITY TESTING PROCEDURE CONSISTENT WITH CURRENT EPA PROTOCOL FOR ENVIRONMENTAL REQUIREMENTS, BASELINE IAQ AND MATERIALS, FOR THE RESEARCH TRIANGLE PARK CAMPUS, SECTION 01445.

CREDIT 4.1 LOW-EMITTING MATERIALS, ADHESIVES AND SEALANTS
ADHESIVES AND SEALANTS MUST MEET OR EXCEED THE VOC LIMITS OF SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE #1168.

CREDIT 4.2 LOW-EMITTING MATERIALS, PAINTS AND COATINGS
PAINTS AND COATINGS MUST MEET OR EXCEED THE VOC AND CHEMICAL COMPONENT LIMITS OF GREEN SEAL REQUIREMENTS.

CREDIT 4.3 LOW-EMITTING MATERIALS, CARPET
CARPET SYSTEMS MUST MEET OR EXCEED THE CARPET AND RUG INSTITUTE GREEN LABEL INDOOR AIR QUALITY TEST PROGRAM.

CREDIT 4.4 LOW-EMITTING MATERIALS, COMPOSITE WOOD AND AGRIFIBER PRODUCTS
COMPOSITE WOOD AND AGRIFIBER PRODUCTS MUST CONTAIN NO ADDED UREA-FORMALDEHYDE RESINS

CREDIT 5 INDOOR CHEMICAL AND POLLUTANT SOURCE CONTROL
DESIGN TO MINIMIZE CROSS-CONTAMINATION OF REGULARLY OCCUPIED AREAS BY CHEMICAL POLLUTANTS:
EMPLOY PERMANENT ENTRY WAY SYSTEMS (GRILLES, GRATES, ETC.) TO CAPTURE DIRT, PARTICULATES, ETC. FROM ENTERING THE BUILDING AT ALL HIGH VOLUME ENTRY WAYS AND PROVIDE AREAS WITH STRUCTURAL DECK TO DECK PARTITIONS WITH SEPARATE OUTSIDE EXHAUST, NO AIR RECIRCULATION AND NEGATIVE PRESSURE WHERE CHEMICAL USE OCCURS (INCLUDING HOUSEKEEPING AREAS AND COPYING/ PRINT ROOMS) AND PROVIDE DRAINS PLUMBED FOR APPROPRIATE DISPOSAL OF LIQUID WASTE IN SPACES WHERE WATER AND CHEMICAL CONCENTRATE MIXING OCCURS.

CREDIT 6.1 CONTROLLABILITY OF SYSTEMS, LIGHTING
PROVIDE INDIVIDUAL LIGHTING CONTROLS FOR 90% OF THE BUILDING OCCUPANTS TO ENABLE ADJUSTMENTS AND PROVIDE LIGHTING SYSTEM CONTROLLABILITY FOR ALL SHARED MULTI-OCCUPANTS SPACES TO ENABLE ADJUSTMENTS.

CREDIT 6.2 CONTROLLABILITY OF SYSTEMS, THERMAL COMFORT
PROVIDE INDIVIDUAL COMFORT CONTROLS FOR 50% OF THE BUILDING OCCUPANTS TO ENABLE ADJUSTMENTS AND PROVIDE COMFORT SYSTEMS CONTROLS FOR ALL SHARED MULTI-OCCUPANTS SPACES TO ENABLE ADJUSTMENTS.

CREDIT 7.1 THERMAL COMFORT, DESIGN
COMPLY WITH ASHRAE 55-2004, THERMAL COMFORT CONDITIONS FOR HUMAN OCCUPANCY.

CREDIT 7.2 THERMAL COMFORT, VERIFICATION
AGREE TO IMPLEMENT A THERMAL COMFORT SURVEY OF BUILDING OCCUPANTS WITHIN A PERIOD OF 6-18 MONTHS AFTER OCCUPANCY.

CREDIT 8.1 DAYLIGHT AND VIEWS, DAYLIGHT 75% OF SPACES
OPTION 1: GLAZING FACTOR CALCULATION - 2% GLAZING IN 75% OF OCCUPIED AREAS
OPTION 2: DAYLIGHT SIMULATION MODEL - 25 FOOTCANDLES IN 75% OF OCCUPIED AREAS
OPTION 3: DAYLIGHT MEASUREMENT - 25 FOOTCANDLES IN 75% OF OCCUPIES AREAS

CREDIT 8.2 DAYLIGHT AND VIEWS, VIEWS FOR 90% OF SPACES
ACHIEVE A DIRECT LINE OF SIGHT TO THE OUTDOOR ENVIRONMENT FOR 90% OF ALL OCCUPIED AREAS INCLUDING COPY ROOMS, STORAGE AREAS, MECHANICAL, LAUNDRY, AND OTHER LOW OCCUPANCY SUPPORT.

INNOVATION AND DESIGN PROCESS

CREDIT 1.1 INNOVATION IN DESIGN: PUBLIC TRANSPORTATION ACCESS
EXEMPLARY PERFORMANCE: DOUBLE TRANSIT RIDERSHIP. LOCATE THE PROJECT WITHIN 1/4 MILE OF AT LEAST 2 OR MORE STOPS FOR 4 OR MORE PUBLIC BUS LINES USABLE BY BUILDING OCCUPANTS AND FREQUENCY OF SERVICE MUST BE AT LEAST 200 TRANSIT RIDES PER DAY, TOTAL, AT THESE STOPS.

CREDIT 1.2 INNOVATION IN DESIGN: SUSTAINABLE EDUCATION
PROVIDE TWO OF THE THREE FOLLOWING ITEMS: 1) A CASE STUDY 2) REGULARLY SCHEDULED PRESENTATIONS OR BUILDING TOURS 3) SIGNAGE OF THE ENVIRONMENTAL FEATURES OF THE BUILDING.

CREDIT 1.3 INNOVATION IN DESIGN: GREEN CLEANING
HAVE A GREEN CLEANING POLICY FOR THE BUILDING AND SITE ADHERING TO LEED-2009 FOR EB: O&M THAT ADDRESSES THE FOLLOWING AREAS
- SUSTAINABLE CLEANING, HARD FLOOR CARE AND CARPET CARE PRODUCTS
- CLEANING EQUIPMENT THAT MEETS SUSTAINABILITY CRITERIA IN EQ CREDIT 3.4
- DEVELOP STRATEGIES TO PROMOTE HANG HYGIENE.
- GUIDELINES ON SAFE HANDLING AND STORAGE OF CLEANING CHEMICALS & HAZARDOUS SPILLS
- TRAINING OF MAINTENANCE PERSONNEL
- COLLECTION OF OCCUPANT FEEDBACK AND CONTINUOUS IMPROVEMENT.

CREDIT 1.4 INNOVATION IN DESIGN: PILOT CREDIT

CREDIT 1.5 INNOVATION IN DESIGN: DESIGN FOR ONE EARTH
ACHIEVE SIGNIFICANT, MEASURABLE ENVIRONMENTAL PERFORMANCE USING "DESIGN FOR ONE EARTH"

CREDIT 2 LEED ACCREDITED PROFESSIONAL
AT LEAST ONE PRINCIPAL PARTICIPANT OF THE PROJECT TEAM THAT HAS SUCCESSFULLY COMPLETED THE LEED ACCREDITED PROFESSIONAL EXAM.

LEED 2009 for New Construction and Major Renovations

Project Checklist

Torrance Transit Park and Ride Regional Terminal

Y	?	N			
21	2	3	**Sustainable Sites**	Possible Points:	26
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
		1	Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
	2		Credit 4.4	Alternative Transportation—Parking Capacity	2
		1	Credit 5.1	Site Development—Protect or Restore Habitat	1
1			Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
1			Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
		1	Credit 8	Light Pollution Reduction	1
5	1	4	**Water Efficiency**	Possible Points:	10
Y			Prereq 1	Water Use Reduction—20% Reduction	
2		2	Credit 1	Water Efficient Landscaping	2 to 4
		2	Credit 2	Innovative Wastewater Technologies	2
3	1		Credit 3	Water Use Reduction	2 to 4
18	10	7	**Energy and Atmosphere**	Possible Points:	35
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
7	5	7	Credit 1	Optimize Energy Performance	1 to 19
2	5		Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
3			Credit 5	Measurement and Verification	3
2			Credit 6	Green Power	2
5	3	6	**Materials and Resources**	Possible Points:	14
Y			Prereq 1	Storage and Collection of Recyclables	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
1	1		Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

Y	?	N			
			Materials and Resources, Continued		
2			Credit 4	Recycled Content	1 to 2
1	1		Credit 5	Regional Materials	1 to 2
	1		Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1
11	4		**Indoor Environmental Quality**	Possible Points:	15
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
	1		Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
	1		Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
	1		Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
	1		Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1
6			**Innovation and Design Process**	Possible Points:	6
1			Credit 1.1	Innovation in Design: Credit Exceedance (SSc4.1)	1
1			Credit 1.2	Innovation in Design: Sustainable Education	1
1			Credit 1.3	Innovation in Design: Green Cleaning	1
1			Credit 1.4	Innovation in Design: Pilot Credit	1
1			Credit 1.5	Innovation in Design: Design for One Earth	1
1			Credit 2	LEED Accredited Professional	1
2	2		**Regional Priority Credits**	Possible Points:	4
1			Credit 1.1	Regional Priority: SSc5.2 Site Development Maximize Open Space	1
	1		Credit 1.2	Regional Priority: IEQc8.1 Daylight & Views, Daylight 75%	1
	1		Credit 1.3	Regional Priority: WEc3 Water Use Reduction, 40%	1
1			Credit 1.4	Regional Priority: EAc2 On-Site Renewable Energy, 1%	1
68	22	20	**Total**	Possible Points:	110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

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A BALANCED CITY · INDUSTRIAL · RESIDENTIAL · COMMERCIAL · TORRANCE

CITY OF TORRANCE
TORRANCE TRANSIT PARK & RIDE
REGIONAL TERMINAL

465 CRENSHAW BLVD.
TORRANCE, CA 90503
30% CONSTRUCTION DRAWINGS

No	REVISION/SUBMISSION	DATE

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PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: NTS

LEED SCORECARD

G-700

CITY OF EL TORRANCE
LOS ANGELES COUNTY, CALIFORNIA

PUBLIC IMPROVEMENT PERFORMANCE DRAWINGS FOR THE
TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE <u>STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION</u>, LATEST EDITION AND SUPPLEMENTS THERETO, AS WRITTEN AND PROMULGATED BY PUBLIC WORKS STANDARDS, INC., HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS, THE TORRANCE STANDARDS, THE AMERICAN WATER WORKS ASSOCIATION STANDARDS LATEST EDITION, AND TO THE SATISFACTION OF THE ENGINEERING DIRECTOR.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, VERIFY DEPTH AND PROTECT ALL STRUCTURES, INCLUDING SUBSTRUCTURES, SHOWN ON THE PLAN. THE CONTRACTOR SHALL BEAR THE ENTIRE COST OF REPAIRING OR REPLACING ANY OF SAID STRUCTURES DAMAGED BY HIM/HER DURING PROSECUTION OF THE WORK. ALL REPAIRS AND REPLACEMENTS SHALL BE DONE IN THE PRESENCE OF THE INSPECTOR. ALL LOCATIONS SHOWN ON THE PLAN FOR UTILITY LINES HAVE BEEN TAKEN FROM AVAILABLE RECORDS AND THEIR COMPLETENESS AND CORRECTNESS ARE IN NO WAY GUARANTEED.

3. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600 AND ALL PUBLIC UTILITY COMPANIES AND OWNERS OF PRIVATE FACILITIES WITHIN THE AREA OF CONSTRUCTION AT LEAST 2 WORKING DAYS IN ADVANCE OF PERFORMING ANY WORK WITHIN SAID AREA.

4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE ENGINEERING DIRECTOR BEFORE COMMENCING WORK. TRAFFIC CONTROL WITHIN PUBLIC STREET RIGHTS OF WAY SHALL BE IN CONFORMANCE WITH THE "CONSTRUCTION TRAFFIC CONTROL PROCEDURES ON CITY STREETS", LATEST EDITION AVAILABLE AT THE ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL PROVIDE A 24-HOUR TELEPHONE NUMBER FOR EMERGENCY REPAIRS TO TRAFFIC CONTROL AND PAVEMENT MARKINGS.

5. CAUTION: REVIEW APPROVED CONSTRUCTION PLAN. IF CONSTRUCTION REQUIRES WORKERS AND/OR EQUIPMENT TO BE WITHIN 6 FEET OR CRANES OR HOISTING DEVICES TO BE WITHIN 10 FEET OF OVERHEAD ELECTRIC LINES, CALL SOUTHERN CALIFORNIA EDISON AT 310-783-9339 FOR PROJECTS IN RESIDENTIAL AREAS OR 310-783-9331 FOR PROJECTS IN COMMERCIAL AREAS.

6. PRIOR TO COMMENCEMENT OF WORK, ALL SURVEY MONUMENTS IN THE PROJECT AREA SHALL BE LOCATED AND TIED OUT. ALL CENTERLINE MONUMENTS OR TIES LOST OR DESTROYED BY THIS WORK SHALL BE REPLACED EITHER BY A LICENSED SURVEYOR OR A CIVIL ENGINEER REGISTERED PRIOR TO JANUARY 1, 1982 AND NEW TIE SHEETS PROVIDED. METHOD OF ESTABLISHMENT SHALL BE STATED ON THE TIE SHEET.

7. GRADE SHEETS PREPARED AND STAMPED BY A LICENSED ENGINEER OR SURVEYOR SHALL BE DELIVERED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK.

8. THE CONTRACTOR SHALL NOTIFY THE CITY STREET DEPARTMENT AT 310-781-6900 PRIOR TO TRIMMING, REMOVING OR RELOCATING ANY EXISTING TREES.

9. UNLESS OTHERWISE SHOWN, ALL TRAFFIC SIGNS SHALL BE RELOCATED OR REMOVED BY THE CITY. THE CONTRACTOR SHALL NOTIFY THE STREET DEPARTMENT AT 310-781-6900 AT LEAST 2 WORKING DAYS IN ADVANCE TO ARRANGE THE WORK.

<u>WATER NOTES:</u>

10. CONTRACTOR SHALL MAKE AVAILABLE FOR THE PUBLIC WORKS INSPECTOR'S REVIEW, ON A DAILY BASIS, AS-BUILT DRAWINGS FOR WORK PERFORMED UP TO AND INCLUDING THE PREVIOUS DAY'S ACTIVITIES. WORK SHALL NOT BE CONSIDERED AS COMPLETE UNTIL AS-BUILTS ARE SUBMITTED TO AND ACCEPTED BY THE ENGINEERING DIRECTOR.

11. TRENCHES CUT INTO AN EXISTING ROADWAY WITHIN THE PUBLIC RIGHTS OF WAY SHALL BE BACKFILLED AND PAVED AS PER CITY OF TORRANCE STANDARD T116.

12. TRENCH RESURFACING SHALL BE OF THE SAME TYPE AS THE EXISTING PAVEMENT, EXCEPT IF EXISTING PAVEMENT IS A.C. OVER P.C.C., RESURFACING MAYBE FULL-DEPTH A.C.

13. THE CONTRACTOR SHALL DISINFECT WATER LINES UNDER THE DIRECTION OF THE CITY'S WATER QUALITY INSPECTOR. THE TORRANCE MUNICIPAL WATER DEPARTMENT SHALL COLLECT WATER SAMPLES FOR ANALYSIS SUBSEQUENT TO DISINFECTING OF THE PIPELINE BY THE CONTRACTOR.

14. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AT LEAST TWO WORKING DAYS IN ADVANCE OF A PROPOSED WATER MAIN OR SERVICE LINE SHUT DOWN. THE CONTRACTOR SHALL NOTIFY THE CUSTOMERS EFFECTED BY THE PROPOSED SHUT DOWN AT LEAST 24 HOURS IN ADVANCE. CUSTOMER NOTIFICATION SHALL CONSIST OF A DOOR HANGER SPECIFING THE DATE(S) AND TIME(S) OF THE PROPOSED SHUT DOWN. NOTICE SHALL CONTAIN THE CONTRACTORS NAME AND TELEPHONE NUMBER. NOTICE SHALL BE APPROVED BY THE INSPECTOR PRIOR TO DISTRIBUTION.

15. OPERATION OF VALVES ON ALL PUBLIC WATER LINES AND THE FIRST NEW VALVE DOWNSTREAM OF A PUBLIC WATER MAIN SHALL BE PERFORMED BY THE TORRANCE MUNICIPAL WATER DEPARTMENT UNLESS OTHERWISE SHOWN.

16. ALL WATER LINES SHALL HAVE 42" COVER FROM PROPOSED FINISHED GRADE UNLESS OTHERWISE SHOWN ON THE PLAN.

17. FOR PARALLEL CONSTRUCTION ALL WATER LINES SHALL BE INSTALLED WITH A TWO FOOT (MIN.) CLEARANCE FROM EXISTING UTILITY LINES (GAS, TELEPHONE, CABLE, POWER...). A MINIMUM OF 12" CLEARANCE SHALL BE PROVIDED WHEN CROSSING UTILITY LINES.

18. NO PVC PIPE SHALL BE INSTALLED UPSTREAM OF THE INLET SIDE OF METERS OR DETECTOR CHECK VALVES.

19. PIPE BEDDING SHALL CONFORM TO TORRANCE STANDARD DRAWING T701.

20. ALL FLANGE NUTS, BOLTS AND WASHERS SHALL BE 316 S.S. UNLESS OTHERWISE SHOWN.

21. ALL BURIED PIPE, VALVES, FITTING, ETC. SHALL BE WRAPPED IN 8 MIL. POLYETHYLENE.

<u>SEWER NOTES:</u>

22. BEFORE BREAKING INTO OR CONSTRUCTION ON A COUNTY SANITATION DISTRICT SEWER AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, COUNTY SANITATION DISTRICT INSPECTOR SHALL BE NOTIFIED BY PHONE AT 310-638-1161 IN ORDER THAT REQUIRED INSPECTION MAY BE MADE.

23. EXISTING DOWNSTREAM MANHOLES SHALL BE BULKHEADED WITH BRICK AND MORTAR OR PLUGS APPROVED BY THE INSPECTOR AT NEW INLET DURING CONSTRUCTION OF NEW UPSTREAM LINES. BRICK AND MORTAR OR PLUG SHALL BE REMOVED IN THE PRESENCE OF THE INSPECTOR(S) DURING CLEANING OF THE FIRST UPSTREAM SECTION OF THE NEW SYSTEM.

24. NO CONNECTION FOR THE DISPOSAL OF INDUSTRIAL WASTES SHALL BE MADE TO SEWERS SHOWN ON THESE DRAWINGS UNTIL A PERMIT FOR INDUSTRIAL WASTE WATER DISCHARGE HAS BEEN ISSUED BY THE COUNTY SANITATION DISTRICTS FOR SAID CONNECTION.

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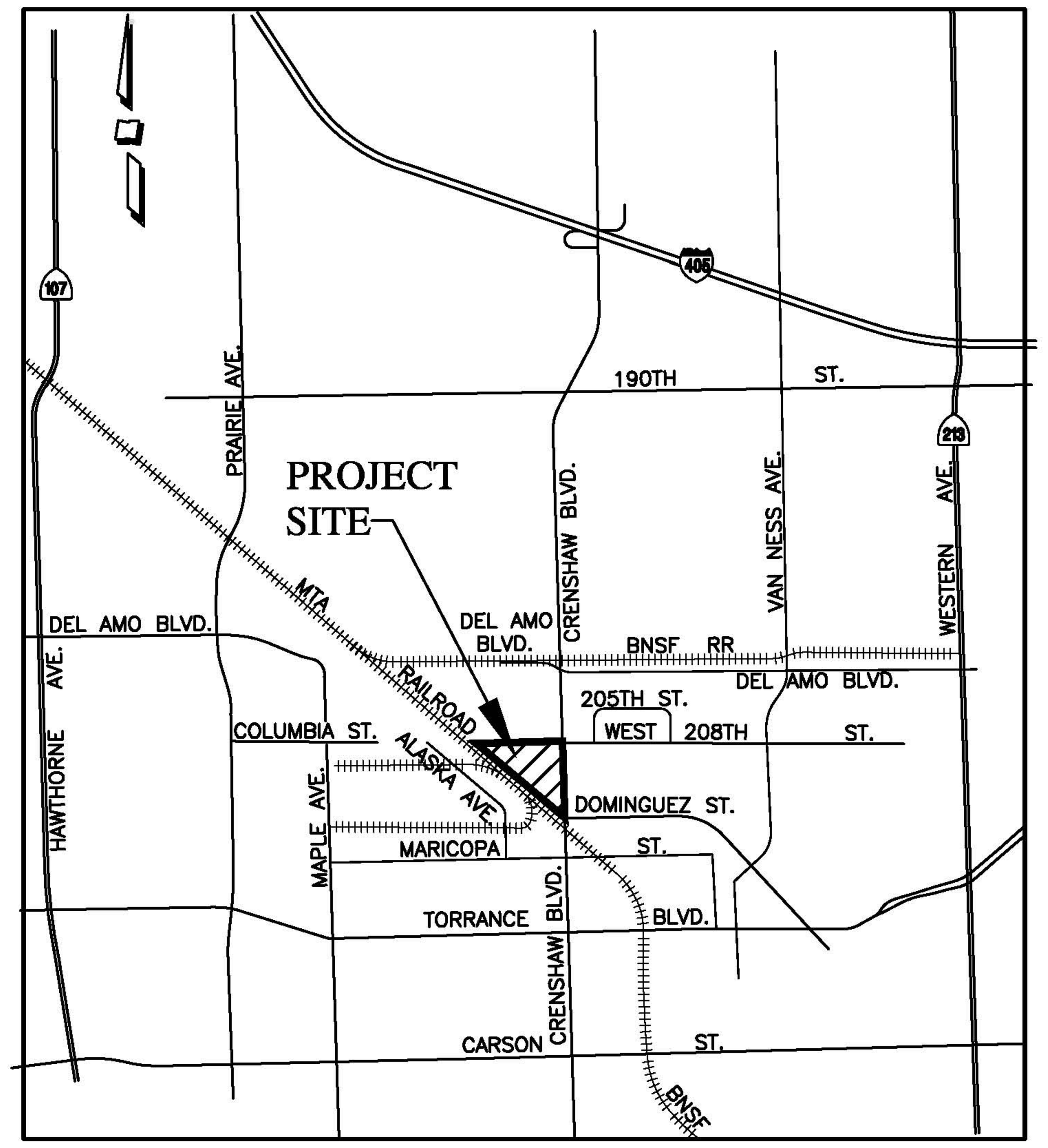
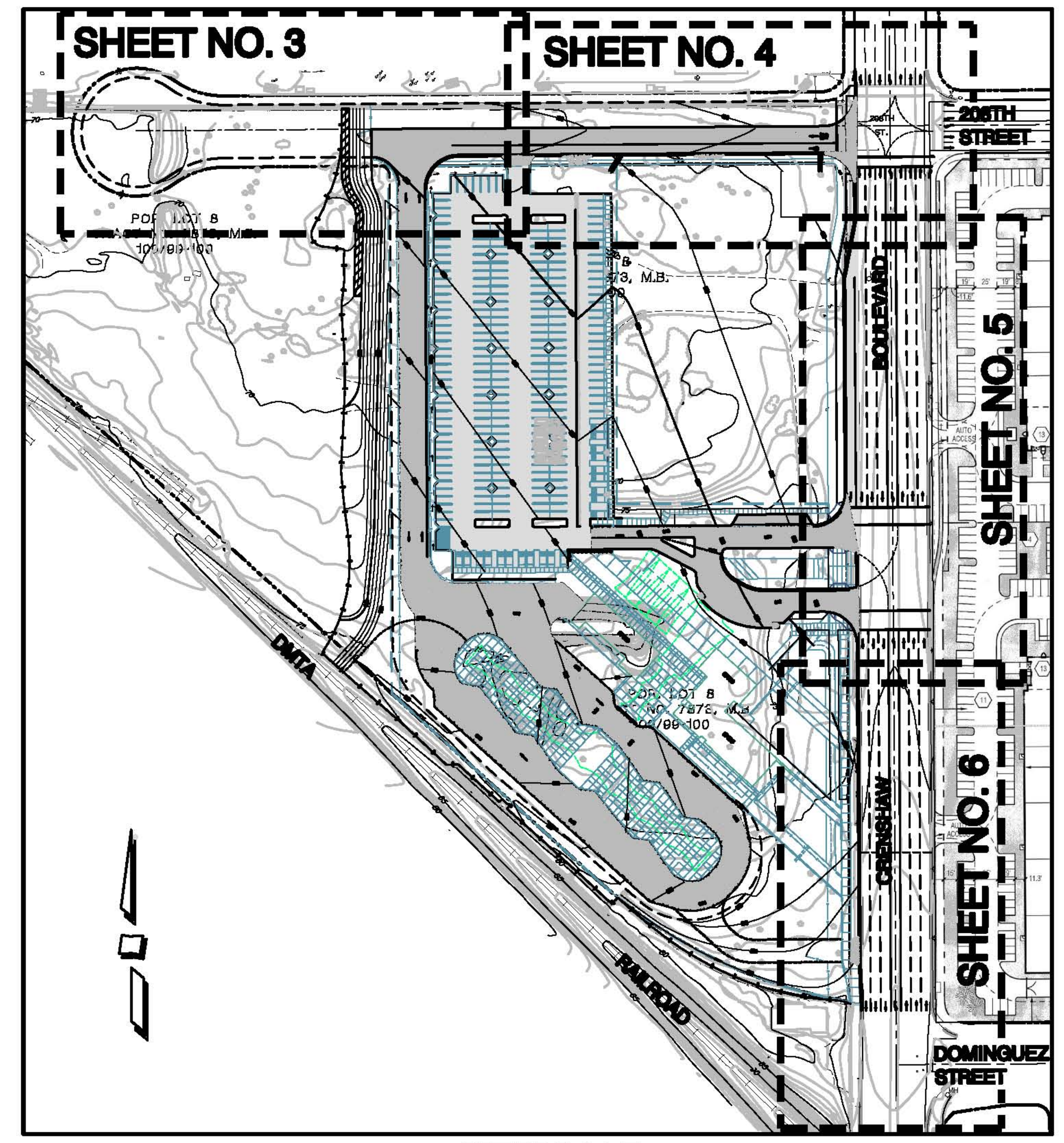


VICINITY MAP
N.T.S.



KEY MAP
SCALE: 1=150'

LIST OF DRAWINGS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	NOTES, LEGEND & TYPICAL SECTIONS
3	IMPROVEMENT PLAN – WEST 208TH ST.
4	IMPROVEMENT PLAN – WEST 208TH ST.
5	IMPROVEMENT PLAN – CRENSHAW BLVD.
6	IMPROVEMENT PLAN – CRENSHAW BLVD.
7	DETAILS

GENERAL NOTES (CON'T.)

25. MANHOLE COVER SHALL BE CAST WITH THE WORDS "TORRANCE SEWER" FOR CITY MAINTAINED LINES AND "PRIVATE SEWER" FOR PRIVATELY MAINTAINED LINES.

26. ALL SEWER LINES CONSTRUCTED TO PUBLIC STANDARDS SHALL BE VITRIFIED CLAY PIPE (VCP). DUCTILE IRON PIPE MAY BE USED SUBJECT TO PRIOR WRITTEN APPROVAL FROM THE COMMUNITY DEVELOPMENT/PUBLIC WORKS DIRECTOR. ALL HOUSE CONNECTION LATERALS SHALL BE MINIMUM 6 INCH DIAMETER.

27. CONTRACTOR SHALL SET ALL MANHOLE FRAMES AND COVERS TO FINISHED GRADE.

28. CONCRETE ENCASEMENT SHALL BE REQUIRED FOR SEWER MAIN LINE AND HOUSE LATERALS WITH LESS THAN 3 FEET OF COVER.

<u>STORM DRAIN NOTES:</u>

29. STORM DRAIN CONNECTIONS TO THE L.A. COUNTY STORM DRAIN SYSTEM REQUIRE A PERMIT FROM L.A. COUNTY (1-626-458-3129) BEFORE ISSUANCE OF A CITY PERMIT.

30. IN CASE OF CONFLICT BETWEEN A CONNECTOR PIPE AND AN EXISTING UNDERGROUND LINE, THE CONNECTOR PIPE MAY BE REALIGNED OVER OR UNDER THE CONFLICTING LINE. CONNECTOR PIPE GRADES SHALL DRAIN POSITIVELY TOWARD THE MAIN LINE, AND WHERE GRADE BREAKS EXCEED FIVE DEGREES A CONCRETE COLLAR PER A.P.W.A. STD. DRAWING 380 SHALL BE CONSTRUCTED. APPROVAL FOR REALIGNMENT SHALL BE OBTAINED FROM THE COMMUNITY DEVELOPMENT/PUBLIC WORKS DIRECTOR PRIOR TO COMMENCEMENT OF WORK.

31. MANHOLE AND CATCH BASIN COVERS SHALL BE CAST WITH THE WORDS "TORRANCE DRAIN" FOR CITY MAINTAINED LINES AND "PRIVATE DRAIN" FOR PRIVATELY MAINTAINED LINES.

32. DURING NON-CONSTRUCTION HOURS, ALL EXCAVATIONS MUST BE APPROPRIATELY SHORED, PLATED OR BACKFILLED EXCEPT BORE PITS WHICH SHALL BE SECURED WITH K-RAIL AND 6' HIGH CHAIN LINK FENCE PANELS SECURED IN PLACE TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR. STEEL PLATES SHALL BE TACK WELDED, PINNED AND/OR SECURED IN PLACE BY ANOTHER METHOD APPROVED BY THE INSPECTOR.

SURVEY MONUMENTS

CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCHMARKS THAT ARE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEYOR OR REGISTERED ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OF SURVEY AS APPROPRIATE, SHALL BE FILED BY THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT FOR ANY REPLACED MONUMENTATION.

BASIS OF BEARINGS

THE BASIS OF BEARINGS USED ON THESE PLANS IS THE RIGHT-OF-WAY LINE OF CRENSHAW BOULEVARD BEARING NORTH 00°34'10" WEST AS SHOWN ON TRACT NO. 7873 AS FILED IN BOOK 109, PAGES 99 TO 100 INCLUSIVE OF MAPS, IN THE OFFICE OF THE RECORDER OF LOS ANGELES COUNTY.

SOURCE OF TOPOGRAPHY

PHOTOGRAMMETRIC TOPOGRAPHY PROVIDED BY: DCA CIVIL ENGINEERING GROUP
DATED: 01/25/2010

LEGAL DESCRIPTION

THAT PORTION OF LOT 8 OF TRACT NO. 7873, IN THE CITY OF TORRANCE, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 109, PAGES 99 AND 100 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND A PORTION OF PARCEL 130 OF SUBDIVISION OF PORTIONS OF THE 730.61 ACRE TRACT ALLOTTED TO SUSANA DOMINGUEZ BY A FINAL DECREE OF PARTITION OF A PORTION OF THE RANCHO SAN PEDRO IN CASE NO. 3284 OF THE SUPERIOR COURT OF LOS ANGELES COUNTY, DESCRIBED AS A WHOLE AS FOLLOWS:

BEGINNING AT THE MOST SOUTHERLY CORNER OF SAID LOT 8; THENCE NORTH 00 DEGREES 34 MINUTES 10 SECONDS WEST ON AND ALONG THE EAST LINE OF SAID LOT 8, 981.22 FEET; THENCE SOUTH 89 DEGREES 25 MINUTES 50 SECONDS WEST 1204.43 FEET, MORE OR LESS, TO A LINE THAT IS PARALLEL WITH AND DISTANT 5 FEET NORTHEASTERLY AT RIGHT ANGLES FROM THE NORTHEASTERLY BOUNDARY LINE OF THE RIGHT OF WAY OF THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, AS CONVEYED TO SANTA FE AND LOS ANGELES HARBOR RAILWAY COMPANY, BY DEED OF EASEMENT RECORDED OCTOBER 9, 1942 AS INSTRUMENT NO. 1327 IN BOOK 19635, PAGE 64, OFFICIAL RECORDS; THENCE SOUTH 48 DEGREES 00 MINUTES 00 SECONDS EAST 1247.12 FEET, MORE OR LESS, ALONG SAID PARALLEL LINE AND THE SOUTHEASTERLY PROLONGATION THEREOF TO THE BEGINNING OF A TANGENT CURVE CONCAVE NORTHEASTERLY HAVING A RADIUS OF 546.438 FEET AND WHICH PASSES THROUGH THE POINT OF BEGINNING; THENCE SOUTHEASTERLY ALONG SAID CURVE A DISTANCE OF 321.98 FEET TO THE POINT OF BEGINNING.

APN

7352-002-008

BENCHMARK

BENCH MARK: Y10874

DPW BM TAG IN E CB 1M(3.3FT)
N/O BCR @ NE COR CRENSHAW
BLVD & 208TH ST
TORRANCE QUAD 2005 EL. 72.904

EROSION CONTROL

THE CONTRACTOR IS RESPONSIBLE TO REPAIR ANY EROSION DAMAGE TO THE SLOPES, PADS OR STREETS SHOWN ON THESE PLANS WHETHER THE SLOPES ARE EXISTING OR NEW SLOPES, UNTIL THE PROJECT IS ACCEPTED BY THE CITY ENGINEER.

PERFORMANCE DRAWING:
NOT FOR CONSTRUCTION

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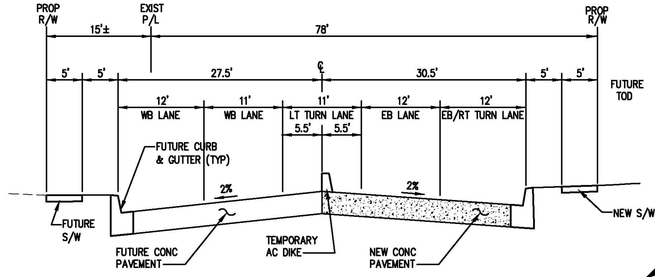
REV.	DATE	DESCRIPTION	BY	CHECKED

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

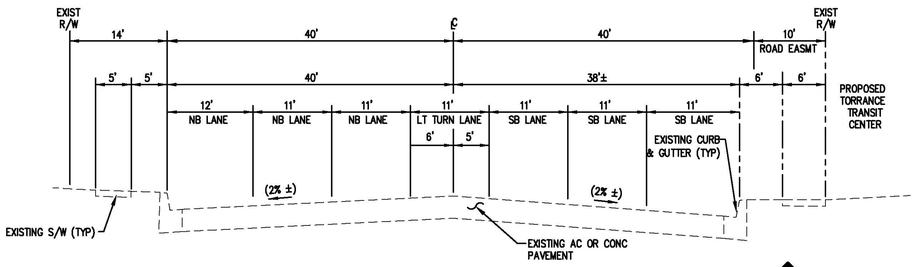
DRAWN:	APPROVED:
DESIGNED:	
PROJECT ENGINEER:	TOUFIC J SEMAAN ACTING CITY ENGINEER R.C.E. NO. C59226 DATE EXP. 06/30/13
DIVISION ENGINEER: JOHN DETTLE	SCALE: SHEET 1 OF 6 PLAN NO.

DRAWING NAME: L:\Projects\3_N-S\3RNL010100 Torrance_Transit_Center\ENGR\SHEETS\PUBLIC IMPROVEMENTS\C-1.dwg
PLOT DATE: Sep 21, 2012 - 4:34pm PLOTTED BY: gyan



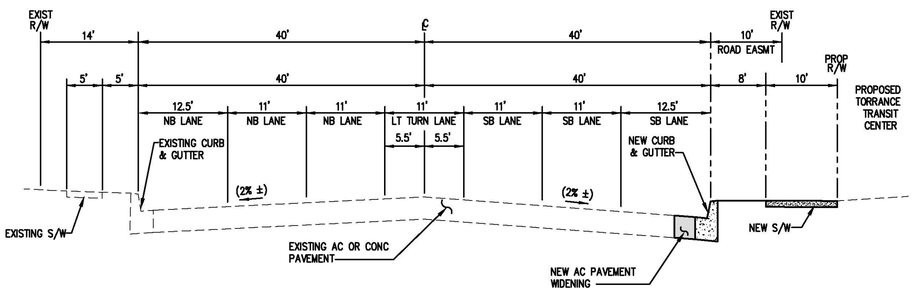
PROPOSED CONDITIONS - 208TH ST. EXTENSION (LOOKING EAST) **A**

NOT TO SCALE



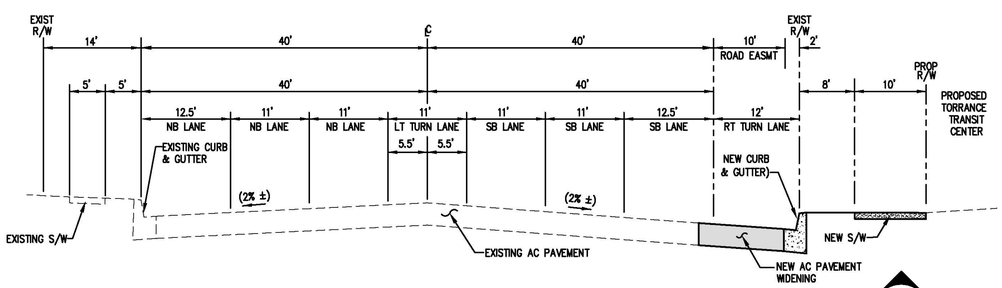
EXISTING CONDITIONS - CRENSHAW BLVD. (LOOKING SOUTH) **B**

NOT TO SCALE



PROPOSED SECTION - CRENSHAW BLVD. (LOOKING SOUTH) **C**

NOT TO SCALE



PROPOSED SECTION (AT RT TURN LANE) - CRENSHAW BLVD. (LOOKING SOUTH) **D**

NOT TO SCALE

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ABBREVIATIONS

ALL ABBREVIATIONS ARE PER SECTION 1-3 OF THE GREEN BOOK WITH THE ADDITIONS INDICATED BELOW:

ABAND	ABANDONED	MAT'L	MATERIAL
ASS'Y	ASSEMBLY	MIN	MINIMUM
BFD	BACKFLOW DEVICE	MJ	MECHANICAL JOINT
BO	BLOW-OFF	N.I.C.	NOT A PART OF THIS CONTRACT
COMB	COMBINATION		
DG	DECOMPOSED GRANITE	PVC	POLYVINYL CHLORIDE
ELEV	ELEVATION	RSD	REGIONAL STANDARD DRAWINGS
EXIST.	EXISTING		
EJ	EXPANSION JOINT	RT	RIGHT
FLG/FLG'D	FLANGE/FLANGED	R/W	RIGHT-OF-WAY
FS	FINISHED SURFACE	SWR	SEWER
GV	GATE VALVE	TB	TOP OF BERM
HDPE	HIGH DENSITY POLYETHYLENE	TG	TOP OF GRATE
		TP	TOP OF PIPE
HP	HIGH PRESSURE	WTR	WATER
INT	INTERSECTION		
IE	INVERT ELEVATION		
IVT	IMPERIAL VALLEY TRANSIT		
LT	LEFT		

GEOTECHNICAL REPORT

A GEOTECHNICAL REPORT ENTITLED "GEOTECHNICAL SERVICES FOR ADVANCED CONCEPTUAL ENGINEERING, TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL" PREPARED BY "DIAZ YOURMAN & ASSOCIATES" HAS BEEN PREPARED FOR THIS PROJECT AND IS AVAILABLE FOR REVIEW BY THE CONTRACTOR FOR REFERENCE AT THE OFFICE OF THE CITY ENGINEER.

ENGINEER'S NOTICE TO CONTRACTORS

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OF STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURE TO PROTECT ANY UTILITY LINES SHOWN AND ANY OTHER FINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

PRIVATE ENGINEERING NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT TO BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD CITY AND DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CITY OR THE DESIGN PROFESSIONAL.

SWPPP NOTE

CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THIS PROJECT. THE SWPPP MUST BE PREPARED BY A QUALIFIED SWPPP DEVELOPER (QSD) AND SUBMITTED TO THE STATE SMARTS SYSTEM. CONTRACTOR TO PROVIDE APPLICATION FOR GRADING PERMIT TO CITY PRIOR TO ANY SOIL DISTURBANCE. THE NOI MUST BE SUBMITTED TO CITY AT TIME OF GRADING PERMIT REQUEST. CONTRACTOR MUST MAINTAIN THE SERVICES OF A QUALIFIED SWPPP PRACTITIONER (QSP) DURING WORK OPERATIONS TO MONITOR OR THE WORK AND PROVIDE REQUIRED REPORTING INTO SMARTS.

SPECIAL NOTES

1. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE, OR RUNNING OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT, AND ANY OTHER ASSOCIATED EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 6:00 AM AND 7:00 PM EACH DAY, MONDAY THROUGH FRIDAY, AND NO GRADING OR EARTHMOVING OPERATIONS SHALL BE CONDUCTED ON THE PREMISES ON SATURDAYS, SUNDAYS OR CITY OF EL CENTRO HOLIDAYS WITHOUT APPROVAL BY THE CITY ENGINEER. OVERTIME INSPECTIONS SHALL BE AT THE CONTRACTORS EXPENSE.
2. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT EXISTING IMPROVEMENTS AND THE CITY OF EL CENTRO WILL ENFORCE SECTION 7-9 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. ALL EXISTING IMPROVEMENTS INCLUDING A.C. BERM, A.C. OR P.C.C. PAVING, WHICH ARE BEING JOINED OR MATCHED IN CONNECTION WITH THIS PROJECT SHALL BE JOINED OR MATCHED IN A MANNER SATISFACTORY TO THE CITY ENGINEER INCLUDING NECESSARY SAWCUTTING, REMOVAL, REPLACEMENT AND CAPPING.
4. THE CONTRACTOR SHALL DESIGN, PLACE AND MAINTAIN ALL SAFETY DEVICES INCLUDING SHORING AND BARRICADING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS. THE CONTRACTOR IS REFERRED TO SECTION 7-10 "PUBLIC CONVENIENCE AND SAFETY" OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
5. ANY CONTRACTOR PERFORMING WORK ON THE PROJECT SITE SHALL FAMILIARIZE SELF WITH THE SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM OPERATIONS. THE CONTRACTOR IS REFERRED TO SECTION 7-9 "PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS" OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
6. ACCESS FOR FIRE AND OTHER EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES DURING PROJECT CONSTRUCTION.
7. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DUST CONTROL MEASURES THROUGHOUT THE DURATION OF PROJECT CONSTRUCTION. PROJECT SITE MAINTENANCE SHALL CONFORM TO SECTION 7-8 "PROJECT SITE MAINTENANCE" OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
8. ALL DISTANCES AND DIMENSIONS SHOWN ON THE PLANS ARE IN A HORIZONTAL PLANE UNLESS OTHERWISE NOTED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY PAVEMENT STRIPING OR MARKINGS REMOVED OR MADE ILLEGIBLE AS A RESULT OF HIS WORK.
10. APPROVAL OF THESE PLANS AS SHOWN DOES NOT CONSTITUTE APPROVAL OF ANY CONSTRUCTION OUTSIDE THE PROJECT LIMITS OF WORK.
11. LOCATION AND ELEVATION OF IMPROVEMENTS SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY BECAUSE OF DISCREPANCIES.
12. NEITHER THE OWNER, NOR THE ENGINEER OF WORK, WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS.
13. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
14. THE ENGINEER OF WORK SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NOR SHALL HE BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK OR THE CONSTRUCTION PROCEDURES FOLLOWED BY THE CONTRACTOR OR SUBCONTRACTORS OR THEIR RESPECTIVE EMPLOYEES OR BY ANY OTHER PERSON AT THE JOB SITE OTHER THAN THAT OF THE ENGINEER'S EMPLOYEES.

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS LISTED BELOW.

STANDARD SPECIFICATIONS

1) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION)

2) CALIFORNIA DEPARTMENT OF TRANSPORTATION, "MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" (MAY 19, 2004)

STANDARD DRAWINGS

CITY OF TORRANCE STANDARD DRAWINGS, (LATEST EDITION)

APWA STANDARD DRAWINGS

LEGEND

EXISTING CONDITIONS

ITEM	SYMBOL
EXISTING SEWER LINE	S EXIST SIZE & MAT'L
EXISTING SEWER CLEANOUT	
EXISTING SEWER MANHOLE	SMH OR SMH
EXISTING WATER LINE	W EXIST SIZE & MAT'L
EXISTING WATER METER	WM
EXISTING WATER VALVE	
EXISTING FIRE HYDRANT	FH
EXISTING STORM DRAIN LINE	SD EXIST SIZE & MAT'L
EXISTING STORM DRAIN INLET	DI
EXISTING POWER POLE	
EXISTING ELECTRIC OR UNDERGROUND	E (U/G) OR (O/H)
EXISTING STREET LIGHT	
EXISTING GAS LINE	G EXIST SIZE
EXISTING TELEPHONE LINE	T
EXISTING TELEPHONE PEDESTAL	
EXISTING CABLE TV LINE	CATV
EXISTING PULL BOX	
EXISTING SIGN	
EXISTING TREE/BUSH	
EXISTING BOLLARD	
EXISTING FENCE	x

NEW IMPROVEMENTS

ITEM	DESCRIPTION	STD DWG NO./DETAIL NO.	SYMBOL
1	6" CURB	APWA 120	
2	6" CURB & GUTTER	APWA 120	
3	CURB RAMP	APWA 111	
4	SIDEWALK	APWA 110	
5	VEHICULAR CONCRETE PAVEMENT		
6	ASPHALT CONCRETE PAVEMENT		
7	STORM DRAIN		
8	CURB INLET		
9	CLEANOUT		
10	FIRE HYDRANT ASSEMBLY	T 706	W
11	2" DOMESTIC WATER SERVICE/METER	T 704	W
12	4" FIRE SERVICE/DCDA	T 710	FW BFD
13	1 12" IRRIGATION WATER SERVICE/METER	T 704	I
14	4" SEWER LATERAL		S
15	SEWER MANHOLE		S
16	COMMERCIAL CONCRETE DRIVEWAY		
17	CURB DRAIN	APWA 150	

EC = CITY OF EL CENTRO STANDARD DRAWINGS
COI = COUNTY OF IMPERIAL STANDARD DRAWINGS

REV.	DATE	DESCRIPTION	BY	CHECKED

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San Diego, CA 92108
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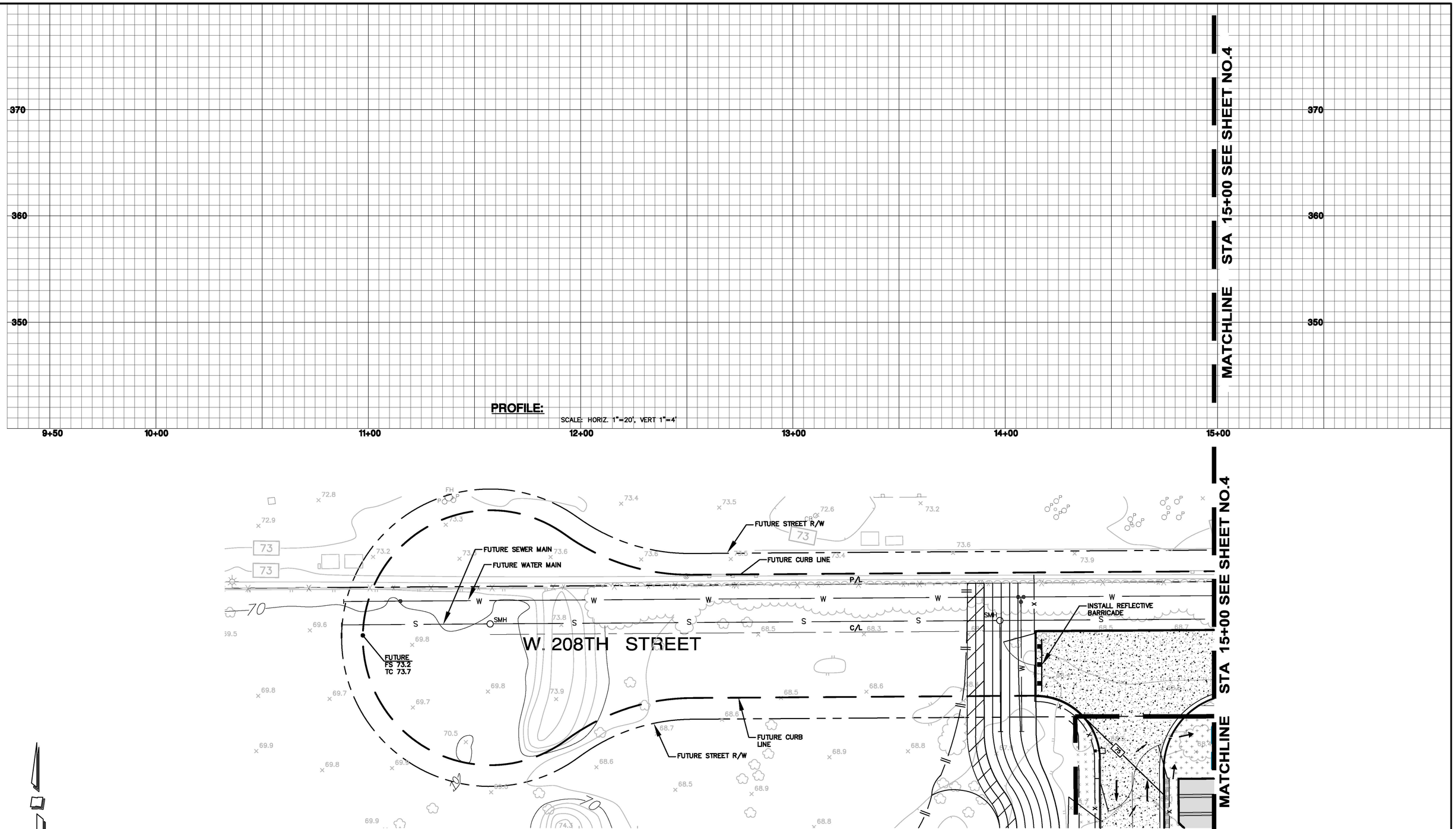
CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

DRAWN:
DESIGNED:
APPROVED:
PROJECT ENGINEER:
TOUFIC J SEMAAN
ACTING CITY ENGINEER
R.C.E. NO. C59226
DATE
EXP. 06/30/13
DIVISION ENGINEER: JOHN DETTLE
SCALE:
SHEET 2 OF 6
PLAN NO.



0' 10' 20' 40' 60'
SCALE: 1" = 20'

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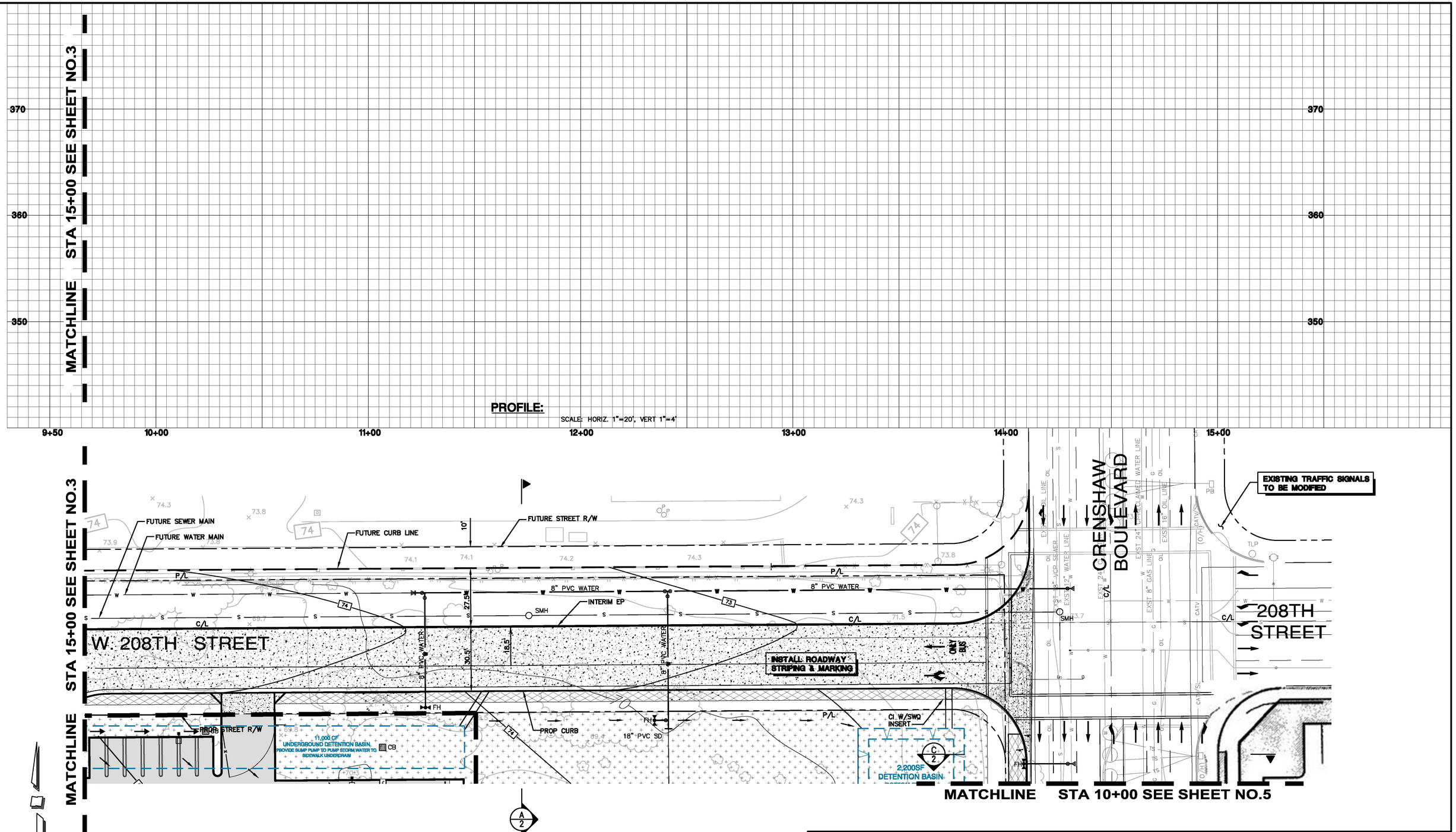
TOUFIC J SEMAAN
ACTING CITY ENGINEER
R.C.E. NO. C59226
DATE
EXP. 06/30/13
SCALE:
SHEET 3 OF 6
DIVISION ENGINEER: JOHN DETTLE
PLAN NO.



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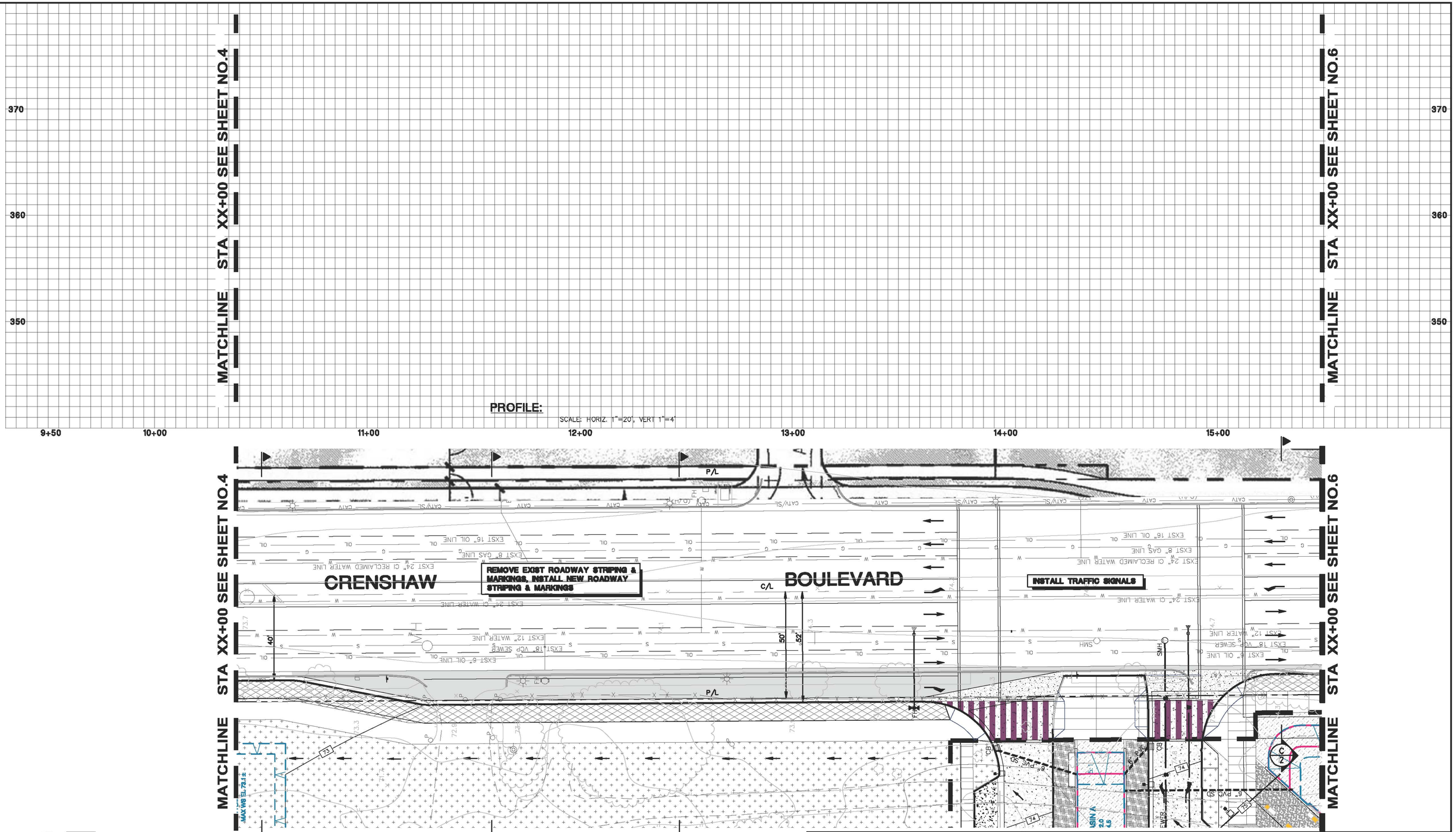
SCALE:
SHEET 4 OF 6
PLAN NO.



0' 10' 20' 40' 60'

SCALE: 1" = 20'

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REV.	DATE	DESCRIPTION	BY	CHECKED

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ACTING CITY ENGINEER
R.C.E. NO. C59226

DATE
EXP. 06/30/13

DIVISION ENGINEER: JOHN DETTLE

SCALE:

SHEET 5 OF 6

PLAN NO.

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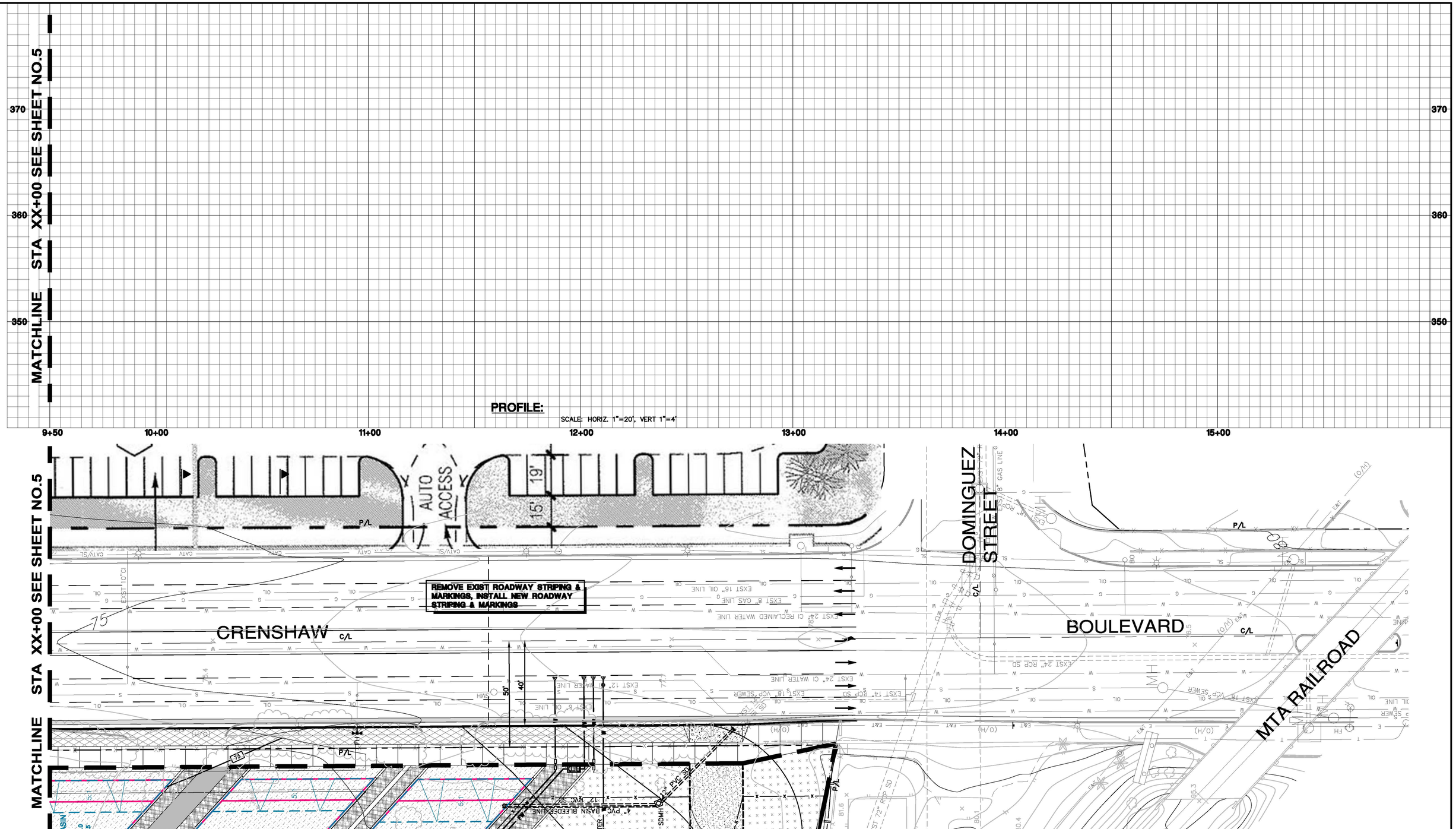
PLOT DATE: Sep 21, 2012 - 4:41pm PLOTTED BY: tgren



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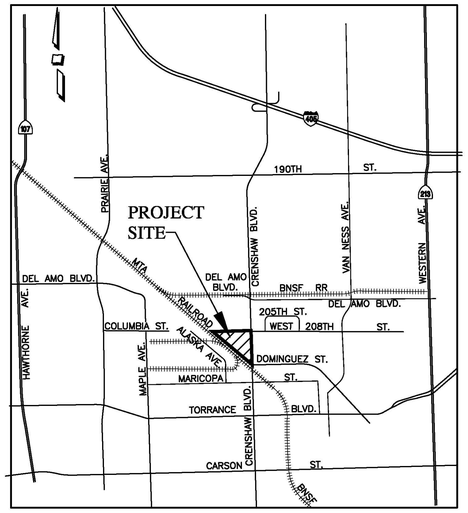
SCALE:
SHEET 6 OF 6
PLAN NO.

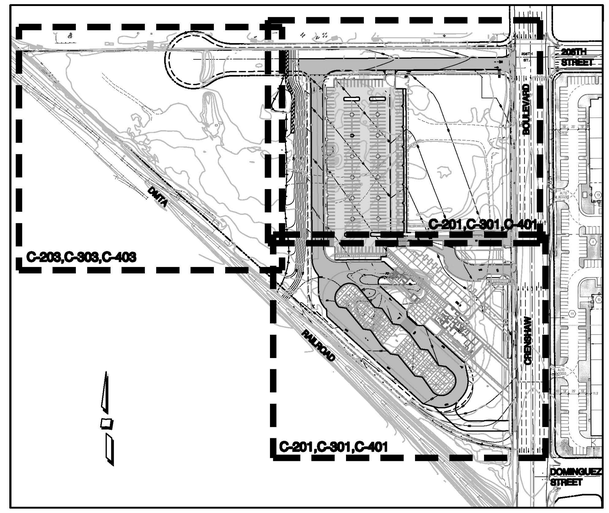
CITY OF EL TORRANCE
LOS ANGELES COUNTY, CALIFORNIA

ON-SITE 30% CONSTRUCTION DRAWINGS FOR THE

TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL



VICINITY MAP
N.T.S.



KEY MAP
SCALE: 1=150'

SURVEY MONUMENTS

CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCHMARKS THAT ARE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEYOR OR REGISTERED ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OF SURVEY AS APPROPRIATE, SHALL BE FILED BY THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT FOR ANY REPLACED MONUMENTATION.

BASIS OF BEARINGS

THE BASIS OF BEARINGS USED ON THESE PLANS IS THE RIGHT-OF-WAY LINE OF CRENSHAW BOULEVARD BEARING NORTH 00°34'10" WEST AS SHOWN ON TRACT NO. 7873 AS FILED IN BOOK 109, PAGES 99 TO 100 INCLUSIVE OF MAPS, IN THE OFFICE OF THE RECORDER OF LOS ANGELES COUNTY.

LEGAL DESCRIPTION

THAT PORTION OF LOT 8 OF TRACT NO. 7873, IN THE CITY OF TORRANCE, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 109, PAGES 99 AND 100 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND A PORTION OF PARCEL 130 OF SUBDIVISION OF PORTIONS OF THE 730.61 ACRE TRACT ALLOTTED TO SUSANA DOMINGUEZ BY A FINAL DECREE OF PARTITION OF A PORTION OF THE RANCHO SAN PEDRO IN CASE NO. 3284 OF THE SUPERIOR COURT OF LOS ANGELES COUNTY, DESCRIBED AS A WHOLE AS FOLLOWS:

BEGINNING AT THE MOST SOUTHERLY CORNER OF SAID LOT 8; THENCE NORTH 00 DEGREES 34 MINUTES 10 SECONDS WEST ON AND ALONG THE EAST LINE OF SAID LOT 8, 981.22 FEET; THENCE SOUTH 89 DEGREES 25 MINUTES 50 SECONDS WEST 1204.43 FEET, MORE OR LESS, TO A LINE THAT IS PARALLEL WITH AND DISTANT 5 FEET NORTHEASTERLY AT RIGHT ANGLES FROM THE NORTHEASTERLY BOUNDARY LINE OF THE RIGHT OF WAY OF THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, AS CONVEYED TO SANTA FE AND LOS ANGELES HARBOR RAILWAY COMPANY, BY DEED OF EASEMENT RECORDED OCTOBER 9, 1942 AS INSTRUMENT NO. 1327 IN BOOK 19635, PAGE 64, OFFICIAL RECORDS; THENCE SOUTH 48 DEGREES 00 MINUTES 00 SECONDS EAST 1247.12 FEET, MORE OR LESS, ALONG SAID PARALLEL LINE AND THE SOUTHEASTERLY PROLONGATION THEREOF TO THE BEGINNING OF A TANGENT CURVE CONCAVE NORTHEASTERLY HAVING A RADIUS OF 546.438 FEET AND WHICH PASSES THROUGH THE POINT OF BEGINNING; THENCE SOUTHEASTERLY ALONG SAID CURVE A DISTANCE OF 321.98 FEET TO THE POINT OF BEGINNING.

APN

7352-002-008

BENCHMARK

BENCH MARK: Y10874

DPW BM TAG IN E CB 1M(3.3FT)
N/O BCR @ NE COR CRENSHAW
BLVD & 208TH ST

TORRANCE QUAD 2005 EL. 72.904

SOURCE OF TOPOGRAPHY

PHOTOGRAMMETRIC TOPOGRAPHY PROVIDED BY:DCA CIVIL ENGINEERING GROUP
DATED:01/25/2010

EROSION CONTROL

THE CONTRACTOR IS RESPONSIBLE TO REPAIR ANY EROSION DAMAGE TO THE SLOPES, PADS OR STREETS SHOWN ON THESE PLANS WHETHER THE SLOPES ARE EXISTING OR NEW SLOPES, UNTIL THE PROJECT IS ACCEPTED BY THE CITY ENGINEER.

LIST OF DRAWINGS

SHEET No.	DESCRIPTION
C-101	TITLE SHEET
C-102	NOTES AND LEGENDS
C-201 THRU C-203	SITE PREPARATION PLAN
C-301 THRU C-303	GRADING/PAVING/UTILITY PLAN
C-401 THRU C-403	HORIZ CONTROL/STRIPING PLAN
C-501	DETAILS
C-601	PROFILES
C-701	SECTIONS

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CITY OF TORRANCE
TORRANCE TRANSIT
PARK & RIDE REGIONAL TERMINAL

465 CRENSHAW BLVD.
TORRANCE, CA 90503
30% CONSTRUCTION DRAWINGS

MARK	DATE	DESCRIPTION

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PROJECT No: 329.00
DATE: 9/28/2012
SCALE: NONE

CIVIL
TITLE SHEET

C-101

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION AND SUPPLEMENTS THERETO, AS WRITTEN AND PROMULGATED BY PUBLIC WORKS STANDARDS, INC., HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS, THE TORRANCE STANDARDS, THE AMERICAN WATER WORKS ASSOCIATION STANDARDS LATEST EDITION, AND TO THE SATISFACTION OF THE ENGINEERING DIRECTOR.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, VERIFY DEPTH AND PROTECT ALL STRUCTURES, INCLUDING SUBSTRUCTURES, SHOWN ON THE PLAN. THE CONTRACTOR SHALL BEAR THE ENTIRE COST OF REPAIRING OR REPLACING ANY OF SAID STRUCTURES DAMAGED BY HIM/HER DURING PROSECUTION OF THE WORK. ALL REPAIRS AND REPLACEMENTS SHALL BE DONE IN THE PRESENCE OF THE INSPECTOR. ALL LOCATIONS SHOWN ON THE PLAN FOR UTILITY LINES HAVE BEEN TAKEN FROM AVAILABLE RECORDS AND THEIR COMPLETENESS AND CORRECTNESS ARE IN NO WAY GUARANTEED.

3. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600 AND ALL PUBLIC UTILITY COMPANIES AND OWNERS OF PRIVATE FACILITIES WITHIN THE AREA OF CONSTRUCTION AT LEAST 2 WORKING DAYS IN ADVANCE OF PERFORMING ANY WORK WITHIN SAID AREA.

4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE ENGINEERING DIRECTOR BEFORE COMMENCING WORK. TRAFFIC CONTROL WITHIN PUBLIC STREET RIGHTS OF WAY SHALL BE IN CONFORMANCE WITH THE "CONSTRUCTION TRAFFIC CONTROL PROCEDURES ON CITY STREETS", LATEST EDITION AVAILABLE AT THE ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL PROVIDE A 24-HOUR TELEPHONE NUMBER FOR EMERGENCY REPAIRS TO TRAFFIC CONTROL AND PAVEMENT MARKINGS.

5. CAUTION: REVIEW APPROVED CONSTRUCTION PLAN. IF CONSTRUCTION REQUIRES WORKERS AND/OR EQUIPMENT TO BE WITHIN 6 FEET OR CRANES OR HOISTING DEVICES TO BE WITHIN 10 FEET OF OVERHEAD ELECTRIC LINES, CALL SOUTHERN CALIFORNIA EDISON AT 310-783-9339 FOR PROJECTS IN RESIDENTIAL AREAS OR 310-783-9331 FOR PROJECTS IN COMMERCIAL AREAS.

6. PRIOR TO COMMENCEMENT OF WORK, ALL SURVEY MONUMENTS IN THE PROJECT AREA SHALL BE LOCATED AND TIED OUT. ALL CENTERLINE MONUMENTS OR TIES LOST OR DESTROYED BY THIS WORK SHALL BE REPLACED EITHER BY A LICENSED SURVEYOR OR A CIVIL ENGINEER REGISTERED PRIOR TO JANUARY 1, 1982 AND NEW TIE SHEETS PROVIDED. METHOD OF ESTABLISHMENT SHALL BE STATED ON THE TIE SHEET.

7. GRADE SHEETS PREPARED AND STAMPED BY A LICENSED ENGINEER OR SURVEYOR SHALL BE DELIVERED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK.

8. THE CONTRACTOR SHALL NOTIFY THE CITY STREET DEPARTMENT AT 310-781-6900 PRIOR TO TRIMMING, REMOVING OR RELOCATING ANY EXISTING TREES.

9. UNLESS OTHERWISE SHOWN, ALL TRAFFIC SIGNS SHALL BE RELOCATED OR REMOVED BY THE CITY. THE CONTRACTOR SHALL NOTIFY THE STREET DEPARTMENT AT 310-781-6900 AT LEAST 2 WORKING DAYS IN ADVANCE TO ARRANGE THE WORK.

WATER NOTES:

10. CONTRACTOR SHALL MAKE AVAILABLE FOR THE PUBLIC WORKS INSPECTOR'S REVIEW, ON A DAILY BASIS, AS-BUILT DRAWINGS FOR WORK PERFORMED UP TO AND INCLUDING THE PREVIOUS DAY'S ACTIVITIES. WORK SHALL NOT BE CONSIDERED AS COMPLETE UNTIL AS-BUILTS ARE SUBMITTED TO AND ACCEPTED BY THE ENGINEERING DIRECTOR.

11. TRENCHES CUT INTO AN EXISTING ROADWAY WITHIN THE PUBLIC RIGHTS OF WAY SHALL BE BACKFILLED AND PAVED AS PER CITY OF TORRANCE STANDARD T116.

12. TRENCH RESURFACING SHALL BE OF THE SAME TYPE AS THE EXISTING PAVEMENT, EXCEPT IF EXISTING PAVEMENT IS A.C. OVER P.C.C., RESURFACING MAYBE FULL-DEPTH A.C.

13. THE CONTRACTOR SHALL DISINFECT WATER LINES UNDER THE DIRECTION OF THE CITY'S WATER QUALITY INSPECTOR. THE TORRANCE MUNICIPAL WATER DEPARTMENT SHALL COLLECT WATER SAMPLES FOR ANALYSIS SUBSEQUENT TO DISINFECTING OF THE PIPELINE BY THE CONTRACTOR.

14. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AT LEAST TWO WORKING DAYS IN ADVANCE OF A PROPOSED WATER MAIN OR SERVICE LINE SHUT DOWN. THE CONTRACTOR SHALL NOTIFY THE CUSTOMERS EFFECTED BY THE PROPOSED SHUT DOWN AT LEAST 24 HOURS IN ADVANCE. CUSTOMER NOTIFICATION SHALL CONSIST OF A DOOR HANGER SPECIFING THE DATE(S) AND TIME(S) OF THE PROPOSED SHUT DOWN. NOTICE SHALL CONTAIN THE CONTRACTORS NAME AND TELEPHONE NUMBER. NOTICE SHALL BE APPROVED BY THE INSPECTOR PRIOR TO DISTRIBUTION.

15. OPERATION OF VALVES ON ALL PUBLIC WATER LINES AND THE FIRST NEW VALVE DOWNSTREAM OF A PUBLIC WATER MAIN SHALL BE PERFORMED BY THE TORRANCE MUNICIPAL WATER DEPARTMENT UNLESS OTHERWISE SHOWN.

16. ALL WATER LINES SHALL HAVE 42" COVER FROM PROPOSED FINISHED GRADE UNLESS OTHERWISE SHOWN ON THE PLAN.

17. FOR PARALLEL CONSTRUCTION ALL WATER LINES SHALL BE INSTALLED WITH A TWO FOOT (MIN.) CLEARANCE FROM EXISTING UTILITY LINES (GAS, TELEPHONE, CABLE, POWER...). A MINIMUM OF 12" CLEARANCE SHALL BE PROVIDED WHEN CROSSING UTILITY LINES.

18. NO PVC PIPE SHALL BE INSTALLED UPSTREAM OF THE INLET SIDE OF METERS OR DETECTOR CHECK VALVES.

19. PIPE BEDDING SHALL CONFORM TO TORRANCE STANDARD DRAWING T701.

20. ALL FLANGE NUTS, BOLTS AND WASHERS SHALL BE 316 S.S. UNLESS OTHERWISE SHOWN.

21. ALL BURIED PIPE, VALVES, FITTING, ETC. SHALL BE WRAPPED IN 8 MIL. POLYETHYLENE.

SEWER NOTES:

22. BEFORE BREAKING INTO OR CONSTRUCTION ON A COUNTY SANITATION DISTRICT SEWER AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, COUNTY SANITATION DISTRICT INSPECTOR SHALL BE NOTIFIED BY PHONE AT 310-638-1161 IN ORDER THAT REQUIRED INSPECTION MAY BE MADE.

23. EXISTING DOWNSTREAM MANHOLES SHALL BE BULKHEADED WITH BRICK AND MORTAR OR PLUGS APPROVED BY THE INSPECTOR AT NEW INLET DURING CONSTRUCTION OF NEW UPSTREAM LINES. BRICK AND MORTAR OR PLUG SHALL BE REMOVED IN THE PRESENCE OF THE INSPECTOR(S) DURING CLEANING OF THE FIRST UPSTREAM SECTION OF THE NEW SYSTEM.

24. NO CONNECTION FOR THE DISPOSAL OF INDUSTRIAL WASTES SHALL BE MADE TO SEWERS SHOWN ON THESE DRAWINGS UNTIL A PERMIT FOR INDUSTRIAL WASTE WATER DISCHARGE HAS BEEN ISSUED BY THE COUNTY SANITATION DISTRICTS FOR SAID CONNECTION.

25. MANHOLE COVER SHALL BE CAST WITH THE WORDS "TORRANCE SEWER" FOR CITY MAINTAINED LINES AND "PRIVATE SEWER" FOR PRIVATELY MAINTAINED LINES.

26. ALL SEWER LINES CONSTRUCTED TO PUBLIC STANDARDS SHALL BE VITRIFIED CLAY PIPE (VCP). DUCTILE IRON PIPE MAY BE USED SUBJECT TO PRIOR WRITTEN APPROVAL FROM THE COMMUNITY DEVELOPMENT/PUBLIC WORKS DIRECTOR. ALL HOUSE CONNECTION LATERALS SHALL BE MINIMUM 6 INCH DIAMETER.

27. CONTRACTOR SHALL SET ALL MANHOLE FRAMES AND COVERS TO FINISHED GRADE.

28. CONCRETE ENCASEMENT SHALL BE REQUIRED FOR SEWER MAIN LINE AND HOUSE LATERALS WITH LESS THAN 3 FEET OF COVER.

STORM DRAIN NOTES:

29. STORM DRAIN CONNECTIONS TO THE L.A. COUNTY STORM DRAIN SYSTEM REQUIRE A PERMIT FROM L.A. COUNTY (1-626-458-3129) BEFORE ISSUANCE OF A CITY PERMIT.

30. IN CASE OF CONFLICT BETWEEN A CONNECTOR PIPE AND AN EXISTING UNDERGROUND LINE, THE CONNECTOR PIPE MAY BE REALIGNED OVER OR UNDER THE CONFLICTING LINE. CONNECTOR PIPE GRADES SHALL DRAIN POSITIVELY TOWARD THE MAIN LINE, AND WHERE GRADE BREAKS EXCEED FIVE DEGREES A CONCRETE COLLAR PER A.P.W.A. STD. DRAWING 380 SHALL BE CONSTRUCTED. APPROVAL FOR REALIGNMENT SHALL BE OBTAINED FROM THE COMMUNITY DEVELOPMENT/PUBLIC WORKS DIRECTOR PRIOR TO COMMENCEMENT OF WORK.

31. MANHOLE AND CATCH BASIN COVERS SHALL BE CAST WITH THE WORDS "TORRANCE DRAIN" FOR CITY MAINTAINED LINES AND "PRIVATE DRAIN" FOR PRIVATELY MAINTAINED LINES.

32. DURING NON-CONSTRUCTION HOURS, ALL EXCAVATIONS MUST BE APPROPRIATELY SHORED, PLATED OR BACKFILLED EXCEPT BORE PITS WHICH SHALL BE SECURED WITH K-RAIL AND 6' HIGH CHAIN LINK FENCE PANELS SECURED IN PLACE TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR. STEEL PLATES SHALL BE TACK WELDED, PINNED AND/OR SECURED IN PLACE BY ANOTHER METHOD APPROVED BY THE INSPECTOR.

ABBREVIATIONS

ALL ABBREVIATIONS ARE PER SECTION 1-3 OF THE GREEN BOOK WITH THE ADDITIONS INDICATED BELOW:

ABAND	ABANDONED	MAT'L	MATERIAL
ASS'Y	ASSEMBLY	MIN	MINIMUM
BFD	BACKFLOW DEVICE	MJ	MECHANICAL JOINT
BO	BLOW-OFF	N.I.C.	NOT A PART OF THIS
CATV	CABLE TV		CONTRACT
COMB	COMBINATION	O/H	OVERHEAD
DI	DRAIN INLET	PVC	POLYVINYL CHLORIDE
DG	DECOMPOSED GRANITE	RSD	REGIONAL STANDARD
E	ELECTRIC		DRAWINGS
ELEV	ELEVATION	RT	RIGHT
EXIST.	EXISTING	R/W	RIGHT-OF-WAY
EJ	EXPANSION JOINT	SMH	SEWER MANHOLE
FH	FIRE HYDRANT	SWQ	STORM WATER QUALITY
FLG/FLG'D	FLANGE/FLANGED	SWR	SEWER
FS	FINISHED SURFACE	T	TELEPHONE
GV	GATE VALVE	TB	TOP OF BERM
HDPE	HIGH DENSITY	TG	TOP OF GRATE
	POLYETHYLENE	TP	TOP OF PIPE
HP	HIGH PRESSURE	U/G	UNDERGROUND
INT	INTERSECTION	WM	WATER METER
IE	INVERT ELEVATION	WTR	WATER
LT	LEFT		

ENGINEER'S NOTICE TO CONTRACTORS

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OF STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURE TO PROTECT ANY UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

PRIVATE ENGINEERING NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT TO BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE CITY OF TORRANCE AND DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CITY OF TORRANCE AND/OR DESIGN PROFESSIONAL.

GEOTECHNICAL REPORT

A GEOTECHNICAL REPORT ENTITLED "GEOTECHNICAL SERVICES FOR ADVANCED CONCEPTUAL ENGINEERING, TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL"
PREPARED BY "DIAZ YOURMAN & ASSOCIATES" HAS BEEN PREPARED FOR THIS PROJECT AND IS AVAILABLE FOR REVIEW BY THE CONTRACTOR FOR REFERENCE AT THE OFFICE OF THE CITY ENGINEER.

SWPPP NOTE

CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THIS PROJECT. THE SWPPP MUST BE PREPARED BY A QUALIFIED SWPPP DEVELOPER (QSD) AND SUBMITTED TO THE STATE SMARTS SYSTEM. CONTRACTOR TO PROVIDE APPLICATION FOR GRADING PERMIT TO CITY PRIOR TO ANY SOIL DISTURBANCE. THE NOI MUST BE SUBMITTED TO CITY AT TIME OF GRADING PERMIT REQUEST. CONTRACTOR MUST MAINTAIN THE SERVICES OF A QUALIFIED SWPPP PRACTITIONER (QSP) DURING WORK OPERATIONS TO MONITOR OR THE WORK AND PROVIDE REQUIRED REPORTING INTO SMARTS.

SPECIAL NOTES

1. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE, OR RUNNING OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT, AND ANY OTHER ASSOCIATED EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 6:00 AM AND 7:00 PM EACH DAY, MONDAY THROUGH FRIDAY, AND NO GRADING OR EARTHMOVING OPERATIONS SHALL BE CONDUCTED ON THE PREMISES ON SATURDAYS, SUNDAYS OR CITY OF EL CENTRO HOLIDAYS WITHOUT APPROVAL BY THE CITY ENGINEER. OVERTIME INSPECTIONS SHALL BE AT THE CONTRACTORS EXPENSE.

2. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT EXISTING IMPROVEMENTS AND THE CITY OF EL CENTRO WILL ENFORCE SECTION 7-9 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

3. ALL EXISTING IMPROVEMENTS INCLUDING A.C. BERM, A.C. OR P.C.C. PAVING, WHICH ARE BEING JOINED OR MATCHED IN CONNECTION WITH THIS PROJECT SHALL BE JOINED OR MATCHED IN A MANNER SATISFACTORY TO THE CITY ENGINEER, INCLUDING NECESSARY SAWCUTTING, REMOVAL, REPLACEMENT AND CAPPING.

4. THE CONTRACTOR SHALL DESIGN, PLACE AND MAINTAIN ALL SAFETY DEVICES INCLUDING SHORING AND BARRICADING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS. THE CONTRACTOR IS REFERRED TO SECTION 7-10 "PUBLIC CONVENIENCE AND SAFETY" OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

5. ANY CONTRACTOR PERFORMING WORK ON THE PROJECT SITE SHALL FAMILIARIZE SELF WITH THE SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM OPERATIONS. THE CONTRACTOR IS REFERRED TO SECTION 7-9 "PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS" OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

6. ACCESS FOR FIRE AND OTHER EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES DURING PROJECT CONSTRUCTION.

7. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DUST CONTROL MEASURES THROUGHOUT THE DURATION OF PROJECT CONSTRUCTION. PROJECT SITE MAINTENANCE SHALL CONFORM TO SECTION 7-8 "PROJECT SITE MAINTENANCE" OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

8. ALL DISTANCES AND DIMENSIONS SHOWN ON THE PLANS ARE IN A HORIZONTAL PLANE UNLESS OTHERWISE NOTED.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY PAVEMENT STRIPING OR MARKINGS REMOVED OR MADE ILLEGIBLE AS A RESULT OF HIS WORK.

10. APPROVAL OF THESE PLANS AS SHOWN DOES NOT CONSTITUTE APPROVAL OF ANY CONSTRUCTION OUTSIDE THE PROJECT LIMITS OF WORK.

11. LOCATION AND ELEVATION OF IMPROVEMENTS SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY BECAUSE OF DISCREPANCIES.

12. NEITHER THE CITY OF EL CENTRO, NOR THE ENGINEER OF WORK, WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS.

13. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

14. THE ENGINEER OF WORK SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NOR SHALL HE BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK OR THE CONSTRUCTION PROCEDURES FOLLOWED BY THE CONTRACTOR OR SUBCONTRACTORS OR THEIR RESPECTIVE EMPLOYEES OR BY ANY OTHER PERSON AT THE JOB SITE OTHER THAN THAT OF THE ENGINEER'S EMPLOYEES.

BUILDING AND GRADING PERMIT REQUIREMENTS

CONTRACTOR IS RESPONSIBLE FOR PULLING BOTH THE BUILDING PERMIT & GRADING PERMIT, INCLUDING PAYMENT OF ALL PERMIT FEES, FROM THE CITY FOR THIS PROJECT PRIOR TO THE START OF CONSTRUCTION.

IN ORDER TO PULL THE GRADING PERMIT THE CONTRACTOR MUST SUBMIT PROOF THAT THE STORMWATER NOTICE OF INTENT (NOI) HAS BEEN SUBMITTED & ACCEPTED BY THE STATES SMARTS SYSTEM & A W.D.I.D. HAS BEEN ASSIGNED TO THE PROJECT.

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS LISTED BELOW.

STANDARD SPECIFICATIONS

1) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION)

2) CALIFORNIA DEPARTMENT OF TRANSPORTATION, "MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" (MAY 19, 2004)

STANDARD DRAWINGS

CITY OF TORRANCE STANDARD DRAWINGS, (LATEST EDITION)

APWA STANDARD DRAWINGS (LATEST EDITION)

NEW IMPROVEMENTS

ITEM	DESCRIPTION	STD DWG NO./DETAIL NO.	SYMBOL
1	6" CURB	APWA 120.	
2	6" CURB & GUTTER	APWA 120.	
3	CURB RAMP	APWA 111.	
4	SIDEWALK	APWA 110.	
5	CONCRETE BUS PAVEMENT		
6	PEDESTRIAN PLAZA PAVEMENT		
7	ASPHALT CONCRETE PAVEMENT		
8	4" PVC FIRE WATER LINE		FW
9	PVC DOMESTIC WATER LINE (SIZE AS SHOWN)		W
10	2" DOMESTIC WATER BACKFLOW DEVICE (FEBCO 825Y REDUCED PRESSURE PRINCIPAL BACKFLOW ASSEMBLY OR APPROVED EQUAL)		BFD
11	4" PVC SEWER LINE		S
12	SEWER CLEANOUT		S
13	SEWER MANHOLE		S
14	STORM DRAIN (SIZE/TYPE AS SHOWN)		
15	CATCH BASIN (SIZE AS SHOWN) WITH SWQ INSERT		
16	DOWNSPOUT CONNECTION/CLEANOUT (ALIGN W/DOWNSPOUT ON PLUMBING PLANS)		
17	STORM WATER QUALITY BOX (OIL-WATER-TRASH SEPARATOR)		

EXISTING CONDITIONS

ITEM	SYMBOL
EXISTING SEWER LINE	S EXIST SIZE & MAT'L
EXISTING SEWER CLEANOUT	
EXISTING SEWER MANHOLE	SMH OR SMH
EXISTING WATER LINE	W EXIST SIZE & MAT'L
EXISTING WATER METER	WM
EXISTING WATER VALVE	
EXISTING FIRE HYDRANT	FH
EXISTING STORM DRAIN LINE	SD EXIST SIZE & MAT'L
EXISTING STORM DRAIN INLET	DI
EXISTING POWER POLE	
EXISTING ELECTRIC OR UNDERGROUND	E (U/G) OR (O/H)
EXISTING STREET LIGHT	
EXISTING GAS LINE	G EXIST SIZE
EXISTING TELEPHONE LINE	T
EXISTING TELEPHONE PEDESTAL	
EXISTING CABLE TV LINE	CATV
EXISTING PULL BOX	
EXISTING SIGN	
EXISTING TREE/BUSH	
EXISTING BOLLARD	
EXISTING FENCE	X

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CITY OF TORRANCE
TORRANCE TRANSIT
PARK & RIDE REGIONAL TERMINAL

465 CRENSHAW BLVD.
TORRANCE, CA 90503
30% CONSTRUCTION DRAWINGS

MARK DATE DESCRIPTION

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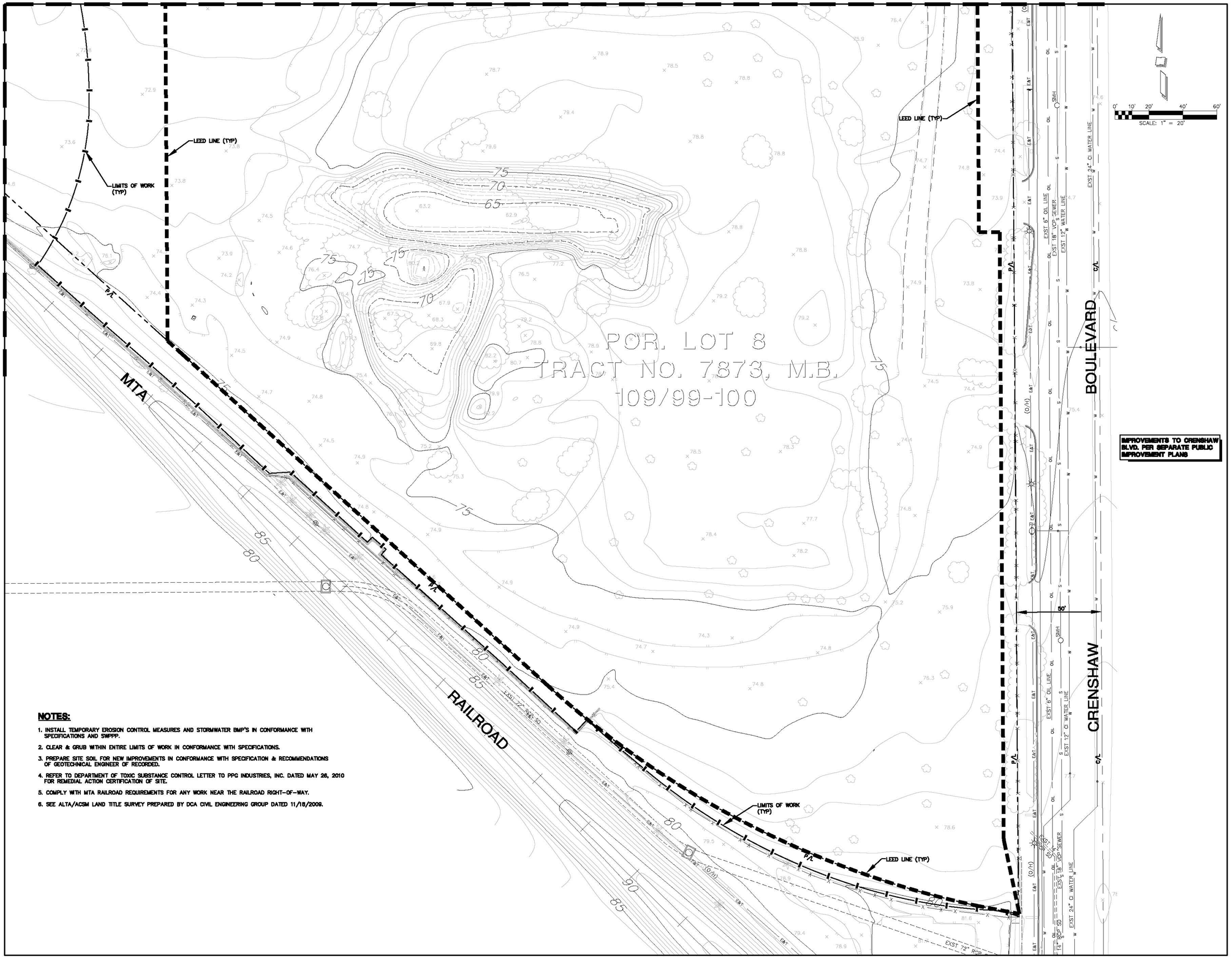
PROJECT No: 329.00
DATE: 9/26/2012
SCALE: NONE

CIVIL
NOTES AND LEGEND

C-102

MATCHLINE SEE SHEET C-202

MATCHLINE SEE SHEET C-203



NOTES:

1. INSTALL TEMPORARY EROSION CONTROL MEASURES AND STORMWATER BMP'S IN CONFORMANCE WITH SPECIFICATIONS AND SWPPP.
2. CLEAR & GRUB WITHIN ENTIRE LIMITS OF WORK IN CONFORMANCE WITH SPECIFICATIONS.
3. PREPARE SITE SOIL FOR NEW IMPROVEMENTS IN CONFORMANCE WITH SPECIFICATION & RECOMMENDATIONS OF GEOTECHNICAL ENGINEER OF RECORDED.
4. REFER TO DEPARTMENT OF TOXIC SUBSTANCE CONTROL LETTER TO PPG INDUSTRIES, INC. DATED MAY 26, 2010 FOR REMEDIAL ACTION CERTIFICATION OF SITE.
5. COMPLY WITH MTA RAILROAD REQUIREMENTS FOR ANY WORK NEAR THE RAILROAD RIGHT-OF-WAY.
6. SEE ALTA/ACSM LAND TITLE SURVEY PREPARED BY DCA CIVIL ENGINEERING GROUP DATED 11/18/2009.

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465 CRENSHAW BLVD.
TORRANCE, CA 90503
30% CONSTRUCTION DRAWINGS

MARK	DATE	DESCRIPTION

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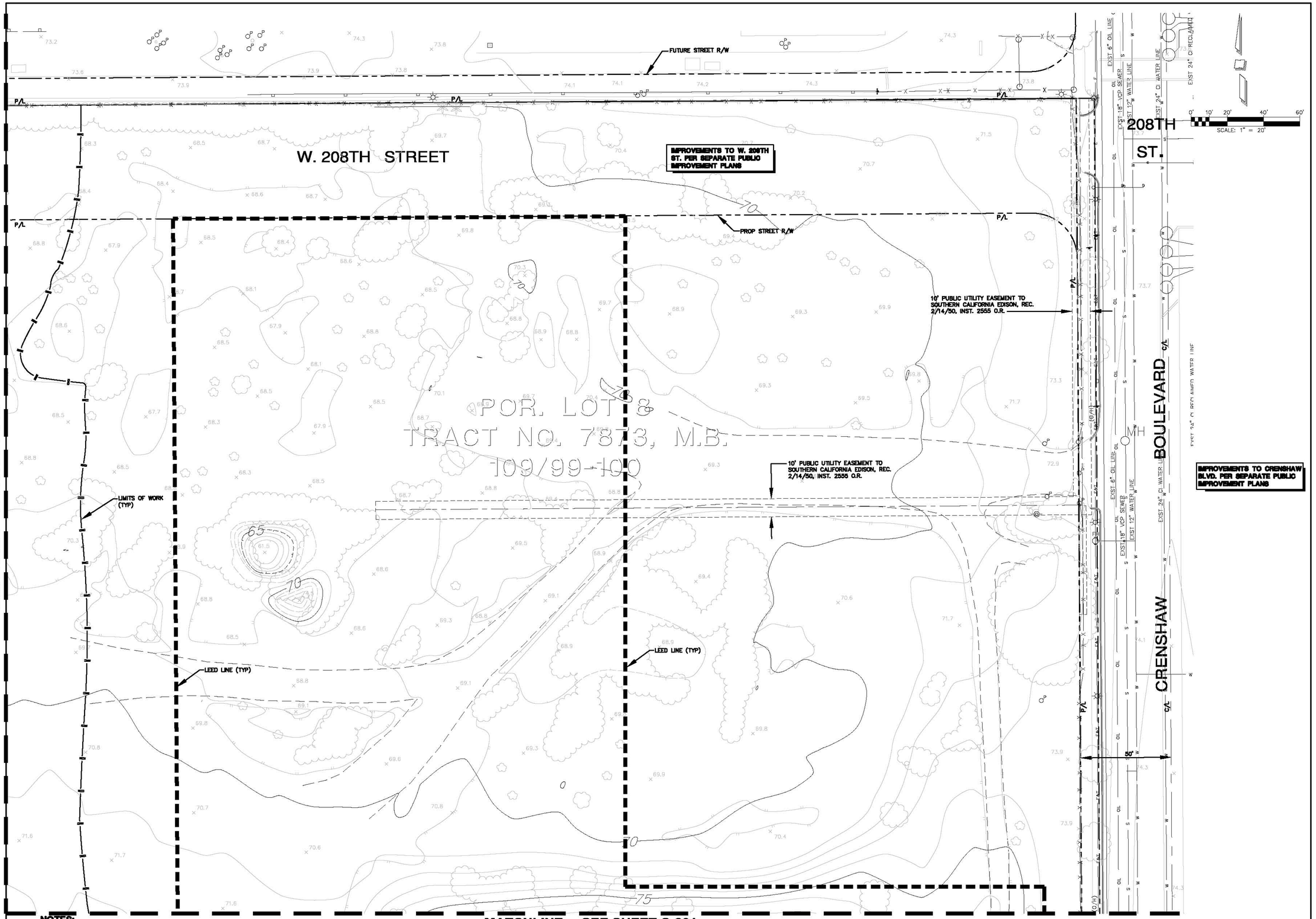
DATE: 8/28/2012
SCALE: 1"=20'

CIVIL
SITE PREPARATION PLAN

C-201



NOTES:

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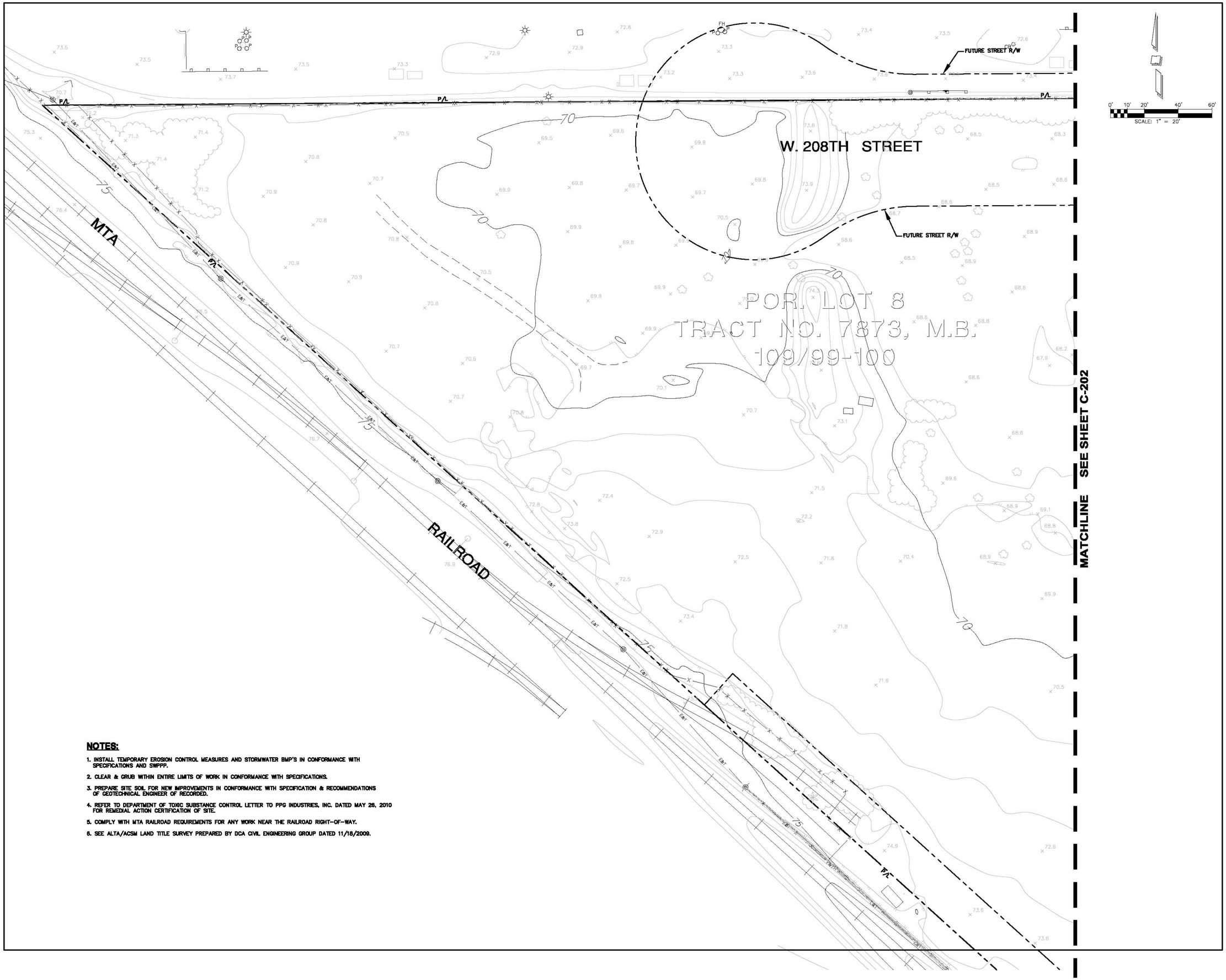
CIVIL
SITE PREPARATION PLAN

C-202



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5. COMPLY WITH MTA RAILROAD REQUIREMENTS FOR ANY WORK NEAR THE RAILROAD RIGHT-OF-WAY.
6. SEE ALTA/ACSM LAND TITLE SURVEY PREPARED BY DCA CIVIL ENGINEERING GROUP DATED 11/18/2009.

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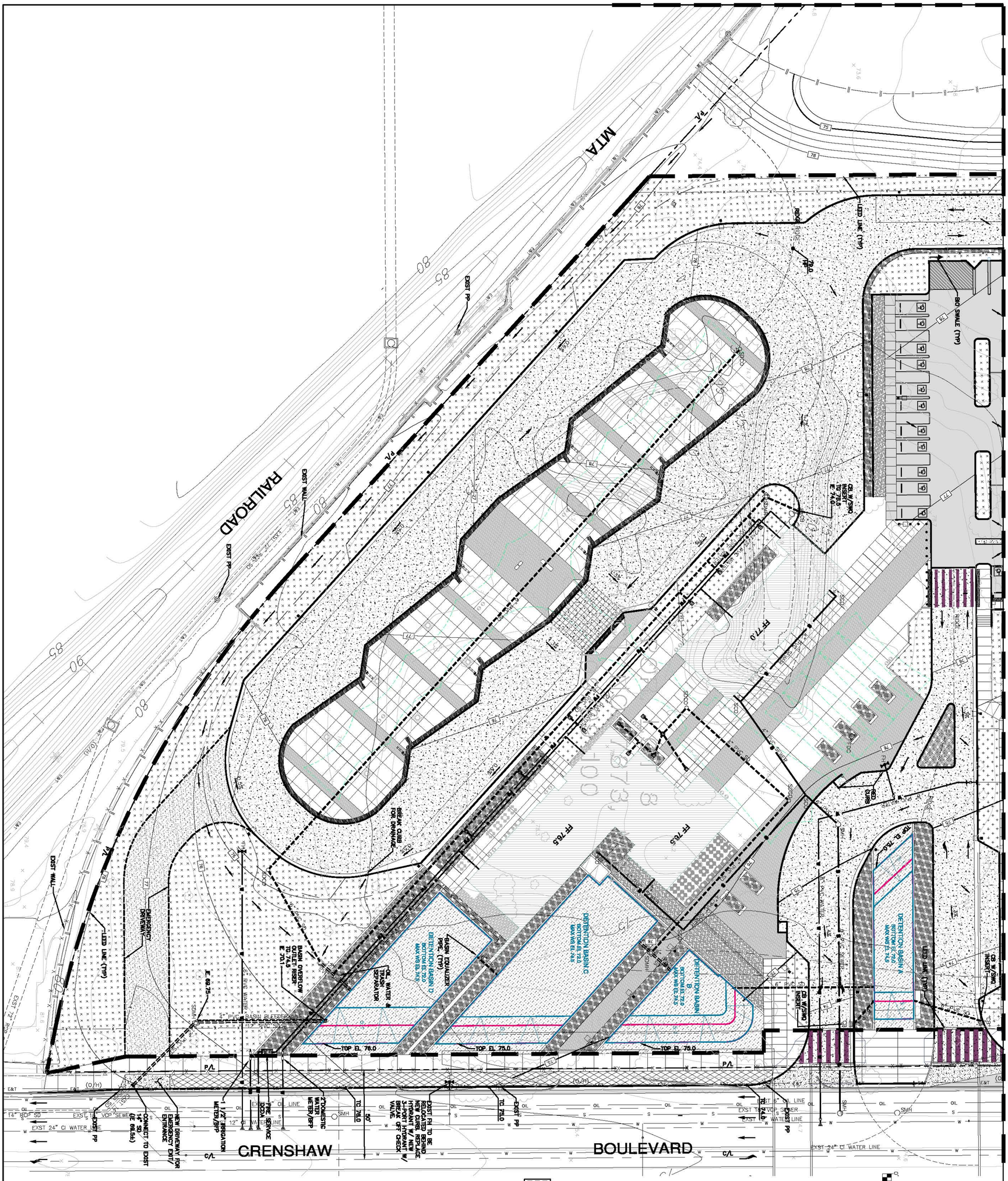
DATE: 9/26/2012
SCALE: 1"=20'

CIVIL
SITE PREPARATION PLAN

C-203

MATCHLINE SEE SHEET C-303



IMPROVEMENTS TO CRENSHAW BLVD. PER SEPARATE PUBLIC IMPROVEMENT PLANS

CIVIL
GRADING/PAVING/UTILITY PLAN

C-301

MARK	DATE	DESCRIPTION

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DRAWN BY: MC
CHECKED BY: MC
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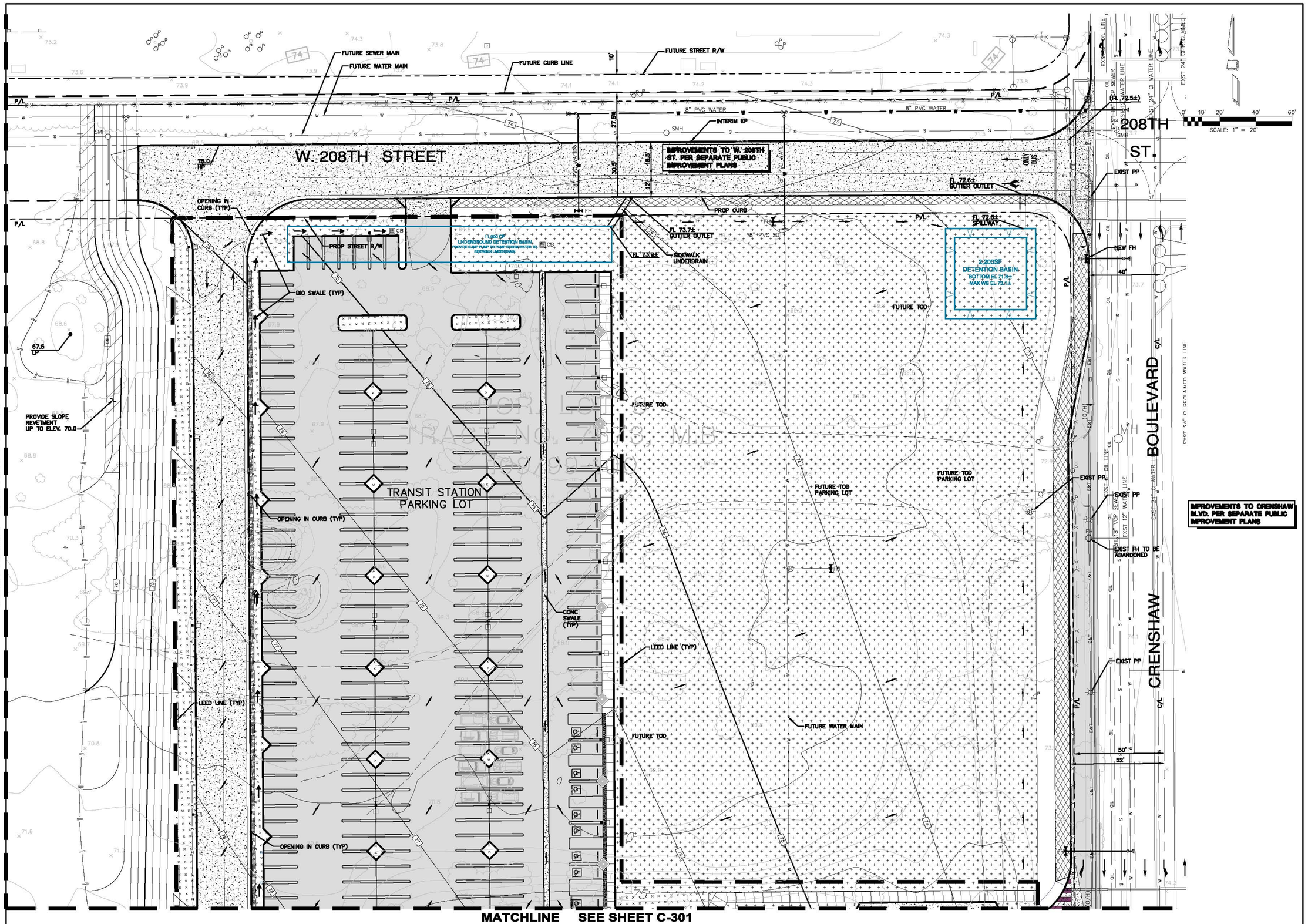

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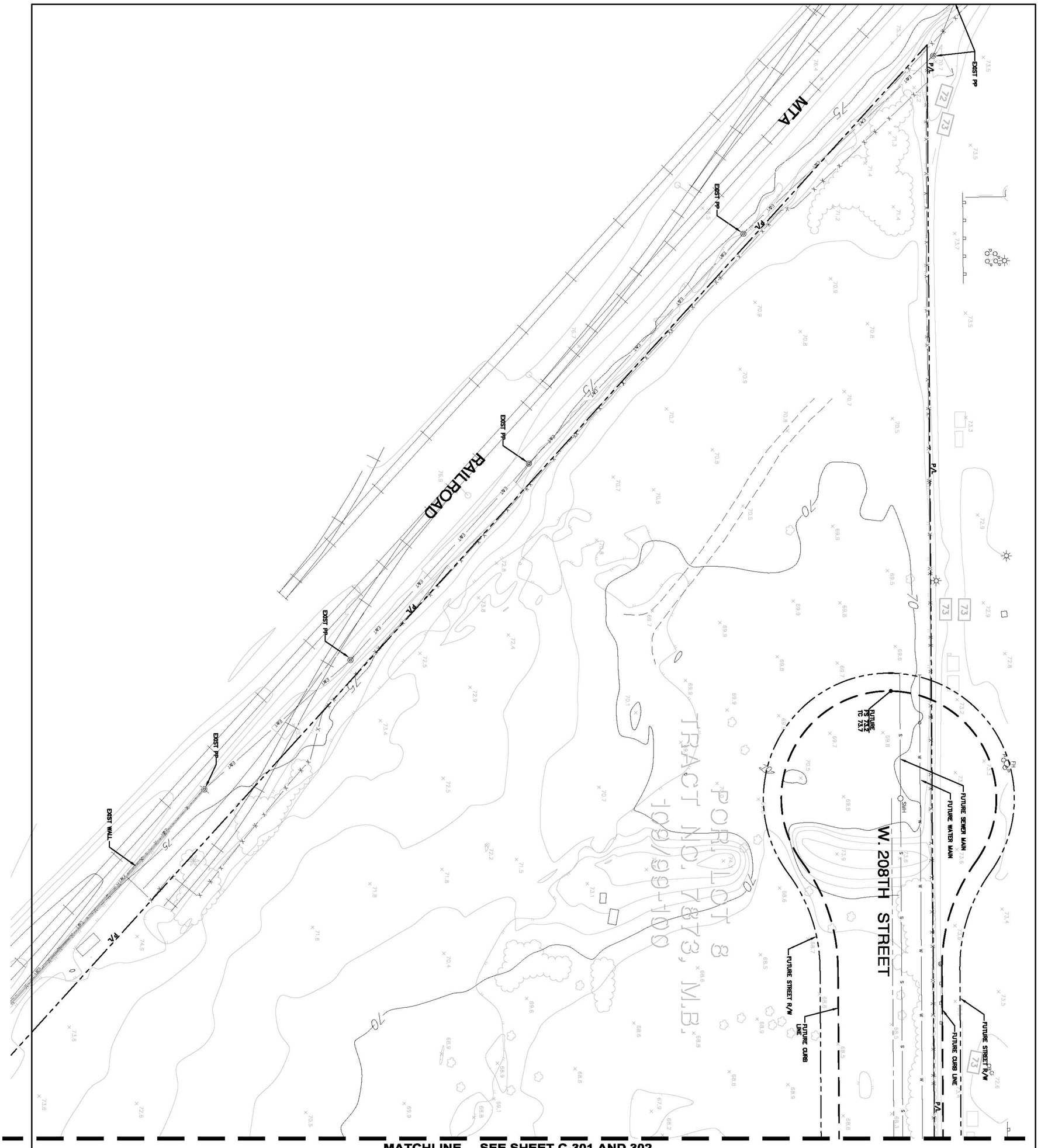
DATE: 8/28/2012
SCALE: 1"=20'

CIVIL
GRADING/PAVING/UTILITY PLAN

C-302



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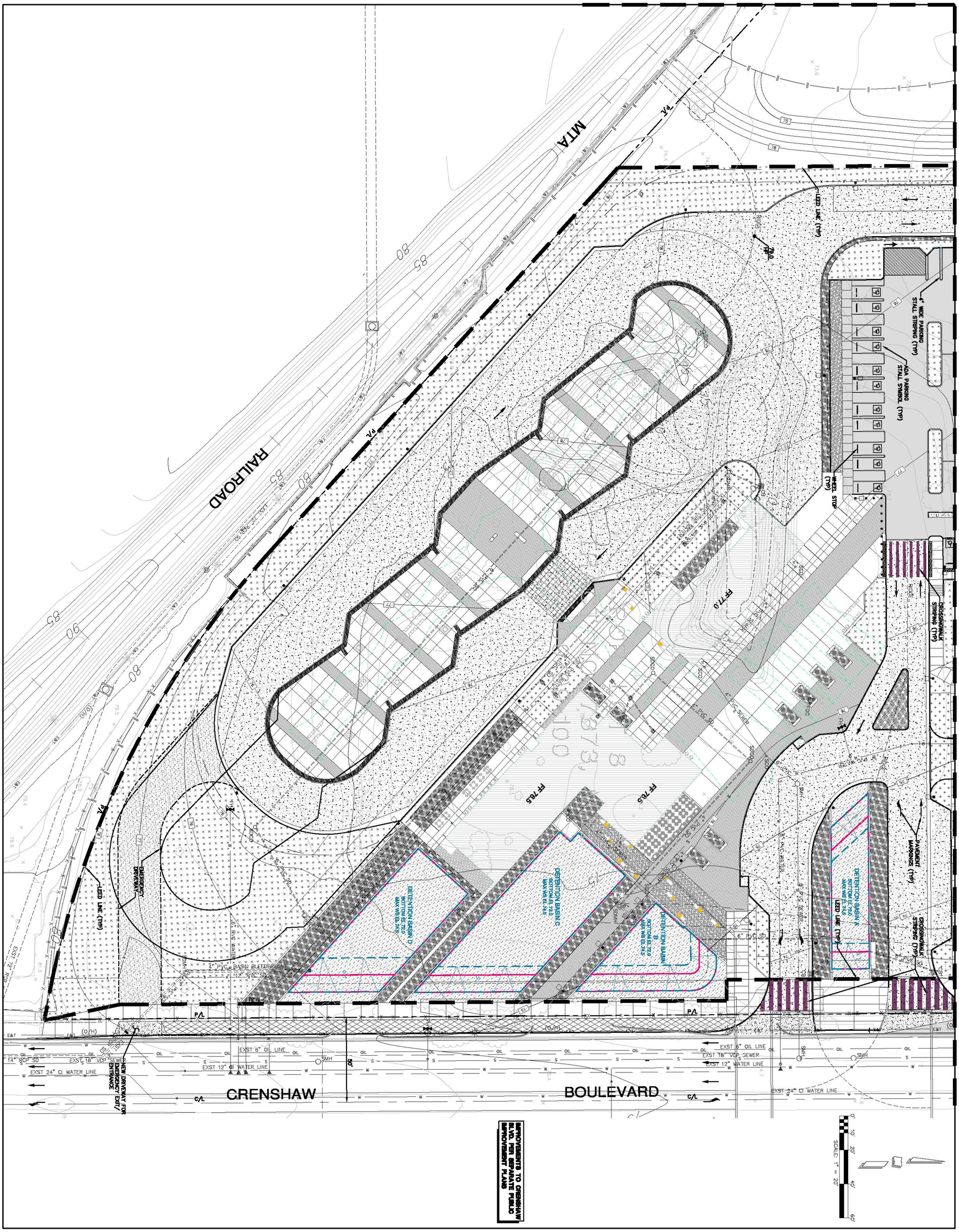
CIVIL
GRADING/PAVING/UTILITY PLAN
C-303

MATCHLINE SEE SHEET C-403



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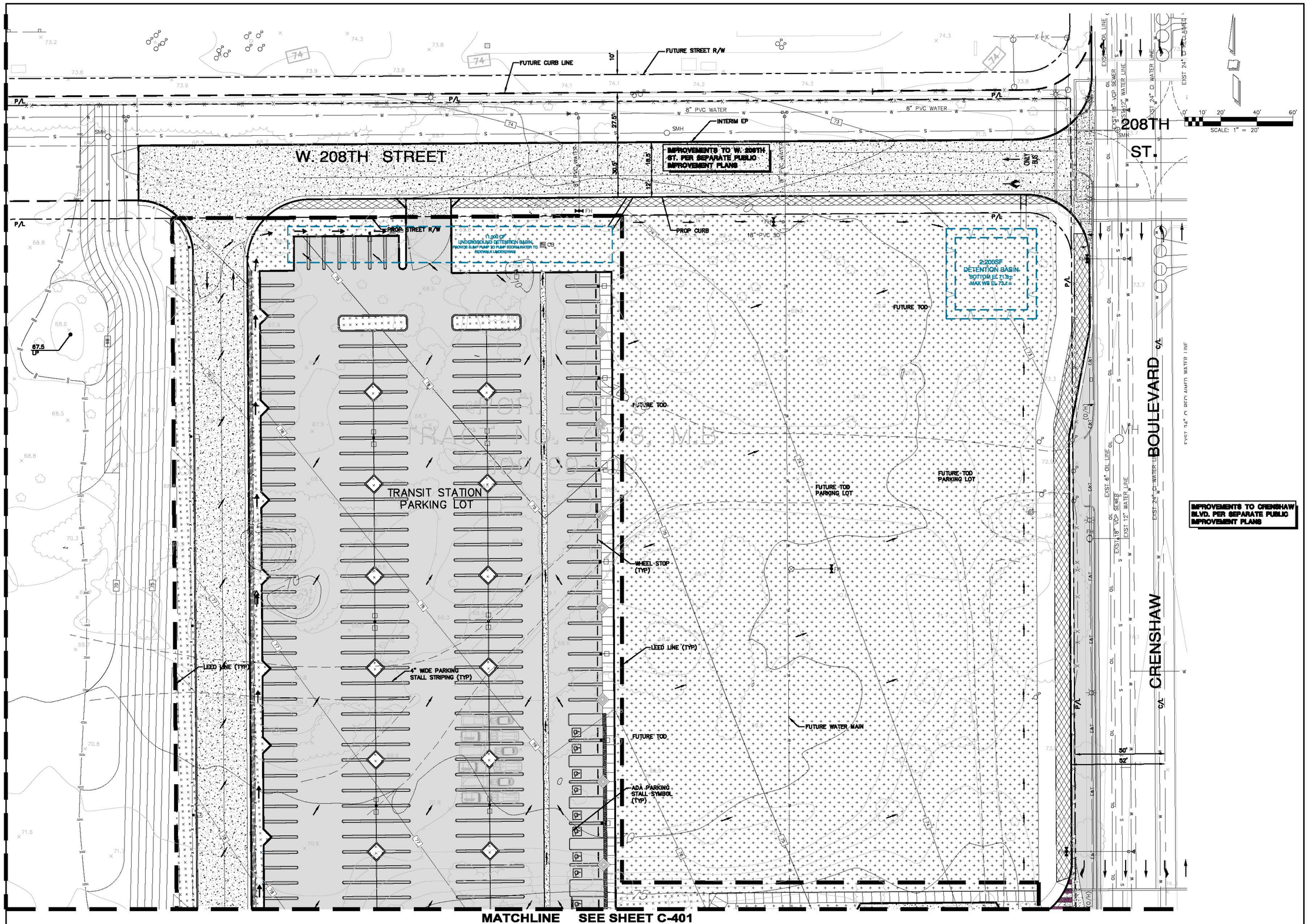
CIVIL
STRIPING PLAN
C-401

MARK	DATE	DESCRIPTION
	02/27/2017	30% DESIGN

DRAWN BY: JOSE
DESIGNED BY: JOSE
DATE: 02/27/2017
SCALE: 1"=20'



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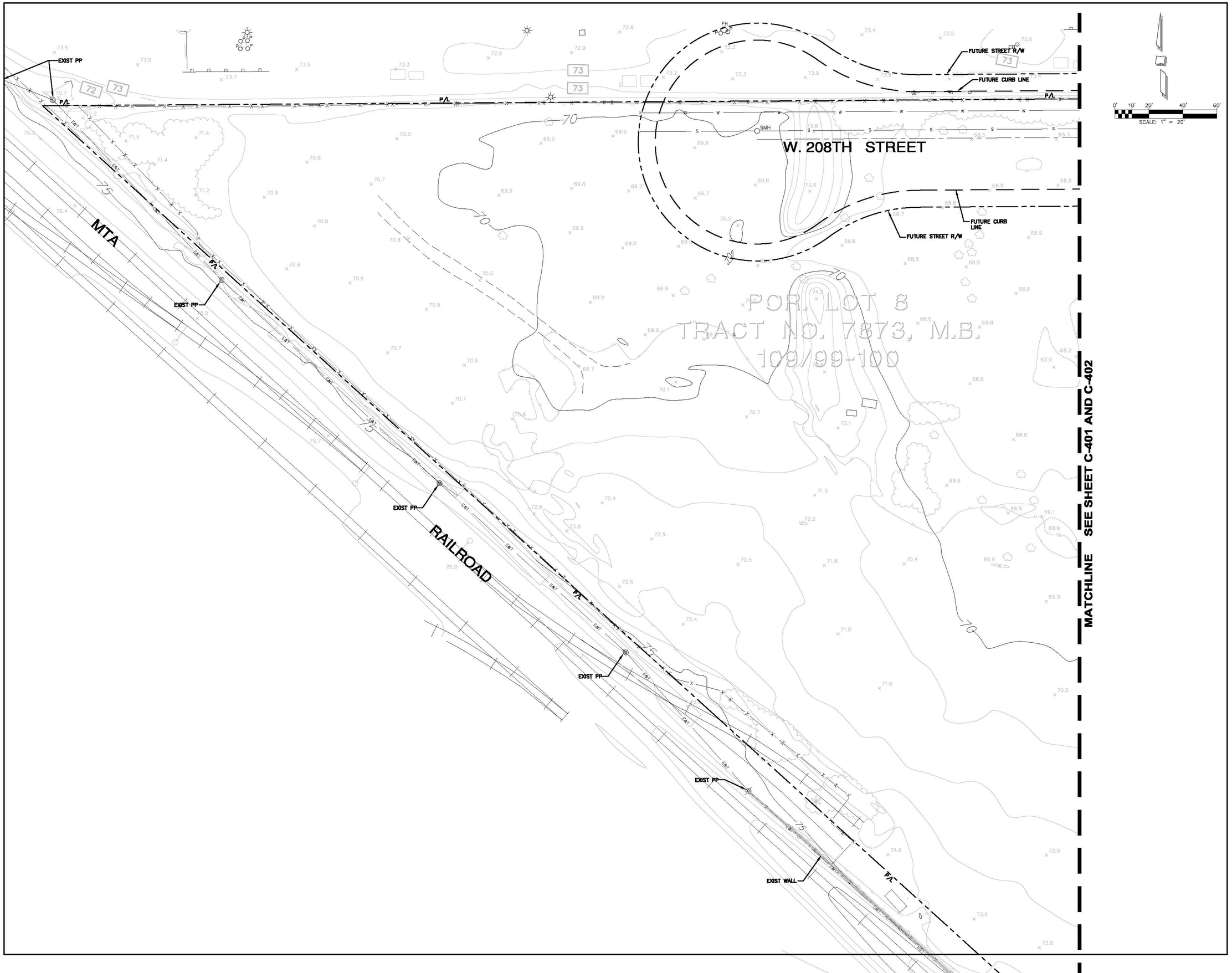
CIVIL
STRIPING PLAN

C-402



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CIVIL
STRIPING PLAN

C-403

ABBREVIATIONS

APPROX	APPROXIMATE
ARCH	ARCHITECT
AVG	AVERAGE
B&B	BALLED AND BURLAPPED
BLDG	BUILDING
BM	BENCHMARK
BOC	BACK OF CURB
BR	BOTTOM OF RAMP
BS	BOTTOM OF STEP
BW	BOTTOM OF WALL
CAL	CALIPER
CF	CUBIC FEET
CIP	CAST-IN-PLACE
CL	CENTERLINE
CLR	CLEAR(ANCE)
COMP	COMPACTED
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CU	CUBIC
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLISH, DEMOLITION
DIA	DIAMETER
DIM	DIMENSTION
DN	DOWN
DTL	DETAIL
DWG	DRAWING
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
ELEV	ELEVATION
ELECT	ELECTRICAL
ENG	ENGINEER
EQ	EQUAL
EST	ESTIMATE
EW	EACH WAY
EXIST	EXISTING
FG	FINISHED GRADE
FL	FLOW LINE
FOB	FACE OF BUILDING
FOW	FACE OF WALL
FS	FINISH SURFACE
FT	FOOT (FEET)
FTG	FOOTING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GC	GENERAL CONTRACT(OR)
GPM	GALLON PER MINUTE
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
ID	INSIDE DIAMETER
INV	INVERT ELEVATION
IN	INCHES
INCL	INCLUDE(D)
IRR	IRRIGATION
JT	JOINT(S)
LIN	LINEAR
LP	LOW POINT
LT	LIGHT
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER(S)
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
PA	PLANTING AREA
PC	POINT OF CURVATURE
PERF	PERFORATED
PED	PEDESTRIAN
PERI	PERIMETER
PERM	PERMEABLE
PL	PROPERTY LINE
PLS	PURE LIVE SEED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT, POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PVR	PAVER(S)
QTY	QUANTITY
R	RADIUS
RE	REFERENCE
REINF	REINFORCE(D), (ING)
REQ'D	REQUIRED
REV	REVISION(S), REVISED
RIM	RIM ELEVATION
ROW	RIGHT-OF-WAY
RP	RADIUS POINT
SAN	SANITARY
SCH	SCHEDULE
SD	STORM DRAIN
SEC	SECTION
SF	SQUARE FOOT (FEET)
SHT	SHEET
SIM	SIMILAR
SPECS	SPECIFICATIONS
SQ	SQUARE
STA	STATION
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
TBC	TOP OF BACK OF CURB
TC	TOP OF CURB
THK	THICK
TLF	TOP OF LIGHT FOOTING
TO	TOP OF
TOPO	TOPOGRAPHY
TR	TOP OF RAMP
TRANS	TRANSFORMER
TS	TOP OF STEP
TW	TOP OF WALL
TYP	TYPICAL
UNFIN	UNFINISHED
VAR	VARIES
VERT	VERTICAL
VEH	VEHICLE
VOL	VOLUME
W/	WITH
W/O	WITHOUT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

GENERAL NOTES

1. All work shall conform to the requirements of the latest adopted edition of the Uniform Building Code and all other applicable local and state codes, ordinances and regulations.

2. Contractor shall be responsible to consult with site superintendent, appropriate agencies and plans, for the locations of all underground utilities, pipes and structures. Contractor shall take sole responsibility for any cost incurred due to damage of said utilities. CONTACT UTILITY LOCATION SERVICE PRIOR TO ANY CONSTRUCTION ACTIVITY.

3. Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions, area discrepancies and/or grade differences exist that may not have been known during design. Such condition shall be immediately brought to the attention of the Landscape Architect for decision. The contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.

CONSTRUCTION / LAYOUT NOTES

1. Refer to the Civil Engineer's grading plans for grading information prior to installation of walks, walls, and other structures.

2. Refer to specifications for all required submittals for approval by the Landscape Architect.

3. Contractor is responsible for replacement of any existing trees, vegetation, structures, utilities, fences, walls, etc. that are damaged during construction. Contractor activities shall be contained within the delineated "limits of work" construction zone.

4. Written dimensions shall prevail. Do not scale directly from drawings. All dimensions are from outside face of paving, walls, etc., unless otherwise noted on plans.

5. All paved surfaces shall have smooth, continuous lines or curves as indicated on plans and shall conform to grades indicated on the plan.

6. All rights of way, property lines and lot lines shall be verified prior to commencing work.

7. All electrical junction boxes for lights shall be in planting areas if possible, as approved by the Landscape Architect. Stake location and obtain landscape architects approval prior to installation.

8. Provide expansion joint with sealant where paving abuts curbing, buildings, columns and structures. Refer to specifications for color and material.

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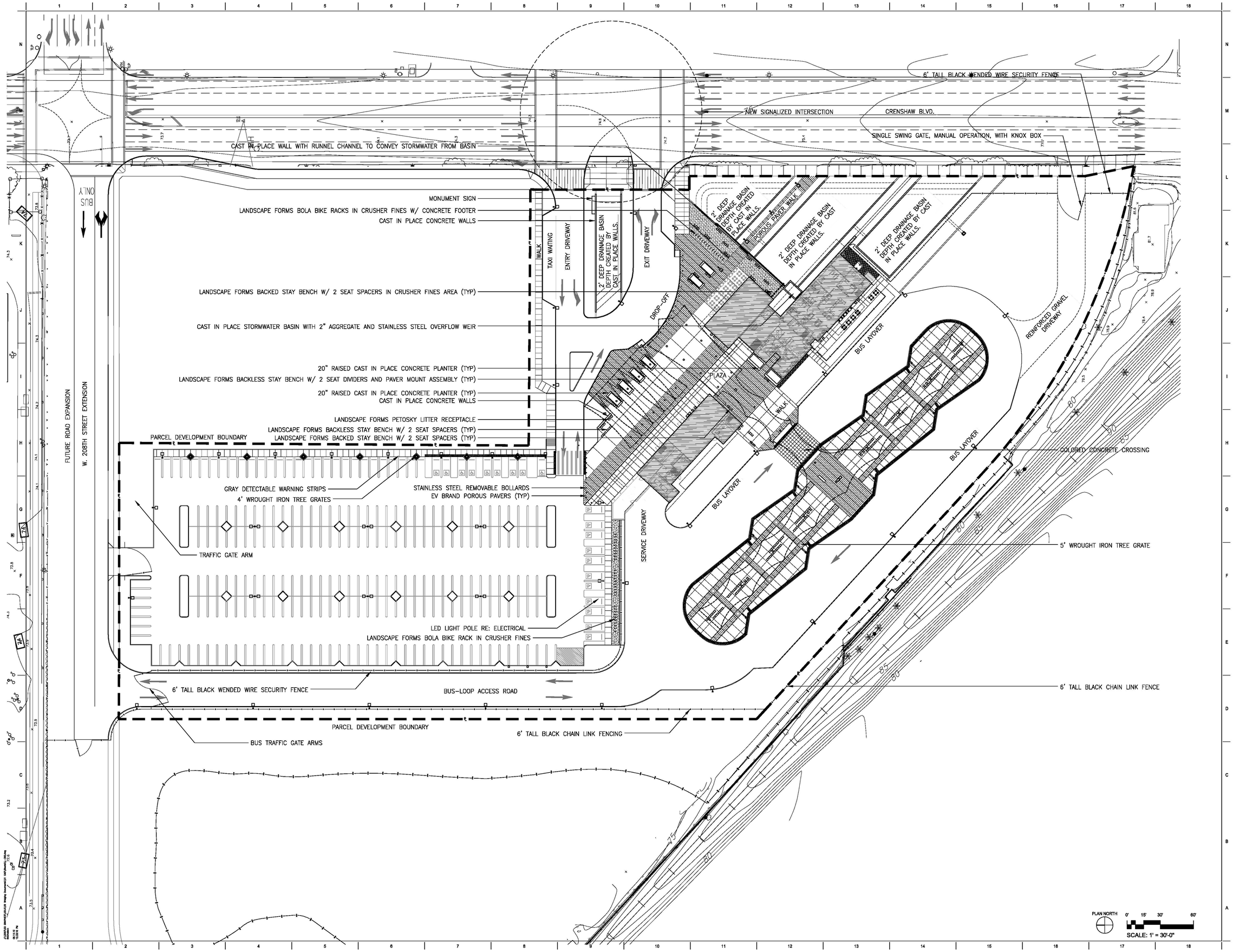
LANDSCAPE NOTES

L-001



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SITE PLAN

L-101

(12)–SOUTHERN MAGNOLIA STREET TREES (TYP)
(9)–CALIFORNIA SYCAMORE (TYP)
CRENSHAW BLVD.
(3)–BLUE PALO VERDE (TYP)
(8)–BLUE PALO VERDE (TYP)
(9)–COASTAL LIVE OAK WITH PERENNIAL GROUNDCOVER UNDERSTORY
COASTAL SHRUB PLANTING MIX (TYP HATCH)
(7)–DESERT WILLOW
WET MEADOW PLANTING MIX (TYP HATCH)
(3)–CALIFORNIA SYCAMORE W/ DRY MEADOW PLANTING MIX UNDERNEATH
(4)–DESERT WILLOW (TYP)
COASTAL SHRUB PLANTING MIX (TYP HATCH)
COASTAL SHRUB PLANTING MIX (TYP HATCH)
COASTAL SHRUB PLANTING MIX (TYP HATCH)
(1)–BLUE PALOVERDE (TYP)
PARCEL DEVELOPMENT BOUNDARY
GRAY DETECTABLE WARNING STRIPS
WESTERN REDBUD IN 4' WROUGHT IRON TREE GRATES
COASTAL SHRUB PLANTING MIX (TYP HATCH)
DRY MEADOW PLANTING MIX (TYP HATCH)
(24)–BAY LAUREL IN 7' WIDE PLANTER WITH 6" CURB
DRY MEADOW PLANTING MIX AS UNDERSTORY
(4)–CALIFORNIA SYCAMORE (TYP)
BUS–LOOP ACCESS ROAD
PARCEL DEVELOPMENT BOUNDARY
FUTURE ROAD EXPANSION
W. 208TH STREET EXTENSION
BUS ONLY
WALK
TAXI WAITING
ENTRY DRIVEWAY
EXIT DRIVEWAY
DROP–OFF
PLAZA
WALK
SERVICE DRIVEWAY
BUS LAYOVER
BUS LAYOVER
BUS LAYOVER
WET MEADOW PLANTING MIX
WET MEADOW PLANTING MIX
WET MEADOW PLANTING MIX
DRY MEADOW PLANTING MIX WITH FLEXTERRA HYDRO MULCH (TYP)
(12)– 15' FAN PALM IN 5' WROUGHT IRON TREE GRATE
(4)–CALIFORNIA SYCAMORE (TYP)
(7)–BLUE PALO VERDE (TYP)
(3)–DESERT WILLOW (TYP)
(4)–BAY LAUREL (TYP)
(4)–WESTERN REDBUD (TYP)
DRY MEADOW PLANTING MIX (TYP)

PLANTING MIX LEGEND

COASTAL SHRUB PLANTING MIX

LEMONADE BERRY (Rhus integrifolia)
COYOTE BRUSH (Baccharis pilularis 'Pigeon Point')
THEODORE PAYNE BUCKWHEAT (Eriogonum fasciculatum 'Theodore Payne')
CALIFORNIA BRITTLEBUSH (Encelia californica)
MARITIME CEANOTHUS 'FROSTY DAWN'
SHAW'S AGAVE (Agave shawii)
WHITE SAGE (Salvia apiana)

WET MEADOW PLANTING MIX

GOLDEN–EYED GRASS (Sisyrinchium californicum)
OCCIDENTAL BLUE WIRE GRASS (Juncus patens)
PURPLE THREE AWN (Aristida purpurea)
DEER GRASS (Muhlenbergia rigens)
CALIFORNIA POPPY (Eschscholzia caespitosa)

DRY MEADOW PLANTING MIX

JUNEGRASS (Koeleria macrantha)
PURPLE NEEDLGRASS (Nassella pulchra) – California's State Grass
NODDING NEEDLEGRASS (Nassella cernua)
MOLATE FESCUE (Festuca rubra)

GROUNDCOVER MEDIANS

PLAN NORTH
0' 15' 30' 60'
SCALE: 1" = 30'-0"

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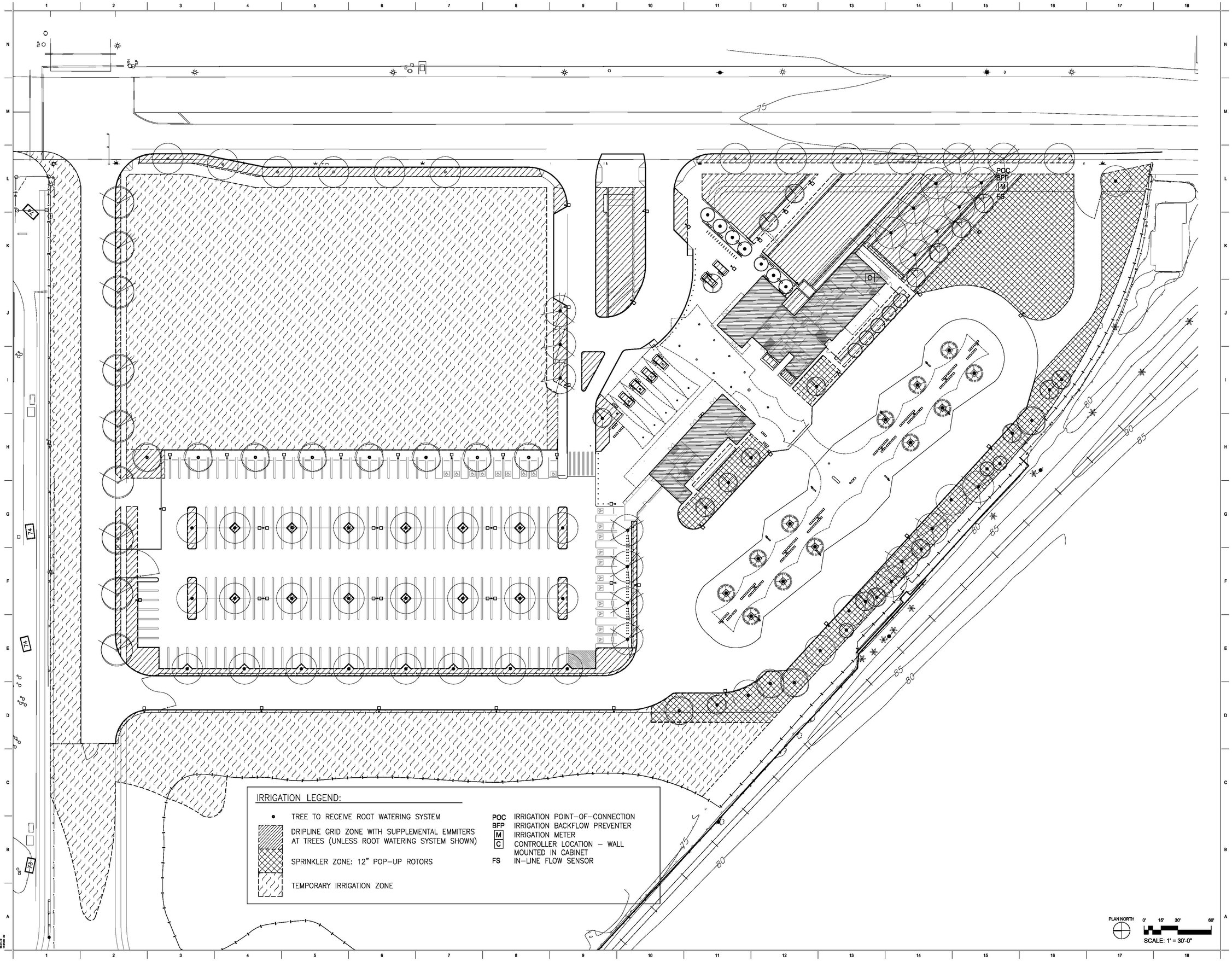
LANDSCAPE PLAN

L-201



IRRIGATION LEGEND:

- • TREE TO RECEIVE ROOT WATERING SYSTEM
- DRIPLINE GRID ZONE WITH SUPPLEMENTAL EMMITERS AT TREES (UNLESS ROOT WATERING SYSTEM SHOWN)
- SPRINKLER ZONE: 12" POP-UP ROTORS
- TEMPORARY IRRIGATION ZONE

- POC IRRIGATION POINT-OF-CONNECTION
- BFP IRRIGATION BACKFLOW PREVENTER
- M IRRIGATION METER
- C CONTROLLER LOCATION – WALL MOUNTED IN CABINET
- FS IN-LINE FLOW SENSOR

PLAN NORTH

0' 15' 30' 60'

SCALE: 1' = 30'-0"

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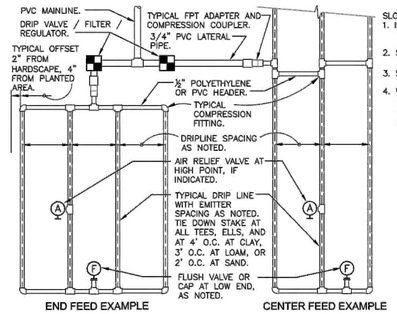
OVERALL IRRIGATION
CONCEPT PLAN

L-401



SLOPED CONDITION NOTE:
1. INSTALL AIR RELIEF VALVE AT HIGHEST POINT.
2. SPACING AS NOTED ON TOP ⅔ OF SLOPE.
3. SPACING AT BOTTOM ⅓ AS NOTED PLUS 25%
4. WHEN ELEVATION CHANGE IS 10 FT OR MORE, ZONE BOTTOM ⅓ SEPARATELY.

MAXIMUM LATERAL LENGTH (FEET)

	EMITTER FLOW RATE GPH					
	12" SPACING		18" SPACING		24" SPACING	
PSI	0.6	0.9	0.6	0.9	0.6	0.9
10	125	96	175	135	218	171
20	249	191	350	171	442	340
30	307	236	434	333	550	422
40	350	268	495	380	627	171
50	125	96	175	135	218	171
60	125	96	175	135	218	171

GRID PRECIPITATION RATES (IN/HR)

EMITTER SPACING	LATERAL SPACING	EMITTER FLOW RATE 0.6	EMITTER FLOW RATE 0.9
12	12	0.95	1.44
18	18	0.65	1.03
24	24	0.28	0.41

LATERAL FLOW PER 100 FT (GPM)

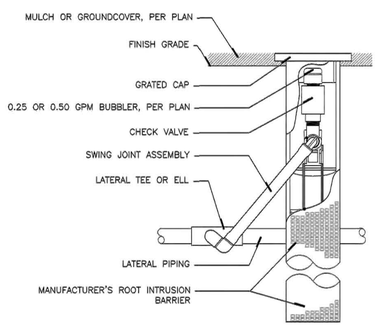
EMITTER FLOW	12" SPACING	18" SPACING	24" SPACING
0.6 GPH	1.0 GPM	0.67 GPM	0.50 GPM
0.9 GPH	1.5 GPM	1.0 GPM	0.75 GPM

MAXIMUM FLOW PER ZONE

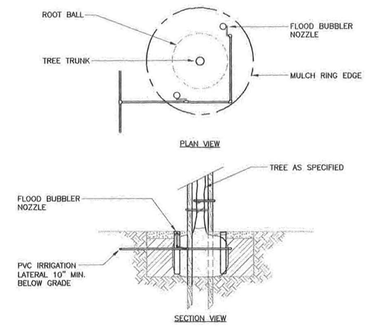
	MAX GPM	PSI LOSS
SCHEDULE 40 PVC HEADER SIZE		
1/2"	4.7 GPM	7.7 PSI
3/4"	8.3 GPM	5.6 PSI
1"	13.5 GPM	4.2 PSI
1-1/2"	33.9 GPM	2.9 PSI
2"	52.4 GPM	1.9 PSI
POLY PIPE HEADER SIZE		
1/2"	4.7 GPM	8.8 PSI
3/4"	8.3 GPM	6.3 PSI
1"	13.5 GPM	4.8 PSI
1-1/2"	31.8 GPM	2.9 PSI
2"	52.4 GPM	2.2 PSI

NOTE:
REFER TO DRIPLINE LAYOUT EXAMPLES BELOW FOR DEFFERENT ACCEPTABLE CONFIGURATIONS.

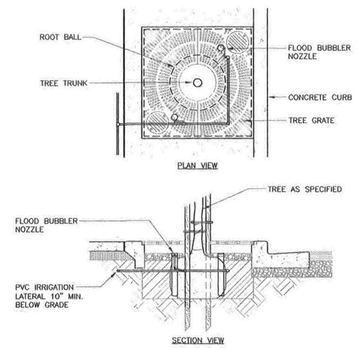
TYPICAL DRIPLINE LAYOUT REQUIREMENTS
N.T.S.
328413.56-06



ROOT WATER SYSTEM
N.T.S.
328403.53-07



ROOT WATERING BUBBLER IN TREE WELL
NOT TO SCALE



32 8403.53-05

BUBBLER IN TREE GRATE DETAIL
NOT TO SCALE

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SHEET STAMP/DISCLAIMER (i.e. not for construction, etc.)

MARK DATE DESCRIPTION

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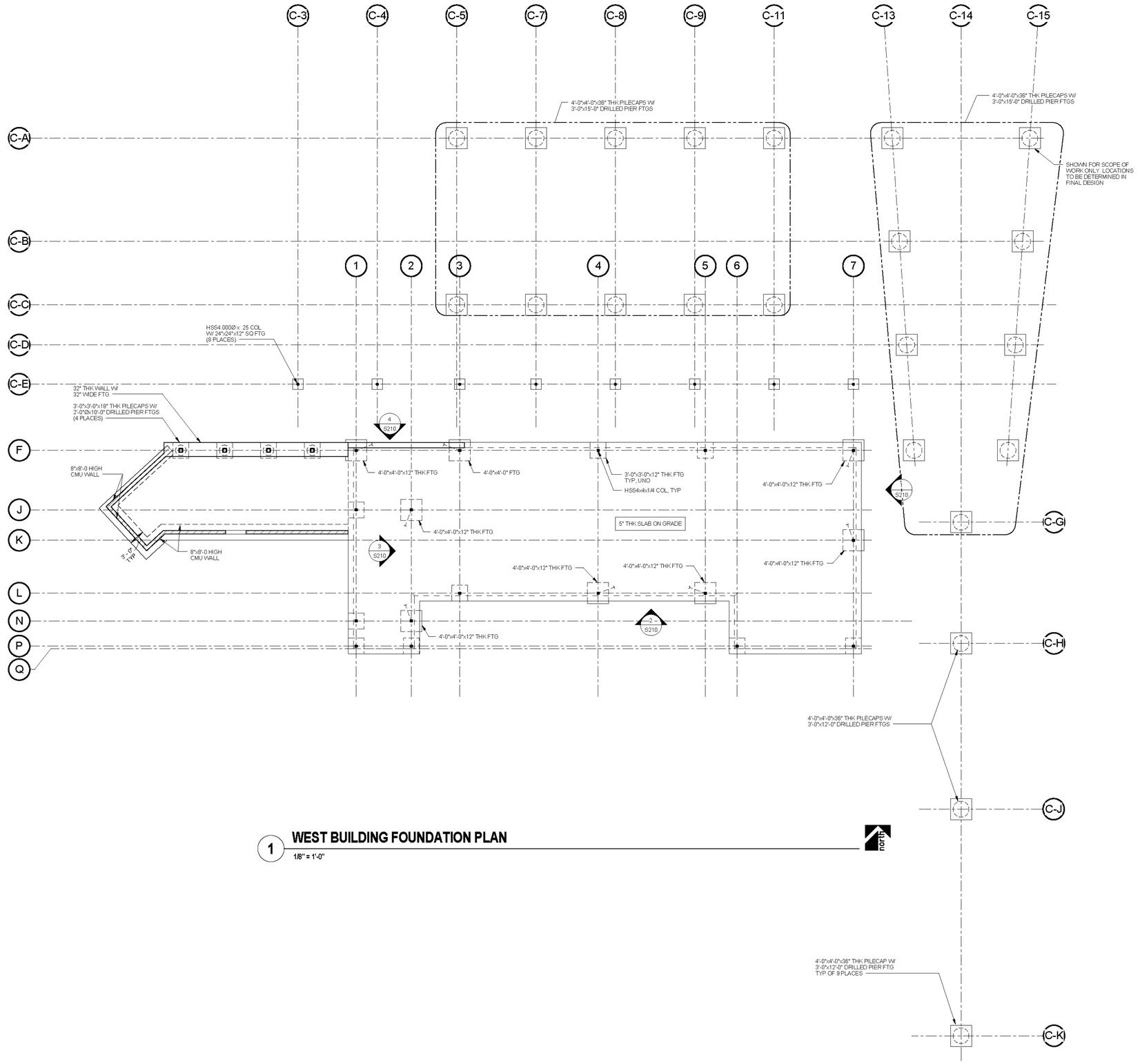
DATE: 09/26/2012
SCALE: AS SHOWN

IRRIGATION DETAILS

L-402



1 WEST BUILDING FOUNDATION PLAN

1/8" = 1'-0"

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Los Angeles, CA 90071
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866-390-2616 f

miyamoto.
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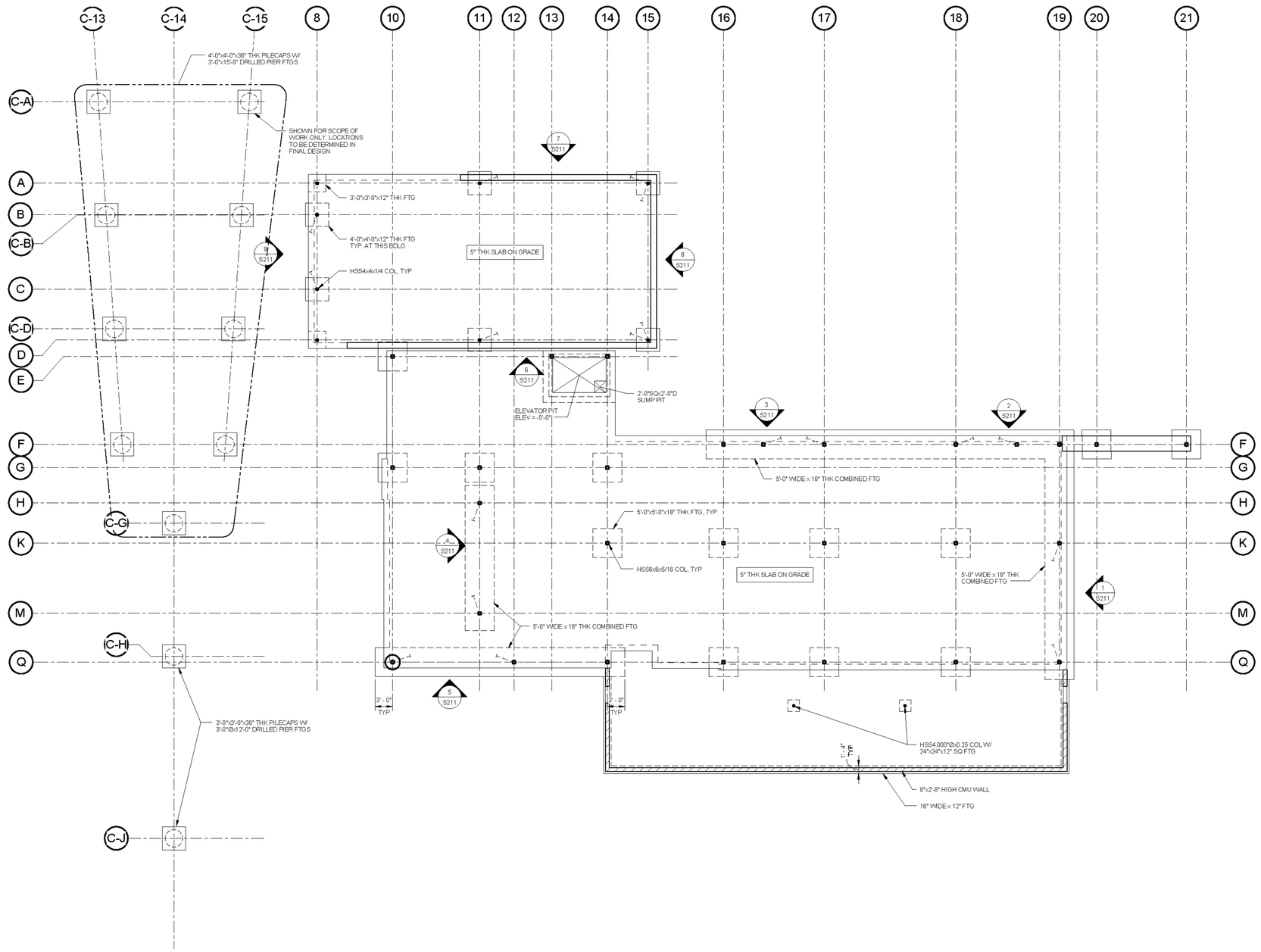
SCALE: 1/8" = 1'-0"

WEST BUILDING FOUNDATION PLAN

S110
OF



1 **EAST BUILDING FOUNDATION PLAN**

1/8" = 1'-0"

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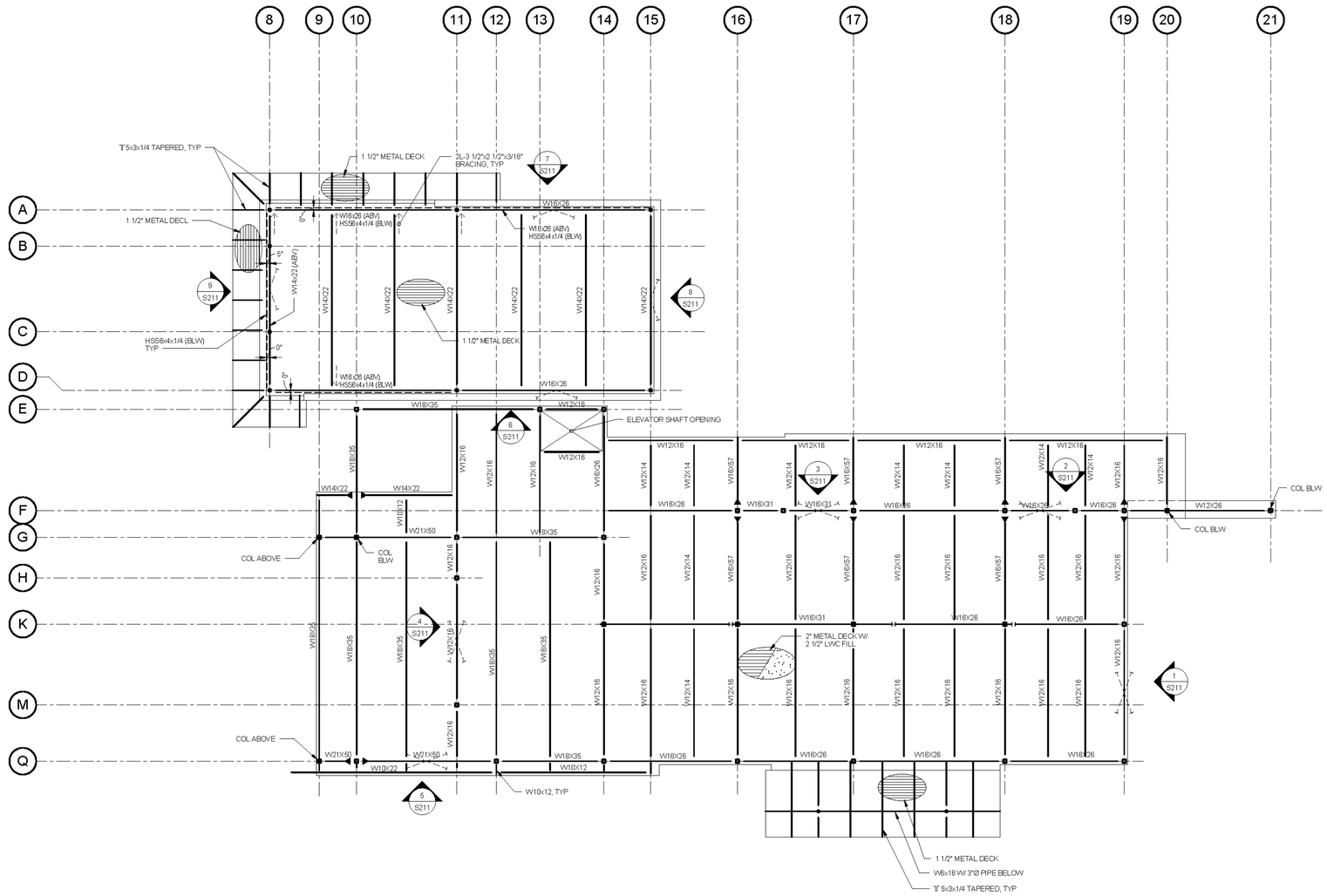
DATE: 09/26/12
SCALE: 1/8" = 1'-0"

EAST BUILDING
FOUNDATION PLAN

S111

OF



1 **EAST BLDG FLOOR FRAMING PLAN - LEVEL 2**

1/8" = 1'-0"

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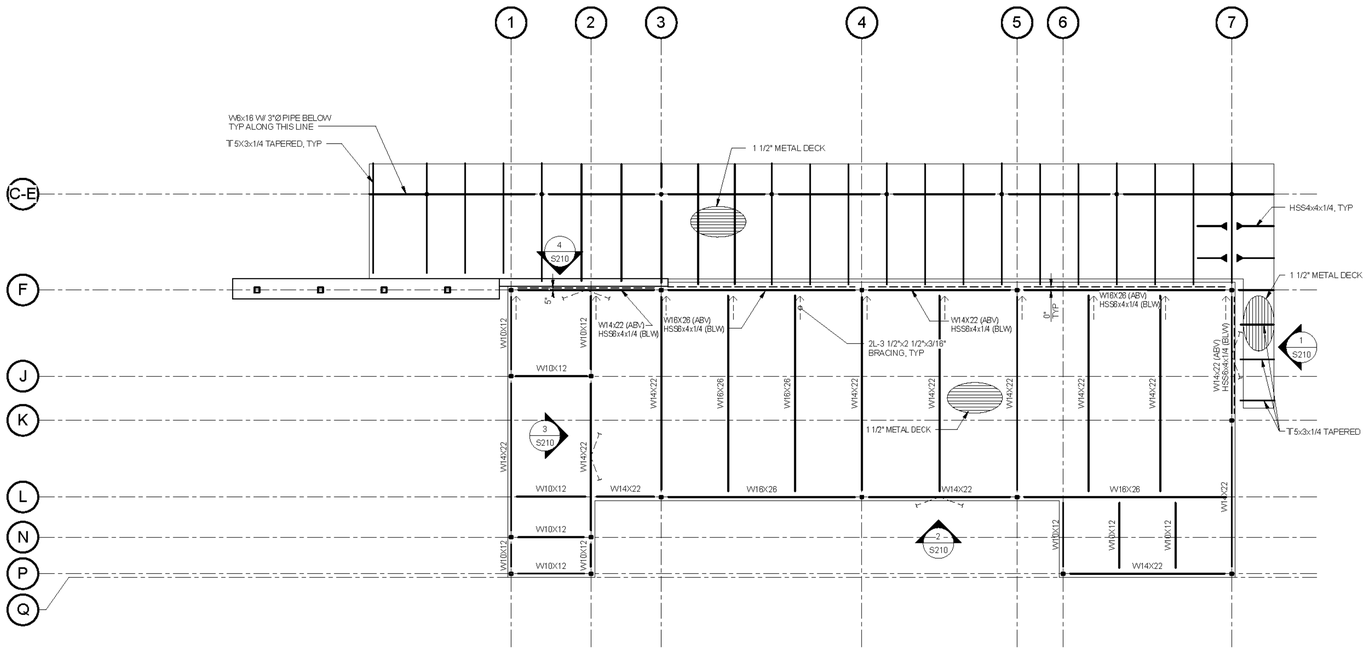
DATE: 09/26/12
SCALE: 1/8" = 1'-0"

EAST BUILDING FLOOR FRAMING PLAN - LEVEL 2

S112

OF



1 WEST BUILDING ROOF FRAMING PLAN

1/8" = 1'-0"

north

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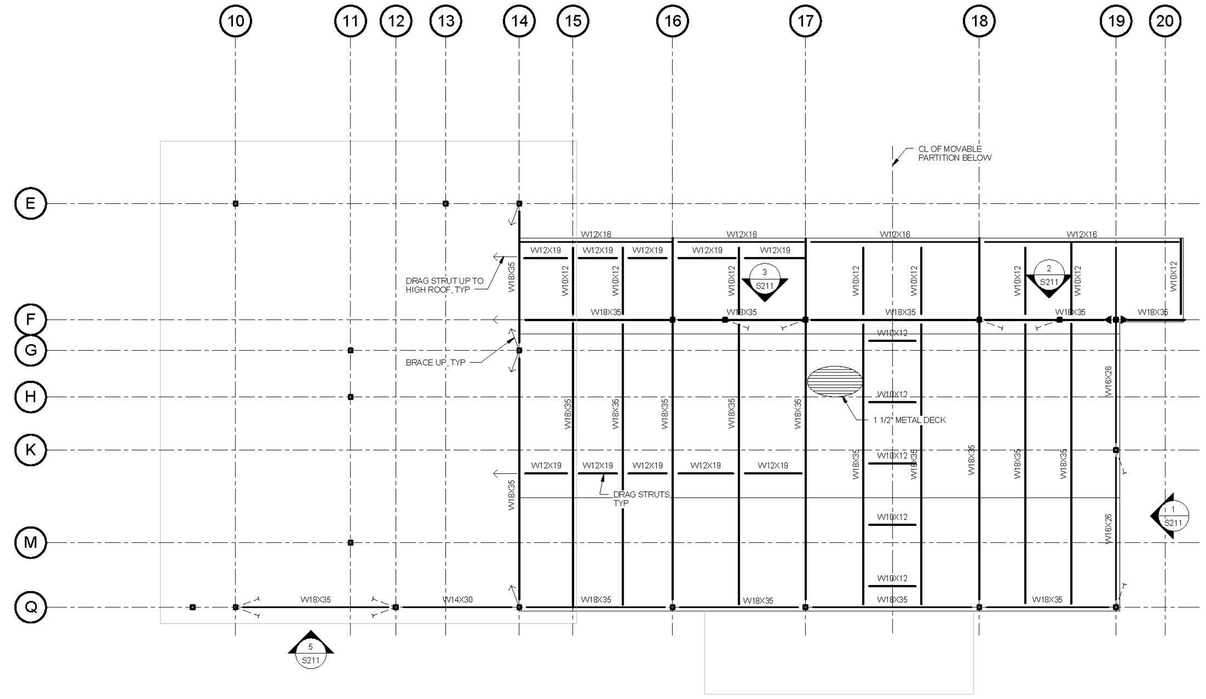
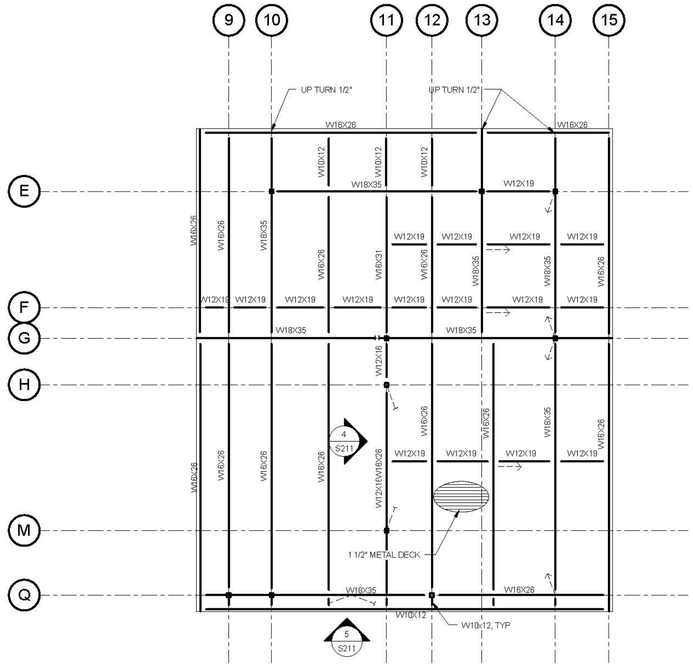
SCALE: 1/8" = 1'-0"

WEST BUILDING ROOF FRAMING PLAN

S115
OF



1 EAST BUILDING LOW ROOF FRAMING PLAN
1/8" = 1'-0"



2 EAST BUILDING HIGH ROOF FRAMING PLAN
1/8" = 1'-0"

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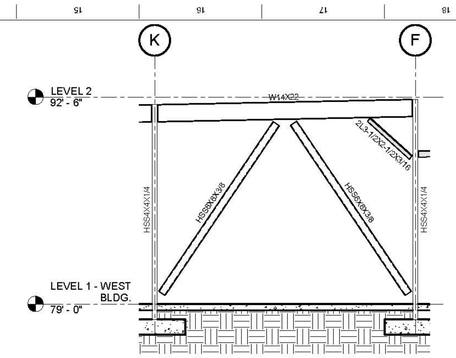
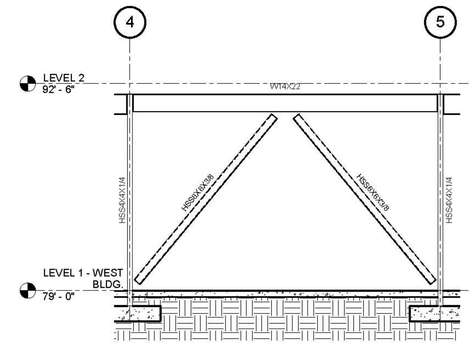
EAST BUILDING LOW & HIGH ROOF FRAMING PLAN

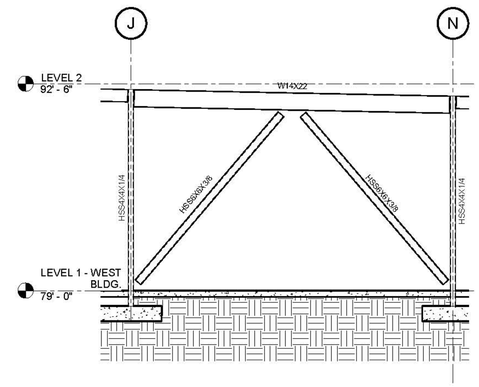
S116
OF



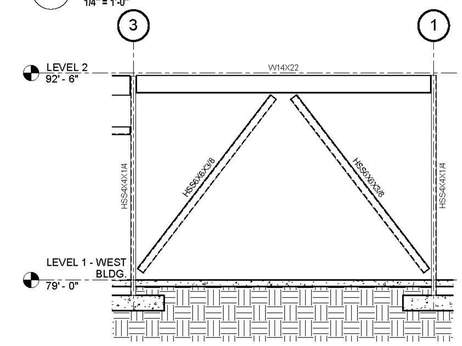
1 BRACED FRAME ELEVATION - WEST BLDG
1/4" = 1'-0"



2 BRACED FRAME ELEVATION - WEST BLDG
1/4" = 1'-0"



3 BRACED FRAME ELEVATION - WEST BLDG
1/4" = 1'-0"



4 BRACED FRAME ELEVATION - WEST BLDG
1/4" = 1'-0"

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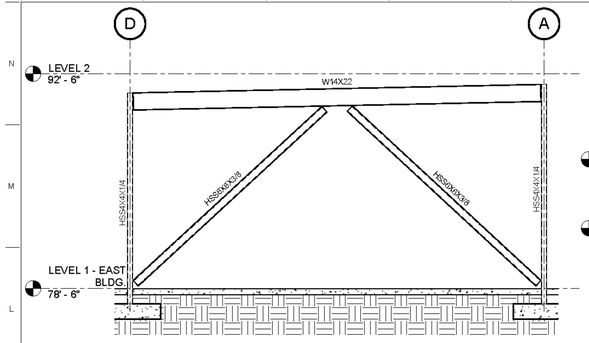
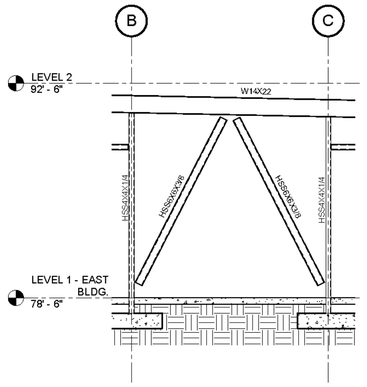
DATE: 09/26/12
SCALE: 1/4" = 1'-0"

BRACED FRAME ELEVATIONS - WEST BLDG

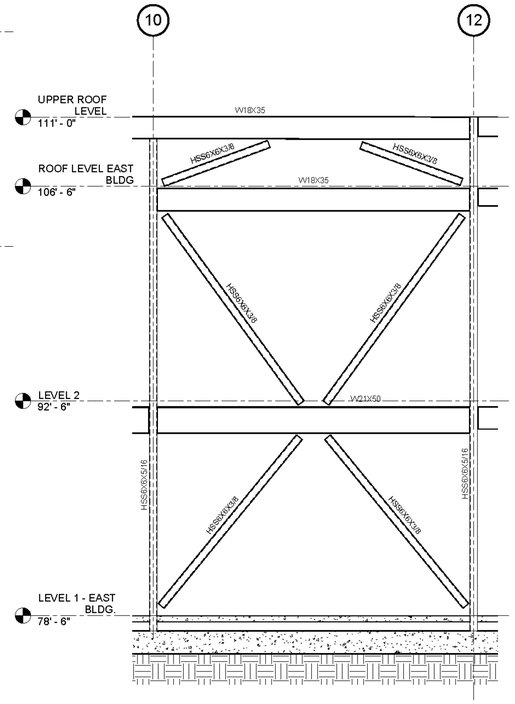
S210
OF



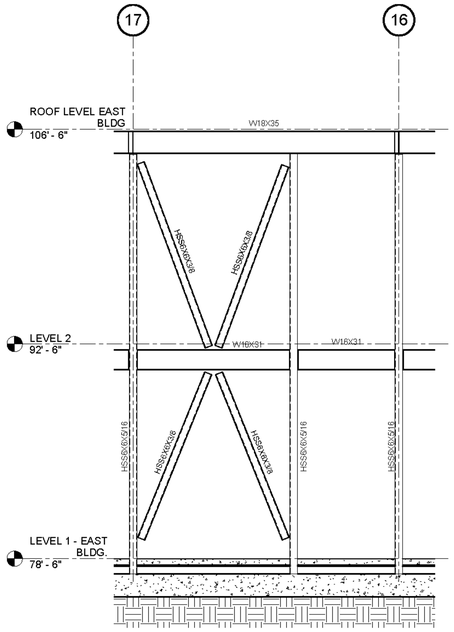
8 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"



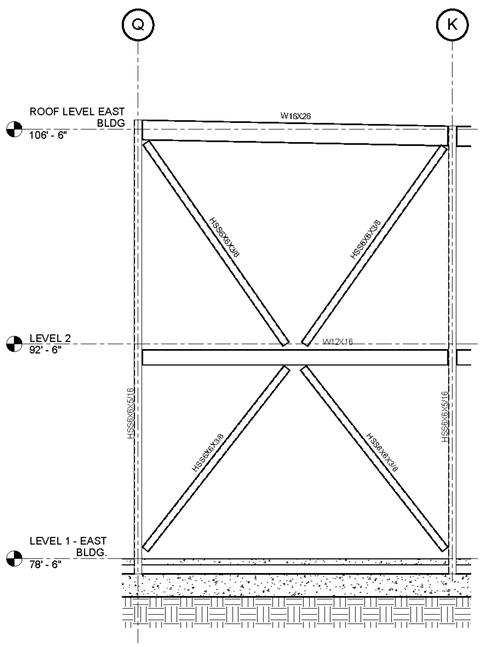
9 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"



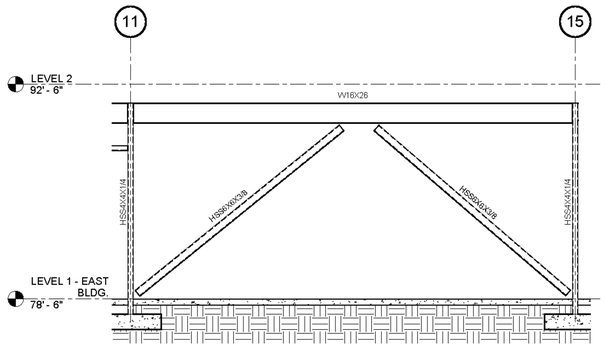
5 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"



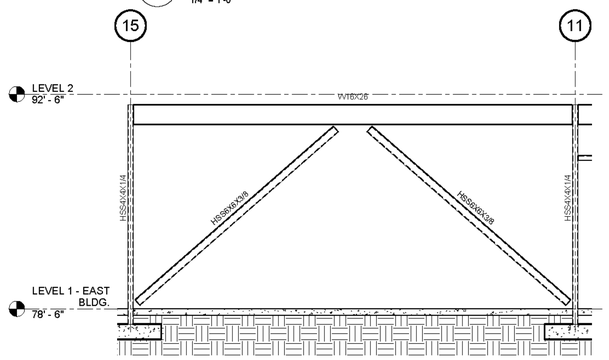
3 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"



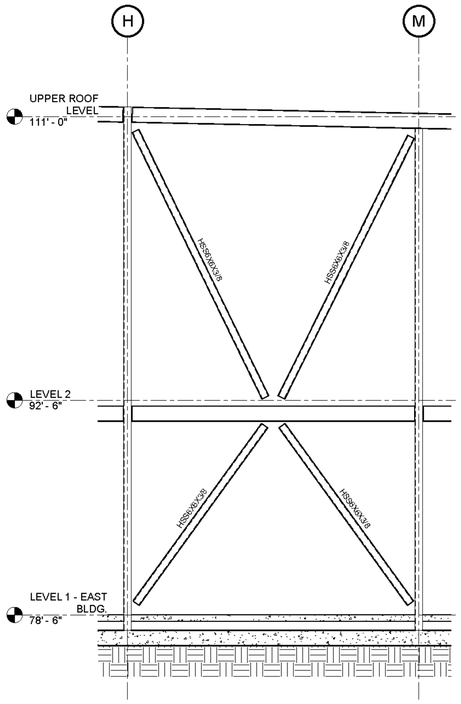
1 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"



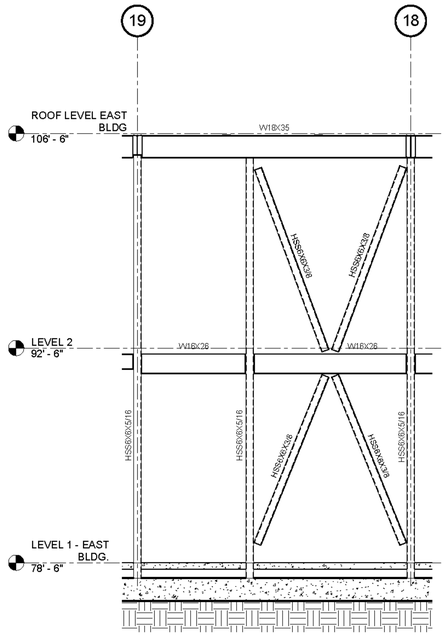
6 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"



7 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"



4 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"



2 **BRACED FRAME ELEVATION - EAST BLDG**
1/4" = 1'-0"

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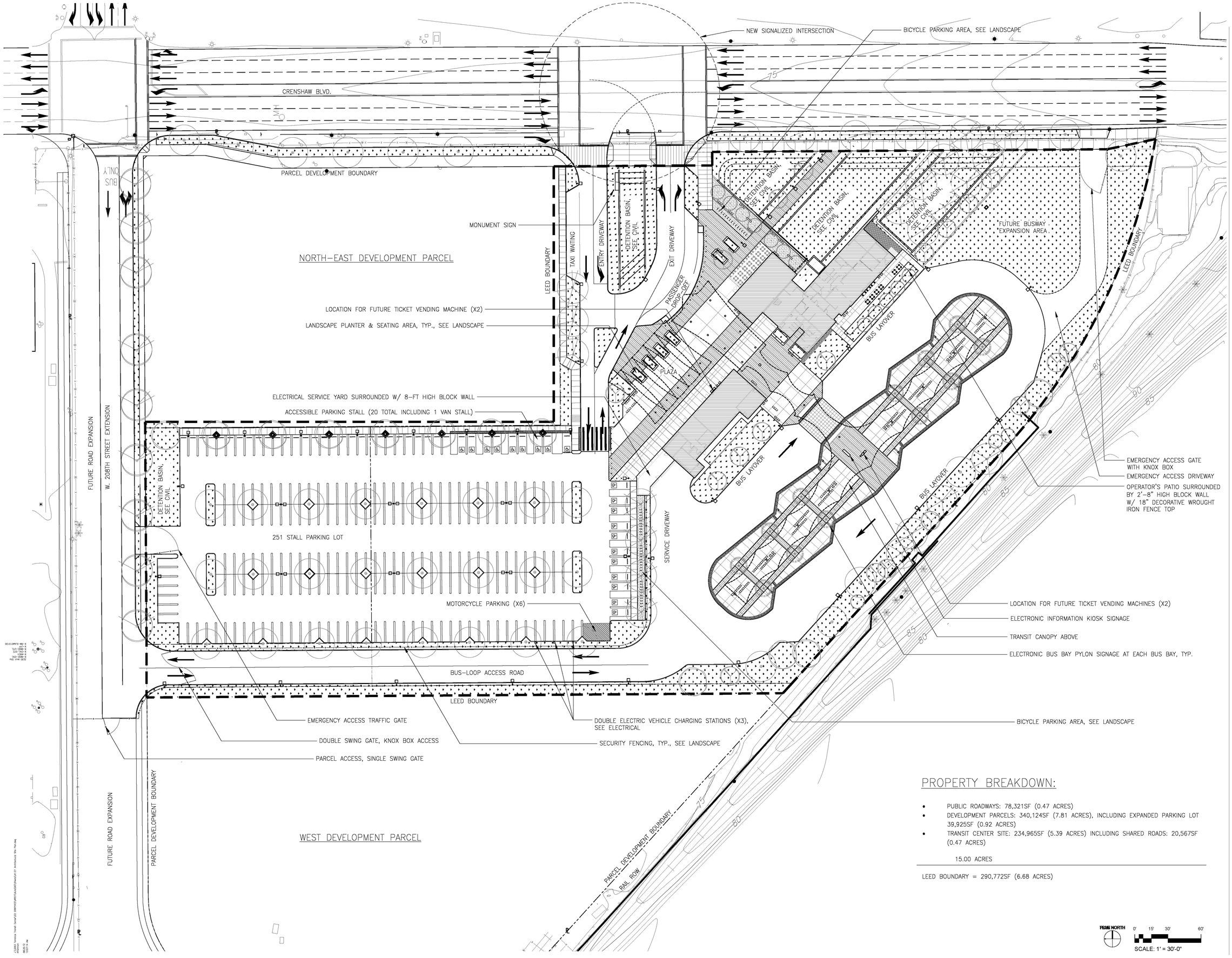
PROJECT No: 3293.01
DATE: 09/26/12
SCALE: 1/4" = 1'-0"

BRACED FRAME ELEVATIONS - EAST BLDG

S211
OF



PROPERTY BREAKDOWN:

- PUBLIC ROADWAYS: 78,321SF (0.47 ACRES)
- DEVELOPMENT PARCELS: 340,124SF (7.81 ACRES), INCLUDING EXPANDED PARKING LOT 39,925SF (0.92 ACRES)
- TRANSIT CENTER SITE: 234,965SF (5.39 ACRES) INCLUDING SHARED ROADS: 20,567SF (0.47 ACRES)

15.00 ACRES

LEED BOUNDARY = 290,772SF (6.68 ACRES)

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MARK	DATE	DESCRIPTION

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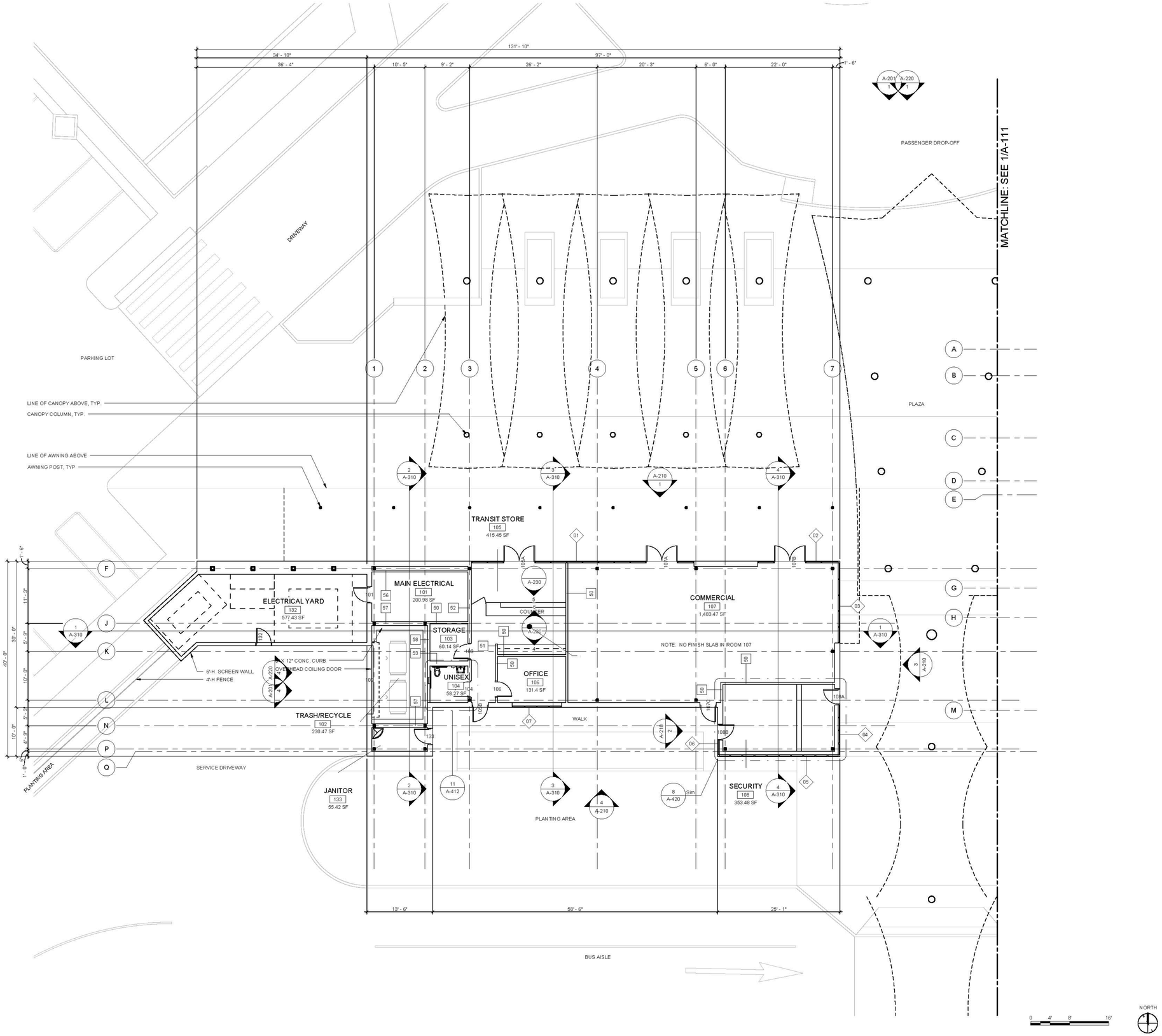
DATE: 09/26/2012
SCALE: 1:30

ARCH. SITE PLAN

A-101



1 FLOOR PLAN - WEST BUILDING

1/8" = 1'-0"

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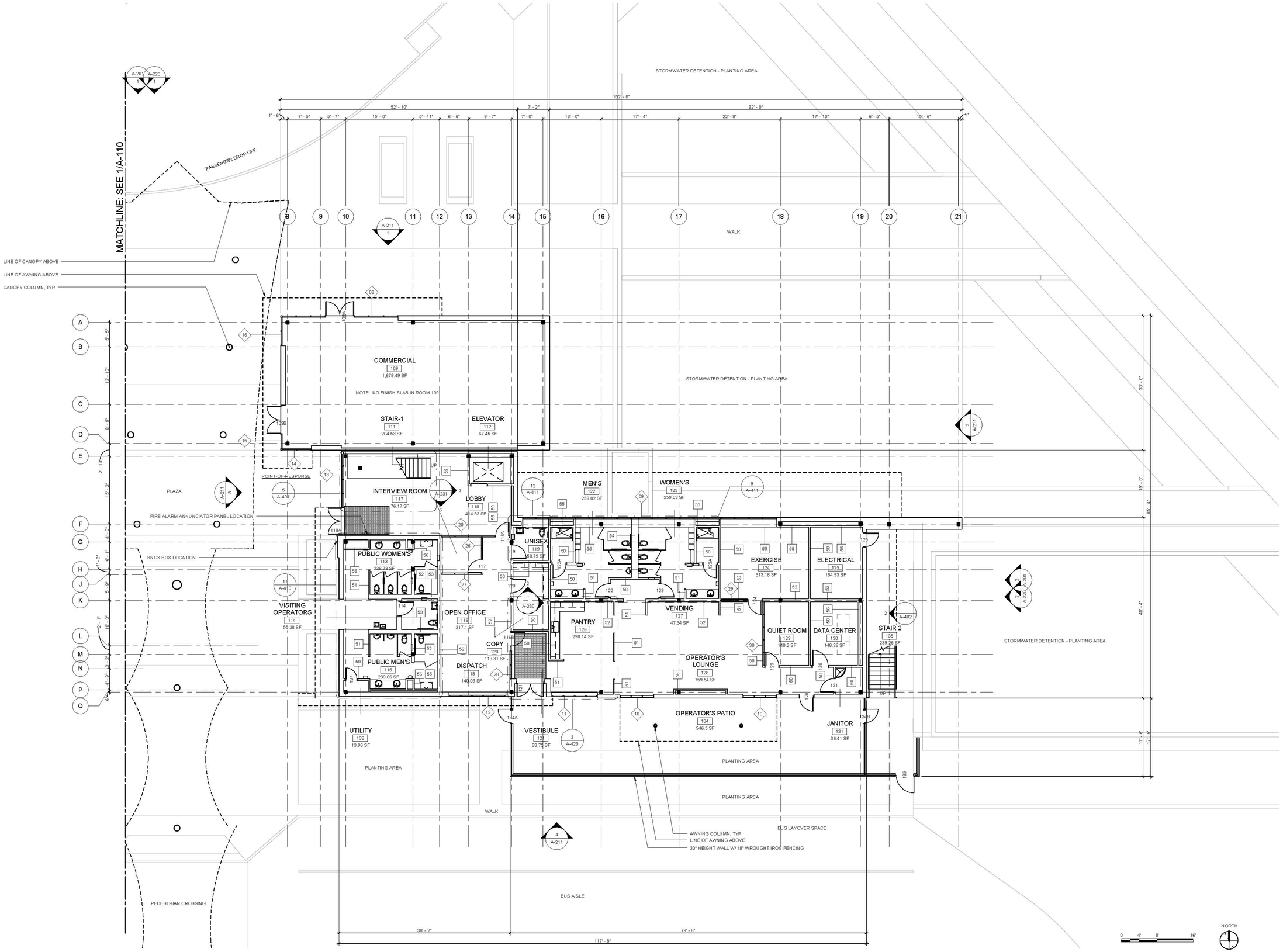
SCALE: 1/8" = 1'-0"

WEST BUILDING
FLOOR PLAN

A-110



1 LEVEL 1 FLOOR PLAN - EAST BUILDING

1/8" = 1'-0"

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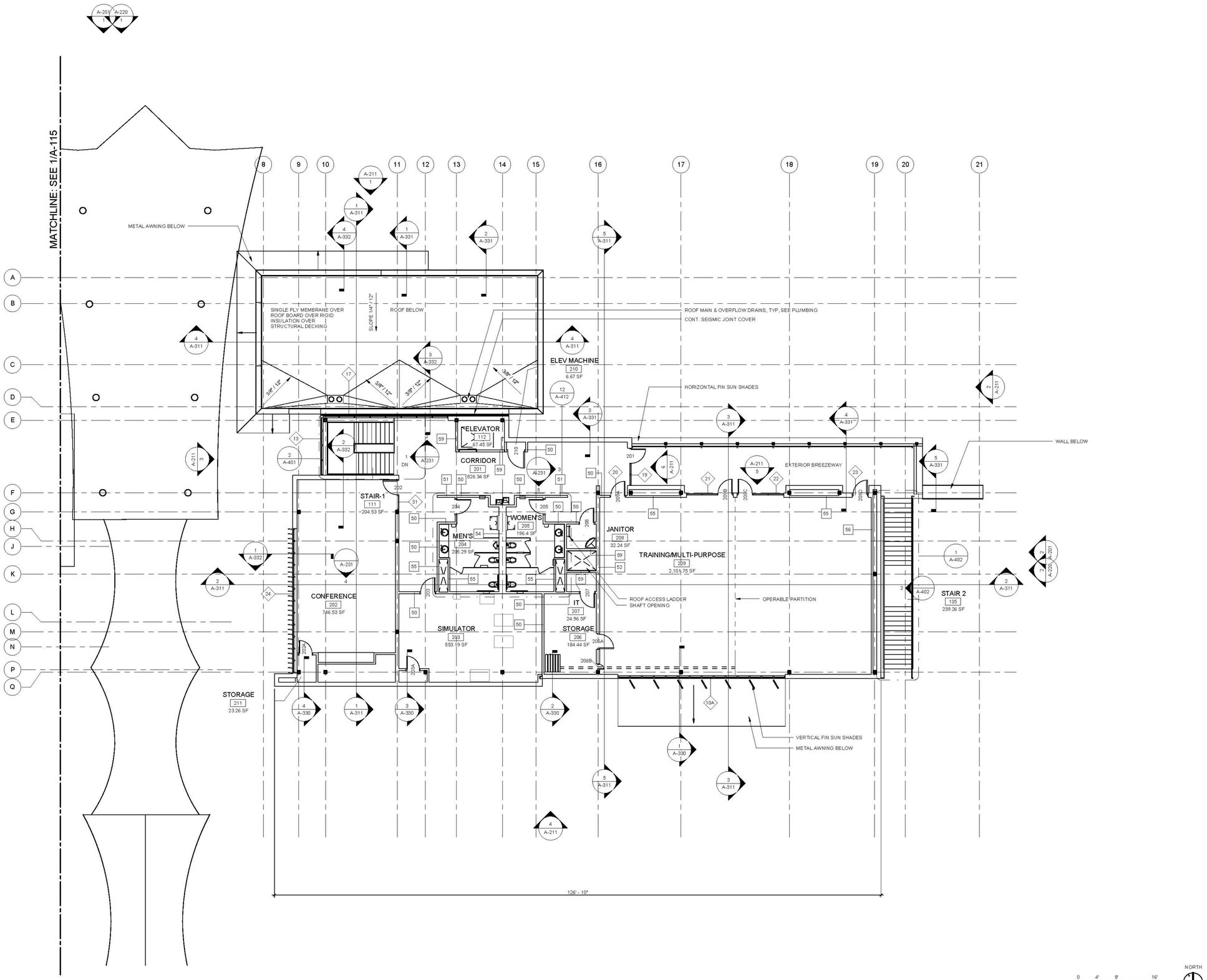
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/8" = 1'-0"

EAST BUILDING FLOOR PLAN - LEVEL 1

A-111



1 LEVEL 2 - EAST BUILDING
1/8" = 1'-0"

0 4' 8' 16'

NORTH

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DATE: 09/26/2012
SCALE: 1/8" = 1'-0"

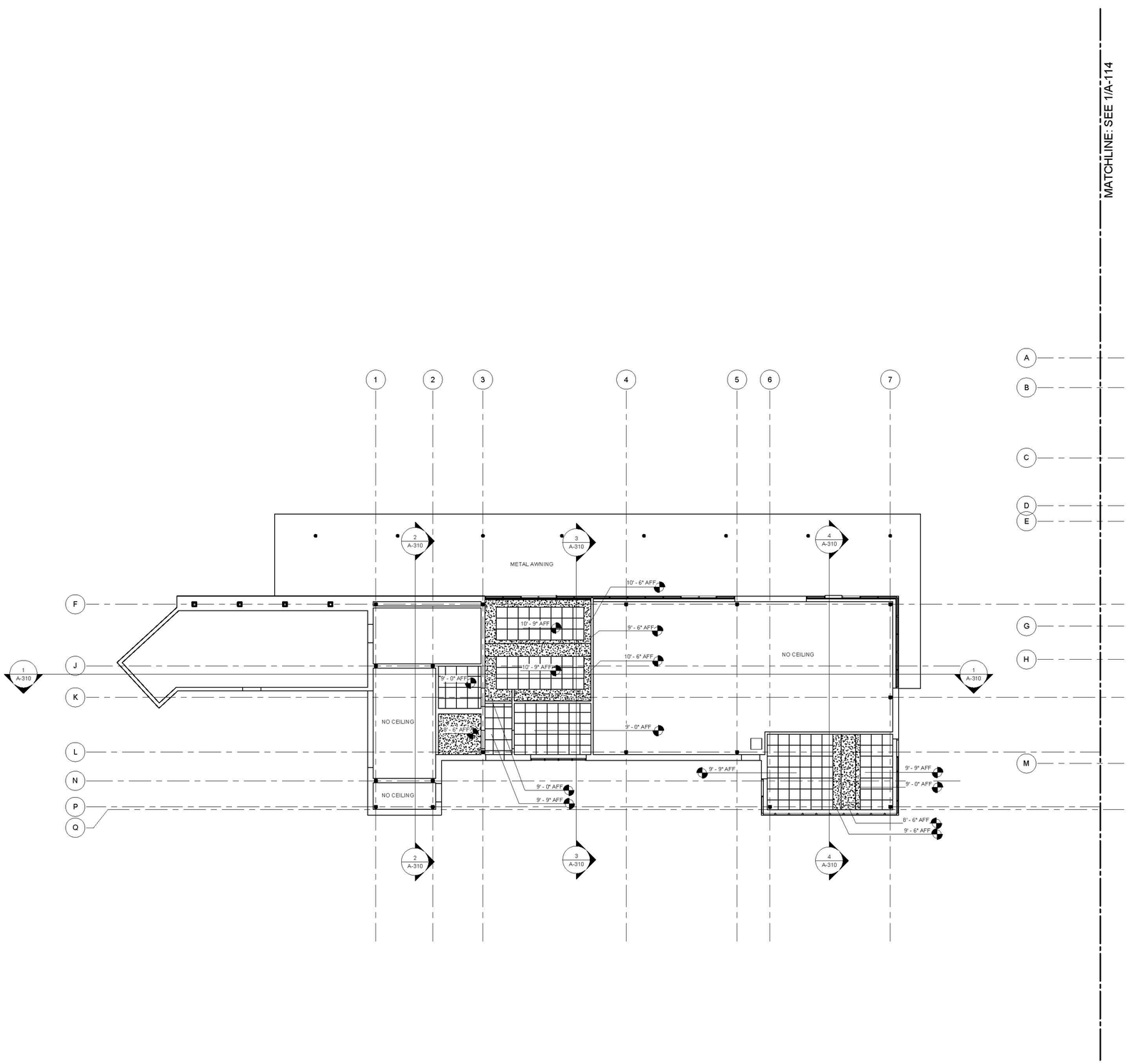
EAST BUILDING FLOOR PLAN - LEVEL 2

A-112

CEILING LEGEND

- GYPSUM CEILING
- 2" x 2" ACOUSTIC TILE
- EXTERIOR GYPSUM CEILING
- METAL PANEL

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING PLANS.
2. REFER TO MECHANICAL DRAWINGS FOR CEILING REGISTERS.



1 RCP - WEST BUILDING LEVEL 1
1/8" = 1'-0"

0 4' 8' 16'

NORTH

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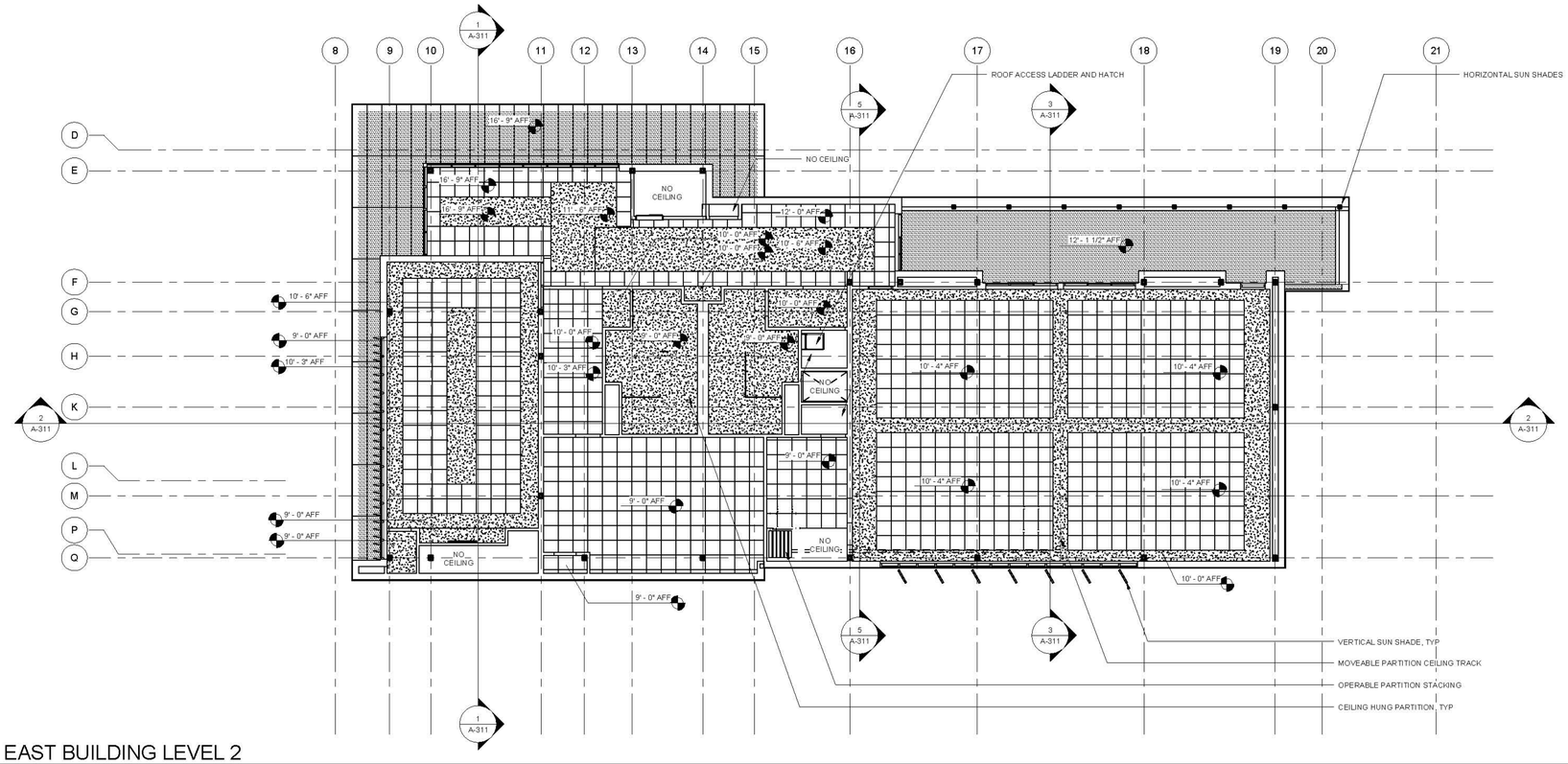
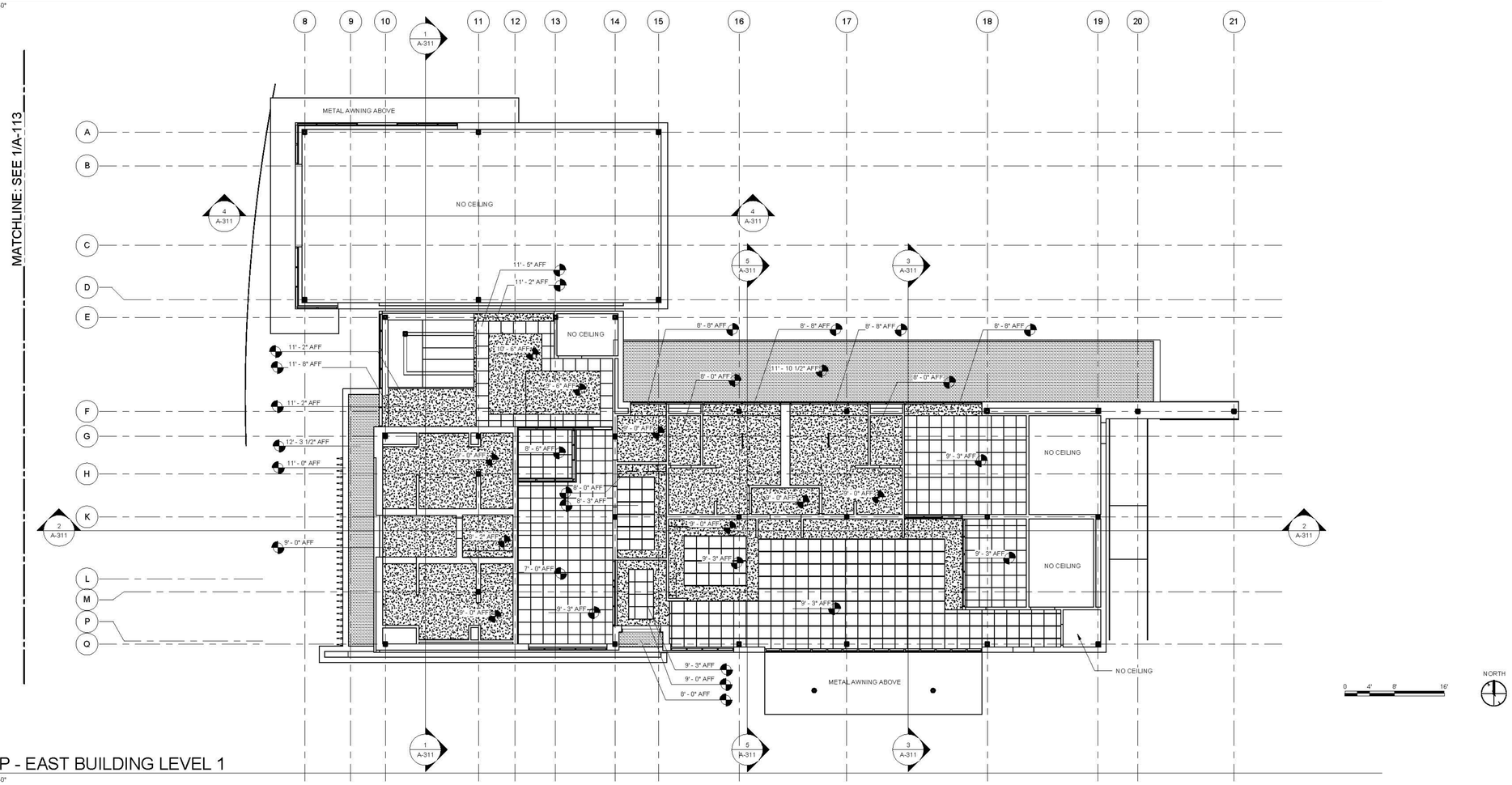
DATE: 09/26/2012
SCALE: As indicated

WEST BUILDING
REFLECTED CEILING
PLAN

A-113



1 RCP - EAST BUILDING LEVEL 2
1/8" = 1'-0"



2 RCP - EAST BUILDING LEVEL 1
1/8" = 1'-0"

CEILING LEGEND

	GYPSUM CEILING
	2' x 2' ACOUSTIC TILE
	EXTERIOR GYPSUM CEILING
	METAL PANEL

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING PLANS.
2. REFER TO MECHANICAL DRAWINGS FOR CEILING REGISTERS.

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CITY OF TORRANCE
TORRANCE TRANSIT PARK & RIDE
REGIONAL TERMINAL

465 CRENSHAW BLVD.
TORRANCE, CA 90503
30% CONSTRUCTION DRAWINGS

No	REVISION/SUBMISSION	DATE

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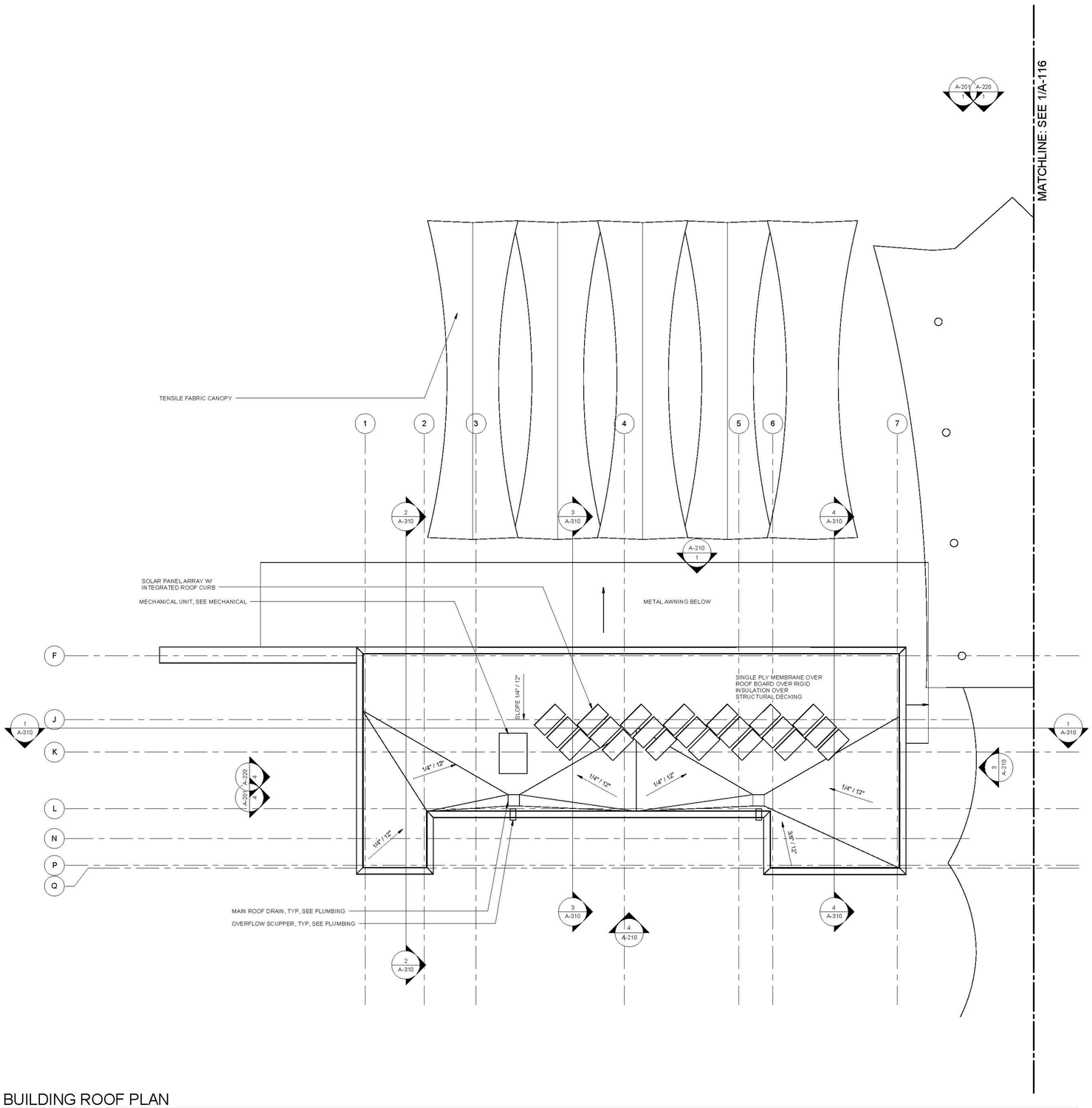
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: As indicated

EAST BUILDING
REFLECTED CEILING
PLANS

A-114



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

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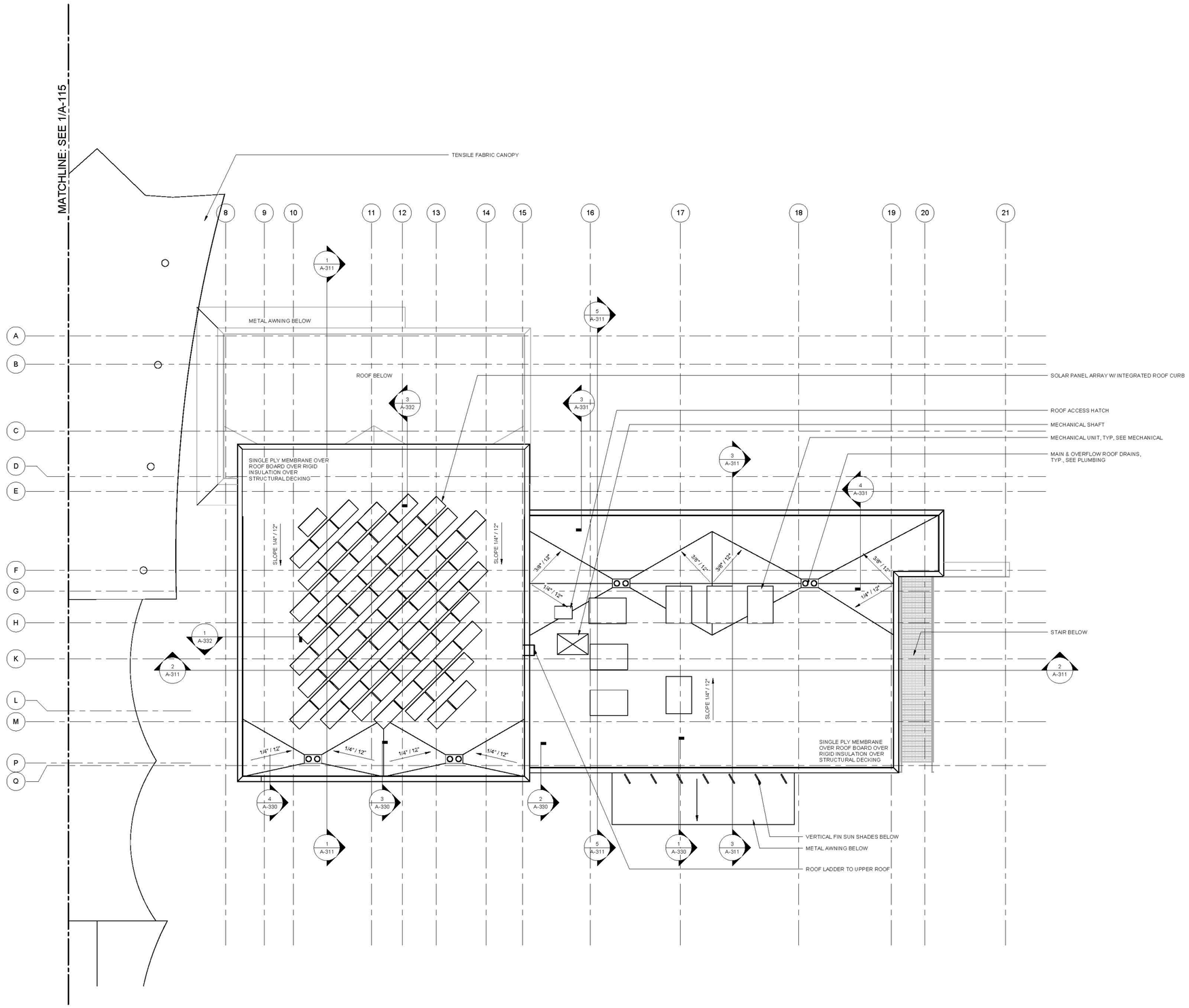
SCALE: 1/8" = 1'-0"

WEST BUILDING ROOF PLAN

A-115



1 EAST BUILDING ROOF PLAN
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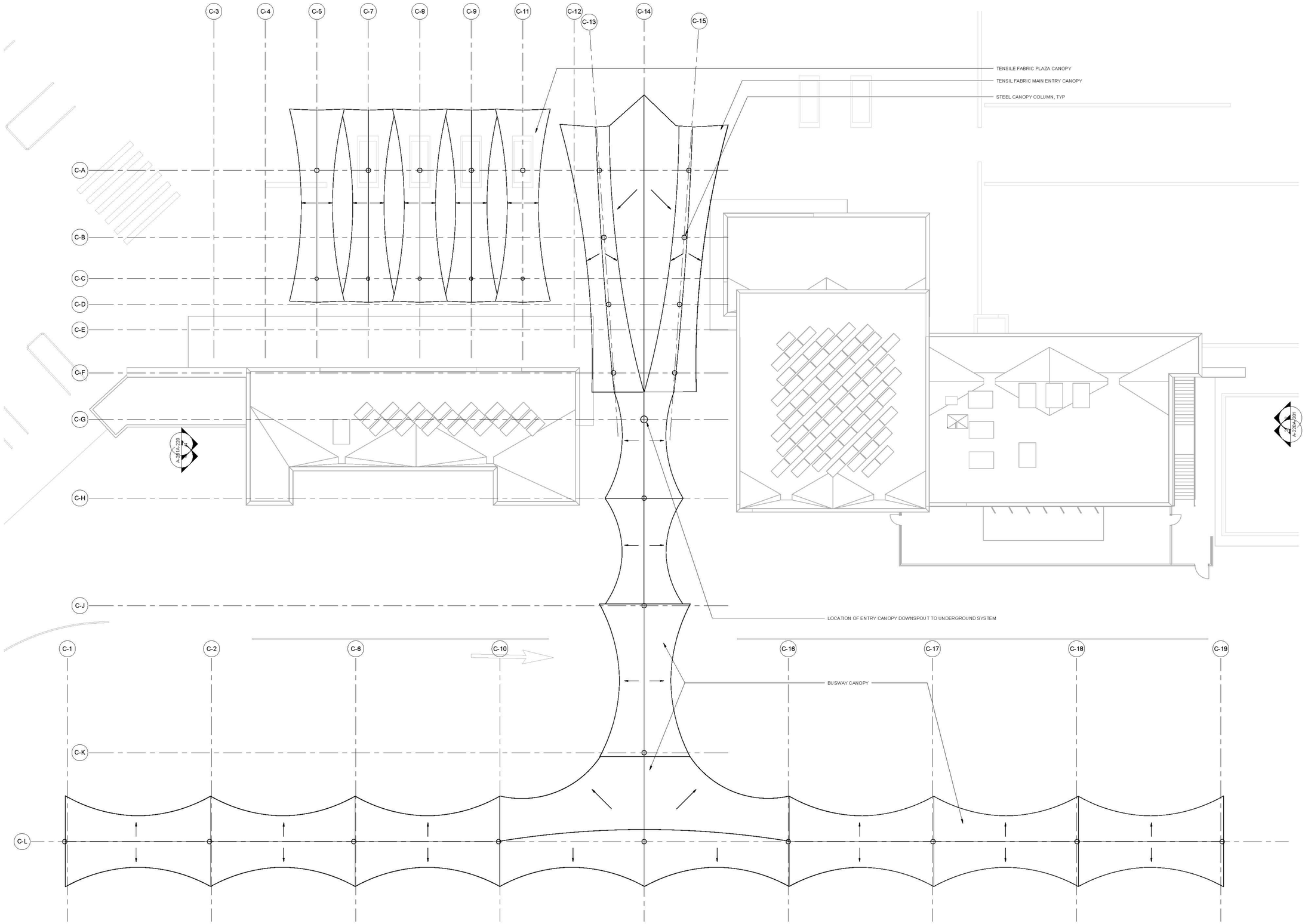
DATE: 09/26/2012
SCALE: 1/8" = 1'-0"

EAST BUILDING ROOF PLAN

A-116



1 CANOPY PLAN
3/32" = 1'-0"

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PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 3/32" = 1'-0"

CANOPY PLANS

A-120

FURNITURE & EQUIPMENT SCHEDULE

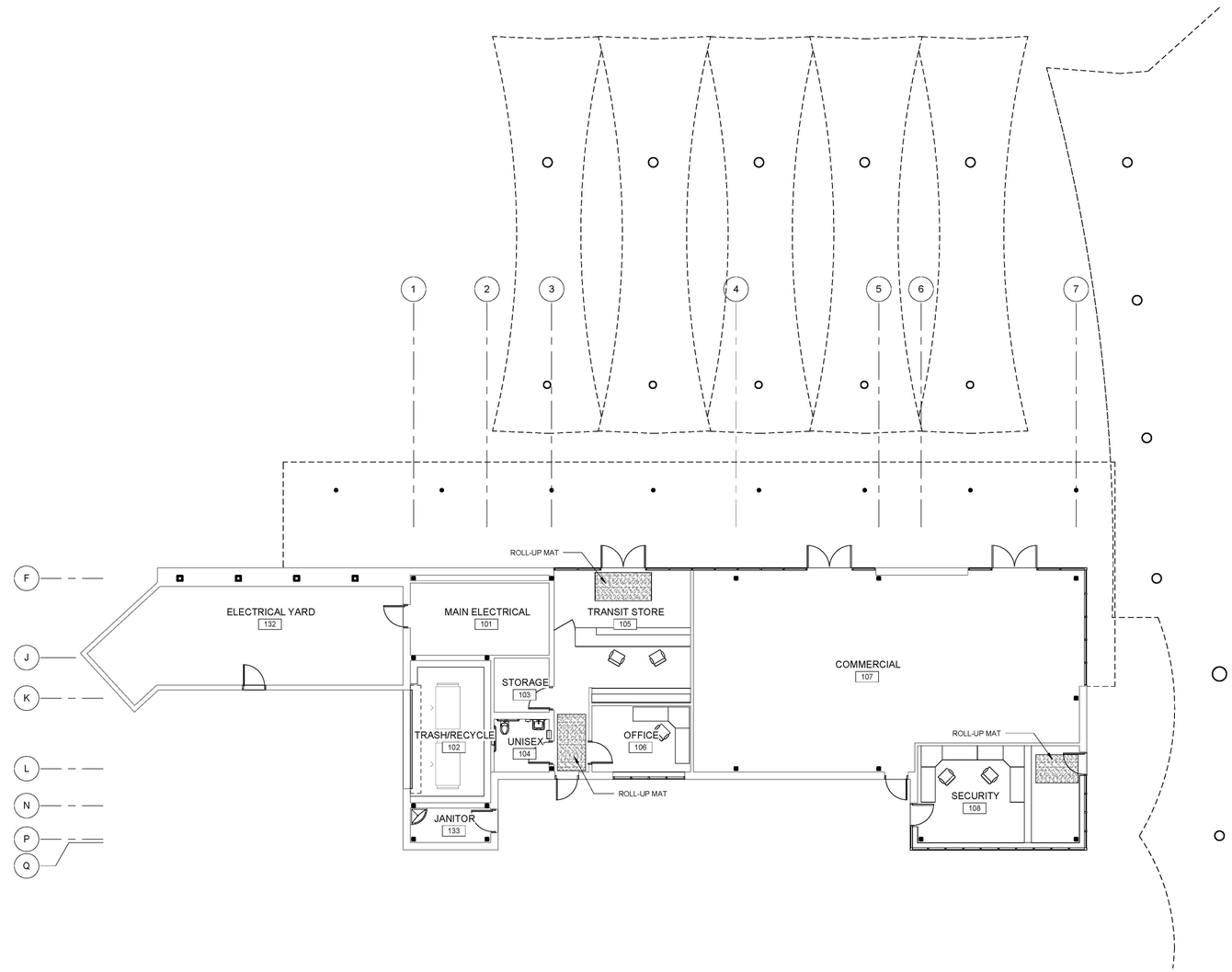
ROOM	MARK	DESCRIPTION	TYPE	QTY
105	EM-1	ENTRY MATT	ROLL-UP MATT, 48" X 96"	2
105	SG-2	STOOL	CHAIR-TASK ARMS	2
106	SG-1	TASK CHAIR	CHAIR-TASK ARMS	1
106	WS-1	WORKSTATION	L-SHAPED, 96" X 96"	1
108	SG-1	TASK CHAIR	CHAIR-TASK ARMS	2
108	WS-2	WORKSTATION	L-SHAPED, 96" X 84"	2
108	EM-2	ENTRY MATT	ROLL-UP MATT, 48" X 72"	1
110	SG-6	BENCH	48"	1
110	SG-7	BENCH	96"	1
110	CG-8	PLANTER	24" DIA.	1
110	EM-3	ENTRY MATT	RECESSED, 76" X 120"	1
116	SG-1	TASK CHAIR	CHAIR-TASK ARMS	2
116	WS-3	WORKSTATION	L-SHAPED, 108" X 84"	2
116	CG-2	WORKSTATION DIVIDER	48" HIGH	1
117	SG-1	TASK CHAIR	CHAIR-TASK ARMS	2
117	CG-1	ROUND TABLE	ROUND WORK TABLE, 30" DIA	1
118	SG-1	TASK CHAIR	CHAIR-TASK ARMS	2
118	WS-3	WORKSTATION	L-SHAPED, 108" X 84"	2
120	EQ-1	COPIER		1
121	EM-4	ENTRY MATT	RECESSED, 84" X 120"	1
122	LK-1	LOCKERS	8 UNIT	1
122	SG-10	LOCKER BENCH	36"	1
123	LK-1	LOCKERS	8 UNIT	1
123	SG-10	LOCKER BENCH	36"	1
124	EQ-2	TV	LCD 32" - 35" WALL MOUNT	1
126	EQ-3	REFRIGERATOR	36" WIDE	1
126	EQ-4	ICE MACHINE	36" WIDE	1
126	EQ-5	DISHWASHER	UNDERCOUNTER, 24"W X 32"H	1
126	EQ-6	MICROWAVE	COMMERCIAL	2
126	EQ-7	COFFEE MAKER	COMMERCIAL	1
126	SG-3	DINING CHAIR		10
126	CG-3	CAFÉ TABLE	30" DIA.	2
126	CG-4	DINING TABLE	RECTANGULAR, 36" X 72"	1
127	EQ-8	VENDING MACHINE		3
128	SG-3	DINING CHAIR		8
128	SG-4	LOUNGE CHAIR		2
128	SG-5	SOFA	54"	3
128	CG-5	CAFÉ TABLE	36" DIA.	2
128	CG-6	END TABLE	24"	3
128	EQ-9	TV	LCD 50", WALL MOUNT	1
128	EM-2	ENTRY MATT	ROLL-UP MATT, 48" X 72"	1
129	SG-4	LOUNGE CHAIR		2
129	SG-5	SOFA	54"	2
129	CG-6	END TABLE	24"	2
129	CG-7	BOOKCASE		1
130	EQ-10	DATA RACK		3
201	SG-6	BENCH	48"	2
201	SG-7	BENCH	96"	1
201	CG-8	PLANTER	24" DIA.	1
201	CG-6	END TABLE	24"	1
201	EM-1	ENTRY MATT	ROLL-UP MATT, 48" X 96"	1
202	SG-8	EXECUTIVE CHAIR	CHAIR - EXECUTIVE ARM	22
202	SG-9	STACKING CHAIR	CHAIR - STACKING	20
202	CG-9	CONFERENCE TABLE	BOAT, 25' X 60', INTERNAL A/V CONNECTIONS	1
202	EQ-9	TV	LCD 50", WALL MOUNT	1
202	EQ-11	PROJECTION SCREEN	FIXED ELECTRONIC RECESSED CEILING MOUNT, 108"	1
202	EQ-12	PROJECTOR	CEILING MOUNTED OVERHEAD PROJECTOR	1
203	SG-1	TASK CHAIR	CHAIR-TASK ARMS	2
203	CG-10	WORKTABLE	72" X 24"	2
203	WT-1	HORIZONTAL BLINDS	34"W, BRUSHED STAINLESS	1
203	WT-2	HORIZONTAL BLINDS	28" BRUSHED STAINLESS	11
203	EQ-13	PROJECTION SCREEN	FIXED ELECTRONIC RECESSED CEILING MOUNT, 120"	1
203	EQ-12	PROJECTOR	CEILING MOUNTED OVERHEAD PROJECTOR	1
203	EQ-14	DRIVER SIMULATOR		2
203	EQ-15	SIMULATOR CONTROL MODULE		1
203	EQ-16	FAREBOX SIMULATOR		1
203	EQ-17	WHEELCHAIR LIFT SIMULATOR		1
209	EQ-11	PROJECTION SCREEN	FIXED ELECTRONIC RECESSED CEILING MOUNT, 108"	2
209	EQ-12	PROJECTOR	CEILING MOUNTED OVERHEAD PROJECTOR	2
209	CG-11	TRAINING ROOM TABLE	72" X 18"	36
209	SG-9	STACKING CHAIR	CHAIR - STACKING	150
209	WT-2	HORIZONTAL BLINDS	28" BRUSHED STAINLESS	18
209	WT-3	HORIZONTAL BLINDS	36" BRUSHED STAINLESS	4
209	EM-1	ENTRY MATT	ROLL-UP MATT, 48" X 96"	1
209	EM-2	ENTRY MATT	ROLL-UP MATT, 48" X 72"	1
209	EQ-18	OPERABLE PARTITION	MANUAL OPERABLE PARTITION, 37'-3" W X 10'-0" H	1

F&E LEGEND

VALUE	DESCRIPTION
AF	ATHLETIC FLOORING
CB	COVE BASE
CLT	CEILING TILE
CP	CERAMIC PANEL
CPT	CARPET TILE
CT	CERAMIC TILE
FRP	FIBER REINFORCED PLASTIC
GB	GYPSUM WALLBOARD
MTL	METAL
PL	PLASTIC LAMINATE
PT	PAINT
PW	PLYWOOD
RB	RESILITENT BASE
RT	RESILITENT TILE
S&S	STAINED & SEALED
SCT	STATIC CONTROL RESILIENT TILE
SLD	SEALED
SS	SOLID SURFACE
STD	STAINED
WC	WALL COVERING
CG	CASE GOODS
EM	ENTRANCE MAT
EQ	EQUIPMENT
LB	LOCKER ROOM BENCH
LK	LOCKERS
MR	MIRROR
SG	SEATING
TC	TOILET COMPARTMENT
WS	WORKSTATION
WT	WINDOW TREATMENT

ROOM FINISH SCHEDULE

		FLOOR			WALLS								CEILING			
NUMBER	NAME	SUBSTR	FINISH	BASE	NORTH - SUBSTR	NORTH - FINISH	EAST - SUBSTR	EAST - FINISH	SOUTH - SUBSTR	SOUTH - FINISH	WEST - SUBSTR	WEST - FINISH	SUSTR	FINISH	HEIGHT	REMARKS
101	MAIN ELECTRICAL	CONC	SLD	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	PT	--	
102	TRASH/RECYCLE	CONC	SLD	RB	PW	FRP	PW	FRP	PW	FRP	PW	FRP	--	PT	--	FRP TO 8-FT HT.
103	STORAGE	CONC	SLD	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	CLT	9'-0"	
104	UNISEX	CONC	CT	CB	GB	CT	GB	CT	GB	CT	GB	CT	GB	PT	8'-6"	
105	TRANSIT STORE	CONC	CPT & RT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB	PT & CLT	VARIES	SEE FINISH PLANS & RCPS
106	OFFICE	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	CLT	9'-0"	
107	COMMERCIAL	SUB-BASE	--	--	GB	PT	GB	PT	GB	PT	GB	PT	--	PT	--	SOG BY TENANT
108	SECURITY	CONC	CPT & RT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB, --	PT & CLT	VARIES	SEE FINISH PLANS & RCPS
109	COMMERCIAL	SUB-BASE	--	--	GB	CP	GB	PT	GB	PT	GB	PT	--	PT	--	SOG BY TENANT
110	LOBBY	CONC	CT	CB	GB	CP	--	--	GB	PT	--	--	GB, --	PT & CLT	VARIES	SEE FINISH PLANS & RCPS
111	STAIR-1	CONC	CT	--	GB	PT	GB	PT	GB	PT	GB	PT	GB, --	PT & CLT	VARIES	SEE FINISH PLANS & RCPS
112	ELEVATOR	CONC	CT	MTL	--	PL	--	PL	--	PL	--	PL	--	MTL	9'-0"	
113	PUBLIC WOMEN'S	CONC	S&S	CB	GB	CP	GB	PT	GB	PT	GB	PT	GB	PT	9'-0"	
114	VISITING OPERATORS	CONC	CT	CB	GB	CP	GB	PT	GB	PT	GB	PT	GB	PT	VARIES	SEE RCPS
115	PUBLIC MEN'S	CONC	S&S	CB	GB	CP	GB	PT	GB	PT	GB	PT	GB	PT	9'-0"	
116	OPEN OFFICE	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	CLT	9'-3"	
117	INTERVIEW ROOM	CONC	CPT	RB	--	--	--	--	--	--	GB	PT	--	CLT	8'-6"	
118	DISPATCH	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB	PT	9'-3"	
119	UNISEX	CONC	CT	CB	GB	CT	GB	PT	GB	PT	GB	PT	GB, --		9'-0"	
120	COPY	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB, --		VARIES	SEE RCPS
121	VESTIBULE	CONC	RT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB, --		VARIES	SEE FINISH PLANS & RCPS
122	MEN'S	CONC	CT	CB	GB	CT	GB	PT	GB	PT	GB	PT	GB, --		VARIES	SEE FINISH PLANS & RCPS
123	WOMEN'S	CONC	CT	CB	GB	CT	GB	PT	GB	PT	GB	PT	--		VARIES	SEE FINISH PLANS & RCPS
124	EXERCISE	CONC	AF	RB	GB	PT	GB	PT	GB	PT	GB	PT	--		9'-3"	
125	ELECTRICAL	CONC	SLD	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB, --		--	
126	PANTRY	CONC	RT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB		VARIES	SEE FINISH PLANS & RCPS
127	VENDING	CONC	RT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB, --		9'-0"	
128	OPERATOR'S LOUNGE	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	--		VARIES	SEE FINISH PLANS & RCPS
129	QUIET ROOM	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	CLT	9'-3"	
130	DATA CENTER	CONC	SCT	RB	GB	PT	GB	PT	GB	PT	PW	--	--	PT	--	
131	JANITOR	CONC	SLD	RB	GB	FRP	GB	FRP	GB	FRP	GB	FRP	--	PT	--	FRP TO 8-FT HT.
133	JANITOR	CONC	SLD	RB	GB	FRP	GB	FRP	GB	FRP	GB	FRP	--	PT	--	FRP TO 8-FT HT.
136	UTILITY	CONC	S&S	CB	GB	FRP	GB	PT	GB	PT	GB	PT	--	PT	--	FRP TO 8-FT HT.
201	CORRIDOR	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB, --	PT & CLT	VARIES	SEE FINISH PLANS & RCPS
202	CONFERENCE	CONC	CPT	RB	GB	WC	GB	PT	GB	PT	GB	PT	GB, --	PT & CLT	VARIES	SEE FINISH PLANS & RCPS
203	SIMULATOR	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	CLT	9'-0"	
204	MEN'S	CONC	CT	CB	GB	CT	GB	PT	GB	PT	GB	PT	GB	PT	9'-0"	
205	WOMEN'S	CONC	CT	CB	GB	CT	GB	PT	GB	PT	GB	PT	GB	PT	9'-0"	
206	STORAGE	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	CLT	9'-0"	
207	IT	CONC	SLD	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	PT	--	
208	JANITOR	CONC	SLD	RB	GB	FRP	GB	PT	GB	PT	GB	PT	--	PT	--	
209	TRAINING/MULTI-PURPOSE	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB, --	PT & CLT	VARIES	FRP TO 8-FT HT
210	ELEV MACHINE	CONC	SLD	RB	GB	PT	GB	PT	GB	PT	GB	PT	--	PT	--	SEE RCPS
211	STORAGE	CONC	CPT	RB	GB	PT	GB	PT	GB	PT	GB	PT	GB	PT	9'-0"	



1 F&E PLAN - WEST BUILDING

1/8" = 1'-0"

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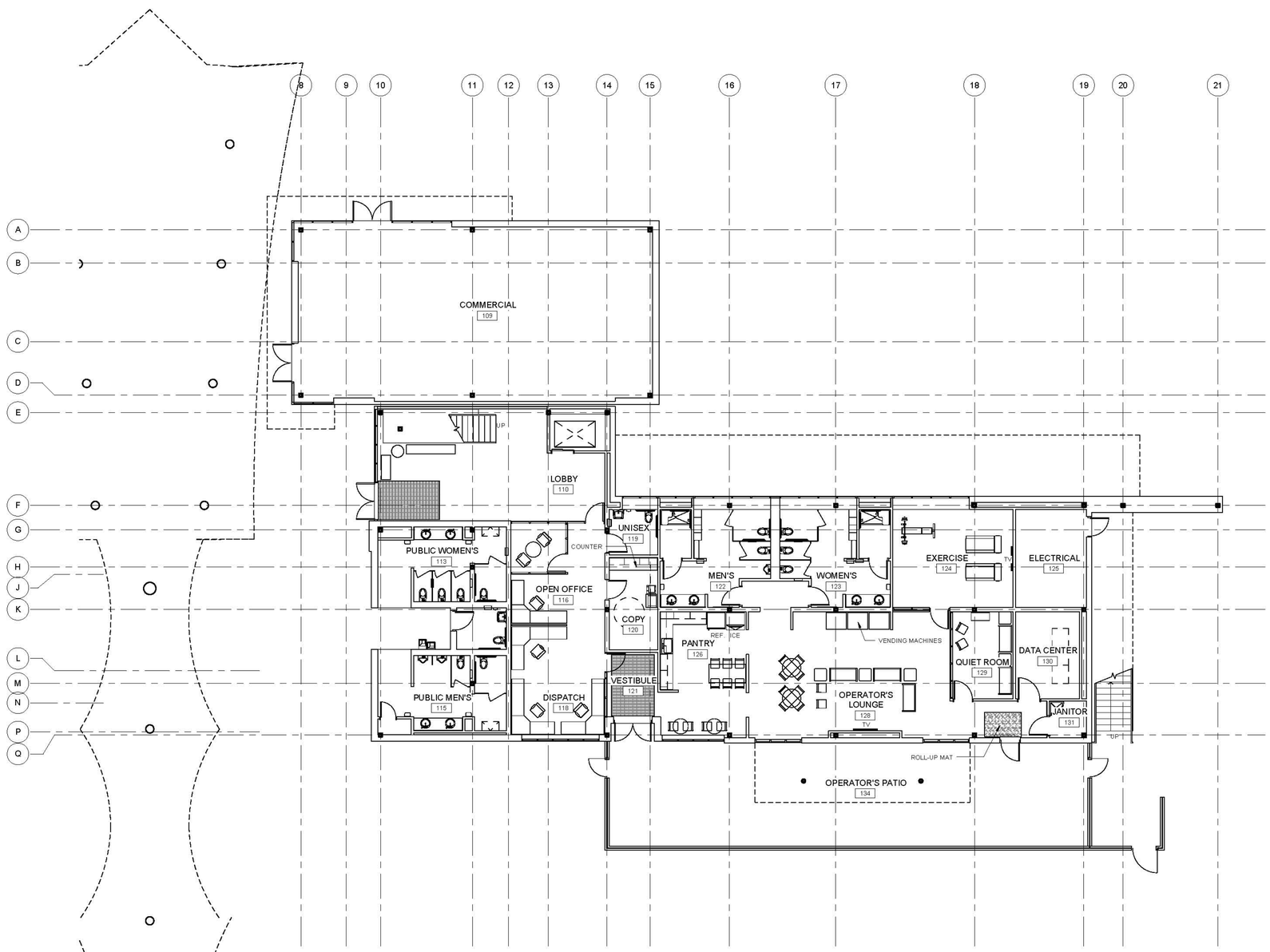
PROJECT No: 3293.01

DATE: 09/26/2012

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

WEST BUILDING F&E PLAN & SCHEDULE

A-130



1 F&E PLAN - EAST BUILDING LEVEL 1

1/8" = 1'-0"

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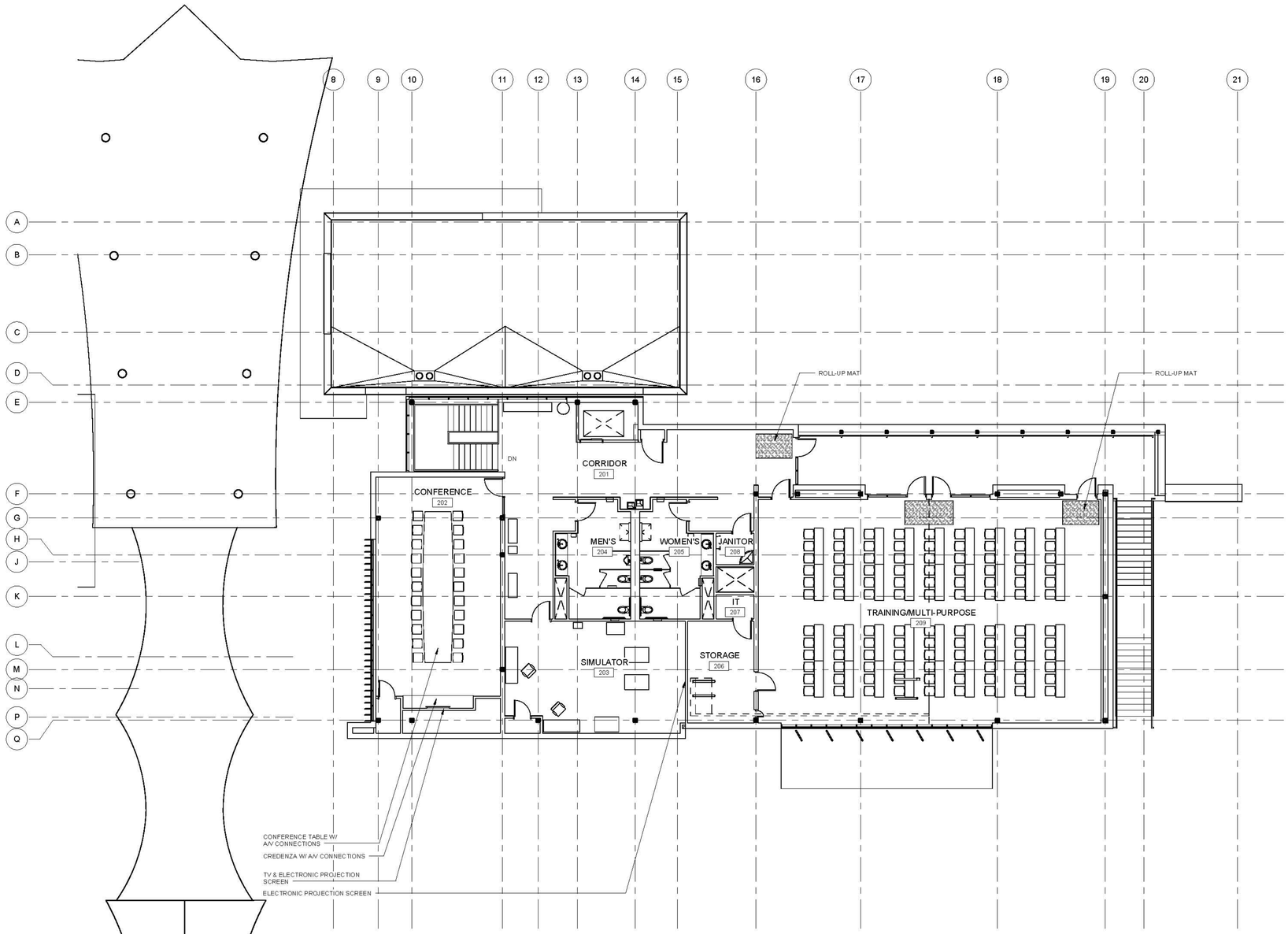
DATE: 09/26/2012

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

EAST BUILDING F&E PLAN - LEVEL 1

A-131



1 FF&E PLAN - EAST BUILDING LEVEL 2

1/8" = 1'-0"

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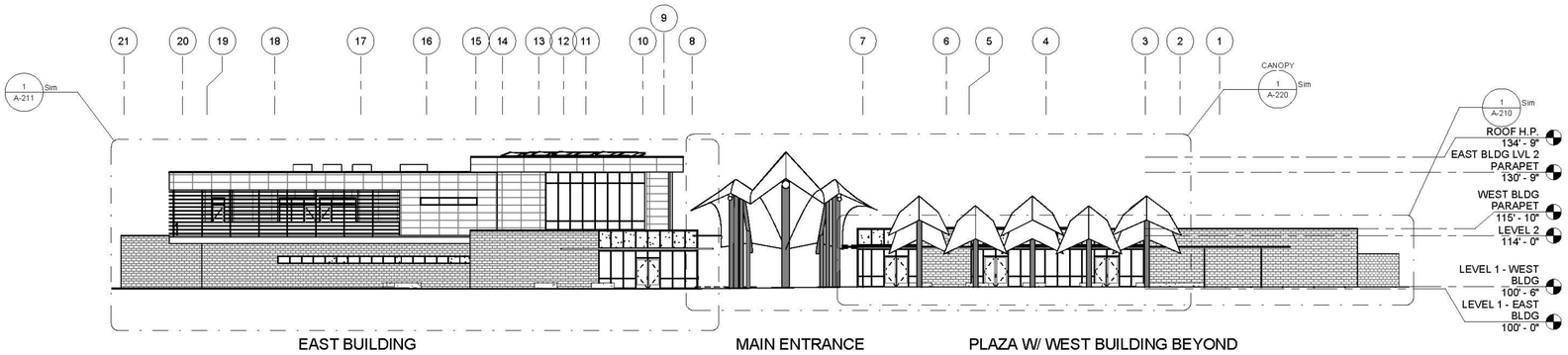
SCALE: 1/8" = 1'-0"

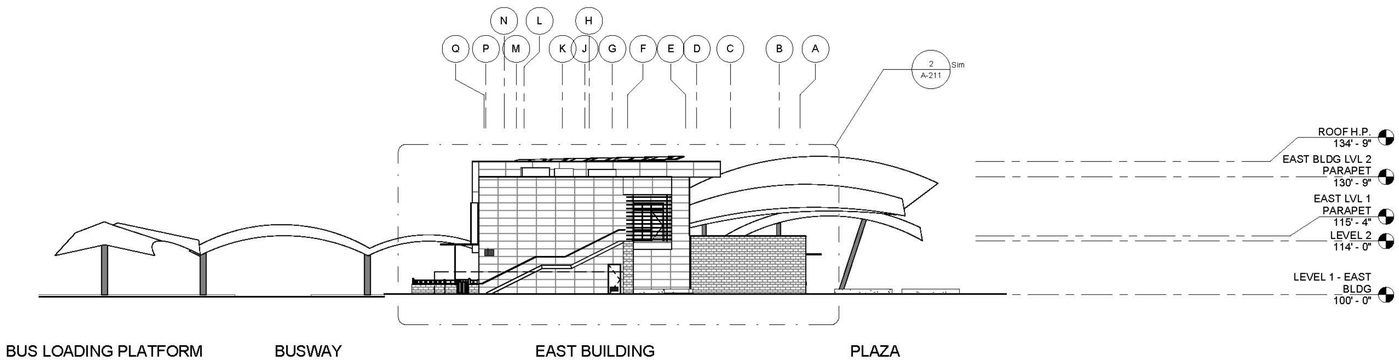
EAST BUILDING FF&E
PLAN - LEVEL 2

A-132



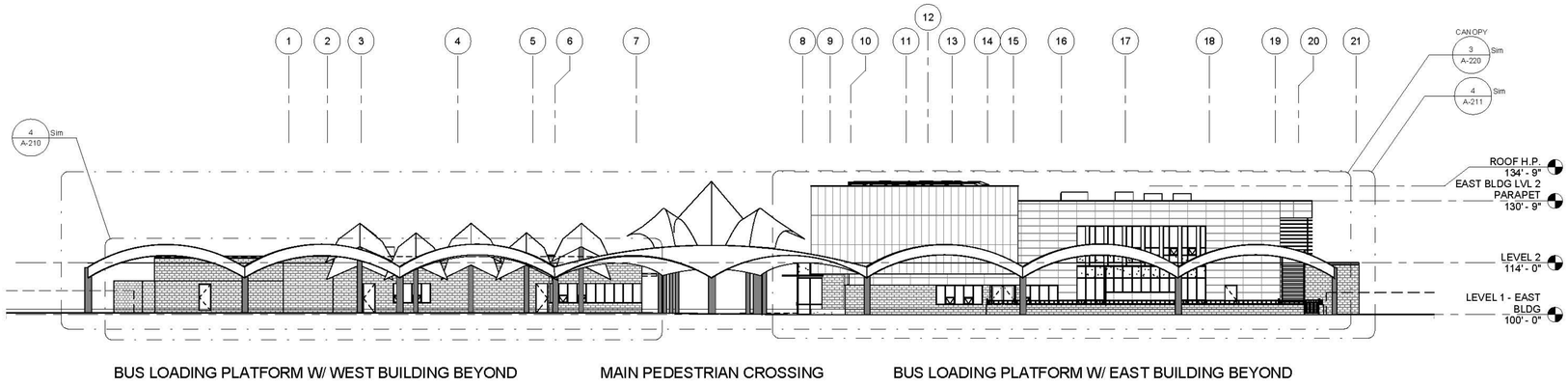
1 OVERALL NORTH ELEVATION

1/16" = 1'-0"



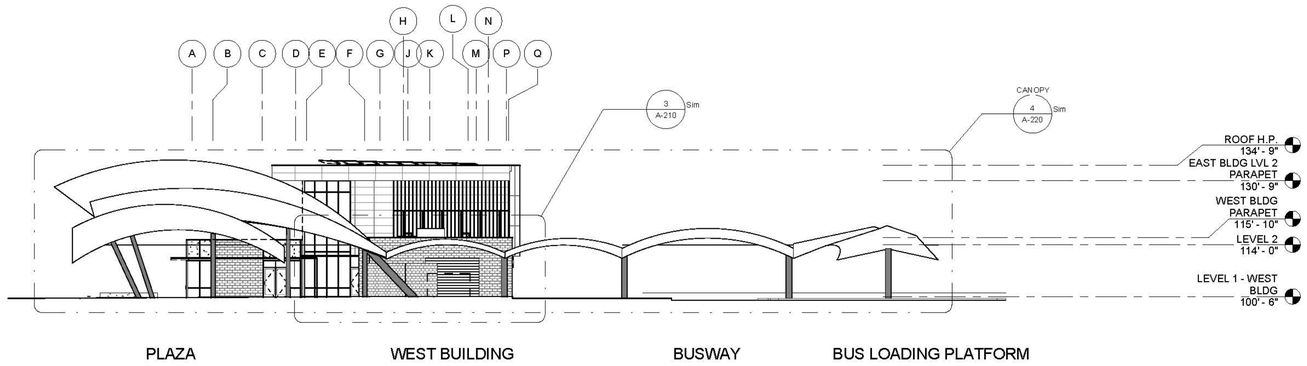
2 OVERALL EAST ELEVATION

1/16" = 1'-0"



3 OVERALL SOUTH ELEVATION

1/16" = 1'-0"



4 OVERALL WEST ELEVATION

1/16" = 1'-0"

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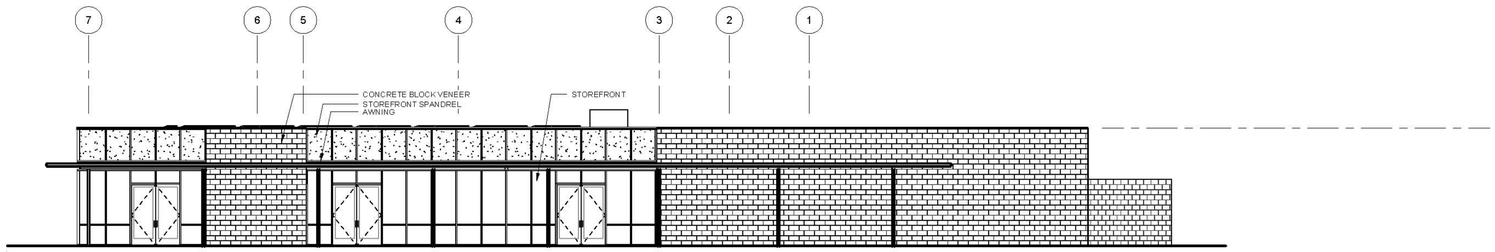
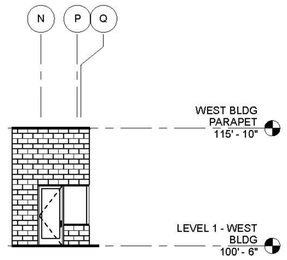
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/16" = 1'-0"

OVERALL ELEVATIONS

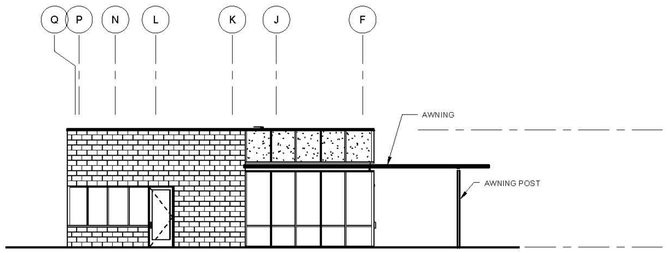
A-201



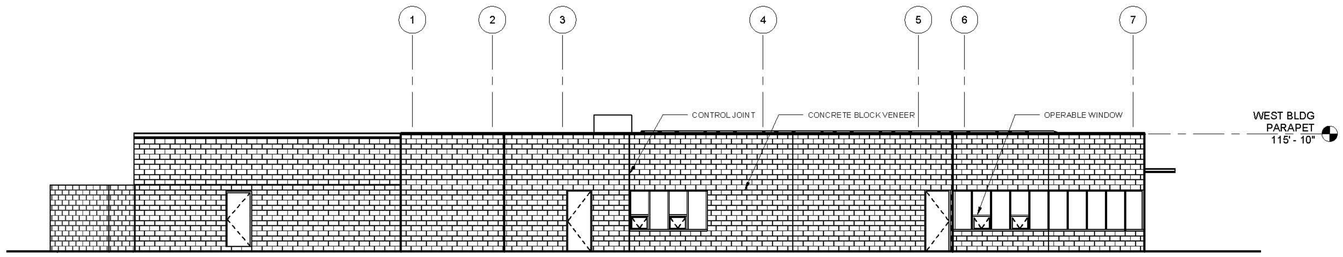
1 WEST BUILDING - NORTH ELEVATION
1/8" = 1'-0"



2 WEST BUILDING - HIDDEN ELEVATION 1
1/8" = 1'-0"



3 WEST BUILDING - EAST ELEVATION
1/8" = 1'-0"



4 WEST BUILDING - SOUTH ELEVATION
1/8" = 1'-0"

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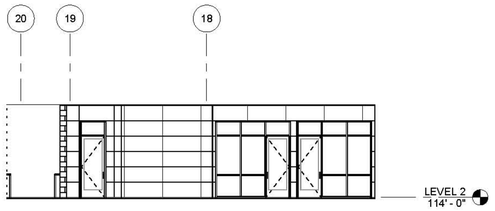
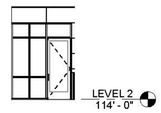
SCALE: 1/8" = 1'-0"

WEST BUILDING
ELEVATIONS

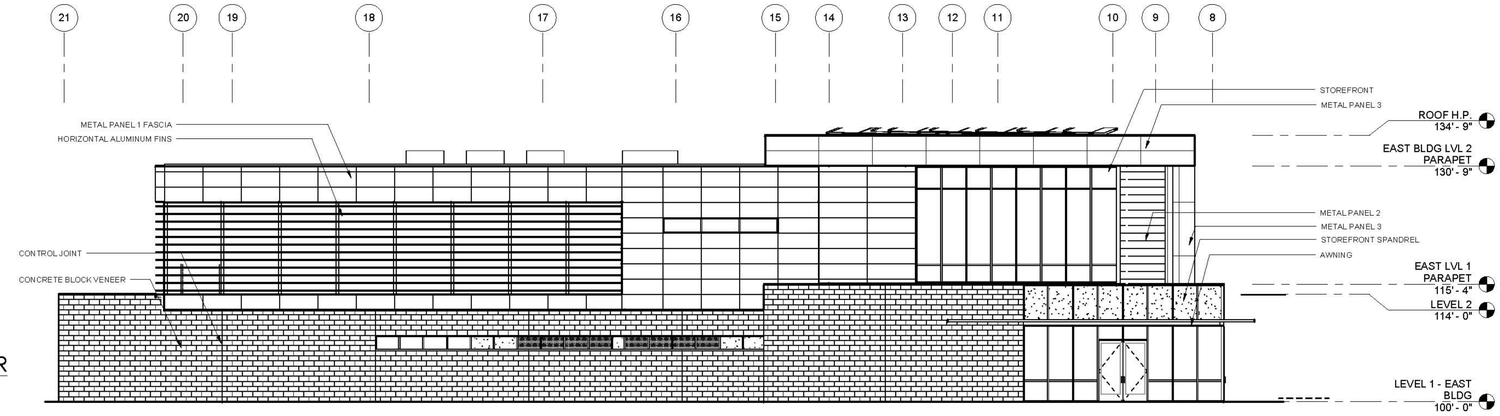
A-210



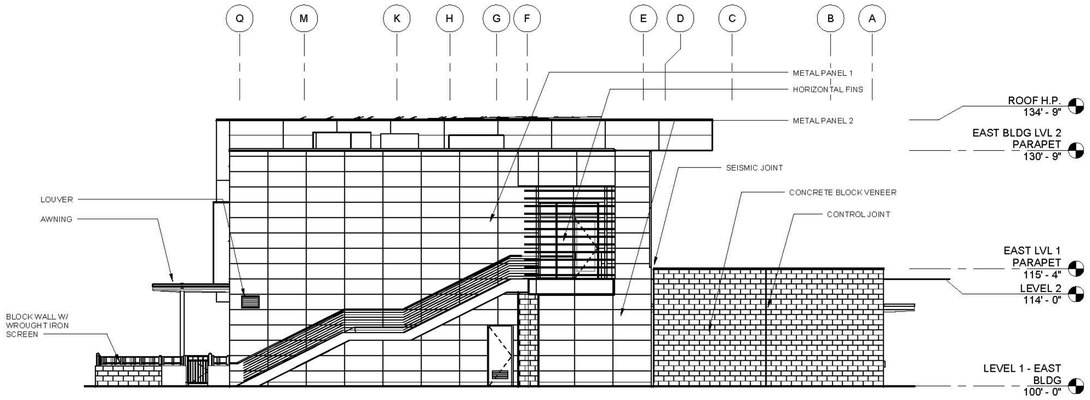
5 EXTERIOR CORRIDOR
1/8" = 1'-0"



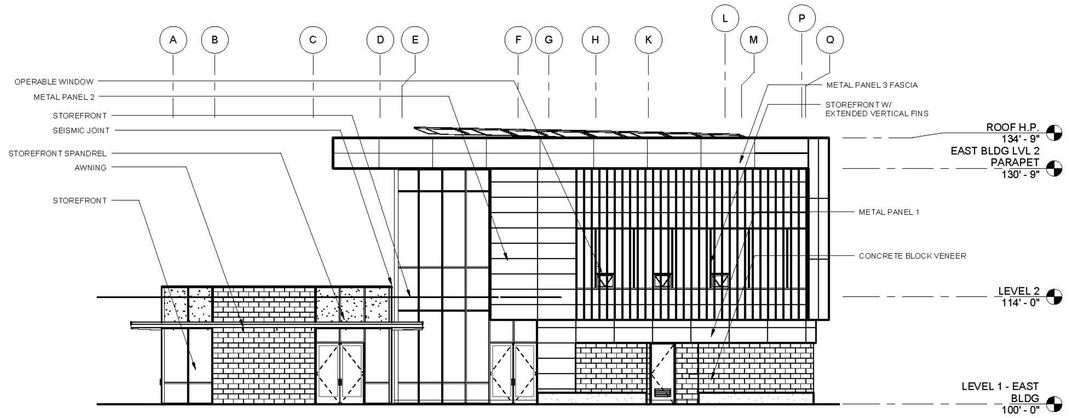
6 EXTERIOR CORRIDOR
1/8" = 1'-0"



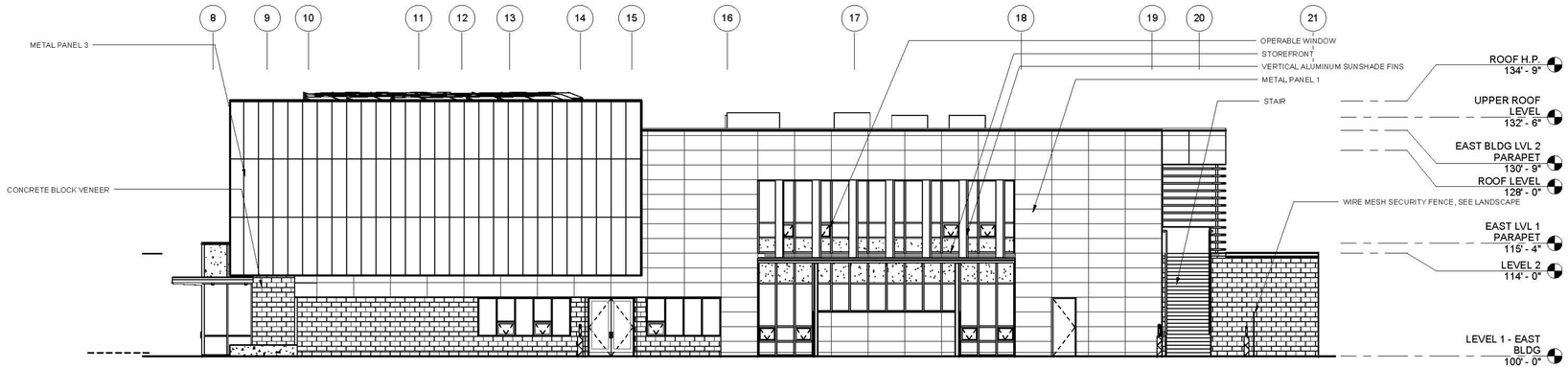
1 EAST BUILDING - NORTH ELEVATION
1/8" = 1'-0"



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



3 EAST BUILDING - WEST ELEVATION
1/8" = 1'-0"



4 EAST BUILDING - SOUTH ELEVATION
1/8" = 1'-0"

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No	REVISION/SUBMISSION	DATE

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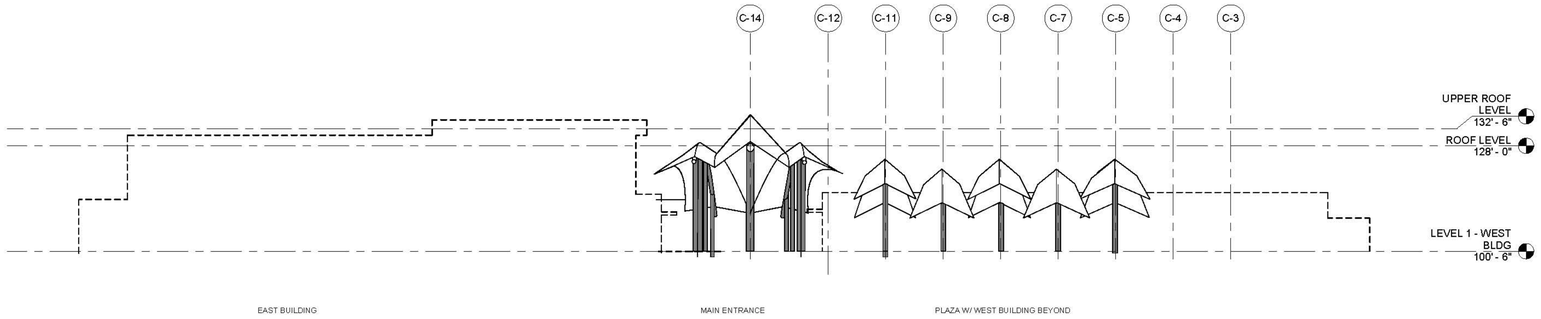
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/8" = 1'-0"

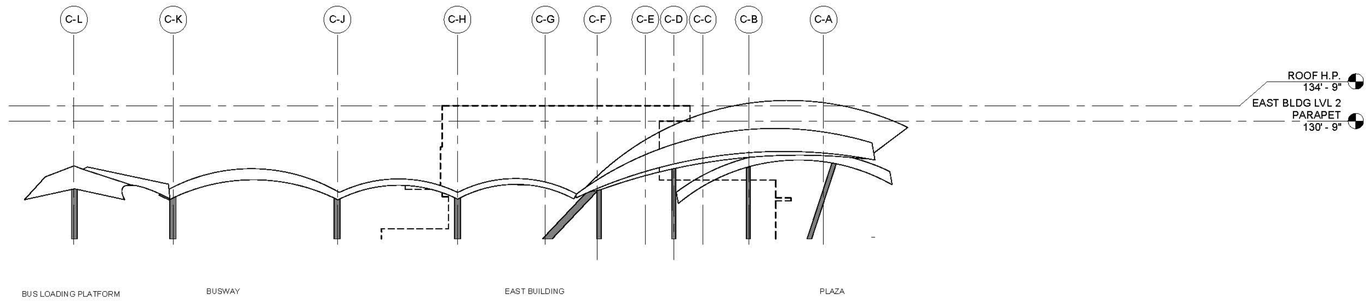
EAST BUILDING
ELEVATIONS

A-211



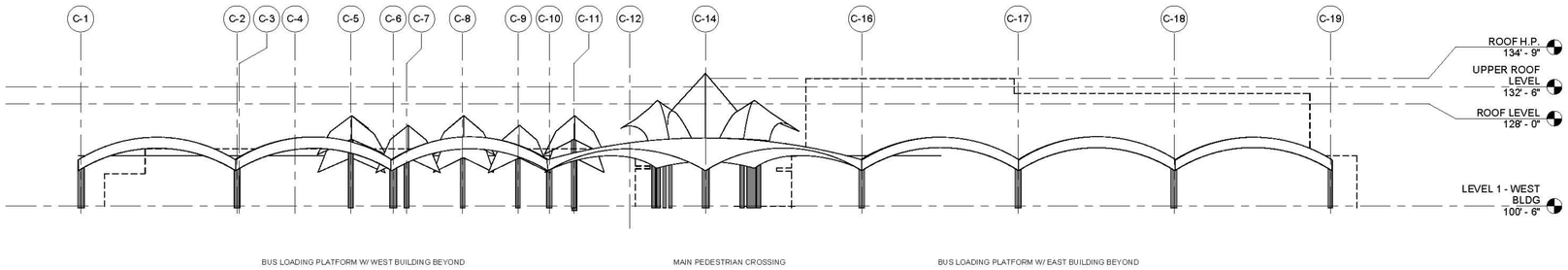
1 OVERALL NORTH ELEVATION CANOPY ONLY

1/16" = 1'-0"



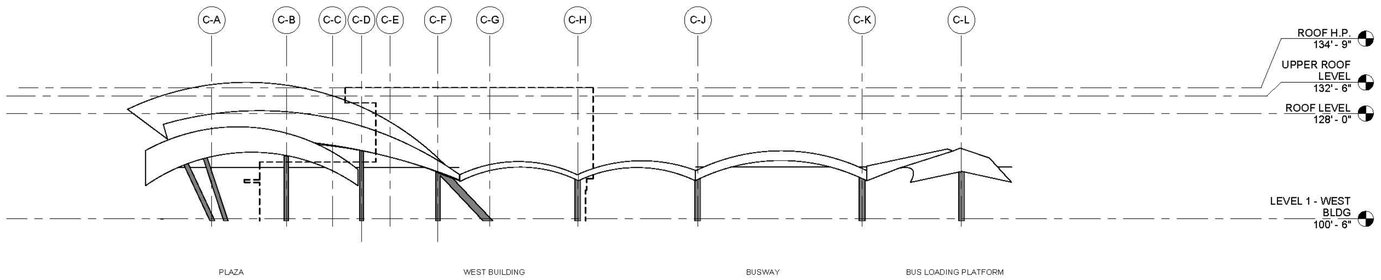
2 OVERALL EAST ELEVATION CANOPY ONLY

1/16" = 1'-0"



3 OVERALL SOUTH ELEVATION CANOPY ONLY

1/16" = 1'-0"



4 OVERALL WEST ELEVATION CANOPY ONLY

1/16" = 1'-0"

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PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/16" = 1'-0"

CANOPY ONLY ELEVATIONS

A-220

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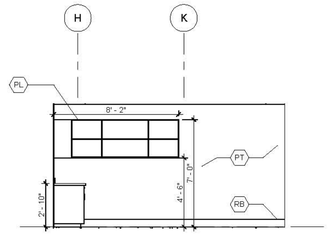
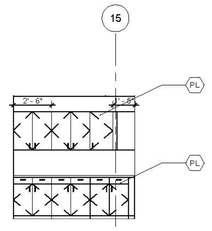
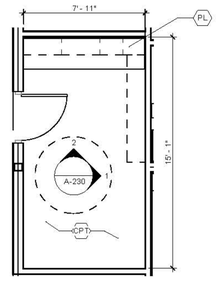
Date: 09/26/2012 8:17:12 AM



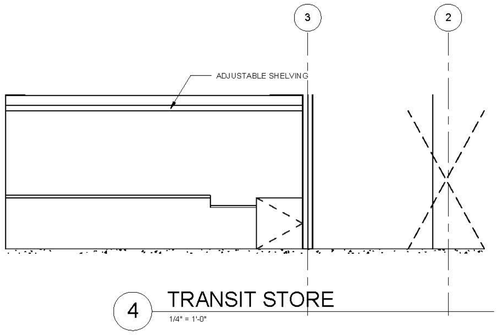
1 COPY ROOM
1/4" = 1'-0"



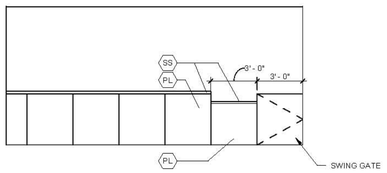
2 COPY ROOM
1/4" = 1'-0"



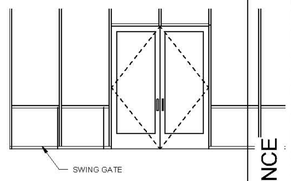
3 COPY ROOM ENLARGED PLAN
1/4" = 1'-0"



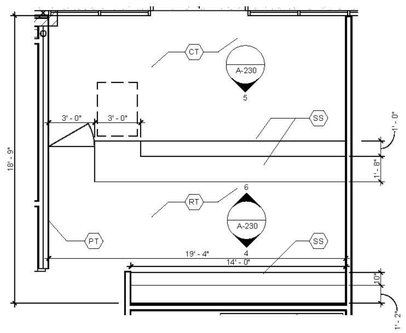
4 TRANSIT STORE
1/4" = 1'-0"



5 TRANSIT STORE
1/4" = 1'-0"



6 TRANSIT STORE
1/4" = 1'-0"



7 TRANSIT STORE 105 ENLARGED PLAN
1/4" = 1'-0"

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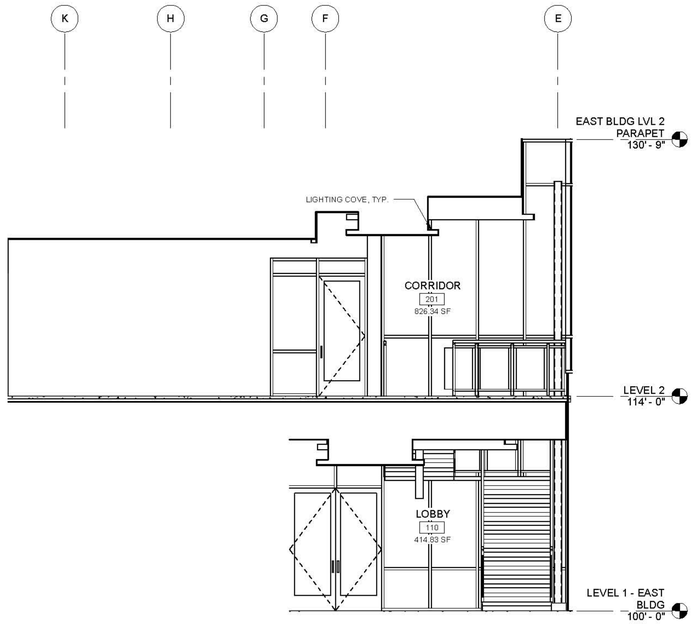
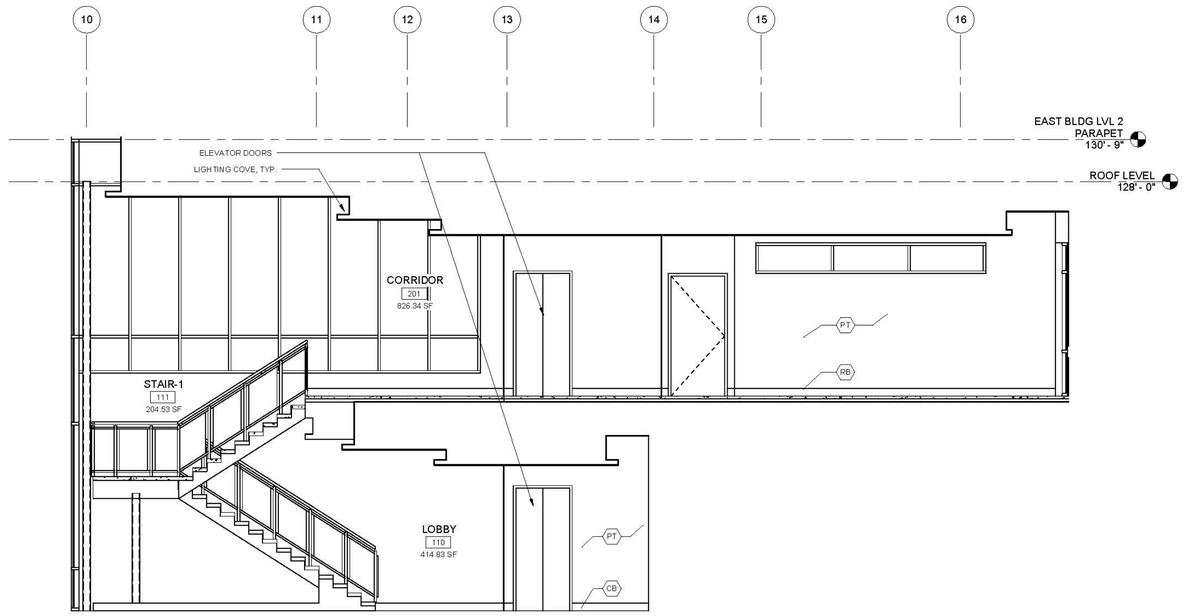
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/4" = 1'-0"

BUILDING INTERIOR ELEVATIONS

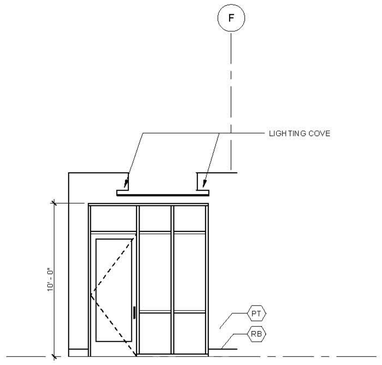
A-230



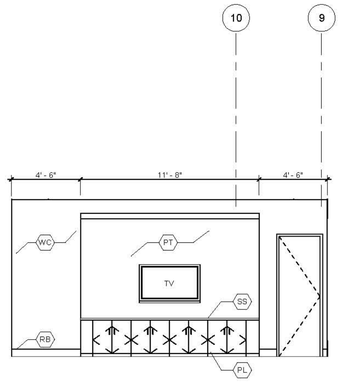
1 LOBBY
1/4" = 1'-0"



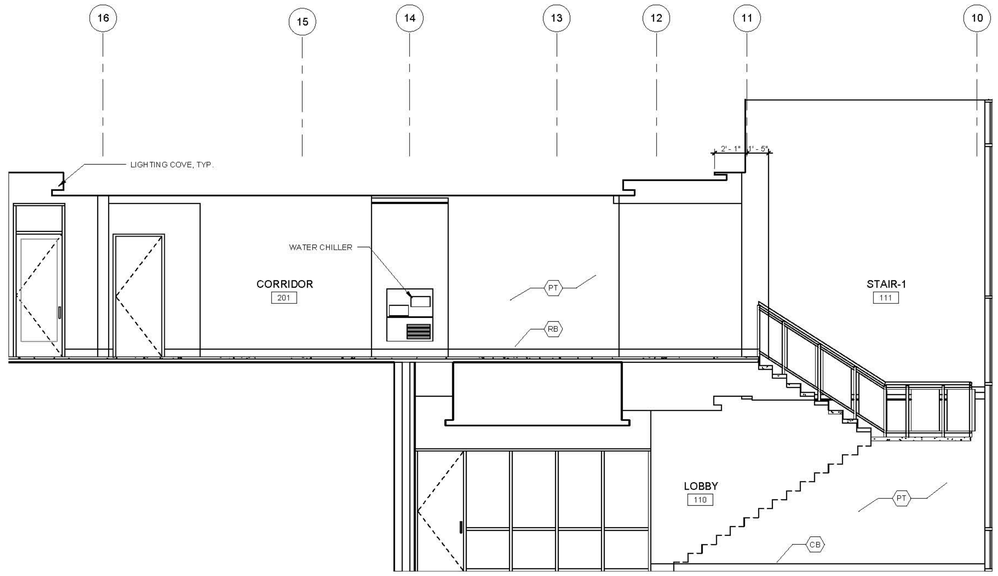
2 LOBBY / CORRIDOR
1/4" = 1'-0"



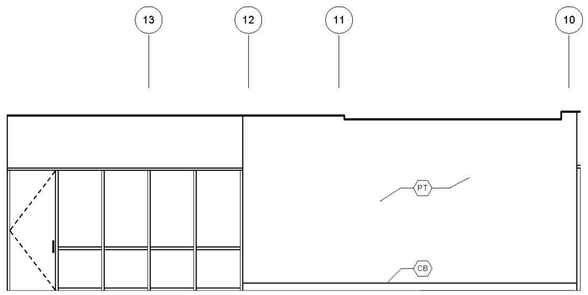
3 CORRIDOR
1/4" = 1'-0"



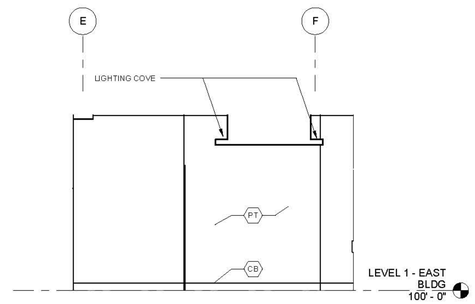
4 CONFERENCE ROOM
1/4" = 1'-0"



5 LOBBY / CORRIDOR
1/4" = 1'-0"



6 CORRIDOR
1/4" = 1'-0"



7 CORRIDOR
1/4" = 1'-0"

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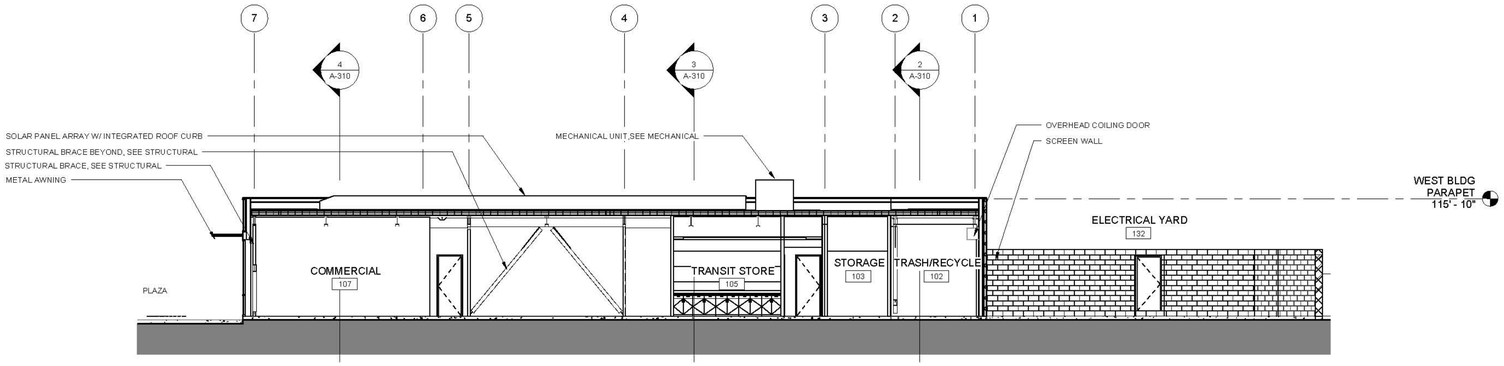
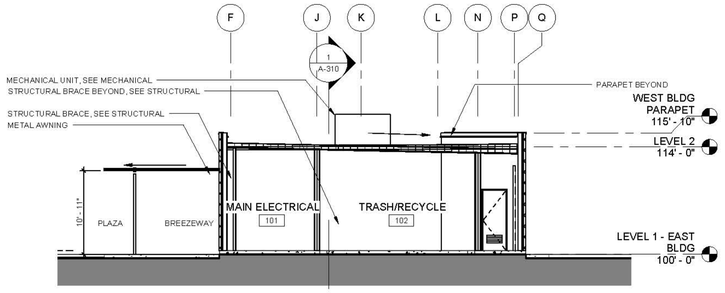
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/4" = 1'-0"

BUILDING INTERIOR
ELEVATIONS

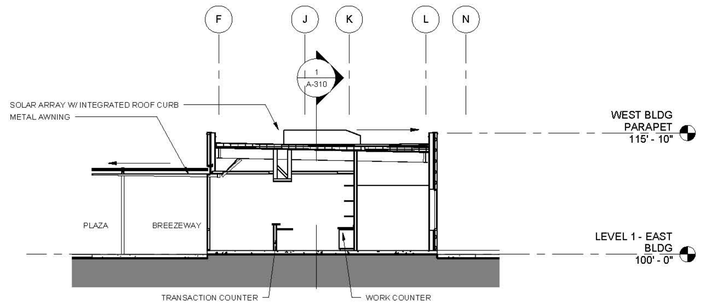
A-231



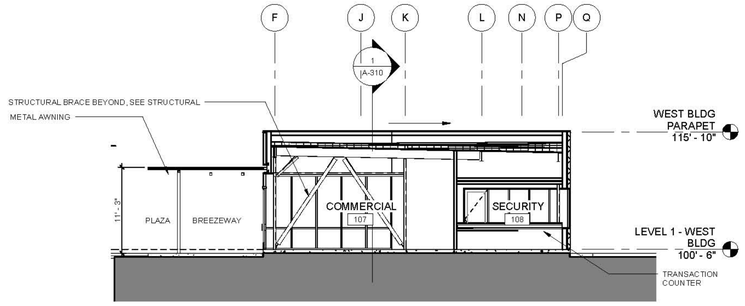
1 WEST BUILDING - LONGITUDINAL SECTION 1
1/8" = 1'-0"



2 WEST BUILDING - CROSS SECTION 1
1/8" = 1'-0"



3 WEST BUILDING - CROSS SECTION 2
1/8" = 1'-0"



4 WEST BUILDING - CROSS SECTION 3
1/8" = 1'-0"

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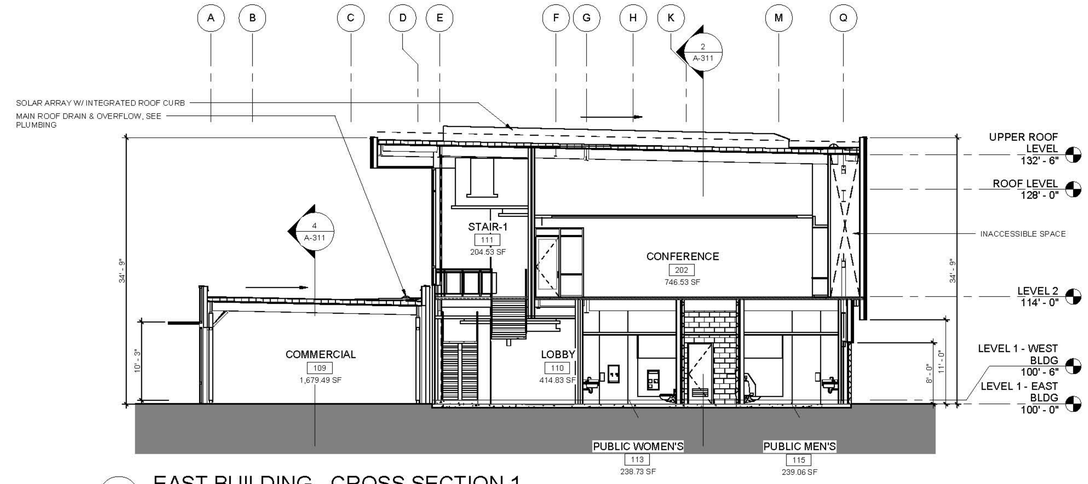
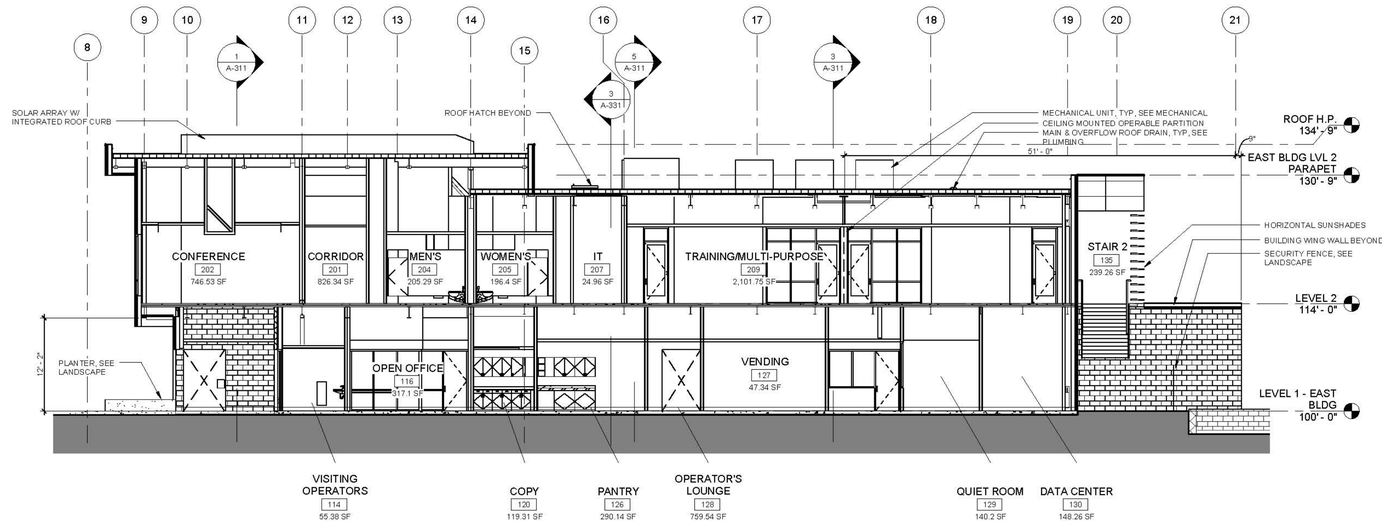
DATE: 09/26/2012
SCALE: 1/8" = 1'-0"

WEST BUILDING SECTIONS

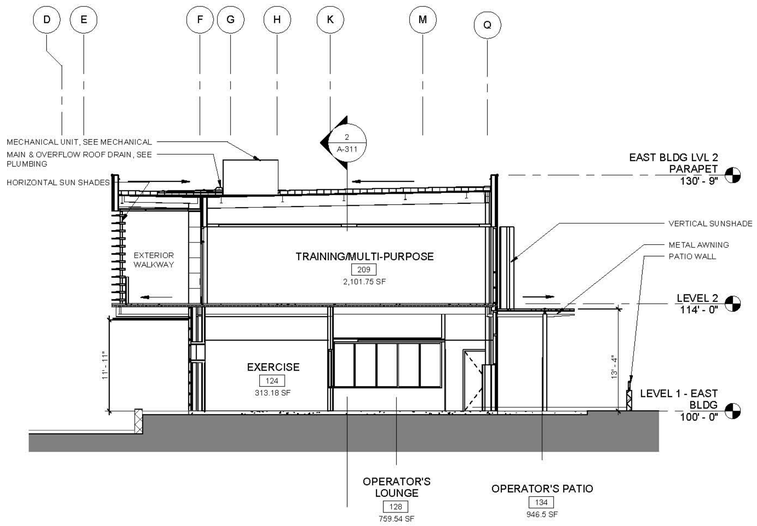
A-310



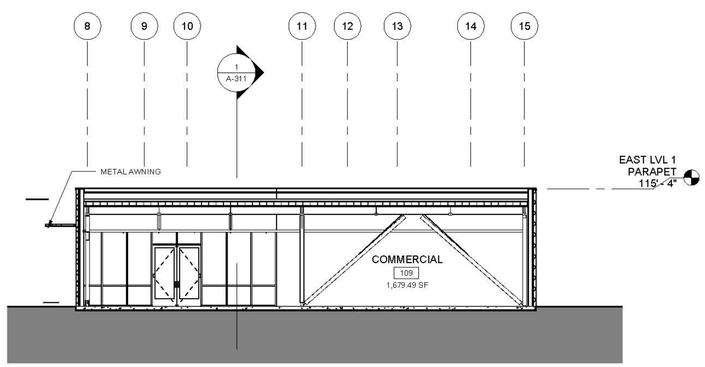
1 EAST BUILDING - CROSS SECTION 1
1/8" = 1'-0"



2 EAST BUILDING - LONGITUDINAL SECTION 1
1/8" = 1'-0"



3 EAST BUILDING - CROSS SECTION 3
1/8" = 1'-0"



4 EAST BUILDING - CROSS SECTION 4
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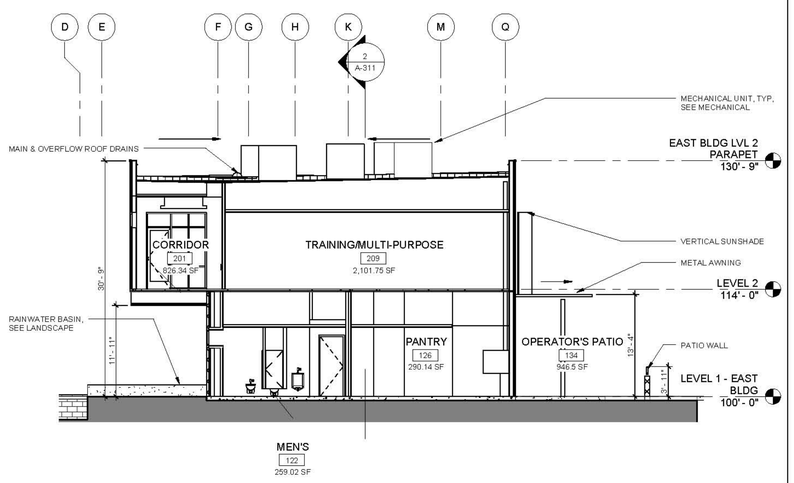

5 EAST BUILDING - CROSS SECTION 2
1/8" = 1'-0"

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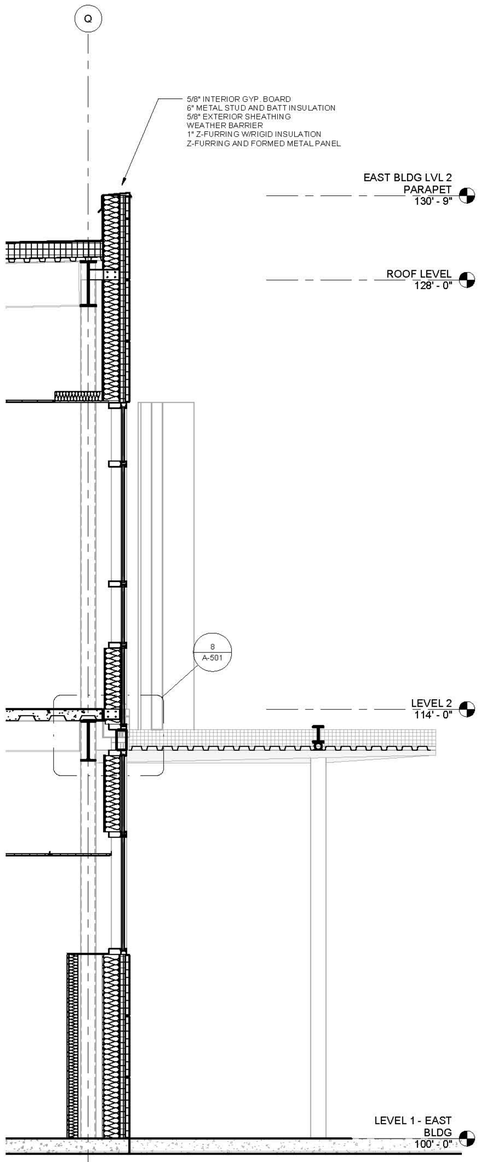
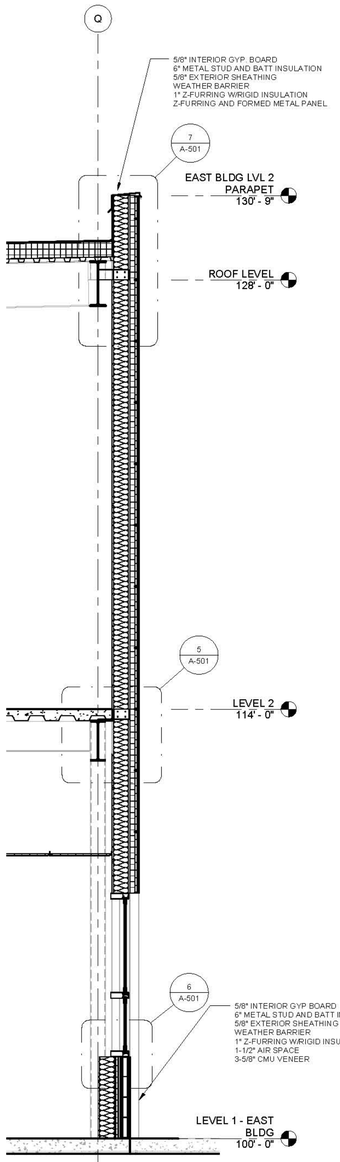
SCALE: 1/8" = 1'-0"

EAST BUILDING SECTIONS

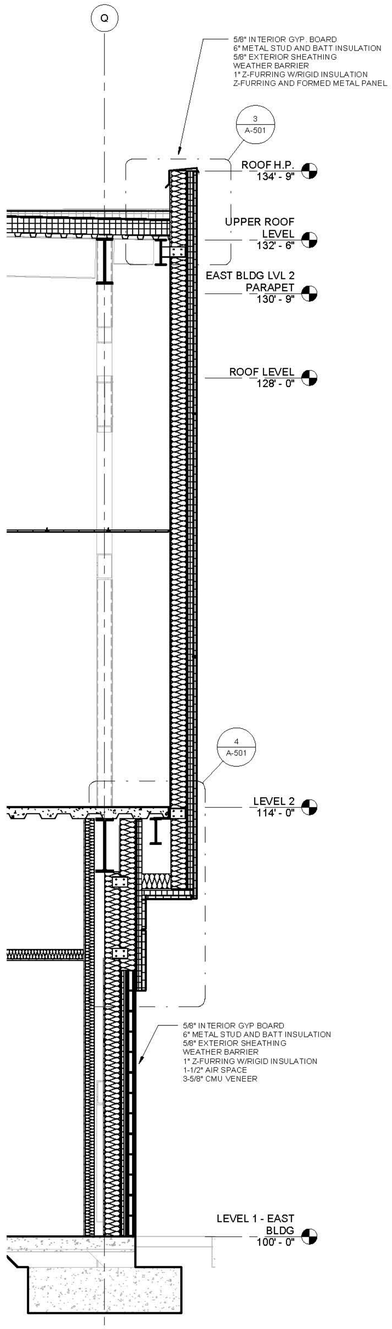
A-311



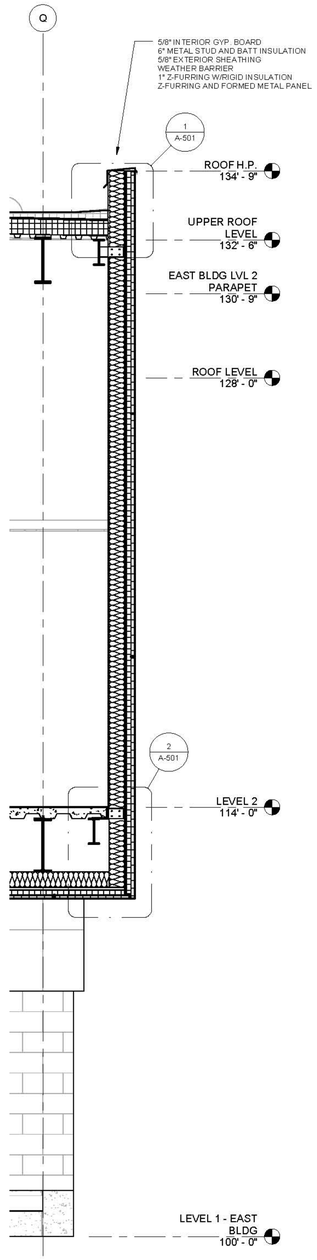
1 WALL SECTION
1/2" = 1'-0"



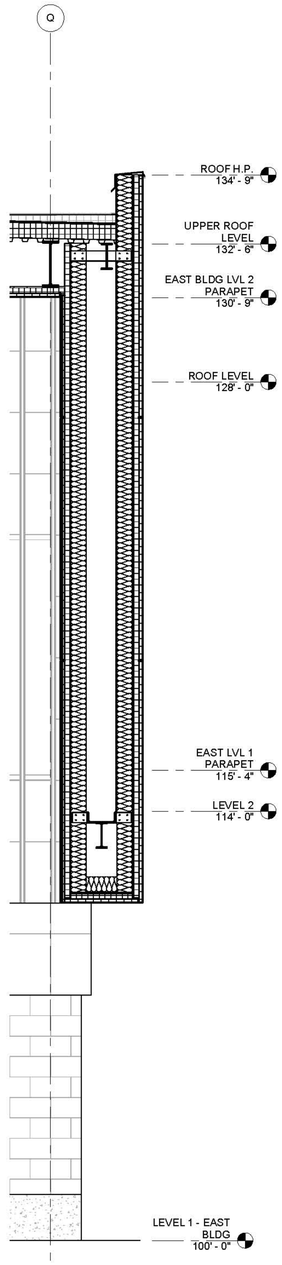
2 WALL SECTION
1/2" = 1'-0"



3 WALL SECTION
1/2" = 1'-0"



4 WALL SECTION
1/2" = 1'-0"



5 WALL SECTION
1/2" = 1'-0"

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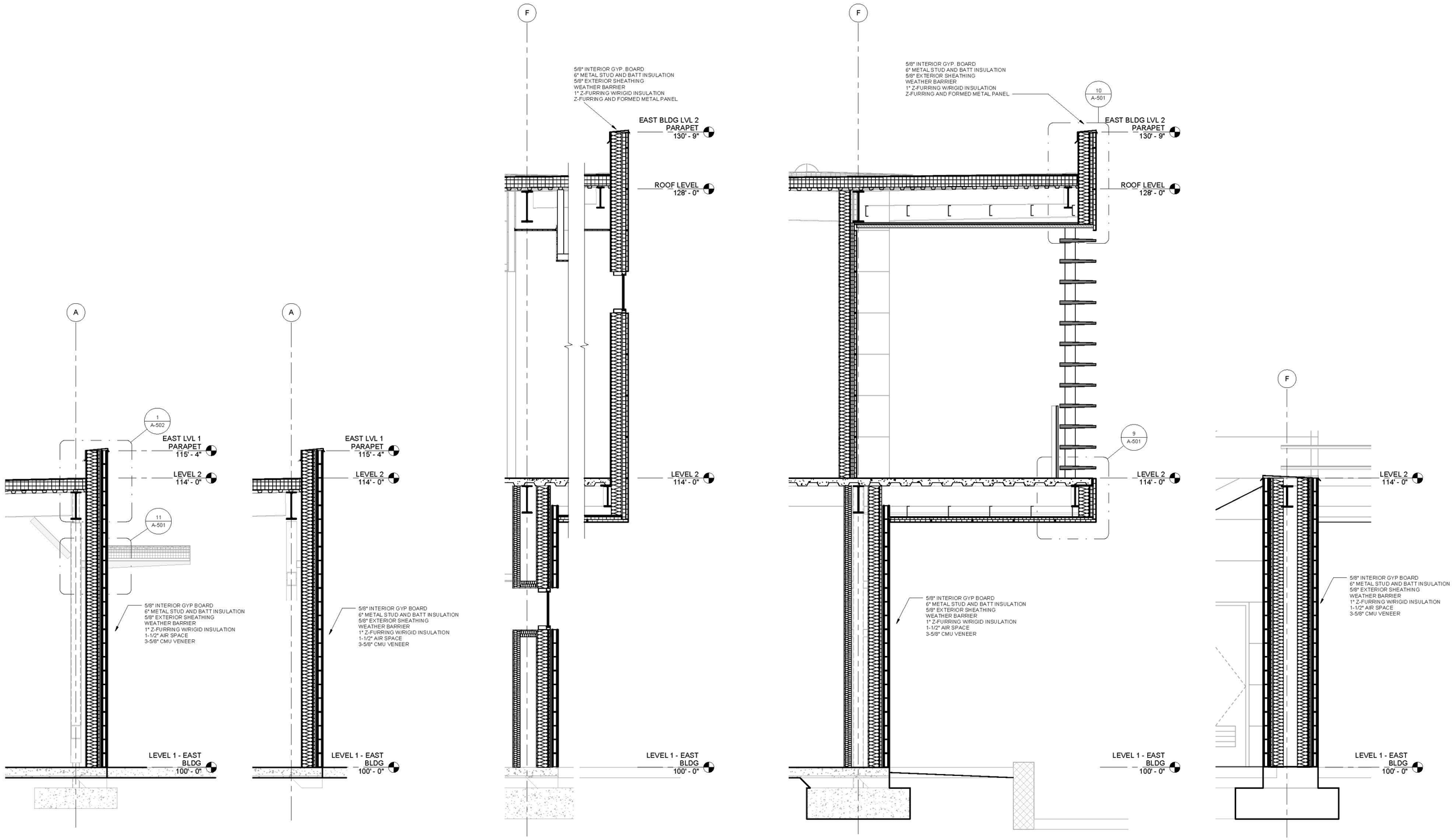
SCALE: 1/2" = 1'-0"

WALL SECTIONS

A-330



1 WALL SECTION
1/2" = 1'-0"

2 WALL SECTION
1/2" = 1'-0"

3 WALL SECTION
1/2" = 1'-0"

4 WALL SECTION
1/2" = 1'-0"

5 WALL SECTION
1/2" = 1'-0"

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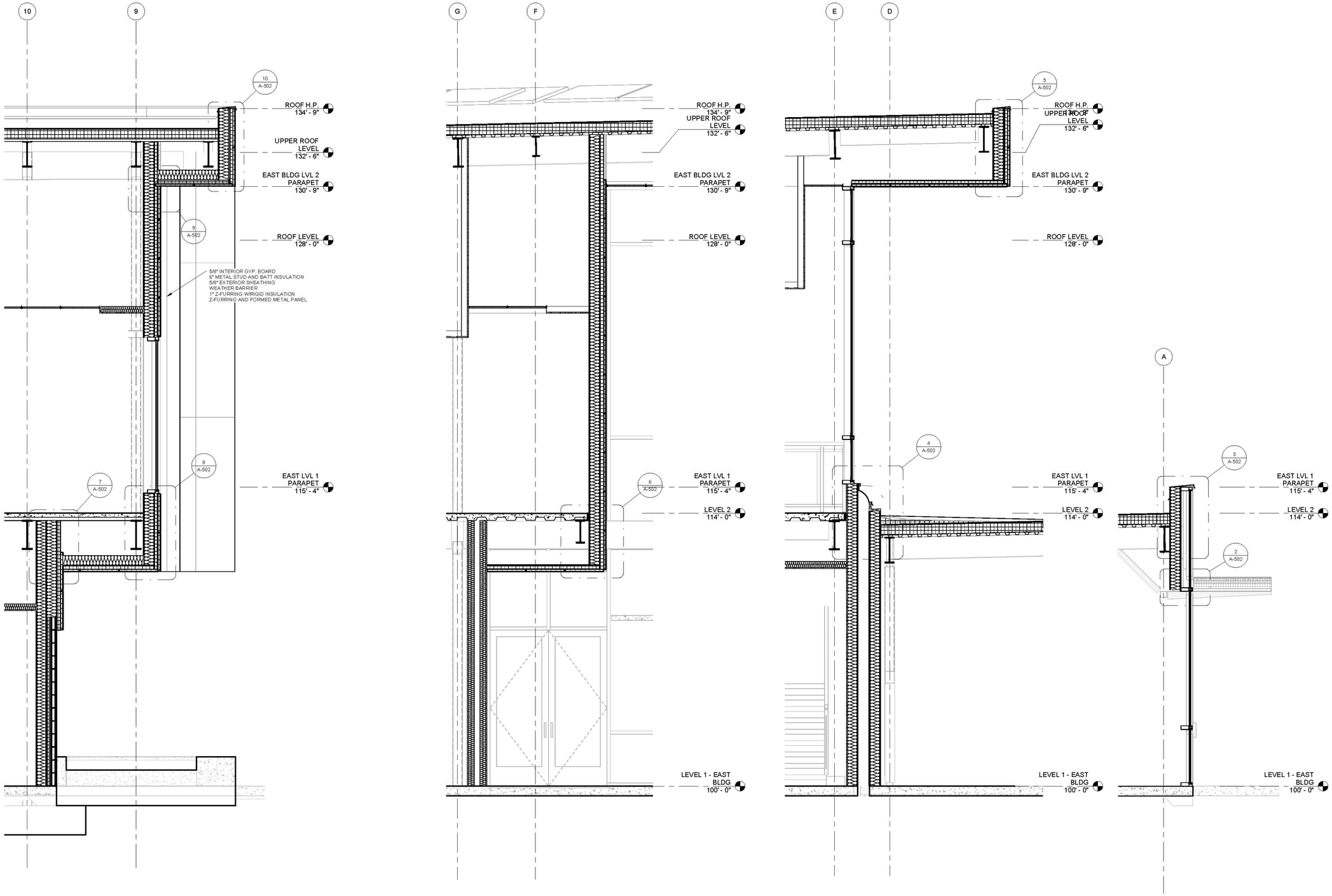
SCALE: 1/2" = 1'-0"

WALL SECTIONS

A-331



1 WALL SECTION
1/2" = 1'-0"

2 WALL SECTION
1/2" = 1'-0"

3 WALL SECTION
1/2" = 1'-0"

4 WALL SECTION
1/2" = 1'-0"

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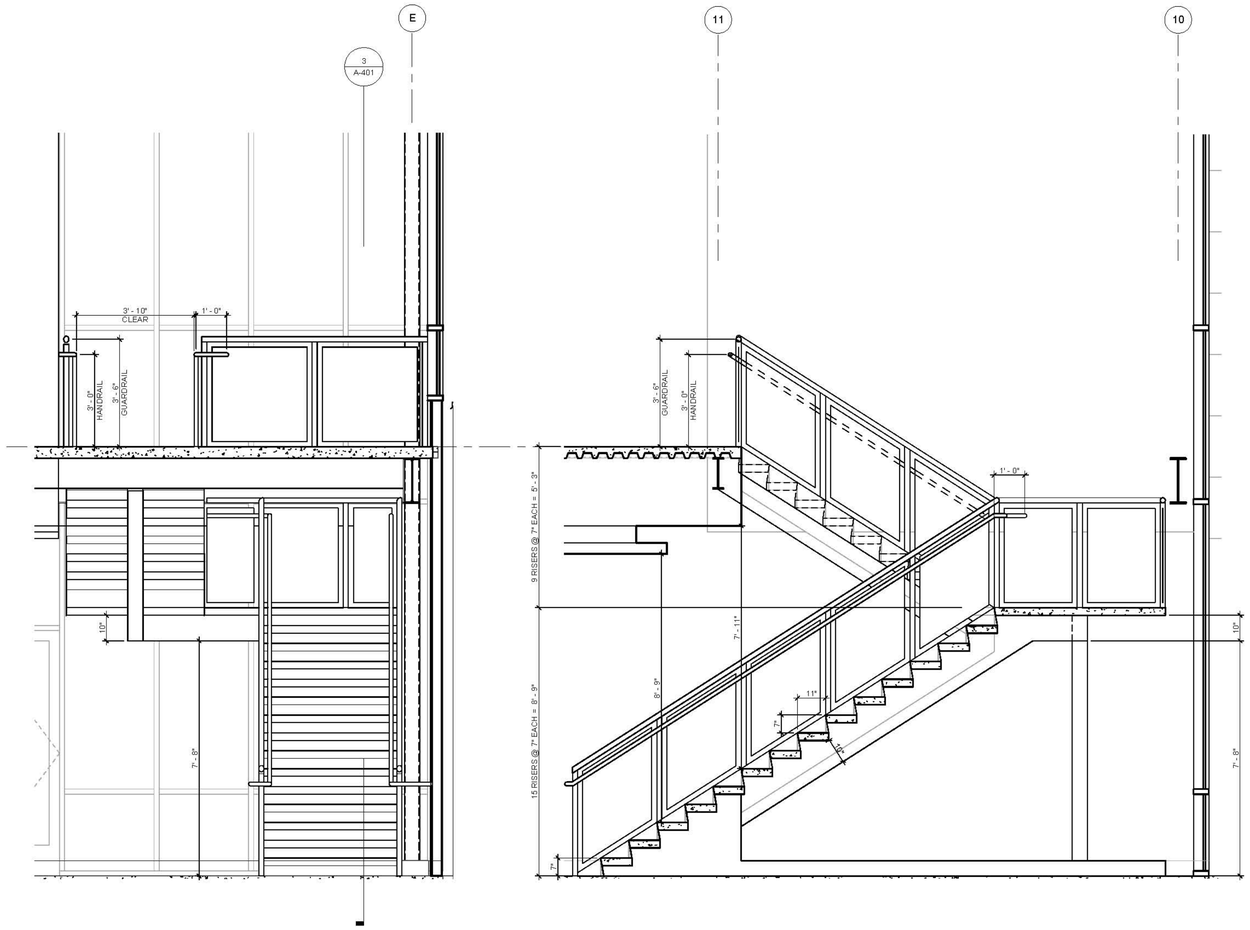
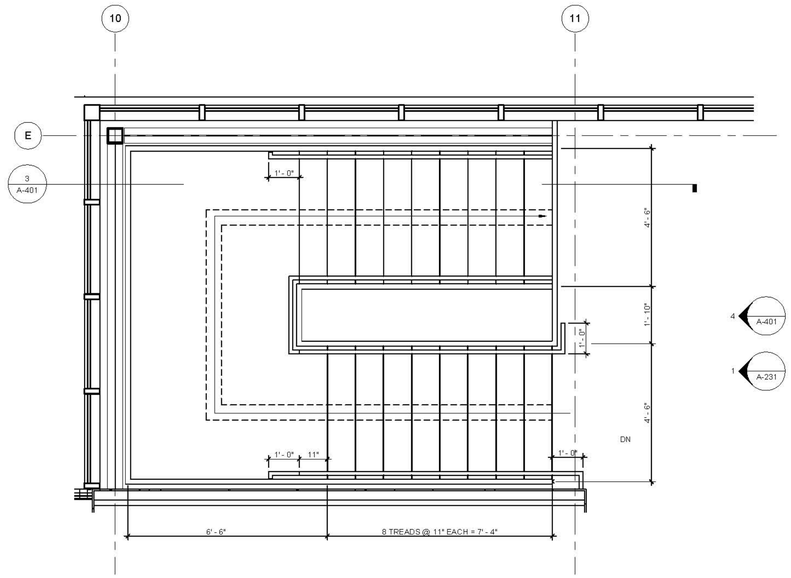
WALL SECTIONS

A-332

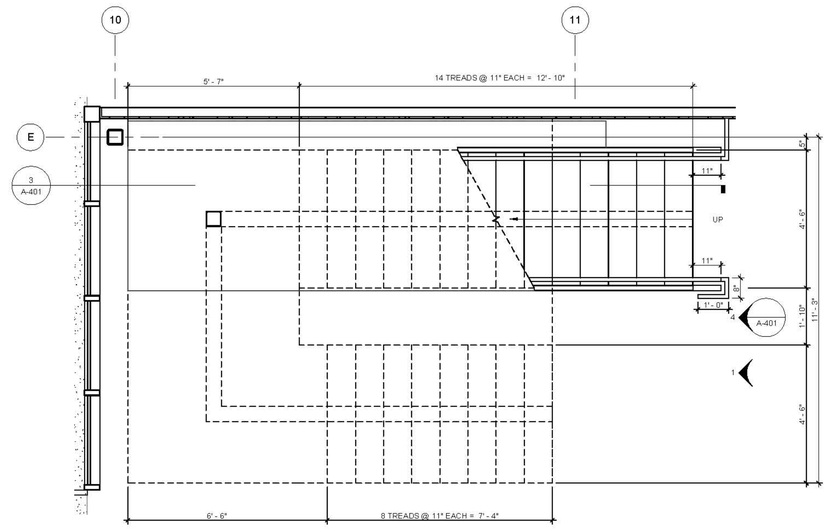


4 STAIR 1 ENLARGED ELEVATION
1/2" = 1'-0"

3 STAIR 1 ENLARGED SECTION
1/2" = 1'-0"



2 STAIR 1 ENLARGED LEVEL 2 PLAN
1/2" = 1'-0"



5 STAIR 1 ENLARGED LEVEL 1 PLAN
1/2" = 1'-0"

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No	REVISION/SUBMISSION	DATE

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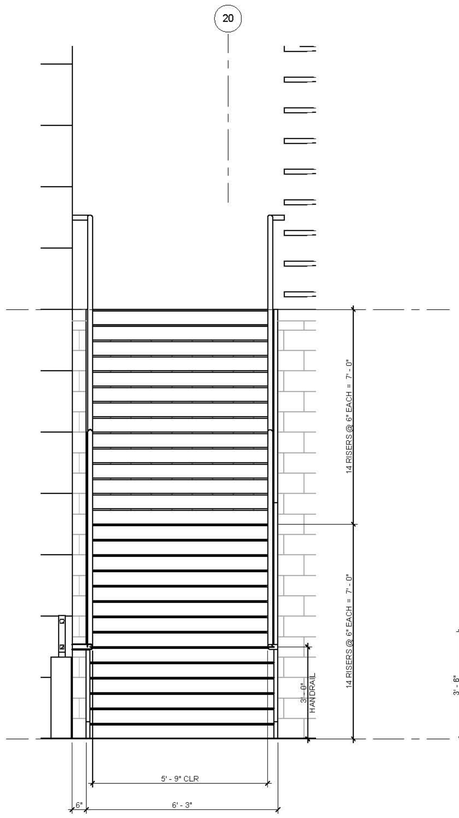
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/2" = 1'-0"

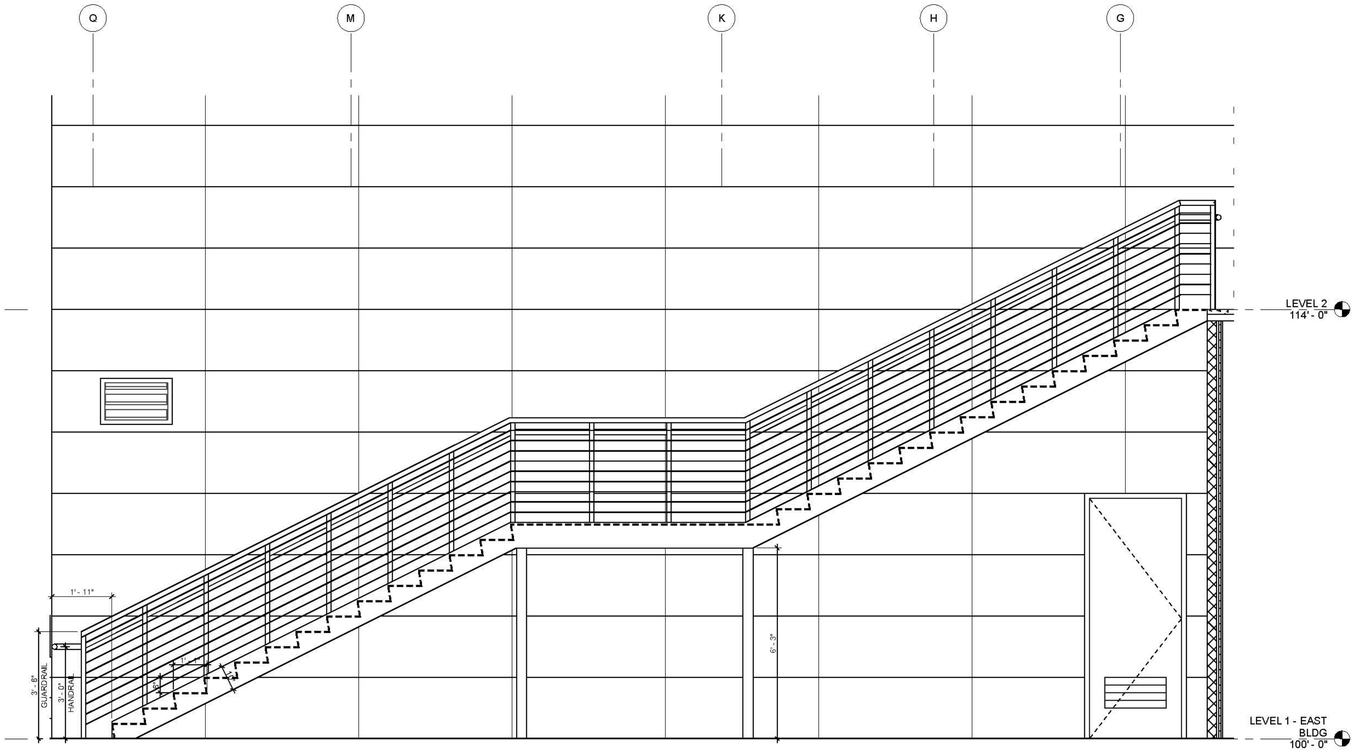
ENLARGED STAIR 1 PLAN, SECTION, ELEVATIONS

A-401

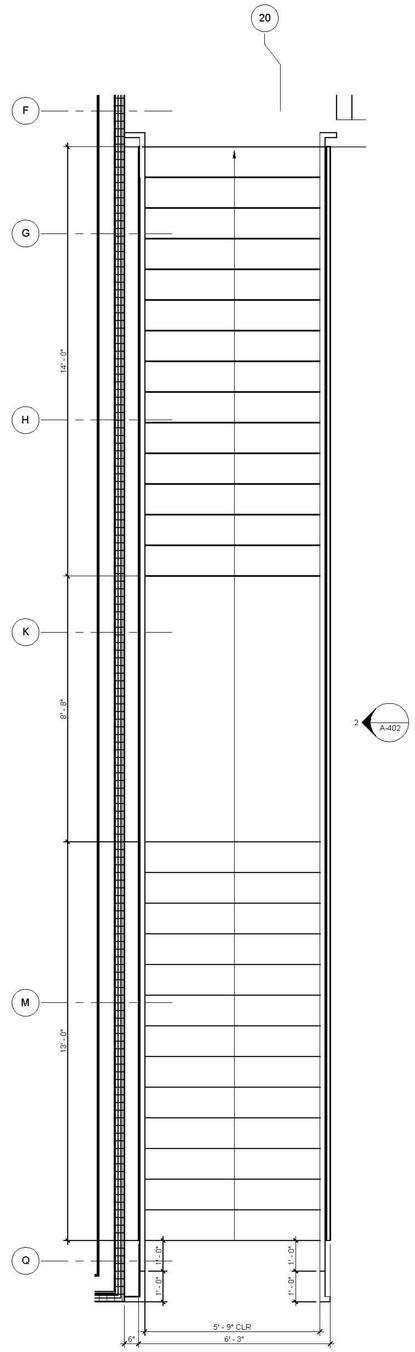
C:\Users\dbb\Dropbox\Revit\Torrance
Transit Park & Ride_dbb.rvt
Plot Date: 09/26/2012 2:11:14 PM
Plot By: dbb
Revit Build: 20120918-1000-x64
DWG/DXF: 2010 Plot By: dbbaker



3 STAIR 2 ENLARGED ELEVATION
1/2" = 1'-0"



2 STAIR 2 ENGLARGED ELEVATION
1/2" = 1'-0"



1 STAIR 2 ENLARGED PLAN
1/2" = 1'-0"

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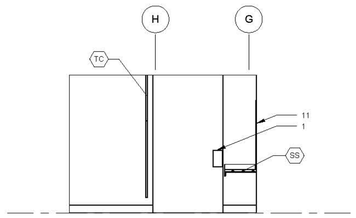
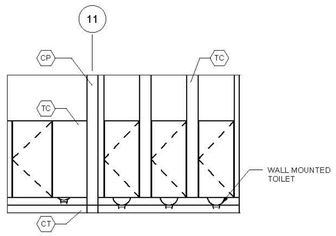
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/2" = 1'-0"

ENLARGED STAIR 2
PLAN, SECTION &
ELEVATIONS

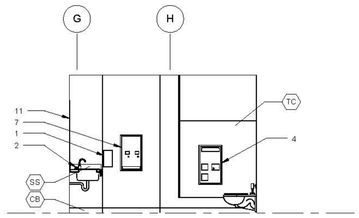
A-402



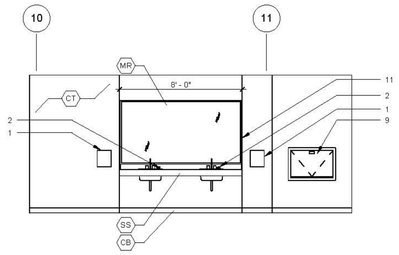
1 WOMEN'S TOILET ROOM 113
1/4" = 1'-0"



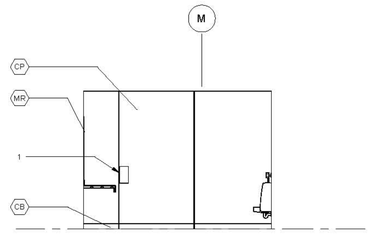
2 WOMEN'S TOILET ROOM 113
1/4" = 1'-0"



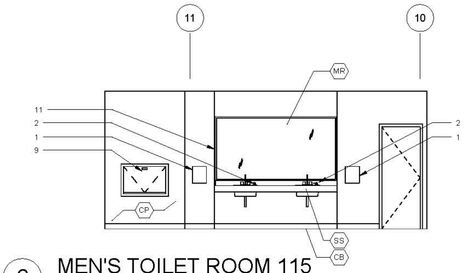
3 WOMEN'S TOILET ROOM 113
1/4" = 1'-0"



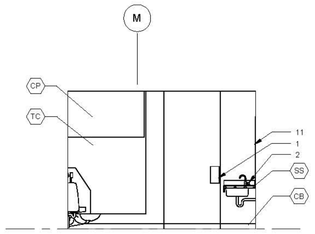
4 WOMEN'S TOILET ROOM 113
1/4" = 1'-0"



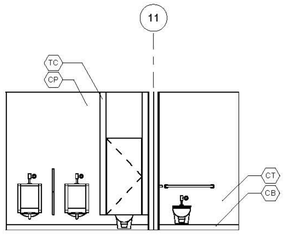
5 MEN'S TOILET ROOM 115
1/4" = 1'-0"



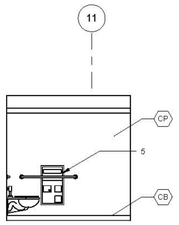
6 MEN'S TOILET ROOM 115
1/4" = 1'-0"



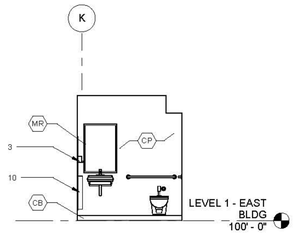
7 MEN'S TOILET ROOM 115
1/4" = 1'-0"



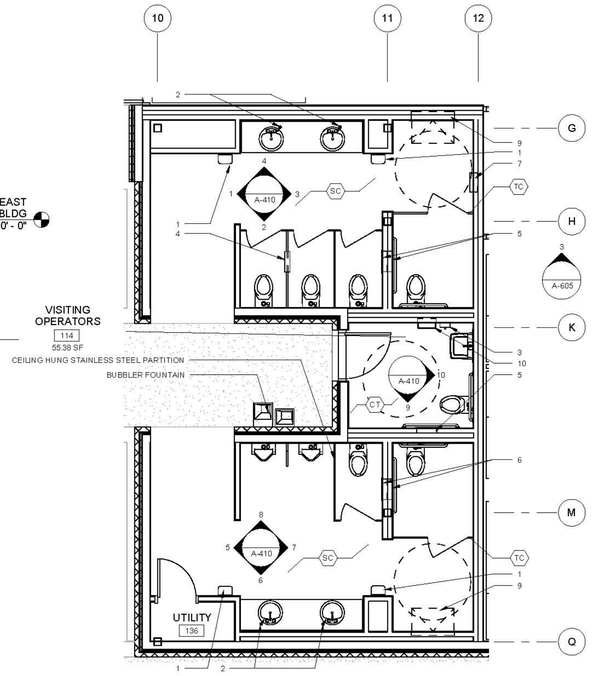
8 MEN'S TOILET ROOM 115
1/4" = 1'-0"



9 TOILET ROOM 114
1/4" = 1'-0"



10 TOILET ROOM 114
1/4" = 1'-0"



11 TOILET ROOMS 113, 114, 115
1/4" = 1'-0"

1 HAND DRYERS
2 SOAP DISPENSER (IN COUNTER)
3 SOAP DISPENSER (SURFACE MOUNTED)
4 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL/SEAT COVER DISPENSER COMBINATION (PARITITION MOUNTED)
5 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL (RECESSED)
6 SEAT COVER DISPENSER/TOILET PAPER DISPENSER (RECESSED)
7 SANITARY NAPKIN DISPENSER (RECESSED)
8 SEAT COVER DISPENSER (RECESSED)
9 CHANGING TABLE (RECESSED)
10 PAPER TOWEL DISPENSER & WASTE DISPOSAL
11 MIRROR
12 TOILET PAPER DISPENSER (SURFACE MOUNTED)
13 TOILET PAPER DISPENSER (RECESSED)
14 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL (RECESSED)

TOILET ROOM ACCESORIES
1/4" = 1'-0"

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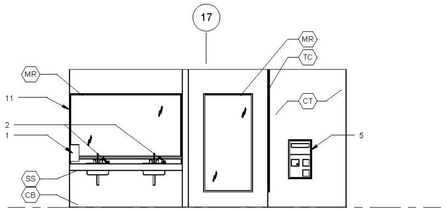
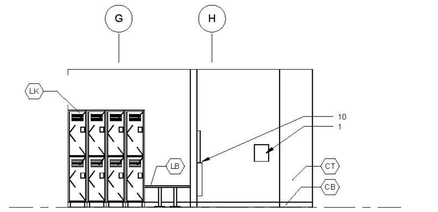
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/4" = 1'-0"

ENLARGED RESTROOMS

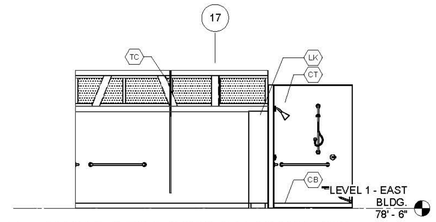
A-410



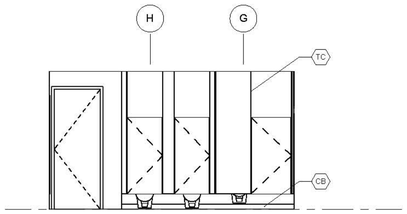
1 WOMEN'S LOCKER ROOM 123
1/4" = 1'-0"



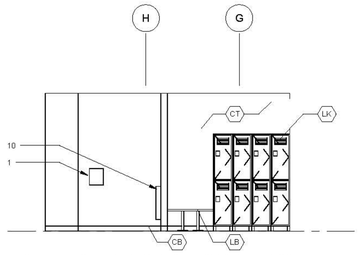
2 WOMEN'S LOCKER ROOM 123
1/4" = 1'-0"



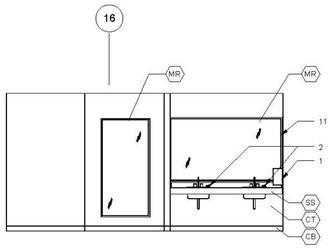
3 WOMEN'S LOCKER ROOM 123
1/4" = 1'-0"



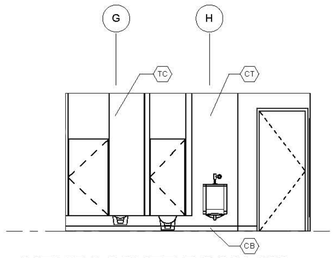
4 WOMEN'S LOCKER ROOM 123
1/4" = 1'-0"



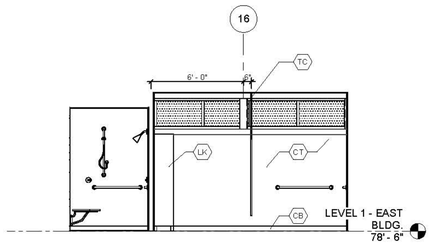
5 MEN'S LOCKER ROOM 122
1/4" = 1'-0"



6 MEN'S LOCKER ROOM 122
1/4" = 1'-0"



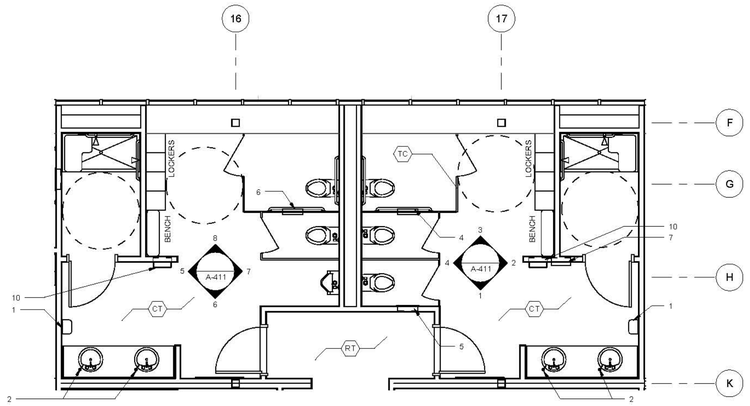
7 MEN'S LOCKER ROOM 122
1/4" = 1'-0"



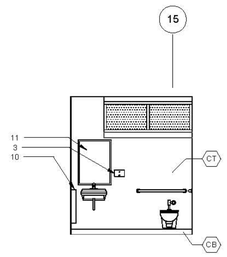
8 MEN'S LOCKER ROOM 122
1/4" = 1'-0"

1 HAND DRYERS
2 SOAP DISPENSER (IN COUNTER)
3 SOAP DISPENSER (SURFACE MOUNTED)
4 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL/SEAT COVER DISPENSER COMBINATION (PARITITION MOUNTED)
5 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL (RECESSED)
6 SEAT COVER DISPENSER/TOILET PAPER DISPENSER (RECESSED)
7 SANITARY NAPKIN DISPENSER (RECESSED)
8 SEAT COVER DISPENSER (RECESSED)
9 CHANGING TABLE (RECESSED)
10 PAPER TOWEL DISPENSER & WASTE DISPOSAL
11 MIRROR
12 TOILET PAPER DISPENSER (SURFACE MOUNTED)
13 TOILET PAPER DISPENSER (RECESSED)
14 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL (RECESSED)

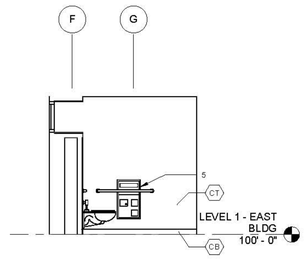
TOILET ROOM ACCESORIES
1/4" = 1'-0"



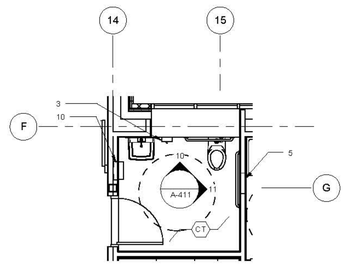
9 OPERATOR TOILET ROOM 122, 123
1/4" = 1'-0"



10 UNISEX TOILET ROOM 119
1/4" = 1'-0"



11 UNISEX TOILET ROOM 119
1/4" = 1'-0"



12 UNISEX TOILET ROOM 119
1/4" = 1'-0"

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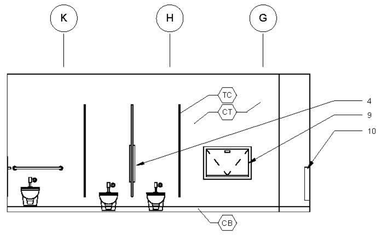
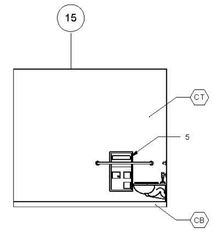
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/4" = 1'-0"

ENLARGED
RESTROOMS

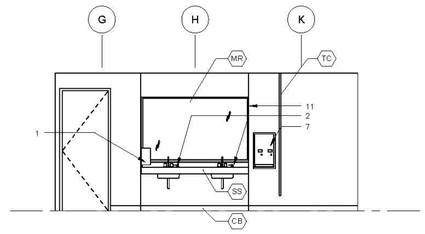
A-411



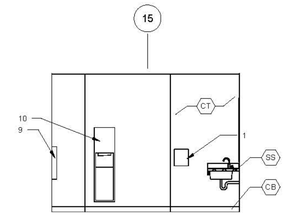
1 WOMEN'S TOILET ROOM 205
1/4" = 1'-0"



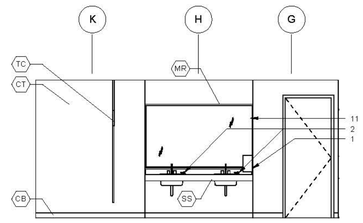
2 WOMEN'S TOILET ROOM 205
1/4" = 1'-0"



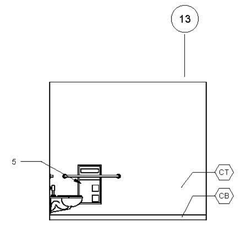
3 WOMEN'S TOILET ROOM 205
1/4" = 1'-0"



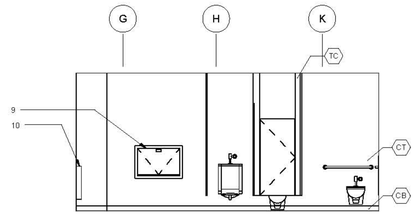
4 WOMEN'S TOILET ROOM 205
1/4" = 1'-0"



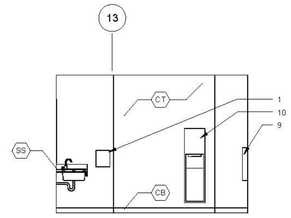
5 MEN'S TOILET ROOM 204
1/4" = 1'-0"



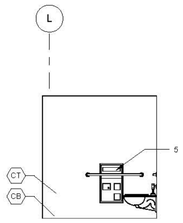
6 MEN'S TOILET ROOM 204
1/4" = 1'-0"



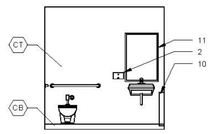
7 MEN'S TOILET ROOM 204
1/4" = 1'-0"



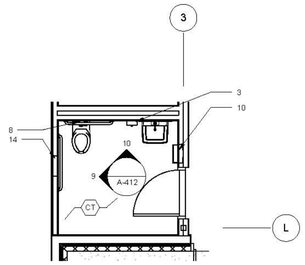
8 MEN'S TOILET ROOM 204
1/4" = 1'-0"



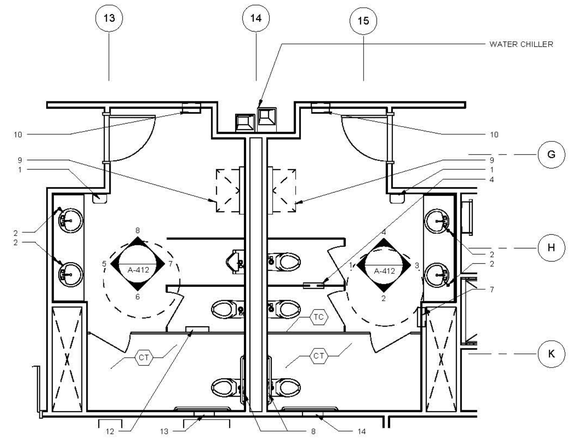
9 UNISEX TOILET ROOM 104
1/4" = 1'-0"



10 UNISEX TOILET ROOM 104
1/4" = 1'-0"



11 UNISEX TOILET ROOM 104
1/4" = 1'-0"



12 TOILET ROOMS 204 & 205
1/4" = 1'-0"

1 HAND DRYERS
2 SOAP DISPENSER (IN COUNTER)
3 SOAP DISPENSER (SURFACE MOUNTED)
4 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL/SEAT COVER DISPENSER COMBINATION (PARITITION MOUNTED)
5 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL (RECESSED)
6 SEAT COVER DISPENSER/TOILET PAPER DISPENSER (RECESSED)
7 SANITARY NAPKIN DISPENSER (RECESSED)
8 SEAT COVER DISPENSER (RECESSED)
9 CHANGING TABLE (RECESSED)
10 PAPER TOWEL DISPENSER & WASTE DISPOSAL
11 MIRROR
12 TOILET PAPER DISPENSER (SURFACE MOUNTED)
13 TOILET PAPER DISPENSER (RECESSED)
14 TOILET PAPER DISPENSER/SANITARY NAPKIN DISPOSAL (RECESSED)

TOILET ROOM ACCESORIES
1/4" = 1'-0"

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REGIONAL TERMINAL

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TORRANCE, CA 90503
30% CONSTRUCTION DRAWINGS

No	REVISION/SUBMISSION	DATE

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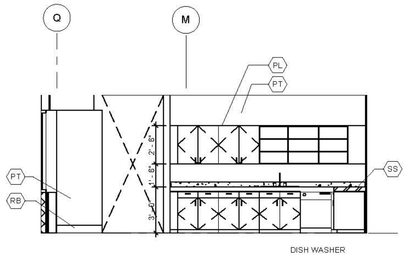
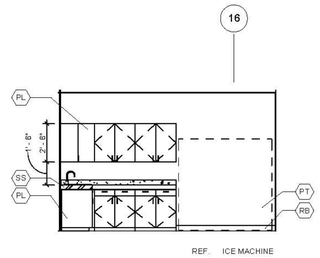
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/4" = 1'-0"

ENLARGED RESTROOMS

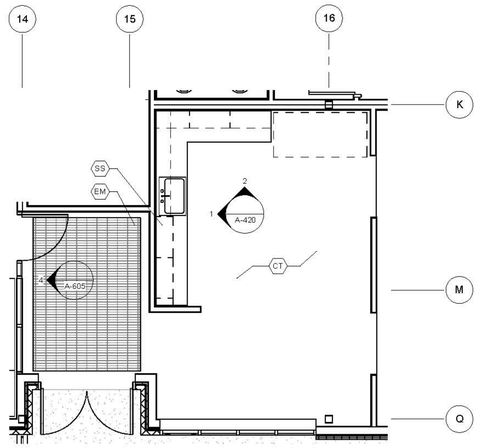
A-412



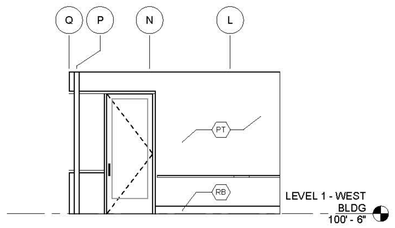
1 PANTRY
1/4" = 1'-0"



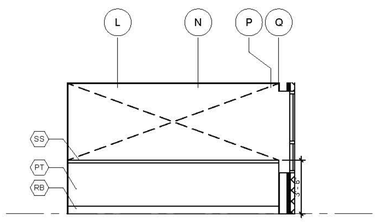
2 PANTRY
1/4" = 1'-0"



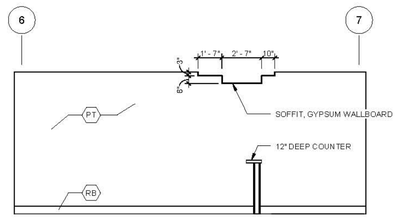
3 VESTIBULE 121 & PANTRY 126
1/4" = 1'-0"



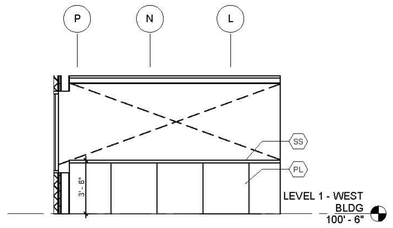
4 SECURITY OFFICE
1/4" = 1'-0"



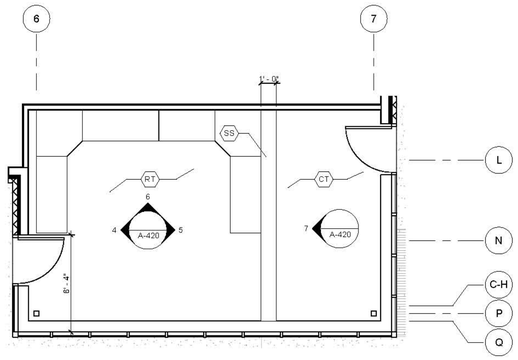
5 SECURITY OFFICE
1/4" = 1'-0"



6 SECURITY OFFICE
1/4" = 1'-0"



7 SECURITY OFFICE
1/4" = 1'-0"



8 SECURITY OFFICE 108 ENLARGED PLAN
1/4" = 1'-0"

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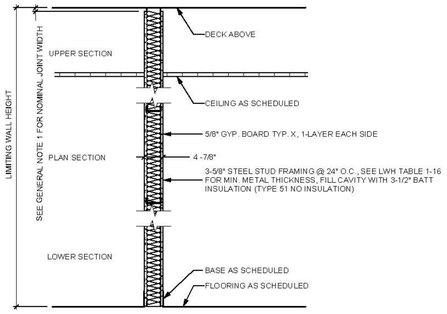
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/4" = 1'-0"

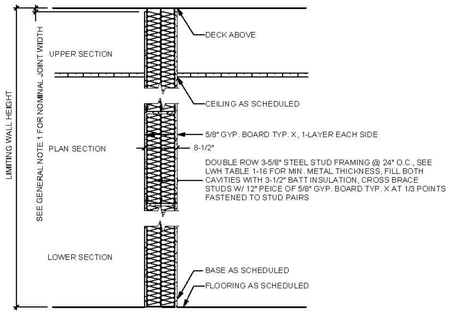
ENLARGED
VESTIBULE, PANTRY, &
SECURITY OFFICE

A-420



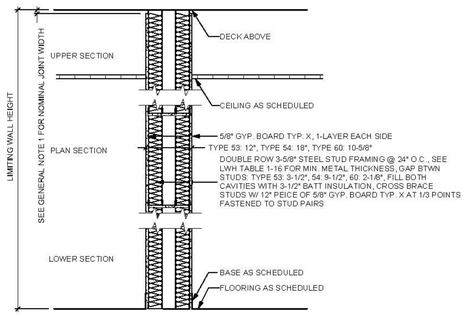
FIRE RATING:	NA
UL DESIGN:	NA
STC RATING:	NA
SOUND TEST NO.:	NA

PARTITION TYPE 50/ 51



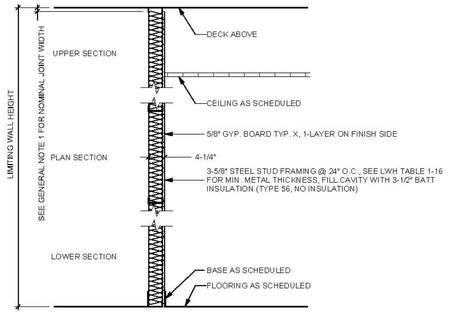
FIRE RATING:	NA
UL DESIGN:	NA
STC RATING:	NA
SOUND TEST NO.:	NA

PARTITION TYPE 52



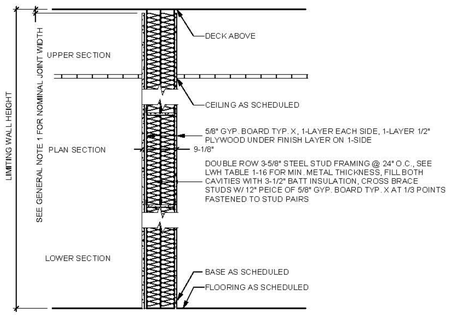
FIRE RATING:	NA
UL DESIGN:	NA
STC RATING:	NA
SOUND TEST NO.:	NA

PARTITION TYPE 53/ 54/ 60



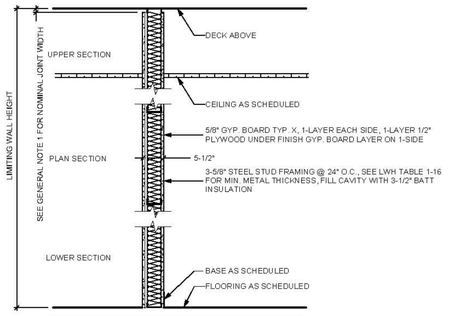
FIRE RATING:	NA
UL DESIGN:	NA
STC RATING:	NA
SOUND TEST NO.:	NA

PARTITION TYPE 55/ 56



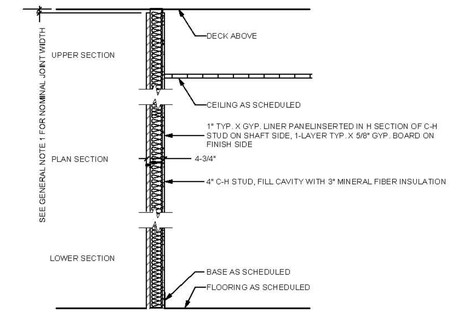
FIRE RATING:	NA
UL DESIGN:	NA
STC RATING:	NA
SOUND TEST NO.:	NA

PARTITION TYPE 57



FIRE RATING:	NA
UL DESIGN:	NA
STC RATING:	NA
SOUND TEST NO.:	NA

PARTITION TYPE 58



FIRE RATING:	NA
UL DESIGN:	U 415 - SYSTEM C
STC RATING:	50 - 54
SOUND TEST NO.:	SA 910913

PARTITION TYPE 59

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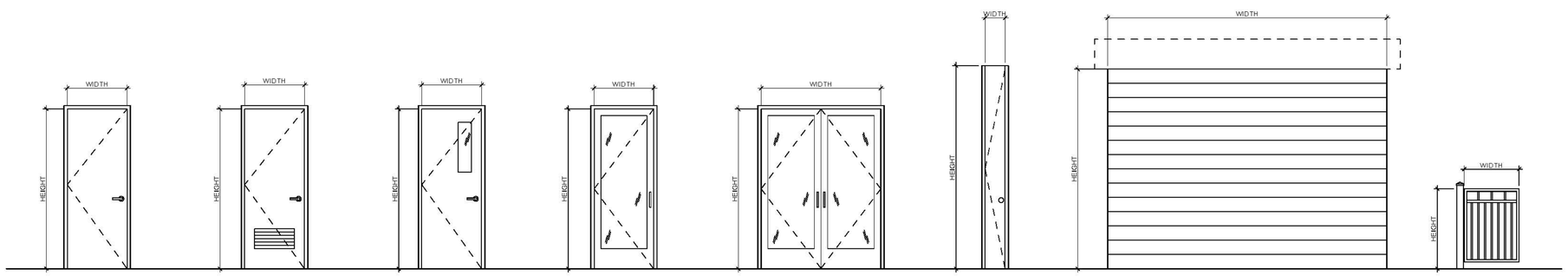
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 3/4" = 1'-0"

PARTITION TYPES

A-601

DOOR AND FRAME SCHEDULE

NO	HW	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR TYPE	DOOR MATL	DOOR FINISH	DOOR GLASS	FRAME TYPE	FRAME MATL	FRAME FINISH	FIRE RATING	NOTES
101		3' - 0"	7' - 10"	1 3/4"	B	HM	PTD	-	2" HM FRAME	HM	PTD		STOREROOM
102		14' - 0"	10' - 0"	2"	G	STL	PTD	-	OVERHEAD	STL	PTD		MOTORIZED
103		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	STN		STOREROOM
104		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	STN		PRIVACY
105A		6' - 4"	8' - 0"	1 3/4"	E	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ENTRANCE
105B		3' - 0"	7' - 10"	1 3/4"	A	HM	PTD	-	2" HM FRAME	HM	PTD		ACCESS CONTROL
106		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		OFFICE
107A		6' - 4"	8' - 0"	1 3/4"	E	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ENTRANCE
107B		6' - 4"	8' - 0"	1 3/4"	E	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ENTRANCE
107C		3' - 0"	7' - 10"	1 3/4"	A	HM	PTD	-	2" HM FRAME	HM	PTD		ENTRANCE
108A		3' - 0"	7' - 10"	1 3/4"	D	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ENTRANCE
108B		3' - 0"	7' - 10"	1 3/4"	D	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ENTRANCE
109A		6' - 4"	8' - 0"	1 3/4"	E	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ENTRANCE
109B		6' - 2"	8' - 0"	1 3/4"	E	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ENTRANCE
110A		6' - 0"	8' - 0"	1 3/4"	E	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ENTRANCE
114		3' - 0"	7' - 10"	1 3/4"	B	HM	PTD	-	2" HM FRAME	HM	PTD		ACCESS CONTROL
116A		3' - 0"	7' - 10"	1 3/4"	D	WD	STN	SG	2" HM FRAME	HM	PTD		ENTRANCE
116B		3' - 0"	7' - 10"	1 3/4"	D	WD	STN	SG	2" HM FRAME	HM	PTD		ENTRANCE
117		3' - 0"	7' - 10"	1 3/4"	D	WD	STN	SG	2" HM FRAME	HM	PTD		PASSAGE
119		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PRIVACY
120		3' - 0"	7' - 10"	1 3/4"	C	WD	STN	-	2" HM FRAME	HM	PTD		PASSAGE
121		6' - 0"	7' - 10"	1 3/4"	E	ALUM	KYNAR	INS	ALUM STOREFORNT	ALUM	KYNAR		ACCESS CONTROL
122		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PUSH-PULL
122A		3' - 0"	7' - 0"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PRIVACY
123		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PUSH-PULL
123A		3' - 0"	7' - 0"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PRIVACY
124		3' - 0"	7' - 10"	1 3/4"	D	WD	STN	-	2" HM FRAME	HM	PTD		PASSAGE
125		3' - 0"	7' - 10"	1 3/4"	B	HM	PTD	-	2" HM FRAME	HM	PTD		STOREROOM
128		3' - 0"	7' - 10"	1 3/4"	A	HM	PTD	-	2" HM FRAME	HM	PTD		EXIT
129		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	SG	2" HM FRAME	HM	PTD		PASSAGE
130		3' - 6"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		STOREROOM
131		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		STOREROOM
132		3' - 0"	7' - 0"	1 3/4"	A	HM	PTD	-	2" HM FRAME	HM	PTD		STOREROOM
133		3' - 0"	7' - 10"	1 3/4"	B	HM	PTD	-	2" HM FRAME	HM	PTD		STOREROOM
134A		3' - 0"	4' - 0"	1"	H	STL	PTD	-	GATE FRAME	STL	PTD		ACCESS CONTROL
134B		3' - 0"	4' - 0"	1"	H	STL	PTD	-	GATE FRAME	STL	PTD		PASSAGE
135		4' - 0"	4' - 0"	1"	H	STL	PTD	-	GATE FRAME	STL	PTD		ACCESS CONTROL
137		2' - 6"	6' - 8"	1 3/4"	A	HM	PTD	-	2" HM FRAME	HM	PTD		STOREROOM
201		3' - 0"	8' - 0"	1 3/4"	D	ALUM	KYNAR	-	ALUM STOREFORNT	ALUM	KYNAR		-
202		3' - 0"	7' - 10"	1 3/4"	D	WD	STN	SG	2" HM FRAME	HM	PTD		PASSAGE
202A		2' - 8"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PASSAGE
203		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		CLASSROOM
203A		2' - 8"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PASSAGE
204		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PUSH-PULL
205		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		PUSH-PULL
206A		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		STOREROOM
206B		1' - 0"	10' - 0"	1 3/4"	F	WD	STN	-	JAMB ONLY	HM	PTD		-
207		3' - 0"	7' - 0"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		STOREROOM
208		3' - 0"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		STOREROOM
209A		3' - 0"	8' - 0"	1 3/4"	D	ALUM	KYNAR	-	ALUM STOREFORNT	ALUM	KYNAR		ED CLASSROOM
209B		3' - 0"	8' - 0"	1 3/4"	D	ALUM	KYNAR	-	ALUM STOREFORNT	ALUM	KYNAR		ED CLASSROOM
209C		3' - 0"	8' - 0"	1 3/4"	D	ALUM	KYNAR	-	ALUM STOREFORNT	ALUM	KYNAR		ED CLASSROOM
209D		3' - 0"	8' - 0"	1 3/4"	D	ALUM	KYNAR	-	ALUM STOREFORNT	ALUM	KYNAR		-
209E		3' - 0"	3' - 4"	1 3/4"					-				-
210		3' - 6"	7' - 10"	1 3/4"	A	WD	STN	-	2" HM FRAME	HM	PTD		STOREROOM



TYPE A TYPE B TYPE C TYPE D TYPE E TYPE F TYPE G TYPE H

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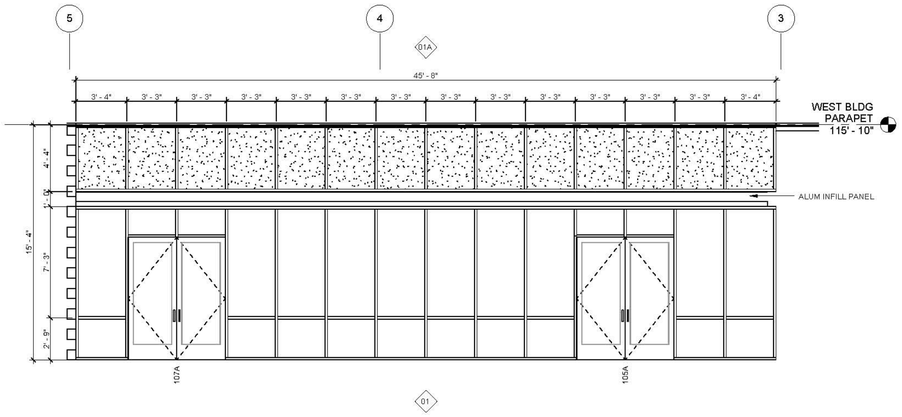
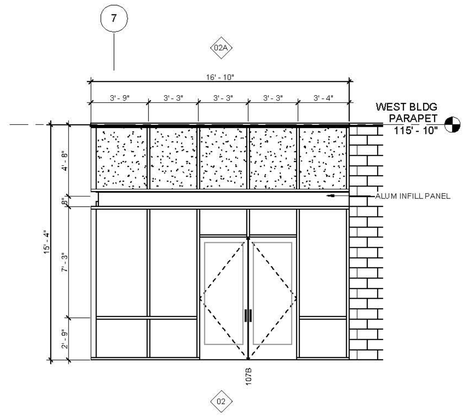
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 3/8" = 1'-0"

DOOR TYPES & SCHEDULE

A-602





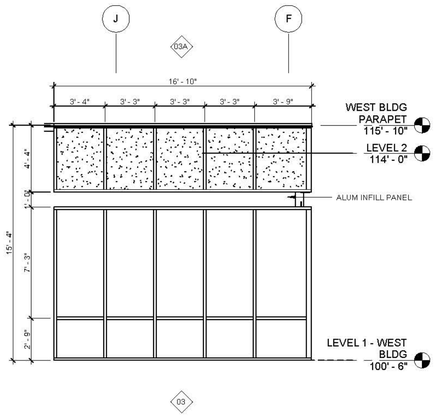
WINDOW SCHEDULE				
NO	Type	Length	Area	Description
01	Torrance TC 3-3 Grid FIXED - 01	45' - 8"	456.67 SF	STOREFRONT
01A	Torrance TC 3-3 Grid FIXED - 01A	45' - 8"	199.14 SF	STOREFRONT
02	Torrance TC 3-3 Grid FIXED - 02	16' - 8"	166.67 SF	STOREFRONT
02A	Torrance TC 3-3 Grid FIXED - 02A	16' - 8"	72.68 SF	STOREFRONT
03	Torrance TC 3-3 Grid FIXED - 03	16' - 7 1/2"	166.25 SF	STOREFRONT
03A	Torrance TC 3-3 Grid FIXED - 03A	16' - 7 1/2"	72.5 SF	STOREFRONT
04	Torrance TC 3-3 Grid FIXED - 04	13' - 9"	82.22 SF	STOREFRONT
05	Torrance TC 3-3 Grid FIXED - 05	24' - 8 1/2"	131.78 SF	STOREFRONT
06	Torrance TC 3-3 Grid FIXED - 06	6' - 6"	43.56 SF	STOREFRONT
07	Torrance TC 3-3 Grid FIXED - 07	10' - 2"	54.17 SF	STOREFRONT
08	Torrance TC 3-3 Grid FIXED - 08	26' - 0"	260 SF	STOREFRONT
08A	Torrance TC 3-3 Grid FIXED - 08A	26' - 0"	123.5 SF	STOREFRONT
09	Torrance TC 3-3 Grid - 09	56' - 8"	113.33 SF	STOREFRONT
10	Torrance TC 2.5-ft Grid - 10	35' - 0"	338.92 SF	STOREFRONT
10A	Torrance TC 2.5-ft Grid - 10A	35' - 0"	350 SF	STOREFRONT
11	Torrance TC 3-3 Grid - 11	10' - 2 1/8"	54.28 SF	STOREFRONT
12	Torrance TC 3-3 Grid - 12	12' - 8"	67.56 SF	STOREFRONT
13	Torrance TC 3-3 Grid - 13	18' - 5"	453.19 SF	CURTAINWALL
14	Torrance TC 3-3 Grid FIXED - 14	6' - 8"	66.67 SF	STOREFRONT
14A	Torrance TC 3-3 Grid FIXED - 14A	6' - 8"	31.67 SF	STOREFRONT
15	Torrance TC 3-3 Grid FIXED - 15	9' - 10"	98.33 SF	STOREFRONT
15A	Torrance TC 3-3 Grid FIXED - 15A	9' - 10"	46.71 SF	STOREFRONT
16	Torrance TC 3-3 Grid FIXED - 16	6' - 6"	65 SF	STOREFRONT
16A	Torrance TC 3-3 Grid FIXED - 16A	6' - 6"	30.87 SF	STOREFRONT
17	Torrance TC 3-3 Grid FIXED - 17	26' - 2"	399.04 SF	CURTAINWALL
18	Torrance TC 3-3 Grid - 18	15' - 0"	30 SF	STOREFRONT
19	Torrance TC 3-3 Grid - Alum Storefront	8' - 3"	78.33 SF	STOREFRONT
20	Torrance TC 3-3 Grid - Alum Storefront	3' - 4"	33.33 SF	STOREFRONT
21	Torrance TC 3-3 Grid - Alum Storefront	9' - 9"	97.5 SF	STOREFRONT
22	Torrance TC 3-3 Grid - Alum Storefront	9' - 9"	97.5 SF	STOREFRONT
23	Torrance TC 3-3 Grid - Alum Storefront	3' - 4"	33.33 SF	STOREFRONT
24	Torrance TC 2-6 Grid FIXED - 22	30' - 9 1/4"	241.33 SF	STOREFRONT
25	Torrance TC 3-3-ft Grid Interior HM Frame	15' - 4 31/64"	122.99 SF	HOLLOW METAL
26	Torrance TC 3-3-ft Grid Interior HM Frame	8' - 2"	65.33 SF	HOLLOW METAL
27	Torrance TC 3-3-ft Grid Interior HM Frame	9' - 1 177/256"	73.13 SF	HOLLOW METAL
28	Torrance TC 3-3-ft Grid Interior HM Frame	10' - 7"	65.92 SF	HOLLOW METAL
29	Torrance TC 3-3-ft Grid Interior HM Frame	9' - 3 9/16"	56.48 SF	HOLLOW METAL
30	Torrance TC 3-3-ft Grid Interior HM Frame	14' - 4 13/16"	84.91 SF	HOLLOW METAL
31	Torrance TC 3-3-ft Grid Interior HM Frame	6' - 4 5/256"	57.01 SF	HOLLOW METAL
Grand total: 39		658' - 7 7/16"	5,081.79 SF	

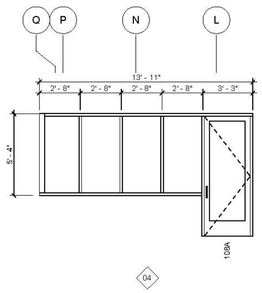
NOTES

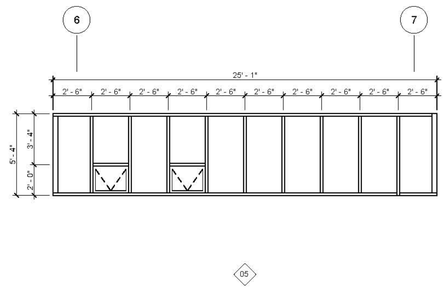
1. SEE DOOR SCHEDULES FOR ADDITIONAL INFORMATION ON DOORS IN GLAZED FRAMES.
2. AT SPLIT STOREFRONT LOCATIONS PROVIDE ALUM PANEL INFILL TRIMMED AND SEALED AROUND STRUCTURAL MEMBERS.
3. ALL OPERABLE WINDOW UNITS TO BE INSWING HOPPER TYPE, EXCEPT SLIDING UNIT IN WO. 28.
4. ALL GLASS IN HM FRAMES, SINGLE PANEL CLEAR.

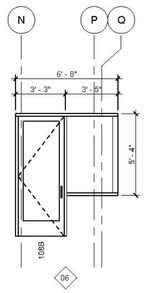
GLAZING LEGEND

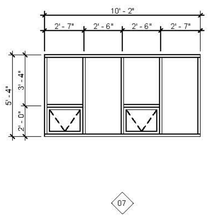
- INSULATED VISION
- INSULATED SPANDREL
- INSULATED TRANSLUCENT

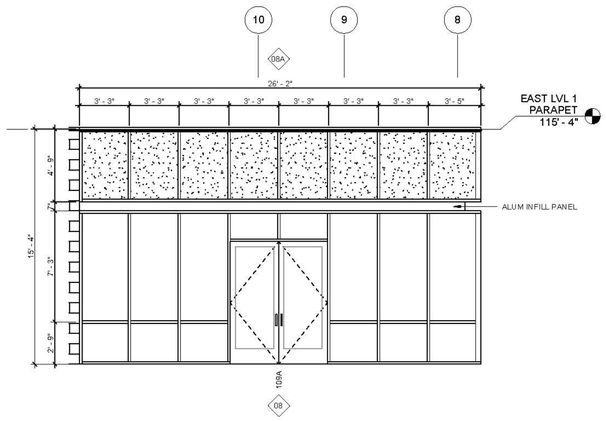


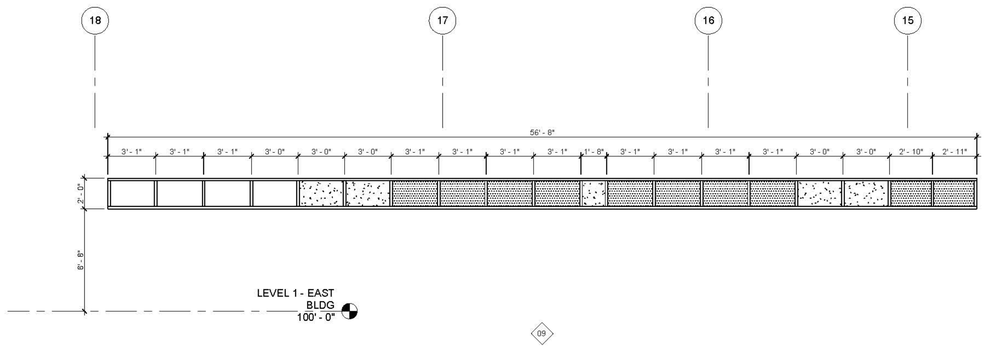












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30% CONSTRUCTION DRAWINGS

No	REVISION/SUBMISSION	DATE

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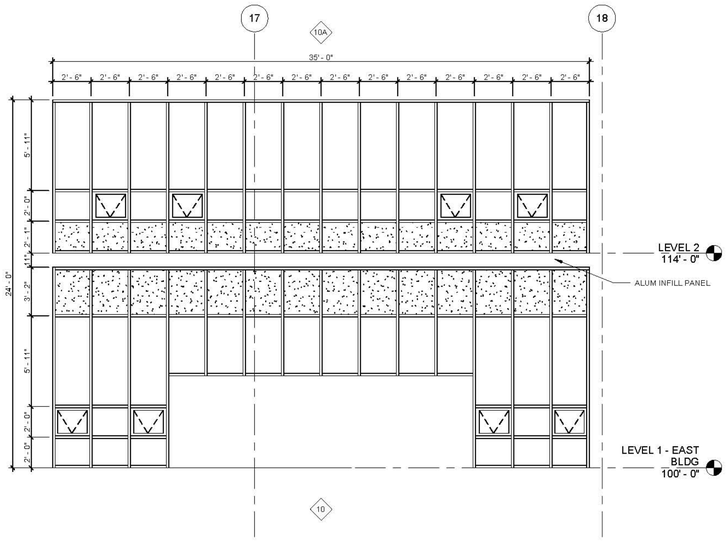
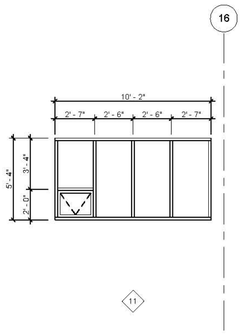
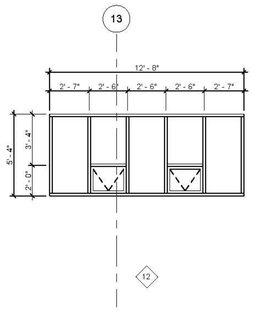
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/4" = 1'-0"

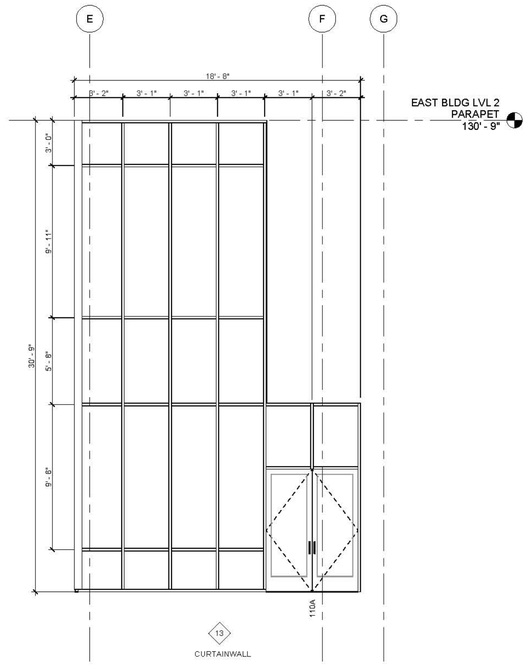
WINDOW TYPES & SCHEDULE

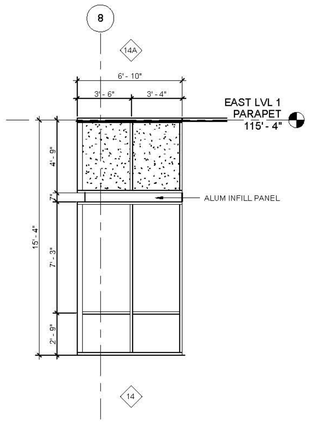
A-603

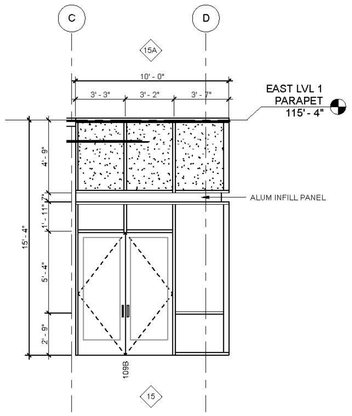


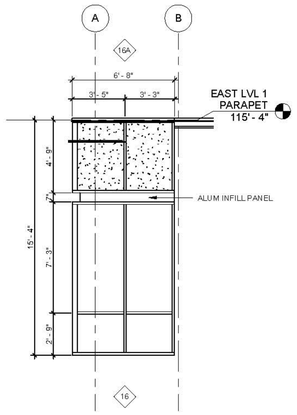


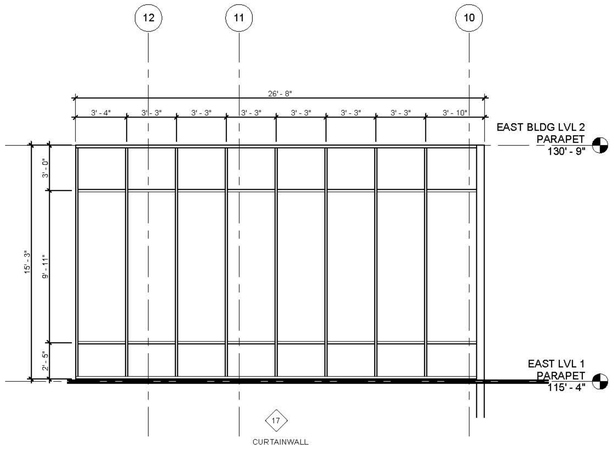


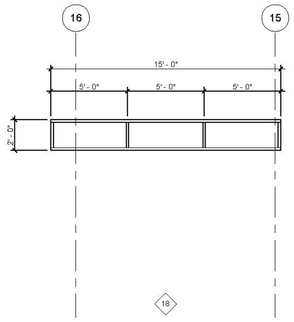


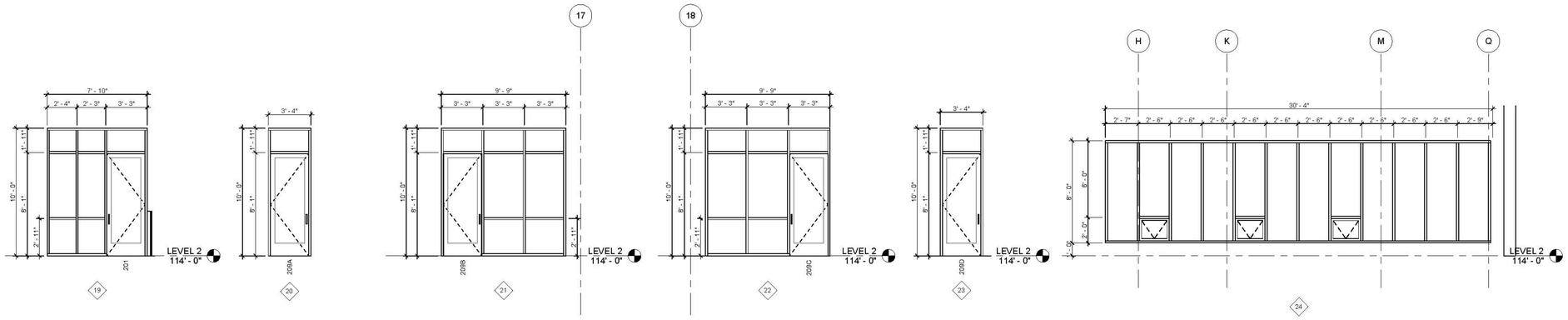












NOTES

1. SEE DOOR SCHEDULES FOR ADDITIONAL INFORMATION ON DOORS IN GLAZED FRAMES.
2. AT SPLIT STOREFRONT LOCATIONS PROVIDE ALUM PANEL INFILL TRIMMED AND SEALED AROUND STRUCTURAL MEMBERS.
3. ALL OPERABLE WINDOW UNITS TO BE INSWING HOPPER TYPE, EXCEPT SLIDING UNIT IN WO. 28.
4. ALL GLASS IN HM FRAMES, SINGLE PANEL CLEAR.

GLAZING LEGEND

- INSULATED VISION
- INSULATED SPANDREL
- INSULATED TRANSLUCENT

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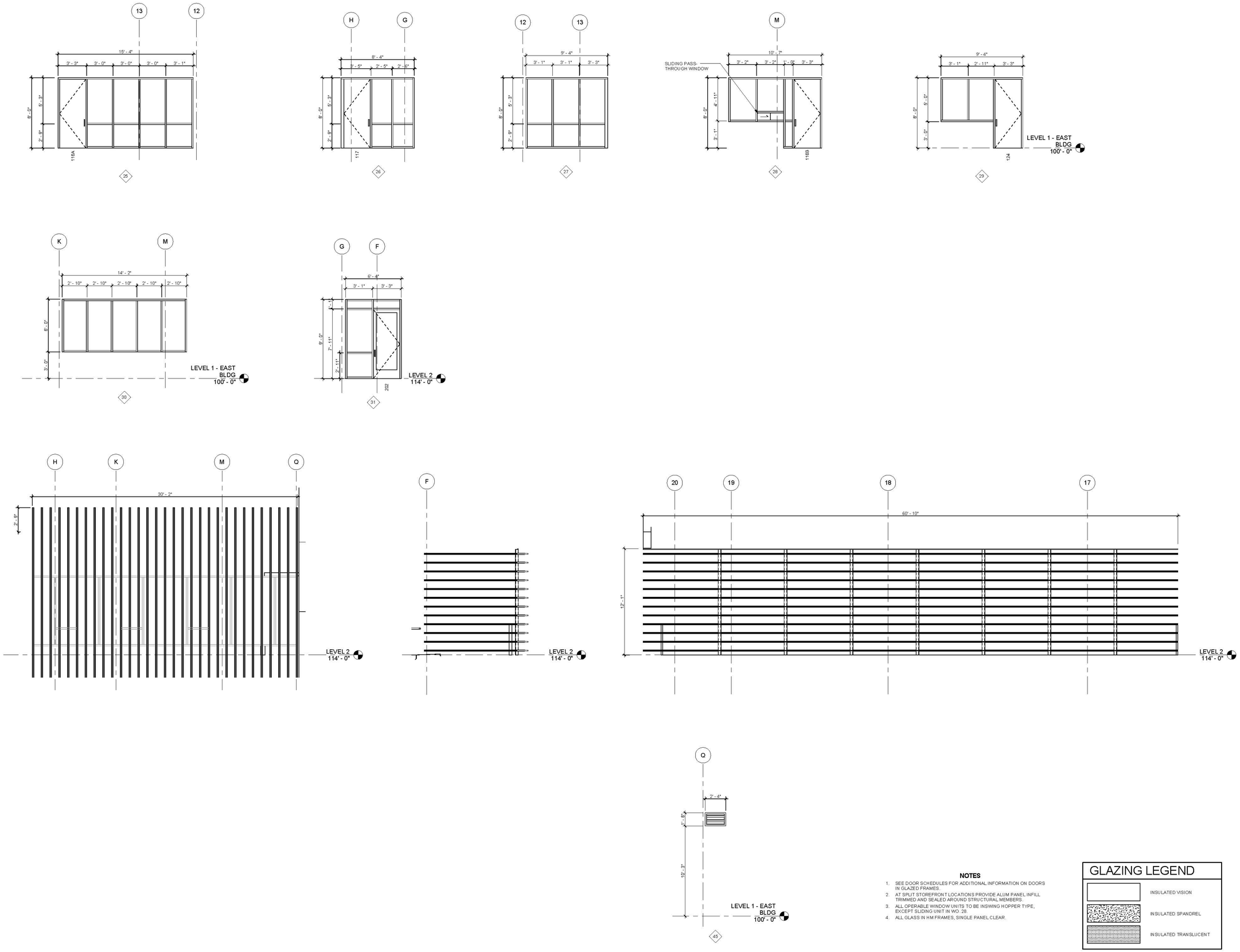
PROJECT No: 3293.01
DATE: 09/26/2012
SCALE: 1/4" = 1'-0"

WINDOW TYPES

A-604



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GLAZING LEGEND

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PROJECT No: 3293.01
DATE: 09/26/2012
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WINDOW TYPES

A-605

PLUMBING LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	BALL VALVE		DIRECTION OF SLOPE
	GATE VALVE		DIRECTION OF FLOW
	ANGLE GATE VALVE		PIPE UP
			PIPE DOWN
	OS & Y GATE VALVE		PIPE DROP
	CHECK VALVE		TOP CONNECTION – BRANCH LINE
	CAP OR PLUG		BOTTOM CONNECTION – BRANCH LINE
WHA	WATER HAMMER	F	FIRE MAIN
		AS	AUTOMATIC WET SPRINKLER
CO	CLEANOUT PLUG	CS	COMBINATION STAND PIPE
			COLD WATER
FCO	FLOOR CLEANOUT		HOT WATER
			HOT WATER CIRCULATING
COTG	CLEANOUT TO GRADE	SD	STORM DRAIN
		OD	OVEFLOW DRAIN
			PIPING BELOW GRADE
			WASTE
			VENT
		G	NATURAL GAS (7"W.C.)
		RW	RECLAIMED WATER
		HB	HOSE BIBB
			FIRE RISER
		FD	FLOOR DRAIN
		FS	FLOOR SINK
			HUB DRAIN
			PLUMBING EQUIPMENT
		B	BOILER

ABBREVIATIONS

	POINT OF CONNECTION
ABV	ABOVE
ADA	AMERICANS WITH DISABILITIES ACT
AP	ACCESS PANEL
ARCH	ARCHITECT
BEL	BELOW
BV	BALL VALVE
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CLG	CEILING
CO	CLEANOUT
CONT	CONTINUATION
CS	COMBINATION STAND PIPE
COTG	CLEANOUT TO GRADE
CW	COLD WATER
DN	DOWN
DFU	DRAINAGE FIXTURE UNIT
DWG	DRAWING
DS	DOWN SPOUT
FCO	FLOOR CLEANOUT
FT	FEET
FC	FAN COIL UNIT
G	GAS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HW	HOT WATER
HWC	HOT WATER CIRCULATING
HWFU	HOT WATER FIXTURE UNIT
ICW	INDUSTRIAL COLD WATER
I.E.	INVERT ELEVATION
MAX	MAXIMUM
MECH	MECHANICAL
MFG	MANUFACTURER
MIN	MINIMUM
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
OD	OVERFLOW DRAIN
OS&Y	OUTSIDE –SCREW–AND –YOKE VALVE
POC	POINT OF CONNECTION
PLBG	PLUMBING
PSI	POUNDS PER SQUARE INCH
RW	RECLAIM WATER
RR	ROOF RECEPTOR
SD	STORM DRAIN
SQ.FT.	SQUARE FEET
SOV	SHUT–OFF VALVE
SPKR	SPRINKLER
TP	TRAP PRIMER
TYP	TYPICAL
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE
WHA	WATER HAMMER ARRESTOR
WCO	WALL CLEANOUT
W/	WITH
WGT	WEIGHT
YB	YARD BOX

PLUMBING FIXTURES SCHEDULE

ITEM	DESCRIPTION	TRAP ARM	WASTE	VENT	CW	HW	REMARKS
WC–1	WATER CLOSET	INT	4"	2"	1–1/2"	---	
WC–2 (ADA)	WATER CLOSET	INT	4"	2"	1–1/2"	---	SAME AS WC–1 WITH FIXTURE ROUGHED–IN AT ACCESS COMPLIANT HEIGHT.
U–1	URINAL	INT	2"	2"	1 –1/2"	---	AMERICAN STANDARD WASHBROOK FLOWISE WALL HUNG, (0.125 GPF) W/SENSOR,WHITE.
U–2 (ADA)	URINAL	INT	2"	2"	1 –1/2"	---	SAME AS U–1.
L–1	LAVATORY	1¼"	2"	1½"	½"	½"	
L–2 (ADA)	LAVATORY	1¼"	2"	1½"	½"	½"	
S–1	SINK	1–1/2"	2"	1–1/2"	¾"	¾"	JUST MFG. USF–ADA–1830–A–GR, 18GA.,STAINLESS STEEL, UNDERMOUNT–18 GAUGE, SINGLE BOWL WITH INTEGRA FLOW SYSTEM,&J–902,DECK MOUNTED WASHERLESS MIXING VALVE WITH ESCUTCHEON,INCLUDE HOSE WITH SPRAY.SPRAY HEAD MOUNTED ON ESCUTCHEON.8"REACH BRASS SWING SPOUT. (1.5GPM)
SH–1 (ADA)	SHOWER	1–1/2"	2"	1–1/2"	¾"	¾"	AMERICAN STANDARD 1662.214, FLOWISE COMMERCIAL SHOWER SYSTEM KIT –1.5 GPM SK–1.FIAT A8030.01RF,60"X30" ONE PIECE ACRYLIC SHOWER. (1.5 GPM)
SS–1	SERVICE SINK	3"	3"	2"	¾"	¾"	AMERICAN STANDARD #7741.000 FLR MNT "FLORWELL" 28"X28"X13", CORNER ENAMELED CAST IRON. FAUCET: CHICAGO #897–CP, WALL MOUNT, VACUUM BREAKER SPOUT W/ PAIL HOOK AND WALL BRACE AND 3/4" MALE THREADED OUTLET. (2.5GPM)
FD–1	FLOOR DRAIN	2"	2"	2"	½"	---	J.R.SMITH WITH TRAP PRIMER CONNECTION. TRAP PRIMER MAY BE PROVIDED BY A FLUSH VALVE ATTACHEMENT OR A "PPP" PR–500 RECESSED IN WALL BEHIND ACCESS PANEL WITH A 1/2" BALL VALVE PRECEEDING THE TRAP PRIMER, BOTH BEHIND ONE ACCESS PANEL.
FS–1	FLOOR SINK	2"	2"	2"	1/2"	---	J.R. SMITH 3040Y, 8–1/12" TOP, 6" DEEP, 2" OUTLET MEDIUM RECEPTOR WITH DOME STRAINER. HALF GRATE AND TRAP PRIMER CONNECTION.
RR–1	ROOF RECEPTOR	2"	2"	2"	---	---	J.R. SMITH #3970Y, 10–1/2" TOP, 2" OUTLET WITH SECURED DOME BOTTOM STRAINER.
TP–1	TRAP PRIMER	---	---	---	½"	---	PPP #P–2, COPPER BODY COMPLETE 1/2" COPPER TYPE "L" PIPE TO RECEOPTOR(S). INSTALL PER MANUF. RECOMMENDATIONS AND PROVIDE ACCESS PANEL
RD–1	ROOF DRAIN	---	---	---	---	---	J.R. SMITH 1010–Y–C–U–R–CID, SEE PLANS FOR SIZES
OD–1	OVERFLOW ROOF DRAIN	---	---	---	---	---	J.R. SMITH 1080–Y–C–U–R–CID–WD, 2" HIGH WATER DAM, SEE PLANS FOR SIZES
HB–1	HOSE BIBB	---	---	---	3/4"	---	J.ACORN NO 8151 WALL MOUNTED WITH VACUUM BREAKER
HB–2	HOSE BIBB	---	---	---	3/4"	---	J.ACORN NO 8126 W/V.B. FREE STANDING WITH VACUUM BREAKER

NOTE: ALL FIXTURES SHALL COMPLY WITH THE FLOW RATES INDICATED ON 94.402.0.

GAS WATER HEATER SCHEDULE

ITEM	LOCATION	SERVICE	STORAGE CAPACITY (GAL.)	RECOVERY RATE	BTU/HR INPUT	MANUFACTURER & MODEL NO.	OPERATING WEIGHT LBS.	REMARKS
GWH 1	MECH. ROOM ON ROOF	DOMESTIC HOT WATER	100	173 GPH @ 100°F △	150,000	A.O. SMITH BTH 150	1400	96% HIGH EFFICIENCY, CONDENSING GAS WATER HEATER WITH POWER DIRECT VENT

EXPANSION TANK SCHEDULE

ITEM	SERVICE	MFR .AND MODEL	TANK VOL.	OPER. WT.	MAX. TEMP	DIMENSIONS	REMARKS
ET 1	GWH 1	WATTS PLT–5	2.1 GAL	5.5 LBS	200°F	8" DIA., 11" LONG	EXPANSION TANK WILL BE SIZED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. DRAWN STEEL W/BUTYL DIAPHRAGM

PUMP SCHEDULE

ITEM		SERVICE	MANUFACTURER AND MODEL	TYPE	CAPACITY GPM	CAPACITY HEAD	HP	RPM	VOLTS	PHASE	WGT	REMARKS
CP 1	HOT WATER CIRCULATION FOR	GWH 1	B&G SERIES PR OR EQUAL	INLINE	10	15'	1/6	1750	120	1	50	INLINE CIRCULATING PUMP FOR DOMESTIC HOT WATER INTERLOCK W /AQUASTAT

ELECTRIC WATER HEATER SCHEDULE

UNIT NO.	MANUF. & MODEL NO.	SERVICE	LOCATION	TYPE	OUTLET TEMP.	ELECTRICAL K. W.	ELECTRICAL V. / PH. / HZ.	OPER. WT. (LBS.)	REMARKS
EWH 1	CHRONOMITE M-20L	DOM. HW	RM. 104 WEST BLDG	TANKLESS	110°	4.16	208V-1Ø-60HZ	5	MICROPROCESS MODEL
EWH 2	CHRONOMITE M-40	DOM. HW	RM.133 WEST BLDG	TANKLESS	120°	8.31	208V-1Ø-60HZ	5	MICROPROCESS MODEL

DOMESTIC WATER PIPE SIZING CALCULATION

WATER PRESSURE: AT BLDG 80 PSI HIGH

INFORMATION RECEIVED : BY CIVIL

PRESSURE DROPS	PSI
RESIDUAL PRESSURE	25
ELEVATION 45' X .433 =	19.5
TOTAL	54.5

PRESSURE AVAILABLE: 75 PSI-54.5 PSI =20.5 PSI

DEVELOPED LENGTH: 300 FT X 1.15 = 115 FT

$\frac{20.5 \times 100}{345} = 5.9$ PSI DROP PER 100 FT. AVAILABLE TO OVERCOME FRICTION.

PIPING: TYPE 'L' COPPER.

PIPE SIZE CHART

SIZE	CW F.V.	CW F.T.	HW F.T.
1/2"	0	2	2
3/4"	0	8	8
1"	0	19	17
1-1/4"	8	42	29
1-1/2"	26	84	47
2"	138	260	120
2-1/2"	358	474	248
3"	630	691	412
MAX. VELOCITY C.W.(8 F.P.S.)			MAX. VELOCITY H.W.(5 F.P.S.)

ALL PIPE SIZING BASED ON 5.0 PSI PER 100 FT. FRICTION LOSS.

DRAINAGE FIXTURE UNIT CHART
2010 CPC & UPC.

FIXTURE	DFU
WC (WATER CLOSET)	4
U (URINAL)	2
L (LAVATORY)	1
S (SINK)	2
SS (SERVICE SINK)	3
FD	2
FS	1

WATER FIXTURE UNIT CHAR
2010 CPC & UPC.

FIXTURE	CW FU	HW FU
WC (WATER CLOSET) FLUSH VALVE	5	-
U (URINAL)	4	
L (LAVATORY)	1	1
S (SINK)	2	2
SS (SERVICE SINK)	3	3
HB (HOSE BIBB)	2.5	-
EACH ADDITIONAL HB	1	

PLUMBING DRAWING LIST

P-001	PLUMBING LEGEND AND SYMBOLS
P-110	PLUMBING WEST BUILDING FLOOR PLAN
P-111	PLUMBING EAST BUILDING FLOOR PLAN - LEVEL1
P-112	PLUMBING EAST BUILDING FLOOR PLAN - LEVEL2
P-115	PLUMBING WEST BUILDING ROOF PLAN
P-116	PLUMBING EAST BUILDING ROOF PLAN
P-301	PLUMBING ENLARGED PLANS
P-302	PLUMBING ENLARGED PLANS
P-401	PLUMBING DETAILS

BASIS OF DESIGN

1. CODES AND STANDARDS:
   A. AMERICANS WITH DISABILITIES ACT, (ADA)
   B. BUILDING CODES ENFORCED BY THE AUTHORITY HAVING JURISDICTION IN CALIFORNIA.
1. CALIFORNIA PLUMBING CODE (CPC) BASED ON 2010 UNIFORM PLUMBING CODE (UPC) WITH STATE AMENDMENTS.
2. WATER SUPPLY: ALL BUILDINGS
   A. SEE FLOOR PLANS
3. SANITARY SEWER: ALL BUILDINGS
   A. SEE FLOOR PLANS FOR SIZES
4. STORM DRAIN:
   A. SIZING FOR STORM DRAIN SYSTEM IS BASED ON RAINFALL OF 2" PER HOUR AS REQUIRED BY 2010 CPC TABLE 11-1 & 11-2

GENERAL NOTES

1. ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH DIVISION 22 SPECIFICATIONS.
2. AS-BUILT RECORD DOCUMENTS: AT PROJECT CLOSEOUT, CONTRACTOR SHALL SUBMIT DETAILED INSTALLATION DRAWINGS, CHANGE ORDERS AND SPECIFICATION CHANGES TO ARCHITECT FOR APPROVAL. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS..
3. DETAILED INVESTIGATION OF EXISTING CONDITIONS ARE PART OF THE CONTRACT WORK. VISIT THE JOB SITE PRIOR TO BID. REVIEW AVAILABLE EQUIPMENT LAYOUTS, ASSEMBLY DRAWINGS AND INSTALLATION SCHEDULES.
4. DOMESTIC WATER HAS BEEN ENGINEERED. CONTRACTOR SHALL NOT USE APPENDIX "A" OF CPC 2010 TO RESIZE ANY LINES. RESIZING OF ANY LINES SHALL BE SUBMITTED FOR WRITTEN APPROVAL BY ENGINEER ONLY PRIOR TO COMMENCING OF ANY CONSTRUCTION.
5. CONTRACTOR SHALL COORDINATE ALL UTILITY LINES EXITING OR ENTERING BUILDING WITH DIVISION 2 SPECIFICATIONS AND CIVIL ENGINEER'S UTILITY PLAN DRAWINGS AND OTHER TRADES.
6. BARRIER FREE REQUIREMENTS: PROVISIONS HAVE BEEN DESIGNED TO PROVIDE FIXTURES IN ACCORDANCE WITH A.D.A., ANSI AND STATE OF CALIFORNIA REGULATIONS. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AND REPORT TO ARCHITECT OR OWNER'S REPRESENTATIVE WHEN FIELD CONDITIONS PREVENT CORRECT INSTALLATION.
7. ALL STORM DRAIN PIPING SHALL BE AS TIGHT AS POSSIBLE TO COLUMNS.

PIPE SCHEDULE

SERVICE	LOCATION	TYPE L COPPER	TYPE M COPPER	NO-HUB CAST IRON	SCH. 40 BLACK STEEL	SCH. 40 GALV. STEEL	ABS SEWER PIPING	FITTINGS
WATER	INSIDE	●						LEAD FREE SOLDERED FITTINGS
	OUTSIDE	●						LEAD FREE SOLDERED FITTINGS
WASTE	ABV. FLR.		●					TYLER 4-BAND NO-HUB COUPLINGS
	BEL. FLR.				●			
VENT	ABV. FLR.		●					TYLER 2-BAND NO-HUB COUPLINGS
	BEL. FLR.		●					TYLER 2-BAND NO-HUB COUPLINGS
STORM DRAIN	ABV. FLR.		●					TYLER 4-BAND NO-HUB COUPLINGS
	BEL. FLR.		●					TYLER 4-BAND NO-HUB COUPLINGS
CONDENSATE DRAIN	INSIDE	●						LEAD FREE SOLDERED FITTINGS
	OUTSIDE	●						LEAD FREE SOLDERED FITTINGS
NATURAL GAS	INSIDE			●				SCHEDULE 40 THREADED FITTINGS
	OUTSIDE			●				SCHEDULE 40 THREADED FITTINGS

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MARK	DATE	DESCRIPTION

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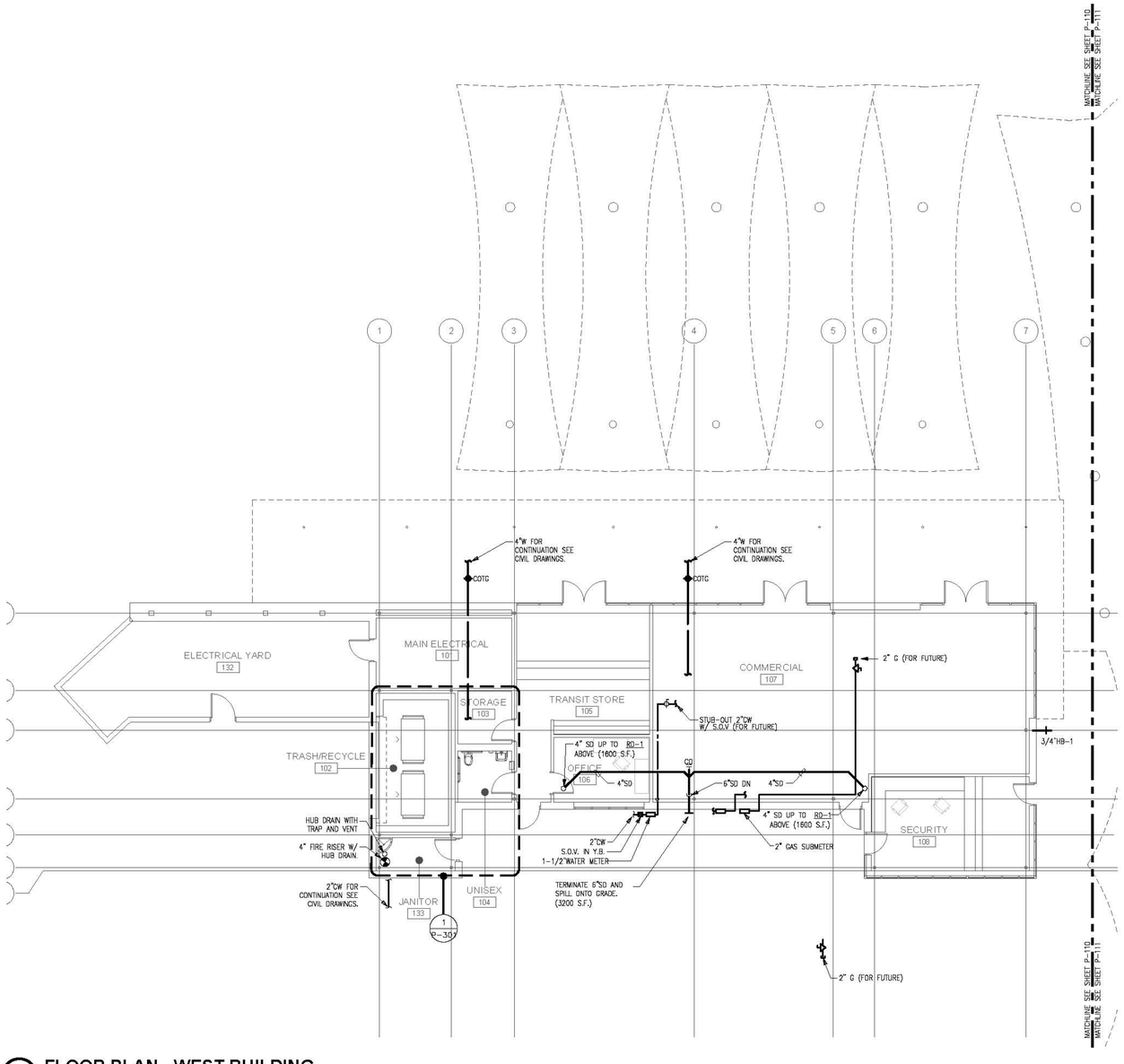
PROJECT No: 06.12.00054
DATE: 09/26/2012
SCALE: NONE

PLUMBING
LEGEND AND SYMBOLS

P-001



1 FLOOR PLAN - WEST BUILDING
SCALE: 1/8"=1'-0"

NORTH

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DATE: 09/26/2012
SCALE: 1/8" = 1'-0"

PLUMBING
WEST BUILDING FLOOR PLAN

P-110

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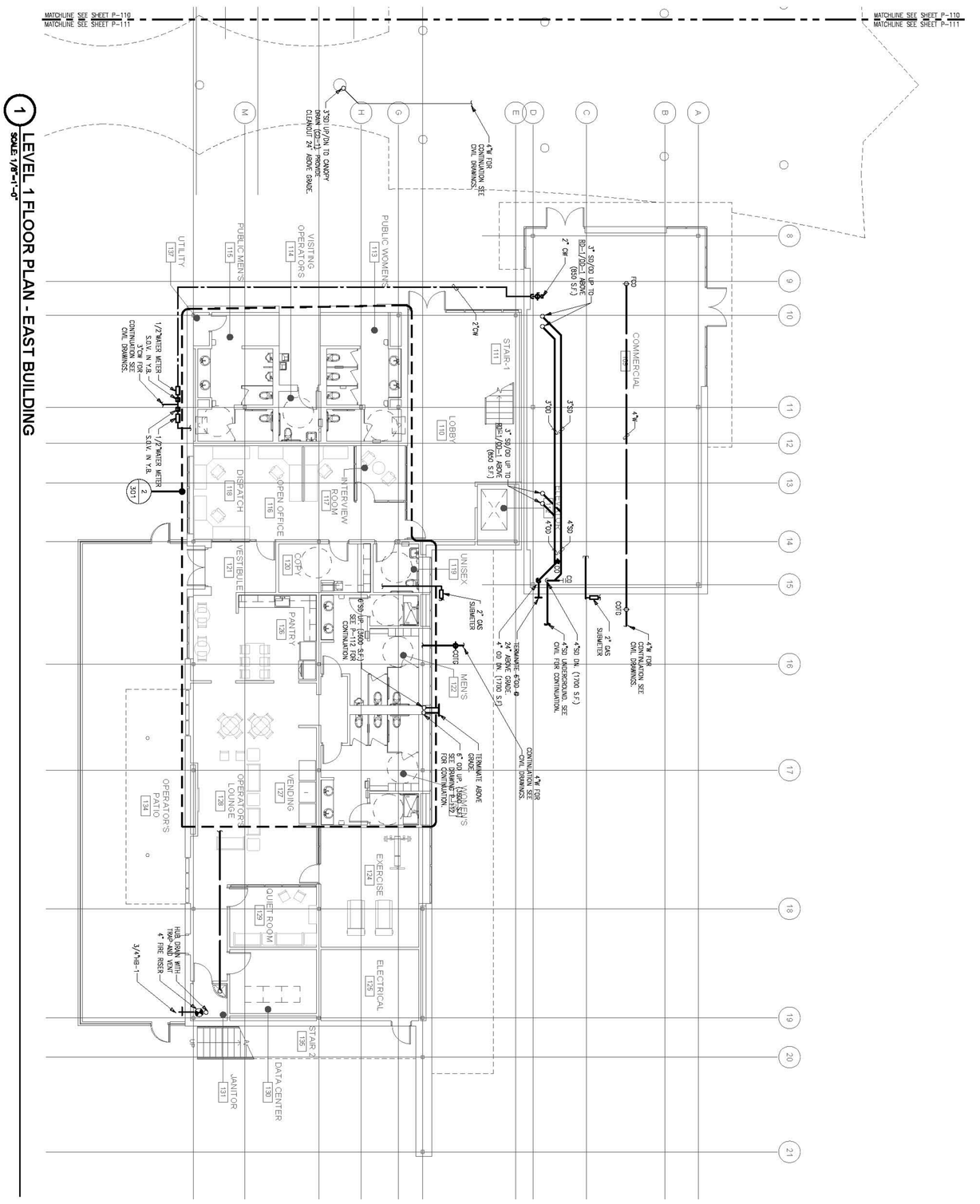

1 LEVEL 1 FLOOR PLAN - EAST BUILDING
SCALE: 1/8"=1'-0"

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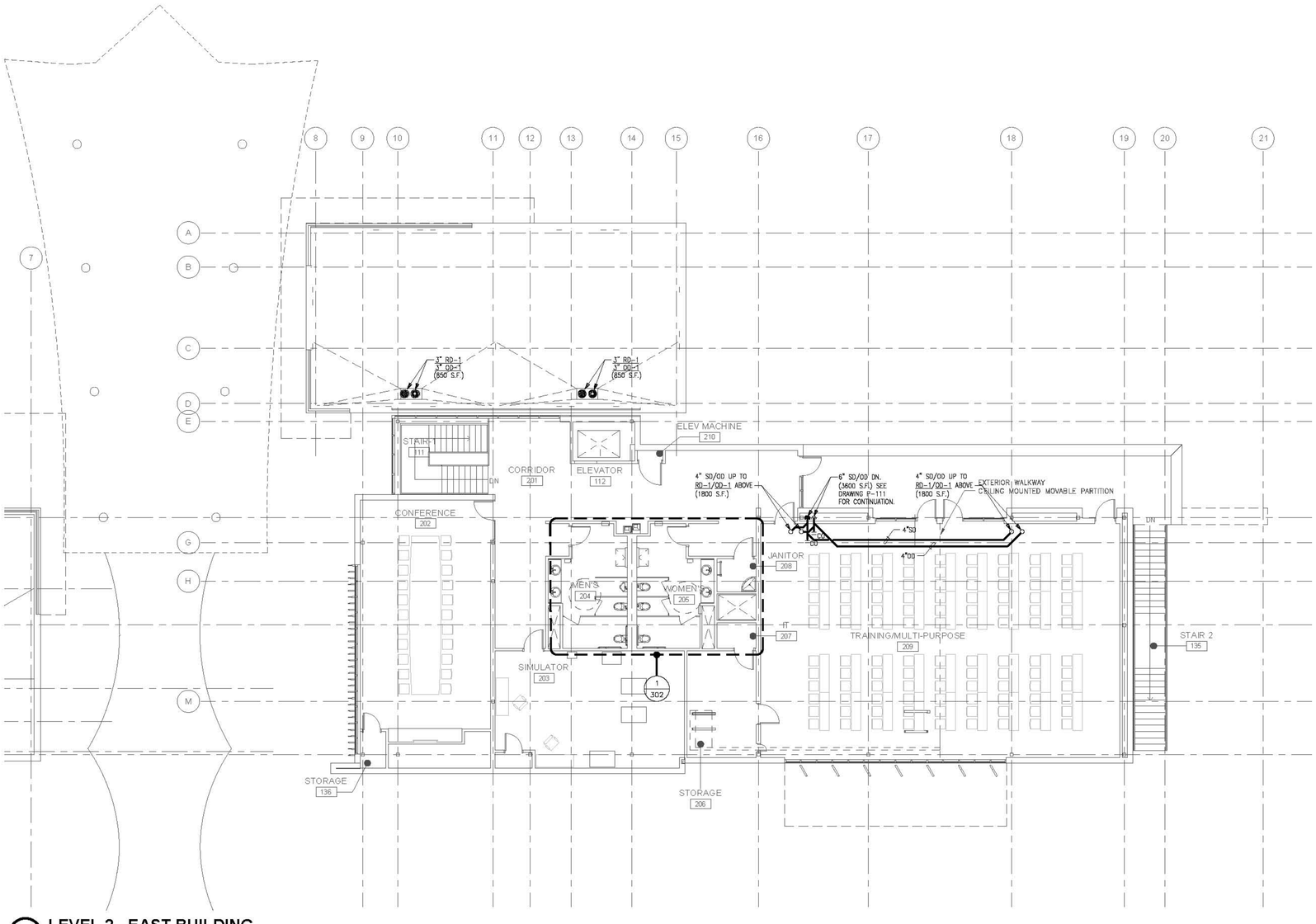
PLUMBING
EAST BUILDING FLOOR PLAN - LEVEL 1

P-111



1 LEVEL 2 - EAST BUILDING
SCALE: 1/8"=1'-0"

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PLUMBING
EAST BUILDING FLOOR PLAN - LEVEL 2

P-112

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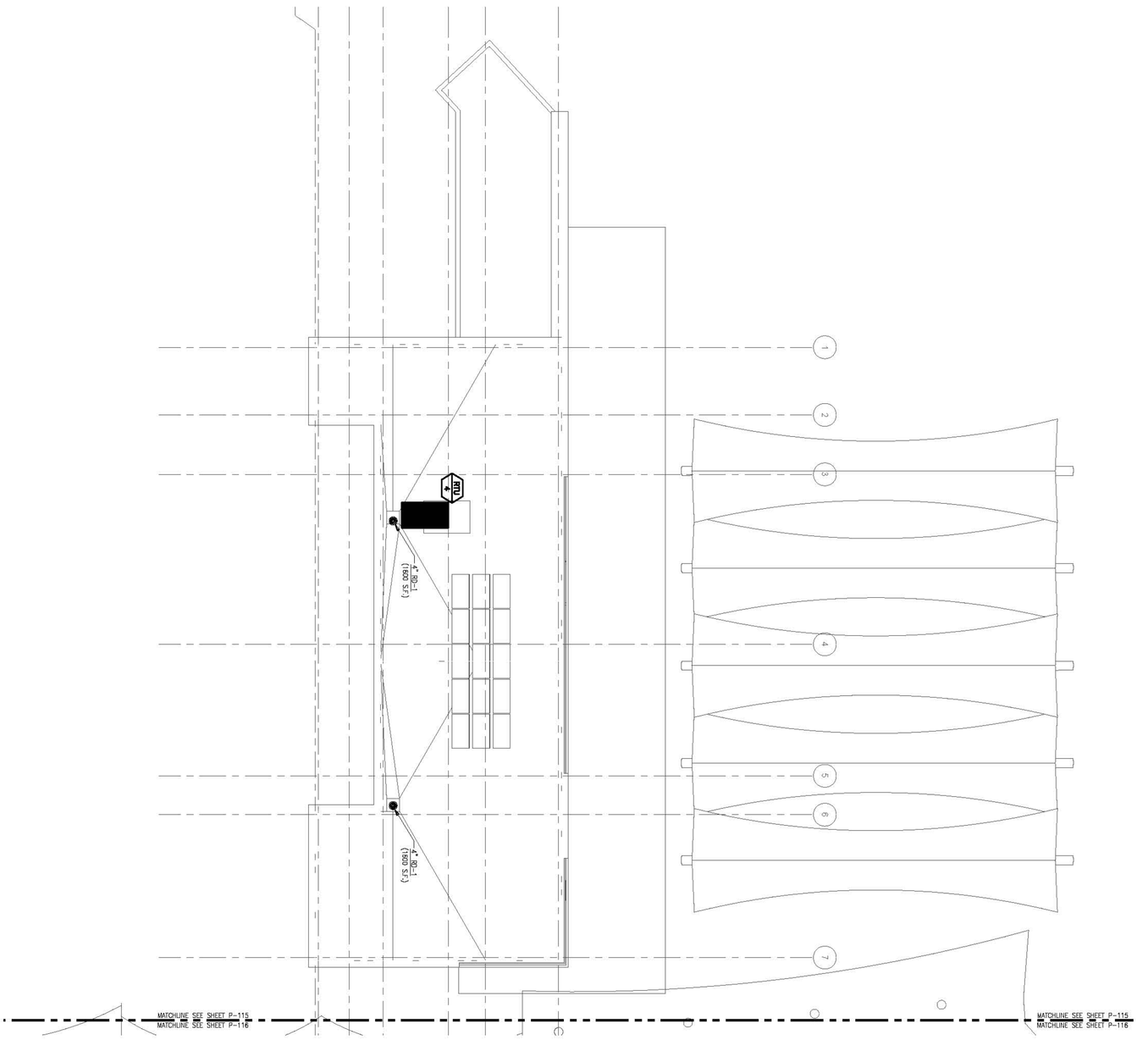
9:48:06 PM

1 WEST BUILDING ROOF PLAN
SCALE: 1/8"=1'-0"



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PLUMBING
WEST BUILDING ROOF PLAN

P-115

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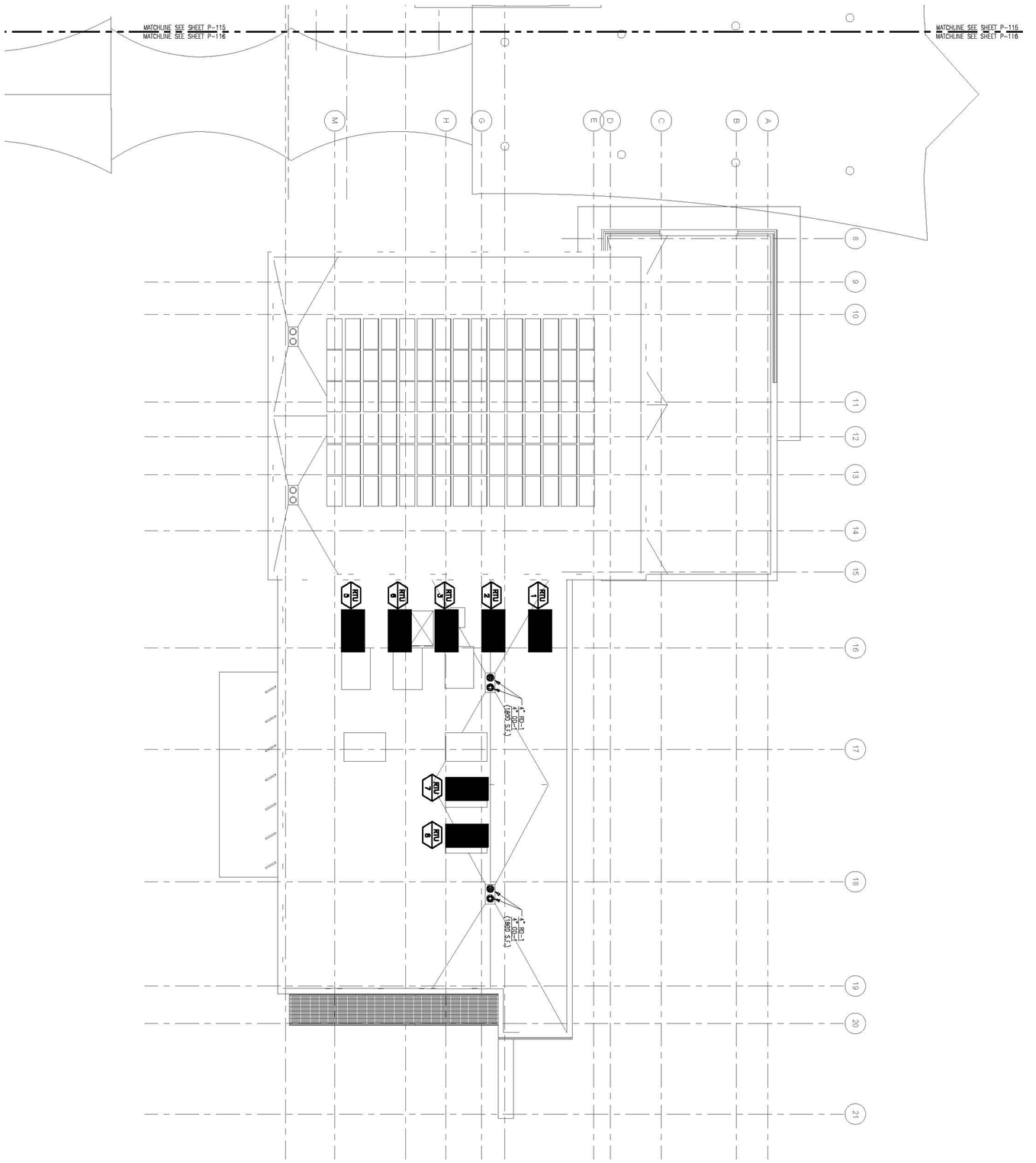

1 EAST BUILDING ROOF PLAN
SCALE: 1/8"=1'-0"

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PLUMBING
EAST BUILDING ROOF PLAN

P-116

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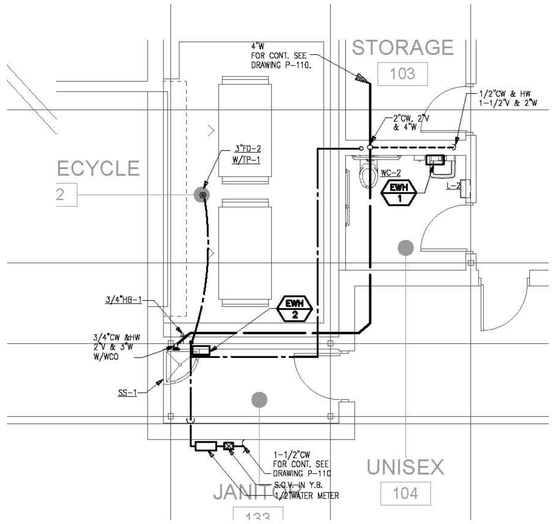
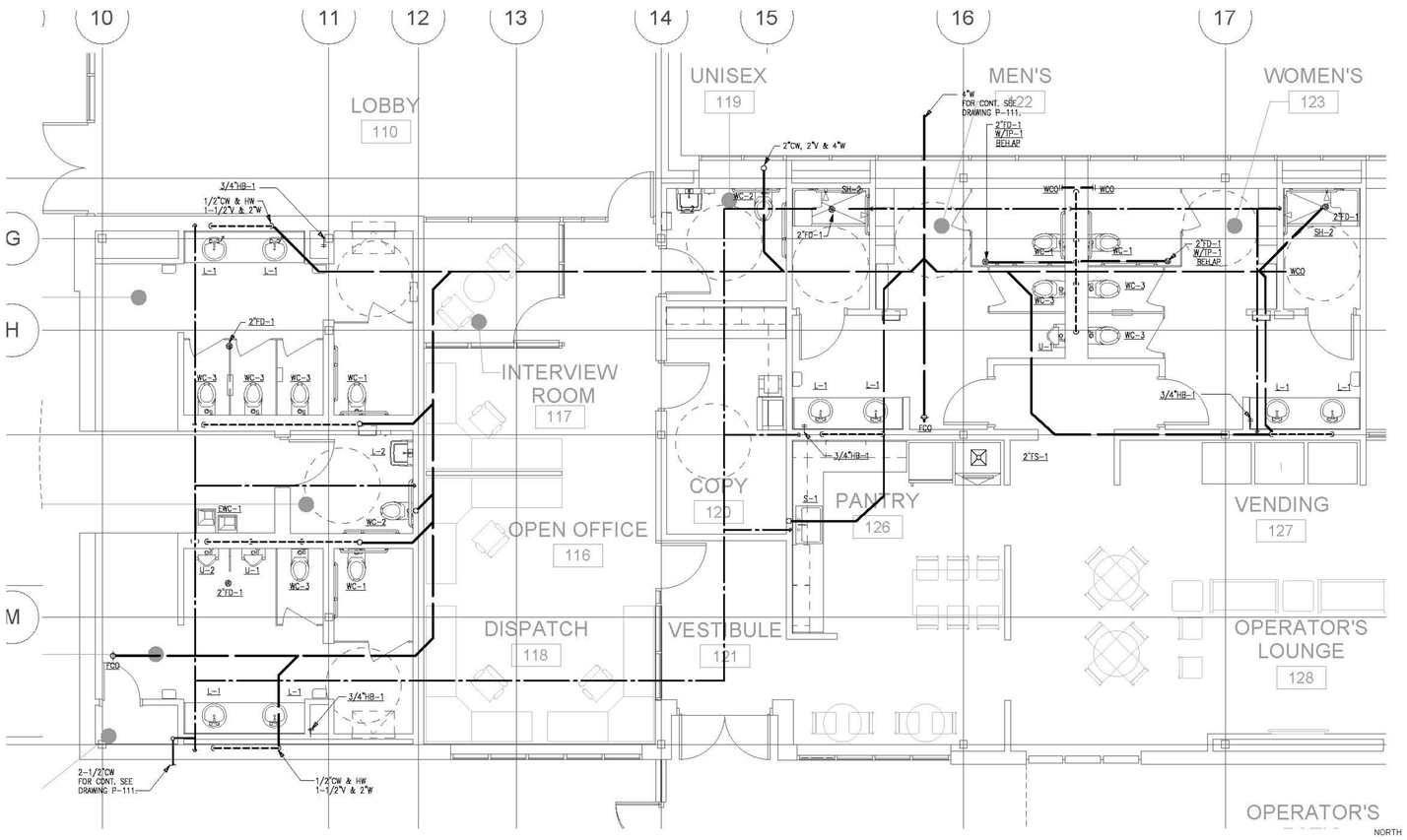


1 WEST BUILDING LEVEL 1 - ENLARGED PLAN
SCALE: 1/4"=1'-0"



2 EAST BUILDING LEVEL 1 - ENLARGED PLAN
SCALE: 1/4"=1'-0"

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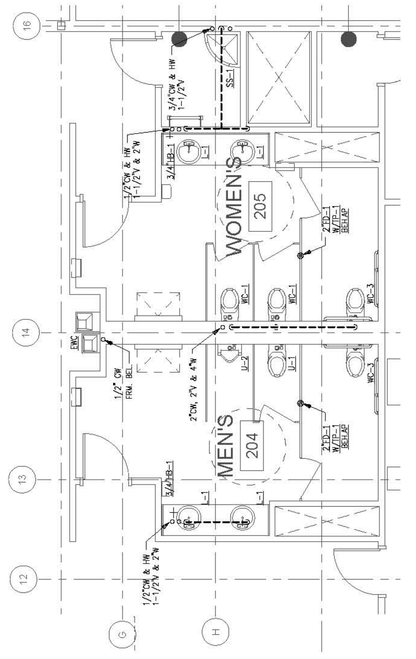
PLUMBING
ENLARGED PLANS

P-301



1 EAST BUILDING LEVEL 2 - ENLARGED PLAN
SCALE: 1/8"=1'-0"

NORTH

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PLUMBING
ENLARGED PLAN
P-302

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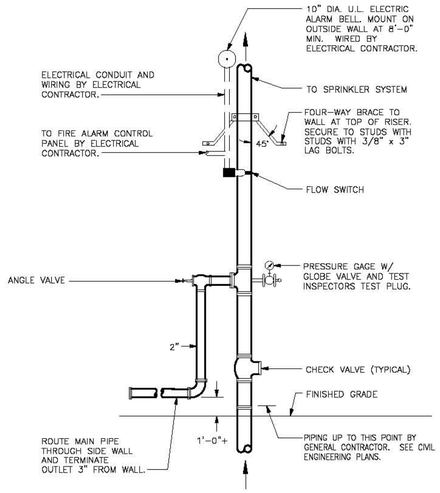
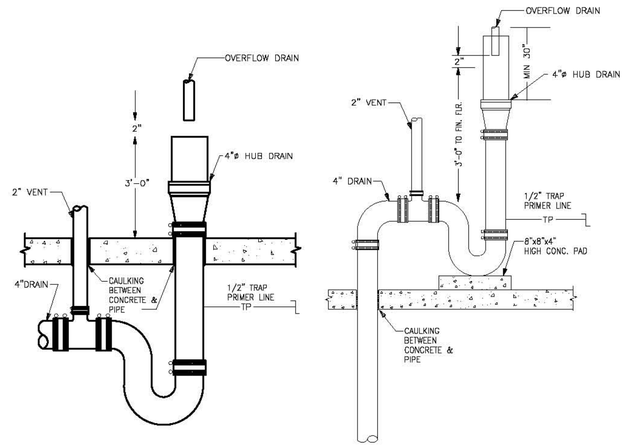
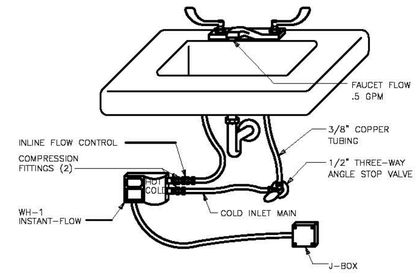


NOTE: MAINTAIN 12" CLEAR SPACE BETWEEN RISER AND INSIDE WALLS.

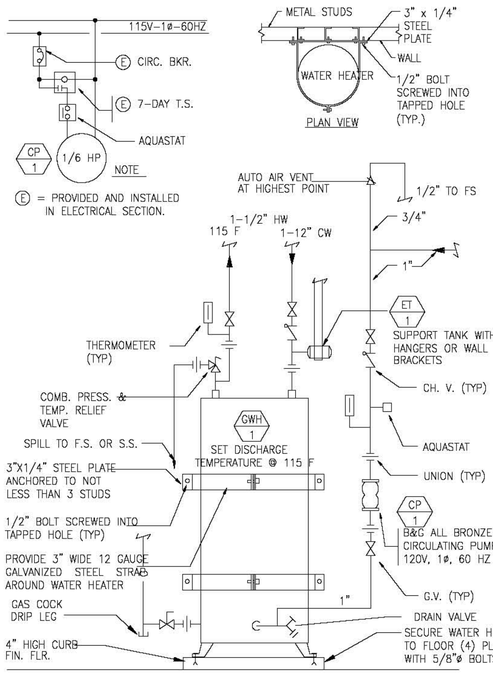
FIRE RISER ASSEMBLY — SCALE NONE — 6



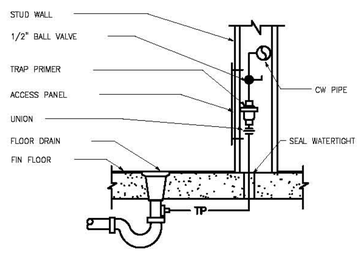
HUB DRAIN (CONTRACTOR'S CHOICE) — SCALE NONE — 6



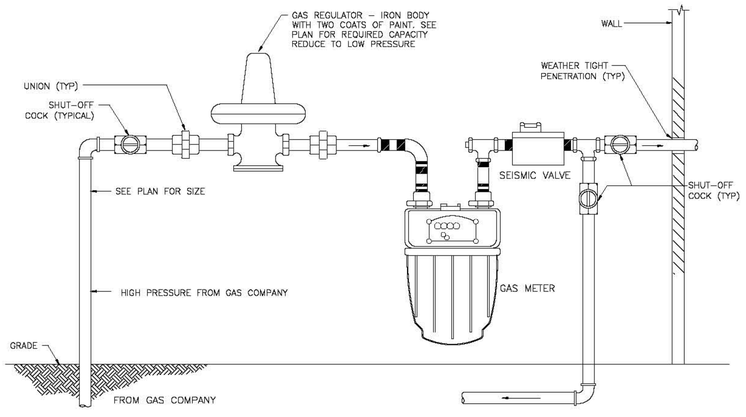
EWH UNDERCOUNTER ELECTRIC WATER HEATER — SCALE NONE — 5



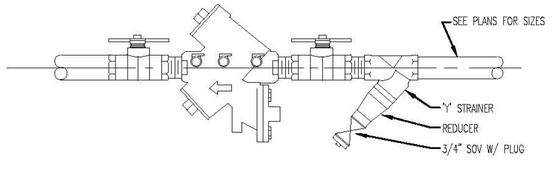
WATER HEATER PIPING DIAGRAM — SCALE NONE — 6



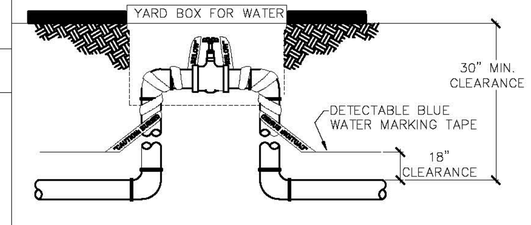
TRAP PRIMER — SCALE NONE — 6



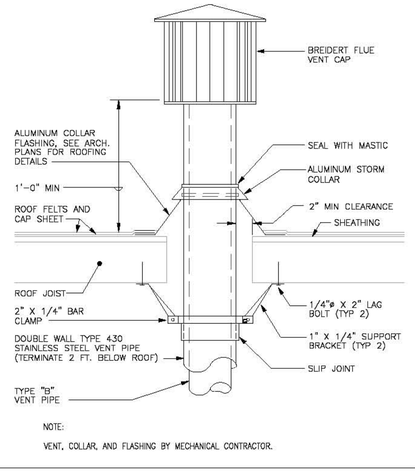
GAS PRESSURE REGULATOR WITH METER AND SEISMIC VALVE — SCALE NONE — 2



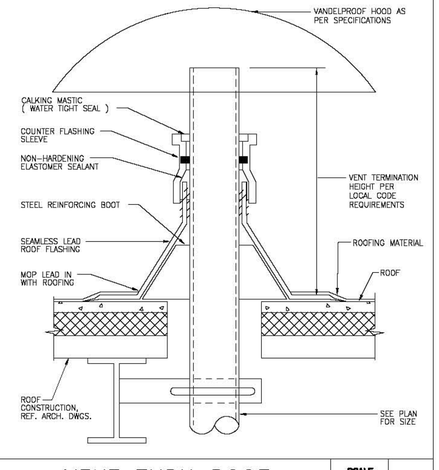
BACKFLOW PREVENTER — SCALE NONE — 1



WATER LINE WITH MARKING TAPE — SCALE NONE — 1



FLUE THRU ROOF



VENT THRU ROOF — SCALE NONE — 1

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PLUMBING DETAILS

P-401

HVAC LEGEND

DUCTWORK

SYMBOL (DOUBLE LINE)	DESCRIPTION	SYMBOL (SINGLE LINE)
AD/AP	ACCESS DOOR / ACCESS PANEL	
	FLEXIBLE CONNECTION	
	FLEXIBLE DUCT RUNOUT TO DIFFUSER	
12x6	DUCT SIZE (WIDTH x DEPTH)	12x6
	DUCT THROUGH BEAM PENETRATION	
R D	DUCT OFFSET (RISE OR DROP)	R D
VD	VOLUME DAMPER	VD
FD SD FSD	FIRE, SMOKE OR FIRE/SMOKE DAMPER	FD SD FSD
	SUPPLY DUCT UP	
	SUPPLY DUCT DOWN	
	EXHAUST DUCT UP	
	EXHAUST DUCT DOWN	
	RETURN DUCT UP	
	RETURN DUCT DOWN	
	CROSS SECTION OF SUPPLY DUCT	
	CROSS SECTION OF EXHAUST AIR DUCT	
	CROSS SECTION OF RETURN AIR DUCT	
	CROSS SECTION OF ROUND DUCT	
	DUCT ELBOW WITH TURNING VANES	
	SMOOTH RADIUS DUCT ELBOW WITHOUT TURNING VANES	
12x6	ACOUSTICAL LINING DUCT DIMENSION IS ID	12x6
M	MOTORIZED DAMPER	M
SIZE / TD CFM	TRANSFER DUCT (WITH LINER)	SIZE / TD CFM
8'-11" BOD	INDICATES 8'11" TO BOTTOM OF DUCT	8'-11" BOD
NECK SIZE-TAG-CFM	ROUND OR SQUARE CEILING SUPPLY DIFFUSER (SEE SCHEDULE) 4-WAY THROW UNLESS INDICATED OTHERWISE.	NECK SIZE-TAG-CFM
NECK SIZE-TAG-CFM	ROUND OR SQUARE CEILING EXHAUST REGISTER (SEE SCHEDULE)	NECK SIZE-TAG-CFM
NECK SIZE-TAG-CFM	ROUND OR SQUARE CEILING RETURN REGISTER (SEE SCHEDULE)	NECK SIZE-TAG-CFM
NECK SIZE-TAG-CFM	ROUND OR SQUARE CEILING RETURN GRILLE (SEE SCHEDULE)	NECK SIZE-TAG-CFM
NECK SIZE-TAG-CFM	ROUND OR SQUARE CEILING RETURN GRILLE (SEE SCHEDULE)	NECK SIZE-TAG-CFM
NECK SIZE-TAG-CFM	ROUND OR SQUARE CEILING RETURN GRILLE (SEE SCHEDULE)	NECK SIZE-TAG-CFM
NECK SIZE-TAG-CFM	WALL SUPPLY REGISTER (SEE SCHEDULE)	NECK SIZE-TAG-CFM
NECK SIZE-TAG-CFM	WALL RETURN REGISTER (SEE SCHEDULE)	NECK SIZE-TAG-CFM
A	LINEAR SLOT DIFFUSER (SEE SCHEDULE)	A
	VARIABLE AIR VOLUME TERMINAL UNIT	
	VARIABLE AIR VOLUME TERMINAL UNIT W/REHEAT	
	FAN POWERED TERMINAL UNIT	
	FAN POWERED TERMINAL UNIT W/ REHEAT	
ST	SOUND TRAP	
DSD	DUCT SMOKE DETECTOR	

GENERAL

SYMBOL	DESCRIPTION
(N)	NEW WORK
℄	CENTER LINE
	POINT OF CONNECTION
AD/AP	ACCESS DOOR / ACCESS PANEL
T H CO CO2	THERMOSTAT, HUMIDISTAT, CO SENSOR, CO2 SENSOR
TS	TEMPERATURE SENSOR
TS	TIMER SWITCH
1 / M-1	DETAIL 1, DRAWING M-1
A / M-1	SECTION A, DRAWING M-1
1 / M-1	ELEVATION 1, DRAWING M-1
EXH / 1	RISER IDENTIFICATION EXHAUST #1
HP / 1	EQUIPMENT IDENTIFICATION HEAT PUMP UNIT #1
1	SHEET NOTE REFERENCE TAG

PIPING

SYMBOL	DESCRIPTION
	DIRECTION OF SLOPE
	DIRECTION OF FLOW
	PIPE UP
	PIPE DOWN
	PIPE DROP/PIPE RISE
	TOP CONNECTION - BRANCH LINE
	BOTTOM CONNECTION - BRANCH LINE
	PIPE ANCHOR
	TEE UP
	TEE DOWN
	STRAINER
	STRAINER WITH BLOW OFF
	INLINE PUMP
	BASE MOUNTED PUMP
	TEST TEE
	TEST TAP (PETE'S PLUG)
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	VACUUM BREAKER
	VENT THRU ROOF
	PIPE GUIDE
	EXPANSION JOINT
	FLEXIBLE CONNECTOR
	UNION
	CAPPED OR PLUGGED TEE
	BLIND FLANGE, CAP
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	EXPANSION LOOP
	VALVE ON RISE
RD	REFRIGERANT DISCHARGE
RS	REFRIGERANT SUCTION

HVAC DRAWING LIST

M-001 MECHANICAL LEGEND AND SYMBOLS
M-002 MECHANICAL EQUIPMENT SCHEDULE

M-110 MECHANICAL WEST BUILDING FLOOR PLAN - LEVEL 1
M-111 MECHANICAL EAST BUILDING FLOOR PLAN - LEVEL 1
M-112 MECHANICAL EAST BUILDING FLOOR PLAN - LEVEL 2
M-115 MECHANICAL WEST BUILDING ROOF PLAN
M-116 MECHANICAL EAST BUILDING ROOF PLAN

M-501 MECHANICAL DETAILS

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AC	AIR CONDITIONING
ACCEPT	ACCEPTANCE
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADD	ADDITION
AF	AFTER FILTER
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MEASURING STATION
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AG	AIR GAP
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AMB	AMBIENT
A	AMPERE
AP	ACCESS PANEL
APPROX	APPROXIMATELY
ARCH	ARCHITECT
ARI	AMERICAN REFRIGERATION INSTITUTE
AS	AIR SEPARATOR
AUTO	AUTOMATIC
AUX	AUXILIARY
B	BOILER
BBD	BOILER BLOW DOWN
BDD	BACKDRAFT DAMPER
BEL	BELOW
BHP	BRAKE HORSEPOWER
BHT	BASEBOARD HEATER
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BFP	BACKFLOW PREVENTER
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
BV	BALL VALVE OR BALANCING VALVE
BYV	BUTTERFLY VALVE
C	COMMON, CONDENSATE OR CONDUIT
CA	CONTROL AIR
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CB	CHILLED BEAM
CC	COOLING COIL OR CONTROLS CONTRACTOR
CEG	CEILING EXHAUST GRILLE
CER	CEILING EXHAUST REGISTER
CFF	CAP FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CDWR	CONDENSER WATER RETURN
CDWS	CONDENSER WATER SUPPLY
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CH	CHILLER
CHV	CHECK VALVE
CL	CENTERLINE
CLG	CEILING
CO	CLEANOUT
COL	COLUMN
COMP	COMPRESSOR
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CONT	CONTINUATION
CONTR	CONTRACTOR
COP	COEFFICIENT OF PERFORMANCE
CP	CONTROL PANEL OR CONDENSATE PUMP
CPF	CHEMICAL POT FEEDER
CR	CONDENSATE RETURN
CRR	CEILING RETURN REGISTER
CRG	CEILING RETURN GRILLE
CS	CIRCUIT SETTER
CSD	CEILING SUPPLY DIFFUSER
CTE	CONNECT TO EXISTING
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CV	CONSTANT VOLUME OR CONTROL VALVE
CW	COLD WATER
D	DROP OR DRAIN
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DEFL	DEFLECTION
DIA	DIAMETER
DIFF	DIFFERENCE
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DPT	DEW POINT TEMPERATURE
DSD	DUCT SMOKE DETECTOR
DV	DIAPHRAGM VALVE
DWG(S)	DRAWING(S)
DX	DIRECT EXPANSION
(E)	EXISTING
EA	EXHAUST AIR OR EACH
EAD	EXHAUST AIR DAMPER
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECON	ECONOMIZER
EDB	ENTERING DRY BULB TEMPERATURE
EER	ENERGY EFFICIENCY RATING
EF	EXHAUST FAN
EFF	EFFICIENCY
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EMS	ENERGY MANAGEMENT SYSTEM
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXPT	EXPANSION TANK
EXT	EXTERNAL
F	FAHRENHEIT OR FILTER
FPB	FAN POWERED BOX
FC	FLEXIBLE CONNECTION OR FAIL CLOSED
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FF	FINAL FILTER OR FINISHED FLOOR
FLR	FLOOR
FO	FAIL OPEN
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE/SMOKE DAMPER
FT	FOOT OR FEET
G	GAS
GA	GAUGE, GAGE
GAL	GALLONS
GALV	GALVANIZED
GC	GAS COCK OR GENERAL CONTRACTOR
GLV	GLOBE VALVE
GN	GENERAL NOTE
GPM	GALLONS PER MINUTE
GND	GROUND
GV	GATE VALVE
H	HEIGHT
HB	HOSE BIBB
HC	HEATING COIL
HD	HEAD
HOR	HORIZONTAL
HP	HIGH PRESSURE
HP	HORSEPOWER
HP	HEAT PUMP
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HR	HOUR(S)
HRU	HEAT RECOVERY UNIT
HS	HUMIDITY SENSOR
HTR	HEATER
HV	HOSE VALVE
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HW	HOT WATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HX	HEAT EXCHANGER
HZ	FREQUENCY (HERTZ)
ID	INSIDE DIAMETER
IN	INCH(ES)
IPLV	INTEGRATED PART LOAD VALUE
JB	JUNCTION BOX
KW	KILOWATT
KWH	KILOWATT HOUR
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LDB	LEAVING DRY BULB
LF	LINEAR FEET
LP	LOW PRESSURE
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
M	MOTOR
MA	MIXED AIR
MAD	MIXED AIR DAMPER
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MERV	MINIMUM EFFICIENCY RATING VALUE
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
MPC	MEDIUM PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM
MV	MANUAL AIR VENT
(N)	NEW
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NUMBER OR NORMALLY OPEN
NOM	NOMINAL
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OAD	OUTSIDE AIR DAMPER
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OPER	OPERATING
OSA	OUTSIDE AIR
OV	OUTLET VELOCITY
P	PUMP OR PRESSURE OR POLE
PC	PUMPED CONDENSATE
PD	PRESSURE DROP
PF	PREFILTER
PG	PIPE GUIDE OR PRESSURE GAUGE
PH	PHASE (ELECTRICAL)
PHC	PREHEAT COIL
PLBG	PLUMBING
POC	POINT OF CONNECTION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SENSOR
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
PV	PLUG VALVE
QTY	QUANTITY
R	RISERS, RELOCATE OR RISE
RA	RETURN AIR
RAD	RETURN AIR DAMPER
RD	REFRIGERANT DISCHARGE OR ROOF DRAIN
REF	ROOFTOP EXHAUST FAN
REFRIG	REFRIGERATION
REJ	REJECTION
REQ'D	REQUIRED
REV	REVISE, REVISION OR REVOLUTIONS
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHT	RADIANT HEATER
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
S	SUPPLY OR SLOPE
SA	SUPPLY AIR
SCFM	CFM, STANDARD CONDITIONS
SD	SMOKE DAMPER
SEER	SEASONAL ENERGY EFFICIENCY RATING
SEN	SENSIBLE
SF	SUPPLY FAN OR SQUARE FEET
SHC	SQUARE HEAD COCK
SN	SHEET NOTE
SP	STATIC PRESSURE
SPD	SPLITTER DAMPER
SPEC	SPECIFICATIONS
SQ IN	SQUARE INCH
ST	STRAINER OR SOUND TRAP
STD	STANDARD
STRUCT	STRUCTURAL
SV	STEAM VENT
T	THERMOMETER OR THERMOSTAT
TCP	TEMPERATURE CONTROL PANEL
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TI	TENANT IMPROVEMENT
TRG	TRANSFER GRILLE
TS	TEMPERATURE SENSOR / TIMER SWITCH
TSP	TOTAL STATIC PRESSURE
TT	TEST TAP OR TEST TEE
TXV	THERMAL EXPANSION VALVE
(TYP)	TYPICAL
U	HEAT TRANSFER COEFFICIENT
UFAD	UNDER FLOOR AIR DISTRIBUTION
UG	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VENT OR VOLT OR VELOCITY
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	VOLUME DAMPER
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VFM	VENTURI FLOW METER
VOL	VOLUME
VTR	VENT THROUGH ROOF
W	WASTE OR WIDTH OR WATTS
W/	WITH
W/O	WITHOUT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WEG	WALL EXHAUST GRILLE
WG	WATER GAUGE
WP	WORKING PRESSURE
WPD	WATER PRESSURE DROP
WRR	WALL RETURN REGISTER
WSHP	WATER-SOURCE HEAT PUMP
WSR	WALL SUPPLY REGISTER
WT	WEIGHT
XFMR	TRANSFORMER
Z	ZONE

HVAC BASIS OF DESIGN

1. CODES AND STANDARDS
   A. AMERICANS WITH DISABILITIES ACT, (ADA)
   B. BUILDING CODES ENFORCED BY THE AUTHORITY HAVING JURISDICTION IN CALIFORNIA:
      1. 2010 CALIFORNIA BUILDING CODE (CBC) BASED ON 2009 INTERNATIONAL BUILDING CODE (IBC) WITH STATE AMENDMENTS.
      2. 2010 CALIFORNIA MECHANICAL CODE (CMC) BASED 2009 UNIFORM MECHANICAL CODE (UMC) WITH STATE AMENDMENTS.
      3. 2010 TITLE 24, PART 6 CALIFORNIA ENERGY EFFICIENCY STANDARDS FOR RESIDENTIAL AND NONRESIDENTIAL BUILDINGS
      4. 2010 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL-GREEN), TITLE 24 PART 11.
      5. AMERICANS WITH DISABILITY ACT (ADA).
   C. METRO RAIL DESIGN CRITERIA
      1. SECTION 8, MECHANICAL
      2. SECTION 11, YARDS AND SHOPS
   D. METRO RAIL MECHANICAL STANDARDS DRAWINGS, MS-000 THROUGH MS-013

2. OUTDOOR DESIGN CONDITIONS
   A. SUMMER: 84°F DB/70°F WB PER METRO RAIL DESIGN CRITERIA (NOTE: THIS IS BELOW 86°F DB/68°F, ASHRAE 0.5% DESIGN CRITERIA FOR TORRANCE.)
   B. WINTER: 36°F PER METRO RAIL DESIGN CRITERIA (NOTE: THIS EXCEEDS 32°F, ASHRAE MEDIAN OF EXTREME FOR TORRANCE)
   C. ELEVATION: 110 FT.
   D. CALIFORNIA CLIMATE ZONE: 6

3. INDOOR DESIGN CONDITIONS
   A. OFFICES, CONFERENCE ROOMS, RETAILS AND SIMILAR AREAS:
      1. COOLING: 78°F +/-3°F
      2. HEATING: 72°F +/-3°F
   B. TOILET ROOM
      1. COOLING: 78°F +/-3°F
      2. HEATING: 68°F +/-3°F
   C. JANITOR ROOM
      1. COOLING: VENTILATION ONLY 10°F ABOVE OUTDOOR TEMPERATURE
      2. HEATING: NONE
   D. STORAGE ROOMS
      1. COOLING: NONE
      2. HEATING: 45°F +/-3°F
   E. ELECTRICAL AND MECHANICAL EQUIPMENT ROOMS
      1. COOLING: VENTILATION ONLY 10°F ABOVE OUTDOOR TEMPERATURE
      2. HEATING: NONE
   F. SERVER ROOM AND TELECOM ROOMS
      1. COOLING: 70°F +/-3°F
      2. HEATING: NONE
   G. PARKING STRUCTURE
      1. COOLING: NONE
      2. HEATING: NONE
   H. HUMIDITY CONTROL: NONE FOR ALL AREAS

4. VENTILATION CRITERIA:
   A. PARKING STRUCTURE: NATURAL VENTILATION
   B. RETAIL AREA: HVAC WHEN WALL PANELS ARE CLOSED, OR NATURAL VENTILATION WHEN WALL PANELS ARE OPENED
   C. OFFICES WITH OPERABLE WINDOWS: HVAC WHEN WALL PANELS ARE CLOSE, OR NATURAL VENTILATION WHEN WINDOWS ARE OPENED
   D. ALL OTHER AREAS: MEET ASHRAE STANDARDS 62.1

5. EXHAUST TO OUTDOORS
   A. JANITORS AND TOILET ROOMS: 10 AIR CHANGES PER HOUR, CONTINUOUS
   B. COPY ROOM: MIN. 0.5 CFM PER SQ.FT. WITH MIN. 0.02" W.G. NEGATIVE ROOM PRESSURE
   C. STORAGE ROOMS (AS NEEDED BASED ON MATERIAL STORED): 6 AIR CHANGES PER HOUR, CONTINUOUS

6. BUILDING ENVELOPE
   A. GLAZING: _TBD_
      1. TYPICAL VERTICAL:
         a. DESCRIPTION: _TBD_
         b. U= _TBD_ (PREFER 0.29 FOR GLASS ONLY)
         c. U = _TBD_ (PREFER 0.58 WITH FRAME)
         d. SHADING COEFFICIENT = _TBD_ (PREFER 0.29 CENTER OF GLASS)
   B. WALL CONSTRUCTION:
      1. DESCRIPTION: _TBD_ (WITH MIN. R-19 BATT INSULATION)
      2. OVERALL U-VALUE = _TBD_
   C. ROOF:
      1. DESCRIPTION: _TBD_ (LIGHT COLORED MEMBRANE WITH R-30 INSULATION)
      2. OVERALL U-VALUE = _TBD_

7. INTERNAL HEAT GAIN
   A. LIGHTING:
      1. RETAILS: 1.5 W/SQ. FT.
      2. OFFICES: 1.2 W/SQ. FT.
      3. SECURITY ROOM: 1.2 W/SQ. FT.
   B. RECEPTACLE POWER:
      1. RETAILS: 1.0 W/SQ. FT.
      2. OFFICE: 1.0 W/SQ. FT.
      3. SECURITY ROOM: 1.0 W/SQ. FT.
   C. OCCUPANTS:
      1. ALL OTHER AREA: 250 BTUH SENSIBLE/200 BTUH LATENT
   D. SERVER ROOM: TBD
   E. ELECTRICAL TRANSFORMERS: 3% LOSS/50% DIVERSITY

8. OCCUPANCY CRITERIA:
   A. PER CALIFORNIA ENERGY CODE SECTION 121.

9. DUCTWORK DESIGN CRITERIA
   A. ALL DUCTWORK: 0.08" W.G./100 FT. MAX
   B. MEDIUM PRESSURE SUPPLY
      1. 1500 FPM MAX ABOVE CEILING
      2. 2000 FPM MAX IN SHAFT
   C. RETURN/EXHAUST/LOW PRESSURE VELOCITY
      1. 1200 FPM MAX ABOVE CEILING
      2. 1500 FPM MAX IN SHAFT

10. FUTURE GROWTH CAPACITY PER METRO RAIL DESIGN CRITERIA
   A. ADDITIONAL 15% SENSIBLE LOAD.
   B. ADDITIONAL 5% LATENT LOAD.

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MECHANICAL
LEGEND AND SYMBOLS

M-001

PACKAGED ROOFTOP AC UNIT SCHEDULE

TAG	MFR & MODEL	LOCATION	AREA SERVED	NOM. CAP. (TONS)	SUPPLY AIRFLOW (CFM)	SUPPLY MIN OSA (CFM)	SUPPLY TSP (IN.WG.)	SUPPLY HP	SUPPLY BHP	SUPPLY DRIVE	REFRIG	COOLING TOTAL (MBH)	COOLING SENS (MBH)	COOLING EAT DB/WB (°F)	COOLING LAT DB/WB (°F)	COOLING EER	COOLING SEER	COOLING IPLV	HEATING INPUT (MBH)	HEATING OUTPUT (MBH)	HEATING AFUE (%)	FILTER TYPE	FILTER MERV	ELECTRICAL V/PH	ELECTRICAL MCA (A)	ELECTRICAL MOCP (A)	PV PANELS	UNIT SIZE (L"xW"xH")	OPER. WT. (LBS)	NOTES
RTU-1	Lennox SunSource LGH060H4E	ROOF	-	5	2000	-	1.36	1	-	-	R-410A	63.3	-	-	-	-	-	-	150	120	-	-	-	460V 3Ph	19	25	9	-	1100	
RTU-2	Lennox SunSource LGH060H4E	ROOF		5	2000		1.36	1			R-410A	63.3							150	120				460V 3Ph	19	25	9		1100	
RTU-3	Lennox SunSource LGH036H4E	ROOF		3	1200		1.36	0.5			R-410A	36.8							65	62				460V 3Ph	12	15	6		960	
RTU-4	Lennox SunSource LGH060H4E	ROOF		5	2000		1.36	1			R-410A	63.3							150	120				460V 3Ph	19	25	15		1100	
RTU-5	Lennox SunSource LGH060H4E	ROOF		5	2000		1.36	1			R-410A	63.3							150	120				460V 3Ph	19	25	9		1100	
RTU-6	Lennox SunSource LGH060H4E	ROOF		5	2000		1.36	1			R-410A	63.3							150	120				460V 3Ph	19	25	9		1100	
RTU-7	Lennox SunSource LGH060H4E	ROOF		5	2000		1.36	1			R-410A	63.3							150	120				460V 3Ph	19	25	9		1100	
RTU-8	Lennox SunSource LGH060H4E	ROOF		5	2000		1.36	1			R-410A	63.3							150	120				460V 3Ph	19	25	9		1100	

NOTES
1. FUSED DISCONNECT PROVIDED BY ELEC CONTRACTOR.
2. PROVIDE FACTORY-INSTALLED VFD FOR SUPPLY FAN. PROVIDE INVERTER-DUTY MOTOR WITH SHAFT GROUNDING DEVICE OR INSULATED BEARINGS.
3. UNIT TO BE CONNECTED TO EMERGENCY POWER.
4. PROVIDE xxHP POWER EXHAUST FAN WITH (ENTHALPY / TEMPERATURE) ECONOMIZER AND SEPARATE ELECTRICAL CONNECTION AT xxV / xx PH.
5. PROVIDE 100% MODULATING (ENTHALPY / TEMPERATURE) ECONOMIZER.
6. COOLING CAPACITY BASED ON 95°F AMBIENT DB.
7. PROVIDE (FACTORY / VIBRATION ISOLATION) (14") HIGH ROOF CURB.
8. UNIT TO HAVE (HORIZONTAL / VERTICAL) DISCHARGE FOR SUPPLY AND RETURN
9. SEE x / M-xx FOR INSTALLATION DETAIL.
10. PROVIDE (NATURAL GAS / PROPANE) HEATING (AT xx PSIG).
11. PROVIDE SMOKE DETECTORS ON THE (SUPPLY / RETURN) FOR AUTOMATIC UNIT SHUTDOWN.
12. PROVIDE NEMA PREMIUM EFFICIENCY MOTORS ON ALL FANS.
13. PROVIDE PROGRAMMABLE THERMOSTAT (MANUF/MODEL) OR APPROVED EQUAL.
14. PROVIDE CONDENSATE PUMP WITH 120 V / 1PH CONNECTION.
15. PROVIDE FULLY MODULATING BURNER.
16. PROVIDE CONDENSER COIL GUARD.
17. PROVIDE CHANGE-OVER BYPASS CONTROLS. REFER TO PLANS FOR BYPASS DAMPER SIZE AND LOCATION.

COMPUTER ROOM AC UNIT - AIR COOLED SCHEDULE

TAG	MFR & MODEL	LOCATION	AREA SERVED	NOM. CAP. (TONS)	SUPPLY AIRFLOW (CFM)	SUPPLY ESP (IN.WG.)	SUPPLY HP	SUPPLY DRIVE	COOLING TOTAL (MBH)	COOLING SENS (MBH)	COOLING EAT DB/WB (°F)	COOLING LAT DB/WB (°F)	FILTER	ELECTRICAL V/PH	ELECTRICAL FLA (A)	ELECTRICAL WSA (A)	ELECTRICAL MOCP (A)	UNIT SIZE (L"xW"xH")	OPER. WT. (LBS)	NOTES
CRAC-FC1	LIEBERT MMD36E7X00DE	-	-	3.0	1250	0.3	0.5	BELT	32,500	28,400	72/60	55/54	MERV 8 DISPOSABLE	277/1	2.3	2.9	15	58x30x24	225	1,2,3,4,5,6,7,8

NOTES
1. FUSED DISCONNECT PROVIDED BY ELEC CONTRACTOR.
2. **PROVIDE FIRESTAT, FILTER CLOG SWITCH, DISCONNECT SWITCH, FILTER BOX, PRE-CHARGED REFRIGERANT LINE, REFRIGERANT LINE SWEAT ADAPTER KIT & REMOTE TEMPERATURE/HUMIDITY SENSORS.**
3. PROVIDE LIEBERT CONDENSATE PUMP INTEGRAL TO THE UNIT.
4. COOLING CAPACITY BASED ON 105°F AMBIENT DB.
5. PROVIDE WIRING AND REFRIGERANT PIPING BETWEEN SPLIT SYSTEM COMPONENTS PER MANUFACTURER'S RECOMMENDATIONS.
6. PROVIDE WITH RELAY FOR INTERLOCK WITH EMERGENCY PUSH BUTTON IN DATA ROOM. SPLIT SYSTEM SHALL SHUT-OFF WHEN BUTTON IS PUSHED.
7. REUSE EXISTING UNIT MOUNTING MECHANISM WITH SPRING HANGERS TO MOUNT THE NEW UNIT.

AIR-COOLED CONDENSER UNIT SCHEDULE

TAG	MFR & MODEL	LOCATION	EQUIP. SERVED	NOM. CAP. (TONS)	REFRIG	ELECTRICAL V/PH	ELECTRICAL FLA (A)	ELECTRICAL WSA (A)	ELECTRICAL MOCP (A)	UNIT SIZE (L"Xw"xH")	OPER. WT. (LBS)	NOTES
CRAC-CU1	LIEBERT PFH037A-AH7	ROOF	CRAC-FC1	3.0	R-407C	460/3	7.4	8.8	15	48x18x31	241	1,2,3,4

NOTES
1. FUSED DISCONNECT PROVIDED BY ELEC CONTRACTOR.
2. UNIT TO BE MOUNTED ON HOUSEKEEPING PAD ON THE ROOF. VERIFY EXACT LOCATION ON SITE.
3. CAPACITY RATED AT ARI STANDARD CONDITIONS.
4. PROVIDE NEOPRENE MOUNTING PADS UNDER THE UNIT FOR VIBRATION ISOLATION.

DIFFUSER AND GRILLE SCHEDULE

TAG	MFR	MODEL	DESCRIPTION	FACE TYPE	FACE SIZE (IN.)	COLOR (SEE NOTE #1)	MATERIAL	OBD	NOTES
A	TITUS	MCD	CEILING SUPPLY	FLUSH	24 x 24	WHITE	STEEL	NO	1,2,3,5,6,7
B	TITUS	PAR	CEILING RETURN / EXHAUST	FLUSH	24 x 24	WHITE	STEEL	NO	1,2,3,4,5,6,7

NOTES
1. **ANY GRILLE MOUNTED DIRECTLY ON EXPOSED DUCT SHALL MATCH COLOR OF DUCT (IF PAINTED) OR SHALL HAVE CLEAR ANODIZED FINISH (IF DUCT IS UNPAINTED).**
2. **MAXIMUM TOTAL PRESSURE DROP SHALL BE 0.1" WG.**
3. **MAXIMUM NC LEVEL SHALL BE 25.**
4. **ALL VISIBLE SURFACES AND DUCTWORK BEHIND FACE SHALL BE PAINTED FLAT BLACK.**
5. **NECK SIZE AND CFM SHOWN ON PLANS (E.G. 12x12-A-400 REFERS TO TAG "A" WITH 12x12 NECK AND 400 CFM).**
6. **COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS OR BORDER TYPES.**
7. **PROVIDE MINIMUM 3"-HIGH RECTANGULAR/SQUARE TO ROUND TRANSITION AS REQUIRED. ROUND NECK AREA SHALL EQUAL OR EXCEED RECTANGULAR NECK AREA.**

FAN SCHEDULE

TAG	MFR & MODEL	LOCATION	AREA SERVED	TYPE	DRIVE	AIR FLOW (CFM)	SP (IN.WG.)	FAN RPM	BHP	ELECTRICAL HP	ELECTRICAL WATT	ELECTRICAL V/PH	UNIT SIZE (L"xW"xH")	OPER. WT. (LBS)	NOTES
EF-1	COOK 80SQN-B	-	-	INLINE	BELT	400	0.40	1423	0.09	1/6	-	120/1	22X27X14	120	1,2,3,4,5
EF-2	PANASONIC FV-08VKS3	-	-	CEILING MOUNTED	DIRECT	70	0.20	1569	-	-	37	120/1	17X15X11	14	
EF-3	PANASONIC FV-11VK3	-	-	CEILING MOUNTED	DIRECT	90	0.20	1569	-	-	37	120/1	17X15X11	14	
EF-4	PANASONIC FV-13VKS3	-	-	CEILING MOUNTED	DIRECT	120	0.20	1569	-	-	37	120/1	17X15X11	14	
EF-5	COOK 100SQN-B	-	-	INLINE	BELT	900	1.00	2317	0.45	1/2	-	120/1	22X27X14	120	1,2,3,4,5
EF-6	COOK 120SQN-B	-	-	INLINE	BELT	1140	1.00	1684	0.43	1/2	-	120/1	22X31X19	180	1,2,3,4,5
EF-7	COOK 70SQN-B	-	-	INLINE	BELT	180	0.70	1842	0.12	1/6	-	120/1	22X27X14	120	1,2,3,4,5
EF-8	COOK 70SQN-B	-	-	INLINE	BELT	210	0.70	1935	0.14	1/6	-	120/1	22X27X14	120	1,2,3,4,5
EF-9	COOK 90C15DH	-	-	CENTRIFUGAL	DIRECT	400	0.40	1550	-	1/6	-	120/1	19X19X17	100	1,2,3,4,5
EF-10	COOK 120ACEB	-	-	CENTRIFUGAL	BELT	800	0.40	1069	0.10	1/6	-	120/1	29X29X27	100	1,2,3,4,5

NOTES
1. STARTER AND FUSED DISCONNECT PROVIDED BY ELECTRICAL CONTRACTOR.
2. PROVIDE BACKDRAFT DAMPER AND INSECT SCREEN.
3. PROVIDE NEMA PREMIUM EFFICIENCY MOTOR.

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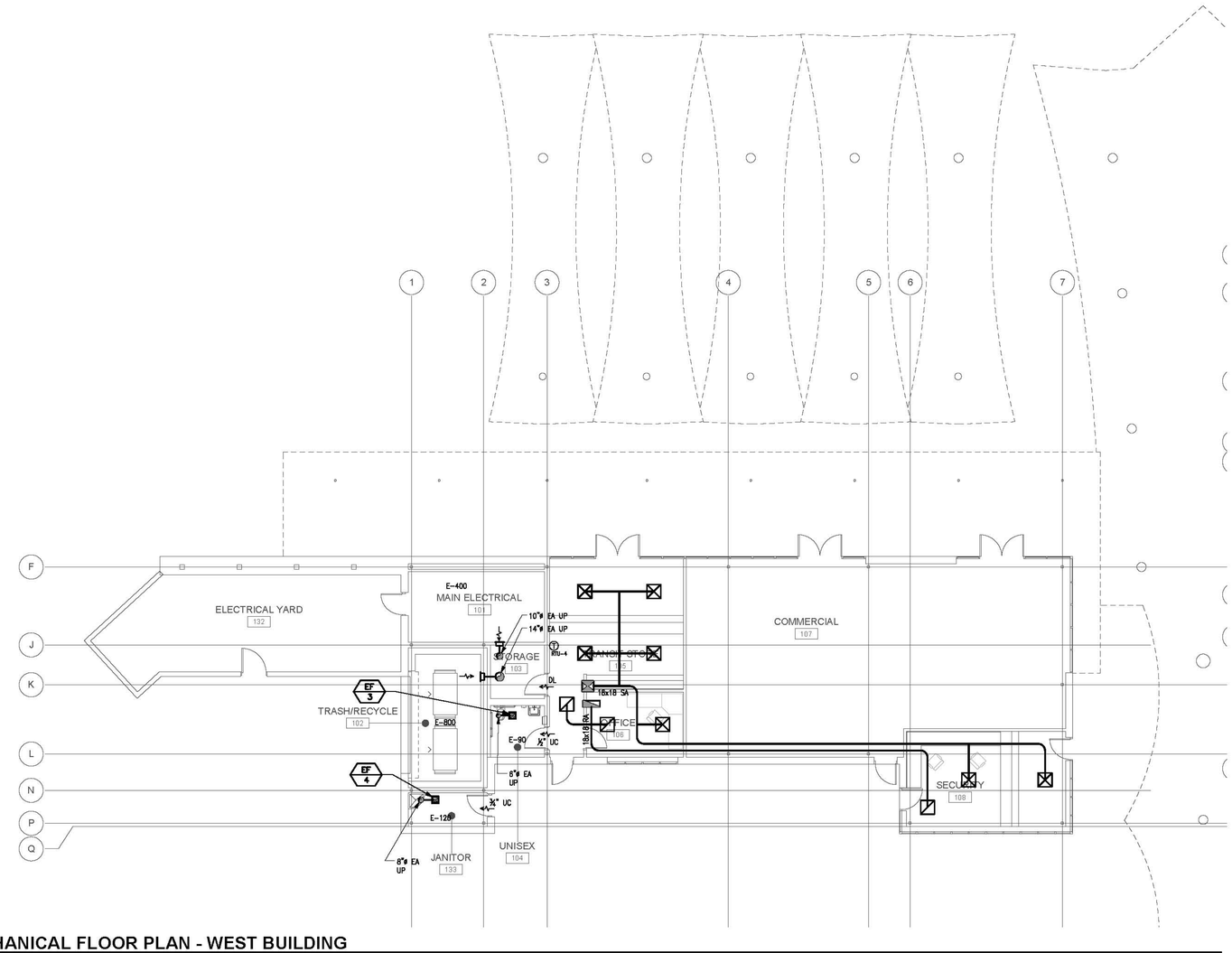
MECHANICAL
EQUIPMENT SCHEDULES

M-002



1 MECHANICAL FLOOR PLAN - WEST BUILDING
SCALE: 1/8"=1'-0"

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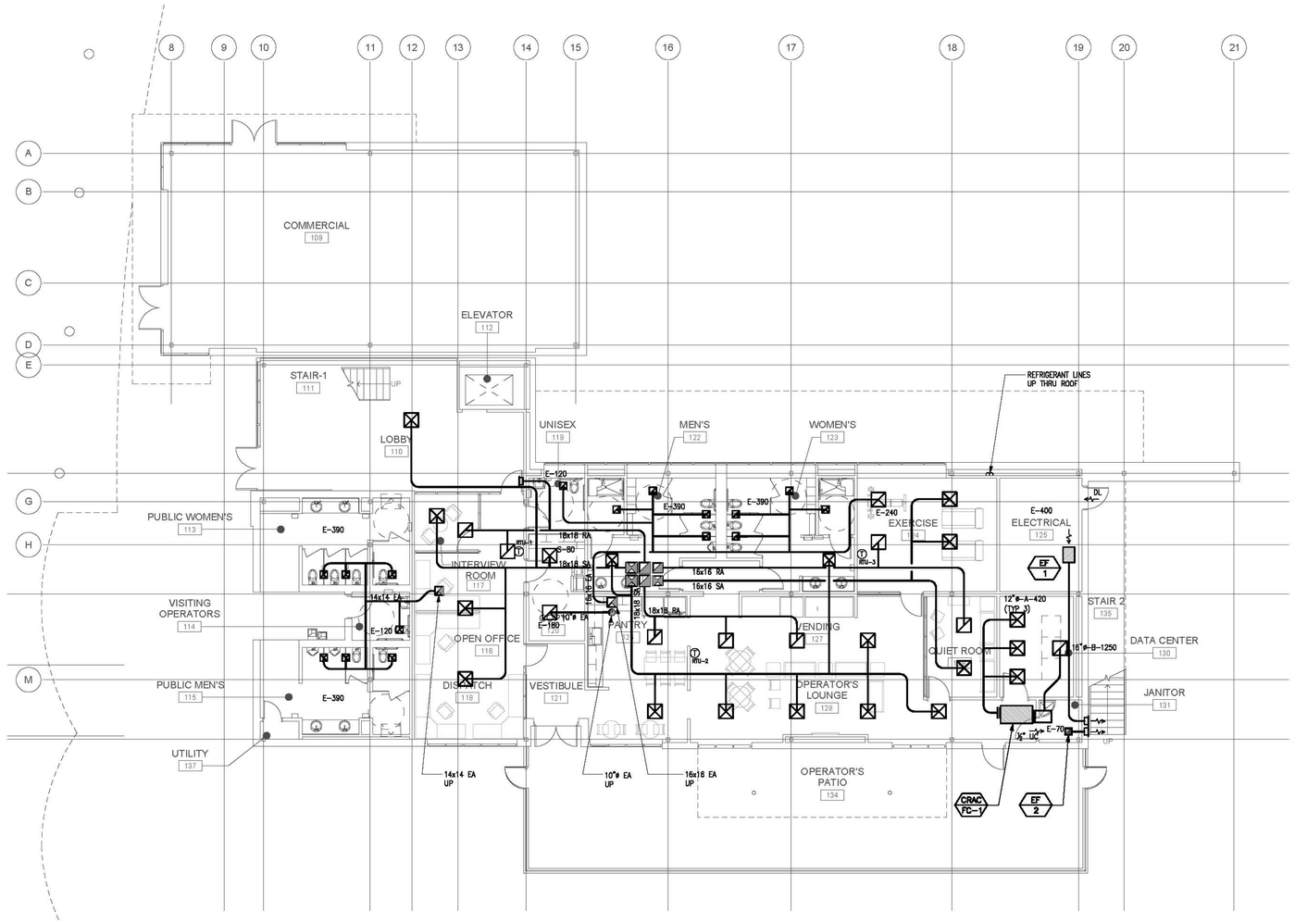
MECHANICAL
WEST BUILDING FLOOR PLAN

M-110



1 LEVEL 1 FLOOR PLAN - EAST BUILDING

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

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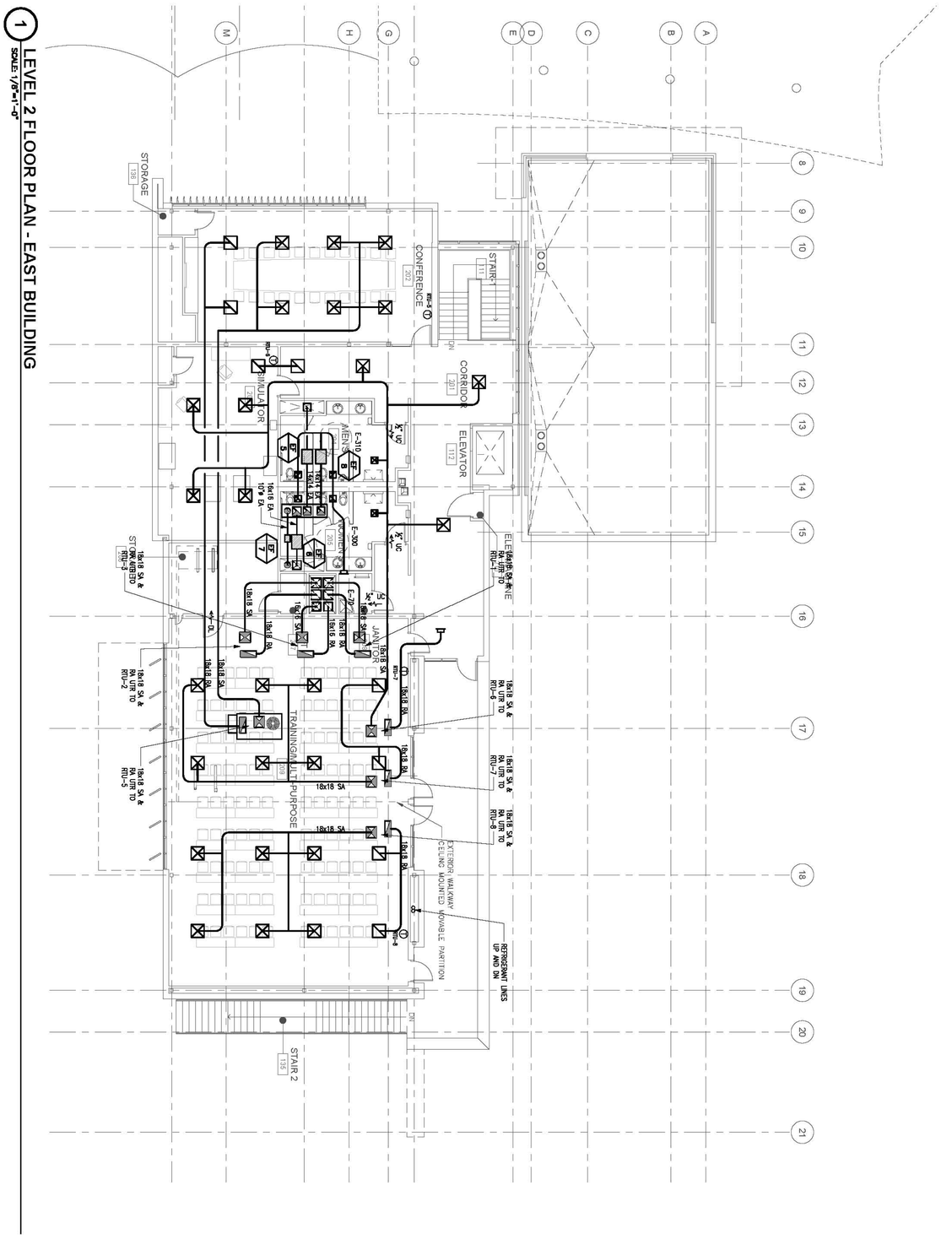
MECHANICAL
EAST BUILDING FLOOR PLAN - LEVEL 1

M-111



1 LEVEL 2 FLOOR PLAN - EAST BUILDING
SCALE: 1/8"=1'-0"

NORTH

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MECHANICAL
EAST BUILDING FLOOR PLAN - LEVEL 2

M-112

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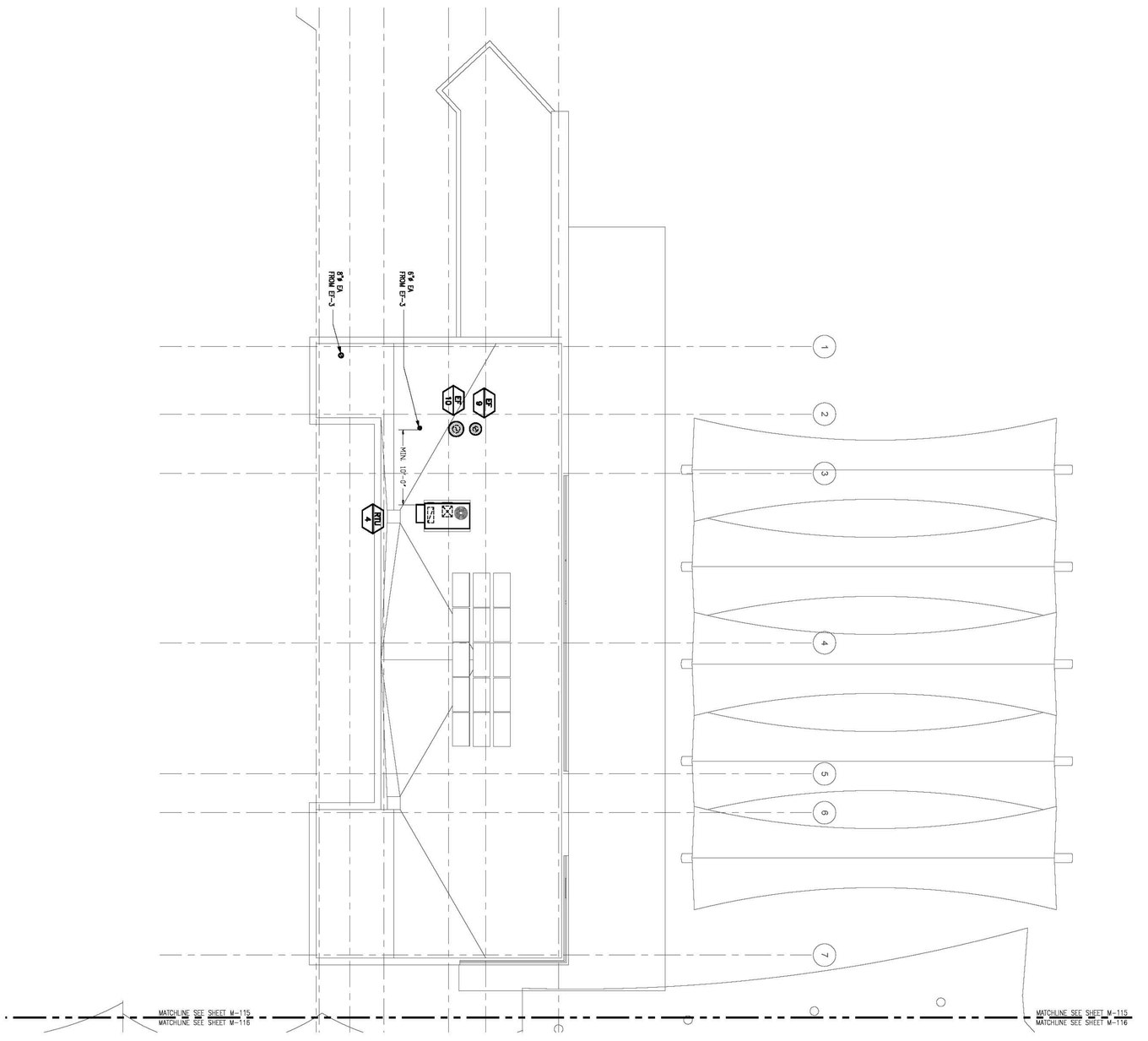

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MECHANICAL
EAST BUILDING ROOF PLAN

M-115

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PARK & RIDE REGIONAL TERMINAL

465 CRENSHAW BOULEVARD
TORRANCE, CALIFORNIA 90503
30% CONSTRUCTION DRAWINGS

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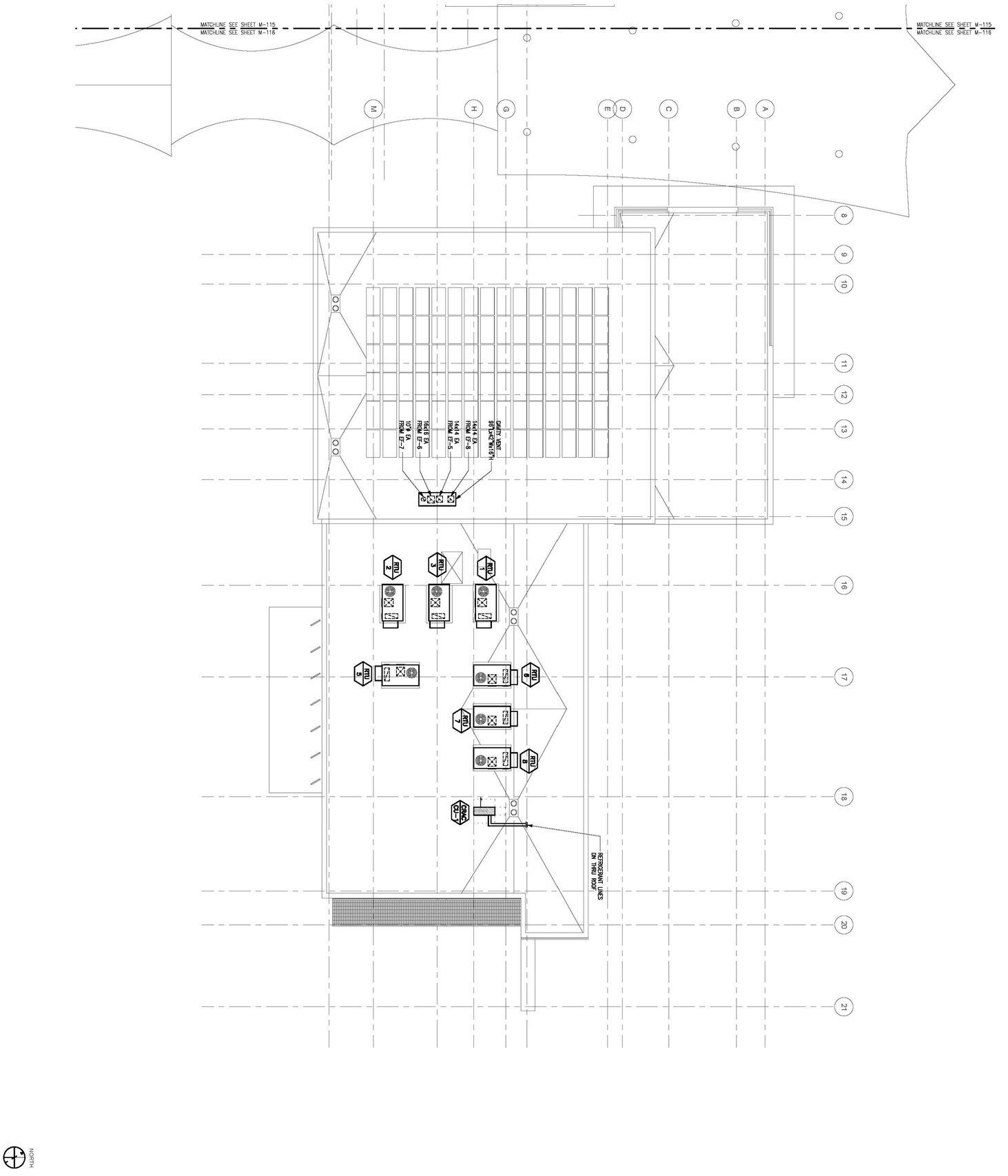

MARK DATE DESCRIPTION
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PROJECT No: 06.12.00054
DATE: 09/26/2012
SCALE: 1/8" = 1'-0"

MECHANICAL
EAST BUILDING ROOF PLAN

M-116

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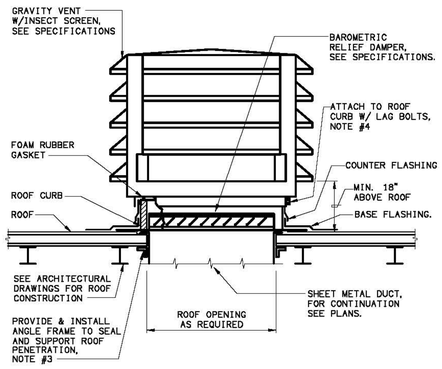
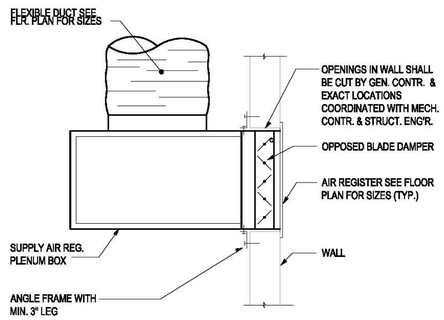


NOTE:

1. LOCATE VENT MINIMUM 15' FROM OUTSIDE AIR INTAKE.
2. COORDINATE ROOF OPENING, BLOCKING, CURB, CANT STRIP AND FLASHING WITH ROOFING CONTRACTOR. ROOF PENETRATION SHALL NOT VOID ROOF WARRANTY.
3. IF PENETRATION MUST BE FIRE RATED THE PACKING AND SEALING MATERIALS AND SYSTEM OF INSTALLATION SHALL BE APPROVED BY FIRE MARSHALL.
4. ALL ANCHORING SHALL BE REVIEWED BY STRUCTURAL ENGINEER.

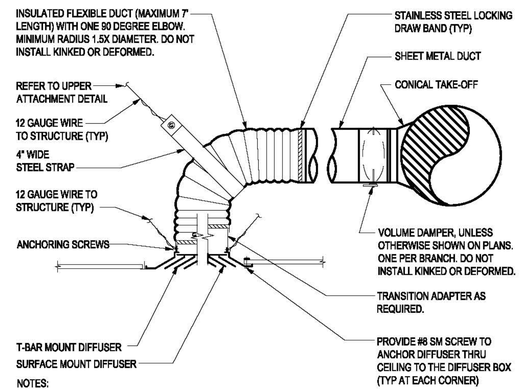
GRAVITY VENT (4 -)

SCALE: NONE



WALL MOUNTED REGISTER SUPPLY AIR (3 -)

SCALE: NONE



NOTES:

1. ACCESS TO BALANCING DAMPER MAY BE PROVIDED THRU REMOVABLE RETURN AIR REGISTER OR HINGED LIGHT FIXTURE.
2. FOR INACCESSIBLE CEILING USE REMOTE FLEXIBLE STEEL SHAFT DAMPER OPERATOR OR PROVIDE 18"X18" (MIN) ACCESS DOOR.
3. DIFFUSER FRAME SHALL MATCH ARCHITECTURAL CEILING TYPE.
4. IF FLEXIBLE DUCT SIZE INDICATED ON PLAN IS LARGER OR SMALLER THAN DIFFUSER NECK OR IF DIFFUSER NECK IS SQUARE OR RECTANGULAR PROVIDE TRANSITION FITTING AT DIFFUSER NECK.

DIFFUSER MOUNTING DETAIL (2 -)

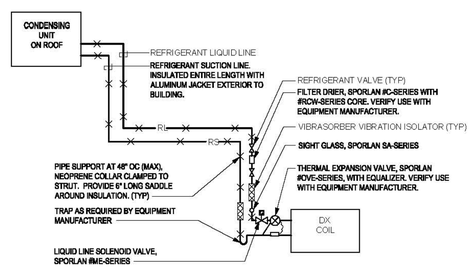
SCALE: NONE

DUCT FITTING LEGEND

SINGLE LINE	DOUBLE LINE ROUND DUCT	DOUBLE LINE RECTANGULAR DUCT	DESCRIPTION
	R=1.5W	W/SINGLE THICKNESS TURNING VANES; R=1.5W	90° ELL
			45° ELL
			REDUCER
		N/A	45° TEE
	N/A		45° - 90° TEE
		N/A	CONICAL 90° TEE
		N/A	CONNECTION BETWEEN RIGID AND FLEXIBLE DUCT
			Y-FITTING
			ACOUSTICALLY LINED DUCT
			SQUARE TO ROUND TRANSITION

DUCT FITTING LEGEND (1 -)

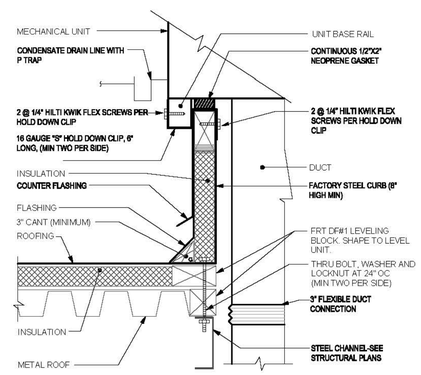
SCALE: NONE



NOTE: SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.

REFRIGERANT PIPING SCHEMATIC (7 -)

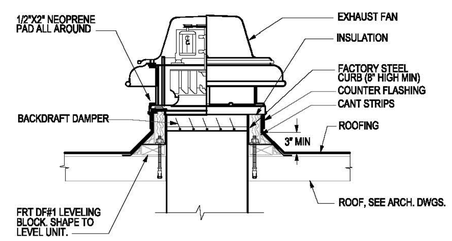
SCALE: NONE



NOTE: COORDINATE EXACT ROOF CONSTRUCTION MEANS AND METHODS WITH ARCHITECTURAL AND STRUCTURAL DESIGNS.

ROOF CURB-METAL STRUCTURE (6 -)

SCALE: NONE



NOTE:

REFER TO ARCHITECTURAL DESIGN AND STRUCTURAL DESIGN FOR ADDITIONAL ATTACHMENT REQUIREMENTS. REFER TO HILTI ICC#ESR-1917 PRE-APPROVAL.

ROOF EXHAUST FAN DETAIL (5 -)

SCALE: NONE

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MARK	DATE	DESCRIPTION

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MECHANICAL
DETAILS

M-501

ABBREVIATIONS

A, AMP	AMPERES
AB	ABOVE COUNTER BACKSPLASH
AC	ALTERNATING CURRENT
ACCP	AIR CONDITIONING CONTROL PANEL
ACP	AUXILIARY CONTROL PANEL
AF	AMPERE (RATED) FUSE OR CB FRAME
AFC	ABOVE FINISHED COUNTER
AFF	ABOVE FINISHED FLOOR OR WALKWAY
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTIING CAPACITY
AL	ALUMINUM (ALLOY)
ALC	AUTOMATIC LIGHTING CONTROL
AT	CIRCUIT BRKR TRIP SETTING (AMPS)
ATS	AUTOMATIC TRANSFER SWITCH
AS	AMPERE (RATED) SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BAT	BATTERY
BC	BARE COPPER
BG	BELOW GRADE
BKR	BREAKER
BLS	BLUE LIGHT STATION
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT (CIRCULAR RACEWAY)
CAB	CABINET
CB	CIRCUIT BREAKER
C.C.	CENTRAL CONTROL
CEC	CALIFORNIA ELECTRICAL CODE
CFM	CUBIC FEET PER MINUTE
CIC	COMMUNICATION INTERFACE CABINET
CKT	CIRCUIT
C/B	CIRCUIT BREAKER
CLG	CEILING
℄	CENTER LINE
CO	CONDUIT ONLY
COMPT	COMPARTMENT
CONT	CONTROL
CONT'D	CONTINUED
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
DMPR	DAMPER
DC	DIRECT CURRENT
DIA	DIAMETER
DISC	DISCONNECT
DIV	DIVISION
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DWG	DRAWING
(E)	EXISTING TO REMAIN
EF	EXHAUST FAN
ELEV	ELEVATION, ELEVATOR
EMERG	EMERGENCY
EMP	EMERGENCY MANAGEMENT PANEL
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EO	ELECTRICALLY OPERATED
EOL	END OF LINE
EQUIP	EQUIPMENT
ETS	EMERGENCY TRIP STATION
EXH	EXHAUST
EWC	ELECTRIC WATER COOLER
(R)	EXISTING TO BE REMOVED
(RL)	EXISTING TO BE RELOCATED
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FC	FOOT CANDLES
FF	FINISH FLOOR
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FLR, FL	FLOOR
FLUOR	FLUORESCENT
FPB	FAN POWERED BOX
FS	FLOW SWITCH
FSCP	FIRE/SECURITY CONTROL PANEL
FSD	FIRE/SMOKE DAMPER
FU	FUSE
FUT	FUTURE
FW	FLUSH WALL MOUNTED
FVNR	FULL VOLTAGE NON-REVERSING
FV	FULL VOLTAGE REVERSING
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GEN	GENERATOR REMOTE ANNUNCIATOR PNL
GND	GROUND
GRAP	
GRS	GALVANIZED RIGID STEEL CONDUIT
HH, MH	HANDHOLE, MANHOLE
HLO	HANDLE LOCK-ON(OFF)
HP	HORSEPOWER
HPE	HIGH DENSITY POLYETHYLENE
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HZ	HERTZ (CYCLES PER 2nd)
IES	INCOMING ELECTRICAL SERVICE
IBC	INDIVIDUAL BRANCH CIRCUIT
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB, J	JUNCTION BOX
LA	LIGHTING ARRESTER
LCP	LIGHTING CONTROL PANEL
LCS	LOCAL CONTROL STATION
LP	LIGHTING PANEL
LTG	LIGHTING
KCMIL	THOUSAND CIRCULAR MILS
KO	KNOCK OUT
KW	KILOWATTS
KVA	KILOVOLT-AMPERES
MAINT	MAINTENANCE
MAX	MAXIMUM
M.B.	MAIN BREAKER
MCA	MINIMUM CIRCUIT AMPERES
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCIUT PROTECTOR
MDF	MAIN DISTRIBUTION FRAME
MFR	MANUFACTURER
M.L.O.	MAIN LUGS ONLY
MIN	MINIMUM
MISC	MISCELLANEOUS
M.O.	MOTOR OPERATED
MTD	MOUNTED
MTG	MOUNTING
MTR	MOTOR
MTS	MANUAL TRANSFER SWITCH
-N-	NEUTRAL (GROUNDED CONDUCTOR)
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
-,NEG	NEGATIVE
NEMA	NATIONAL ELECTRICAL MFGR'S ASSOC.
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT (UNSWITCHED)
NM	NON-METALLIC
N.O., N.C.	NORMALLY OPEN,NORMALLY CLOSED
NP	NAMEPLATE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OS	OCCUPANCY SENSOR
P	POLE
PB	PUSH BOX
PH, Ø	PHASE
PNL	PANEL
PP	POWER PANEL
+,POS	POSITIVE
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE CONDUIT
PWR	POWER
REQD	REQUIRED
RM	ROOM
RNC	RIGID NON-METALLIC CONDUIT (PVC)
RS	RAPID START
RST	REMOTE STATION TRANSMITTER
S.A.D.	SEE ARCHITECTURAL DRAWINGS
SEC	2ndARY
SN	SHEET NOTE
SOL	SOLENOID
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
ST	SHUNT TRIP
SUB	SUBSTATION
SUP	SUPPLY
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
T	TEMPERATURE SWITCH (THERMOSTAT)
TB	TERMINAL BOARD
TBD	TO BE DETERMINED
TC	TIME CLOCK
TDC	TIME DELAY CLOSING
TDD	TELECOMMUNICATION DEVICE FOR THE DEAF
TDO	TIME DELAY OPENING
TEL	TELEPHONE
T/R	TOP OF RAIL
TYP	TYPICAL
TVM	TICKET VENDING MACHINE
UL	UNDERWRITERS LAB
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTX	UTILITY TRANSFORMER
V	VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF, SEE RECEPT. SYMBOL
XFR	TRANSFORMER
XP	EXPLOSION PROOF
Z	IMPEDANCE
", IN	INCHES
', FT	FEET
>	GREATER THAN
<	LESS THAN
≥	GREATER THAN OR EQUAL TO

ELECTRICAL DESIGN CRITERIA

PART1	2010 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, TITLE 24 C.C.R.
PART2	2010 CALIFORNIA BUILDING CODE (CBC), TITLE 24 C.C.R. (2009 INTERNATIONAL BUILDING CODE VOLUMES 1-3 AND 2010 CALIFORNIA AMENDMENTS)
PART3	2010 CALIFORNIA ELECTRICAL CODE (CEC), TITLE 24 C.C.R. (2008 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA)
PART6	2008 CALIFORNIA ENERGY CODE, TITLE 24 C.C.R.
PART7	2010 SAFETY CODE FOR ELEVATORS AND ESCALATORS (ASME A17.1-2004), TITLE 24 C.C.R.
PART9	2010 CALIFORNIA FIRE CODE (CFC), TITLE 24 C.C.R. (2009 INTERNATIONAL FIRE CODE OF THE INTERNATIONAL CODE COUNCIL)
PART11	2010 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE), TITLE 24 C.C.R.
PART12	2010 CALIFORNIA REFERENCED STANDARDS CODE, TITLE 24 C.C.R.

AMERICANS WITH DISABILITIES ACT, (ADA)

ELECTRICAL DRAWING LIST

E-001	ELECTRICAL ABBREVIATIONS AND BASIS OF DESIGN
E-002	ELECTRICAL SYMBOLS AND LEGENDS
E-003	ELECTRICAL SINGLE LINE DIAGRAM
E-004	ELECTRICAL INDOOR TITLE-24
E-005	ELECTRICAL OUTDOOR TITLE-24
E-006	ELECTRICAL LIGHTING FIXTURE SCHEDULE
E-101	ELECTRICAL SITE PLAN
E-110	ELECTRICAL WEST BUILDING POWER PLAN
E-111	ELECTRICAL EAST BUILDING POWER PLAN - LEVEL 1
E-112	ELECTRICAL EAST BUILDING POWER PLAN - LEVEL 2
E-113	ELECTRICAL WEST BUILDING ROOF POWER PLAN
E-114	ELECTRICAL EAST BUILDING ROOF POWER PLAN
E-115	ELECTRICAL WEST BUILDING LIGHTING PLAN
E-116	ELECTRICAL EAST BUILDING LIGHTING PLANS - LEVEL 1 & LEVEL 2

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SCALE: NONE

ELECTRICAL
ABBREVIATIONS & BASIS OF DESIGN

E-001

COPPER FEEDER SCHEDULE

FEEDER TAG	CONDUITS MET	CONDUITS SETS	CONDUITS RNC	CONDUCTORS PER SET PHASE/NEUTRAL	CONDUCTORS PER SET GROUND	NOTES
4000.4	3.50"	11	4.00"	(4) 500 KCMIL	500 KCMIL	–
4000.3	3.00"	11	4.00"	(3) 500 KCMIL	500 KCMIL	–
3500.4	3.50"	10	4.00"	(4) 500 KCMIL	500 KCMIL	–
3500.3	3.00"	10	4.00"	(3) 500 KCMIL	500 KCMIL	–
3000.4	3.50"	8	4.00"	(4) 500 KCMIL	400 KCMIL	–
3000.3	3.00"	8	4.00"	(3) 500 KCMIL	400 KCMIL	–
2500.4	3.50"	7	4.00"	(4) 500 KCMIL	350 KCMIL	–
2500.3	3.00"	7	4.00"	(3) 500 KCMIL	350 KCMIL	–
2000.4	3.00"	6	4.00"	(4) 400 KCMIL	250 KCMIL	–
2000.3	3.00"	6	4.00"	(3) 400 KCMIL	250 KCMIL	–
1600.4K	3.50"	5	4.00"	(3) 500 KCMIL, (2) 400 KCMIL–N	#4/0	7
1600.4	3.00"	5	4.00"	(4) 400 KCMIL	#4/0	–
1600.3	3.00"	5	4.00"	(3) 400 KCMIL	#4/0	–
1200.4	3.00"	4	4.00"	(4) 350 KCMIL	#3/0	–
1200.3	3.00"	4	3.00"	(3) 350 KCMIL	#3/0	–
1000.4K	3.50"	3	4.00"	(3) 500 KCMIL, (2) 400 KCMIL–N	#2/0	7
1000.4	3.00"	3	4.00"	(4) 400 KCMIL	#2/0	–
1000.3	3.00"	3	4.00"	(3) 400 KCMIL	#2/0	–
800.4K	3.00"	3	4.00"	(3) 350 KCMIL, (2) 300 KCMIL–N	#1/0	7
800.4	3.00"	3	3.00"	(4) 300 KCMIL	#1/0	–
800.3	2.50"	3	3.00"	(3) 300 KCMIL	#1/0	–
700.4	3.50"	2	4.00"	(4) 500 KCMIL	#1/0	–
700.3	3.00"	2	4.00"	(3) 500 KCMIL	#1/0	–
600.4	3.00"	2	4.00"	(4) 350 KCMIL	#1	–
600.3	2.50"	2	3.00"	(3) 350 KCMIL	#1	–
500.4K	3.00"	2	4.00"	(3) 300 KCMIL, (2) 250 KCMIL–N	#2	7
500.4	2.50"	2	3.00"	(4) 250 KCMIL	#2	–
500.3	2.50"	2	2.50"	(3) 250 KCMIL	#2	–
450.4	2.50"	2	3.00"	(4) #4/0	#2	–
450.3	2.00"	2	2.50"	(3) #4/0	#2	–
400.4K	2.50"	2	2.50"	(3) #4/0, (2)#3/0–N	#2	7
400.4	2.00"	2	2.50"	(4) #3/0	#2	–
400.3	2.00"	2	2.50"	(3) 3/0	#2	–
350.4	3.50"	1	4.00"	(4) 500 KCMIL	#2	–
350.3	2.50"	1	4.00"	(3) 500 KCMIL	#2	–
300.4	3.00"	1	3.00"	(4) 350 KCMIL	#4	–
300.3	2.50"	1	3.00"	(3) 350 KCMIL	#4	–

FEEDER TAG	CONDUITS MET	CONDUITS SETS	CONDUITS RNC	CONDUCTORS PER SET PHASE/NEUTRAL	CONDUCTORS PER SET GROUND	NOTES
250.4	2.50"	1	3.00"	(4) 250 KCMIL	#4	–
250.3	2.50"	1	3.00"	(3) 250 KCMIL	#4	–
225.4K	3.00"	1	3.00"	(3) 250 KCMIL, (2)#4/0–N	#4	7
225.4	2.50"	1	3.00"	(4) #4/0	#4	–
225.3	2.00"	1	2.50"	(3) #4/0	#4	–
200.4K	2.50"	1	2.50"	(3)#4/0,(2)#3/0–N	#6	–
200.4	2.00"	1	2.50"	(4) #3/0	#6	–
200.3	2.00"	1	2.50"	(3) #3/0	#6	–
175.4	2.00"	1	2.50"	(4) #2/0	#6	–
175.3	1.50"	1	2.00"	(3) #2/0	#6	–
150.4K	2.00"	1	2.00"	(3)#2/0,(2)#1/0–N	#6	–
150.4	2.00"	1	2.00"	(4) #1/0	#6	–
150.3	1.50"	1	2.00"	(3) #1/0	#6	–
125.4	1.50"	1	1.50"	(4) #1	#6	–
125.3	1.25"	1	1.50"	(3) #1	#6	–
110.4K	1.50"	1	2.00"	(3) #2,(1)#4/0–N	#6	7
110.4	1.25"	1	1.50"	(4) #2	#6	–
110.3	1.25"	1	1.50"	(3) #2	#6	–
100.4	1.25"	1	1.50"	(4) #2	#8	–
100.3	1.25"	1	1.50"	(3) #2	#8	–
90.4	1.25"	1	1.50"	(4) #2	#8	–
90.3	1.25"	1	1.50"	(3) #2	#8	–
80.4	1.25"	1	1.50"	(4) #4	#8	–
80.3	1.00"	1	1.50"	(3) #4	#8	–
70.4	1.25"	1	1.50"	(4) #4	#8	–
70.3	1.00"	1	1.50"	(3) #4	#8	–
60.4	1.00"	1	1.00"	(4) #6	#10	–
60.3	0.75"	1	1.00"	(3) #6	#10	–
50.4K	1.00"	1	1.50"	(3) #6,(1)#2–N	#10	7
50.4	1.00"	1	1.00"	(4) #6	#10	–
50.3	0.75"	1	1.00"	(3) #6	#10	–
40.4	0.75"	1	1.00"	(4) #8	#10	–
40.3	0.75"	1	1.00"	(3) #8	#10	–
30.4	0.75"	1	1.00"	(4) #10	#10	–
30.3	0.75"	1	1.00"	(3) #10	#10	–
20.4	0.75"	1	1.00"	(4) #12	#12	–
20.3	0.75"	1	1.00"	(3) #12	#12	–
XFR						8
SCHD						9

NOTES:

1. CONDUCTORS AND CONDUITS SHOWN IN THIS SCHEDULE ARE BASED ON COPPER CONDUCTORS WITH THHN/THWN INSULATION.
2. THIS SCHEDULE SHALL BE USED ON ALL FEEDERS SERVING LOADS WHERE THE CIRCUIT BREAKER SIZE MATCHES THE AMPACITY OF ITS FEEDER. USE THE "MOTOR CIRCUIT SCHEDULE" FOR LOADS, SUCH AS MOTORS, PUMPS, FANS, CHILLERS, ETC., WHERE THE CIRCUIT BREAKER SIZE IS LARGER THAN THE AMPACITY OF ITS FEEDER.
3. PROVIDE GROUND WIRE NOTED ABOVE IN ALL FEEDERS AND BRANCH CIRCUITS. WHERE MULTIPLE CONDUITS ARE INDICATED PROVIDE NOTED GROUND WIRE IN EACH CONDUIT.
4. NOT ALL FEEDERS ARE NECESSARILY USED ON THIS PROJECT.
5. NOMINAL AMPACITIES GREATER THAN 100 AMPS ARE FOR 75 DEG..C TERMINALS.
6. "MET"= EMT, IMC, GRC, RAC, OR PVC COATED GRC TYPE CONDUITS. "RNC"= PVC 40, PVC 80 OR FIBERGLASS TYPE CONDUITS ROUTED UNDERGROUND. REFER TO SIZING ON DRAWINGS IF "RNC" CONDUITS ARE ROUTED ABOVEGROUND. CONDUIT SIZES NOTED ON SINGLE–LINE DIAGRAM OR ON PLANS SUPERSEDE SIZES NOTED ABOVE IF LARGER.
7. OVERSIZED (173% MIN.) NEUTRAL FOR FEEDERS CONNECTED TO A K–4 OR HIGHER RATED TRANSFORMER.
8. REFER TO TRANSFORMER SCHEDULE FOR STANDARD PRIMARY AND SECONDARY FEEDER SIZES.
9. REFER TO MCC OR PANEL SCHEDULES FOR FEEDER SIZES TO EQUIPMENT NOTED WITH THIS TAG.

ELECTRICAL LEGEND

REFER TO DETAILS FOR MOUNTING HEIGHTS OF DEVICES NOT ALL SYMBOLS, ABBREV., ETC. ARE NECESSARILY USED ON THIS PROJECT

SWITCHING CONTROLS

SYMBOL	DESCRIPTION
S^a	SINGLE POLE SWITCH (SUPERSCRIPT DENOTES SIMILARLY MARKED LUMINAIRES CONTROLLED TOGETHER)
S_2	TWO POLE SWITCH
S_3	THREE WAY SWITCH
S_4	FOUR WAY SWITCH
S_K	KEY OPERATED SWITCH
D	DIMMER SWITCH. NUMBER INDICATES WATTAGE RATING. IF NOT SHOWN THEN EQUAL TO LOAD.
	DIMMER SWITCH UNDER SEPARATE COVERPLATE
S_{TS}	TIMER SWITCH
S^{5A}, $S^{5A,5B}$ S^{5C}	LOW VOLTAGE MOMENTARY CONTACT SWITCH, UPPER CASE LETTER SUPERSCRIPT INDICATES CONNECTION TO LOW VOLTAGE RELAY CONTROLLING SIMILARLY MARKED LUMINAIRES.
S_{XP}	EXPLOSION PROOF SWITCH
S_{WP}	WEATHERPROOF SWITCH
S_T	MOTOR-RATED THERMAL OVERLOAD SWITCH
PC	PHOTOCELL
	EQUIPMENT OPERATOR PUSH BUTTON STATION. PROVIDED WITH EQUIPMENT, INSTALLED AND CONNECTED BY DIV. 16, UON.
	PUSHBUTTON OR PUSHBUTTONS, BY DIV. 16
TC	TIME CLOCK
S_{OS}	OCCUPANCY SENSOR - WALL MOUNTED
OS	360 DEGREE OCCUPANCY SENSOR - CEILING MTD.
LCP ?	LIGHTING CONTROL PANEL AND ASSOCIATED COMPONENTS. PROVIDE 120V OR 277V CONTROL POWER AS REQUIRED OR AS INDICATED.
TX	REMOTE MOUNTED LINE TO LOW-VOLTAGE FUSED TRANSFORMER. CONCEAL FROM VIEW.

DISTRIBUTION & EQUIPMENT

SYMBOL	DESCRIPTION
	BRANCH CIRCUIT PANELBOARDS, SURFACE AND RECESS MOUNTED, SOLID= 120/280V, HATCHED= 277/480V, DASHED EQUIP. = FUTURE
	MOTOR CONTROL CENTER W/ CODE CLEARANCES SHOWN, DASHED EQUIP. = FUTURE
	TRANSFORMER WITH CODE CLEARANCES SHOWN
	SERVICE AND/OR DISTRIBUTION EQUIPMENT WITH CODE CLEARANCES SHOWN
	CONNECTION TO MOTOR PROVIDED BY OTHERS
VFD	CONNECTION TO DIV. 15 FURNISHED VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT DIV. 16 TO INSTALL VFD EQUIPMENT
30A	DISCONNECT SWITCH, SIZE AS NOTED OR IF NOT SHOWN SIZE PER CONNECTED MOTOR SIZE AND MOTOR DISCONNECT SCHEDULE
F 30A	FUSED DISCONNECT SWITCH, SIZE AS NOTED. SIZE FUSE PER MANUFACTURER'S RECOMMENDATIONS
C 60AT	ENCLOSED CIRCUIT BREAKER DISCONNECT SWITCH, TRIP SIZE AS NOTED.
	DISCONNECT W/ MAGNETIC MOTOR STARTER (CONTROLLER) OR CONTACTOR. SIZE PER LOAD SERVED. NEMA SIZE #1 MINIMUM.
	MAGNETIC MOTOR STARTER (CONTROLLER) OR CONTACTOR. SIZE PER LOAD SERVED. NEMA SIZE #1 MINIMUM.
	DIV. 16 CONNECTION TO EQUIPMENT PROVIDED BY OTHERS. SHADED = ON ALT. POWER SOURCE NOTED
	DIV. 16 CONNECTION TO EQUIPMENT WITH INTEGRAL DISCONNECT THAT IS PROVIDED BY OTHERS. SHADED = ON ALT. POWER SOURCE NOTED
	EQUIPMENT OR TERMINAL ENCLOSURE AS NOTED, SURFACE AND RECESS MOUNTED
	BUILDING GROUND BUS, SEE DETAILS

POWER DEVICES

SYMBOL	DESCRIPTION
	SIMPLEX RECEPTACLE - WALL, CEILING, ON ALT.
	DUPLEX RECEPTACLE - WALL, CEILING, ON ALT.
L5-15R	SPECIAL PURPOSE RECEPTACLE -WALL, CEILING ON ALT. POWER; NEMA CONFIGURATION AS NOTED
AB	RECEPTACLE TYPE SHOWN -WALL -ABOVE COUNTER BACKSPLASH. SEE ARCHITECTURAL DRAWINGS.
"ON ALT."	SHADED RECEPTACLES NOTED "ON ALT." ABOVE ARE CONNECTED TO ALTERNATE POWER SOURCE (EMERG., STANDBY, UPS, ETC.) PER CIRCUITING INDICATED
	DUPLEX RECEPTACLE - WALL - HALF SWITCHED
	COMBINATION SWITCH/DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE - WALL - WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
WP	RECEPT. TYPE SHOWN W/ WEATHERPROOF COVER AND INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
+42"	RECEPT. TYPE SHOWN AT SPECIAL HEIGHT AFF UON
	WALL MOUNTED ELECTRICAL CONNECTION TO ELECTRIFIED FURNITURE. PROVIDE 8 WIRES (4 HOTS, 1 DEDICATED NEUTRAL, 1 COMMON NEUTRAL, 1 ISOLATED GROUND) NEUTRALS TO BE #10 AWG. USE LIQUID-TIGHT FLEX.
	DATA/COMMUNICATION OUTLET, FLUSH IN WALL, +18"AFF U.O.N. WITH 1"C.O. TO NEAREST CABLE TRAY, OR STUB OUT IN CEILING SPACE.
	FLUSH FLOOR BOX DEVICE - IN RAISED FLOOR DEVICE TYPE PER SYMBOLS ABOVE
	MULTI-SERVICE FLOOR BOX IN RAISED FLOOR - SEE ARCH DWGS; WITH RECEPTACLES & SIGNAL OUTLETS AS NOTED SUBSCRIPT DENOTES QUANTITY OF DATAPORTS. BLANK INDICATES (4) DATAPORTS
	FLUSH MOUNTED, COMBO POKE THRU UNIT WITH DUPLEX RECEPTACLE, 20A, 120V AND TEL/DATA OUTLET. WIREMOLD RC3 SERIES OR EQUAL.
	FLUSH MOUNTED, COMBO POKE THRU UNIT WITH DOUBLE DUPLEX RECEPTACLE, 20A, 120V AND TEL/DATA OUTLET. WIREMOLD RC4 SERIES OR EQUAL.

WIRING

SYMBOL	DESCRIPTION
	WIRING CONCEALED IN CEILING OR WALL LINE WEIGHT TOP TO BOTTOM = NEW, EXITING TO REMAIN, FUTURE. CONTRACTOR MAY RUN WIRING IN WALLS, UNDERGROUND, OR IN RAISED FLOOR MARK AS-BUILTS ACCORDINGLY.
	WIRING CONCEALED IN FLOOR OR UNDER GRADE OR ROUTED IN CEILING SPACE OF FLOOR BELOW. LINE WEIGHT TOP TO BOTTOM= NEW, EXISTING TO REMAIN, FUTURE
FA	FIRE ALARM CONDUIT
V/D	VOICE AND DATA CONDUIT
T	TELEPHONE SYSTEM CONDUIT
MV	MEDIUM VOLTAGE CONDUIT
G	BARE GROUNDING GRID OR CONDUCTORS, UON.
GC	GROUNDING CONDUCTOR(S) ROUTED IN CODE SIZED CONDUIT, UON.
L1A-1,3 HD1A	HOME RUN WIRING TO INDICATED DESTINATION, 3/4"C. MIN. FOR POWER, 1/2"C. MIN. FOR LIGHTING OR AS OTHERWISE NOTED. CONTRACTOR SHALL USE CIRCUIT SIZES NOTED IN RESPECTIVE SCHEDULES AND INFORMATION IN THE FEEDER AND BRANCH CIRCUIT SCHEDULES. CONTRACTOR MAY COMBINE HOMERUNS UP TO A MAXIMUM OF (6) CIRCUITS, FOLLOW CODE FOR DERATING & RESIZE WIRE & CONDUIT SIZES.
	CONDUIT STUBBED OUT AT LOCATION SHOWN. PROVIDE INSULATED BUSHING & PULLROPE.
	TELEPHONE/DATA SLEEVE THROUGH WALL, ABOVE CEILING. EXTEND TO ACCESSIBLE TILE CLG. BOTH SIDES. TERMINATE WITH BUSHINGS. (1) 1.25" CO UON. COORDINATE LOCATIONS WITH CABLE INSTALLER(S) PRIOR TO ROUGH-IN.
	JUNCTION BOXES, WALL, CEILING AND FLOOR MOUNTED. 4" SQ. BOX MIN., LARGER IF REQUIRED
PB	PULL BOX, MIN. SIZE PER NEC., UON.
	UNDERFLOOR RACEWAY
	FLEXIBLE CONDUIT CONNECTION
	POWER CONNECTION TO DIV 15 FIRE/SMOKE DAMPER. REFER TO FSD CONNECTION DETAIL IF NOT SHOWN
	GROUND ROD CONNECTION
	GROUND ROD CONNECTION WITH TEST WELL BOX

REFERENCE SYMBOLS

SYMBOL	DESCRIPTION
12	SHEET NOTE REFERENCE
125.4	BRANCH CIRCUIT OR FEEDER NOMINAL AMPACITY & TYPE; REFER TO BRANCH CIRCUIT AND FEEDER SCHEDULES FOR WIRE AND CONDUIT SIZES & QTY.
1 / E4.1	REFER TO DETAIL NO. ON DRAWING INDICATED NOT ALL DETAIL REFERENCES ARE SHOWN. ALL DETAILS APPLY TO ALL APPLICABLE SITUATIONS, UON.
2 / E4.1	ELEVATION TAG: REFER TO ELEVATION NUMBER ON DRAWING INDICATED
2 / E4.1	SECTION TAG: REFER TO SECTION NUMBER ON DRAWING INDICATED
K112	KITCHEN EQUIPMENT REFERENCE, REFER TO KITCHEN EQUIPMENT SCHEDULE
CH / 1	MECHANICAL EQUIPMENT IDENTIFICATION TAG
EQUIP NAME	EQUIPMENT BY OTHERS IDENTIFICATION TAG

DIAGRAMS

SYMBOL	DESCRIPTION
	MANUAL TRANSFER SWITCH
	SWITCH
	NORMALLY CLOSED CONTACTOR OR RELAY CONTACTS
	NORMALLY OPEN CONTACTOR OR RELAY CONTACTS
	BUS DUCT
	BUS BAR
	PIPE GROUND
C	CONTACTOR COIL
R	RELAY COIL
D	LIGHTNING SURGE ARRESTOR D= DISTRIBUTION CLASS I = INTERMEDIATE CLASS
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	CURRENT TRANSFORMER
	FUSED VOLTAGE SENSE LEADS
KWH	METER: KILOWATT HOUR
M	UTILITY CO. APPROVED SOCKET WITH METER INSTALLED. SQUARE = REMOTE MOUNTED
DMU	DIGITAL METER UNIT. REFER TO SPECIFICATIONS.
	DELTA CONNECTION
	GROUNDED WYE CONNECTION
	CONNECTION TO GROUND
100AT 225AF	CIRCUIT BREAKER, WITH TRIP & FRAME AMPERE RATING
225AF 400AS	FUSED SWITCH, WITH FUSE AND SWITCH AMPERE RATING
GF	GROUND FAULT TRIP UNIT
ST	SHUNT TRIP UNIT, 120VAC OR VOLTAGE AS NOTED
K	KEY INTERLOCK
	GENERATOR
	FUSE, HOLDER & PULLER
	DRAWOUT BREAKER

BRANCH CIRCUIT WIRING LEGEND

SYMBOL	DESCRIPTION
	3/4" CONDUIT WITH 2#12 WIRES AND 1#12 GND.
	3/4" CONDUIT WITH 3#12 WIRES AND 1#12 GND.
	3/4" CONDUIT WITH 4#12 WIRES AND 1#12 GND.
	3/4" CONDUIT WITH 5#12 WIRES AND 1#12 GND.
	3/4" CONDUIT WITH 6#12 WIRES AND 1#12 GND.
#10	NUMBER INDICATES GAUGE OF NEUTRAL WIRE. ALL OTHER WIRES #12 UON.
C.O.	CONDUIT-ONLY WITH #12 NYLON PULL-WIRE (3/4" MINIMUM SIZE, UNLESS NOTED OTHERWISE)

NOTE:

1. ALL WIRING TO BE COPPER THHN INSULATION & GROUND PER NEC 250-122(B) CONCEALED IN WALL OR CEILING.

GROUNDING SYSTEM

SYMBOL	DESCRIPTION
G	BARE GROUNDING GRID OR CONDUCTORS, UON.
GC	GROUNDING CONDUCTOR(S) ROUTED IN CODE SIZED CONDUIT, UON.
	GROUND GRID BOND POINT
	GROUND GRID BOND POINT - MECHANICAL CONNECTION
	GROUND GRID BOND POINT - EXOTHERMIC WELD CONNECTION
	24" GROUND BAR
	60" GROUND BAR
	GROUND ROD LOCATION
	GROUND ROD IN TEST WELL

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CITY OF TORRANCE
TORRANCE TRANSIT
PARK & RIDE REGIONAL TERMINAL

465 CRENSHAW BOULEVARD
TORRANCE, CALIFORNIA 90503
30% CONSTRUCTION DRAWINGS

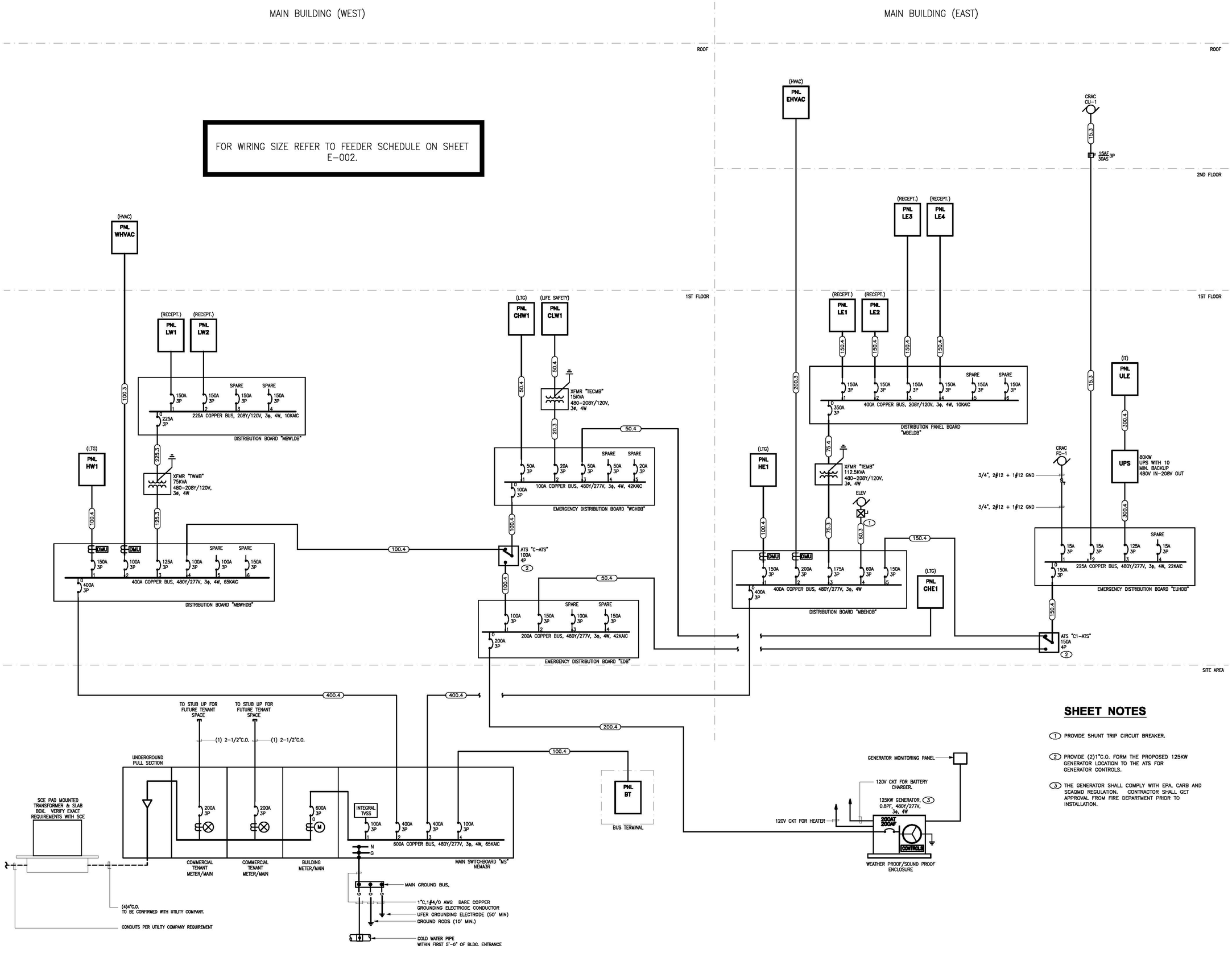
MARK DATE DESCRIPTION

COPYRIGHT 2011 RNL DESIGN

PROJECT No: 06.12.00054
DATE: 09/26/2012
SCALE: NONE

ELECTRICAL
SYMBOLS & LEGENDS

E-002



SHEET NOTES

1. PROVIDE SHUNT TRIP CIRCUIT BREAKER.
2. PROVIDE (2)1"C.O. FORM THE PROPOSED 125KW GENERATOR LOCATION TO THE ATS FOR GENERATOR CONTROLS.
3. THE GENERATOR SHALL COMPLY WITH EPA, CARB AND SCAQMD REGULATION. CONTRACTOR SHALL GET APPROVAL FROM FIRE DEPARTMENT PRIOR TO INSTALLATION.

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CITY OF TORRANCE
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465 CRENSHAW BOULEVARD
TORRANCE, CALIFORNIA 90503
30% CONSTRUCTION DRAWINGS

MARK	DATE	DESCRIPTION

COPYRIGHT 2011 RNL DESIGN

PROJECT No: 06.12.00054
DATE: 09/26/2012
SCALE: NONE

ELECTRICAL
SINGLE LINE DIAGRAM

E-003

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL	Date: September 21, 2012
Project Address: 465 CRENSHAW BLVD., TORRANCE, CALIFORNIA 90503	Climate Zone / Building CFA / Unconditioned Floor Area

Building Type	☒ NON RESIDENTIAL ☐ RELOCATABLE PUBLIC SCHOOLS	☐ HIGH RISE RESIDENTIAL ☒ CONDITIONED SPACES	☐ HOTEL/MOTEL GUEST ☐ UNCONDITIONED SPACES
☐ SCHOOLS			
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: JACOB CHAN	Signature:
Company: GLUMAC	Date: September 21, 2012
Address: 617 WEST 7TH STREET, 5TH FLOOR	EA #: CEPE #:
City/St/Zip: LOS ANGELES, CA 90017-3830	Phone #: (213) 239-8866

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 foe 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: JACOB CHAN	Signature:
Company: GLUMAC	Phone #: (213) 239-8866
Address: 617 WEST 7TH STREET, 5TH FLOOR	License #: E13358
City/St/Zip: LOS ANGELES, CA 90017-3830	Date: September 21, 2012

LIGHTING MANDATORY MEASURES

Indicate location on building plans of Mandatory Measures Not

LIGHTING COMPLIANCE FORMS & WORKSHEET (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 Nonresidential Manual published by the California Energy Commission.

☒ LTG-1C Pages 1 to 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 to 4	Tailored Method Worksheet
☐ LTG-5C Pages 1 and 2	Line Voltage Track Lighting Worksheet

2008 Nonresidential Compliance Forms August 2009

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

Project Name: | Date: September 21, 2012

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 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.

A Name or Item Tag	B Complete Luminaire Description (i.e. 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	C Special Features	D Watts per Luminaire (1)	E CEC Default from NA8	E According to 130 (d or e)	F Number of Luminaires	G Installed Watts (DxF)	H Pass	H Fail
A1	2'x4' LED	☐	36	☒	☐	36	1296	☐	☐
A2	2'x4' LED	☐	48	☒	☐	38	1824	☐	☐
A3	2'x4' FLUORESCENT	☐	62	☒	☐	2	124	☐	☐
A4	2'x4' LED	☐	28	☒	☐	2	56	☐	☐
C1	LINER FLUO WALLWASHER	☐	62	☒	☐	13	806	☐	☐
C2	LINER FLUO	☐	30	☒	☐	13	390	☐	☐
D1	4" LED DOWNLIGHT	☐	25	☐	☐	34	850	☐	☐
D2	4" SQUARE LED DOWNLIGHT	☐	25	☐	☐	15	375	☐	☐
D3	9" SQUARE DOWNLIGHT	☐	24	☐	☐	2	48	☐	☐
L1	LED COVE LIGHT	☐	6	☐	☐	8	48	☐	☐
L2	LED COVE LIGHT	☐	12	☐	☐	4	48	☐	☐
B1	PENDANT CFL LIGHT	☐	28	☒	☐	2	56	☐	☐

INSTALLED WATTS PAGE TOTAL: 5921

Building total number of pages:

INSTALLED WATTS BUILDING TOTAL (Sum of all pages) 8277 Enter into LTG-1C Page 4 of 4

1 Wattage shall be determined according to Section 130(d and e). Wattage shall be rating of light fixture, not rating of bulb.

2 If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

2008 Nonresidential Compliance Forms August 2009

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL | Date: September 21, 2012

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST CONTINUATION SHEET

A Name or Item Tag	B Complete Luminaire Description (i.e. 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	C Special Features	D Watts per Luminaire	E CEC Default from NA8	E According to 130 (d or e)	F Number of Luminaires	G Installed Watts (DxF)	H Pass	H Fail
L3	LED COVE LIGHT	☐	18	☒	☐	4	72	☐	☐
L4	LED COVE LIGHT	☐	24	☒	☐	12	288	☐	☐
L8	LED COVE LIGHT	☐	48	☒	☐	15	720	☐	☐
S1	4' FLUO STRIP LIGHT	☐	32	☒	☐	5	160	☐	☐
S2	4' FLUO STRIP LIGHT	☐	62	☒	☐	14	868	☐	☐
S3	4' FLUO STRIP LIGHT	☐	62	☒	☐	4	248	☐	☐

PAGE TOTAL: 2356

2008 Nonresidential Compliance Forms August 2009

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL | Date: September 21, 2012

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Fill in controls for all spaces: a) area controls, b) multi-level controls, c) manual daylighting controls for daylit areas > 250 ft2, automatic daylighting controls for daylit areas > 2,500 ft2, d) shut-off controls, e) display lighting controls, f) tailored lighting controls - general lighting controlled separately from display, ornamental and diplay case lighting and g) demand responsive automatic controls for retail stores > 50,000 ft2, in accordance with Section 131.

MANDATORY LIGHTING CONTROLS - FIELD INSPECTION ENERGY CHECKLIST

Type / Description	Number of Units	Location in Building	Special Features	Field Inspector Pass	Field Inspector Fail
			☐	☐	☐

SPECIAL FEATURES INSPECTION CHECKLIST (See Page 2 of 4 of LTG-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 thejustification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Field Inspector's Notes or Discrepancies:

2008 Nonresidential Compliance Forms August 2009

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL | Date: September 21, 2012

CONDITIONED AND UNCONDITIONED SPACE LIGHTING MUST NOT BE COMBINED FOR COMPLIANCE

Indoor Lighting Power Conditioned Spaces	Watts	Indoor Lighting Power Unconditioned Spaces	Watts
Installed Lighting (from Conditioned LTG-1C Page 2)	8277	Installed Lighting (from Unconditioned LTG-1C Page 2)	0
Lighting Control Credit (from Conditioned Spaces LTG-2C)	- 0	Lighting Control Credit (from Unconditioned Spaces LTG-2C)	-
Adjusted **Installed** Lighting Power	= 8,277	Adjusted **Installed** Lighting Power	= 0
Complies if **Installed <= Allowed**	YES	Complies if **Installed** <= Allowed	YES
Allowed Lighting Power Conditioned Spaces (from LTG-3C)	12,701	**Allowed** Lighting Power Unconditioned Spaces (from LTG-3C)	

REQUIRED ACCEPTANCE TEST

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, **LTG-2A**. The designer is required to check the acceptance tests and list all controls devices serving the building or space shall be certied 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 **LTG-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 **LTG-2A** for each different lighting luminaire control(s) must be provided to the owner of the building for their records.

Equipment Requiring Testing	Luminaires Controlled: Description	Luminaires Controlled: Number of like Controls	Location	LTG-2A: Controls and Sensors and Automatic DayLighting Controls Acceptance
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐

2008 Nonresidential Compliance Forms August 2009

INDOOR LIGHTING POWER ALLOWANCE LTG-3-C

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL | Date: September 21, 2012

ALLOWED LIGHTING POWER (Choose One Method)

A separate LTG-3C must be filled out for Conditioned and Unconditioned Spaces. Indoor Lighting Power Allowances listed on this page are only for: ☒ CONDITIONED Spaces ☐ UNCONDITIONED Spaces

COMPLETE BUILDING METHOD - CONDITIONED SPACES

BUILDING CATEGORY (From 146 Table 146-E)	WATTS PER SF	COMPLETE BLDG. AREA	ALLOWED WATTS

AREA CATEGORY METHOD - CONDITIONED SPACES

A AREA CATEGORY (From 146 Table 146-F)	B WATTS PER SF	C AREA (SF)	D ALLOWED WATTS
OFFICES; <= 250 SQUARE FEET	1.1	580	638
OFFICES; > 250 SQUARE FEET	0.9	970	873
LOUNGE / RECREATION	1.1	1219	1341
EXERCISE CENTER, GYMNASIUM	1	350	350
SUPPORT; RESTROOMS	0.6	2415	1449
LOBBIES; MAIN ENTRY LOBBY (1)	1.5	908	908
ELECTRICAL, MECHANICAL, TELEPHONE ROOMS (2)	0.7	407	407
CONVENTION, MULTIPURPOSE & MEETING CENTERS (1)	1.4	3700	3700
SUPPORT; HALLWAY, CORRIDOR	0.6	860	860
Area Category Method Page TOTALS		11409	9,666
Sum of Additional Allowed Watts from Area Category Method - Part B (from table below)			
Total Pages for Area Category Method / Area Category Method Project TOTALS		15,757 SF Areas	12,701 WATTS

AREA CATEGORY METHOD - Part B Additional Wattage Allowance (from Table 146-F Footnotes)

A Primary Function	B sf	C Additional Watts per sf Allowed	D Wattage allowance (BxC)	E Description(s) and Quantity of Special Luminaire (2) Types in each Primary Function Area	F Total Design Watts	G ALLOWED WATTS Smaller of

TOTALS - Enter into Area Category Method - Part A (table above) WATTS

1. Additional watts available only when allowed according to the footnotes on bottom of Table 146-F for chandelier or sconce; art, craft, assembly or manufacturing specialized task work; precision commercial/industrial work; or lab specialized task work.
2. Special luminaires are light fixtures described in the Table 146-F Footnotes that are subject to an addional wattage allowance.

TAILORED METHOD

Total Allowed Watts using the Tailored Method taken from LTG-4C (Page 1 of 4) Row 3

The indoor lighting power allowance using the Tailored Method of Compliance shall be determined using the LTG-4C set of forms. A separate set of LTG-4C forms shall be filled out for CONDITIONED and UNCONDITIONED spaces

2008 Nonresidential Compliance Forms August 2009

INDOOR LIGHTING MANDATORY MEASURES

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL

☒ §131(d)	**BUILDING SHUT-OFF** THE BUILDING LIGHTING SHUT-OFF SYSTEM CONSISTS OF AN AUTOMATIC TIME SWITCH, WITH A ZONE FOR EACH FLOOR.
☒ §131(c)	**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 SQ. FT.
☒ §131(c)	**AUTOMATIC CONTROL DEVICES CERTIFIED:** ALL AUTOMATIC CONTROL DEVICES SPECIFIED ARE CERTIFIED; ALL ALTERNATE EQUIPMENT SHALL BE CERTIFIED AND INSTALLED AS DIRECTED BY THE MANUFACTURER.
☒ §131(c)	**FLUORESCENT BALLAST AND LUMINARIES CERTIFIED:** ALL FLUORESCENT FIXTURES SUBJECT TO CERTIFICATION AND SPECIFIED FOR THE PROJECTS ARE CERTIFIED.
☒ §131(c)	**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(c)	**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 MULTI-LEVEL SWITCHING FOR UNIFORM REDUCTION OF LIGHTING WITHIN THE ROOM.
☒ §131(c)	**DAYLIT AREA CONTROL:** ALL ROOMS THAT ARE GREATER THAN 250 SQUARE FEET AND CONTAIN WINDOWS AND SKYLIGHTS, THAT ALLOW FOR THE EFFECTIVE USE OF DAYLIGHT IN THE AREA SHALL HAVE 50% OF THE LIGHTING POWER IN EACH DAYLIT AREA CONTROLLED BY A SEPARATE SWITCH; OR
☒ §131(c)	THE EFFECTIVE USE OF DAYLIGHT CANNOT BE ACCOMPLISHED BECAUSE THE WINDOWS ARE CONTINUOUSLY SHADED BY A BUILIDING 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.

2008 Nonresidential Compliance Forms

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CITY OF TORRANCE
TORRANCE TRANSIT
PARK & RIDE REGIONAL TERMINAL

465 CRENSHAW BOULEVARD
TORRANCE, CALIFORNIA 90503
30% CONSTRUCTION DRAWINGS

MARK DATE DESCRIPTION

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PROJECT No: 06.12.00054
DATE: 09/26/2012
SCALE: NONE

ELECTRICAL
INDOOR TITLE 24
E004

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL	Date: September 21, 2012
Project Address: 465 CRENSHAW BLVD., TORRANCE, CALIFORNIA 90503	Total Hardscape Illuminated Area:

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 :	JACOB CHAN	Signature :	
Company :	GLUMAC	Date :	September 21, 2012
Address :	150 CALIFORNIA STREET, 3rd FLOOR	FA # : CEPE # :	
City/St/Zip :	SAN FRANCISCO, CA 94111	Phone # :	(415) 398-7667

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 foe compliance w ith Title 24, Parts 1 and 6 of the California Code of Regulations.
* The design features represented on this Certificate of Compliance are consistent w ith the information provided to document this design on the other applicable compliance forms, w orksheets, calculations, plans and specifications submitted to the enforement agency for approval w ith this building permit application.

Name :	JACOB CHAN	Signature :	
Company :	GLUMAC	Phone # :	(415) 398-7667
Address :	150 CALIFORNIA STREET, 3rd FLOOR	License # :	
City/St/Zip :	SAN FRANCISCO, CA 94111	Date :	September 21, 2012

Principal Lighting Designer's Declaration

☐ I certify that this Certificate of Compliance documentation is accurate and complete, and accounts for all outdoor lighting pow er, including building mounted, pole mounted, as w ell as all other outdoor lighting desgned for the site, and that Additional Lighting Pow er Allow ances for Specific Applications or Additional Lighting Pow er Allow ances for Ordinacne Requirements have not been counted more than one time for the same area, in accordance w ith Section 147 of the

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

LIGHTING COMPLIANCE FORMS & WORKSHEET (check box if w orksheet 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 3 pages required on plans for all submittals
☐ OLTG-2C	(Page 1 of 3)	Lighting Wattage Allow ances for General Hardscape, Sales Frontage, or Ornamental Lighting. Optional on plans
☐ OLTG-2C	(Page 2 of 3)	Lighting Wattage Allow ances for Per Application or Per Area. Optional on plans.
☐ OLTG-2C	(Page 3 of 3)	Additional Lighting Pow er Allow ance for Ordinance Requirements. Optional on plans.

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL Date: September 21, 2012

COMPLIANCE FIXTURE / LIGHTING CONTROL SCHEDULE and FIELD INSPECTION CHECKLIST

Installation Certificate, OLTG-1-INST (Retain a copy and verify form is completed and signed) Field Inspector ☐
Certificate of Acceptance, OLTG-2A (Retain a copy and verify form is completed and signed) Field Inspector ☐

A Name or Item Tag	B Luminaire Description (1) See footnote below (i.e.: 1 lamp pole-top shoe-box 400 w att metal halide)	C Cutoff Designation	D Watts per Luminaire (1)	E Special Features	F Default from NA8	F According to 130 (d or e)	G Number of Luminaires	H Installed Watts (DxG)	I Pass	I Fail
P1	SEE CONTINUATION SHEET		70	☐	☐	☐	13	910	☐	☐
P2			466	☐	☐	☐	6	2796	☐	☐
P3			233	☐	☐	☐	8	1864	☐	☐
P3B			233	☐	☐	☐	10	2330	☐	☐
	Total # of Pages:					Page Total Installed Watts:		7900		
	Enter total into OLTG-1C; Page 4 of 4; Row H; Total Installed Watts:							9298		

1. Type of luminaire (i.e.:post top, w all pack, surface, shoe box); for non-incandescent luminaires, indicate nominal lamp w attage 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 w attage listed in column D shall be the max imum relamping rated w attage on a permanent factory-installed label on the luminaire, NOT the w attage of the lamp (bulb) used, in accordance w ith Section 130(d or e).

EXEMPT LUMINAIRES Field Inspector ☐

Name or Symbol	Description of exempt luminaires in accordance w ith Section 147

MANDATORY CONTROLS Field Inspector ☐

#	Description	Location	#	Description	Location
12	MICROPANELS	ELECTRICAL ROOM			

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

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

Field Inspection Notes or Descrepancies:

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL Date: September 21, 2012

COMPLIANCE FIXTURE / LIGHTING CONTROL SCHEDULE and FIELD INSPECTION CHECKLIST

A Name or Item Tag	B Luminaire Description (1) See footnote below (i.e.: 1 lamp pole-top shoe-box 400 w att metal halide)	C Cutoff Designation	D Watts per Luminaire (1)	E Special Features	F Default from NA8	F According to 130 (d or e)	G Number of Luminaires	H Installed Watts (DxG)	I Pass	I Fail
P4			233	☐	☒	☐	4	932	☐	☐
P4B			233	☐	☐	☐	2	466	☐	☐
				☐	☐	☐			☐	☐
				☐	☐	☐			☐	☐
				☐	☐	☐			☐	☐
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				☐	☐	☐			☐	☐
	Enter total into OLTG-1C; Page 4 of 4; Row H; Total Installed Watts:							1398		

1. Type of luminaire (i.e.:post top, w all pack, surface, shoe box); for non-incandescent luminaires, indicate nominal lamp w attage 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 w attage listed in column D shall be the max imum relamping rated w attage on a permanent factory-installed label on the luminaire, NOT the w attage of the lamp (bulb) used, in accordance w ith Section 130(d or e).

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL Date: September 21, 2012

A. OUTDOOR LIGHTING ZONE

OUTDOOR LIGHTING ZONE: ☐ OLZ 1 ☐ OLZ 2 ☒ OLZ 3 ☐ OLZ 4
Is the Outdoor Lighting Zone: ☒ Default in accordance w ith § 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 designed park, recreation area, w ildlife preserve, or portion thereof, and has been designated as LZ2 or LZ3, in accordance w ith Table 10-114-A, because the site is contained w ithin 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 w ebsite

B. ADDITIONAL LIGHTING POWER ALLOWANCE FOR ORDINANCE REQUIREMENTS

Are additional lighting pow er allow ances for ordinacne in Table 147-C used? ☐ Yes ☐ No

Complete the information below if additional lighting pow er allow ances for ordinance requirements are used:
☐ The local jurisdiction having authority has officially adoped specific outdoor light levels, w hich are expressed as average or minimum footcandle level; by follow ing a public process that allow ed for formal public notification, review , and comment about the proposed change
☐ The local jurisdiction having authority w hich adopted specific outdoor light levels and has notified the Commission by providing the follow ing materials required 10-114(f) 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, LTG-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 systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form w ill be part of the plans, completion of this section w ill allow the responsible party to budget for the scope of w ork appropriately. Forms can be grouped by type of Luminaire controlled.

Enforcement Agency:
Systems Acceptance. Before Occupancy Permit is granted for a new ly constructed building or space or w hen ever new lighting system w ith controls is installed in the building or space shall be certified as meeting the Acceptance Requiements. The LTG-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the box es 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 LTG-2A for each different lighting luminaire control(s) must be provided to the ow ner of the building for their records.

	Luminaires Controlled			Certificate of Acceptance OTLG-2A(1)
Equipment Requiring Testing	Description	Number of Like Controls	Locations	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 Sw itch; and , STS for Standard (non-astronomical Time Sw itch acceptance.

CERTIFICATE OF COMPLIANCE (Page 4 of 4) OLTG-1C

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL Date: September 21, 2012

ALLOWED AND INSTALLED OUTDOOR LIGHTING POWER

		Lighting Wattage Power Allowance
A	Lighting power allowance for general hardscape (from OLTG-2C Page 1 of 3)	28557.68 Watts
B	Specific application lighting wattage allowance per unit length (from OLTG-2C Page 1 of 3)	Watts
C	Specific application wattage allowance for ornamental lighting (from OLTG-2C Page 1 of 3)	Watts
D	Specific application wattage allowance per application (from OLTG-2C Page 2 of 3)	Watts
E	Specific application lighting wattage allowance per area (from OLTG-2C Page 2 of 3)	Watts
F	Additional lighting power allowance for ordinance requirements (from OLTG-2C Page 3 of 3)	Watts
G	Total Allowed Wattage = Sum of rows A through F:	28557.68 Watts
H	Total Installed Watts (from Luminaire Schedule on OLTG-1C Page 2 of 4)	9298 Watts

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

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL Date: September 21, 2012

A. LIGHTING POWER ALLOWANCE FOR GENERAL HARDSCAPE

AREA WATTAGE ALLOWANCE (AWA)			LINEAR WATTAGE ALLOWANCE (LWA)			INITIAL WATTAGE ALLOWANCE	TOTAL GENERAL HARDSCAPE LIGHTING ALLOWANCE
A	B	C	D	E	F	G	H
ILLUMINATED HARDSCAPE AREA	AWA PER SQUARE FOOT	AWA (AxB)	PERIMETER LENGTH OF GENERAL HARDSCAPE	LWA PER LINEAR FOOT	LWA (DxE)	IWA (WATTS)	C + F + G
277290	0.092	25510.68	2475	0.92	2277	770	28557.68
Enter total into OLTG-1C; Page 4 of 4; Row A; Lighting Pow er Allow ance for General Hardscape:							28557.68

☒ **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	B	C	D	E	F	G	H	I	J
SPECIFIC LIGHTING APPLICATION	LINEAR FEET OF FRONTAGE	SALES FRONTAGE ALLOWANCE FOR OLZ (WATTS PER LF)	WATTAGE ALLOWANCE (B x C)	NAME OR SYMBOL	LUMINAIRE TYPE	LUMINAIRE QUANTITY	WATTS PER LUMINIARE	DESIGN WATTS (G x H)	ALLOWED WATTS MINIMUM OF D or I
Enter total into OLTG-1C; Page 4 of 4; Row B; Specific Application Lighting Wattage Allow ance Per Unit Length:									

C. SPECIFIC APPLICATION WATTAGE ALLOWANCE FOR ORNAMENTAL LIGHTING

DETERMINE WATTAGE ALLOWANCE				LUMINAIRE TYPE		DESIGN WATTS			
A	B	C	D	E	F	G	H	I	J
SPECIFIC LIGHTING APPLICATION	SQUARE FEET OF HARDSCAPE	ORNAMENTAL LIGHTING ALLOWANCE FOR OLZ (WATTS PER SF)	WATTAGE ALLOWANCE (B x C)	NAME OR SYMBOL	LUMINAIRE TYPE	LUMINAIRE QUANTITY	WATTS PER LUMINIARE	DESIGN WATTS (G x H)	ALLOWED WATTS MINIMUM OF D or I
Enter total into OLTG-1C; Page 4 of 4; Row C; Specific Application Wattage Allow ance for Ornamental Lighting:									

OUTDOOR LIGHTING MANDATORY MEASURES

Project Name: TORRANCE TRANSIT PARK & RIDE REGIONAL TERMINAL

☒ §132 **OUTDOOR LIGHTING**
ALL PERMANENTLY INSTALLED OUTDOOR LUMINAIRES EMPLOYING LAMPS RATED OVER 100 WATTS SHALL EITHER: HAVE A LAMP EFFICACY OF AT LEAST 60 LUMENS PER WATT; OR BE CONTROLLED BY A MOTION SENSOR UNLESS EXEMPTED FROM THE 8 POSSIBLE EXCEPTIONS. SEE SECTION 132.

☒ §132(b) **LUMINAIRE CUTOFF REQUIREMENTS**
ALL OUTDOOR LUMINAIRES THAT USE LAMPS RATED GREATER THAN 175 WATTS IN HARDSCAPE AREAS INCLUDING PARKING LOTS, BUILDING ENTRANCES, SALES AND NON-SALES CANOPIES, AND ALL OUTDOOR SALES AREAS SHALL BE DESIGNATED CUTOFF FOR LIGHT DISTRIBUTION.
TO COMPLY WITH THIS REQUIREMENT, THE LUMINAIRE SHALL BE RATED CUTOFF IN A PHOTOMETRIC TEST REPORT THAT INCLUDES ANY TILT OR OTHER NON-LEVEL MOUNTING CONDITION OF THE INSTALLED LUMINAIRE.
CUTOFF IS A LUMINAIRE LIGHT DISTRIBUTION CLASSIFICATION WHERE THE CANDELA PER 1000 LAMP LUMENS DOES NOT NUMERICALLY EXCEED 25 AT OR ABOVE A VERTICAL ANGLE OF 90 DEGREES ABOVE NADIR, AND 100 AT OR ABOVE A VERTICAL ANGLE OF 80 DEGREES ABOVE NADIR.
NADIR IS IN THE DIRECTION OF STRAIGHT DOWN, AS WOULD BE INDICATED BY A PLUMB LINE. 90 DEGREES ABOVE NADIR IS HORIZONTAL. 80 DEGREES ABOVE NADIR IS 10 DEGREES BELOW HORIZONTAL UNLESS EXEMPTED FROM THE 6 POSSIBLE EXCEPTIONS. SEE SECTION 132(b).

☒ §132(c)2 **CONTROLS FOR OUTDOOR LIGHTING**
ALL PERMANENTLY INSTALLED OUTDOOR LIGHTING SHALL BE CONTROLLED BY A PHOTOCONTROL OR ASTRONOMICAL TIME SWITCH THAT AUTOMATICALLY TURNS OFF THE OUTDOOR LIGHTING WHEN DAYLIGHT IS AVAILABLE UNLESS EXEMPTED FROM THE EXCEPTION. SEE SECTION 132©
FOR LIGHTING OF BUILDING FACADES PARKING LOTS SALES AND NON-SALES CANOPIES, ALL OUTDOOR SALES AREAS, AND STUDENT PICK-UP/DROP-OFF ZONES WHERE TWO OR MORE LUMINAIRES ARE USED, AN AUTOMATIC TIME SWITCH SHALL BE INSTALLED THAT IS CAPABLE OF;
(1) TURNING OFF THE LIGHTING WHEN NOT NEEDED AND
(2) REDUCING THE LIGHTING POWER (IN WATTS) BY AT LEAST 50 PERCENT BUT NOT EXCEEDING 80 PERCENT OR PROVIDING CONTINUOUS DIMMING THROUGH A RANGE THAT INCLUDES 50 PERCENT THROUGH 80 PERCENT REDUCTION UNLESS EXEMPTED FROM THE 6 POSSIBLE EXCEPTIONS.
SEE SECTION 132(C)2. THIS CONTROL SHALL MEET THE REQUIREMENTS OF SECTION 119(C).

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CITY OF TORRANCE
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PARK & RIDE REGIONAL TERMINAL

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30% CONSTRUCTION DRAWINGS

MARK DATE DESCRIPTION

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PROJECT No: 06.12.00054
DATE: 09/26/2012
SCALE: NONE

ELECTRICAL
OUTDOOR TITLE 24

E005

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LUMINAIRE SCHEDULE

Type	Image	Manuf	Catalog #	Lamp	Ballast/Driver	Description	VA	Volts	Mounting	Notes	D/N Allowance
A1		METALUX	2ALN	LED 3500K	DIMMING 0-10V	ARCLINE 2'x2' RECESSED VOLUMETRIC LUMINAIRE, GRID CEILING, FLAT WHITE STEEL DOOR, 3400 LUMEN OUTPUT, SMOOTH FROSTED ACRYLIC SHIELDING	36	UNV	RECESSED	-	
A2		METALUX	2ALN	LED 3500K	DIMMING 0-10V	ARCLINE 2'x4' RECESSED VOLUMETRIC LUMINAIRE, GRID CEILING, FLAT WHITE STEEL DOOR, 4500 LUMEN OUTPUT, SMOOTH FROSTED ACRYLIC SHIELDING	48	UNV	RECESSED	-	
A3		COOPER LIGHTING ALL-PRO	APT-232	(2) 32W T8 3500K	ELECTRONIC	APT SERIES 2'x4' RECESSED COMMERCIAL TROFFER, ACRYLIC PRISMATIC LENS	62	UNV	RECESSED	-	
A4		METALUX	2ALN	LED 3500K	DIMMING 0-10V	ARCLINE 2'x2' RECESSED VOLUMETRIC LUMINAIRE, GRID CEILING, FLAT WHITE STEEL DOOR, 2600 LUMEN OUTPUT, SMOOTH FROSTED ACRYLIC SHIELDING	28	UNV	RECESSED	-	
B1		HAMPSTEAD LIGHTING	17597	(1) 26W CFL 3500K	STANDARD	LUCCIOLA SMALL SUSPENSION LUMINAIRE, BLOWN GLASS DIFFUSER, SATIN NICKEL FINISH	28	277	PENDANT @	-	
C1		NEO-RAY	79OS-1	(1) 32W T8 3500K	ELECTRONIC	CONTINUOUS PERIMETER WALL WASH	62	UNV	RECESSED	2	
C2		NEO-RAY	23X-R-1	(1) 28W T5 3500K	ELECTRONIC	4' STRAIGHT & NARROW CONTINUOUS WALL WASH, RECESSED, SHEET ROCK MOUNTING, SINGLE SWITCHING	30	UNV	RECESSED	5	
D1		PORTFOLIO	LDSQ4	LED 3500K	DIMMING 0-10V D010	4" SQUARE LED DOWNLIGHT, 1300 LUMENS, SELF FLANGED REFLECTOR, SEMI-SPECULAR CLEAR FINISH	25	UNV	RECESSED	-	
D2		PORTFOLIO	LDSQ4	LED 3500K	DIMMING 0-10V D010	4" SQUARE LED DOWNLIGHT, 1300 LUMENS, SELF FLANGED REFLECTOR, SEMI-SPECULAR CLEAR FINISH	25	UNV	RECESSED	-	
D3		TECH LIGHTING	700FMFLDS	LED 3200K	INTEGRAL	LARGE 9" FLUID SQUARE CEILING LUMINAIRE, WET LISTED, SATIN NICKEL FINISH, CUSTOM 3200 LED WITH 277V DRIVER	24	277	SURFACE	-	
L1		LUMENPULSE	LCS RO	LED 3500K	DIM 0-10V	LUMENCOVE, 12" LENGTH, FROSTED LENS, FEED THROUGH, WHITE FINISH	6	277	COVE	-	
L2		LUMENPULSE	LCS RO	LED 3500K	DIM 0-10V	LUMENCOVE, 24" LENGTH, FROSTED LENS, FEED THROUGH, WHITE FINISH	12	277	COVE	-	
L3		LUMENPULSE	LCS RO	LED 3500K	DIM 0-10V	LUMENCOVE, 36" LENGTH, FROSTED LENS, FEED THROUGH, WHITE FINISH	18	277	COVE	-	
L4		LUMENPULSE	LCS RO	LED 3500K	DIM 0-10V	LUMENCOVE, 48" LENGTH, FROSTED LENS, FEED THROUGH, WHITE FINISH	24	277	COVE	-	
L8		LUMENPULSE	LCS RO	LED 3500K	DIM 0-10V	LUMENCOVE, 96" LENGTH, FROSTED LENS, FEED THROUGH, WHITE FINISH	48	277	COVE	-	
LX1		LUMENPULSE	LXT ASHRAE	LED 3500K	NO DIMMING	LUMENCOVE XT, 12" LENGTH, WET LISTED, UNIVERSAL ADJUSTABLE MOUNTING, SILVER SANDTEXT FINISH	5	277	COVE	-	
LX2		LUMENPULSE	LXT ASHRAE	LED 3500K	NO DIMMING	LUMENCOVE XT, 24" LENGTH, WET LISTED, UNIVERSAL ADJUSTABLE MOUNTING, SILVER SANDTEXT FINISH	10	277	COVE	-	
LX4		LUMENPULSE	LXT ASHRAE	LED 3500K	NO DIMMING	LUMENCOVE XT, 48" LENGTH, WET LISTED, UNIVERSAL ADJUSTABLE MOUNTING, SILVER SANDTEXT FINISH	20	277	COVE	-	
P1		BETA LED	ARE-SLM66	(1) 40 LED 4000K	525 mA	IP66 SLM LED AREA LUMINAIRE, TYPE 5 MEDIUM DISTRIBUTION, TENON MOUNTING, WHITE FINISH, MULTI-LEVEL CONTROL, 12'-6' ROUND TAPERED POLE	70	UNV	POLE @ 15'-0" AFG	3	
P2		BETA LED	ARE-EDG	(2) 140 LED 4000K	525 mA	EDGE LED AREA LUMINAIRE, TYPE 4 DISTRIBUTION WITH BACKLIGHT CONTROL, DIRECT ARM LONG MOUNTING, TWIN HEADS AT 180°, PLATINUM BRONZE FINISH, MULTI-LEVEL CONTROL, 25' ROUND TAPERED POLE	466	UNV	POLE @ 27'-6" AFG	3	
P3		BETA LED	ARE-EDG	(1) 140 LED 4000K	525 mA	EDGE LED AREA LUMINAIRE, TYPE 3 DISTRIBUTION, DIRECT ARM LONG MOUNTING, PLATINUM BRONZE FINISH, MULTI-LEVEL CONTROL, 25' ROUND TAPERED POLE	233	UNV	POLE @ 27'-6" AFG	3	
P3B		BETA LED	ARE-EDG	(1) 140 LED 4000K	525 mA	EDGE LED AREA LUMINAIRE, TYPE 3 DISTRIBUTION WITH BACKLIGHT CONTROL, DIRECT ARM LONG MOUNTING, PLATINUM BRONZE FINISH, MULTI-LEVEL CONTROL, 25' ROUND TAPERED POLE	233	UNV	POLE @ 27'-6" AFG	3	
P4		BETA LED	ARE-EDG	(1) 140 LED 4000K	525 mA	EDGE LED AREA LUMINAIRE, TYPE 4 DISTRIBUTION, DIRECT ARM LONG MOUNTING, PLATINUM BRONZE FINISH, MULTI-LEVEL CONTROL, 25' ROUND TAPERED POLE	233	UNV	POLE @ 27'-6" AFG	3	
P4B		BETA LED	ARE-EDG	(1) 140 LED 4000K	525 mA	EDGE LED AREA LUMINAIRE, TYPE 4 DISTRIBUTION WITH BACKLIGHT CONTROL, DIRECT ARM LONG MOUNTING, PLATINUM BRONZE FINISH, MULTI-LEVEL CONTROL, 25' ROUND TAPERED POLE	233	UNV	POLE @ 27'-6" AFG	3	
S1		METALUX	SSF-1	(1) 32W T8 3500K	ELECTRONIC	4' STRIP LUMINAIRE WITH WIRE GUARD	32	UNV	SURFACE	4	
S2		METALUX	SSF-2	(2) 32W T8 3500K	ELECTRONIC	4' STRIP LUMINAIRE WITH WIRE GUARD	62	UNV	SURFACE	4	
S3		COOPER LIGHTING ALL-PRO	APHDVT-232	(2) 32W T8 3500K	ELECTRONIC	4' VAPORTITE INDUSTRIAL LUMINAIRE, WET LISTED	62	UNV	SURFACE	-	
W1		BEGA	2380 LED	(1) 11.2W LED 4000K	ELECTRONIC	FULL CUT-OFF WALL LUMINAIRE, LOW PROFILE, SILVER FINISH, 4000K	14	UNV	WALL @	-	
W2		McGRAW-EDISON	IST	(1) 21 LED 4000K	INTEGRAL	IMPACT ELITE SMALL TRAPEZOID FULL CUT-OFF WALL LUMINAIRE, B01 LIGHT BARS, TYPE 3 DISTRIBUTION WITH BACK LIGHT CONTROL, DARK PLATINUM FINISH	27	UNV	WALL @ 7'-0" AFG	-	

GENERAL NOTES

A. BASE BID SHALL BE FOR ALL LIGHTING SPECIFICATIONS AS INDICATED. ALTERNATE PACKAGES SHALL NOT BE ACCEPTED, IF VE IS REQUIRED, ALTERNATES WILL BE EVALUATED ONCE PROJECT IS AWARDED.

B. ALL COMPACT AND LINEAR FLUORESCENT LAMPS SHALL BE 3500K, U.O.N.

C. MULTI-LAMP LUMINAIRES SHALL BE PROVIDED WITH THE FEWEST BALLASTS POSSIBLE, MASTER/SLAVE CONFIGURATION WHERE APPLICABLE.

D. MOUNTING HEIGHTS ARE TO BOTTOM OF LUMINAIRE, U.O.N.

E. AS PER NEC 410.73(G) 2005, ALL FLUORESCENT LUMINAIRES UTILIZING DOUBLE-ENDED LAMPS AND BALLASTED LUMINAIRES THAT CAN BE SERVICED IN PLACE SHALL HAVE LOCAL DISCONNECTING MEANS EITHER INTERNAL OR EXTERNAL TO EACH LUMINAIRE.

SCHEDULE NOTES

1. REFER TO ELECTRICAL DRAWINGS FOR LOCATION, ARROWS AND NUMBER OF FACES.
2. CONTINUOUS HOUSING SHALL RUN WALL-TO-WALL WITH LAMPS CENTERED ON WALL AND EMPTY HOUSING AT THE ENDS. CONTRACTOR SHALL PROVIDE MEASUREMENTS PRIOR TO ORDERING. MANUFACTURER SHALL ATTEMPT TO LIMIT LAMP TYPES TO 2' AND 4' T8 AS FEASIBLE TO RUN CONTINUOUS LENGTH.
3. REFER TO POLE BASE DETAIL FOR ADDITIONAL INFORMATION. FINAL POLE BASE DETAILS SHALL BE VERIFIED WITH CIVIL/STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL PROVIDE CHAIN HANGING KIT AS REQUIRED TO AVOID CONFLICTS WITH OTHER TRADES AND OTHER ELECTRICAL EQUIPMENT.
5. CONTRACTOR SHALL DETERMINE INTERMEDIATE, BEGINNING, OR END OF RUN SECTIONS SUCH THAT THE INDICATED LENGTHS ON PLAN ARE RUN CONTINUOUSLY.

1 LUMINAIRE SCHEDULE
NO SCALE

CONTROL DEVICE SCHEDULE

Type	Manufacturer	Model	Description	Coverage	Voltage	On	Time Delay	Mounting	Notes
$OS	COOPER GREENGATE	OSW-P-0451-MV-W	WALL-BOX OCCUPANCY SENSOR SWITCH, SELF ADAPTING, WHITE FINISH	< 450 SF	LINE	MANUAL	10 MINUTES	WALL SWITCH	-
OS	COOPER GREENGATE	OAC-DT-0501-R	MICROSET DUAL TECH SELF-ADJUSTING OCCUPANCY SENSOR	< 500 SF	LOW	AUTOMATIC	10 MINUTES	CEILING SIDE	1, 2
OS	COOPER GREENGATE	OAC-DT-1000-R	MICROSET DUAL TECH SELF-ADJUSTING OCCUPANCY SENSOR	500 - 1000 SF	LOW	AUTOMATIC	10 MINUTES	CEILING SIDE	1, 2
OS	COOPER GREENGATE	OAC-DT-2000-R	MICROSET DUAL TECH SELF-ADJUSTING OCCUPANCY SENSOR	1000 - 2000 SF	LOW	AUTOMATIC	10 MINUTES	CEILING CENTER	1, 2
OS	COOPER GREENGATE	ODC-0051-H	DESIGNER SERIES DUAL TECH OCCUPANCY SENSOR	< 50 LF	LOW	AUTOMATIC	10 MINUTES	CEILING END	1, 2
P	COOPER GREENGATE	DLC-PD-DIM	PHOTODIODE FOR 0-10V DIMMING	0 - 500 FC	LOW	-	-	CEILING	-

NOTES:

1. ALL SENSOR LOCATIONS SHOWN ON PLANS ARE FOR OPERATIONAL INTENT ONLY. ELECTRICAL CONTRACTOR SHALL PROVIDE PROJECT SPECIFIC DIMENSIONAL LAYOUT OF DEVICE LOCATIONS FOR REVIEW AND APPROVAL DURING SUBMITTAL PROCESS PRIOR TO INSTALLATION. FINAL LOCATIONS SHALL BE DETERMINED BY CONTRACTOR AS PER MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS AND AS COORDINATE WITH LOCAL COMMISSIONING AGENTS.
2. DEVICE SHALL BE PROVIDED WITH SWITCHPACK TRANSFORMER AS REQUIRED TO STEP FROM LOW-VOLTAGE TO LINE VOLTAGE.

2 CONTROL DEVICE SCHEDULE
NO SCALE

LIGHTING LEGEND

LIGHTING

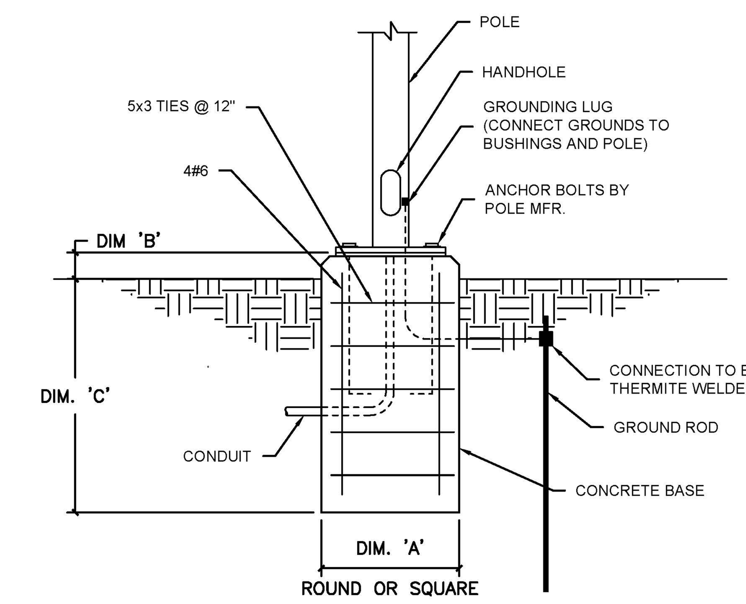
UPPER-CASE LETTER ADJACENT TO LUMINAIRE INDICATES LUMINAIRE TYPE. LOWER-CASE LETTER ADJACENT TO LUMINAIRE INDICATES SWITCHING LEG.

EM STD

- DOWNLIGHT
- WALLWASHER/ADJUSTABLE
- PENDANT
- WALL MOUNTED FIXTURE
- PENDANT MOUNTED INDIRECT
- WALL MOUNTED FLUORESCENT FIXTURE
- LINEAR LED LIGHT
- 2x4 DIRECT/INDIRECT FIXTURE
- 1x4 DIRECT/INDIRECT FIXTURE
- 2x4 FLUORESCENT FIXTURE
- 1x4 FLUORESCENT FIXTURE
- 1x2 FLUORESCENT FIXTURE
- FLUORESCENT STRIP LIGHT- LENGTH AS SHOWN ON DRAWING
- IN-GRADE TYPE FIXTURE
- WALL RECESSED STEP LIGHT
- POST-TOP PEDESTRIAN POLE LUMINAIRE
- AREA POLE LUMINAIRE
- FLOOD LUMINAIRE

PROJECT NOTES

1. CONTRACTOR SHALL BASE SPECIFICATION ORDERING ON THE ARCHITECTURAL ENGINEERING DRAWINGS. REFER TO ELECTRICAL FOR EXIT SIGNS, ELECTRICAL LAYOUTS, AND CODE INFORMATION.
2. CONTRACTOR SHALL PROVIDE LIGHTING CONTROL SYSTEM FOR TITLE 24 AND ENERGY CODE COMPLIANCE TO CONTROL BOTH INTERIOR AND EXTERIOR BUILDING AND SITE LIGHTING.



TYPE	A*	B	C*	OVERALL HEIGHT
P1	1'-6"	2'-6"	4'-0"	15'
P2	2'-0"	2'-6"	5'-6"	27'-6"
P3	2'-0"	2'-6"	5'-0"	27'-6"
P3B	2'-0"	2'-6"	5'-0"	27'-6"
P4	2'-0"	2'-6"	5'-0"	27'-6"
P4B	2'-0"	2'-6"	5'-0"	27'-6"

** "A" AND "C" COLUMNS SHALL BE VERIFIED BY CIVIL/STRUCTURAL ENGINEER PRIOR TO INSTALLATION.*

4 POLE BASE DETAIL
NO SCALE

AREA	TYPE	ASHRAE ALLOWANCE	SF	PROPOSED W/SF
EAST BUILDING	OFFICE	1.0 W/SF	13,366 SF	0.69 W/SF
WEST BUILDING	OFFICE	1.0 W/SF	3,295 SF	0.54 W/SF

3 LIGHTING POWER DENSITY
NO SCALE

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PROJECT No: 06.12.00054
DATE: 09/26/2012
SCALE: NONE

ELECTRICAL
LIGHTING FIXTURE SCHEDULE

E-006

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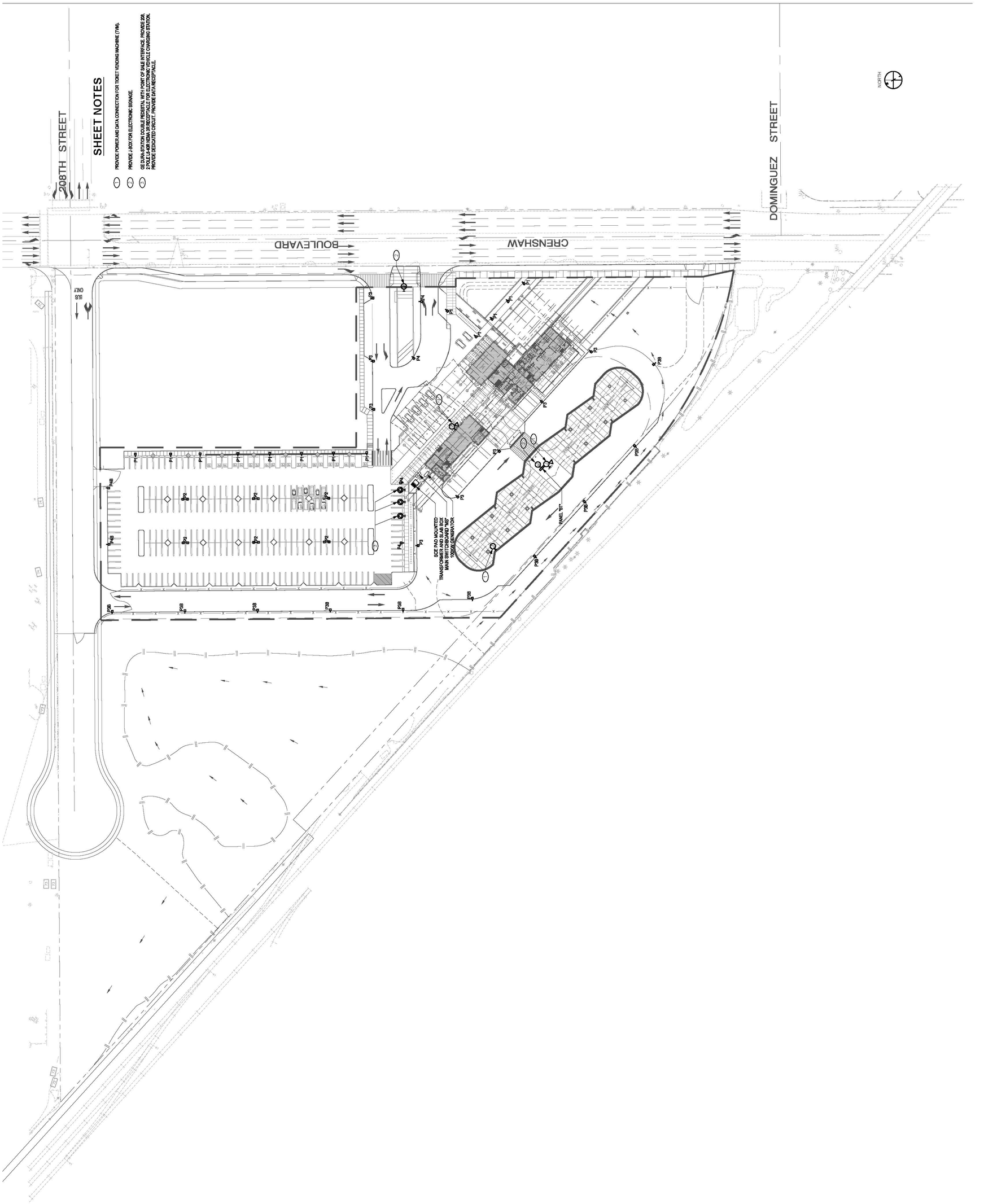

SHEET NOTES

1. PROVIDE POWER AND DATA CONNECTION FOR TICKET VENDING MACHINE (TVM).
2. PROVIDE J-BOX FOR ELECTRONIC SIGNAGE.
3. GE DURA-STATION DOUBLE PEDESTAL WITH POINT OF SALE INTERFACE. PROVIDE 208, 2 POLE LI-40R NEMA 3R RECEPTACLE FOR ELECTRONIC VEHICLE CHARGING STATION. PROVIDE DEDICATED CIRCUIT. PROVIDE DATA RECEPTACLE.

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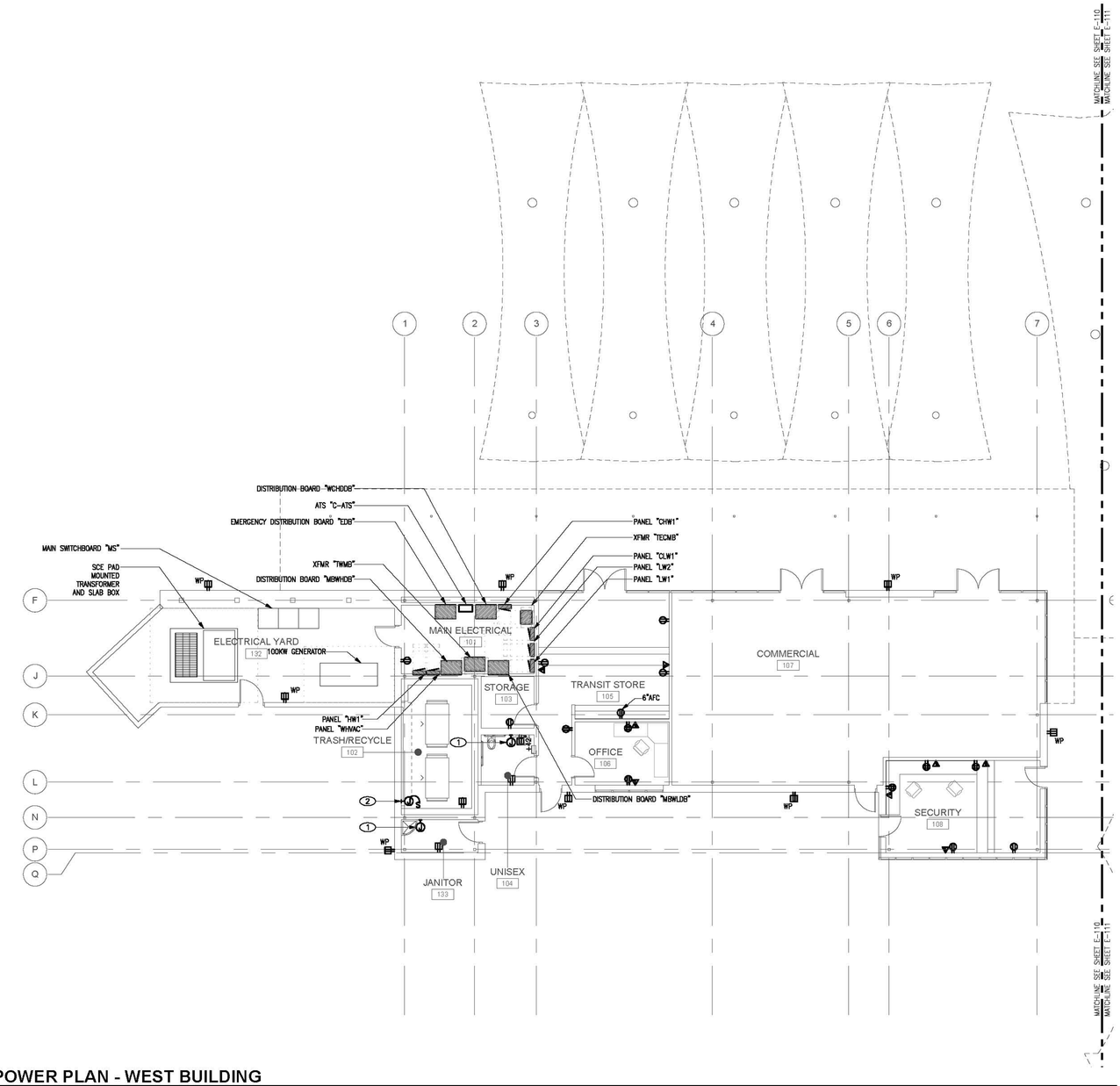
SCALE: 1" = 50'-0"

ELECTRICAL
SITE PLAN

E-101

SHEET NOTES

1. J-BOX FOR CONNECTION TO INSTANT HOT WATER HEATER. CONTRACTOR TO PROVIDE FINAL CONNECTION PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. J-BOX FOR CONNECTION TO MOTORIZED ROLL UP DOOR. CONTRACTOR TO PROVIDE FINAL CONNECTION PER MANUFACTURER'S INSTALLATION REQUIREMENTS.



1 **POWER PLAN - WEST BUILDING**
SCALE: 1/8"=1'-0"

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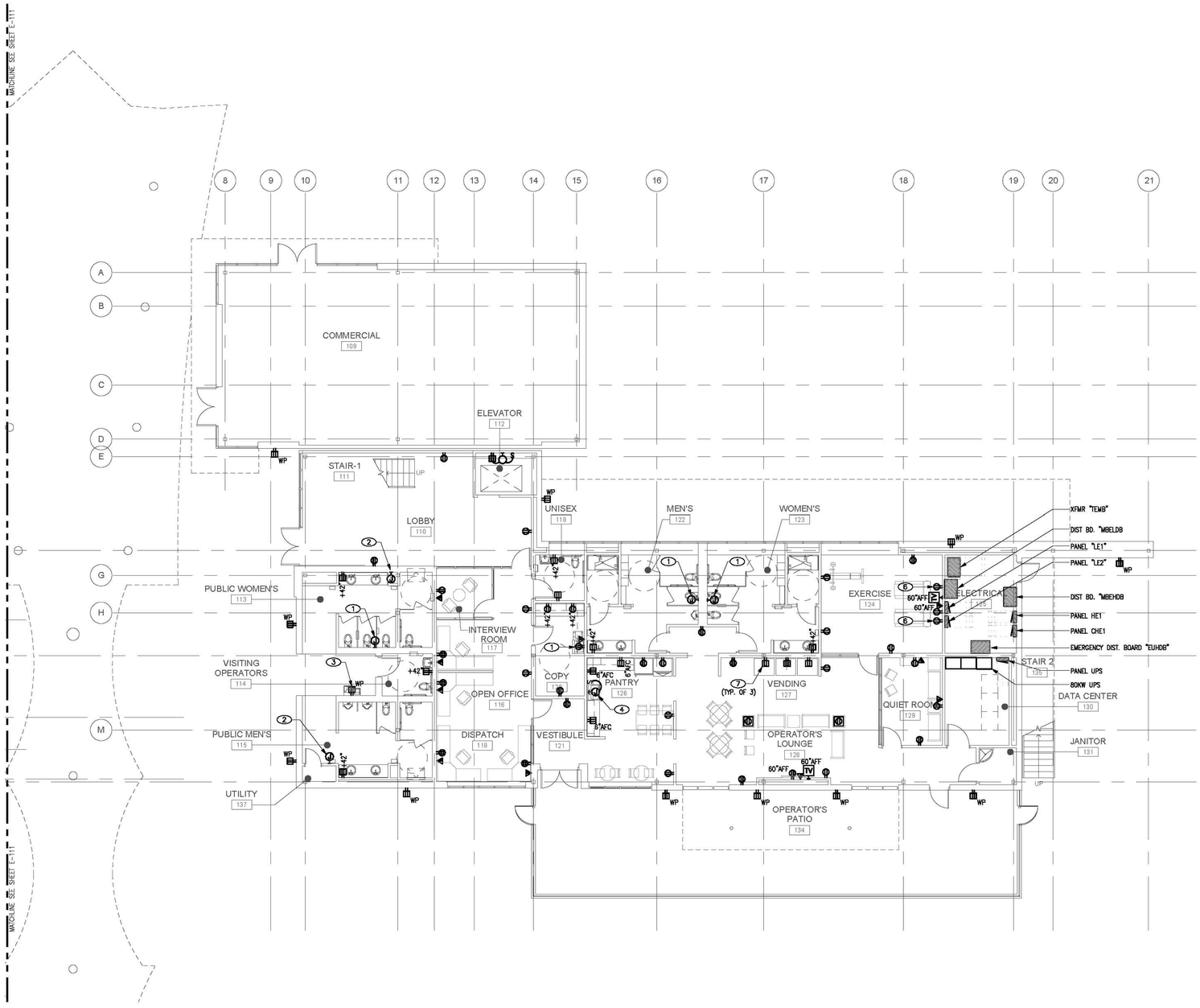
SCALE: 1/8" = 1'-0"

ELECTRICAL
WEST BUILDING POWER PLAN

E-110

SHEET NOTES

1. J-BOX FOR CONNECTION TO PLUMBING FIXTURE INFRARED SENSOR. PROVIDE TRANSFORMER AND ALL REQUIRED ACCESSORIES PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. J-BOX FOR HAND DRYER. VERIFY EXACT MOUNTING HEIGHT IN FIELD SO THAT J-BOX IS LOCATED BEHIND DRYER AND IS NOT EXPOSED. PROVIDE DEDICATED CIRCUIT.
3. PROVIDE DEDICATED CIRCUIT FOR ELECTRIC WATER COOLER..
4. J-BOX FOR GARBAGE DISPOSAL. CONTRACTOR TO PROVIDE FINAL CONNECTION PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. PROVIDE DEDICATED CIRCUIT FOR COPIER/PRINTER.
6. PROVIDE DEDICATED CIRCUIT FOR TREADMILL MACHINE.
7. PROVIDE DEDICATED CIRCUIT FOR VENDING MACHINE.



1 LEVEL 1 POWER PLAN - EAST BUILDING
SCALE: 1/8"=1'-0"

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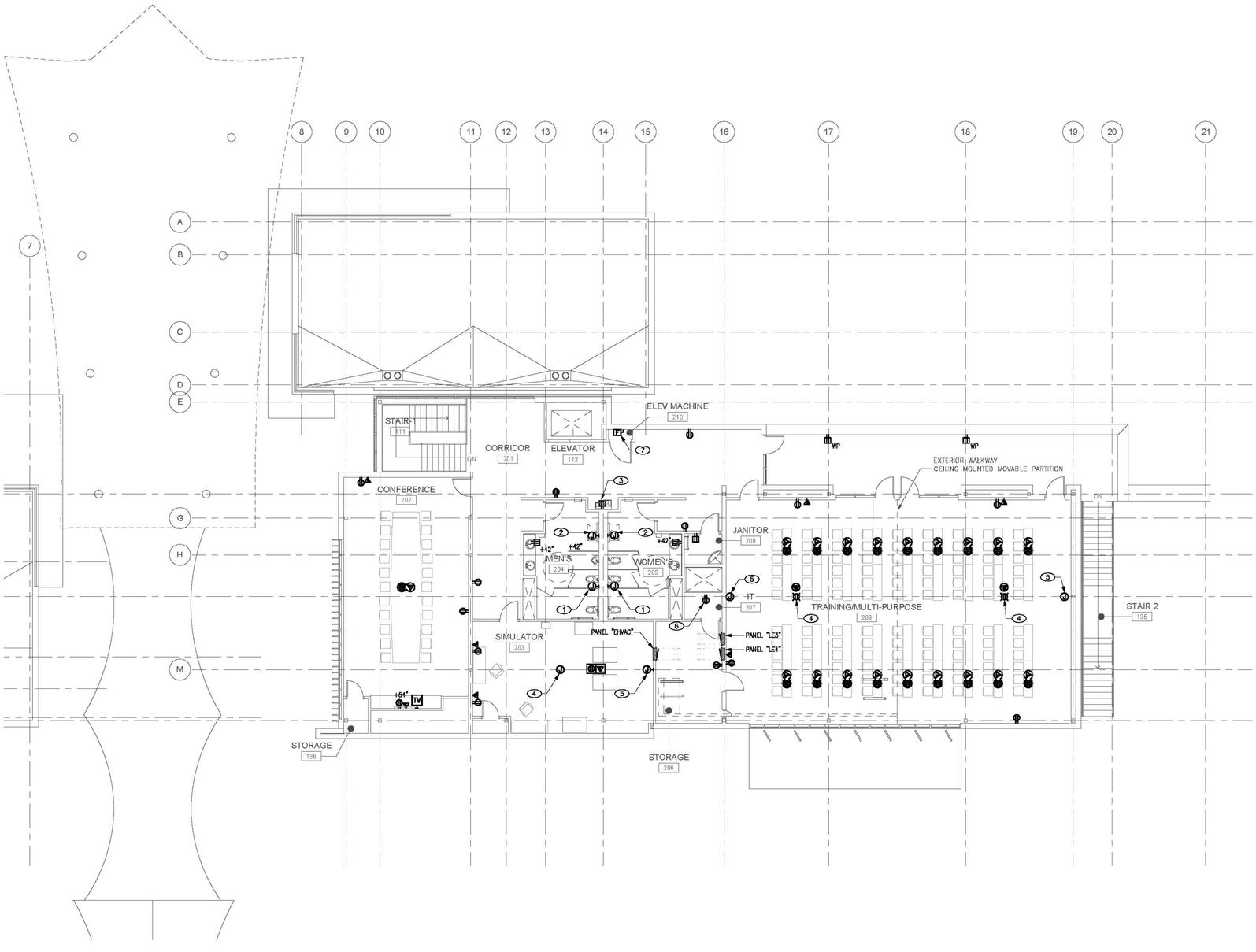
ELECTRICAL
EAST BUILDING POWER PLAN - LEVEL 1

E-111

SHEET NOTES

1. J-BOX FOR CONNECTION TO PLUMBING FIXTURE INFRARED SENSOR. PROVIDE TRANSFORMER AND ALL REQUIRED ACCESSORIES PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. J-BOX FOR HAND DRYER. VERIFY EXACT MOUNTING HEIGHT IN FIELD SO THAT J-BOX IS LOCATED BEHIND DRYER AND IS NOT EXPOSED. PROVIDE DEDICATED CIRCUIT.
3. PROVIDE DEDICATED CIRCUIT FOR ELECTRIC WATER COOLER.
4. PROVIDE DEDICATED CIRCUIT FOR SCREEN PROJECTOR.
5. J-BOX FOR SCREEN. VERIFY EXACT MOUNTING HEIGHT IN FIELD. PROVIDE DEDICATED CIRCUIT.
6. PROVIDE 30A DEDICATED CIRCUIT FOR IT UPS POWER.
7. PROVIDE FUSED DISCONNECT FOR ELEVATOR.



1 LEVEL 2 POWER PLAN - EAST BUILDING
SCALE: 1/8"=1'-0"

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ELECTRICAL
EAST BUILDING POWER PLAN - LEVEL 2

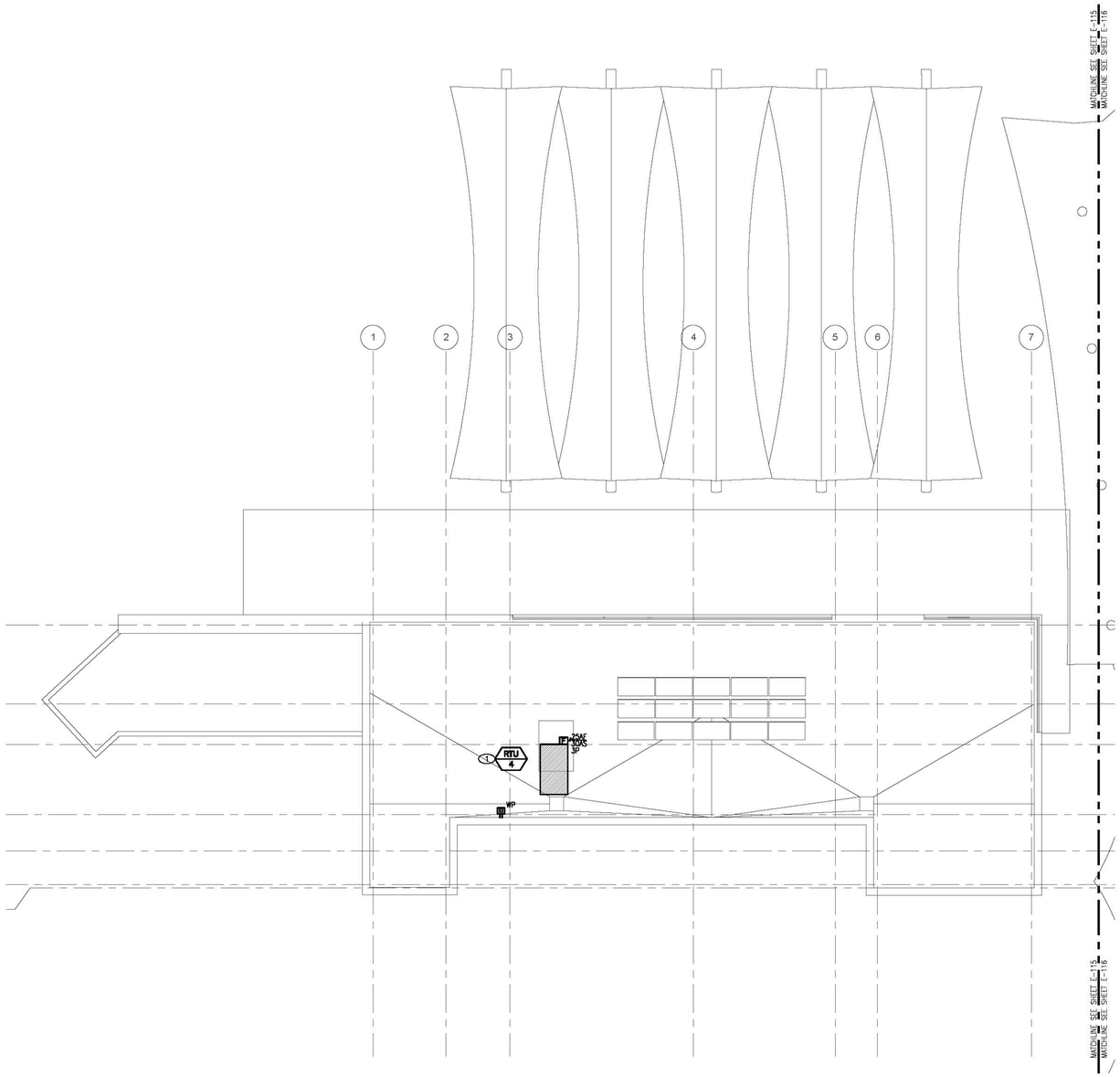
E-112

GENERAL NOTES

1. ALL ROOFTOP ELECTRICAL EQUIPMENT TO BE PROVIDED IN NEMA 3R ENCLOSURES.
2. COORDINATE EXACT LOCATION AND CONNECTIONS TO HVAC EQUIPMENT IN FIELD. PROVIDE ALL REQUIRE EQUIPMENT, HARDWARE, CONDUIT AND WIRE REQUIRED PER MANUFACTURER INSTALLATION INSTRUCTIONS FOR A COMPLETE AND FULLY OPERATIONAL INSTALLTION.

SHEET NOTES

1. ELECTRICAL CONTRACTOR SHALL PROVIDE CONNECTION FROM UNIT TO SOLAR PANEL DISCONNECT. HVAC CONTRACTOR TO PROVIDE ALL PV INTER CONNECTIONS AS WELL AS EQUIPMENT REQUIRED FOR SOLAR PANELS.



1 WEST BUILDING ROOF POWER PLAN
SCALE: 1/8"=1'-0"

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ELECTRICAL
WEST BUILDING ROOF PLAN

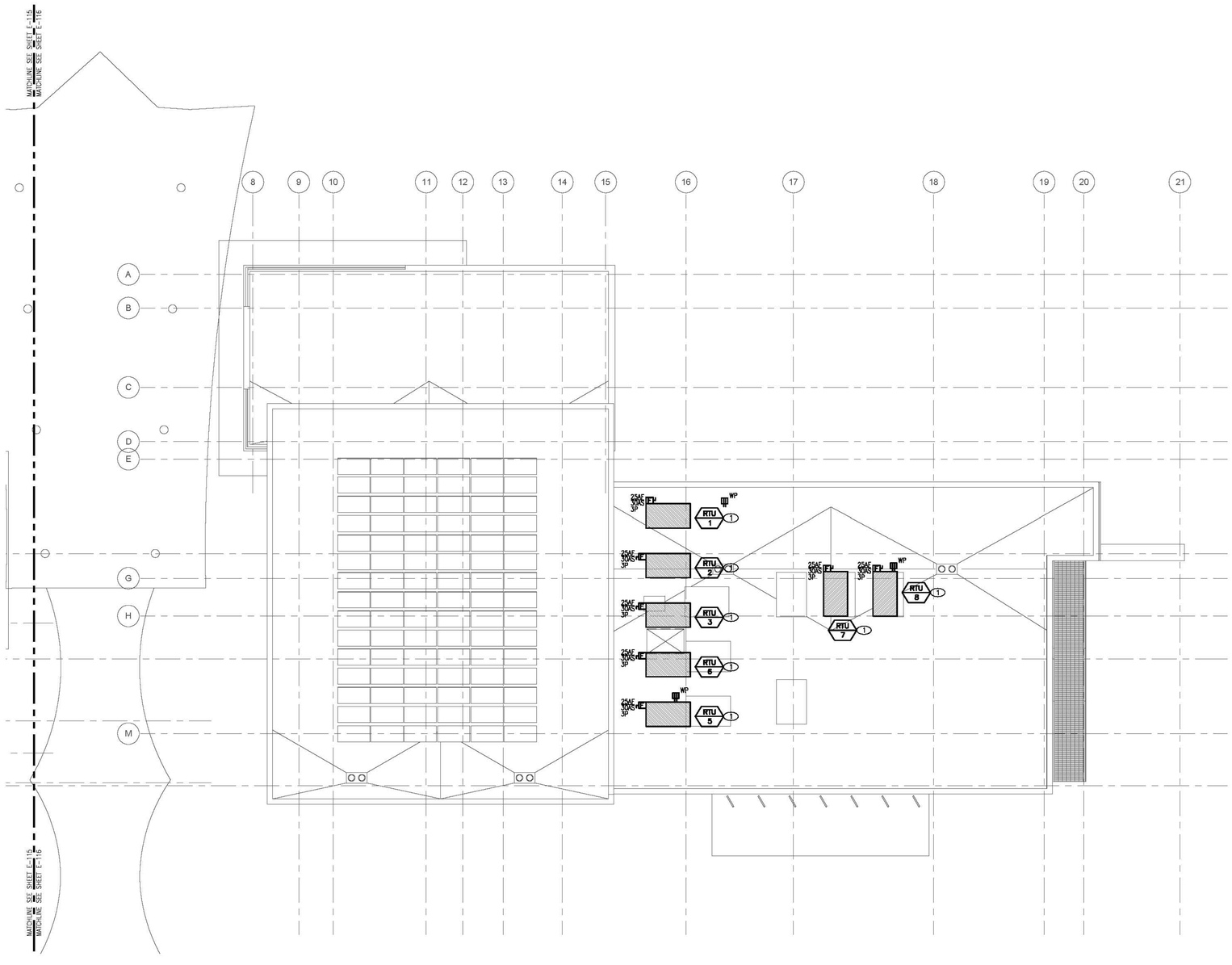
E-113

GENERAL NOTES

1. ALL ROOFTOP ELECTRICAL EQUIPMENT TO BE PROVIDED IN NEMA 3R ENCLOSURES.
2. COORDINATE EXACT LOCATION AND CONNECTIONS TO HVAC EQUIPMENT IN FIELD. PROVIDE ALL REQUIRE EQUIPMENT, HARDWARE, CONDUIT AND WIRE REQUIRED PER MANUFACTURER INSTALLATION INSTRUCTIONS FOR A COMPLETE AND FULLY OPERATIONAL INSTALLTION.

SHEET NOTES

(1) ELECTRICAL CONTRACTOR SHALL PROVIDE CONNECTION FROM UNIT TO SOLAR PANEL DISCONNECT. HVAC CONTRACTOR TO PROVIDE ALL PV INTER CONNECTIONS AS WELL AS EQUIPMENT REQUIRED FOR SOLAR PANELS.



1 EAST BUILDING ROOF POWER PLAN
SCALE: 1/8"=1'-0"

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ELECTRICAL
EAST BUILDING ROOF PLAN

E-114

GENERAL NOTES

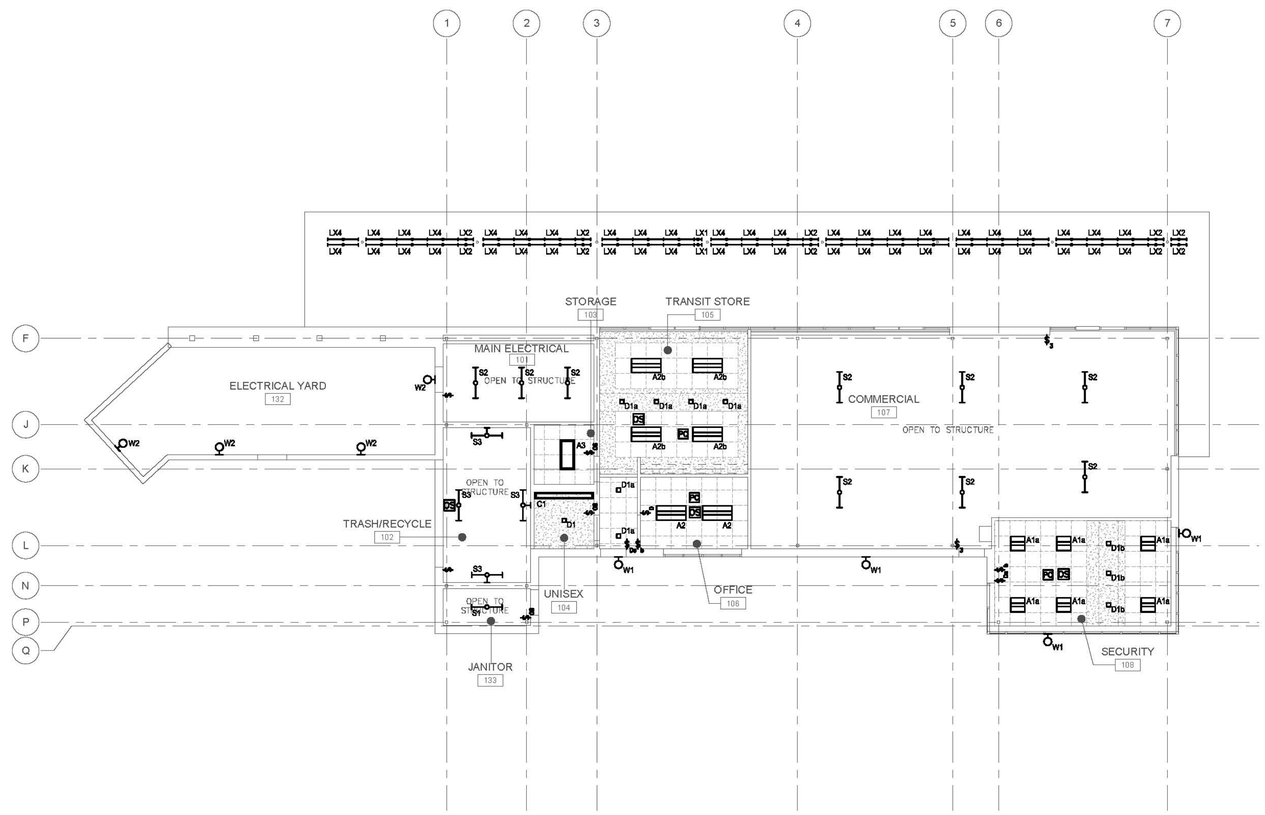
A. REFER TO DETAIL DRAWINGS FOR ADDITIONAL INFORMATION. ALL DETAILS APPLY FOR ALL APPLICABLE SITUATIONS WHETHER REFERENCED OR NOT, UON.

B. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL LUMINAIRES. INFORM ENGINEER OF CONFLICTS.

C. CONTRACTOR IS RESPONSIBLE TO REVIEW ARCHITECTURAL DRAWINGS TO CONFIRM CEILING TYPES IN ALL ROOMS (ACCESSIBLE, EXPOSED, OR "HARD") AND TO USE THE APPROPRIATE WIRING METHOD FOR EACH TYPE. INSURE ALL J-BOXES ARE ACCESSIBLE AFTER ALL OTHER TRADE'S WORK IS COMPLETED. DO NOT LOCATE ANY J-BOXES ON "HARD" CEILINGS; ALL WIRING MUST BE ACCESSIBLE THROUGH LUMINAIRE ONLY IN "DASEY-CHAIN" METHOD OR WITH DEDICATED HOMERUNS TO EACH LUMINAIRE. J-BOXES MAY BE LOCATED ABOVE OTHER TRADE'S ACCESS DOORS IF FEASIBLE AND DOES NOT INTERFERE WITH ACCESS.

D. LUMINAIRES WITH "NL" ADJACENT TO IT INDICATES CONNECTION TO UNSWITCHED HOT CONDUCTOR. THIS IS ONLY SHOWN WHERE THERE IS A POSSIBILITY OF CONFUSION WHEN A GROUP OF LUMINAIRES ARE CONTROLLED TOGETHER EXCEPT FOR THE NIGHTLIGHT LUMINAIRE.

E. 3-WAY AND 4-WAY SWITCHES SHALL BE INTERCONNECTED USING CONDUIT AND WIRE ONLY.



1 LIGHTING PLAN - WEST BUILDING LEVEL 1
SCALE: 1/8"=1'-0"

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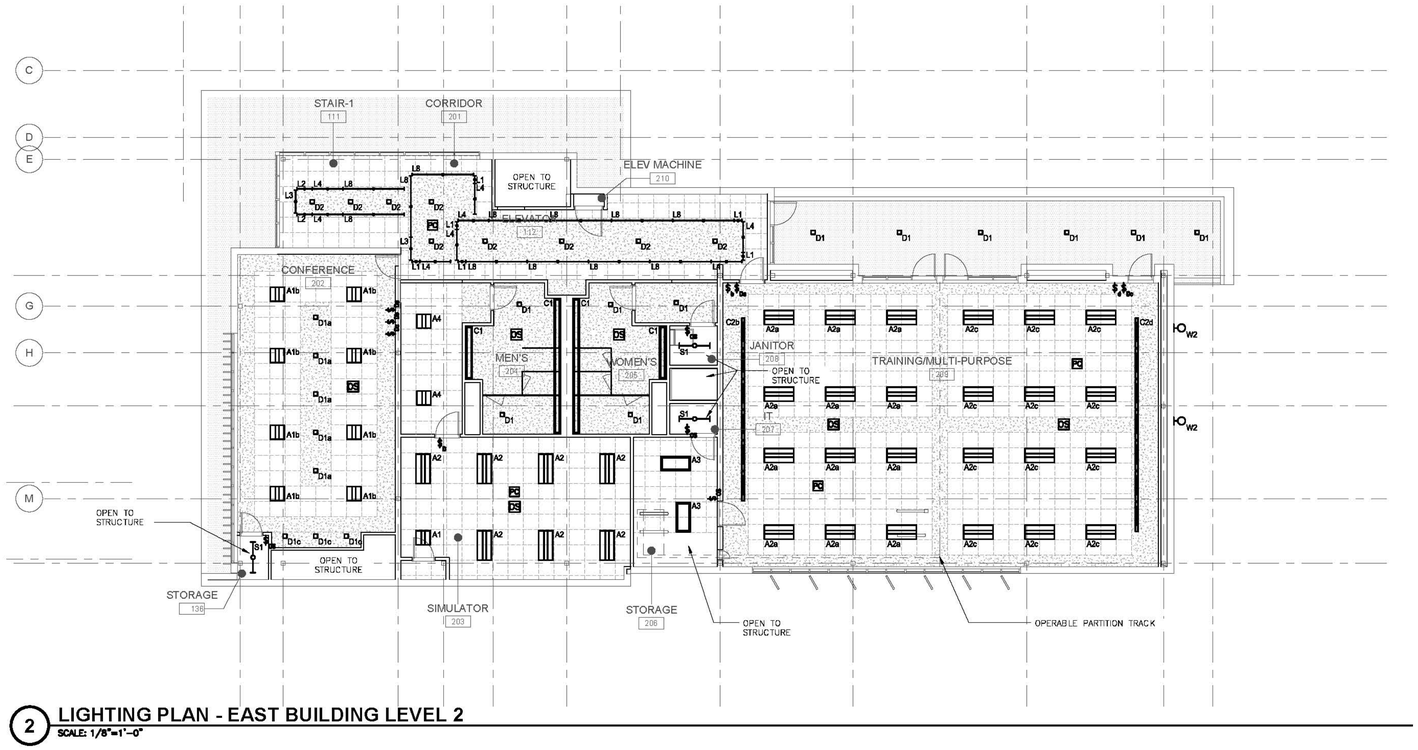
SCALE: 1/8" = 1'-0"

ELECTRICAL
WEST BUILDING LIGHTING PLAN

E-115

1 LIGHTING PLAN - EAST BUILDING LEVEL 1

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



2 LIGHTING PLAN - EAST BUILDING LEVEL 2

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

GENERAL NOTES

A. REFER TO DETAIL DRAWINGS FOR ADDITIONAL INFORMATION. ALL DETAILS APPLY FOR ALL APPLICABLE SITUATIONS WHETHER REFERENCED OR NOT, UON.

B. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL LUMINAIRES. INFORM ENGINEER OF CONFLICTS.

C. CONTRACTOR IS RESPONSIBLE TO REVIEW ARCHITECTURAL DRAWINGS TO CONFIRM CEILING TYPES IN ALL ROOMS (ACCESSIBLE, EXPOSED, OR "HARD") AND TO USE THE APPROPRIATE WIRING METHOD FOR EACH TYPE. INSURE ALL J-BOXES ARE ACCESSIBLE AFTER ALL OTHER TRADE'S WORK IS COMPLETED. DO NOT LOCATE ANY J-BOXES ON "HARD" CEILINGS; ALL WIRING MUST BE ACCESSIBLE THROUGH LUMINAIRE ONLY IN "DAISEY-CHAIN" METHOD OR WITH DEDICATED HOMERUNS TO EACH LUMINARE. J-BOXES MAY BE LOCATED ABOVE OTHER TRADE'S ACCESS DOORS IF FEASIBLE AND DOES NOT INTERFERE WITH ACCESS.

D. LUMINAIRES WITH "NL" ADJACENT TO IT INDICATES CONNECTION TO UNSWITCHED HOT CONDUCTOR. THIS IS ONLY SHOWN WHERE THERE IS A POSSIBILITY OF CONFUSION WHEN A GROUP OF LUMINAIRES ARE CONTROLLED TOGETHER EXCEPT FOR THE NIGHTLIGHT LUMINAIRE.

E. 3-WAY AND 4-WAY SWITCHES SHALL BE INTERCONNECTED USING CONDUIT AND WIRE ONLY.

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TORRANCE TRANSIT
PARK & RIDE REGIONAL TERMINAL

465 CRENSHAW BOULEVARD
TORRANCE, CALIFORNIA 90503
30% CONSTRUCTION DRAWINGS

MARK	DATE	DESCRIPTION

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

ELECTRICAL
EAST BUILDING LIGHTING PLANS

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