

## Application for DelDOT Safety Permit

Agency Contact: BillCrotty  
Primary phone: 1(302) 739-7300  
Email: william.crotty@delaware.gov  
Rank:Major

Property Owner's Name: \_\_\_\_\_ Date: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_, \_\_\_\_\_  
City State Zip Code

Telephone No.: \_\_\_\_\_ Cell No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

Tax Map/ Parcel I.D. : \_\_\_\_\_  
(NCC Ex: 00- 000.00-000; KC Ex: 0 00 000 00 00 00 000; SC Ex: 0-00 00.00 00.00 )

Applicant Name: \_\_\_\_\_ Point of Contact (Name): \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_, \_\_\_\_\_  
City State Zip Code

Telephone No.: \_\_\_\_\_ Cell No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

Proposed Project Location:

Nearest Intersecting road:

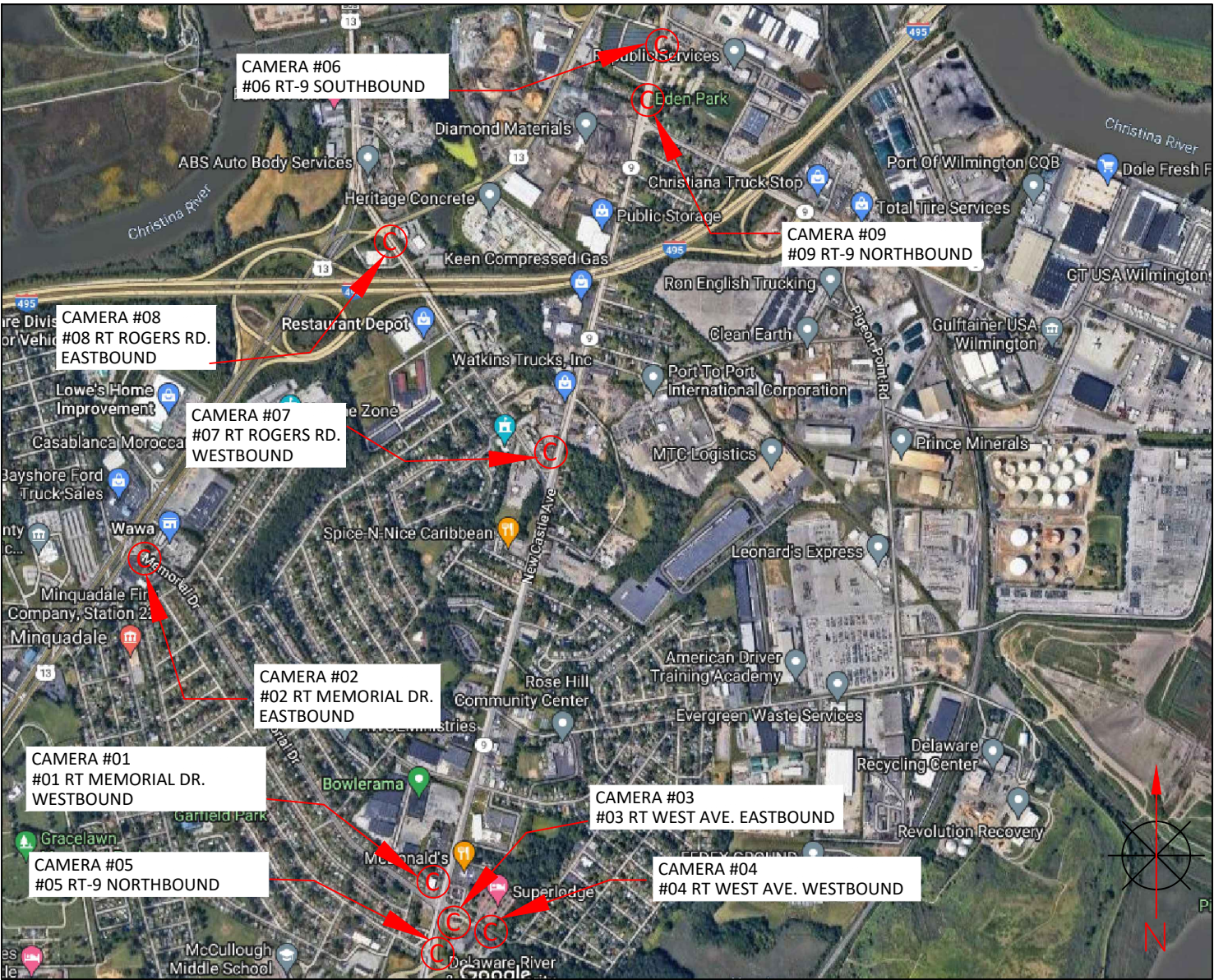
Description of Work:

STATE OF DELAWARE  
COUNTY OF NEW CASTLE  
SUBMITTED BY DELAWARE POLICE  
DEPARTMENT

Automated License Plate Reader Permit

flock safety

LOCATION / VICINITY MAP



INDEX OF DRAWINGS

- SHEET 1: COVER SHEET, CAMERA LOCATION MAP
- SHEET 2: GENERAL NOTES AND CAMERA LOCATION INFORMATION
- SHEET 3-11: SITE PLAN
- SHEET 12-16: TRAFFIC CONTROL PLAN
- SHEET 17-18: POLE DETAILS



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REV	DESCRIPTION	DATE	BY

TITLE:	COVER SHEET AND CAMERA LOCATION MAP
SCOPE OF WORK:	COUNTY OF NEW CASTLE LICENSE PLATE READER INSTALLATION

PLANS PREPARED BY:
<b>CHC</b> A CONGRUEX COMPANY 9095 Rio San Diego Dr. Ste 165 San Diego, CA 92108-1694 (949) 250-0004 / FAX (949) 250-0006

CASE#:	141283
DRAWN BY:	PRITHPAL SINGH
CHECKED BY:	SAMIA MAKOI
APPROVED BY:	SAMIA MAKOI
DATE:	04/11/2022
SHEET:	1 OF 18



# GENERAL TRAFFIC CONTROL NOTES

1. TRAFFIC CONTROL PLAN SHALL CONFORM TO THE MOST CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (FHWA) AND STATE STANDARD PLANS
2. NO LANE CLOSURES PERMITTED BEFORE 9:00AM AND AFTER 3:00PM.
3. ALL AFFECTED RESIDENTS, BUSINESSES, AGENCIES, AND SCHOOLS SHALL BE GIVEN A 72 HOURS NOTICE PRIOR TO THE START OF WORK AND THEIR ACCESS SHALL BE MAINTAINED AT ALL TIMES.
4. TEMPORARY NO PARKING SIGNS SHALL BE POSTED 48 HOURS PRIOR TO START OF WORK.
5. ALL CONFLICTING SIGNS, STRIPING OR PAVEMENT MARKINGS SHALL BE COVERED OR REMOVED AND REPLACED WHEN WORK IS COMPLETED.
6. TRAFFIC DIRECTION THROUGH A SIGNALIZED INTERSECTION SHALL BE CONDUCTED BY A TOWN OF AVON UNIFORMED POLICE OFFICER OR A COMMUNITY SERVICE OFFICER ONLY. SHOULD WORK REQUIRE A SIGNAL TO BE OVERRIDDEN, ARRANGEMENT SHALL BE MADE WITH THE CITY POLICE DEPT AND TRANSPORTATION ENGINEERING DEPT AT LEAST 14 DAYS PRIOR TO START OF WORK.

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Interstate / Expressway / Freeway	1,000 feet	1,640 feet	2,640 feet

Type of Taper	Taper Length
Merging Taper	at least L
Shifting Taper	0.5 L to L*
Shoulder Taper	at least 0.33 L
One-Lane, Two-Way Traffic Taper	50 feet minimum, 100 feet maximum
Downstream Taper	50 feet minimum, 100 feet maximum

Speed (S)	Taper Length (L) in feet
40 mph or less	$L = \frac{WS^2}{60}$
More than 40 mph	$L = WS$



Where:

L = taper length in feet

W = width of offset in feet

S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

CAMERA NO.	LOCATION				
	STREET	DIRECTION	LATITUDE	LONGITUDE	POLE
01	MEMORIAL DR.	WESTBOUND	39 D 41 M 58.95 S	75 D 33 M 10.07 S	New Flock Pole
02	MEMORIAL DR.	EASTBOUND	39 D 42 M 33.64 S	75 D 33 M 48.90 S	New Flock Pole
03	WEST AVE.	EASTBOUND	39 D 41 M 57.72 S	75 D 33 M 7.66 S	New Flock Pole
04	WEST AVE.	WESTBOUND	39 D 41 M 57.23 S	75 D 33 M 4.90 S	New Flock Pole
05	NEW CASTLE AVE RT-9	NORTHBOUND	39 D 41 M 56.59 S	75 D 33 M 8.60 S	New Flock Pole
06	NEW CASTLE AVE RT-9	SOUTHBOUND	39 D 43 M 26.44 S	75 D 32 M 40.23 S	New Flock Pole
07	ROGERS RD.	WESTBOUND	39 D 42 M 43.01 S	75 D 32 M 55.45 S	New Flock Pole
08	ROGERS RD.	EASTBOUND	39 D 43 M 5.65 S	75 D 33 M 15.96 S	New Flock Pole
09	NEW CASTLE AVE RT-9	NORTHBOUND	39 D 43 M 19.53 S	75 D 32 M 41.04 S	New Flock Pole

	REV	DESCRIPTION	DATE	BY	TITLE: GENERAL NOTES AND CAMERA LOCATION INFORMATION	<div>PLANS PREPARED BY:  A CONGRUEX* COMPANY 9095 Rio San Diego Dr. Ste 165 San Diego, CA 92108-1694 (949 )250-0004 /FAX (949)250-0006</div>	CASE#: 141283
					SCOPE OF WORK: COUNTY OF NEW CASTLE LICENSE PLATE READER INSTALLATION		DRAWN BY: PRITHPAL SINGH
							CHECKED BY: SAMIA MAKOI
							APPROVED BY: SAMIA MAKOI
							DATE: 04/11/2022



SITE PLAN

AERIAL VIEW



STREET VIEW



flock safety

REV	DESCRIPTION	DATE	BY

TITLE:	SITE PLAN
SCOPE OF WORK:	COUNTY OF NEW CASTLE LICENSE PLATE READER INSTALLATION

PLANS PREPARED BY:  
**CHC**  
A CONGRUEX COMPANY  
9095 Rio San Diego Dr. Ste 165  
San Diego, CA 92108-1694  
(949) 250-0004 / FAX (949) 250-0006

CASE#:	141283
DRAWN BY:	PRITHPAL SINGH
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APPROVED BY:	SAMIA MAKOI
DATE:	04/11/2022
SHEET:	6 OF 18



flock safety

CALIFORNIA STANDARD DETAILS  
AUTOMATIC LICENSE PLATE READER  
2-7/8" ROUND STEEL POST, 60 WATT SYSTEM

SHEET INDEX

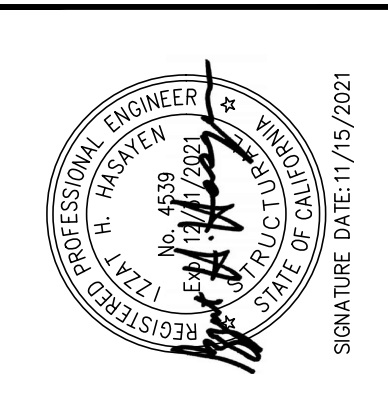
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES & POLE ASSEMBLY DETAIL
3	EQUIPMENT DETAILS
4	FOUNDATION DETAILS - WINGED UNIBASE OPTION
5	FOUNDATION DETAILS - CONCRETE SHAFT OPTION

PROJECT:  
flock safety  
CALIFORNIA STANDARD DETAILS  
AUTOMATIC LICENSE PLATE READER  
2-7/8" ROUND STEEL POST, 60 WATT SYSTEM

SHEET NAME:  
COVER SHEET

SHEET NUMBER:  
1  
OF 5 SHEETS

DELTA	DESCRIPTION	DATE
Δ	1ST SUBMITTAL	11.12.2021



CONTACT:  
kpff  
1601 FIFTH AVE SUITE 1600  
SEATTLE, WA 98101  
PHONE: (206) 622-5822  
WEBSITE: KPFF.COM

DESIGN NOTES:

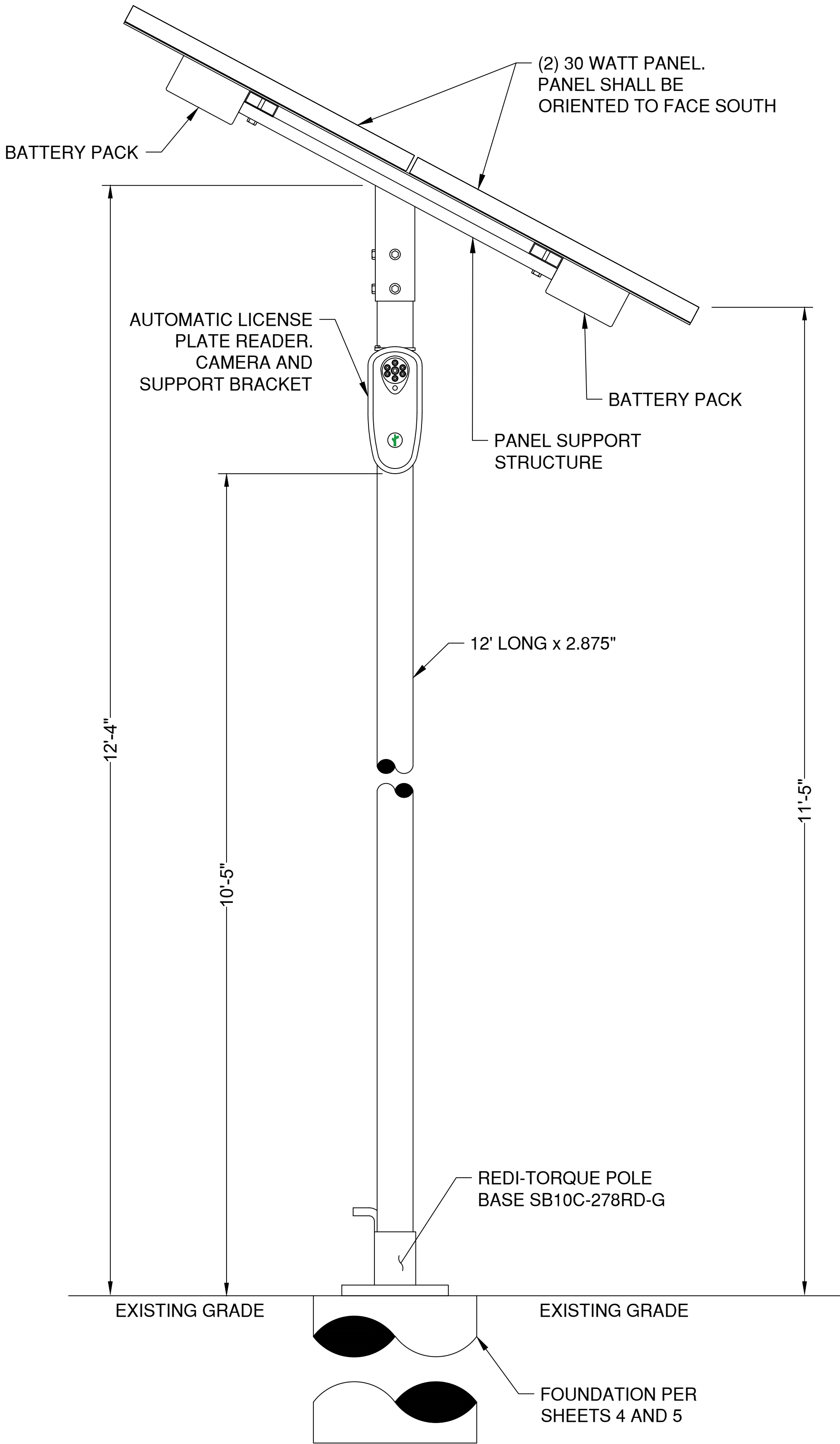
- POLE AND FOUNDATION DESIGNED PER AASTHO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 2015 EDITION WITH 2017, 2018 & 2019 INTERIMS.
- POLE DESIGN WIND SPEED IS 100 MPH BASED ON A 300-YEAR MRI.

GENERAL & CONSTRUCTION NOTES

- CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT DESIGNATED AGENCY TO LOCATE ALL UNDERGROUND UTILITIES 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE TO APPLY AND OBTAIN AN APPROVED TRAFFIC CONTROL PLAN IN ACCORDANCE WITH MUTCD AND LOCAL STANDARDS AS REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE ALL DISTURBED AREAS TO ORIGINAL CONDITION TO STATE DEPARTMENT OF TRANSPORTATION AND LOCAL AGENCY SATISFACTION AT NO ADDITIONAL COMPENSATION.
- ALL WORK SHALL CONFORM TO ALL APPLICABLE ELECTRICAL CODES EXCEPT WHEN SATE DEPARTMENT OF TRANSPORTATION AND LOCAL AGENCY STANDARDS SUPERSEDE.
- CONNECT POLE TO SOLID BARE BOND GROUND & GROUNDING ROD (OR COIL 25' OF NO. 6 BARE COPPER) IN POLE FOUNDATION & TO SYSTEM GROUND BONDED BACK TO FLOCK SAFETY CABINET.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION AND LOCAL AGENCY SPECIFICATIONS UNLESS SPECIFICALLY STATED OR SHOWN OTHERWISE HEREIN.
- CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE SOIL TYPE AND SUITABILITY REQUIREMENTS PRIOR TO CONSTRUCTION. THIS STEP MAY INCLUDE GEOTECHNICAL TESTING AND/OR CONSULTATION WITH A QUALIFIED GEOTECHNICAL ENGINEER AS DIRECTED BY THE PROJECT MANAGER.

ADA COMPLIANCE NOTES:

- ALL SIDEWALK CONSTRUCTION SHALL BE IN ACCORDANCE WITH ADA TITLE II AND ALL STATE DEPARTMENT OF TRANSPORTATION AND LOCAL STANDARDS.
- USE STATE DEPARTMENT OF TRANSPORTATION CURRENT EDITION STANDARDS FOR PEDESTRIAN CONTROL PLANS FOR CLOSURE OF SIDEWALK.
- MINIMUM SIDEWALK CLEAR PEDESTRIAN ACCESS ROUTE (PAR) IS 48" WIDE.
- NO OBSTRUCTION IS PERMITTED ALONG THE WIDTH OF THE SIDEWALK UP TO 7'-0" IN HEIGHT.



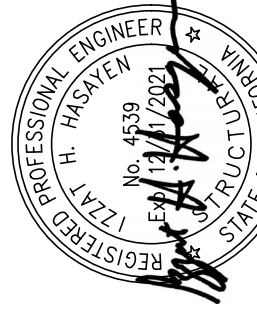
DETAIL "A"  
60 WATT SYSTEM ASSEMBLY

12' LONG x 2.875" O.D.

CONTACT:




1601 FIFTH AVE SUITE 1600  
SEATTLE, WA 98101  
PHONE: (206) 622-5822  
WEBSITE: KPFF.COM



SIGNATURE DATE: 11/15/2021

DATE:  
11-12-21

DATE	DESCRIPTION	DELTA
11.12.2021	1ST SUBMITTAL	

flock safety

CALIFORNIA STANDARD DETAILS  
AUTOMATIC LICENSE PLATE READER  
2 7/8" ROUND STEEL POST, 60 WATT SYSTEM

PROJECT:

SHEET NAME:

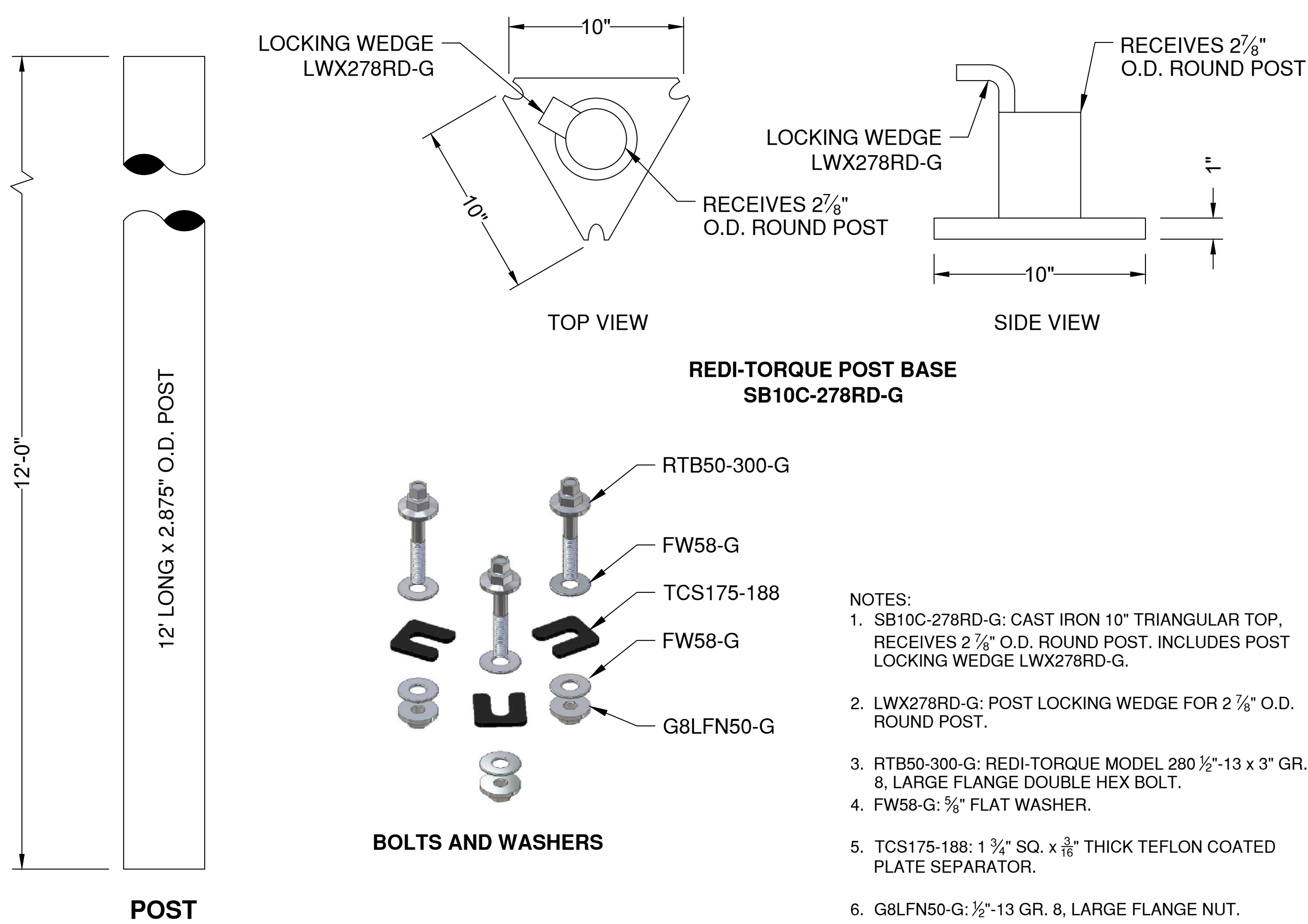
GENERAL NOTES &  
POLE ASSEMBLY DETAIL

SHEET NUMBER:

2  
OF 5 SHEETS

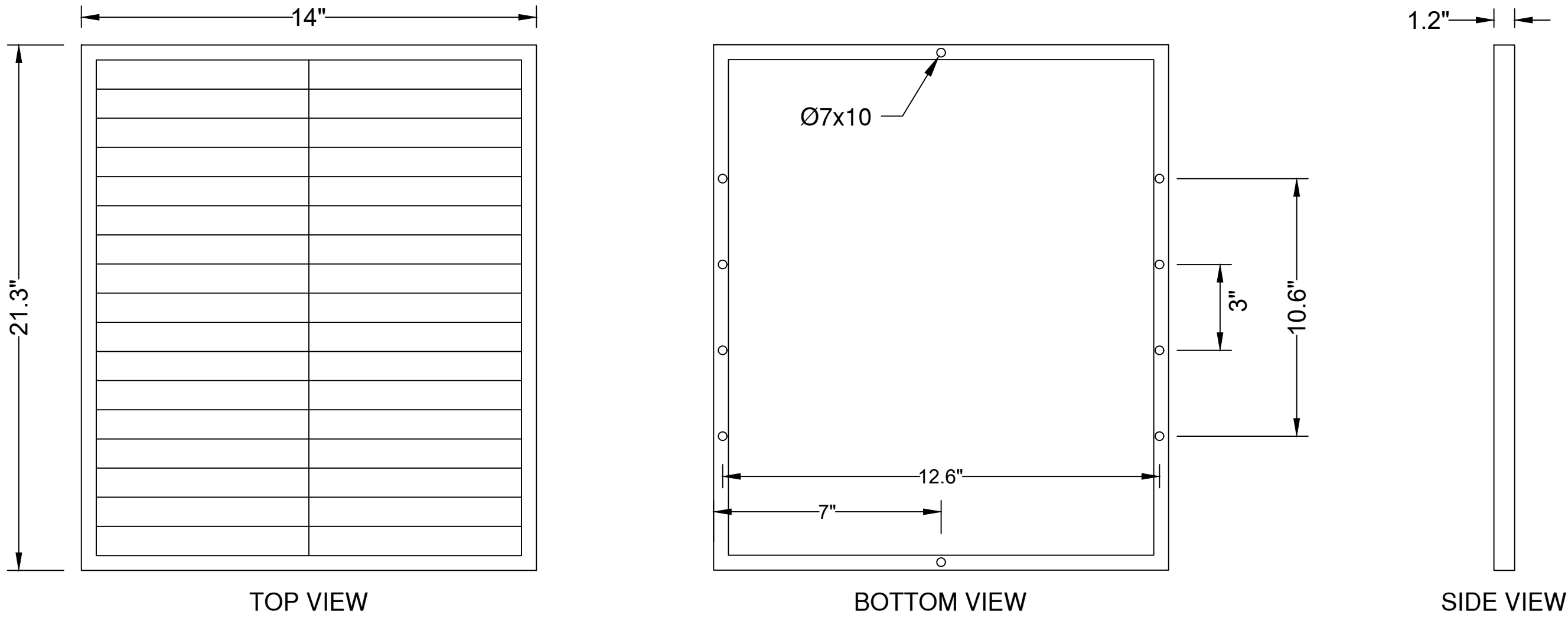


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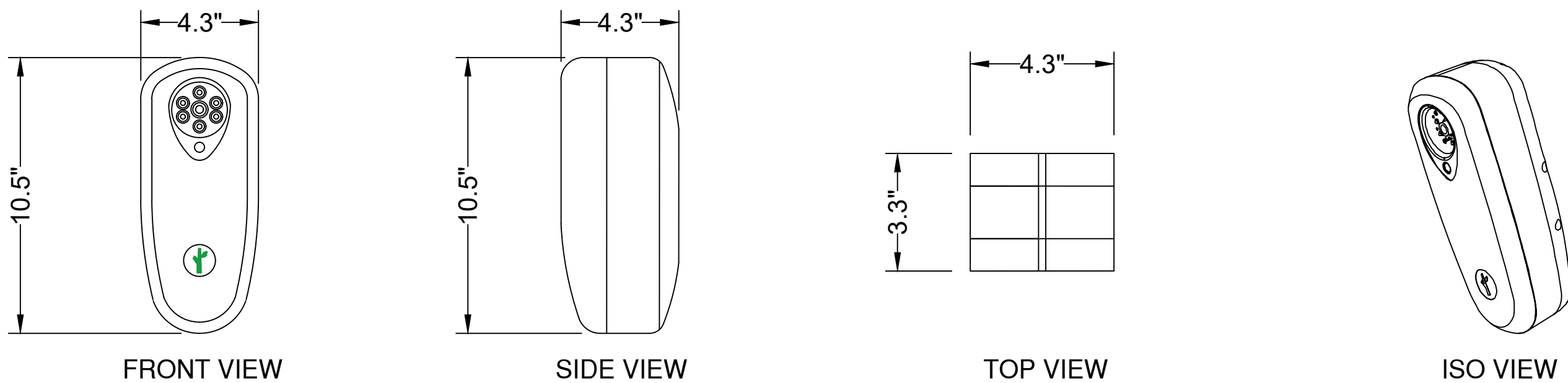
### POST DETAIL

- NOTES:
- SB10C-278RD-G: CAST IRON 10" TRIANGULAR TOP, RECEIVES 2 7/8" O.D. ROUND POST. INCLUDES POST LOCKING WEDGE LWX278RD-G.
  - LWX278RD-G: POST LOCKING WEDGE FOR 2 7/8" O.D. ROUND POST.
  - RTB50-300-G: REDI-TORQUE MODEL 280 1/2"-13 x 3" GR. 8, LARGE FLANGE DOUBLE HEX BOLT.
  - FW58-G: 5/8" FLAT WASHER.
  - TCS175-188: 1 3/4" SQ. x 3/16" THICK TEFLON COATED PLATE SEPARATOR.
  - G8LFN50-G: 1/2"-13 GR. 8, LARGE FLANGE NUT.



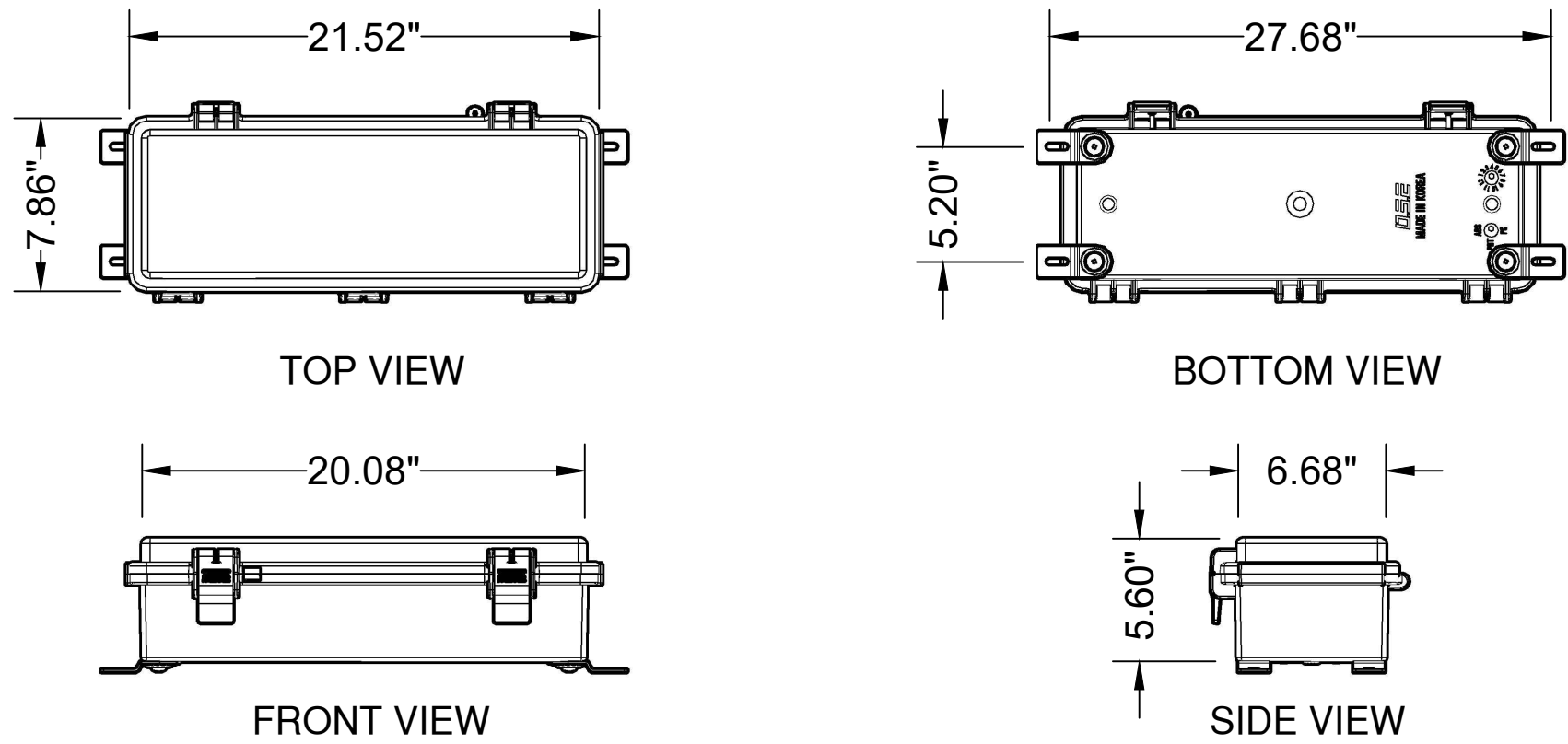
### (2) - 30 WATT PANEL DETAIL

- NOTES:
- SOLAR PANELS ARE WORLD MICRO MODEL PP-N30WB-CH7.



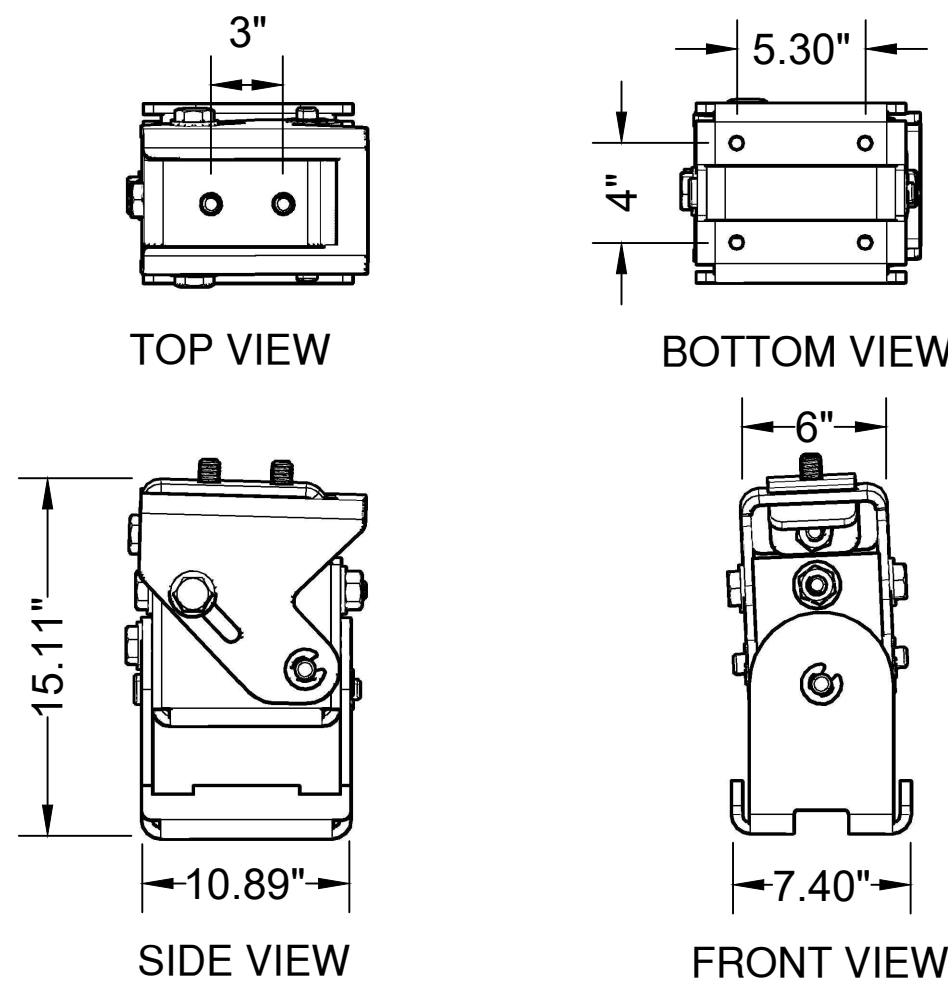
### AUTOMATIC LICENSE PLATE READER CAMERA DETAIL

- NOTES:
- CAMERA SHALL BE MODEL 701-00166 SUPPLIED BY FLOCK SAFETY.

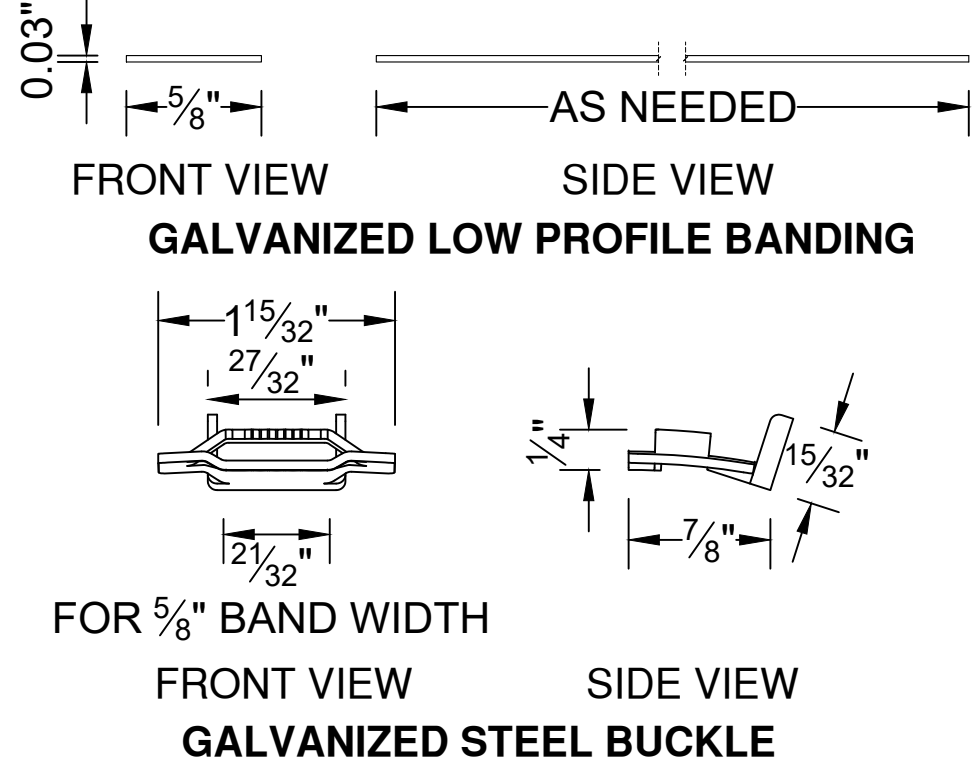


- NOTES:
- BATTERY PACK SHALL BE MODEL 701-00111 SUPPLIED BY FLOCK SAFETY.

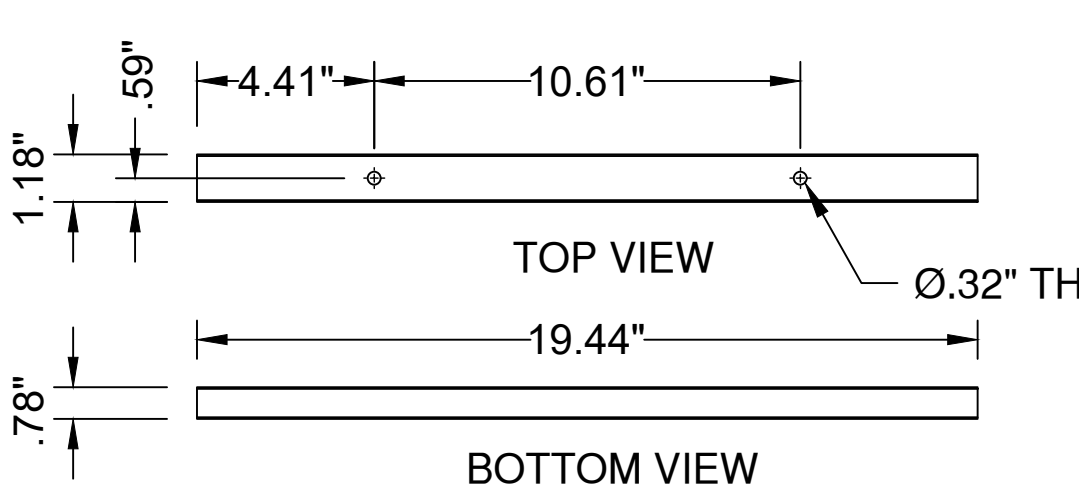
### BATTERY PACK DETAIL



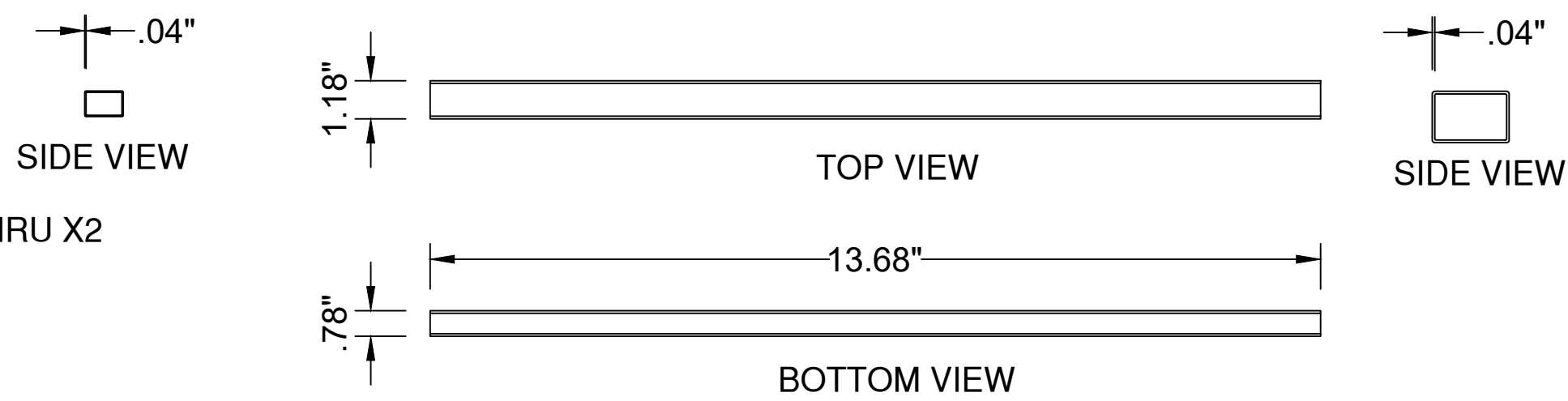
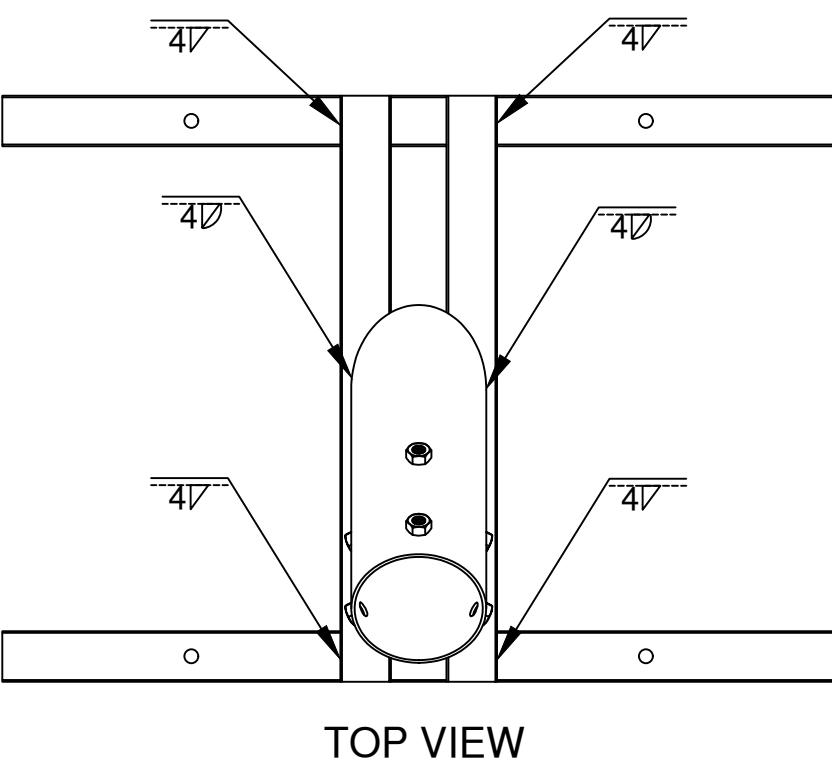
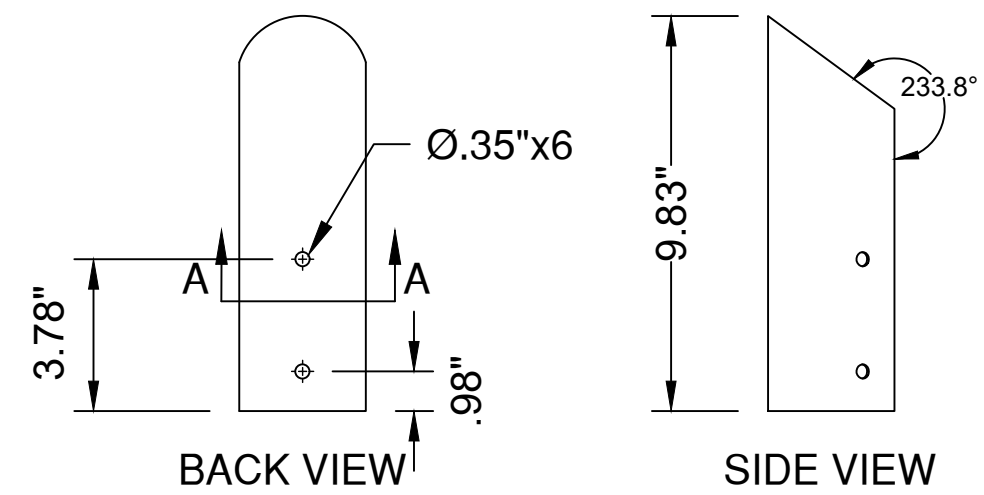
- NOTES:
- CAMERA BRACKET SHALL BE MODEL 701-00112 SUPPLIED BY FLOCK SAFETY.
  - STEEL BUCKLE AND BANDING SHALL BE FROM McMASTER CARR SUPPLY COMPANY.



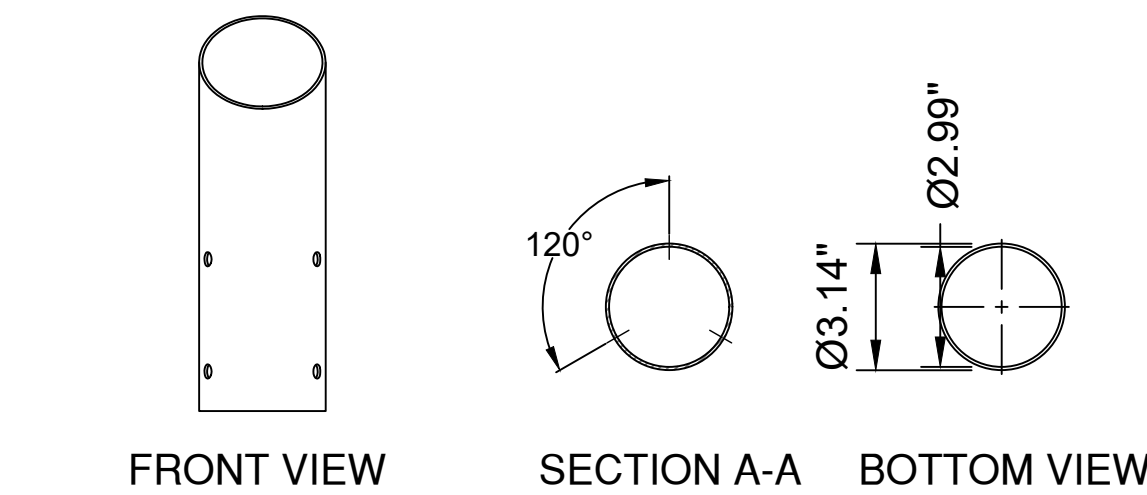
### CAMERA BRACKET DETAILS



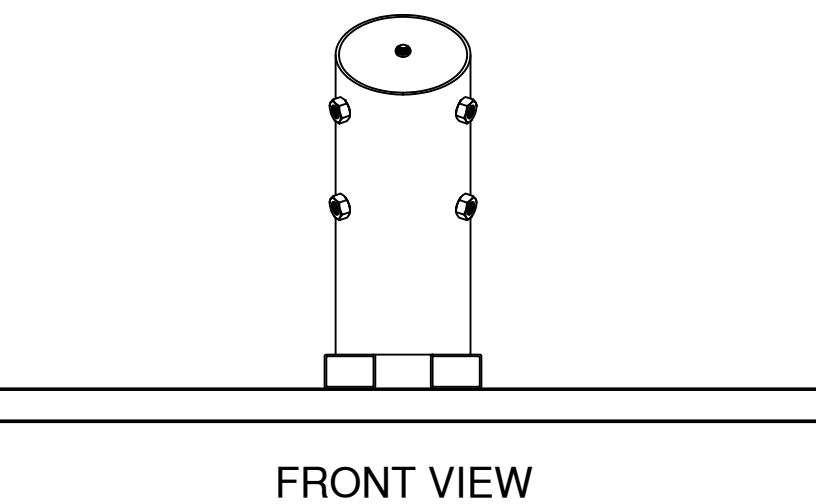
### HORIZONTAL RECTANGULAR BAR



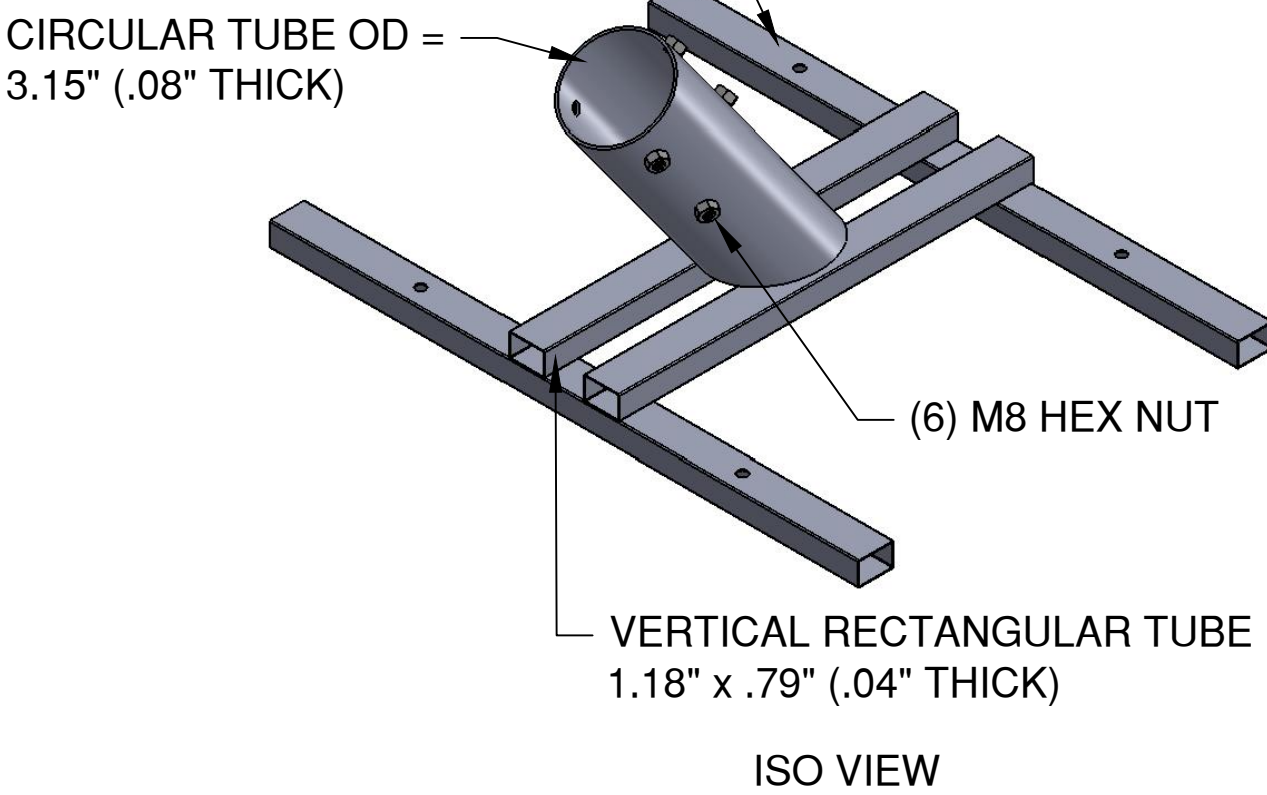
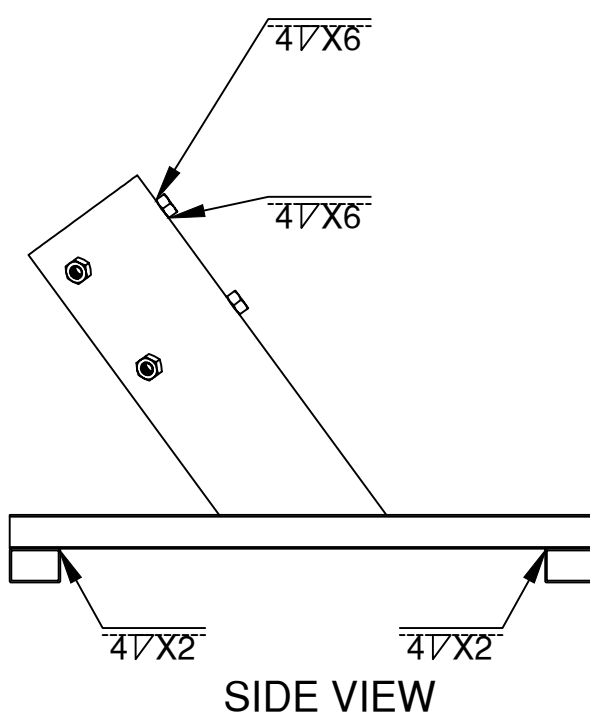
### VERTICAL RECTANGULAR BAR



### CIRCULAR TUBE



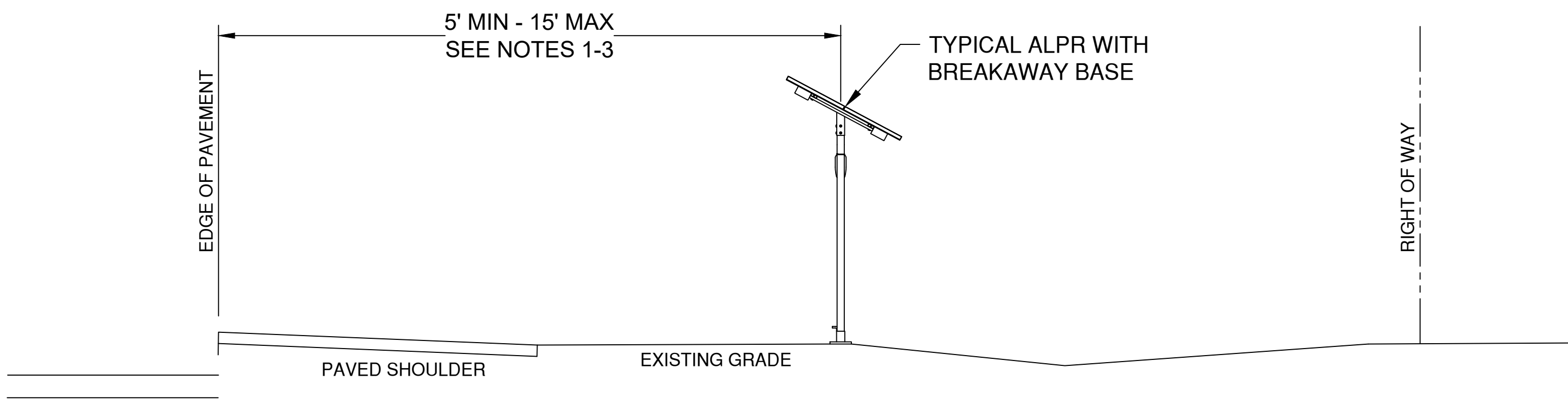
### PANEL BRACKET DETAIL



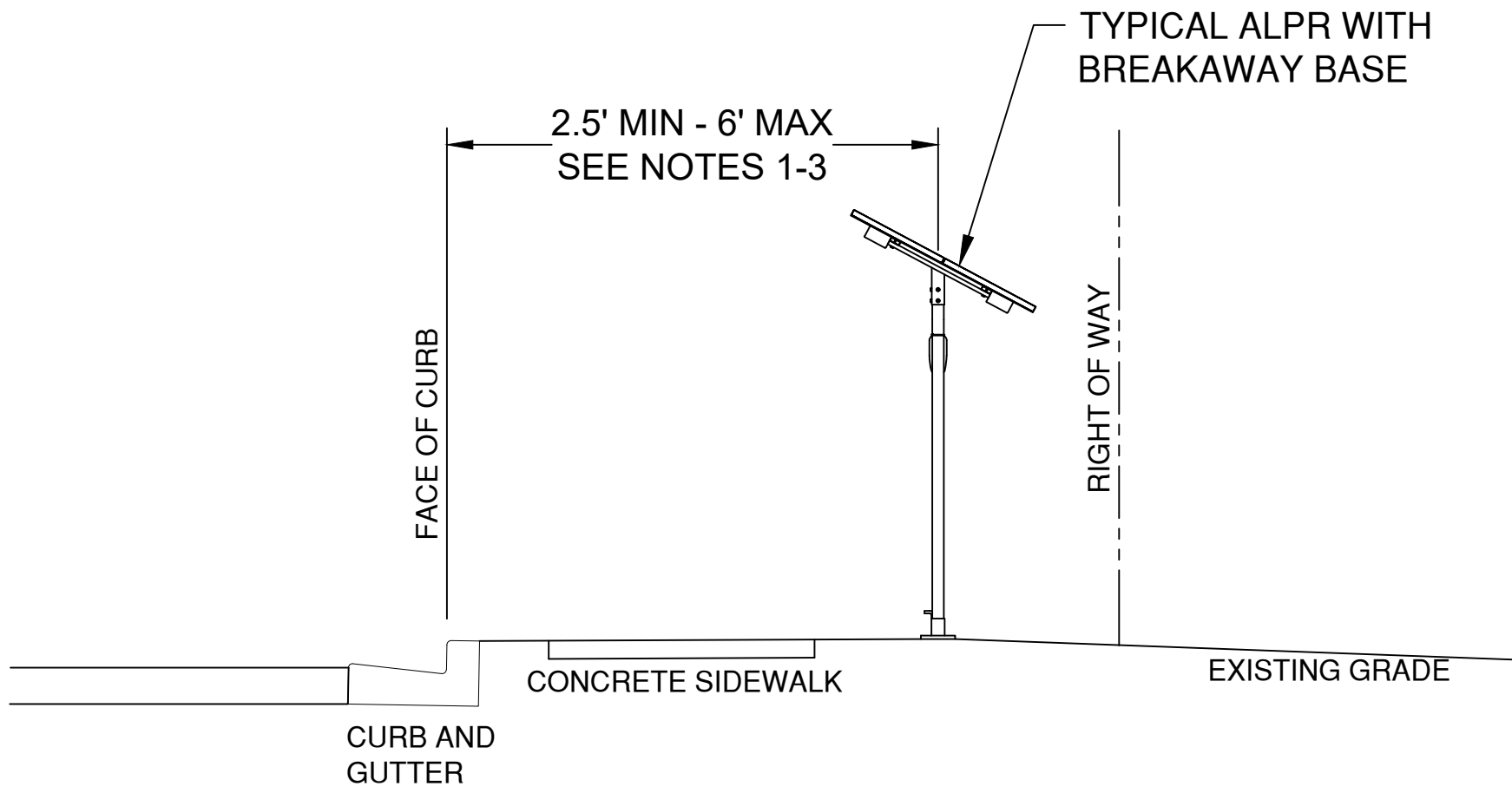
- NOTES:
- DESIGN PER ASME Y14.100-2004.
  - DEBURR ALL SHARP EDGES.
  - PANEL SUPPORT STRUCTURE SHALL BE MODEL 701-00116 SUPPLIED BY FLOCK SAFETY.



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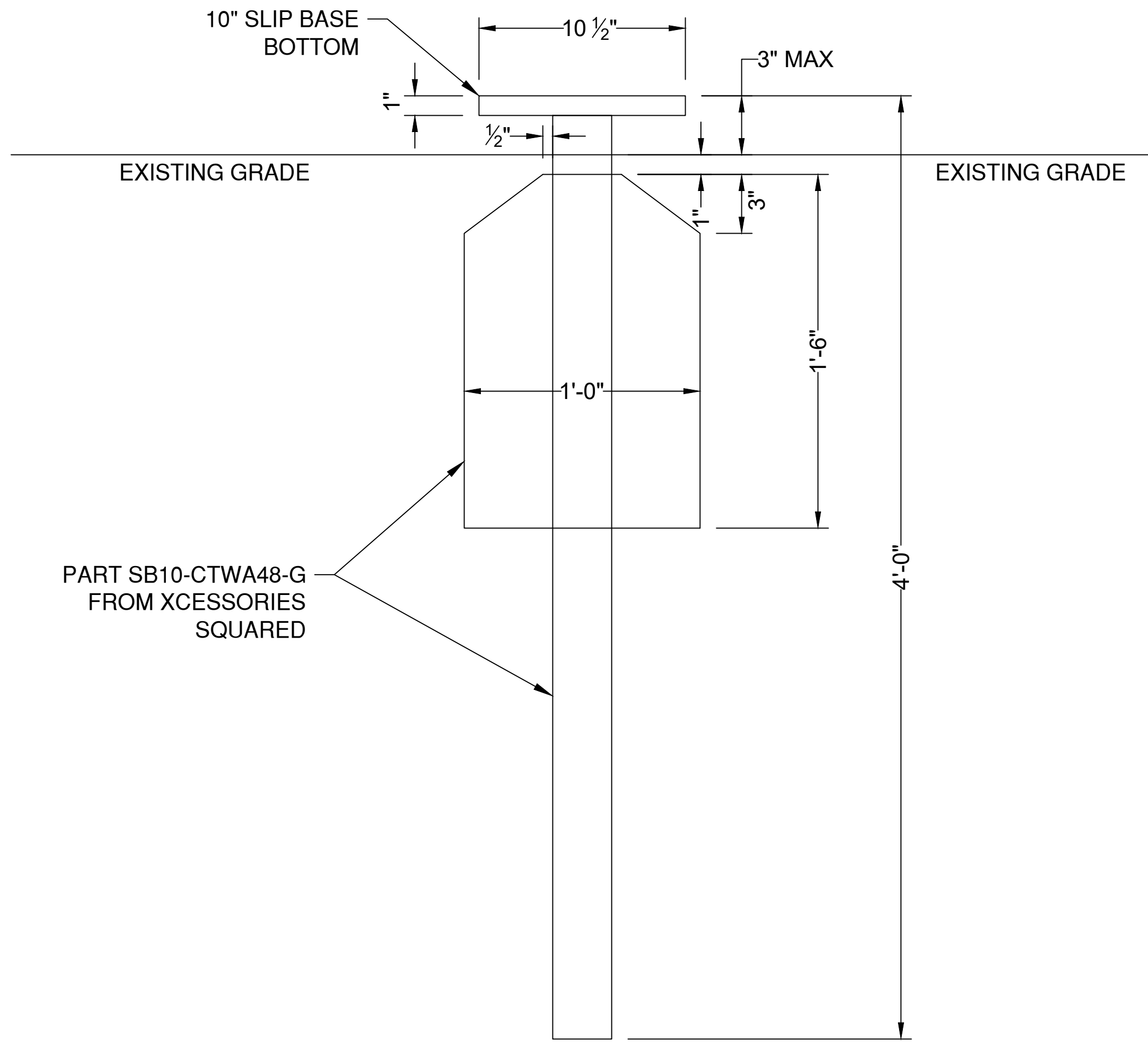


TYPICAL RURAL INSTALLATION



TYPICAL URBAN INSTALLATION

- NOTES:
1. ASSEMBLY INCLUDES AN APPROVED BREAK-AWAY BASE FOR INSTALLATION WITHIN THE ROADWAY CLEAR ZONE.
  2. LATERAL SEPARATION DISTANCE WILL BE DETERMINED ON A CASE-BY-CASE BASED ON CONDITIONS FOR SITE SPECIFIC LOCATIONS.
  3. CLEAR SIDEWALK WIDTH OF 4'-0" SHALL BE MAINTAINED.




FOUNDATION DETAIL - WINGED UNIBASE OPTION



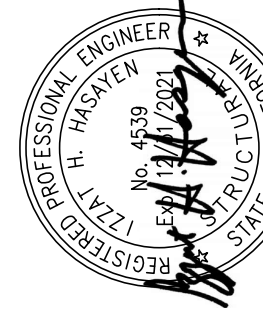
10" SLIP BASE BOTTOM / ANCHOR	
PART NUMBER	ANCHOR SIZE
SB10-CTWA48-G	3"x48"

- NOTES:
1. DO NOT USE THIS DETAIL AT SITES WHERE FOUNDATION WILL BE BELOW THE GROUNDWATER TABLE, OR WHERE SOILS CONSIST OF LOOSE SANDS, SOFT CLAYS OR PEAT. REFER TO THE CONCRETE FOUNDATION DETAIL ON SHEET 5 FOR FOUNDATIONS SUITABLE FOR A BROADER RANGE OF SOIL TYPES AND GROUNDWATER CONDITIONS.
  2. DO NOT USE THIS DETAIL IN SOILS WHERE A SMALL DIAMETER REBAR (#5 OR SMALLER) OR METAL PROBE PENETRATES EASILY TO 6" OR MORE OF DEPTH WHEN THE FULL WEIGHT OF A PERSON IS APPLIED.
  3. DO NOT USE THIS DETAIL IN SOILS WHERE THE STANDARD PENETRATION TEST (SPT) BLOW COUNT IS 10 OR LESS.
  4. CONTRACTOR IS RESPONSIBLE TO VERIFY THE SOIL TYPE AND SUITABILITY BASED ON FIELD CONDITIONS PRIOR TO USE OPTION 1 - WINGED UNIBASE ANCHOR. IF SOILS ARE UNSUITABLE FOR APPLICATION OF WINGED UNIBASE ANCHOR, A SHAFT FOUNDATION SHALL BE USED AS SHOWN ON SHEET 5 OF 5.
  5. ORIENT WINGS SO THAT BROAD FACES ARE FACING IN NORTH-SOUTH DIRECTION AND WING EDGES ARE POINTING IN EAST-WEST DIRECTION.


CONTACT:




1601 FIFTH AVE SUITE 1600  
SEATTLE, WA 98101  
PHONE: (206) 622-5822  
WEBSITE: KPFF.COM



DATE:  
11-12-21

DATE	11.12.2021
DESCRIPTION	1ST SUBMITTAL
DELTA	

PROJECT:



CALIFORNIA STANDARD DETAILS  
AUTOMATIC LICENSE PLATE READER  
2 7/8" ROUND STEEL POST, 60 WATT SYSTEM

SHEET NAME:

FOUNDATION DETAILS -  
WINGED UNIBASE OPTION

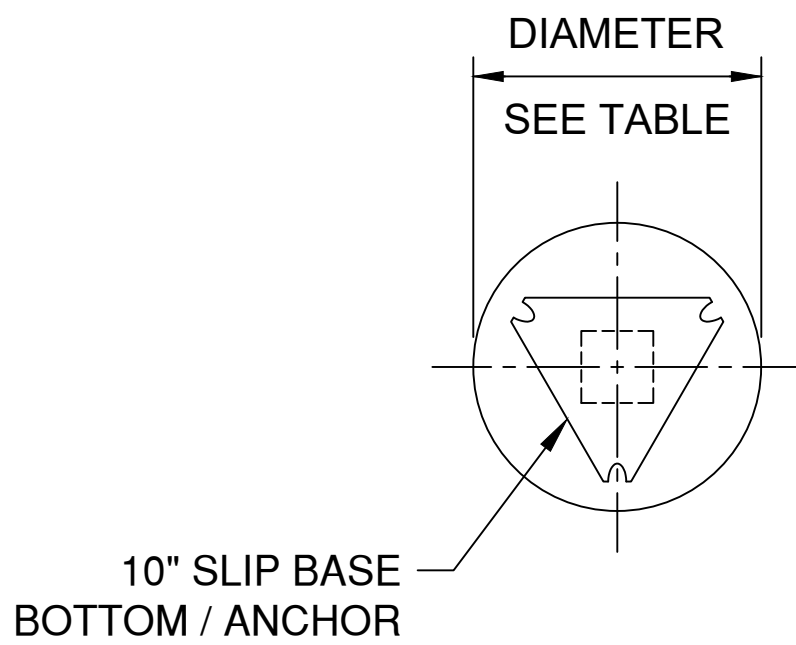
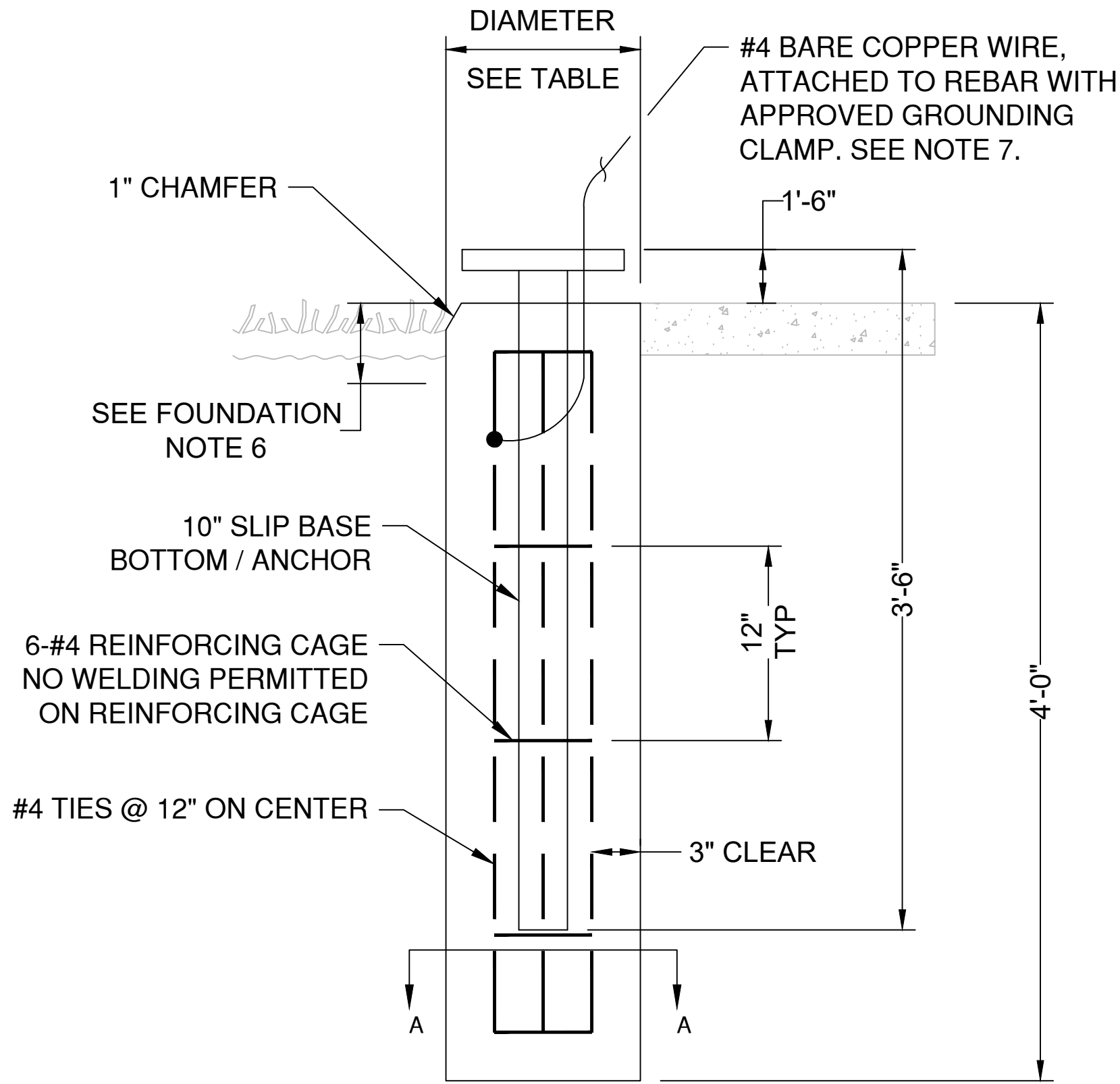
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4  
OF 5 SHEETS

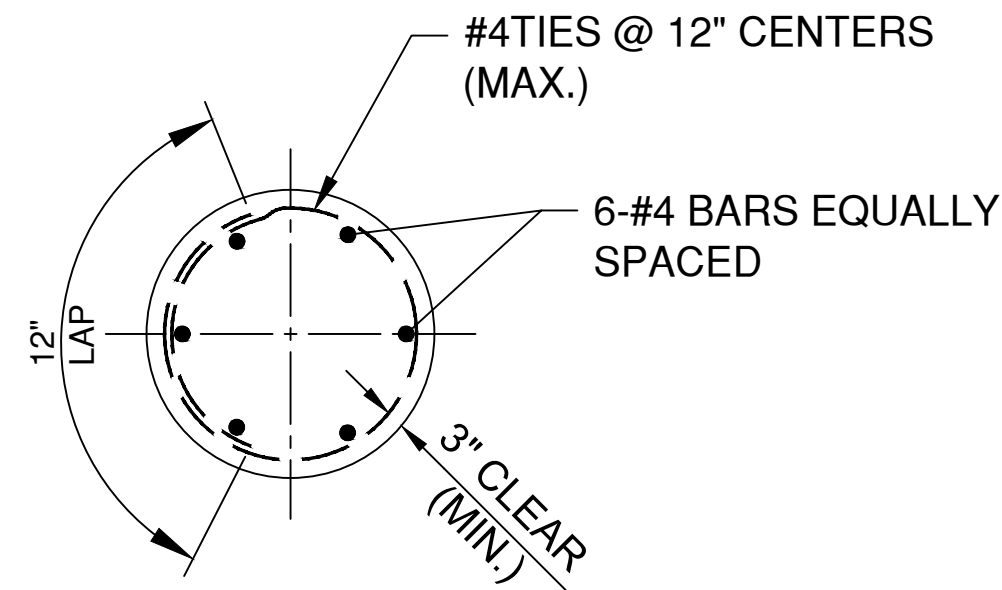


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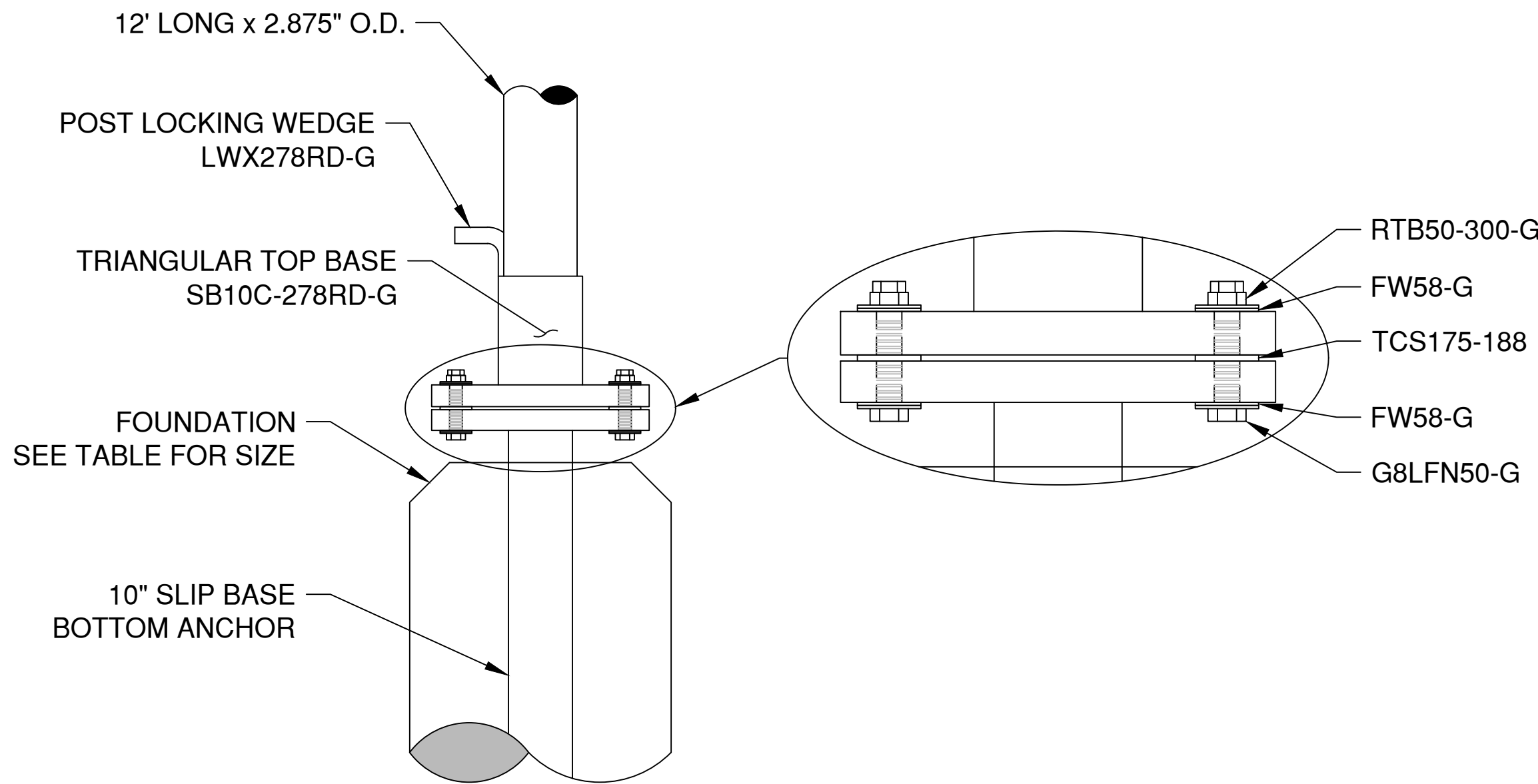
DETAIL "A"  
FOUNDATION DETAIL - CONCRETE SHAFT OPTION  
(PRECAST OR POURED-IN-PLACE)



TOP VIEW



SECTION A-A



BASE MOUNTING DETAIL

10" SLIP BASE - SB10-CTA42-G  
BOTTOM / ANCHOR



FOUNDATION NOTES:

1. CONCRETE: CLASS I WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI, AND HAVE AT LEAST 505 POUNDS OF CEMENTITIOUS MATERIAL PER CUBIC YARD.
2. REINFORCING STEEL: ASTM A615, GRADE 60.
3. FOR PRECAST CONCRETE FOUNDATIONS, FILL THE VOID AROUND THE FOUNDATION WITH FLOWABLE FILL OR CLEAN SANDS USING HYDRAULIC METHODS TO A LEVEL 6 INCHES BELOW GRADE.
4. WHERE FOUNDATION ABUTS THE SIDEWALK, THE TOP OF THE FOUNDATION SHALL BE LEVEL WITH THE SIDEWALK. FOR ALL OTHER CASES, THE TOP OF THE FOUNDATION SHALL NOT BE MORE THAN 3 INCHES ABOVE GRADE.
5. SUPPLEMENTAL GROUNDING CONDUCTOR SHALL BE NON-INSULATED #4 AWG STRANDED COPPER AND SHALL BE CLAMPED TO VERTICAL REBAR WITH A CONNECTOR SUITABLE FOR USE IN CONCRETE: PROVIDE 3'-0" MIN. SLACK. ATTACH TO POLE GROUNDING STUD WITH A FULL CIRCLE CRIMP-ON CONNECTOR (CRIMPED WITH A MANUFACTURER RECOMMENDED CRIMPER).

FOUNDATION DESIGN NOTES:

1. DO NOT USE THIS DETAIL FOR SITES WHERE SOIL CONSISTS OF SOFT CLAY, PEAT OR ANY OTHER SOIL WHERE A SMALL DIAMETER REBAR (#5 OR SMALLER) OR METAL PROBE PENETRATES EASILY TO 6" OR MORE OF DEPTH WHEN THE FULL WEIGHT OF A PERSON IS APPLIED.

POLE TYPE	WIND SPEED	POLE HEIGHT	FOUNDATION		FOUNDATION REINFORCEMENT	
			DIAMETER	DEPTH	VERTICAL	HORIZONTAL
2.875" O.D. STEEL POST	100 MPH	12'	1'-0"	4'-0"	6 - NO .4	NO. 4 @ 12" C-C

SHEET NAME:

FOUNDATION DETAILS -  
CONCRETE SHAFT OPTION

PROJECT:

flock safety

CALIFORNIA STANDARD DETAILS  
AUTOMATIC LICENSE PLATE READER  
2 7/8" ROUND STEEL POST, 60 WATT SYSTEM

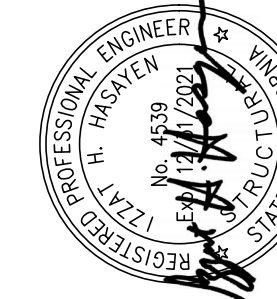
DESCRIPTION

1ST SUBMITTAL

DATE

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