

NOTES:

- INDIVIDUAL BIKE RACKS ARE PRESENTED TO ILLUSTRATE GENERAL REQUIREMENTS FOR THE HORIZONTAL POSITION AND CONFIGURATION OF BIKE RACKS INSTALLED ABOVE THE CURB (NOT ON A ROADWAY). REFER TO 16.2.16 FOR INDIVIDUAL BIKE RACK INSTALLATION DETAILS. REFER TO 16.2.17 FOR BIKE RACK INSTALLED BELOW THE CURB (ON A ROADWAY).
- MINIMUM CLEAR AREA SHALL BE 8' WHERE DISTANCE FROM PROPERTY LINE TO CURB LINE IS 21' OR GREATER. SEE TRANSPORTATION STANDARDS AND DETAILS STANDARD DRAWING 13.2 SIDEWALK CLEAR ZONES. BIKE RACK SHALL NOT IMPEDE PEDESTRIAN TRAFFIC. BIKE RACKS INSTALLED ADJACENT TO PEDESTRIAN AREA SHALL MAINTAIN 5-FEET OF CLEAR AREA (MINIMUM) THAT PRESERVES PEDESTRIAN FLOW LINES AND MANEUVERABILITY. CLEAR AREA SHALL ASSUME A 6-FOOT LONG BIKE (TYPICAL BIKE) IS PARKED AT THE CENTER OF THE RACK. CLEAR AREA SHALL BE MEASURED FROM THE OUTSIDE EDGE OF THE TYPICAL BIKE TIRE TO THE NEXT NEAREST OBSTRUCTION AS DEFINED BY THE AMERICAN DISABILITY ASSOCIATION (ADA). OBSTRUCTIONS COULD INCLUDE BIKE RACKS, A RAISED CURB, A VERTICAL POST, ETC.
- WHERE PRACTICAL, INSTALL BIKE RACK WITHIN 50-FEET OF BUILDING ENTRANCE AND WITH A CLEAR LINE-OF-SIGHT.
- BIKE RACKS SHALL BE INSTALLED AT LOCATIONS GRADED TO DRAIN TO PREVENT ACCUMULATION OF SURFACE WATER AND PAVED WITH CONCRETE, MASONRY PAVERS, OR OTHER HARDENED, RIGID MATERIAL. INSTALLATION NOTES ARE PROVIDED ON 16.2.16.

ADDITIONAL MINIMUM CLEARANCE REQUIREMENTS

4 FEET:		10 FEET:
MAIL BOX	SIGN POST	RTD BUS STOP
LIGHT POLE	STREET FURNITURE	OTHER VERTICAL OBSTRUCTION
TRASH CAN	DRIVEWAY	
CONTROLLER CABINET	LOADING ZONE	
MANHOLE	UTILITY METER	

Computer File Information		Sheet Revisions		 <p>DEPARTMENT OF TRANSPORTATION & INFRASTRUCTURE 201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544</p>	<p>GENERAL REQUIREMENTS FOR HORIZONTAL POSITION OF BIKE RACKS INSTALLED ABOVE THE CURB</p> <p>Issued By:</p>	STANDARD DRAWING NO.	
Creation Date:	Initials:	Date:	Comments:			16.2.15	
Full Path:						Sheet No. 16 of 18	
Drawing File Name:							
CAD Ver.:	Scale:	Units:					

NOTES:

1. DESIGN AND MANUFACTURER SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
2. INVERTED-U SHAPE SHALL BE FORMED FROM ONE SEGMENT OF STEEL PIPE USING METHODOLOGY THAT MAINTAINS THE STRUCTURAL INTEGRITY OF THE STEEL PIPE.
3. ALTERNATE BIKE RACKS SHALL BE ACCEPTED BY DENVER DEPARTMENT OF TRANSPORTATION AND INFRASTRUCTURE (DOTI) PRIOR TO INSTALLATION.

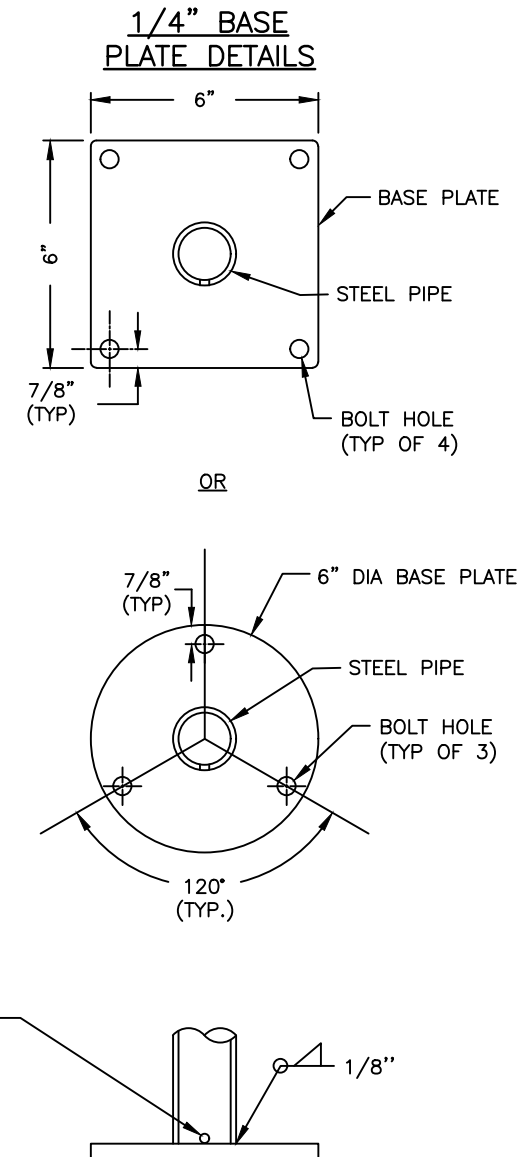
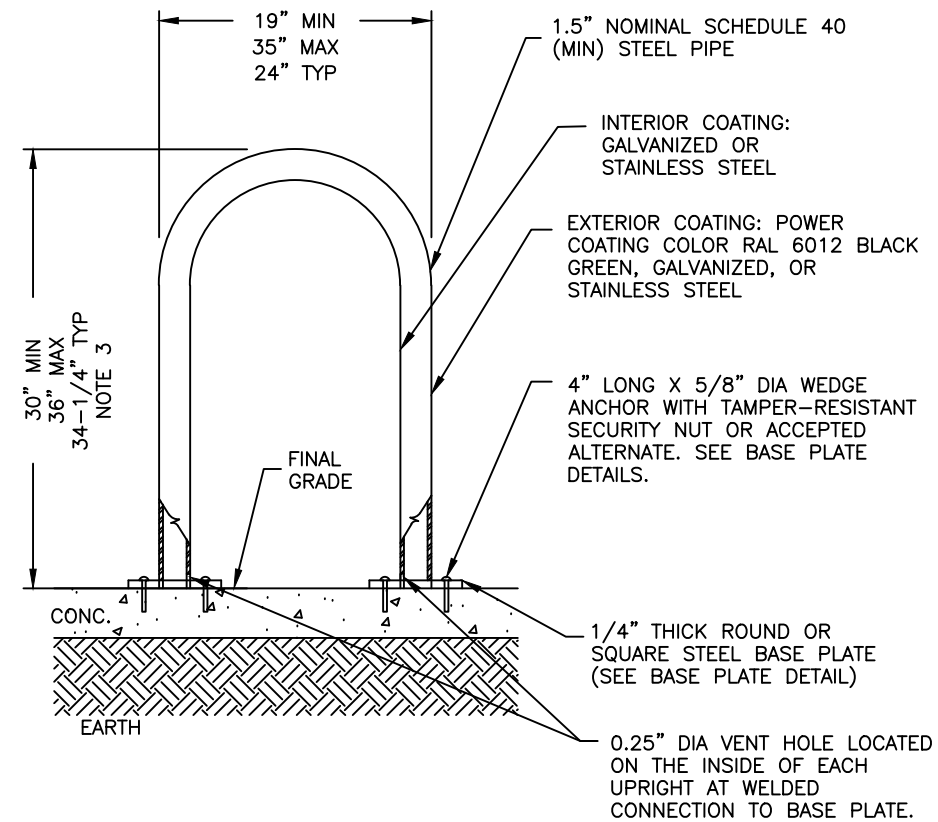
INSTALLATION NOTES FOR BIKE RACKS MOUNTED TO CONCRETE OR CONCRETE PAVERS:

1. BIKE RACK SHALL BE MOUNTED TO FINISHED CONCRETE SURFACE USING POST-INSTALLED WEDGE ANCHORS WITH TAMPER-RESISTANT SECURITY NUT OR ACCEPTED ALTERNATE.
2. BIKE RACK SHALL BE SET FIRM AND INSTALLED WITHIN A VERTICAL TOLERANCE OF 1/4-INCH FROM PLUMB. STEEL SHIMS MAY BE INSTALLED TO ACHIEVE VERTICAL TOLERANCE.

INSTALLATION NOTES FOR BIKE RACKS MOUNTED TO CONCRETE FOUNDATION BENEATH MASONRY PAVERS

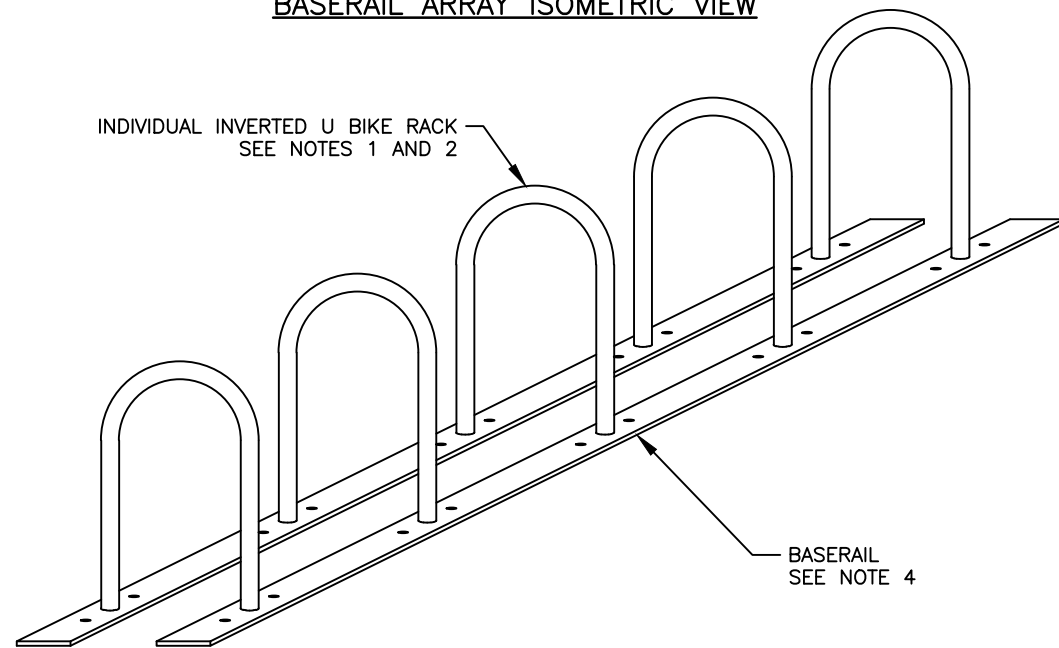
1. REMOVE MASONRY PAVER AND BEDDING MATERIAL AND PRESERVE FOR REINSTALLATION.
2. CONSTRUCT UNREINFORCED CONCRETE FOOTING OR UNREINFORCED CONCRETE SLAB TO SUPPORT BIKE RACK. CONCRETE SHALL BE 5,000 PSI COMPRESSIVE STRENGTH (28-DAY STRENGTH).
 - a. CONCRETE FOOTINGS SHALL BE 12-INCHES DIAMETER AND 24-INCHES DEEP (MINIMUM). ONE CONCRETE FOOTING SHALL BE CONSTRUCTED FOR EACH BIKE RACK BASE PLATE.
 - b. ALTERNATIVELY, CONSTRUCT A 4-INCH-THICK UNREINFORCED CONCRETE SLAB THAT EXTENDS 1-FOOT (MINIMUM) OUTSIDE FOOTPRINT OF BIKE RACK ON ALL SIDES.
 - c. EXCAVATE SUBGRADE AS NECESSARY TO MAINTAIN TOP OF CONCRETE FOUNDATION AT BOTTOM OF BEDDING MATERIAL. DISPOSE OF EXCESS EXCAVATED MATERIAL AT ACCEPTED OFF-SITE LOCATION.
3. MOUNT BIKE RACK TO CONCRETE USING INSTRUCTIONS PROVIDED THIS SHEET.
4. REPLACE BEDDING MATERIAL.
5. REINSTALL MASONRY PAVERS. MASONRY PAVERS SHALL BE CUT TO ACCOMMODATE BIKE RACK (1/2-INCH INSTALLATION TOLERANCE).

INDIVIDUAL INVERTED U BIKE RACK

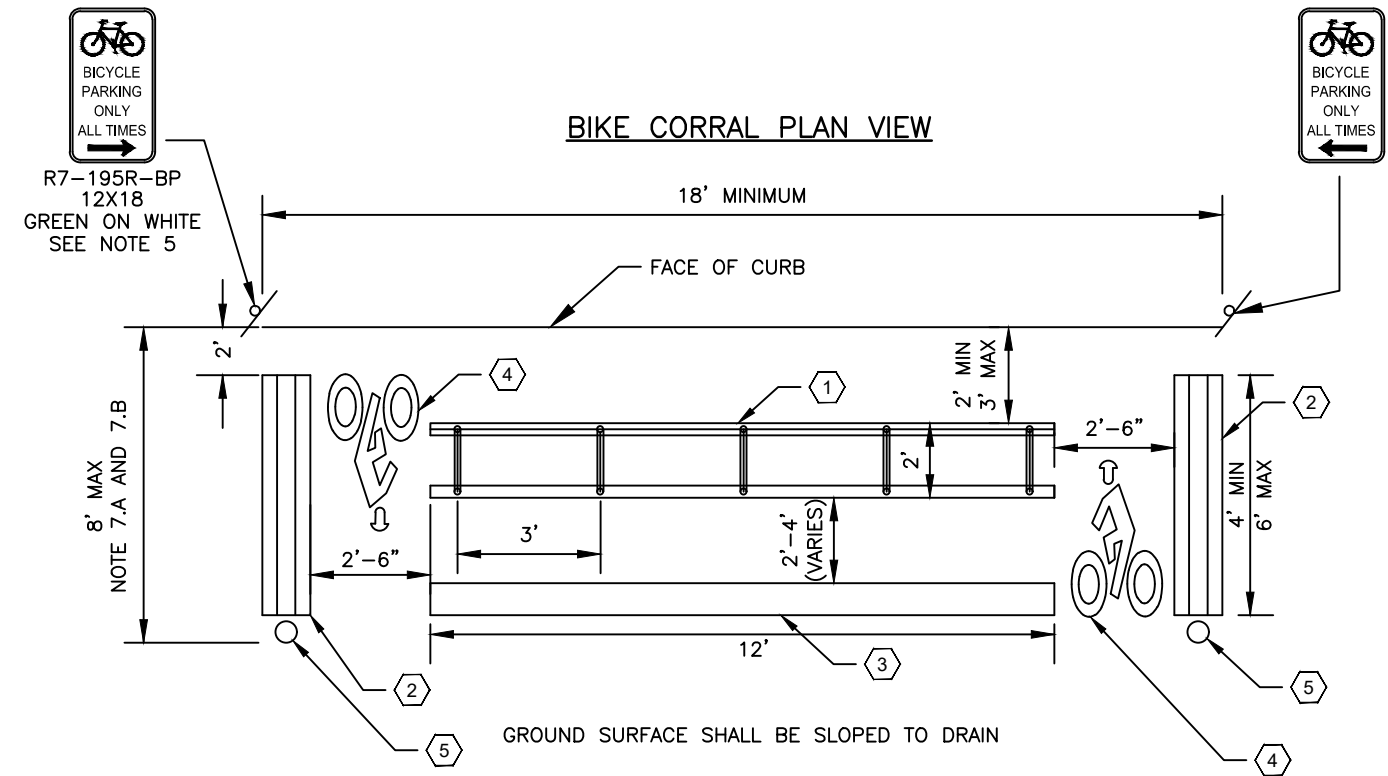


Computer File Information		Sheet Revisions		 <p>DENVER THE MILE HIGH CITY</p>	<p>DEPARTMENT OF TRANSPORTATION & INFRASTRUCTURE 201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544</p>	<p>BIKE CORRAL INSTALLATION DETAIL (BELOW CURB)</p>	STANDARD DRAWING NO.	
Creation Date:	Initials:	Date:	Comments:				16.2.16	
Full Path:							Sheet No. 17 of 18	
Drawing File Name:								
CAD Ver.:	Scale:	Units:						

BASERAIL ARRAY ISOMETRIC VIEW



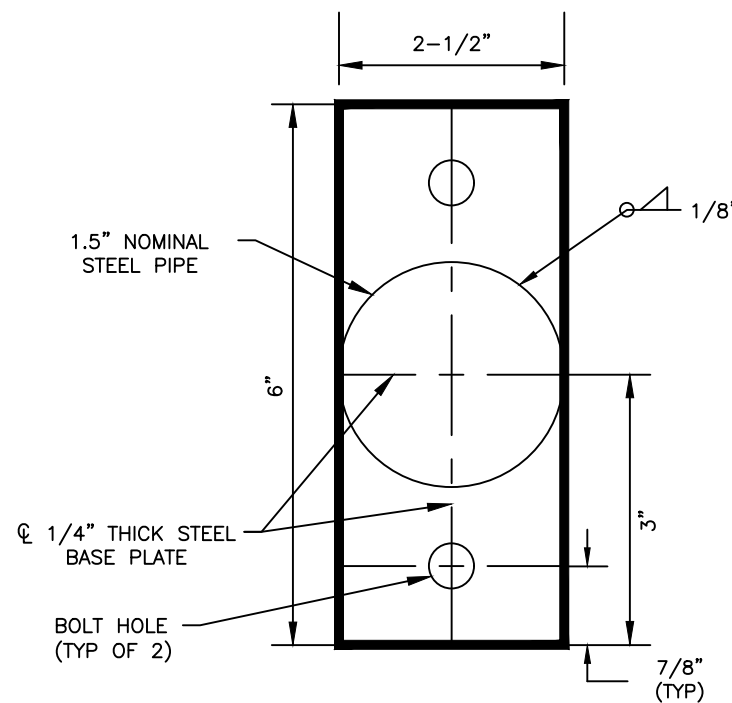
BIKE CORRAL PLAN VIEW



NOTES:

1. FIVE INVERTED U RACKS MAY BE INSTALLED IN ONE BASERAIL ARRAY.
2. INDIVIDUAL INVERTED U BIKE RACK SHALL BE CONSISTENT WITH 16.2.16 EXCEPT BASE PLATE SHALL BE MODIFIED TO ACCOMMODATE RAIL INSTALLATION (SEE DETAIL THIS SHEET). INVERTED U BIKE RACK SHALL BE MOUNTED TO BASERAIL WITH 4 5/8-INCH DIAMETER GALVANIZED STEEL CARRIAGE BOLTS WITH NUT AND WASHER INSTALLED ON THE UNDERSIDE OF THE BASERAIL.
3. BASERAIL ARRAY SHALL BE FIRMLY MOUNTED TO ASPHALT OR CONCRETE USING 6 4-INCH LONG 5/8-INCH DIAMETER BOLTS AND FEMALE THREADED DROP-IN ANCHOR SLEEVES. SPACE ANCHORS EVENLY ALONG BASERAIL.
4. BASERAIL SHALL CONSIST OF MILD STEEL STRUCTURAL C-SHAPE (CHANNEL SHAPE) C3x1.4x3/16. BASERAIL SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION.
5. SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH DENVER STANDARD DRAWING 16.2.5 AND BE MOUNTED ON A 2" TELESPAR POLE WITH A 7'-0" MINIMUM CLEARANCE TO FINISHED GRADE. LEGEND AND BORDER OF THE BICYCLE PARKING AREA SIGN SHALL BE GREEN ON A RETROREFLECTORIZED WHITE BACKGROUND.
6. INSTALLATION OF BIKE PARKING BELOW THE CURB IS ACCEPTABLE AT THE FOLLOWING GENERAL LOCATIONS:
 - A. CENTRAL BUSINESS DISTRICT DOWNTOWN STREETS
 - B. ROADWAYS CLASSIFIED AS COLLECTOR STREETS THAT ARE DESIGNATED BIKEWAYS
 - C. ROADWAYS CLASSIFIED AS LOCAL STREETS
7. INSTALLATION OF BIKE PARKING BELOW THE CURB SHALL ADHERE TO THE FOLLOWING SITE-SPECIFIC REQUIREMENTS:
 - A. TRAVEL LANE WIDTH (BUS AND HEAVY TRUCK ROUTES) - INSTALLATION OF BIKE PARKING SHALL NOT REDUCE TRAVEL LANE WIDTH BELOW 11 FEET. A TRUCK ROUTE IS CONSIDERED ANY ROADWAY WITH AT LEAST 2-PERCENT TRUCK USE.
 - B. TRAVEL LANE WIDTH (OTHER) - INSTALLATION OF BIKE PARKING SHALL NOT REDUCE TRAVEL LANE WIDTH BELOW 11 FEET.
 - C. RTD BUS STOP BIKE PARKING SHALL BE AT LEAST 20 FEET AHEAD OF SIGN AND 45 FEET BEHIND SIGN OR 65 FEET BEHIND SIGN WHERE ARTICULATED BUSES ARE USED.
 - D. INTERSECTIONS - BIKE PARKING SHALL NOT BE INSTALLED WITHIN 20 FEET OF CURB RAMPS, STOP SIGNS, OR INTERSECTIONS WITHOUT WRITTEN PERMISSION OF DENVER DEPARTMENT OF TRANSPORTATION AND INFRASTRUCTURE (DOTI) TRANSPORTATION DESIGN.
 - E. DRIVEWAYS - BIKE PARKING SHALL NOT BE INSTALLED WITHIN 5 FEET OF DRIVEWAYS OR ALLEYS.
 - F. FIRE HYDRANTS - BIKE PARKING SHALL NOT BE INSTALLED WITHIN 10 FEET OF A FIRE HYDRANT.
 - G. ROW INFRASTRUCTURE - BIKE PARKING SHALL NOT BE INSTALLED WITHIN 5 FEET FROM TRAFFIC CONTROL CABINETS, UTILITY BOX COVERS, MANHOLE COVERS, VALVE BOX COVERS, POLICE/FIRE CALL BOX, OR OTHER EMERGENCY FACILITIES.
 - H. EXISTING CURBLANE USES - ON-STREET BIKE PARKING SHALL NOT CONFLICT WITH LOADING ZONES, CAR SHARE, DISABILITY PARKING SPACES, OR OTHER PERMITTED CURBLANE USES.

BASE PLATE DETAIL FOR INSTALLATION ON BASERAIL



LEGEND:

- ① INVERTED U RACK BASERAIL ARRAY
- ② RECYCLED RUBBER CURB STOP OR APPROVED EQUAL
- ③ 8" WIDE WHITE THERMOPLASTIC CHANNELIZING LINE
- ④ 2'x4' WHITE THERMOPLASTIC PREFORMED BIKE SYMBOL
- ⑤ TWO WHITE OR YELLOW, 36" TO 48" TALL SURFACE MOUNTED CANDLESTICK DELINEATORS WITH TWO 3"-WIDE REFLECTIVE WHITE OR YELLOW BANDS. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.

Computer File Information		Sheet Revisions		<p>DEPARTMENT OF TRANSPORTATION & INFRASTRUCTURE 201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544</p>	<p>BIKE CORRAL INSTALLATION DETAIL (BELOW CURB)</p> <p>Issued By:</p>	STANDARD DRAWING NO.	
Creation Date:	Initials:	Date:	Comments:			16.2.17	
Full Path:						Sheet No. 18 of 18	
Drawing File Name:							
CAD Ver.:	Scale:	Units:					