

**GENERAL NOTES**

- ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE 2016 CALIFORNIA BUILDING CODE (REFERRED TO HEREINAFTER AS "CBC") AND 2016 SAN FRANCISCO BUILDING CODE AMENDMENTS.
- ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS NOTED OTHERWISE. NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS.
- ALL OMISSIONS AND CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR ARCHITECTURAL SPECIFICATIONS (WHERE APPLICABLE) SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY OF THE WORK INVOLVED.
- AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF THE PERSONS AND PROPERTY, AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. THE ARCHITECT'S OR ENGINEER'S JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
- DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS.
- IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE STRUCTURAL DRAWINGS.
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION WITH SUFFICIENT TIME FOR REVIEW OF DESIGN INTENT (A MINIMUM OF 10 WORKING DAYS) FOR THE FOLLOWING ITEMS:
  - STRUCTURAL STEEL
  - REINFORCING STEEL
- NO OPENINGS, CHASES, NOTCHES, ETC. SHALL BE PLACED IN COLUMNS, JOISTS, BEAMS, BEARING WALLS, AND SHEAR WALLS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW SUCH OPENINGS.
- CONTRACTOR SHALL COORDINATE ALL STRUCTURAL FRAMING WITH MECHANICAL, PLUMBING AND ELECTRICAL INFRASTRUCTURE, INCLUDING, BUT NOT LIMITED TO, RECESSED AND SEMI-RECESSED LIGHTING, MECHANICAL DUCTS AND PIPING, FIRE SPRINKLER PIPE AND HEADS AND PLUMBING DRAINS, WASTE AND SUPPLY LINES.
- ALL ASTM DESIGNATIONS SHALL BE AS AMENDED TO DATE UNLESS NOTED OTHERWISE.

**DESIGN CRITERIA**

- DEAD LOADS:
  - TOTAL WEIGHT = T.B.D.
- LIVE LOADS:
  - POINT LOAD = 200 LB
- SEISMIC DESIGN PARAMETERS:
  - IMPORTANCE FACTOR I = 1.0
  - RISK CATEGORY II
  - SITE CLASS D
  - MAPPED SHORT PERIOD ACCELERATION  $S_s = 1.5$
  - SITE COEFFICIENT  $F_a = 1.0$
  - DESIGN SHORT PERIOD ACCELERATION  $S_{ps} = 1.000$
  - MAPPED ONE SECOND ACCELERATION  $S_1 = 0.639$
  - SITE COEFFICIENT  $F_v = 1.5$
  - DESIGN ONE SECOND ACCELERATION  $S_{p1} = 0.639$
  - SEISMIC DESIGN CATEGORY D

DESIGN BASE SHEAR:  $V = C_s * W$  AT STRENGTH LEVEL  
( $W =$  EFFECTIVE SEISMIC WEIGHT)
- WOOD SHEAR WALLS:
  - RESPONSE MODIFICATION FACTOR  $C_d = 0.50$   
 $R = 2$
- WIND DESIGN PARAMETERS:
  - BASIC WIND SPEED 110mph
  - RISK CATEGORY II
  - EXPOSURE CATEGORY B
  - WIND PRESSURES:
    - FREE STANDING WALLS AND SOLID SIGNS: 5,663 LB
- FOUNDATION DESIGN PARAMETERS:
  - SPREAD FOOTING PARAMETERS:
    - ALLOWABLE SOIL PRESSURE:
 

DEAD LOADS:	1,500 PSF
DEAD PLUS LIVE LOADS:	1,500 PSF
DEAD PLUS LIVE PLUS SEISMIC:	2,000 PSF

**FOUNDATION**

- FOUNDATION DESIGN IS BASED ON THE PRESUMPTIVE LOAD BEARING VALUES OF SOIL GIVEN IN THE CALIFORNIA BUILDING CODE 2016, TABLE 1806.2.
- INSTALLATION OF THE FOUNDATION FOOTINGS OR PIERS WITH RESPECT TO THE DEPTH BELOW FINISHED OR NATURAL GRADE SHALL BE AT A MINIMUM ACCORDING TO THE FOUNDATION DETAILS ON THESE PLANS. FIELD DISCOVERED CONDITIONS MAY NECESSITATE DEEPER FOUNDATIONS.
- EXCEPT WHERE OTHERWISE SHOWN, EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE.
- ALL EXCAVATIONS, FORMS AND REINFORCING ARE TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
- ALL WATER, SOIL, AND OTHER DEBRIS SHALL BE REMOVED FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING OF CONCRETE.
- ALL BACKFILL WITH ENGINEERED FILLS SHALL BE COMPACTED TO 95% RELATIVE DENSITY.

**CONCRETE**

- ALL CONCRETE CONSTRUCTION SHALL BE PER CBC CHAPTER 19 AND IN ACCORDANCE WITH ACI 318-11, SPECIFICATIONS FOR STRUCTURAL CONCRETE.
- ALL CONCRETE SHALL HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.48 FOR FOUNDATIONS AND ALL STRUCTURAL ELEMENTS AND 0.45 FOR SLABS, 4"±1" SLUMP, AND SHALL OBTAIN A 28 DAY MINIMUM COMPRESSIVE STRENGTH AS FOLLOWS:
  - GRADE BEAMS, MAT SLABS, AND FOOTINGS 2,500 PSI
  - STRUCTURAL SLABS AND SLABS-ON-GRADE 2,500 PSI
  - NON-STRUCTURAL CONCRETE TOPPING SLAB 2,000 PSI
- ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE, WEIGHING LESS THAN 150 PCF, UNLESS OTHERWISE NOTED. ALL CONCRETE FILL OVER METAL DECK SHALL BE LIGHTWEIGHT CONCRETE, WEIGHING LESS THAN 115 PCF, UNLESS OTHERWISE NOTED.
- CEMENT SHALL CONFORM TO ASTM C150, TYPE II (OR ENGINEERED MAXIMUM DESIGN TO STRENGTH).
- HARD ROCK AGGREGATES SHALL CONFORM TO ASTM C33. MAXIMUM NORMAL SIZE OF AGGREGATE SHALL NOT EXCEED 1 1/2 INCHES FOR FOUNDATION CONCRETE AND 1 INCH FOR STRUCTURAL CONCRETE ABOVE THE FOUNDATION. SEE ALSO THE REQUIREMENTS IN ACI STANDARD SPECIFICATIONS. MAXIMUM NORMAL SIZE SHALL ALSO BE SELECTED SUCH THAT WORKABILITY AND PLACABILITY OF CONCRETE ARE FACILITATED.
- ALL ALTERNATE CONCRETE MIX DESIGN AND TEST STRENGTHS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

- MAXIMUM VERTICAL DROP OF CONCRETE SHALL BE NO MORE THAN 2'-0" FROM END OF PLACEMENT DEVICE TO PLACEMENT SURFACE.
- CONCRETE COVER AT REINFORCING SHALL BE AS FOLLOWS:
  - CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3" CLEAR
  - EXPOSED TO EARTH OR WEATHER BUT CAST AGAINST FORMS 2" CLEAR
  - SLABS (EXCEPT FOR MATS) REBAR AT CENTER OF SLAB
  - BAR PARALLEL TO COLD JOINTS 2" CLEAR
  - NOT EXPOSED TO WEATHER OR EARTH SLABS, WALLS, JOISTS 3/4" CLEAR
  - NOT EXPOSED TO WEATHER OR EARTH BEAMS AND COLUMN 1/2" CLEAR
- ALL REINFORCING STEEL, DOWELS, ANCHOR BOLTS, PIPE SLEEVES AND OTHER INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING OF CONCRETE. "WET SETTING" WILL NOT BE ALLOWED.
- THE SURFACE OF ALL CONSTRUCTION JOINTS SHALL BE CLEANED AND ROUGHENED BY REMOVING THE ENTIRE SURFACE AND EXPOSING CLEAN AGGREGATE SOLIDLY EMBEDDED IN MORTAR MIX.
- EPOXY SET ANCHORS SHALL BE INSTALLED IN CONCRETE THAT HAS A MINIMUM AGE OF 21 DAYS PER ACI D5.5.2.
- INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT. THE ACCEPTABILITY OF CERTIFICATION OTHER THAN ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION SHALL BE THE RESPONSIBILITY OF THE LICENSED DESIGN PROFESSIONAL.

**REINFORCING BAR**

- REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM A615 WITH BAR MARKS LEGIBLY ROLLED INTO THE SURFACE INDICATION SIZE, TYPE OF STEEL, AND YIELD STRENGTH DESIGNATION:
  - #3 BARS AND SMALLER GRADE 40 OR GRADE 60
  - #4 BARS AND LARGER GRADE 60
  - ALL BARS TO BE WELDED GRADE A706
- REINFORCING SHALL HAVE A MINIMUM LAP IN CONFORMANCE WITH DETAILS AND SPECIFICATIONS SHOWN ON THESE DRAWINGS. STAGGER SPLICES WHENEVER POSSIBLE. VERTICAL WALL REINFORCING BARS SHALL EITHER EXTEND INTO FOOTINGS OR LAP SPLICED WITH FOOTING DOWELS OF THE SAME SIZE BARS.
- BENDING OF REINFORCING SHALL BE IN CONFORMANCE WITH DETAILS AND SPECIFICATIONS SHOWN ON THESE DRAWINGS. FIELD BENDING OF BARS THAT ARE IN PLACE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
- ALL BARS SHALL BE FREE OF LOOSE AND FLAKY RUST AND SCALE, GREASE, OR OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND.
- WELDED WIRE MESH (WWM) SHALL CONFORM TO ASTM A-185, EXCEPT AT SLABS ON GRADE WHICH MAY BE GRA40. USE 6x6 W10/10 AND LAP 12" MIN UON

**STRUCTURAL STEEL**

- STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:
 

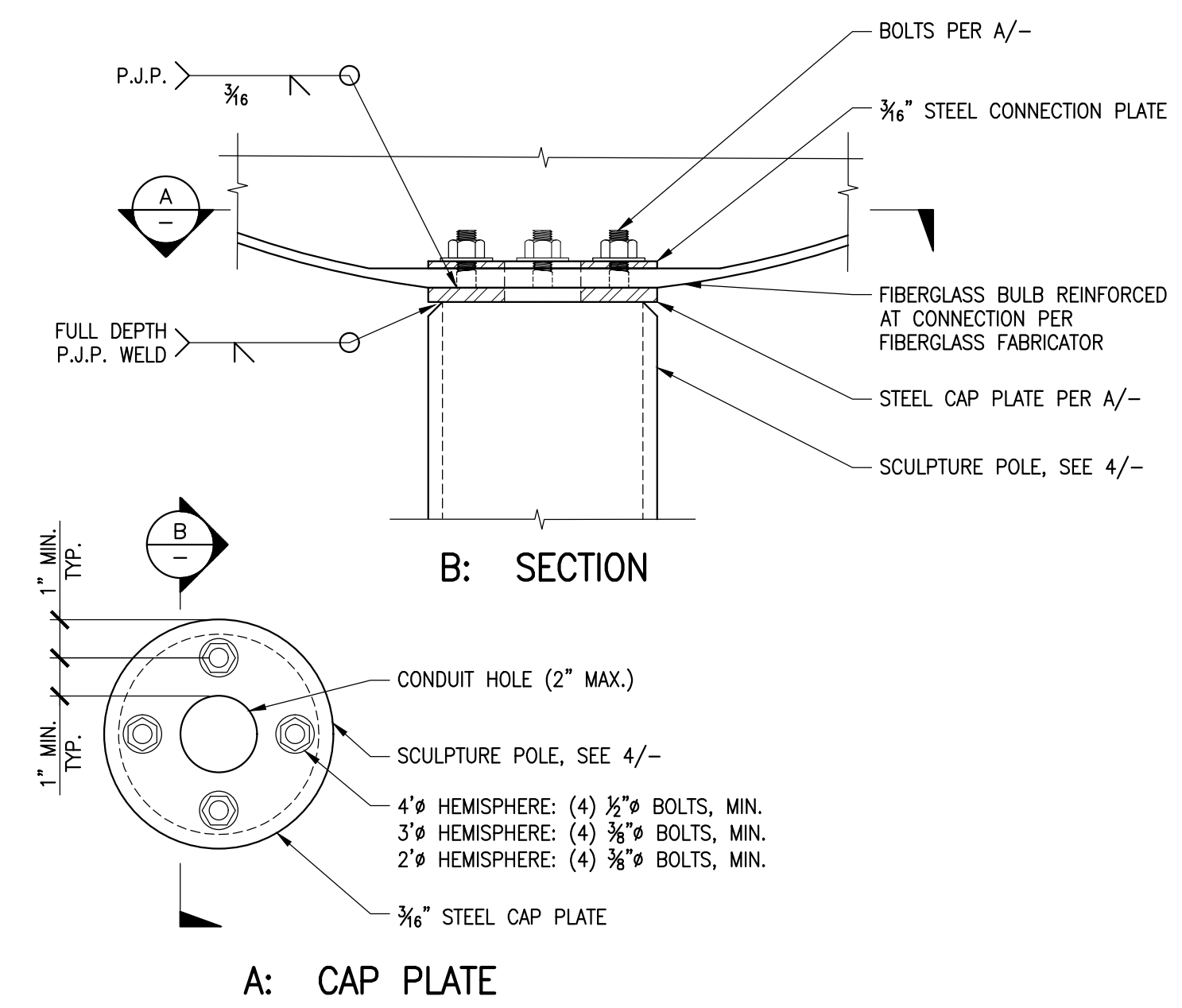
HSS SHAPES	ASTM A500, GRADE B
OTHER SHAPES AND PLATES	ASTM A36
ELECTRODES	ASTM E70XX
BASE PLATES	ASTM A36
ANCHOR BOLTS	ASTM F1554, Fy=36 ksi
MACHINE BOLTS	ASTM A307
HIGH STRENGTH BOLTS	ASTM A325-X UNLESS SPECIFICALLY NOTED AS ASTM A490-SC
WELDED STUDS	ASTM A108
THREADED RODS	ASTM A193, GRADE B7
- ALL STRUCTURAL STEEL SHALL CONFORM TO AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS. BOLT HOLES SHALL BE 1/16" OVERSIZED, EXCEPT AT BASE PLATES WHERE THEY CAN BE 5/16" OVERSIZED, WITH WELDED WASHERS.
- ALL SHOP AND FIELD WELDING SHALL BE INSPECTED BY AN APPROVED TESTING LABORATORY. SPECIAL INSPECTION REQUIREMENTS OF CHAPTER 17, 2016 CBC, APPLY TO ALL WELDING.
- ALL WELDING TO CONFORM TO THE REQUIREMENTS OF THE LATEST AWS D1.1 STRUCTURAL WELDING CODE AND SHALL BE PERFORMED BY CERTIFIED WELDERS.
- ALL WELDS NOT SPECIFIED SHALL BE CONTINUOUS FILLET WELDS, USING NOT LESS THAN THE MINIMUM SIZES BASED ON THICKNESS OF THICKER PART JOINED PER AISC/AWS, AND IN NO CASE LESS THAN 1/4" UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES ESPECIALLY WITH RELATION TO TEMPERATURE DIFFERENTIALS, ERECTION TOLERANCES, AND WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO REINFORCED CONCRETE WALLS.
- THE STRUCTURAL STEEL CONNECTIONS CONSIST OF THE FOLLOWING:
  - ALL MAJOR STRUCTURAL STEEL CONNECTIONS ARE DETAILED ON THE DRAWINGS. THE DETAILS INDICATE THE REQUIRED MINIMUM PLATE THICKNESSES, ANGLES, WELDS, BOLTS AND GENERAL CONNECTION CONFIGURATION. THE FINAL DIMENSIONAL CONFIGURATION INCLUDING ADJUSTMENTS FOR CAMBER SHALL BE DETERMINED BY THE FABRICATOR ON SHOP DRAWINGS.
  - ANY PROPOSED REVISIONS OR MODIFICATIONS TO THE CONNECTIONS AS SHOWN ON THE DRAWINGS SHALL BE FULLY ENGINEERED BY THE FABRICATOR. SHOP DRAWINGS AND CALCULATIONS PREPARED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA SHALL BE SUBMITTED FOR REVIEW. THE CAPACITY OF CONNECTIONS SHALL NOT BE REDUCED FROM THAT PROVIDED BY THE DETAIL AS SHOWN WHERE NOT SHOWN OR INFERRED FROM DRAWINGS. THE CONNECTION SHALL BE CAPABLE OF NOT LESS THAN 120% OF THE MEMBER CAPACITY IN TENSION. ANY PROPOSED REVISIONS SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

**STRUCTURAL OBSERVATIONS**

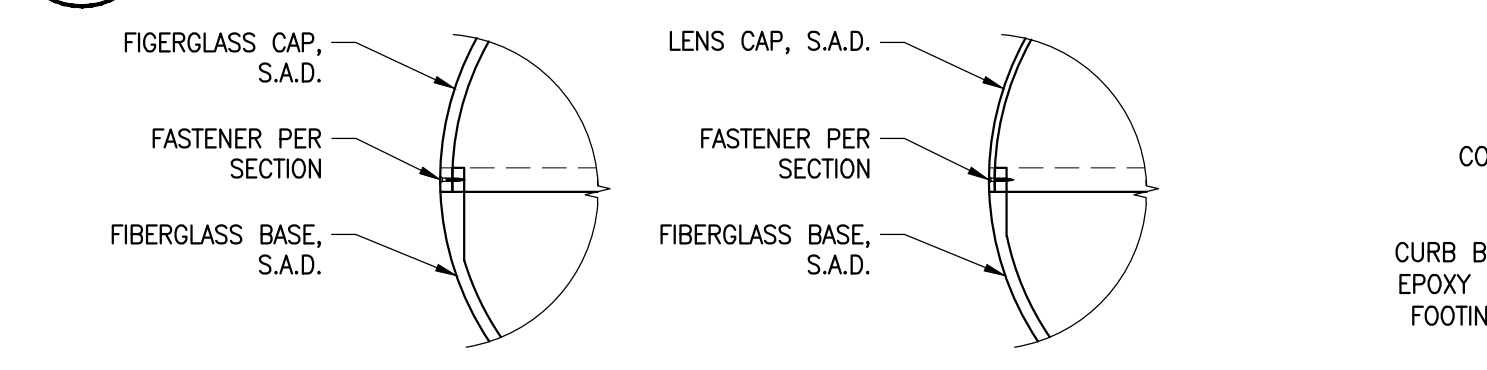
- THE FOLLOWING ITEMS SHALL HAVE PERIODIC STRUCTURAL OBSERVATION BY THE STRUCTURAL ENGINEER OF RECORD PER CBC SECTION 1704.5:
  - REINFORCING STEEL PRIOR TO POURING CONCRETE
  - ANCHOR BOLTS AND HOLD DOWNS ANCHORS PRIOR TO POURING CONCRETE
  - STRUCTURAL STEEL CONSTRUCTION PRIOR TO COVER
- THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER A MINIMUM OF 48 HOURS (EXCLUDING WEEKEND DAYS) PRIOR TO THE TIME OF A REQUIRED STRUCTURAL OBSERVATION.
- OBSERVATION VISITS TO THE JOB SITE BY THE ENGINEER'S FIELD REPRESENTATIVE SHALL BE CONSTRUED AS NEITHER INSPECTION NOR APPROVAL OF CONSTRUCTION.

**SPECIAL INSPECTIONS**

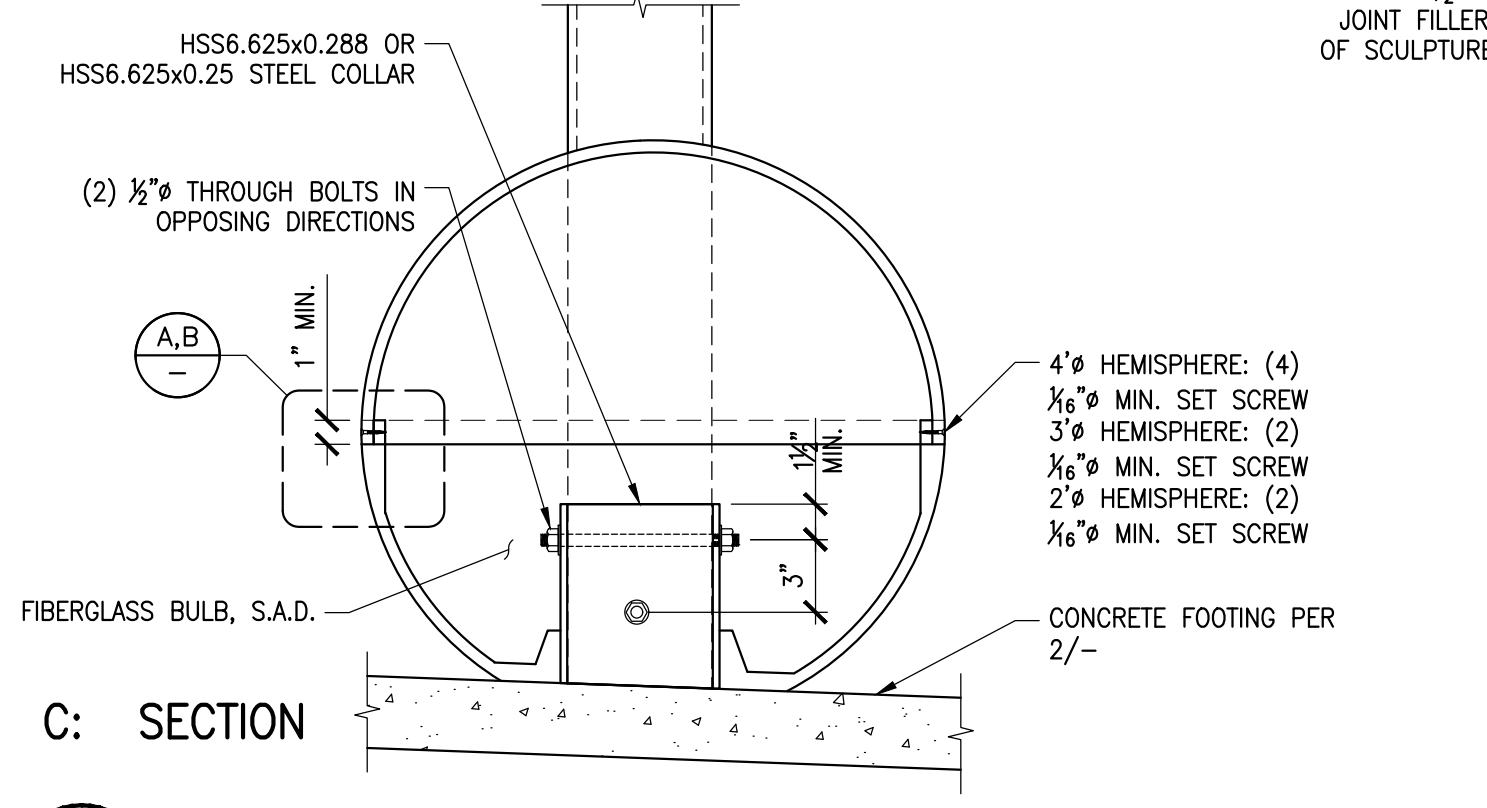
- THE FOLLOWING CONTINUOUS OR PERIODIC SPECIAL INSPECTIONS, AS REQUIRED BY THE 2016 CALIFORNIA BUILDING CODE (CBC) CHAPTER 17, SHALL BE PERFORMED BY THE OWNER'S TESTING AND INSPECTION AGENCY:
  - STRUCTURAL WELDING. DURING THE WELDING OF ANY MEMBER OR CONNECTION IN THE SHOP OR FIELD, INCLUDING NON-DESTRUCTIVE TESTING OF SPECIAL MOMENT-RESISTING AND ECCENTRICALLY BRACED STEEL FRAMES. PERIODIC INSPECTIONS PERMITTED ONLY AS NOTED IN CONTRACT DOCUMENTS. DURING THE WELDING OF REINFORCING STEEL.



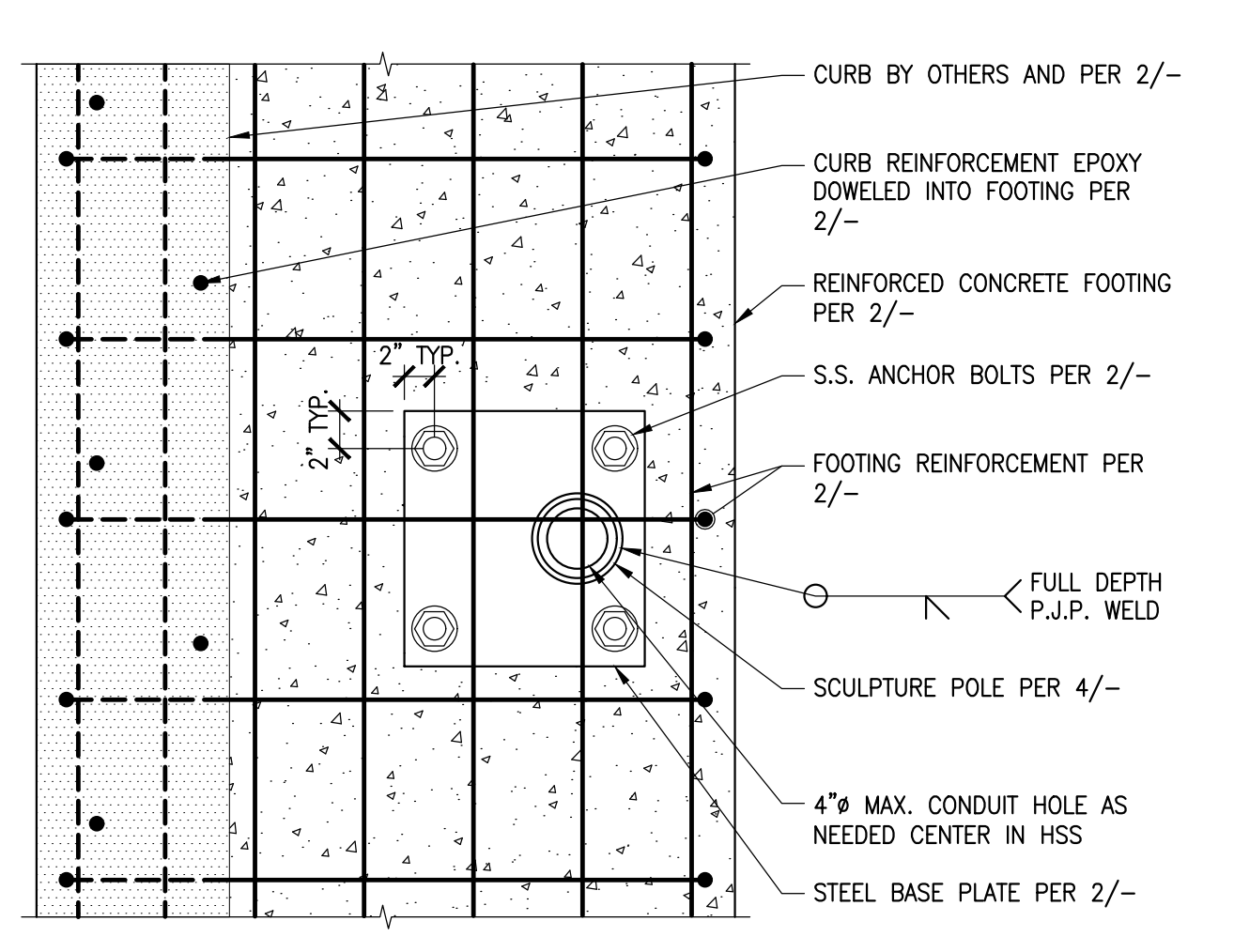
6 COLUMN CAP DETAIL SCALE: 3"=1'-0"



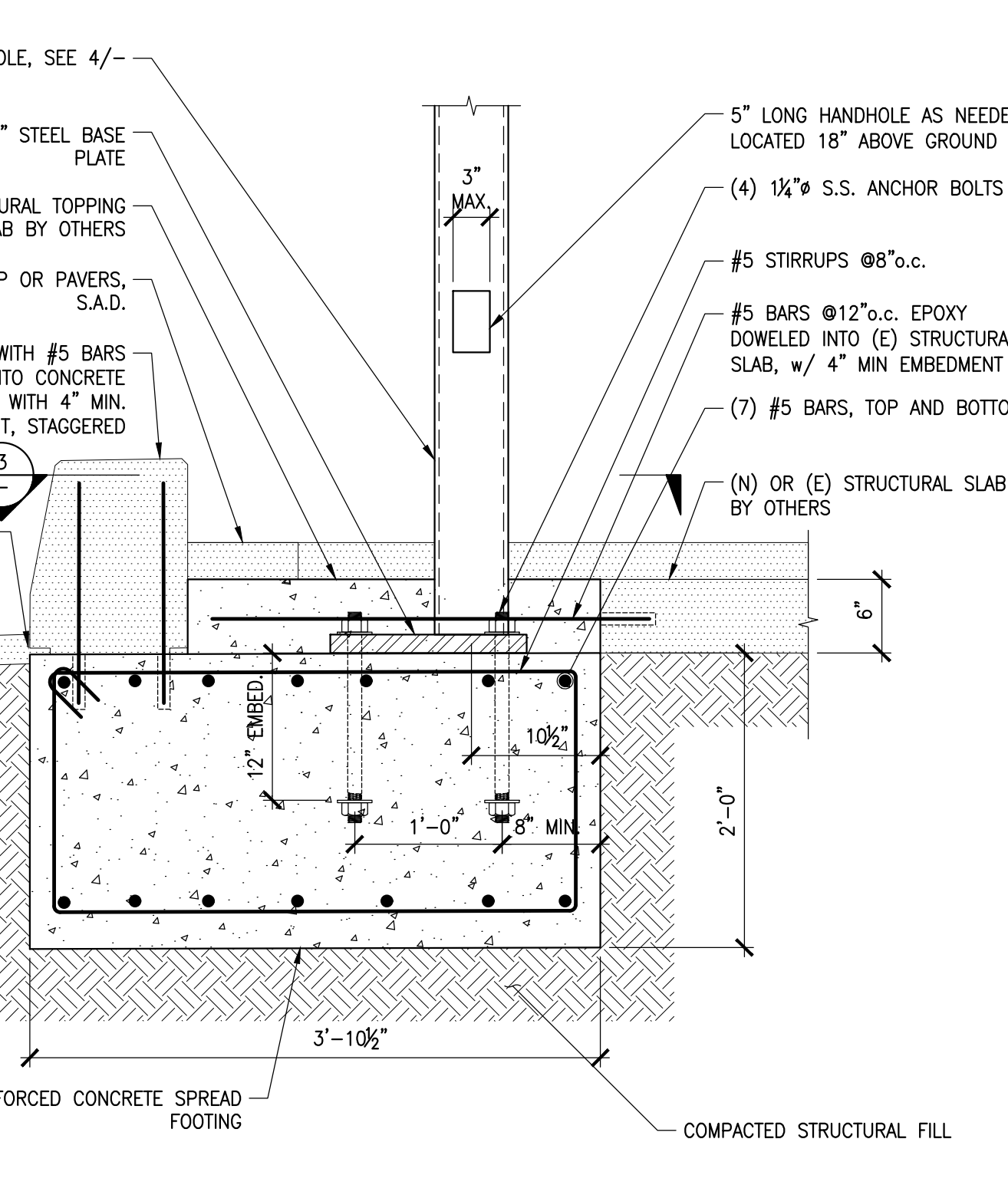
5 HEMISPHERE CONNECTION DETAIL SCALE: 1-1/2"=1'-0"



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






3 CONCRETE FOOTING PLAN SCALE: 1"=1'-0"



2 CONCRETE FOOTING SECTION SCALE: 1"=1'-0"

# ELECTRICAL LEGEND AND ABBREVIATIONS

## POWER LEGEND

	JUNCTION BOX, CEILING MOUNTED
	JUNCTION BOX, WALL MOUNTED
	NUMBERED NOTE

## ABBREVIATIONS

A	AMPERES
CB	CIRCUIT BREAKER
CKT	CIRCUIT
DWG	DRAWING
(E)	EXISTING TO REMAIN
EC	EMPTY CONDUIT
EMT	ELECTRICAL METALLIC TUBING
GFI	GROUND FAULT INTERRUPTOR
GND	GROUND
IG	ISOLATED GROUND
JB	JUNCTION BOX
MCB	MAIN CIRCUIT BREAKER
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
P	POLE
PB	PULL BOX
PH	PHASE
PVC	POLYVINYL CHLORIDE CONDUIT
PWR	POWER
(R)	EXISTING TO BE RELOCATED
RAC	RIGID ALUMINUM CONDUIT
RGS	RIGID GALVANIZED STEEL
RSC	RIGID STEEL CONDUIT
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
WT	WATERTIGHT
(X)	EXISTING TO BE REMOVED

## DRAWING LIST

E0.00	ELECTRICAL LEGEND, ABBREVIATIONS AND DRAWING LIST
E1.00	ELECTRICAL SITE PLAN
E4.00	ELECTRICAL ENLARGED PLANS
E6.00	ELECTRICAL DETAILS
E6.01	ELECTRICAL DETAILS
E6.02	ELECTRICAL DETAILS



WSP USA Buildings Inc.  
425 Market St. 17th Floor  
San Francisco, CA 94105  
(415) 243-4600  
wsp.com

REVISION		
NO.	REVISION	DATE
	100% CD SET	06.14.2019



Electrical Legend,  
Abbreviations  
and Drawing List

VN-BRT  
Artworks

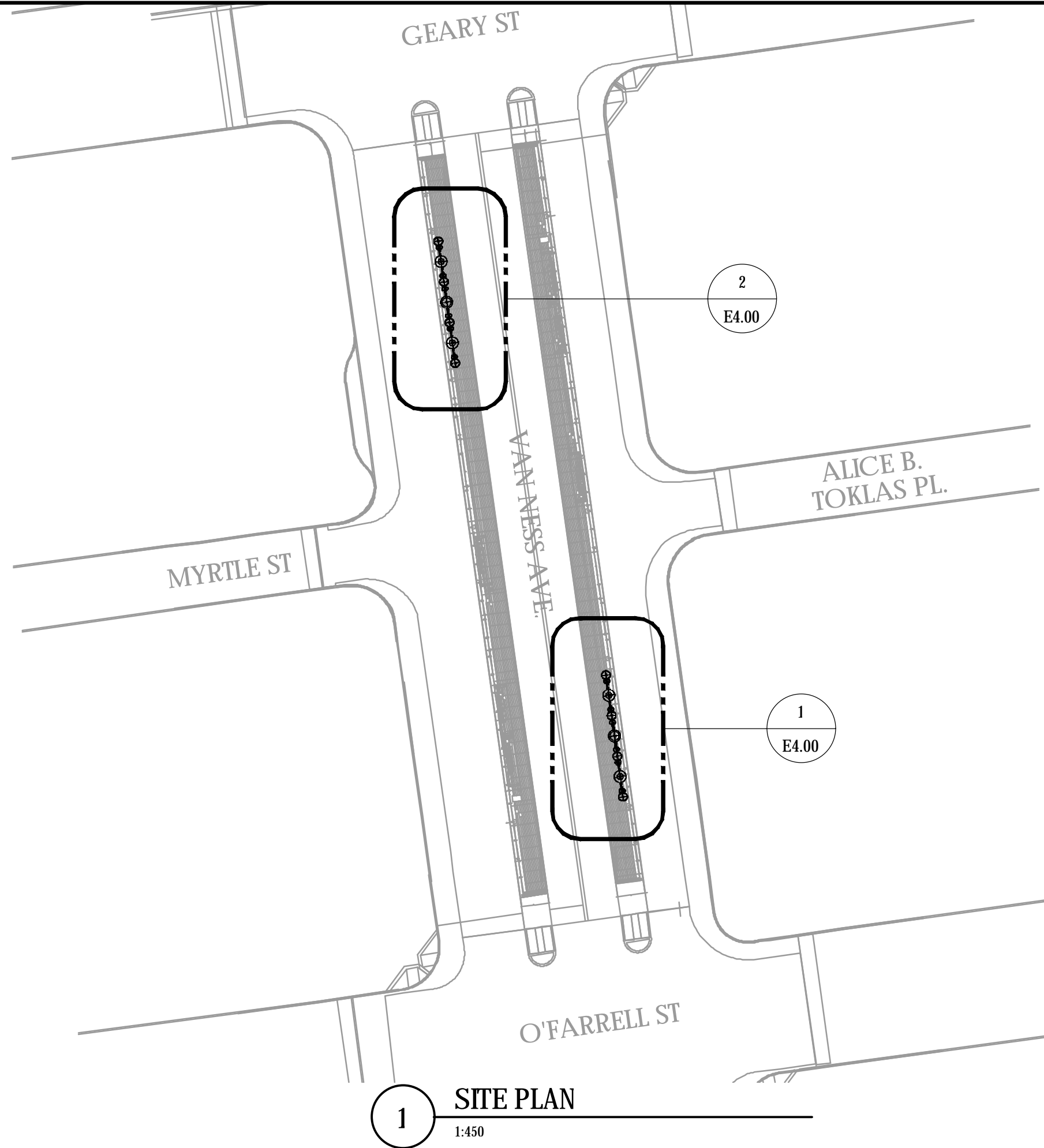
06.14.2019

1 OF 6 SHEETS

SCALE: AS NOTED

**E0.00**

P:\2019\11984--Van\_Ness\_VN-BRT\_Artwork\CAD\ELECTRIC\SHEETS\E1.00.dwg - ELECTRICAL LIGHTING FIXTURE SCHEDULES - Fri, 14 Jun 2019 - 14:18 - by USBB01938



**1** SITE PLAN  
1:450



WSP USA Buildings Inc.  
425 Market St. 17th Floor  
San Francisco, CA 94105  
(415) 243-4600  
wsp.com

REVISION		
NO.	REVISION	DATE
	100% CD SET	06.14.2019



Site Plan

VN-BRT  
Artworks

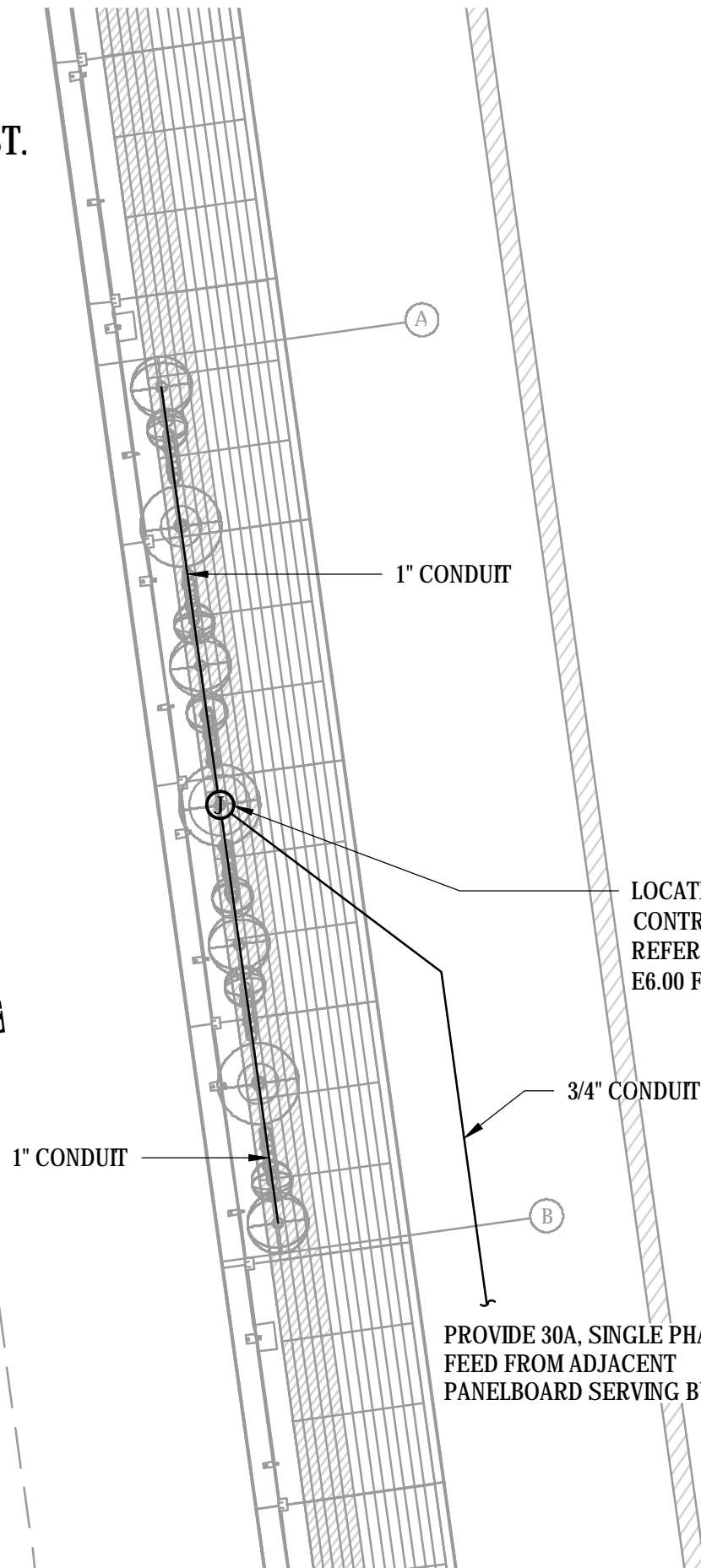
06.14.2019  
2 OF 6 SHEETS  
SCALE: AS NOTED

**E1.00**

P:\2019\11984--Van\_Ness\_VN-BRT\_Artwork\CAD\ELECTRICAL\E4.00.dwg - ELECTRICAL ENLARGED PLANS - Fri, 14 Jun 2019 - 14:19 - by USBB01938

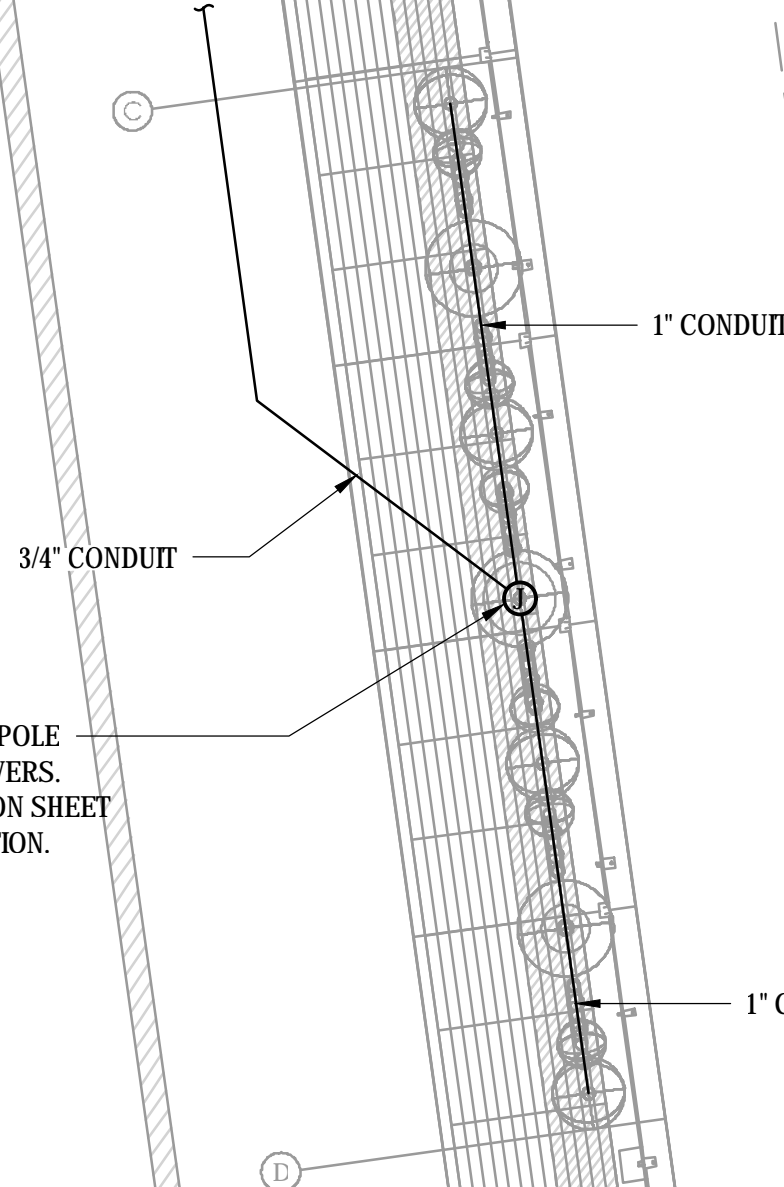
GEARY ST.

VAN NESS AVE.



**2** WEST PLATFORM PLAN  
1/8"=1'-0"

PROVIDE 30A, SINGLE PHASE FEED FROM ADJACENT PANELBOARD SERVING BUS STOP.



**1** EAST PLATFORM PLAN  
1/8"=1'-0"

LOCATION OF LIGHT POLE CONTROLS AND DRIVERS. REFER TO DETAIL 1 ON SHEET E6.00 FOR INFORMATION.

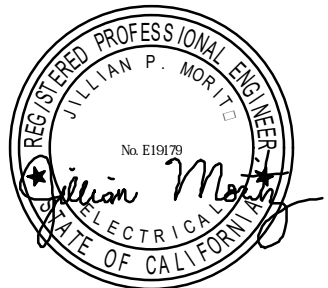
VAN NESS AVE.

O'FARRELL ST



WSP USA Buildings Inc.  
425 Market St. 17th Floor  
San Francisco, CA 94105  
(415) 243-4600  
wsp.com

REVISION		
NO.	REVISION	DATE
	100% CD SET	06.14.2019



Electrical Enlarged Plans

VN-BRT Artworks

06.14.2019  
3 OF 6 SHEETS  
SCALE: AS NOTED

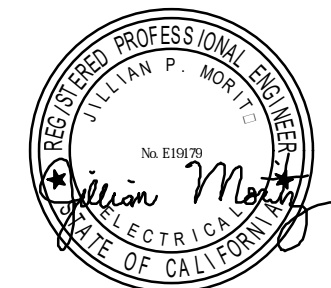
**E4.00**

P:\2019\11984--Van\_Ness\_VN-BRT\_Artwork\CAD\ELECTRICAL SHEETS\E6.00.dwg - ELECTRICAL DETAILS - Mon, 17 Jun 2019 - 16:03 - by USBB01938



WSP USA Buildings Inc.  
425 Market St. 17th Floor  
San Francisco, CA 94105  
(415) 243-4600  
wsp.com

REVISION		
NO.	REVISION	DATE
	100% CD SET	06.14.2019



Electrical Details

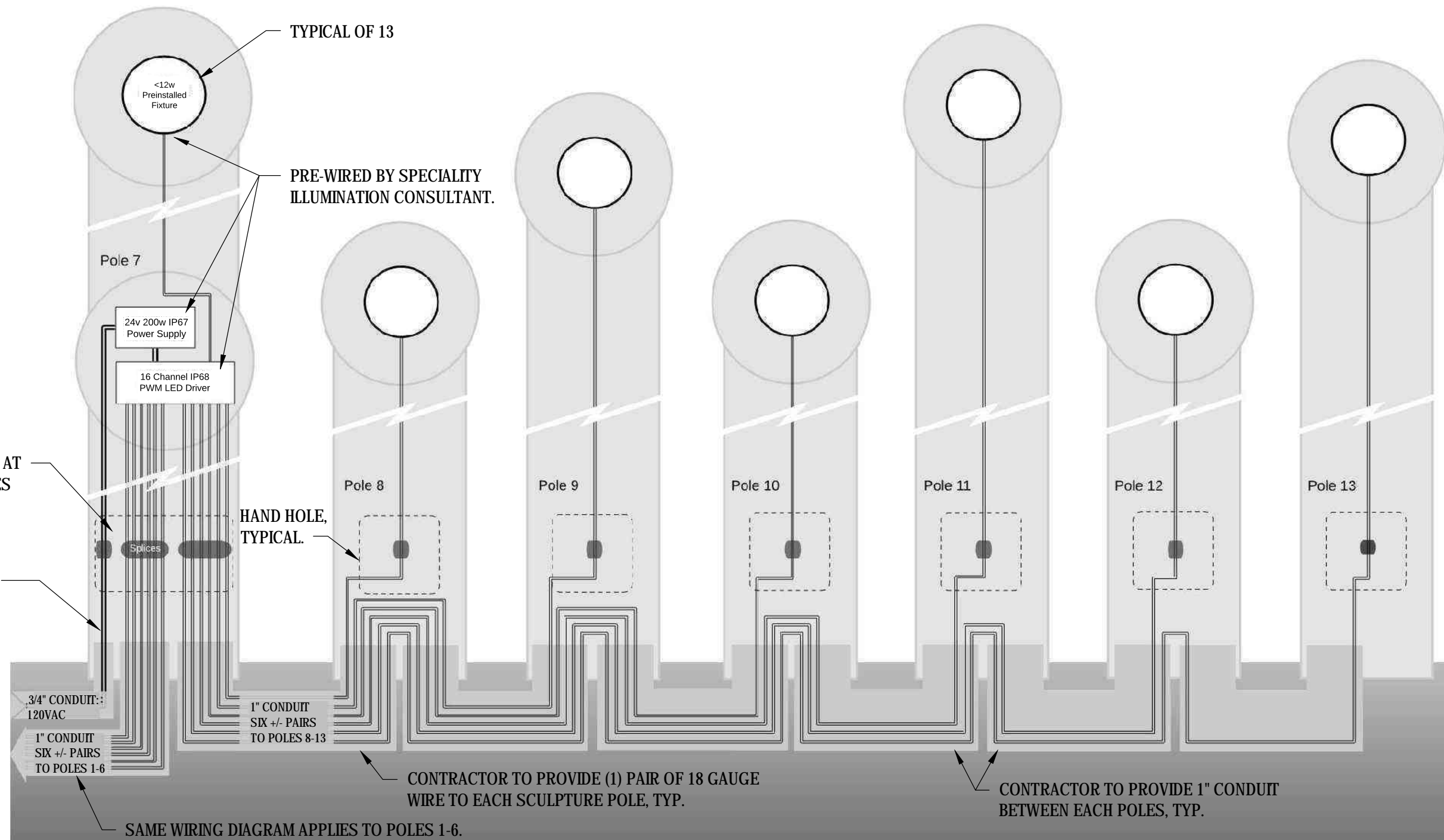
VN-BRT  
Artworks

06.14.2019

4 OF 6 SHEETS

SCALE: AS NOTED

E6.00



1 SCULPTURE POLES 7-13 WIRING DIAGRAM  
NTS

SHEET NOTES:

- A. SCULPTURE LIGHT POLES ARE TO BE PRE-WIRED BY MANUFACTURER. CONTRACTOR IS RESPONSIBLE FOR SPLICING TOGETHER THE PRE-WIRED POLE WIRING VIA THE HAND HOLE IN EACH POLE.
- B. SCULPTURE LIGHT CONTROLS, DRIVERS, AND POWER BOX ARE TO BE PRE-MOUNTED AND PRE-TESTED IN THE POLE #7 CENTRAL GLOBE BY THE SPECIALITY ILLUMINATION CONSULTANT.

P:\2019\11984--Van\_Ness\_VN-BRT\_Artwork\CAD\ELECTRIC\SHEETS\E6.01.dwg - ELECTRICAL DETAILS - Mon, 17 Jun 2019 - 16:05 - by USBB01938

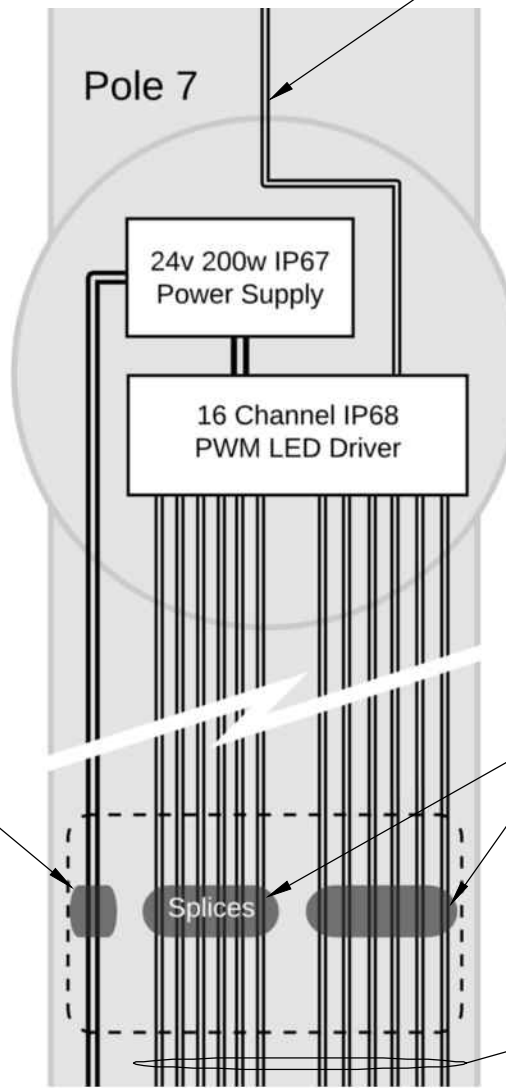


WSP USA Buildings Inc.  
 425 Market St. 17th Floor  
 San Francisco, CA 94105  
 (415) 243-4600  
 wsp.com

REVISION		
NO.	REVISION	DATE
	100% CD SET	06.14.2019



CONTRACTOR TO PROVIDE 30A VIA 2#10 WIRES CONNECTION FROM THE PANELBOARD SERVING THE BUS STOP EQUIPMENT TO THE SPLICE AT BASE OF POLE 7



PRE-WIRED UP TO LUMINAIRE

(12) WIRE PAIRS TAGGED TO IDENTIFY DESTINATION POLES 1-6 AND 8-13

CONTRACTOR TO PROVIDE (1) PAIR OF 18 GAUGE WIRES TO EACH SCULPTURE POLE.

**1** SCULPTURE WIRING DIAGRAM  
 NTS

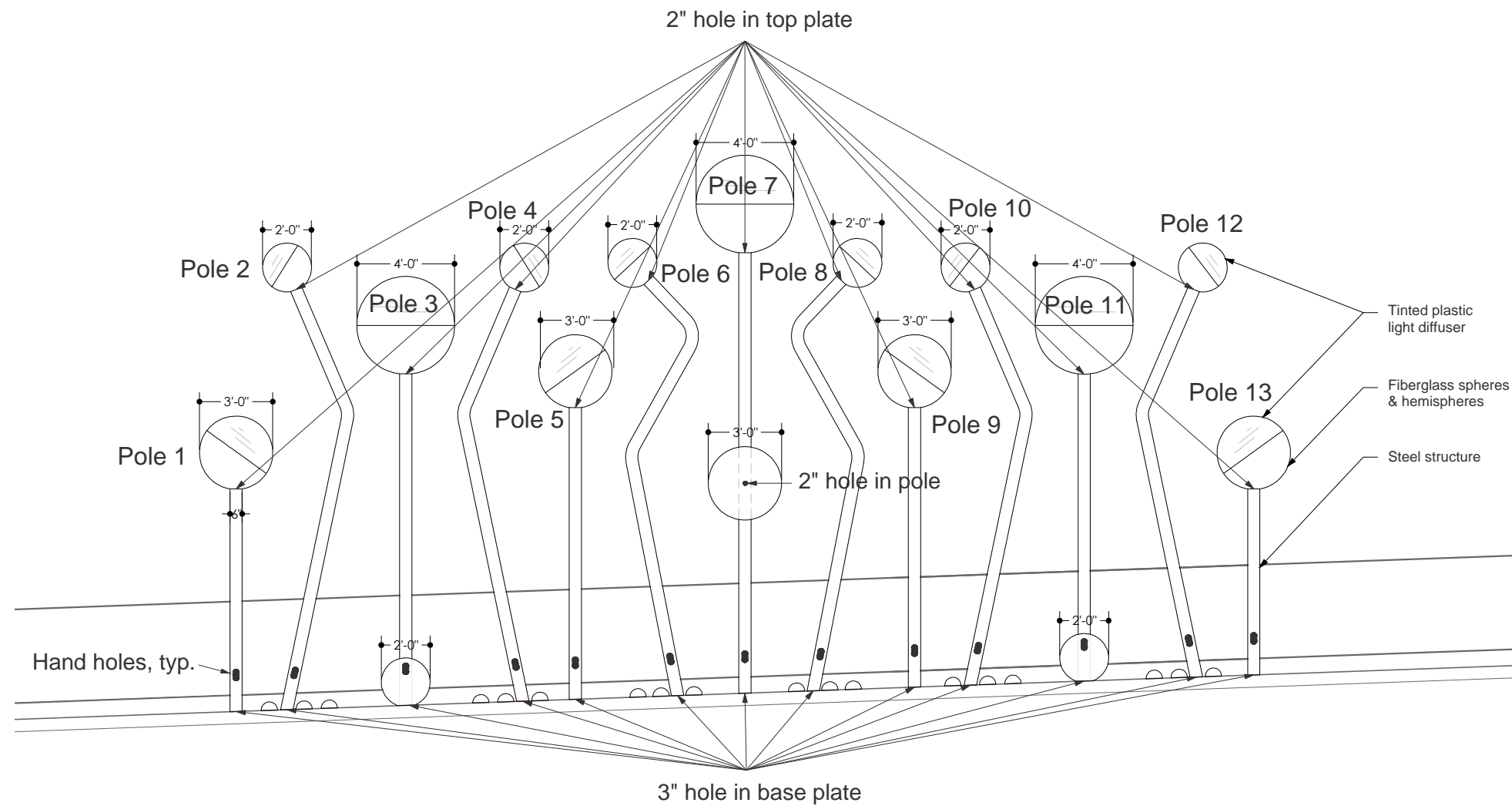
Electrical Details

VN-BRT  
 Artworks

06.14.2019  
 5 OF 6 SHEETS  
 SCALE: AS NOTED

E6.01

P:\2019\11984--Van\_Ness\_VN-BRT\_Artwork\CAD\ELECTRIC\SHEETS\E6.02.dwg - ELECTRICAL DETAILS - Fri, 14 Jun 2019 - 14:24 - by USBB01938

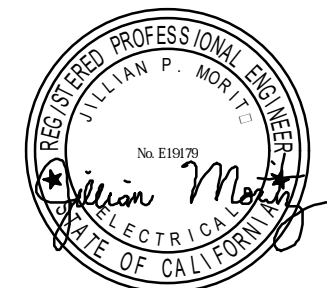


**1** SCULPTURE ELEVATION  
NTS



WSP USA Buildings Inc.  
425 Market St. 17th Floor  
San Francisco, CA 94105  
(415) 243-4600  
wsp.com

REVISION		
NO.	REVISION	DATE
	100% CD SET	06.14.2019



Electrical Details

VN-BRT  
Artworks

06.14.2019

6 OF 6 SHEETS

SCALE: AS NOTED

E6.02

## DIVISION 26 – ELECTRICAL SYSTEMS

### SPECIALITY ILLUMINATION CONSULTANT SCOPE OF WORK

- A. The specialty illumination consultant will provide, pre-mount, and pre-test all power and control hardware located in the center globe on pole #7, as well as all the luminaires in the top globes. The specialty illumination consultant will bundle and label the low-voltage wires to indicated which pole each pair of wires will be terminated. The poles will be delivered to site prewired with pigtails emerging from the base of each pole. The contractor is responsible for providing conduit between poles, pulling the wires through the conduit as shown and splicing the prewired poles to the appropriate wires in the prewired bundle at the base of pole #7.

### SECTION 26 05 01 – ELECTRICAL GENERAL PROVISIONS

- A. General: Provide labor and materials required to install, test and place into operation complete, operating electrical systems as called for in the Contract Documents.
- B. Codes: Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the Owner's insurance underwriter, and applicable base building standards.
- C. Quality Assurance: All equipment and installations shall meet or exceed minimum requirements of ADA, ANSI, ASTM, IEEE, IES, NEC, NEMA, NETA, NFPA, OSHA, SMACNA, UL, and the State Fire Marshal. Equipment shall be certified for use in the State of the project and shall meet the State energy code. Provide products and materials that are new, clean, free of defects, and free of damage and corrosion.
- D. Guarantee: Guarantee work against faulty and improper material and workmanship for a period of one year from the date of final acceptance by the Owner.
- E. Coordination: The electrical drawings show the general arrangement of equipment and appurtenances. Follow these drawings as closely as the actual construction and the work of other trades will permit. Provide offsets, fittings, and accessories, which may be required but not shown on the Drawings. Investigate the site, and review drawings of other trades to determine conditions affecting the work, and provide such work and accessories as may be required to accommodate such conditions.
- F. Branch Circuiting: Circuit tags in the form of numbers are used where shown to indicate the circuit designation numbers in electrical panelboards. Provide conduit and wire as required for the circuiting and control indicated.
- G. Before commencing work, examine adjoining work on which this work is in any way affected and report conditions, which prevent performance of the work. Become thoroughly familiar with actual existing conditions to which connections must be made or which must be changed or altered.
- H. Whenever the word "Provide" is used, it shall mean "Furnish and install complete and ready for use".
- I. Supports: Support work in accordance with the best industry practice. Provide supports, hangers, auxiliary structural members and supplemental hardware required for support of the work.
- J. Existing Equipment and Services: Electrical services not specifically indicated to be removed or altered shall remain as they presently exist. Remove, relocate, and reroute existing electrical equipment to facilitate new construction or remodeling work. Preserve continuity of service of existing facilities (related to damage or alteration due to new construction). Unauthorized alteration to existing equipment shall be corrected without additional cost to the Owner.



- K. Cleaning: Clean all fixtures and equipment at the completion of the project. Wipe clean exposed lighting fixture reflectors and trim pieces with a non abrasive cloth just prior to occupancy.
- L. Field Testing:
  - 1. Programmable Lighting Control Systems: Completed by specialty illumination consultant.
- M. As-Builts: Provide two sets of as-built drawings to the Building Engineer. Indicate new and existing circuiting, junction box locations, and conduit routing. Submit one disk containing a complete set of as-builts for the entire project in AutoCAD 2006 format. Include on the disk PDF versions of all drawings for reference.
- N. Identification
  - 1. Unless otherwise noted in specific equipment identification requirements listed below, identify electrical equipment with permanently attached black phenolic identification nameplates with ½-inch high white engraved lettering. Identification shall include equipment name or load served as appropriate. Nameplates for equipment connected to the emergency power system shall be red with white lettering. Nameplates shall be attached with cadmium-plated screws; peel-and-stick tape or glue-on type nameplates are not allowed.
  - 2. Equipment
    - a. Lighting Controls: To be provided by specialty illumination consultant.
  - 3. Cabling
    - a. Cable tags: To be provided by specialty illumination consultant
  - 4. Raceways
    - a. Raceways and Boxes
      - 1) Mark junction box covers with permanent stencil identification of panelboard and circuit numbers of wiring contained within.
    - b. Modular Wiring System
      - 1) Label distribution junction box with panelboard and circuit numbers.
- O. The Artist or Artist's Representative may conduct unannounced field reviews of any work completed or in progress during the Contractor's working hours. A report will be issued to the Contractor if the field review of the electrical systems construction has revealed elements of the work which are inconsistent with the Contract Documents. All items in the report shall be addressed in writing by the Contractor within two (2) weeks and corrections in the field shall be made as directed.

END OF SECTION 26 05 01

SECTION 26 05 19 – 600 VOLT WIRE AND CABLE

- A. Acceptable Manufacturers:
  - 1. Copper: Anaconda, General Cable, Okonite, National, Simplex or Triangle.
- B. Connectors:
  - 1. Hand applied for number 12 through number 6: Piggy (Thomas & Betts), Scotchlock (3M), or Wing Nut (Ideal).
  - 2. Tool applied for number 4 through number 1: Tool applied: One hole compression type, Burndy HYLUG or Thomas & Betts 54000 Series.
  - 3. Electrical tape: Insulating type, Johns-Manville or 3M.
- C. Wire and Cable:
  - 1. 600 volts minimum insulation rating, electrical grade, annealed copper, tinned if rubber insulated, and fabricated in accordance with ASTM and IPCEA standards. Minimum size number 12. Aluminum conductors are not permitted.
  - 2. Number 12 and number 10 solid, larger than number 10, stranded ASTM Class B.
  - 3. Aluminum conductors are not permitted.
- D. Insulation:
  - 1. Copper: 600 volts, 90 degree C PVC insulation, nylon jacket, surface printed identification, listed as type THHN or THWN per UL 83.
- E. Color Coding:

<b>Conductor</b>	<b>120/208V System</b>
Phase A	Black
Phase B	Red
Phase C	Blue
Neutral	White
Ground	Green

END OF SECTION 26 05 19

SECTION 26 05 33 – RACEWAYS AND BOXES

- A. Provide raceway between poles for luminaire power and controls.
- B. Rigid Non-Metallic Conduit:
  - 1. Schedule 40 polyvinyl chloride suitable for 90 degrees C.
  - 2. Solvent cemented type fittings.

END OF SECTION 26 05 33