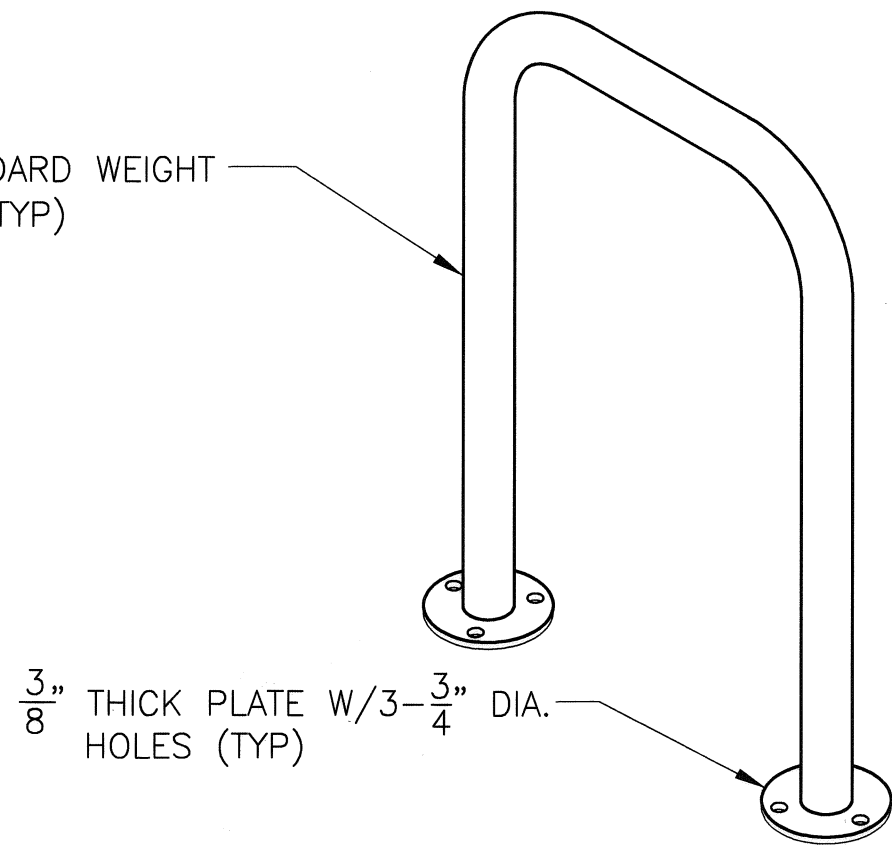
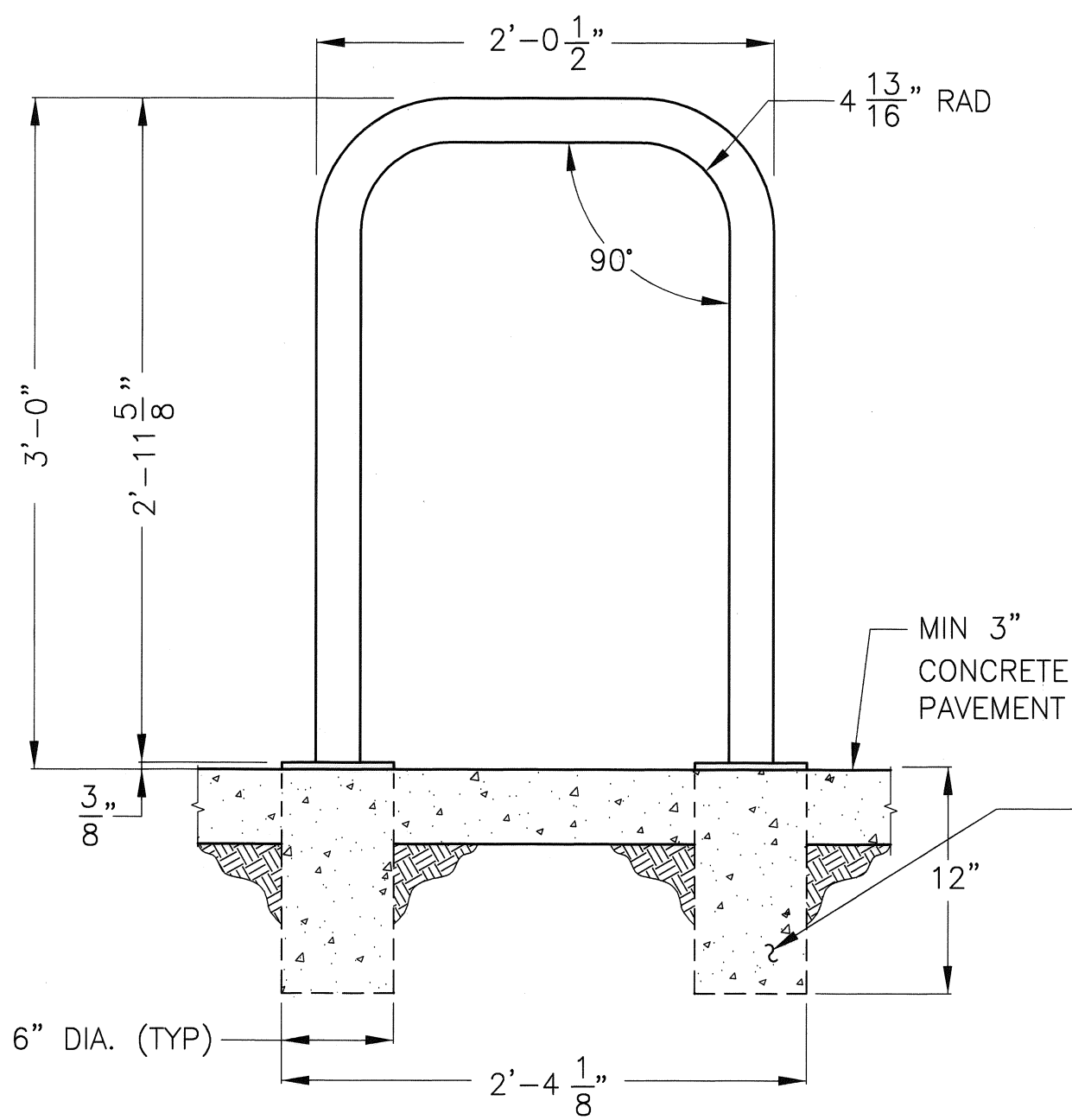


**PLAN**

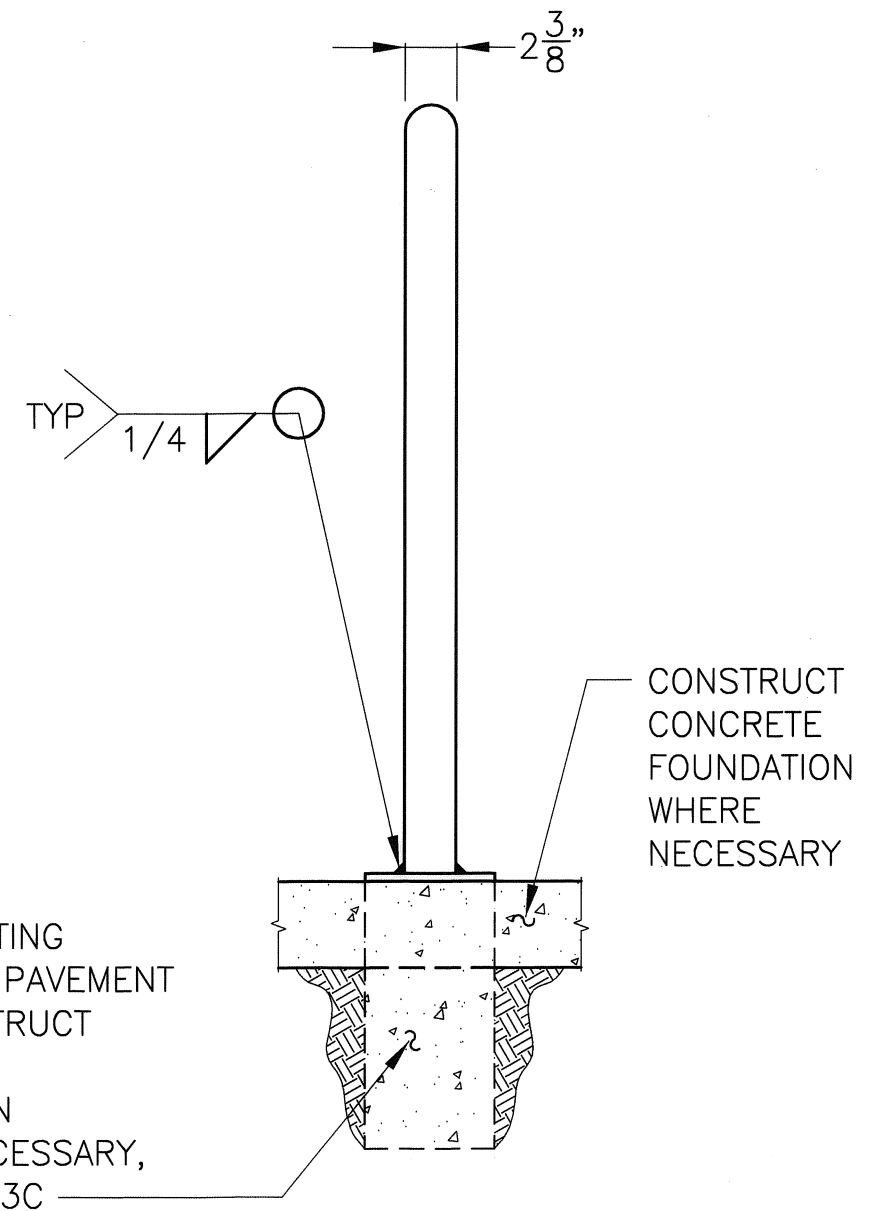
2" DIA. STANDARD WEIGHT  
STEEL PIPE (TYP)



**ISOMETRIC VIEW**



**SECTION**



**END VIEW**

BUREAU OF ENGINEERING

DEPARTMENT OF PUBLIC WORKS

CITY OF LOS ANGELES

**BICYCLE RACK**

**STANDARD PLAN  
S-671-0**

PREPARED  
**CARLOS MORALES**  
DEPT. OF TRANSPORTATION  
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RONALD LAU  
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CHECKED  
PATRICK LEE, P.E.  
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SUBMITTED

*[Signature]* 3/11/11  
SAMARA ALI-AHMAD, P.E. DATE  
ENGINEER OF DESIGN

*[Signature]* 3/11/11  
KENNETH REDD, P.E. DATE  
DEPUTY CITY ENGINEER

APPROVED

*[Signature]* 3-14-11  
GARY LEE MOORE, P.E. DATE  
CITY ENGINEER



SUPERSEDES	REFERENCES
SHEET 1 OF 2 SHEETS	

## NOTES

### 1. MATERIALS:

- A. PIPE: ASTM A53 GRADE B STANDARD WEIGHT STEEL PIPE; 2 INCH DIA. CONSTRUCTED OF 90 DEGREE BENDS WITH AN INSIDE RADIUS BEND OF 4 13/16 INCHES.
- B. PLATE: ASTM A36 3/8 INCH THICK PLATE WITH THREE 3/4 INCH DIA. HOLES AT 120 DEGREES SPACING.  
BOLT: DRIVE TYPE ANCHOR BOLT MADE OF ZINC PLATED AISI 1038 HEAT TREATED CARBON STEEL, 1/2 INCH DIA BY 3 INCHES LONG. THE ANCHOR BOLT, SHALL BE MANUFACTURED BY POWERS FASTENERS (WWW.POWERS.COM), ALLIED BOLT INC. ([Http://alliedboltinc.com](http://alliedboltinc.com)) OR APPROVED EQUIVALENT. NO ANCHOR BOLT SHALL CONTAIN ANY SHARP EDGES.
- C. UNLESS SPECIFIED OTHERWISE OR APPROVED BY THE CITY ENGINEER, THE BICYCLE RACK SHALL BE INVERTED-U DESIGN AND SUPPORT THE BICYCLE FRAME (NOT THE WHEEL) AT TWO POINTS.
- D. THE BICYCLE RACK SHALL ALLOW FOR USE OF A CABLE AS WELL AS U-SHAPED LOCK.

### 2. MATERIAL FINISH:

- A. ALL METAL COMPONENTS INCLUDING ALL BOLT HOLES SHALL HAVE MINIMUM 4 MIL THICK BLACK COLORED, LONG WEARING, MILDEW AND ULTRAVIOLET RAY RESISTANT ELECTROSTATIC POLYESTER COATING MADE OF TRIGLYCIDYL (TGIC) APPLIED IN THE FACTORY PRIOR TO DELIVERY. OTHER ALTERNATE COATINGS ARE CITY APPROVED POLYVINYL, THERMOPLASTIC OR POWDER COATING.
- B. BEFORE COATING APPLICATION, THE BICYCLE RACK SHALL BE SANDBLASTED AND EPOXY PRIMED.
- C. ALL FINISH COATINGS SHALL BE MAINTAINED BY THE INSTALLER. ANY DAMAGED SURFACE AREA INCLUDING THOSE RESULTED FROM THE INSTALLER'S OPERATION SHALL BE REPAIRED TO THE CITY ENGINEER'S SATISFACTION WITH APPROVED MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. ALL WASTE SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE EPA AND/OR CALIFORNIA STATE REQUIREMENTS.

### 3. MOUNTING PROCEDURES:

- A. ALL BICYCLE RACKS SHALL BE INSTALLED IN THE SIDEWALK FURNITURE ZONE AT A LOCATION APPROVED BY THE DEPARTMENT OF TRANSPORTATION ([http://www.ladot.lacity.org/tf\\_development\\_review.htm](http://www.ladot.lacity.org/tf_development_review.htm)) AND THE CITY ENGINEER. A MINIMUM 48 INCH WIDE UNOBSTRUCTABLE SIDEWALK MUST BE MAINTAINED. NO INTERFERENCE WITH THE PEDESTRIAN ACCESS AND/OR THE EGRESS TO THE PARKING ZONE SHALL BE PERMITTED.
- B. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, ALL INSTALLATIONS SHALL CONFORM WITH THE FOLLOWING CLEARANCES AND APPLICABLE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS:
  - MINIMUM 45 FEET CLEARANCE FROM ALL STREET CORNERS TO PROVIDE THE REQUIRED VISIBILITY TRIANGLE.
  - MINIMUM 45 FEET CLEARANCE FROM BUS STOP, BUS SHELTER, OR ITS REQUIRED CLEAR APPROACH AREA. FOR ARTICULATED BUS STOP, MINIMUM 55 FEET CLEARANCE SHALL BE PROVIDED.
  - MINIMUM 25 FEET FROM ANY PORTION OF THE BEGINNING OF THE CURB RETURN (BCR), THE END OF THE CURB RETURN (ECR), THE TOP OF THE CURB OF ANY CURB RAMP OR ALLEY INTERSECTION.
  - MINIMUM 48 INCHES CLEARANCE FROM ANY FIRE DEPARTMENT CONNECTION; STAND PIPE; INLET, OUTLET, OR DRAIN PIPE THAT ARE INSTALLED AT THE EXTERIOR OF THE BUILDING. PROVIDE MINIMUM 48 INCHES CLEAR SIDEWALK ACCESS FROM THE STREET CURB TO THE FIRE FACILITIES.
  - MINIMUM 24 INCHES CLEARANCE FROM THE CURB FACE.
  - MINIMUM 63 INCHES (36 INCHES PLUS 27 INCHES WHEEL SPACE) CLEARANCE BETWEEN ANY PART OF THE RACK OR RACK POST, AND ANY SIDEWALK FURNITURE OR IMPROVEMENT INCLUDING BUT NOT LIMITED TO STREET TREE AND TREE WELL, PARKING METER, STREET LIGHTING STANDARD, TRAFFIC SIGN OR POST, HYDRANT, OTHER UTILITY FACILITY AND ITS ACCESS OPENING.
  - IF ADDITIONAL RACK IS INSTALLED SIDE BY SIDE, IT SHALL HAVE MINIMUM 30 INCHES CLEARANCE BETWEEN THE RACKS OR THE RACK POSTS.
  - IF ADDITIONAL RACK IS INSTALLED END TO END, IT SHALL HAVE AT LEAST 90 INCHES (36 INCHES PLUS TWO-27 INCHES WHEEL SPACE) CLEARANCE BETWEEN THE RACKS OR RACK POSTS.
  - MINIMUM 3 INCHES CLEARANCE FROM ANY EXPANSION JOINT OR CONTROL JOINT IN THE CONCRETE PAVEMNT. DO NOT AFFIX BICYCLE RACK OVER OR NEAR ANY UTILITY FACILITY, STORM DRAIN CATCH BASIN OR STRUCTURE.
- C. ALL BOLT HOLES IN THE CONCRETE PAVEMENT OR THE CONCRETE FOUNDATION SHALL BE PREDRILLED HOLES, 1/2 INCH DIA. BY 2 3/4 INCHES DEEP. PRIOR TO INSTALLATION, ALL BOLT HOLES SHALL BE CLEANED OF DUST OR DELETERIOUS MATERIAL. ALL ANCHOR BOLTS SHALL BE DRIVEN VERTICALLY THROUGH THE SUPPORT PLATE INTO THE BOLT HOLES UNTIL THE HEAD IS FIRMLY SEATED AGAINST THE SUPPORT PLATE. NO PROTRUDING OR NON-FLUSH ANCHOR BOLTS SHALL BE USED.
- D. FOR CONCRETE PAVEMENT THAT IS LESS THAN 3 INCHES THICK, CONSTRUCT CONCRETE FOUNDATION IN ACCORDANCE WITH THE SPECIFIED DETAILS. FOR CONCRETE PAVEMENT THAT IS NOT LEVEL, USE HOT DIPPED GALVANIZED STEEL OR STAINLESS STEEL WASHERS TO LEVEL THE RACK AND THE SUPPORT PLATES BEFORE DRIVING THE ANCHOR BOLTS. FILL ALL OPENINGS AND VOIDS WITH NON-SHRINK GROUT AFTER ERECTION OF THE BICYCLE RACK.

### 4. COVENANT AND MAINTENANCE AGREEMENT:

- A. ALL BICYCLE RACKS INSTALLED UNDER WORK PERMIT SHALL BE MAINTAINED BY THE PERMITTEE. THE PERMITTEE SHALL COMPLETE THE COVENANT & AGREEMENT (C&A) FORM, AVAILABLE FROM THE DEPARTMENT OF TRANSPORTATION PERMIT OFFICE, EXECUTE IT WITH THE CITY AND RECORD IT WITH THE LOS ANGELES COUNTY REGISTRAR-RECORDER. SUBMIT A COPY OF RECORDED C&A TO THE CITY ENGINEER BEFORE A WORK PERMIT CAN BE ISSUED.