

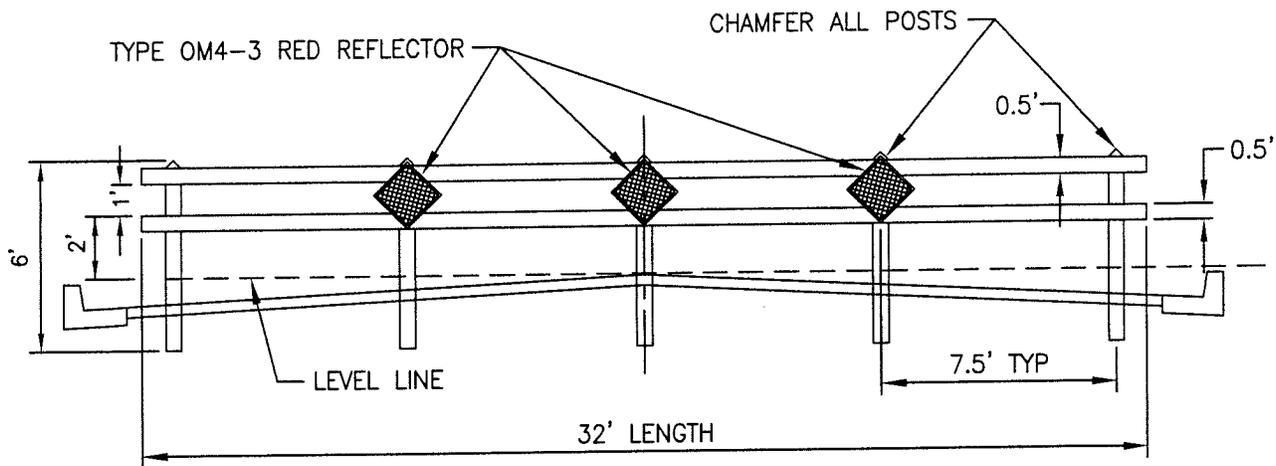
SECTION 4000

TRAFFIC

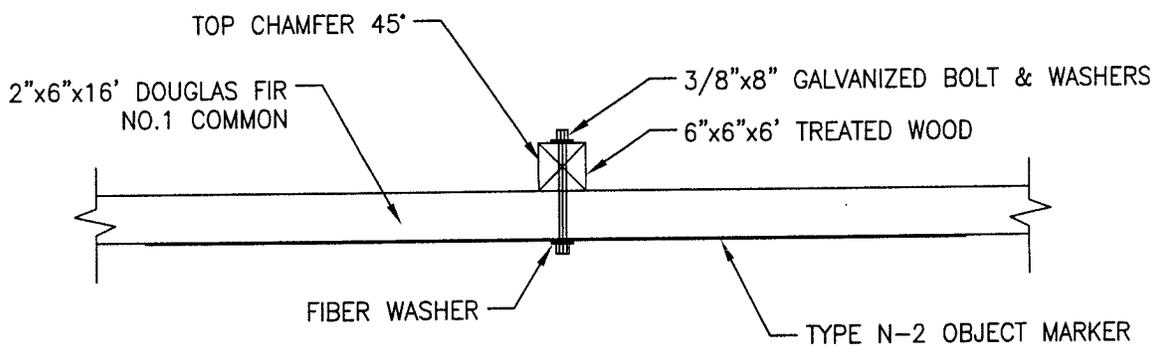
CONSTRUCTION STANDARDS

SECTION 4000 – TRAFFIC

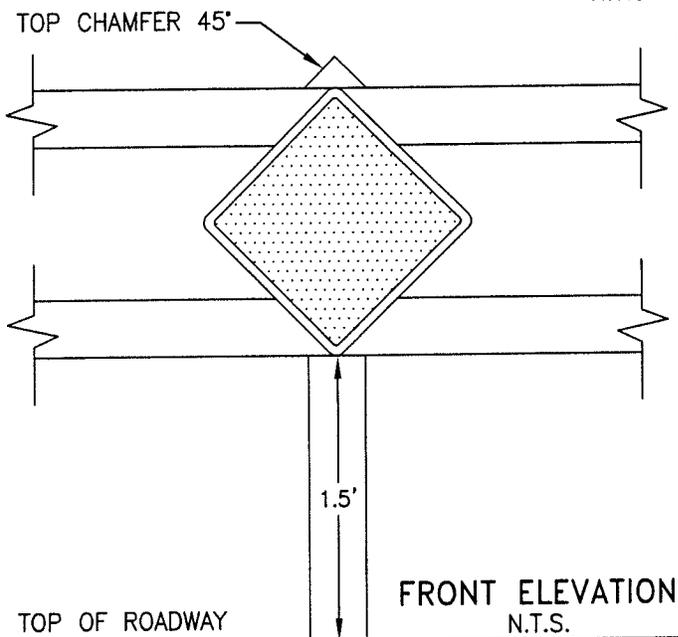
4000	Standard Barricade
4001	Type R Controller Cabinet Foundation Detail
4002	Type 1-A Foundation Detail – Revised 12/10/15
4003 (4 Sheets)	Sign Installation Details – Revised 02/02/16
4004	Autoscope Solopro Installation Detail – Revised 01/07/13 Overhead
4005 (6 Sheets)	Reflective Street Name Sign Details – Revised 02/02/16
4006	Pullbox Conduit entry Detail – Revised 12/10/15
4007	CCTV Camera/Cable Installation and Orientation



TYPICAL SECTION
SCALE: 1"=6'

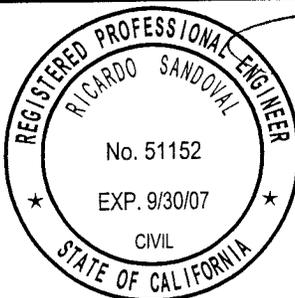


TYPICAL SECTION
N.T.S.



NOTES:

1. PROVISION FOR FIRE TRUCK/EMERGENCY VEHICLE TURN-AROUND SHALL BE REQUIRED AS SHOWN ON PLANS.
2. CONSTRUCTION METHODS AND STRUCTURAL MATERIALS USED SHALL MEET CALTRANS STD. SPECIFICATIONS, SECTIONS 57 & 58.
3. TWO COATS OF PREMIUM QUALITY WHITE PAINT SHALL BE APPLIED PER SECTION 59.
4. THREE GALVANIZED 20D NAILS SHALL BE USED TO SECURE END OF PLANK TO POSTS AT CENTERLINE AND FIVE 20D NAILS SHALL BE USED AT OTHER POSTS.
5. OVERALL WIDTH SHOWN IS FOR LOCAL RESIDENTIAL STREETS WITH 36 FT. CURB SEPARATION. FOR OTHER STREETS USE CURB SEPARATION LESS 4 FT.



APPROVED BY:

Ricardo Sandoval 10.18.06
CITY ENGINEER DATE

RICARDO SANDOVAL

REVIEWED BY: *DL*

REVISION NUMBER: _____

CITY OF FONTANA

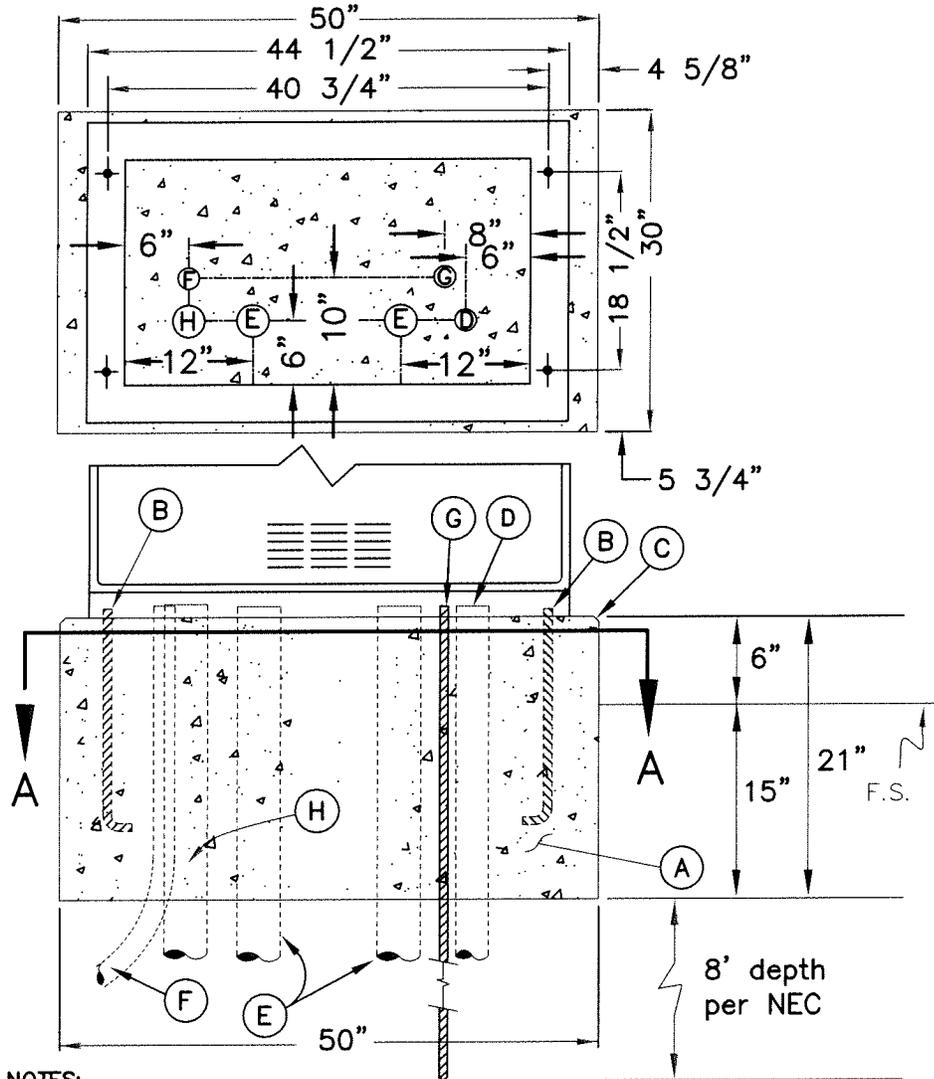
STANDARD
BARRICADE

07/10/06

STD. PLAN NO. 4000

SHT 1 OF 1

SECTION A-A

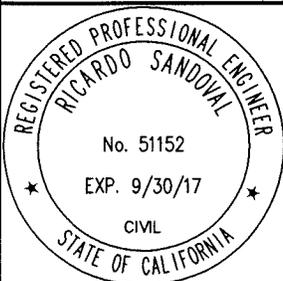


CONSTRUCTION NOTES:

- (A) 560-C-3250 PORTLAND CEMENT CONCRETE FOUNDATION.
- (B) 3/4" x 18" GALVANIZED ANCHOR BOLTS (ASTM A307).
- (C) 3/8" CHAMFER TYPICAL.
- (D) 2" SERVICE CONDUIT TO SERVICE ENCLOSURE.
- (E) (2) CONDUITS TO ADJACENT 6E PULL BOX.
- (F) 2" CONDUIT FOR SIGNAL INTERCONNECT, PHONE OR FUTURE FIBER OPTIC CABLE.
- (G) GROUND ROD, 8 FT. MIN. INTO EARTH, EXCLUDING CONCRETE (APPROX. 10.5' ROD)
- (H) CONDUIT FOR DETECTION (VIDEO OR LOOP) AND OPTICOM CABLES TO ADJACENT 6E PULLBOX.

GENERAL NOTES:

1. INSTALL IN ACCORDANCE WITH CALTRANS RSP ES-3A AND ES-3B.
2. TOP OF FOUNDATION SHALL BE 6" ABOVE FINISHED SURFACE.
3. FINAL LOCATION OF CONDUITS SHALL BE APPROVED PRIOR TO FOUNDATION POUR.
4. ALL CONDUITS IN CONTROLLER FOUNDATION SHALL BE HOT-DIPPED GALVANIZED RIGID STEEL.



APPROVED BY:
Ricardo Sandoval (12-10-15)
 CITY ENGINEER DATE
 RICARDO SANDOVAL

DRAWN BY: _____ DT
 REVISION NUMBER: 2

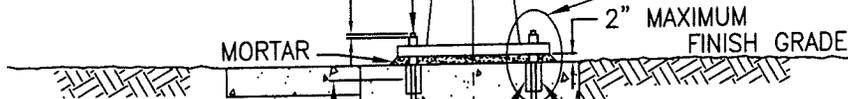
CITY OF FONTANA

TYPE R CONTROLLER
 CABINET FOUNDATION
 DETAIL

STD. PLAN NO. 4001 DWG. 1/1

3/4"x6" GALVANIZED FULLY
THREADED STUD (TOTAL OF 4)

1/2" MAXIMUM



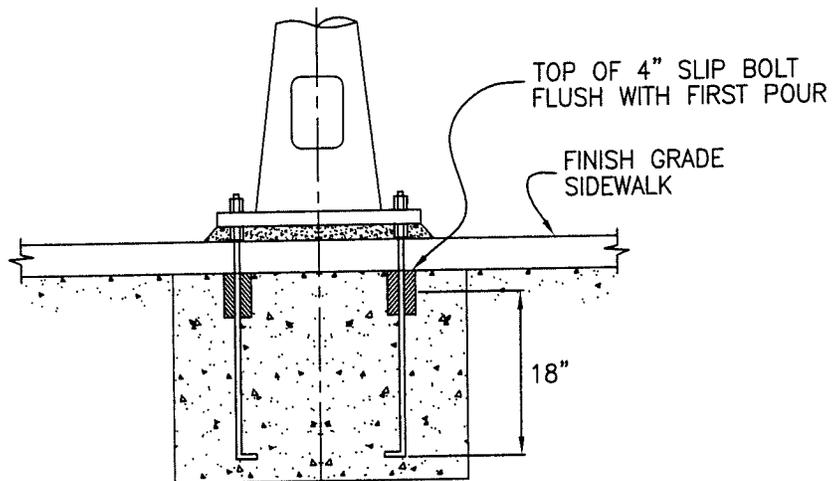
2" MAXIMUM
FINISH GRADE

3/4" STEEL SLEEVE NUT
4" MINIMUM LENGTH
(TOTAL OF 4)

THREADED STUB AND
ANCHOR BOLTS SHALL
THREAD INTO SLEEVE NUT
A MINIMUM OF 1 1/2"

3/4"x18" ANCHOR BOLTS THREAD 6",
WITH 2 NUTS AND 2 WASHERS EACH.
LENGTH DOES NOT INCLUDE 2" OR 4"
90° BEND (TOTAL OF 4)

FOUNDATION FOR TYPE 1 - A STANDARD
UN - IMPROVED AREA



FOUNDATION FOR TYPE 1 - A STANDARD
IMPROVED AREA

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 10.18.06
DATE

CITY ENGINEER
RICARDO SANDOVAL

REVIEWED BY: *RL*

DATE OF LAST REVISION: _____

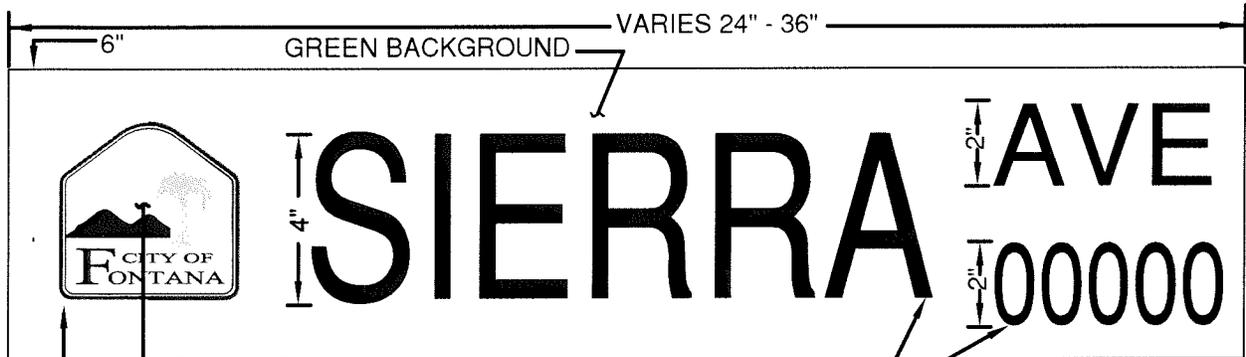
CITY OF FONTANA

TYPE 1-A FOUNDATION
DETAIL

07/10/06

STD. PLAN NO. 4002

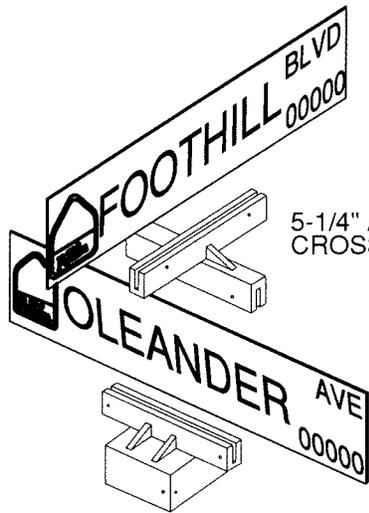
SHT 1 OF 1



WHITE (SILVER) BACKGROUND

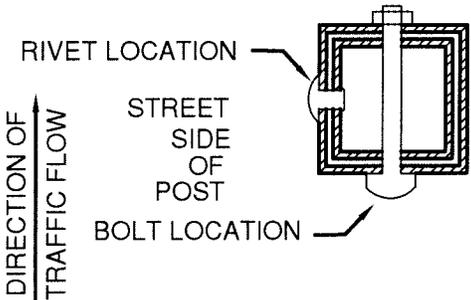
WHITE REFLECTIVE LETTERS/NUMBERS

4" CITY EMBLEM



5-1/4" ALUMINUM CROSS-SADDLE

2" SQUARE x 5-1/4" ALUMINUM CAP



RIVET LOCATION

STREET SIDE OF POST

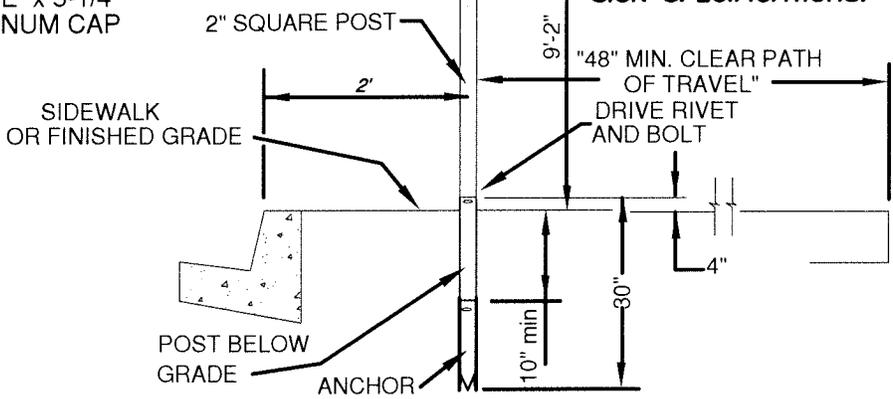
DIRECTION OF TRAFFIC FLOW

BOLT LOCATION



NOTE:

EACH SIGN POST SHALL ACCOMPANY TWO STREET NAME SIGN BLADES. SEE SHEETS 2 AND 3 FOR COMPLETE SIGN SPECIFICATIONS.



APPROVED BY: *Ricardo Sandoval* 12.5.12
 CITY ENGINEER DATE
 RICARDO SANDOVAL
 DRAWN BY: _____ DT
 REVISION NUMBER: 3

CITY OF FONTANA
SIGN INSTALLATION DETAILS
 STD. PLAN NO. 4003 SHT. 1 OF 4

SIGN AND POST MATERIAL & INSTALLATION REQUIREMENTS:

1.) STREET NAME SIGN MATERIALS, SIZES, AND INSTALLATION

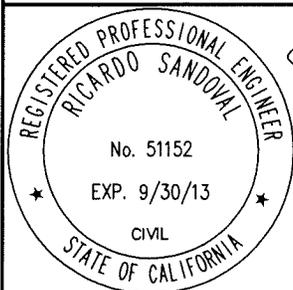
- A) SIGN BLANK MATERIAL SHALL BE EXTRUDED ALUMINUM, 5052-H38 ALLOY
- B) SIGN BLANK DIMENSIONS ARE 6" HIGH BY A MINIMUM OF 24" TO MAXIMUM OF 42" LONG AS REQUIRED
- C) SIGN LETTERING SHALL BE 3M OR AVERY-DENNISON PRISMATIC HIGH INTENSITY GRADE REFLECTIVE WHITE SHEETING OR APPROVED EQUIVALENT. THE SIGN BACKGROUND SHALL BE 3M OR AVERY-DENNISON PRISMATIC HIGH INTENSITY GRADE REFLECTIVE GREEN SHEETING OR APPROVED EQUIVALENT.
- D) SIGN STREET NAME LETTERS MUST BE WHITE FHWA (FEDERAL HIGHWAY ADMINISTRATION) SERIES C-4" UPPER CASE. ADDRESS BLOCK NUMBERS MUST BE WHITE FHWA SERIES C-2". STREET NAME SUFFIX MUST BE WHITE FHWA 2" UPPER CASE.

2.) REGULATORY AND WARNING SIGN MATERIALS, SIZES, AND INSTALLATION

- A) SIGNS SHALL BE HIGH INTENSITY PRISMATIC .080 ALUMINUM WITH 3M 1160 OR AVERY DENNISON 1160 (OR APPROVED EQUAL) ANTI-GRAFFITI FILM.
- B) SIGNS SHALL BE SECURED TO THE POST BY A 3" BY 5/16" COURSE THREAD STAINLESS STEEL BOLT WITH A 2" FENDER WASHER ON TOP AND A 3/8" DRIVE RIVET WITH A 2" FENDER WASHER ON THE BOTTOM. THE FENDER WASHER SHALL HAVE A MINIMUM THICKNESS OF .075".
- C) ALL SIGNS 30" OR GREATER SHALL HAVE A BACK BRACE INSTALLED.
- D) THE BOTTOM OF THE SIGN SHALL BE A MINIMUM OF 7 FEET ABOVE THE FINISHED SURFACE.

3.) POST MATERIALS AND INSTALLATION

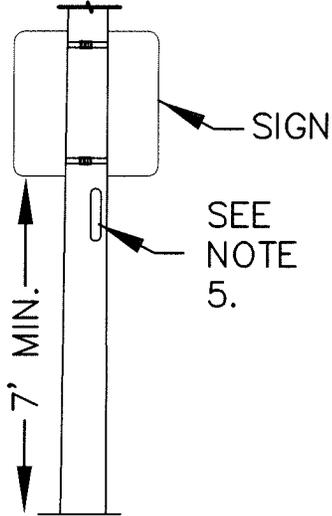
- A) SQUARE PREPUNCHED STEEL TUBE POSTS WITH ANCHOR SHALL BE USED FOR ALL TRAFFIC CONTROL AND INFORMATIONAL SIGNS WITHIN ROAD RIGHT-OF-WAY. POST MUST BE 2" SQUARE PRE-PUNCH AND HOT DIPPED GALVANIZED INSIDE AND OUTSIDE. THE ONE-PIECE ANCHOR SHALL BE AN "ANCHORMATE" ANCHOR (2.5" X 2.5" X 30" GALVANIZED STEEL).
- B) THE NUMBER OF POSTS REQUIRED FOR SIGN INSTALLATION SHALL BE DETERMINED BY THE WIDTH OF THE SIGN OR THE COMBINATION OF SIGNS TO BE INSTALLED. A SINGLE POST SHALL BE USED WHERE THE WIDTH IS IS LESS THAN 48". DOUBLE POSTS SHALL BE USED WHERE THE SIGN WIDTH EQUALS OR EXCEEDS 48"
- C) THE ANCHOR SHALL BE DRIVEN UNTIL ONLY 4" REMAINS ABOVE GROUND LEVEL. IN CONCRETE, ANCHORS MAY BE CUT TO 20"
- D) ALL DIRT AND CONCRETE SHALL BE REMOVED FROM THE INSIDE TOP 10" MIN. OF THE ANCHOR TO ALLOW FOR INSTALLATION OF THE SIGN POST.
- E) THE SIGN POST SHALL BE INSTALLED A MINIMUM OF 10" INTO THE ANCHOR AND SECURED IN PLACE WITH ONE 3/8" DRIVE RIVET AND ONE 3" x 5/16 COURSE THREAD STAINLESS STEEL BOLT. THE RIVET SHALL BE INSTALLED ON THE SIDE FACING TRAFFIC AND THE BOLT INSTALLED PARALLEL TO TRAFFIC AS SHOWN (SEE SHEET 1).
- F) INSTALLATION ACCORDING TO THESE REQUIREMENTS IS ESSENTIAL TO MAINTAIN THE BREAK-AWAY CHARACTERISTICS OF THE POST SYSTEM. UNDER NO CIRCUMSTANCES SHALL THE ANCHOR ASSEMBLY BE SECURED IN CONCRETE FOOTINGS.
- G) THE SIGN POST SHALL BE A MINIMUM OF 2 FEET FROM THE CURB.



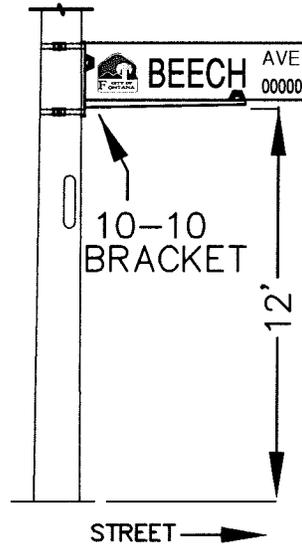
APPROVED BY: *Ricardo Sandoval* 12.5.12
 CITY ENGINEER DATE
 RICARDO SANDOVAL
 DRAWN BY: _____ DT
 REVISION NUMBER: _____ 3

CITY OF FONTANA	
SIGN INSTALLATION DETAILS	
STD. PLAN NO. 4003	SHT. 2 OF 4

REGULATORY SIGN



STREET NAME SIGN



TYPICAL MARBELITE INSTALLATION

- 1.) THE MINIMUM VERTICAL CLEARANCE SHALL BE 7' FROM THE FINISHED SURFACE TO THE BOTTOM OF THE LOWEST SIGN ON THE MARBELITE.
- 2.) THE SIGN OR 10-10 BRACKET SHALL BE BANDED TO THE FLAT SURFACE OF THE MARBELITE THAT BEST ACCOMMODATES A 90 DEGREE ANGLE TO ONCOMING TRAFFIC (OR THE CURB) UNLESS OTHERWISE SPECIFIED.
- 3.) THE BAND SHALL BE TIGHTENED TO A POINT AT WHICH IT DOES NOT BREAK, YET PREVENTS MOVEMENT OF THE SIGN, BAND, OR BRACKET.
- 4.) ALL SIGNS BEING BANDED TO MARBELITE SHALL HAVE NO LESS THAN 2 BANDS (UPPER AND LOWER).
- 5.) UNDER NO CIRCUMSTANCES SHALL THE BANDS COVER THE IDENTIFICATION TAG ON THE MARBELITE.

BAND-IT - C206 STAINLESS STEEL TYPE 201 OR APPROVED EQUAL
3/4" WIDTH AND .030" THICKNESS

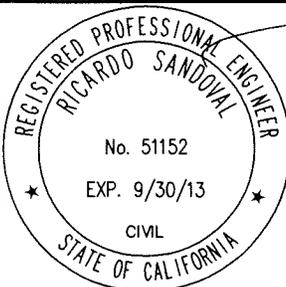
BRACKET (REGULATORY SIGN): BAND-IT, D001 OR EQUAL 1 BOLT
STRAIGHT LEG STAINLESS STEEL 3/4".

BRACKET (STREET NAME SIGN): 10-10 EXTRUDED ALUMINUM ALLOY.

BUCKLES - BAND-IT C456 OR EQUAL EAR LOCKED
316 STAINLESS STEEL 3/4".

BOLTS - 1" x 5/16" COARSE THREAD STAINLESS STEEL

WASHERS - ALL REGULATORY SIGNS SHALL BE INSTALLED WITH 5/16"
X 2" ZINC COATED FENDER WASHERS WITH A MINIMUM
THICKNESS OF .075"



APPROVED BY:

Ricardo Sandoval 12.5.12

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY: _____ DT

REVISION NUMBER: _____ 3

CITY OF FONTANA

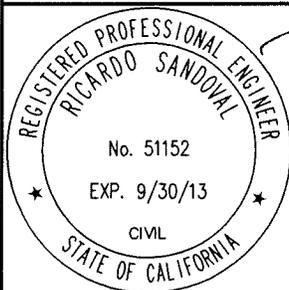
**SIGN INSTALLATION
DETAILS**

STD. PLAN NO. 4003

SHT. 3 OF 4

STANDARD ABBREVIATIONS

AVENUE/AVENIDA	AVE	LAKE/LAKES	LKS
BOULEVARD	BLVD	LANE	LN
CANYON	CYN	PARKWAY	PKWY
CENTER	CNTR	PLACE	PL
CIRCLE	CIR	ROAD	RD
COURT	CT	SQUARE	SQ
DRIVE	DR	STREET	ST
HEIGHTS	HTS	WAY	WY



APPROVED BY:
Ricardo Sandoval
 12-5-12
CITY ENGINEER **DATE**
 RICARDO SANDOVAL
DRAWN BY: _____ **DT**
REVISION NUMBER: 3

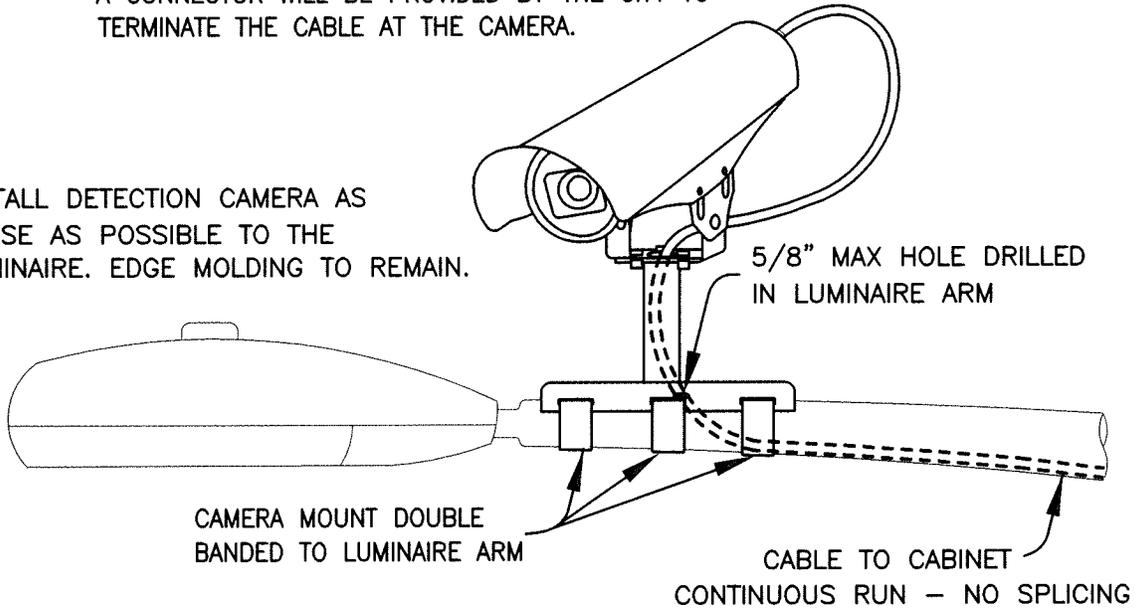
CITY OF FONTANA

STREET NAME ABBREVIATIONS

STD. PLAN NO. 4003 **SHT. 4 of 4**

RUN CAMERA CABLE THROUGH MOUNT, INTO LUMINAIRE ARM AND DOWN POLE TO CONTROLLER CABINET. A CONNECTOR WILL BE PROVIDED BY THE CITY TO TERMINATE THE CABLE AT THE CAMERA.

INSTALL DETECTION CAMERA AS CLOSE AS POSSIBLE TO THE LUMINAIRE. EDGE MOLDING TO REMAIN.

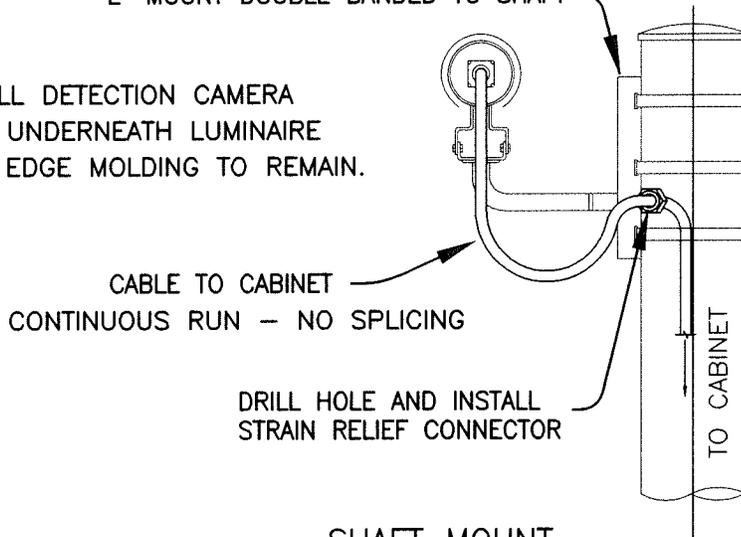


LUMINAIRE ARM MOUNT

NOT TO SCALE

"L" MOUNT DOUBLE BANDED TO SHAFT

INSTALL DETECTION CAMERA JUST UNDERNEATH LUMINAIRE ARM. EDGE MOLDING TO REMAIN.



SHAFT MOUNT

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 1.7.13

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY: _____ RG/DT

REVISION NUMBER: _____ 2

CITY OF FONTANA

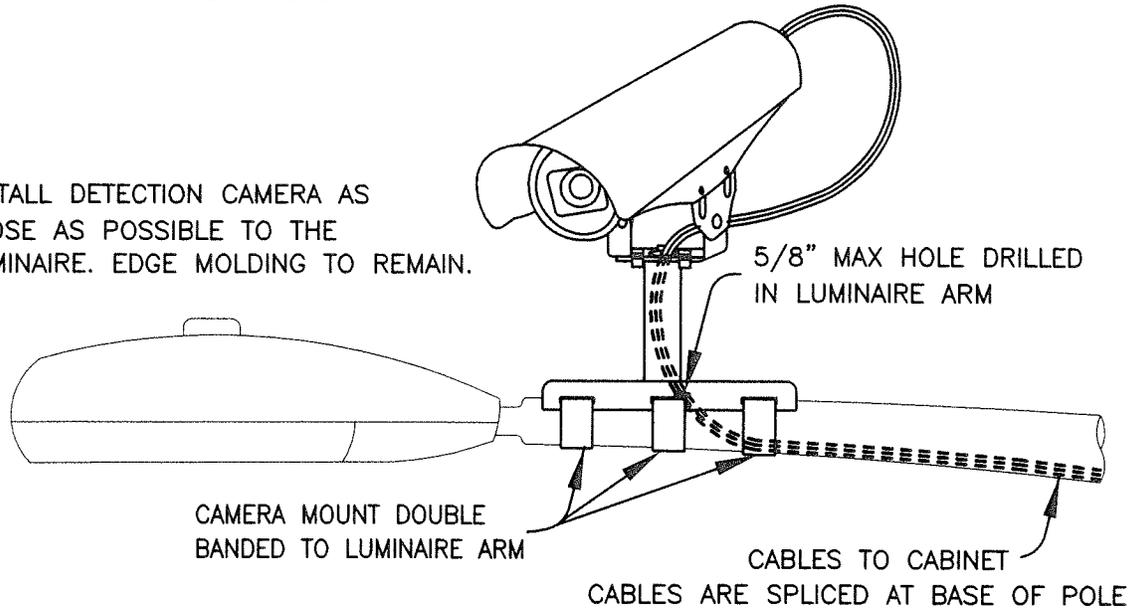
AUTOSCOPE
SOLO TERRA INSTALLATION
DETAILS

STD. PLAN NO. 4004

SHT. 1 OF 2

RUN CAMERA CABLES (VIDEO AND POWER) THROUGH MOUNT, INTO LUMINAIRE ARM AND DOWN POLE. SPLICE AT BASE OF POLE. "PIGTAILS" ARE SUPPLIED BY THE CITY.

INSTALL DETECTION CAMERA AS CLOSE AS POSSIBLE TO THE LUMINAIRE. EDGE MOLDING TO REMAIN.



LUMINAIRE ARM MOUNT

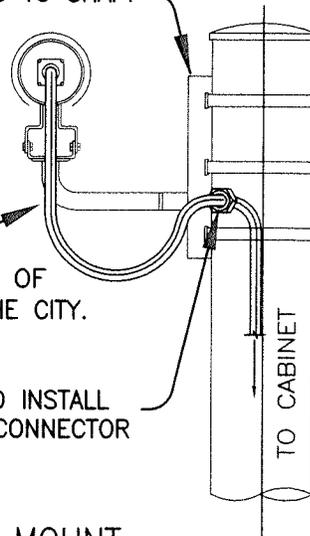
NOT TO SCALE

"L" MOUNT DOUBLE BANDED TO SHAFT

INSTALL DETECTION CAMERA JUST UNDERNEATH LUMINAIRE ARM. EDGE MOLDING TO REMAIN.

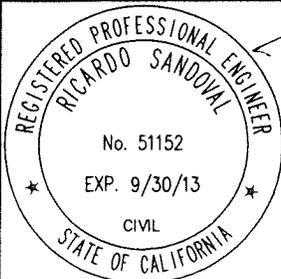
CABLES TO CABINET
CABLES ARE SPLICED AT BASE OF POLE. "PIGTAILS" ARE SUPPLIED BY THE CITY.

DRILL HOLE AND INSTALL STRAIN RELIEF CONNECTOR



SHAFT MOUNT

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 1-7-13

CITY ENGINEER DATE
RICARDO SANDOVAL

DRAWN BY: RG/DT

REVISION NUMBER: 2

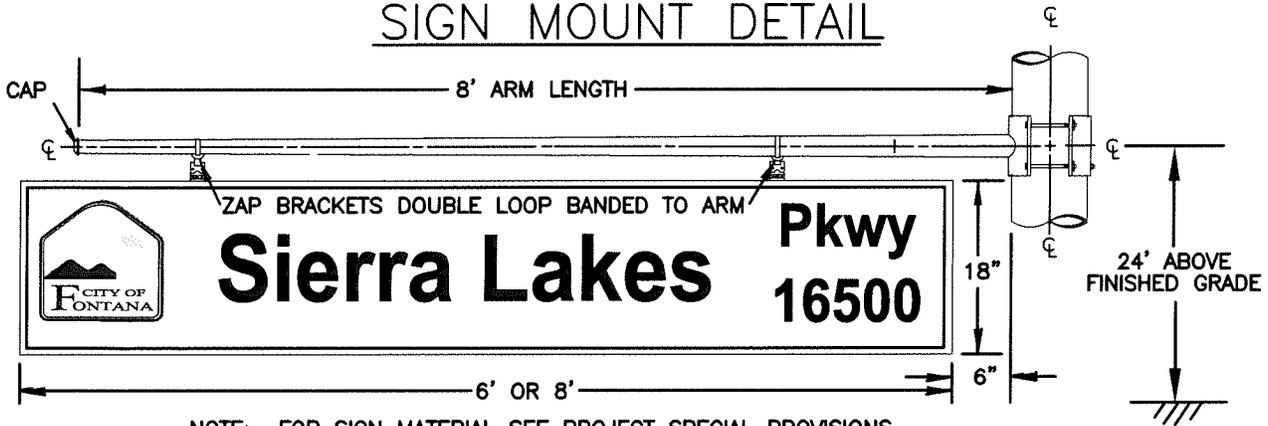
CITY OF FONTANA

AUTOSCOPE
RVP2 INSTALLATION
DETAILS

STD. PLAN NO. 4004

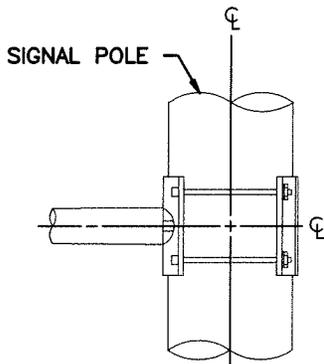
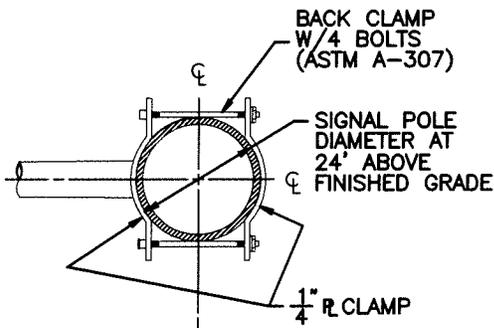
SHT. 2 OF 2

SIGN MOUNT DETAIL



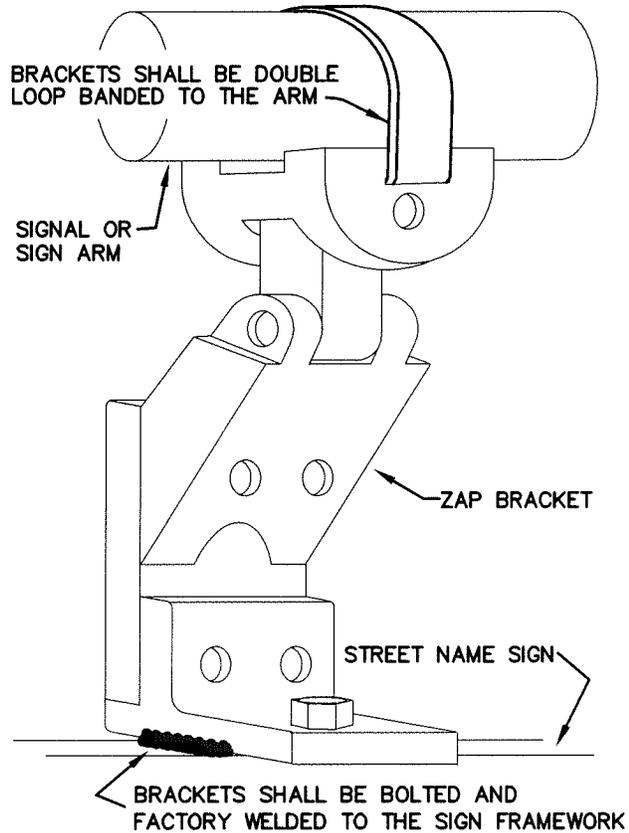
NOTE: FOR SIGN MATERIAL SEE PROJECT SPECIAL PROVISIONS.

NOT TO SCALE



CLAMP DETAIL

NOT TO SCALE



ZAP BRACKET DETAIL

NOT TO SCALE



APPROVED BY:
Ricardo Sandoval 11.19.15
 CITY ENGINEER DATE
 RICARDO SANDOVAL
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CITY OF FONTANA

OVERHEAD REFLECTIVE
 STREET NAME SIGN
 MOUNTING DETAIL

STD. PLAN NO. 4005 DWG. 1/4

NOT TO SCALE

SIGN LEGEND DETAIL



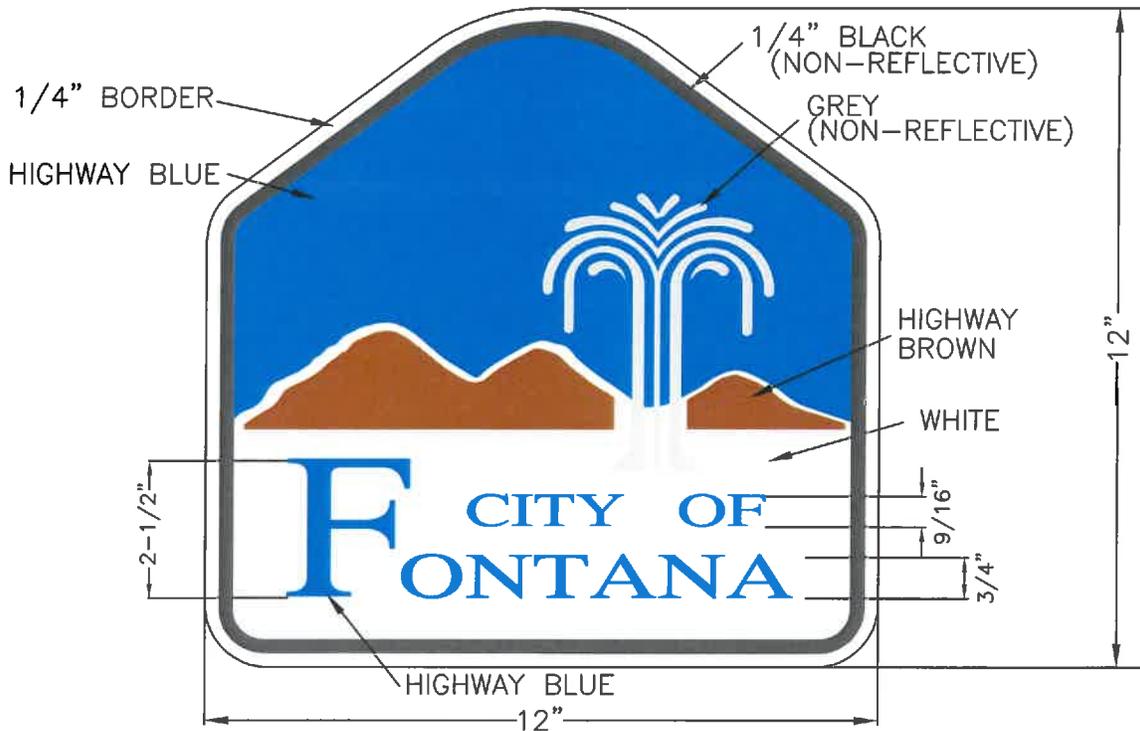
WHITE LETTERS AND NUMBERS

SIGN LENGTH IS EITHER 6' OR 8' BASED LENGTH OF STREET NAME

SIGN LEGEND SHALL CONSIST OF 3M DG3 SERIES 4000 REFLECTIVE SHEETING OR APPROVED EQUAL.

NOT TO SCALE

CITY LOGO DETAIL



APPROVED BY: *Ricardo Sandoval* 11-19-18
 CITY ENGINEER DATE
 RICARDO SANDOVAL
 DRAWN BY: _____ DT
 REVISION NUMBER: 4

CITY OF FONTANA

OVERHEAD REFLECTIVE
STREET NAME SIGN
LEGEND DETAIL

STD. PLAN NO. 4005 DWG. 2/4

NOT TO SCALE

SIGN LEGEND DETAIL



WHITE LETTERS AND NUMBERS

SIGN LENGTH IS EITHER 6' OR 8' BASED LENGTH OF STREET NAME

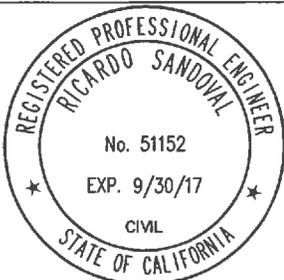
SIGN LEGEND SHALL CONSIST OF 3M DG3 SERIES 4000 REFLECTIVE SHEETING OR APPROVED EQUAL.

NOT TO SCALE

SIGN MOUNT DETAIL



NOTE: FOR SIGN MATERIAL SEE PROJECT SPECIAL PROVISIONS.



APPROVED BY: *Ricardo Sandoval* 10/19/16
 CITY ENGINEER DATE
 RICARDO SANDOVAL
 DRAWN BY: _____ DT _____
 REVISION NUMBER: _____

CITY OF FONTANA

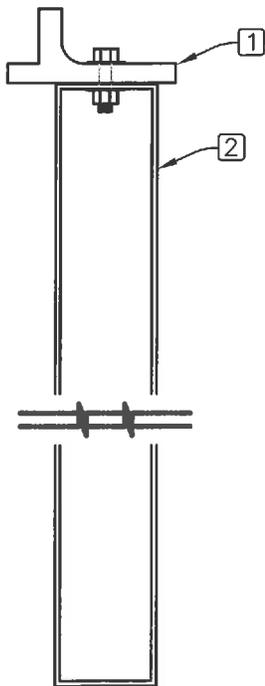
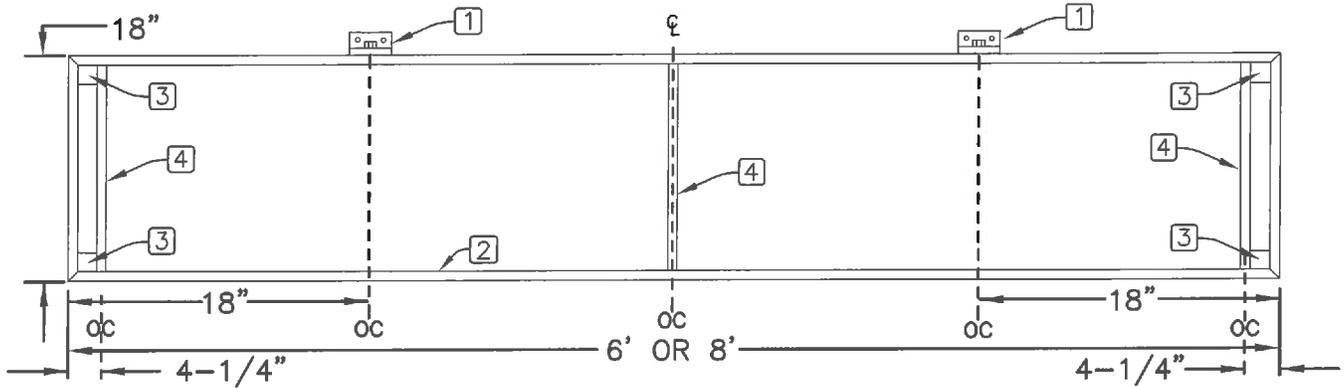
OVERHEAD REFLECTIVE
STREET NAME SIGN
LEGEND AND MOUNT
DETAIL

STD. PLAN NO. 4005

DWG. 2A/4

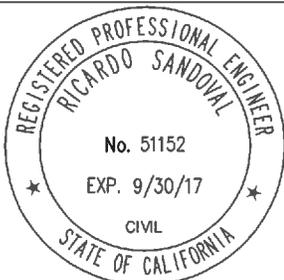
NOT TO SCALE

SIGN FRAME FABRICATION DETAIL



SIGN FRAMEWORK FABRICATION NOTES

- 1 ZAP MOUNTING BRACKET SHALL BE WELDED TO TOP OF ALUMINUM CHANNEL FRAMEWORK AND MECHANICALLY FASTENED WITH A 1/2" DIA. STAINLESS STEEL BOLT AND LOCKING NUT.
- 2 SIGN FRAMEWORK SHALL BE 1-1/4" X 1-1/4" X 1/8" WALL ALUMINUM CHANNEL WELDED TOGETHER AT CORNERS.
- 3 FRAMEWORK SHALL HAVE .040" THICK ALUMINUM BRACKETS WELDED TO INSIDE OF CORNERS AS SHOWN.
- 4 FRAMEWORK SHALL HAVE 1" X 1/8" WALL ALUMINUM SQ. TUBE VERTICAL SUPPORTS WELDED INSIDE AS SHOWN.



APPROVED BY:
Ricardo Sandoval 1.19.16
 CITY ENGINEER DATE
 RICARDO SANDOVAL
 DRAWN BY: _____ DT
 REVISION NUMBER: 4

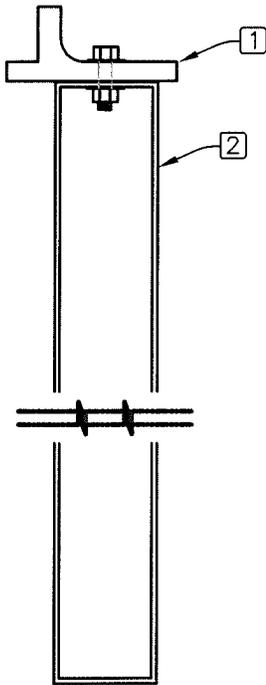
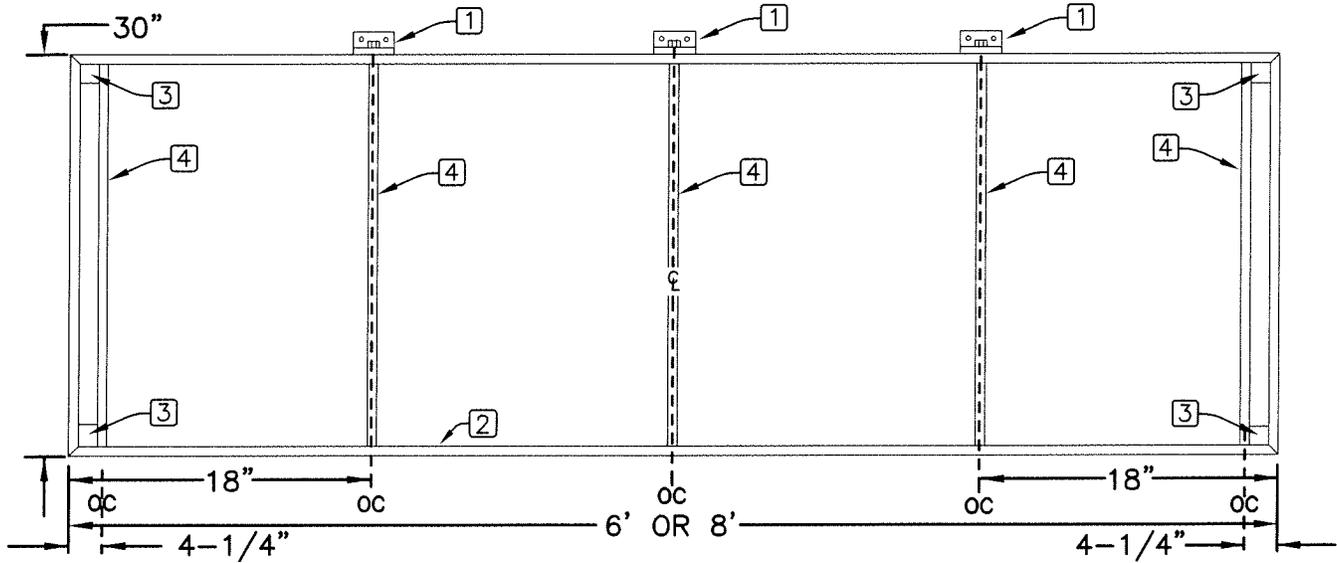
CITY OF FONTANA

OVERHEAD REFLECTIVE
STREET NAME SIGN
FABRICATION DETAIL

STD. PLAN NO. 4005 DWG. 3/4

NOT TO SCALE

SIGN FRAME FABRICATION DETAIL



SIGN FRAMEWORK FABRICATION NOTES

- 1 ZAP MOUNTING BRACKET SHALL BE WELDED TO TOP OF ALUMINUM CHANNEL FRAMEWORK AND MECHANICALLY FASTENED WITH A 1/2" DIA. STAINLESS STEEL BOLT AND LOCKING NUT.
- 2 SIGN FRAMEWORK SHALL BE 1-1/4" X 1-1/4" X 1/8" WALL ALUMINUM CHANNEL WELDED TOGETHER AT CORNERS.
- 3 FRAMEWORK SHALL HAVE .040" THICK ALUMINUM BRACKETS WELDED TO INSIDE OF CORNERS AS SHOWN.
- 4 FRAMEWORK SHALL HAVE 1" X 1/8" WALL ALUMINUM SQ. TUBE VERTICAL SUPPORTS WELDED INSIDE AS SHOWN.

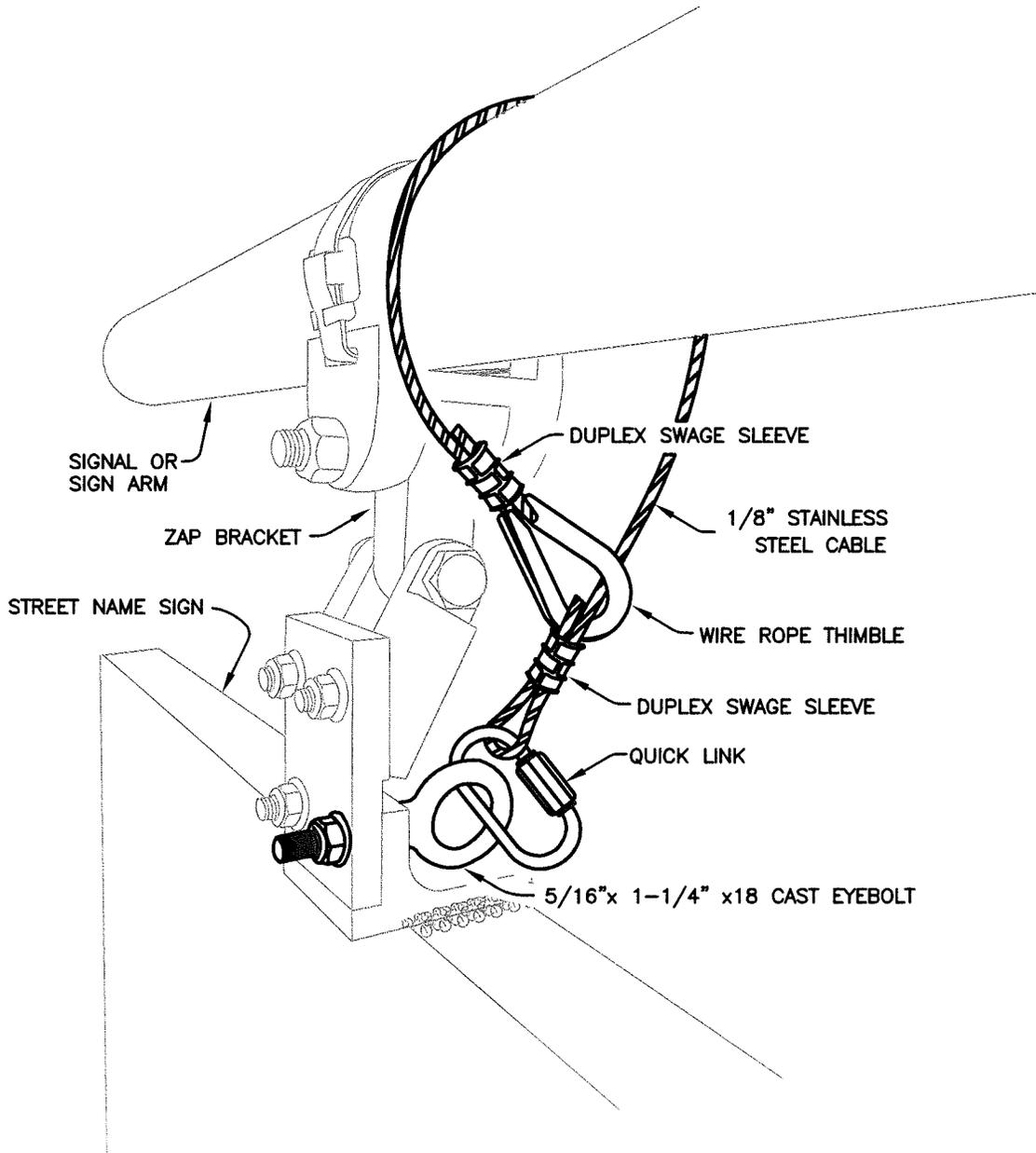


APPROVED BY: *Ricardo Sandoval* DATE: 6.19.16
 CITY ENGINEER
 RICARDO SANDOVAL
 DRAWN BY: _____ DT _____
 REVISION NUMBER: _____

CITY OF FONTANA

OVERHEAD REFLECTIVE
STREET NAME SIGN
FABRICATION DETAIL

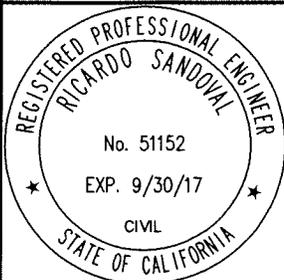
STD. PLAN NO. 4005 DWG. 3A/4



REINFORCING CABLE DETAIL

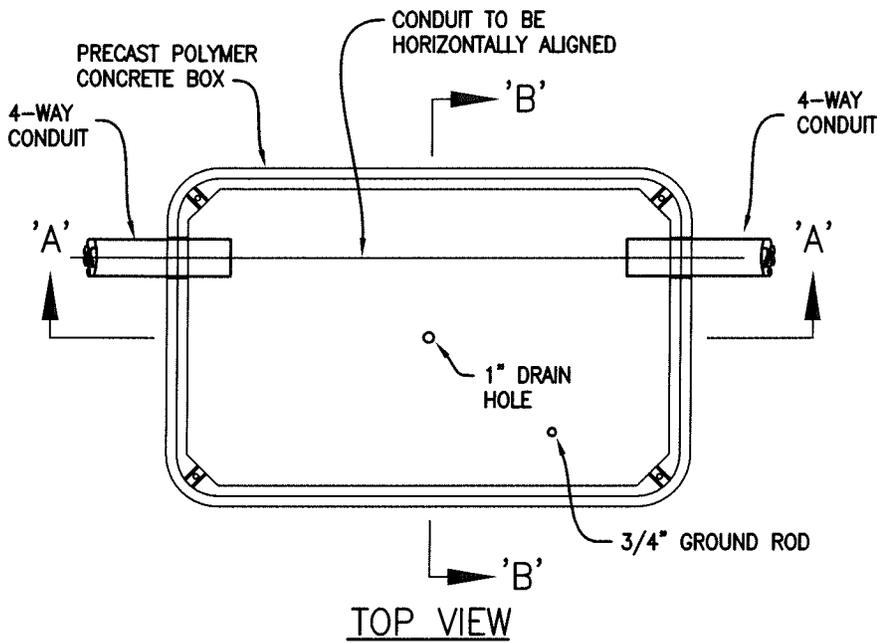
EACH OVERHEAD SIGN SHALL HAVE TWO CABLE ASSEMBLIES
 INSTALLED, ONE AT EACH MOUNTING BRACKET.

NOT TO SCALE

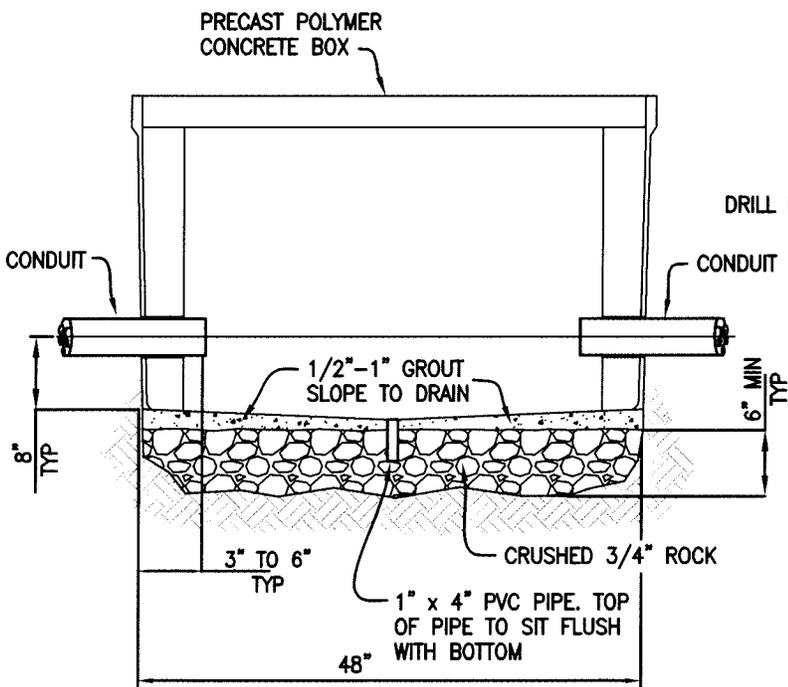


APPROVED BY:
Ricardo Sandoval 11.19.15
 CITY ENGINEER DATE
 RICARDO SANDOVAL
 DRAWN BY: _____ DT
 REVISION NUMBER: _____

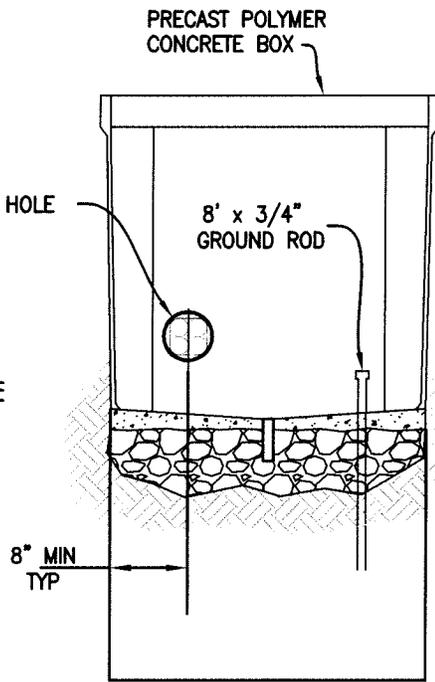
CITY OF FONTANA
 OVERHEAD REFLECTIVE
 STREET NAME SIGN
 REINFORCING CABLE
 DETAIL
 STD. PLAN NO. 4005 DWG. 4/4



TOP VIEW



SECTION 'A' - 'A'



SECTION 'B' - 'B'

NOT TO SCALE



APPROVED BY:

CITY ENGINEER
RICARDO SANDOVAL

DRAWN BY: _____ DT

REVISION NUMBER: _____

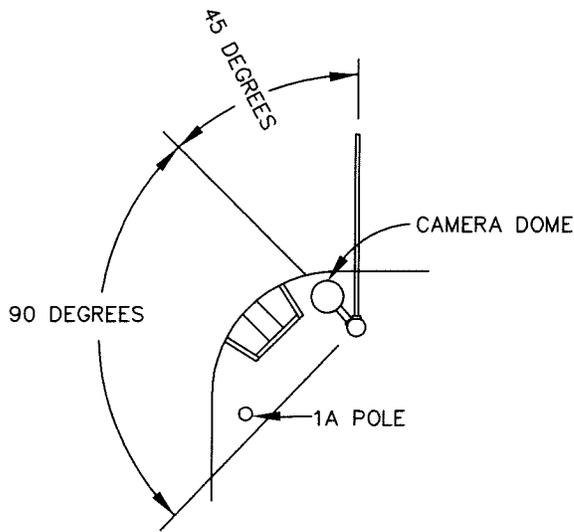
DATE

CITY OF FONTANA

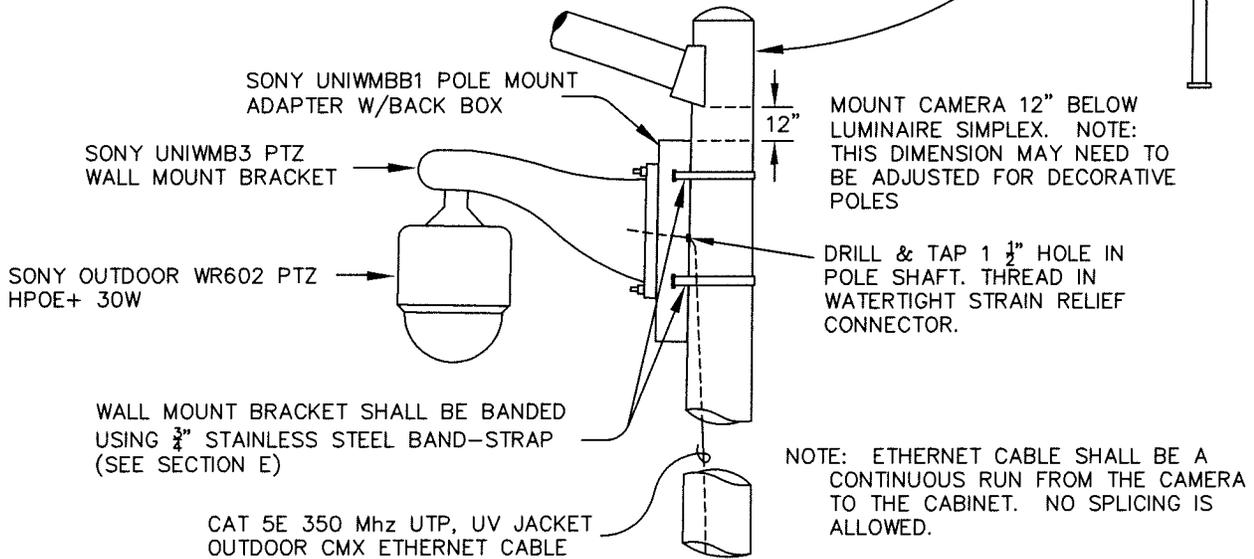
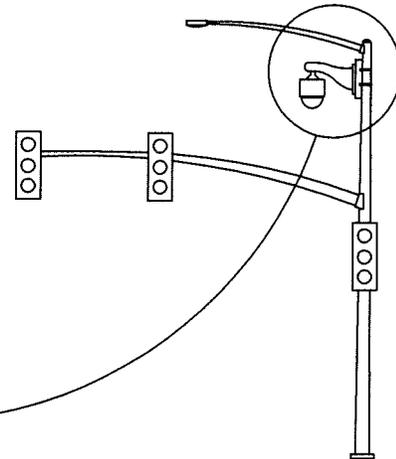
COMMUNICATION SYSTEM
P48 PULLBOX DETAILS

STD. PLAN NO. 4006

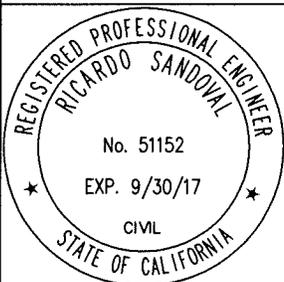
DWG. 1/1



CCTV CAMERA ORIENTATION



CCTV CAMERA AND CABLE INSTALLATION



APPROVED BY: *Ricardo Sandoval* 11-19-15
CITY ENGINEER DATE
RICARDO SANDOVAL
DRAWN BY: _____ DT
REVISION NUMBER: _____

CITY OF FONTANA
CCTV CAMERA/CABLE
INSTALLATION AND
ORIENTATION
STD. PLAN NO. 4007 DWG. 1/1