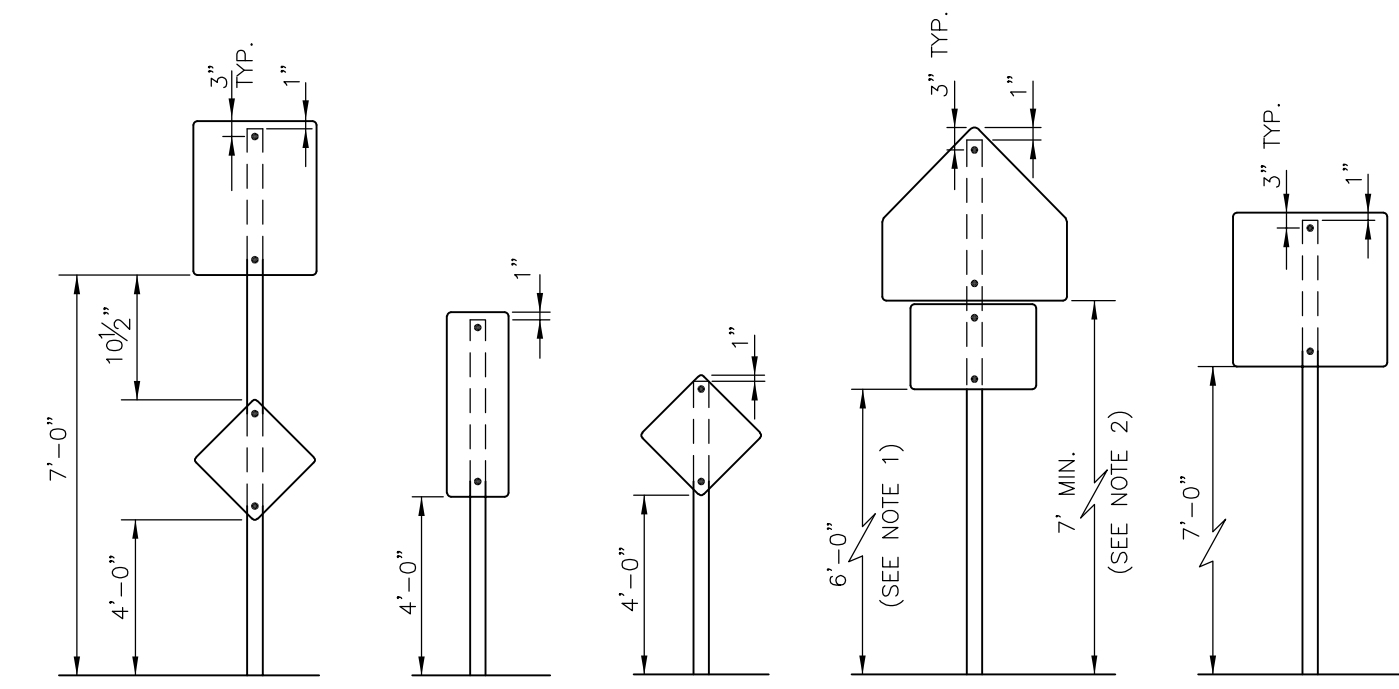


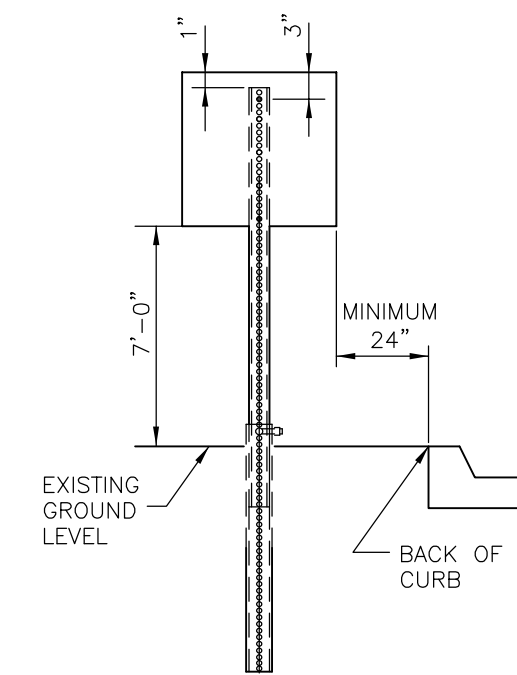
**PERMANENT SIGNING GENERAL NOTES**

- ALL PERMANENT SIGNING SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AS INDICATED IN THE PLANS AND SPECIFICATIONS, AND ACCORDING TO THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT STANDARD DETAILS.
- ALL LETTER, NUMBER AND SYMBOL SIZES, SPACING AND SIGN COLORS SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL SCHOOL, PEDESTRIAN AND BICYCLE SIGNING SHALL HAVE A FLUORESCENT YELLOW-GREEN BACKGROUND WITH BLACK LEGEND AND BORDER. ALL OTHER WARNING SIGNS SHALL HAVE A STANDARD YELLOW BACKGROUND.
- THE LOCATIONS OF EXISTING UTILITIES, IF SHOWN, ARE APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR LOCATIONS OF ALL UNDERGROUND LINES PRIOR TO EXCAVATION AND BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT OCCUR AS A RESULT OF THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT IS ON THE KS ONE CALL SYSTEM. THE CONTRACTOR SHALL CALL 811 TO OBTAIN LOCATES FOR STREETLIGHTING, TRAFFIC SIGNAL, AND FIBER OPTIC CONDUITS/CABLES.
- ALL NEW SIGNS SHALL BE LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
- TYPE XI SHEETING SHALL BE USED. ALL SIGNS SHALL BE MADE FROM A COMBINATION RETRO-REFLECTIVE SHEETING BACKGROUND WITH BATCHED COMPONENT SYSTEM APPLIED TO THE SURFACE. (UNLESS OTHERWISE INDICATED IN THE PLANS OR SPECIFICATIONS).
- ALL SIGN BLANK MATERIAL SHALL BE MADE OF 0.08" ALUMINUM EXCEPT ALL OVERHEAD STREET NAME SIGNS SHALL BE MADE OF 0.125" ALUMINUM.
- EXISTING STREET NAME SIGNS IN THE WAY OF CONSTRUCTION: THE STREET NAME SIGNS SHALL BE RELOCATED OUT OF THE WAY OF CONSTRUCTION BUT IN A CONSPICUOUS LOCATION FOR THE DRIVING PUBLIC AND EMERGENCY PROVIDERS. THE STREET NAME SIGNS SHALL BE REINSTALLED IN THEIR PROPER LOCATION AS SOON AS POSSIBLE UNLESS OTHERWISE INDICATED. THE REMOVAL AND RE-INSTALLATION OF EXISTING SIGNS WILL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.
- SIGNS SHOWN TO BE INSTALLED ON THE SIDE OF POLES SHALL BE MOUNTED BY STAINLESS STEEL MOUNTING BANDS AS DETAILED IN THE PLANS. ALL R10 SERIES SIGNS INSTALLED ON A TRAFFIC SIGNAL MAST ARM SHALL BE MOUNTED WITH CABLE MOUNTING BRACKETS AS SPECIFIED.
- ALL POST MOUNTED SIGNS SHALL BE MOUNTED ON BREAK-AWAY SIGN POSTS ACCORDING TO THE STANDARD DETAILS.
- ALL SIGNS AND POSTS SHOWN IN THE PLANS SHALL BE NEW UNLESS OTHERWISE INDICATED IN THE PLANS OR BY THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT.
- ALL EXISTING REGULATORY SIGNS, WARNING SIGNS, AND STREET NAME SIGNS WILL BE USED IN PLACE DURING CONSTRUCTION AND PROTECTED FROM DAMAGE UNLESS OTHERWISE INDICATED IN THE PLANS. IF THE CONTRACTOR DAMAGES ANY EXISTING SIGN OR POSTS DURING CONSTRUCTION, THEY SHALL BE REQUIRED TO REINSTALL NEW SIGNS AND POSTS MEETING CURRENT REQUIREMENTS TO REPLACE THE DAMAGED EQUIPMENT.
- ANY EXISTING PERMANENT SIGNS SHOWN TO BE REMOVED BY THE CONTRACTOR FOR CONSTRUCTION PURPOSES OTHER THAN STOP SIGNS, YIELD SIGNS OR STREET NAME SIGNS SHALL BE SALVAGED. SEE INSTRUCTIONS FOR DISASSEMBLY AND RETURN OF TRAFFIC SIGN EQUIPMENT.
- ALL STOP, YIELD, WARNING SIGNS, AND STREET NAME SIGNS SHALL BE MAINTAINED IN A CONSPICUOUS LOCATION FOR THE DRIVING PUBLIC. ALL STOP AND YIELD SIGNS REMOVED FOR CONSTRUCTION PURPOSES CAN BE TEMPORARILY ERRECTED (NO LESS THAN 7 FEET VERTICAL FROM GRADE) UNTIL THEY CAN BE PERMANENTLY RE-INSTALLED. ANY TEMPORARY STOP OR YIELD SIGN INSTALLATION TO BE LEFT IN PLACE OVERNIGHT WILL REQUIRE PRIOR APPROVAL FROM THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT.
- ALL EXISTING SIGNS, OTHER THAN STOP, YIELD, WARNING SIGNS, OR STREET NAME SIGNS, SHOWN TO BE USED IN PLACE SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. THE CONTRACTOR MAY TEMPORARILY REMOVE THE SIGN AND POST TO PREVENT DAMAGE AT THE APPROVAL OF THE INSPECTOR. STORAGE AND PROTECTION OF THE SIGNS & POSTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL SIGN POSTS INSTALLED IN CONCRETE, ASPHALT OR BRICK PAVER ISLANDS OR MEDIANS SHALL HAVE A 6" PVC SLEEVE OR 6" CORE DRILLED HOLE COMPLETELY THROUGH THE FULL DEPTH OF PAVEMENT TO THE TOP OF SUBGRADE. SEE MEDIAN NOSE DETAILS.
- MINOR ADJUSTMENTS IN THE LOCATION OF SIGN POSTS SHOULD BE MADE IN THE FIELD DURING CONSTRUCTION IN ORDER TO MAINTAIN 4'-0" CLEARANCE FROM THE CENTERLINE OF ANY FIRE HYDRANT TO THE FACE OF THE SIGN POST.



TYPICAL MOUNTING FOR R4-7 W/OM1-3  
TYPICAL OM3 MOUNTING  
TYPICAL OM1-3 & OM4-3 MOUNTING  
TYPICAL MOUNTING FOR PRIMARY & SUPPLEMENTAL PLAQUES  
TYPICAL MOUNTING FOR PRIMARY SIGNS

**SIGN MOUNTING DETAILS**



**TRAFFIC SIGN INSTALLATION DETAIL**

- NOTES:
- THE HEIGHT TO THE BOTTOM OF A SUPPLEMENTAL PLAQUE MOUNTED BELOW ANOTHER SIGN WHEN IT IS LOCATED IN A PEDESTRIAN WALKWAY, OR EXTENDS MORE THAN 4" INTO A PEDESTRIAN WALKWAY, SHALL BE A MINIMUM OF 80" IN COMPLIANCE WITH THE AMERICANS WITH DISABILITY ACT (ADA).
  - IF THE SUPPLEMENTAL PLAQUE IS LESS THAN 12" HIGH, THE HEIGHT TO THE BOTTOM OF THE PRIMARY SIGN SHOULD BE A MINIMUM OF 7'-0".

**INSTRUCTIONS FOR DISASSEMBLY AND RETURN OF TRAFFIC SIGN EQUIPMENT**

**FOR USE ON FEDERAL FUNDED PROJECTS**

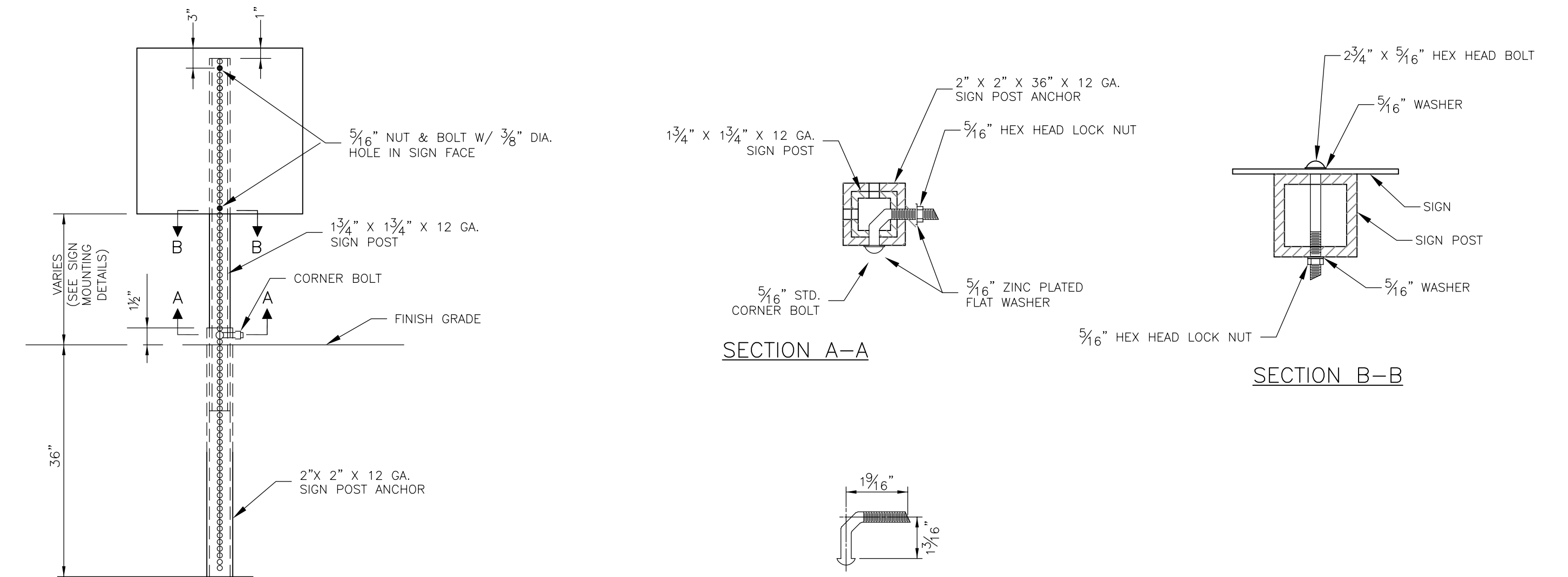
THE FOLLOWING IS A LIST OF PERMANENT SIGNING EQUIPMENT WHICH SHALL BE SALVAGED AND STORED ON SITE FOR PICKUP BY THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT, UNLESS OTHERWISE INSTRUCTED BY THE INSPECTOR. ALL SALVAGED EQUIPMENT SHALL BE CAREFULLY DISASSEMBLED AND STORED. THE CONDITION AT THE TIME OF CITY PICKUP SHALL BE THE SAME AS PRIOR TO REMOVAL. THE CONTRACTOR SHALL NOTIFY THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT TO ARRANGE FOR THE CITY PICKUP OF THE SALVAGED EQUIPMENT. PROVIDE 48-HOURS ADVANCE NOTICE.

**FOR USE ON NON-FEDERALLY FUNDED PROJECTS**

THE FOLLOWING IS A LIST OF PERMANENT SIGNING EQUIPMENT WHICH SHALL BE SALVAGED AND RETURNED TO THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT, UNLESS OTHERWISE INSTRUCTED BY THE INSPECTOR. THE CONDITION AT THE TIME OF DELIVERY SHALL BE THE SAME AS PRIOR TO REMOVAL. DISASSEMBLY OF EQUIPMENT SHALL BE DONE PRIOR TO RETURNING THE EQUIPMENT. THE CONTRACTOR SHALL NOTIFY THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT, TO ARRANGE FOR THE DELIVERY OF THE SALVAGED EQUIPMENT. PROVIDE 48-HOURS ADVANCE NOTICE.

THE CITY MAINTAINS THE FIRST RIGHT OF REFUSAL OF ANY EQUIPMENT LISTED. THE PROJECT INSPECTOR WILL MAKE AN ON-SITE ASSESSMENT TO DETERMINE IF THE EQUIPMENT SHOULD BE SALVAGED OR DISPOSED. ANY EQUIPMENT THAT WILL NOT BE SALVAGED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

- ALL TRAFFIC SIGNS SHALL BE REMOVED FROM SIGN POSTS, SIGNAL POLES OR STREET LIGHT POLES AND BE SALVAGED.
- ALL ASTRO-BRACKETS SHALL BE REMOVED FROM THE TUBULAR SUPPORT. DO NOT CUT THE ASTRO-BRACKET CABLE.
- ALL TRAFFIC SIGN POSTS, SHALL BE REMOVED AND SALVAGED UNLESS BENT. IF THE SIGN POST OR POLE WAS MOUNTED IN CONCRETE, THE POST OR POLE SHALL BE DISCARDED UPON REMOVAL.
- ANY HARDWARE (I.E. BOLTS, BANDIT MATERIAL, ETC.) INVOLVED IN MOUNTING THE SIGN MUST BE DISCARDED.
- ALL FLASHING BEACON ASSEMBLIES SHALL BE SALVAGED, INCLUDING SOLAR PANELS, POLES, CABINET AND INTERNAL COMPONENTS. SOLAR PANELS AND SIGNS SHALL BE REMOVED PRIOR TO SALVAGING. SCREW-IN FOUNDATIONS SHALL BE CLEANED OF DIRT AND DEBRIS AND SALVAGED WITH BOLT AND ANCHOR STUDS.



**CORNER BOLT DETAIL**

**BREAK-AWAY SIGN POST DETAILS**

**PAVEMENT INSTALLATION SEQUENCE**

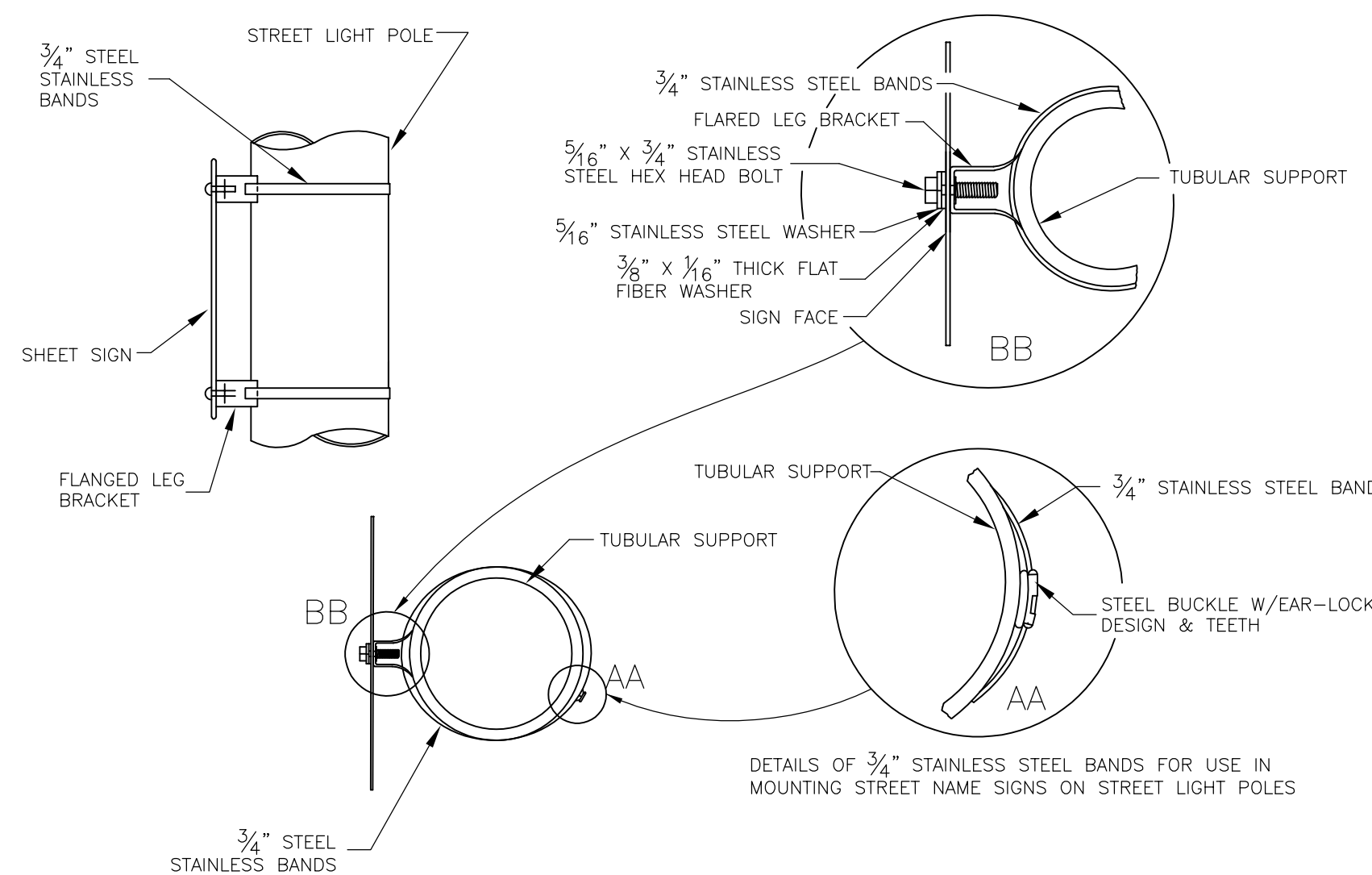
- SIGN POST ANCHOR DRIVEN PARTIALLY INTO SUBGRADE USING A DRIVE CAP WITH SLEDGE OR POWER EQUIPMENT PRIOR TO THE PLACEMENT OF THE PAVEMENT.
- INSERT SIGN POST INTO THE POST ANCHOR AND BOLT IN PLACE.

**GROUND INSTALLATION SEQUENCE**

- SIGN POST ANCHOR DRIVEN PARTIALLY INTO SUBGRADE USING A DRIVE CAP WITH SLEDGE OR POWER EQUIPMENT.
- ANCHOR SLEEVE SLIPPED OVER ANCHOR AND DRIVEN INTO SUBGRADE TOGETHER WITH THE SIGN POST ANCHOR.
- INSERT SIGN POST INTO THE POST ANCHOR AND BOLT IN PLACE.

**NOTES:**

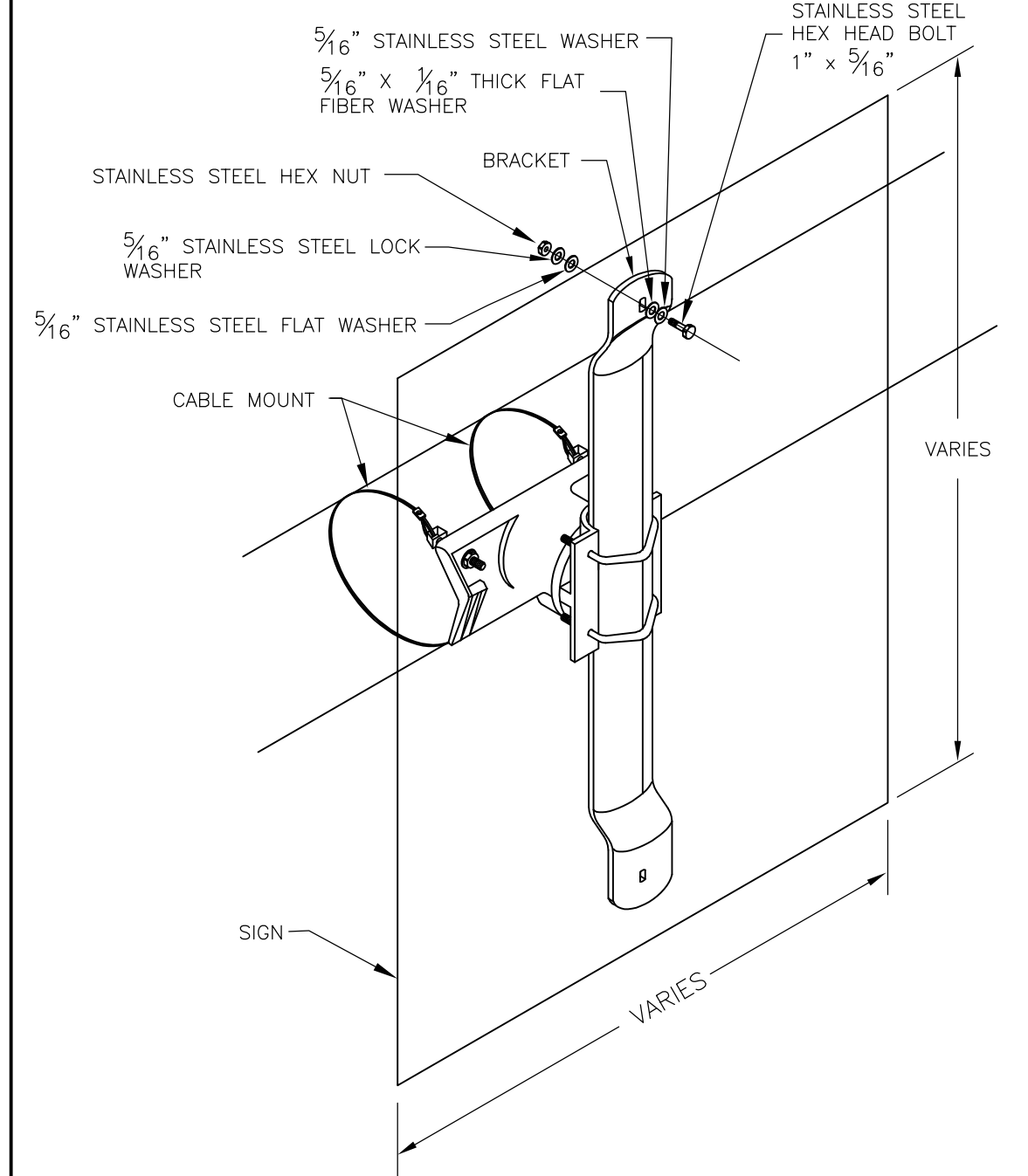
- THE FIRST HOLE ABOVE THE FINISHED GRADE LEVEL IN ALL THREE UNITS MUST BE IN LINE FOR INSERTION OF THE CORNER BOLT.
- ALL CORNER BOLTS AND NUTS FOR FASTENING THE SIGNS AND SIGN POST ASSEMBLY AND ALL WASHERS SHALL COMPLY WITH APPROPRIATE SECTIONS OF THE STANDARD SPECIFICATIONS (LATEST EDITION) AND SHALL BE A SUBSIDIARY ITEM.



**NOTES:**

- SIGNS ON TUBULAR SUPPORTS SHALL BE ATTACHED WITH TWO (2) BRACKETS AND STAINLESS STEEL BANDS.
- HOLE IN SIGN FOR ATTACHMENT TO THE MOUNTING BRACKETS SHALL BE OFFSET A MINIMUM OF 2" FROM THE EDGE OF SIGN.
- HOLE IN SIGN SHALL BE LOCATED SUCH THAT THE SIGN IS LEVEL.

**SIGN MOUNTING DETAIL (VERTICAL POLE)**



**SIGN MOUNTING DETAIL (MAST ARM)**  
(DOES NOT APPLY TO OVERHEAD STREET NAME SIGNS)

DATE	BY	REVISION
05-01-22	LJM	REPLACES ALL PREVIOUS VERSIONS OF SIGNING DETAILS
03-01-21	LJM	REPLACES ALL PREVIOUS VERSIONS OF SIGNING DETAILS



STANDARD DETAILS FOR  
**SIGNING**  
GENERAL NOTES AND DETAILS

DAVID P. CRONIN CITY ENGINEER      CRAIG S. OWENS CITY MANAGER

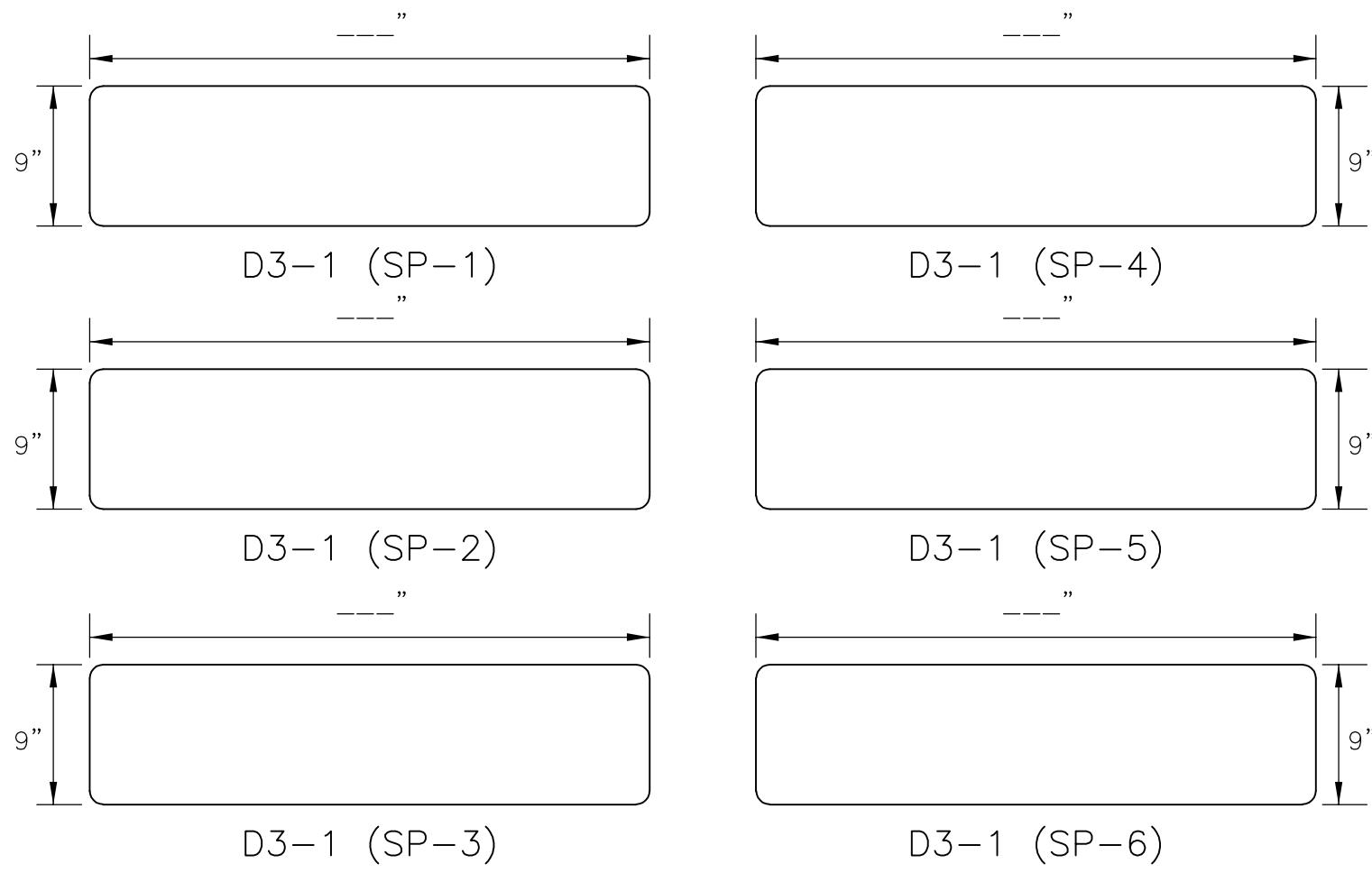


TABLE 1 (ALPHA STREETS)	
STANDARD ABBREVIATION LIST	
AVENUE	AVE
BOULEVARD	BLVD
CIRCLE	CIR
COURT	CT
CREEK	CRK
DRIVE	DR
HIGHWAY	HWY
LANE	LN
PARKWAY	PKWY
PLACE	PL
PLAZA	PLZ
ROAD	RD
STREET	ST
TERRACE	TER
TRAIL	TR
WAY	WAY

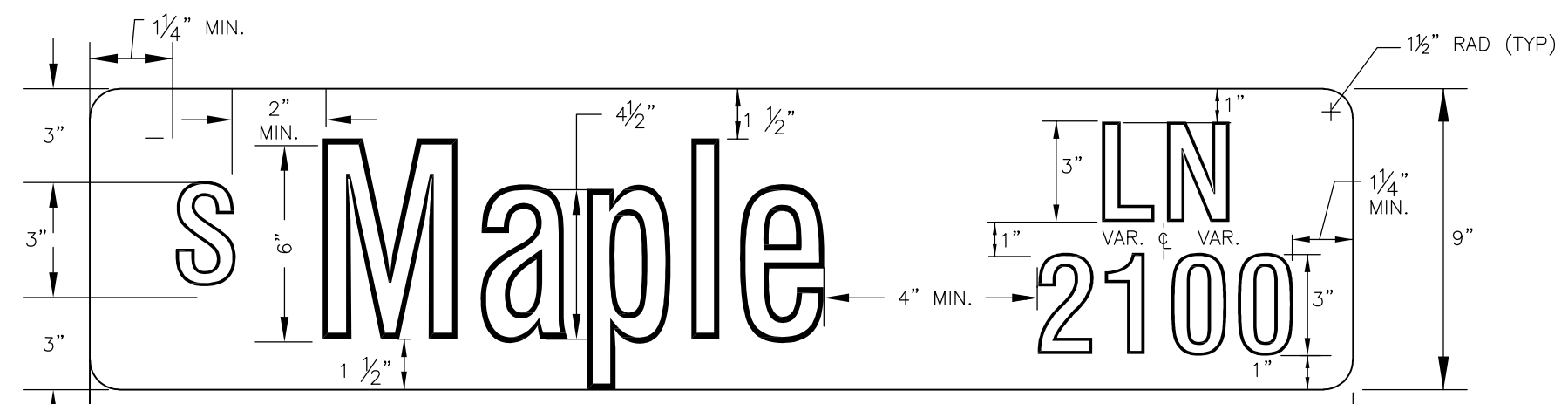
TABLE 2 (NUMBERED STREETS)	
STANDARD ABBREVIATION LIST	
FIRST	st
SECOND	nd
THIRD	rd
FOURTH TO NINTH	th

\*NOTE: SERIES B 2000 LETTERS SHALL BE USED IN LIEU OF HIGHWAY SERIES C TO AVOID EXCEEDING A 48" SIGN BLANK.

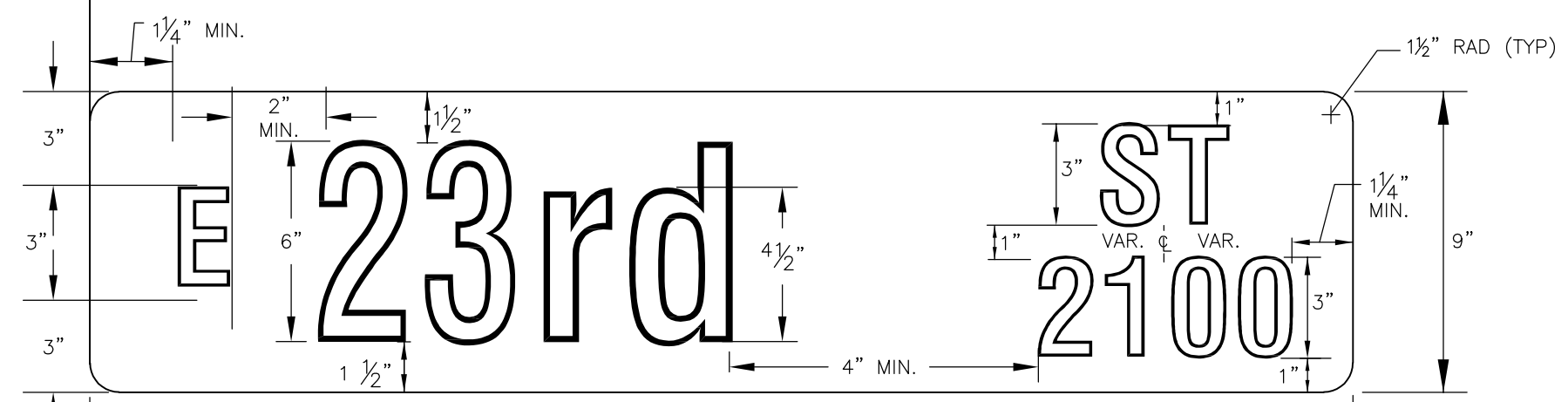
STREET NAME SIGN QUANTITY TABLE				
SIGN DESIGNATION	SIZE (W X H)	AREA (S.F.)	NUMBER	QUANTITY (S.F.)
D3-1 (SP-1)	X			
D3-1 (SP-2)	X			
D3-1 (SP-3)	X			
D3-1 (SP-4)	X			
D3-1 (SP-5)	X			
D3-1 (SP-6)	X			
TOTAL				



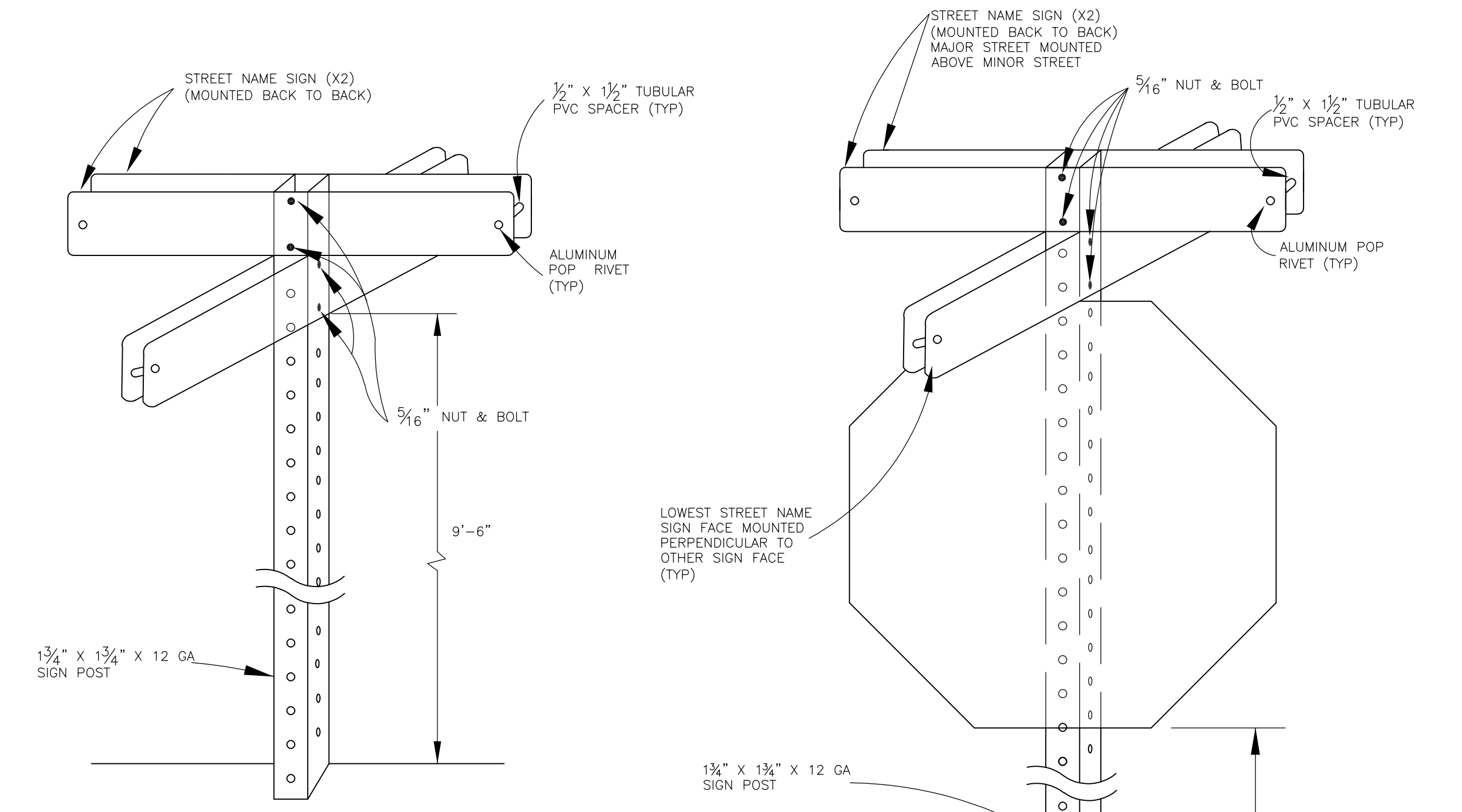
PROJECT SIGN DETAILS



NAMED STREET SIGN DETAIL W/ BLOCK NUMBER

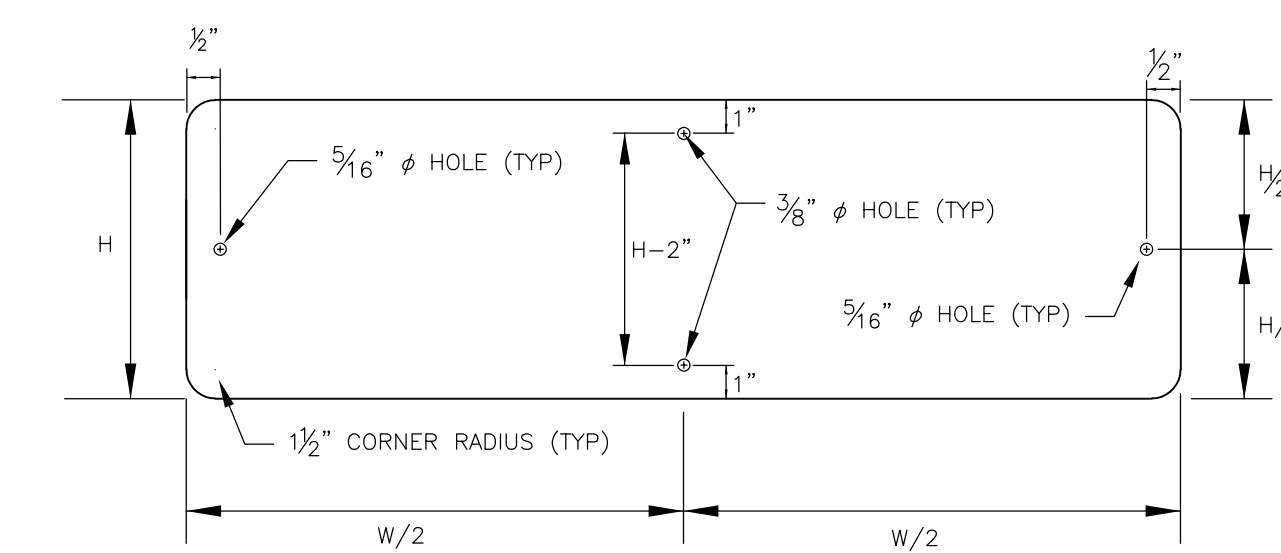


NUMBERED STREET SIGN DETAIL W/ BLOCK NUMBER

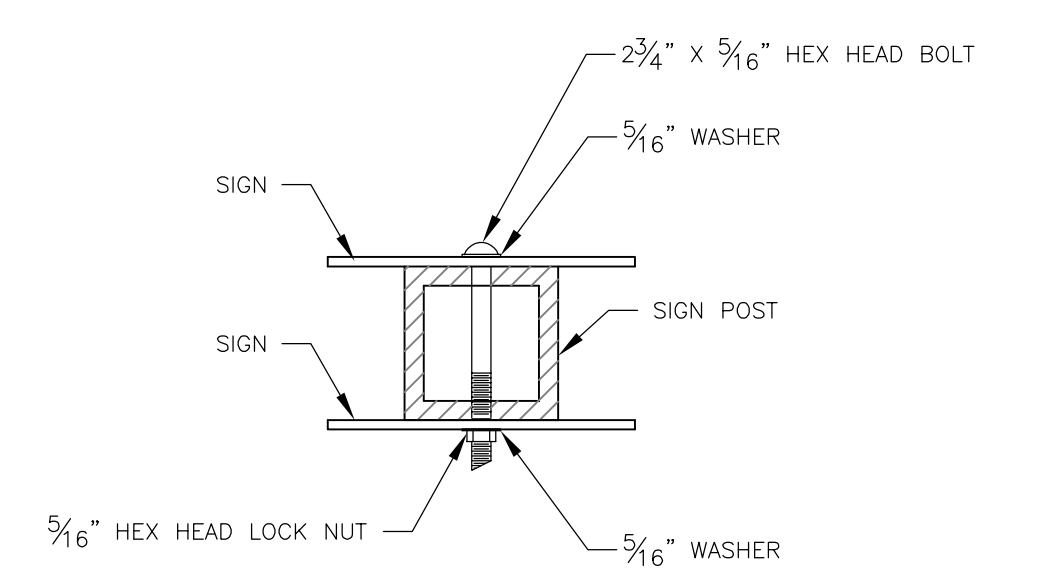


STREET NAME SIGN ASSEMBLY (MOUNTED SEPARATELY)

STREET NAME SIGN ASSEMBLY (MOUNTED WITH OTHER SIGN)



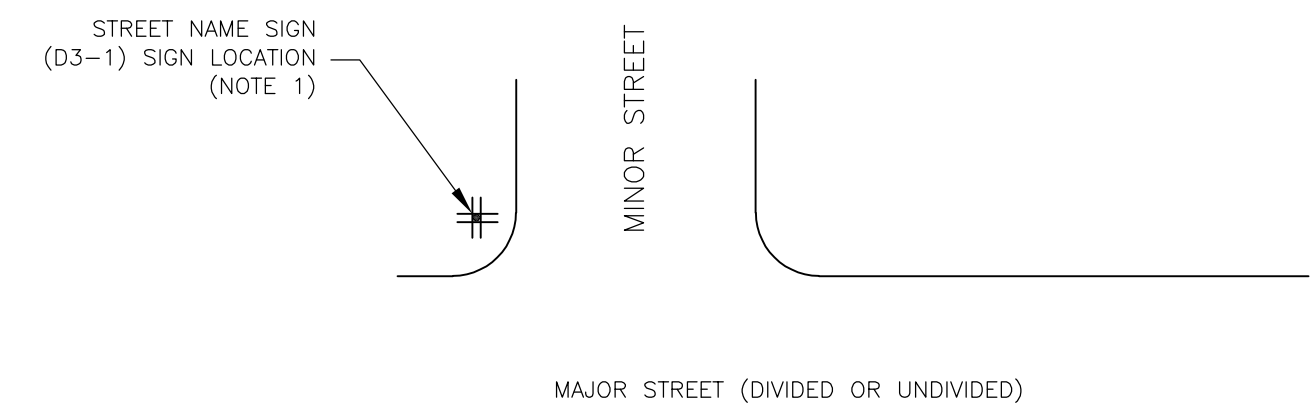
SIGN MOUNTING HOLE DETAIL (FOR MOUNTING ON SQUARE TUBULAR SUPPORTS)



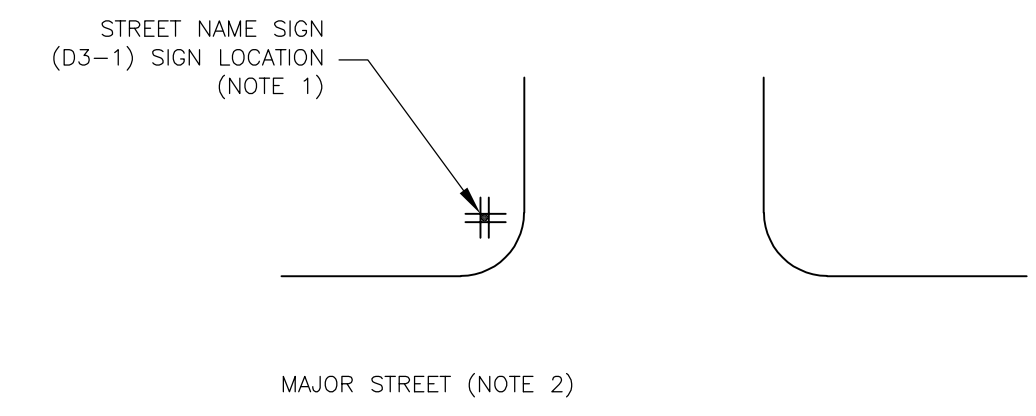
DOUBLE SIGN FACE MOUNTING DETAIL

STREET NAME CONSTRUCTION NOTES:

- LEGEND: WHITE (NO BORDER)
- BACKGROUND: GREEN (FEDERAL COLOR STDS 595A, COLOR NO.14109)
- TEXT SERIES: SERIES C 2000 AS INDICATED IN THE EXAMPLES
- SHEETING: MICRO-ENCAPSULATED, RETRO-REFLECTIVE PRISMATIC SHEETING (TYPE IV)
- PROCESS: ELECTRO-CUTABLE FILM
- NAMED/NUMBERED STREET SIGNS WITHIN THE OLD WEST LAWRENCE NEIGHBORHOOD SHALL BE PROVIDED TO THE CONTRACTOR AT COST.



STREET NAME SIGN LOCATION DETAIL ('T' INTERSECTION)



STREET NAME SIGN LOCATION DETAIL (4-LEG INTERSECTION)

- NOTES:
- CITY SIGNING INSPECTOR SHALL APPROVE FINAL LOCATION OF STREET NAME SIGN.
  - IF MAJOR STREET IS LESS THAN 36' BACK TO BACK, ONLY ONE STREET NAME SIGN ASSEMBLY WILL BE INSTALLED IN LOCATION APPROVED BY THE CITY SIGNING INSPECTOR.

2022 EDITION SHEET \_\_\_\_ OF \_\_\_\_

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03-01-21	LJM	REPLACES ALL PREVIOUS VERSIONS OF SIGNING DETAILS



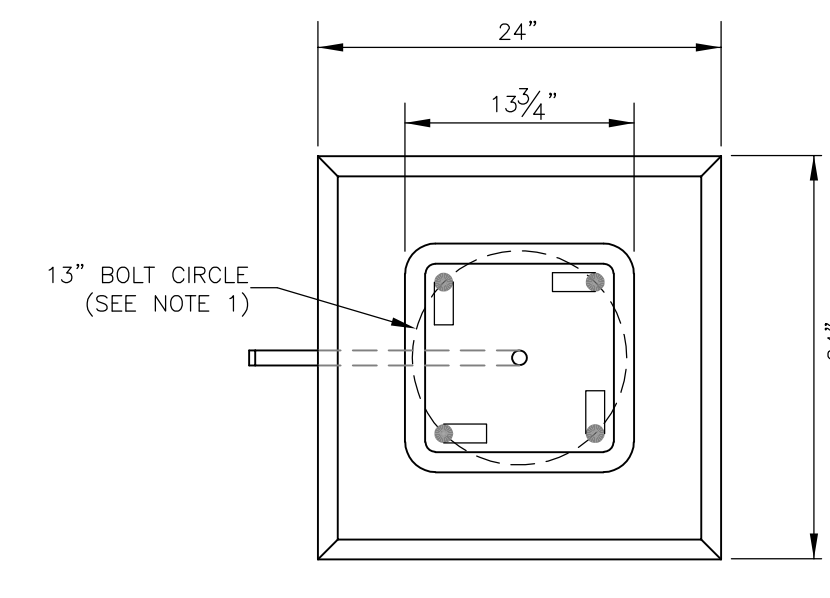
STANDARD DETAILS FOR SIGNING GROUND MOUNT STREET NAME SIGNS

DAVID P. CRONIN CITY ENGINEER CRAIG S. OWENS CITY MANAGER

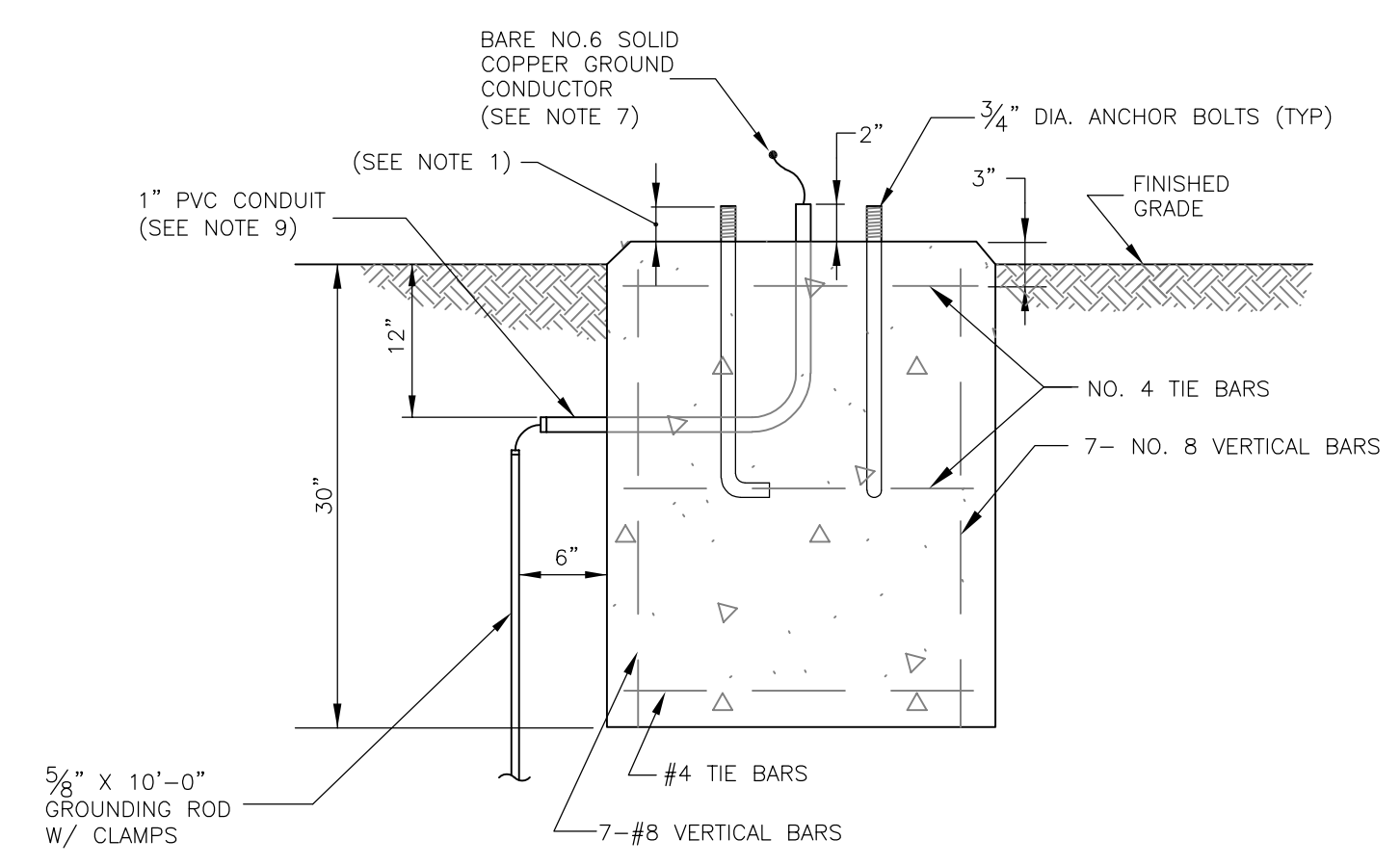
**SOLAR SCHOOL ZONE FLASHER REQUIREMENTS**

- UNBREAKABLE, VANDAL RESISTANT SOLAR PANEL, 55 WATT MINIMUM
- GEL-CEL TYPE BATTERY (12 VOLT, 100 AMP)
- DCF2 MODULAR 2-CIRCUIT SOLID STATE FLASHER (12VDC) RATED AT 6.0 AMPS PER CIRCUIT
- SURGE PROTECTOR POLY PHASER
- MASTER RADIO ASSEMBLY WITH ETHERNET LAN ASSEMBLY SERIAL PORT SERVER WITH 6DB OMNI ANTENNA
- REMOTE RADIO
- AUTOMATIC SEQUENCING CHARGER (ASC)
- 0.125 INCH ALUMINUM SHEETING W/ NATURAL ALUMINUM FINISH W/ STANDARD NO. 2 KEY LOCK
- TWO CIRCUIT, CALENDAR PROGRAMMABLE 2-WAY RADIO SOLID STATE TIME SWITCH

FLASHING BEACON QUANTITY TABLE			
STATION	OFFSET	STREET	QUANTITY

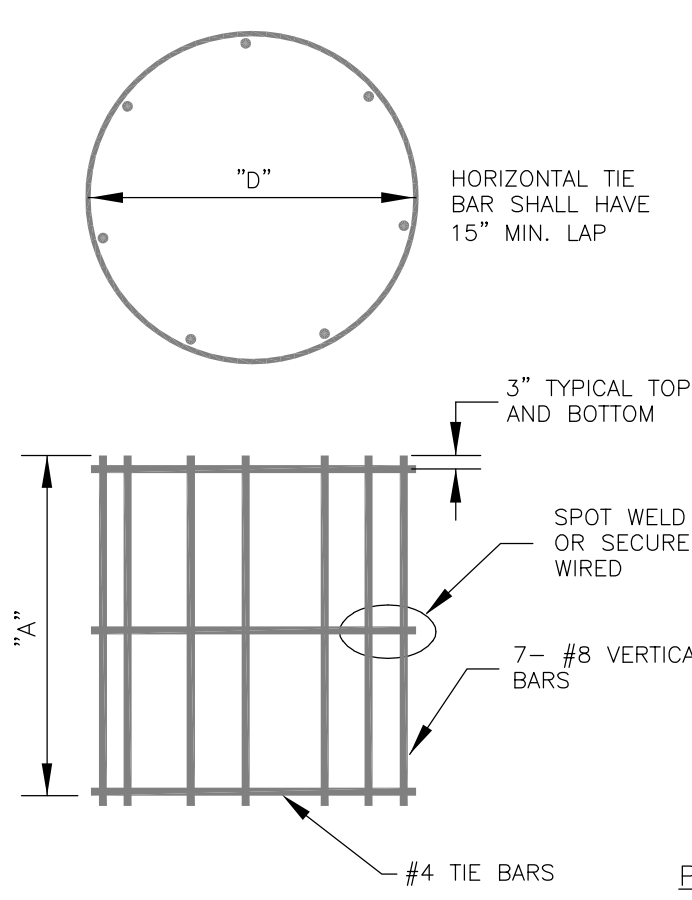


PLAN



SECTION

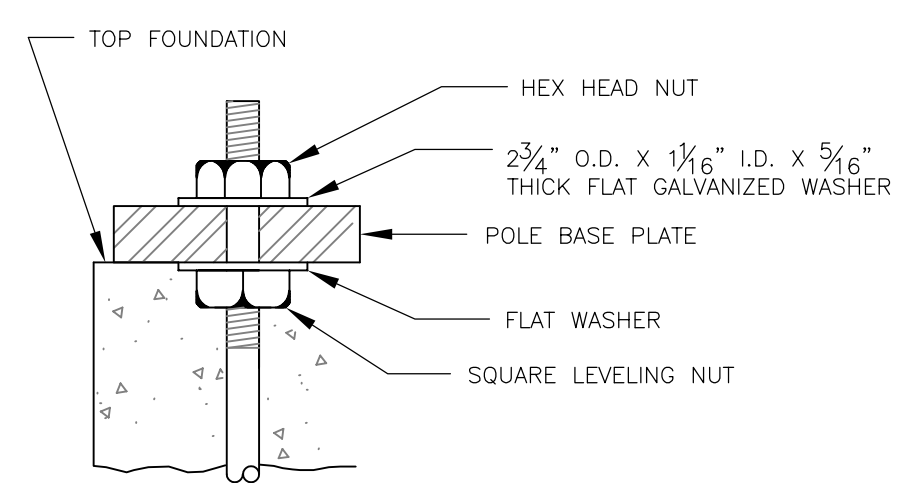
**PEDESTAL POLE BASE**



HORIZONTAL REBAR		
POLE FND. DIA.	REBAR CIR. "D"	SPACING
24"	20"	12" MAX.

VERTICAL REBAR	
POLE FND. DEPTH	LENGTH "A"
30"	2'-3"

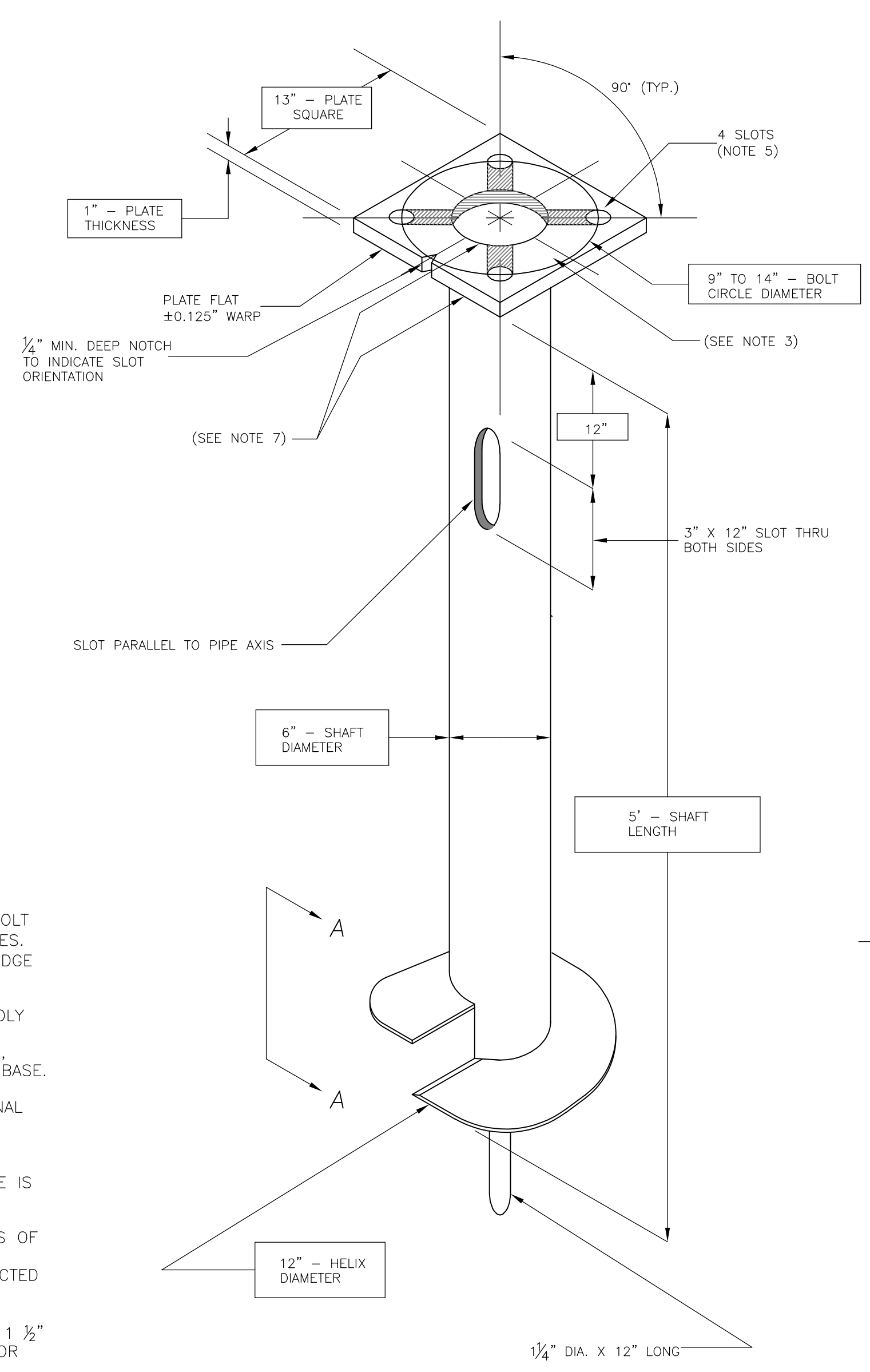
**REBAR CAGE DETAIL**



**ANCHOR BOLT DETAIL**

**POLE BASE NOTES:**

1. FINAL POLE, ANCHOR BOLT SIZE, ANCHOR BOLT PROJECTION, AND BOLT CIRCLE SHALL BE AS PER MANUFACTURER'S RECOMMENDED PRACTICES. ROTATE ANCHOR BOLT TO MAINTAIN 3" MINIMUM CLEARANCE FROM EDGE OF HOLE.
2. ALL ANCHOR BOLTS FOR ALL THE NEW POLE BASES SHALL BE RIGIDLY INSTALLED BEFORE CONCRETE IS PLACED. ANCHOR BOLTS SHALL BE SPACED BY MEANS OF A FACTORY CERTIFIED TEMPLATE OR DRAWING, THE CENTER OF WHICH SHALL COINCIDE WITH THE CENTER OF THE BASE.
3. ALL CONCRETE POLE BASES SHALL BE CONSOLIDATED BY AN INTERNAL TYPE VIBRATOR.
4. FINAL 6" OF CONCRETE FOUNDATION (POLE CAP) SHALL BE FORMED SQUARE. THE CAP SHALL BE FORMED AND POURED AFTER THE POLE IS PLUMB.
5. ALL CONCRETE USED IN THIS WORK SHALL MEET THE REQUIREMENTS OF THE CITY OF LAWRENCE STANDARD SPECIFICATIONS AND SHALL BE KCM4K CONCRETE (F<sub>c</sub> = 4,000 PSI). POLES SHALL NOT BE ERRECTED UNTIL CONCRETE HAS REACHED 3,400 PSI.
6. REINFORCING STEEL SHALL HAVE 60 KSI YIELD STRENGTH; MAINTAIN 1/2" MINIMUM CLEARANCE FROM REINFORCING STEEL TO EDGE OF HOLE OR FORM.
7. BARE NO. 6 SOLID COPPER GROUND CONDUCTOR SHALL BE CONNECTED FROM INTERNAL POLE GROUNDING NUT TO CLAMP ON GROUND ROD.
8. ALL REINFORCING STEEL SHALL BE ASTM A615 GR60.
9. PVC CONDUIT ELBOWS IN CONCRETE FOUNDATIONS, GROUND ROD, AND GROUND CABLING SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.
10. ALL CONCRETE SURFACES SHOULD BE BRUSHED AND SEALED WITH CURING COMPOUND.

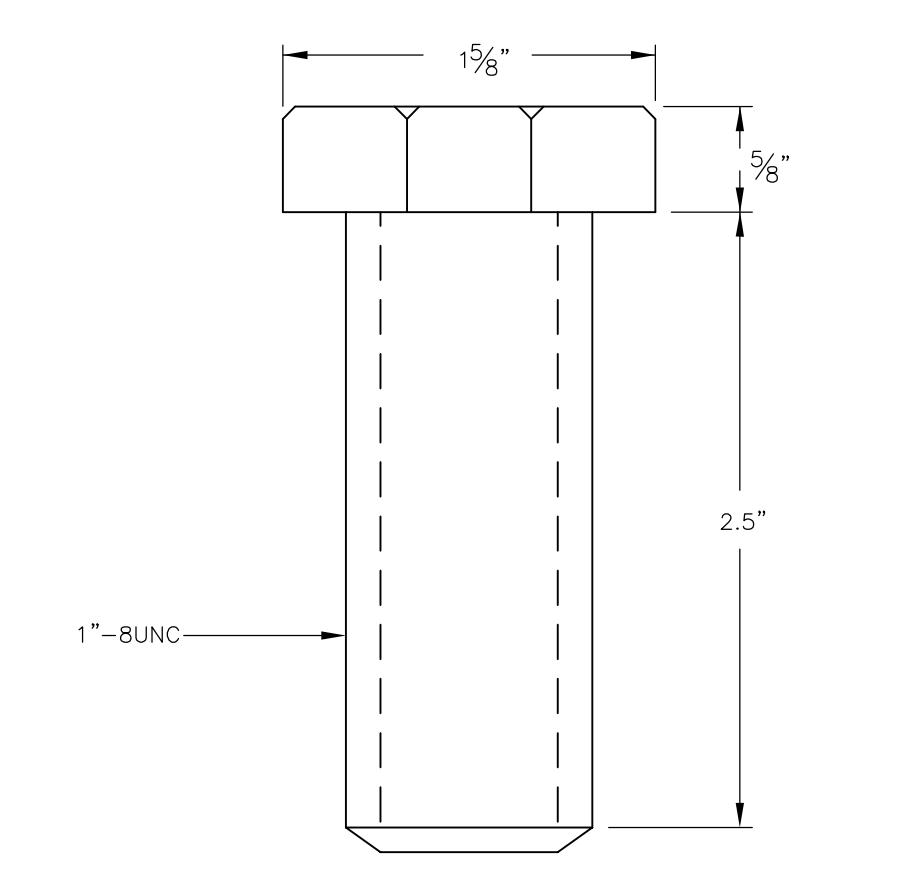


**ALTERNATE SCREW-IN FOUNDATION ANCHOR DETAILS**

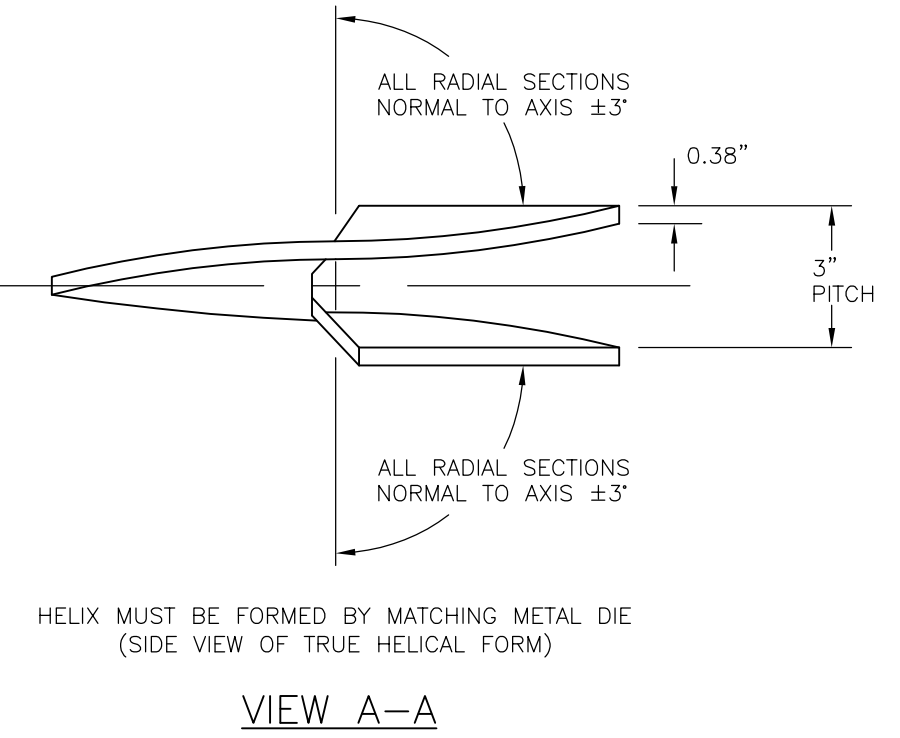
**SCREW-IN FOUNDATION NOTES:**

1. FINISH: HOT DIP GALVANIZE PER ASTM-A153 (LATEST REVISION).
2. BASEPLATE TO BE PERPENDICULAR TO SHAFT AXIS (±1') AND HOLE AND CONCENTRIC TO SHAFT AXIS.
3. ALL BASES SHALL BE IDENTIFIED BY THE MANUFACTURER NAME, ABBREVIATION, OR SYMBOL ENGRAVED ON THE SHAFT AND/OR TOP PLATE. THE ANCHOR TYPE SHALL BE ENGRAVED INTO THE TOP PLATE WITH (1/4"-1/2") LETTERING.
4. PILOT POINT AND SHAFT AXES TO BE CONCENTRIC AND IN LINE (±2').
5. SLOTTED HOLES PERPENDICULAR TO THE BASEPLATE.
6. PREHEAT (ROOM TEMPERATURE 70°F, 21°C), TUMBLEBLAST, HANDGRIND, AND CLEAN BASEPLATE, HELIX, AND CORE ON ALL WELDED AREAS.
7. FLAMECUT IRREGULARITIES PERMISSIBLE:
  - (1) VALLEYS NOT TO EXCEED (3/32") BELOW NOMINAL SURFACE LEVEL.
  - (2) PEAKS OR POSITIVE IRREGULARITIES NOT TO EXCEED (1/32") ABOVE NOMINAL SURFACE LEVEL OR INTERSECTIONS OF NOMINAL SURFACES.
8. MANUFACTURER TO HAVE IN EFFECT INDUSTRY RECOGNIZED WRITTEN QUALITY CONTROL FOR ALL MATERIAL AND MANUFACTURING PROCESSES.
9. ALL MATERIAL IS TO BE NEW, UNUSED AND MILL TRACEABLE MEETING THE FOLLOWING SPECIFICATIONS:

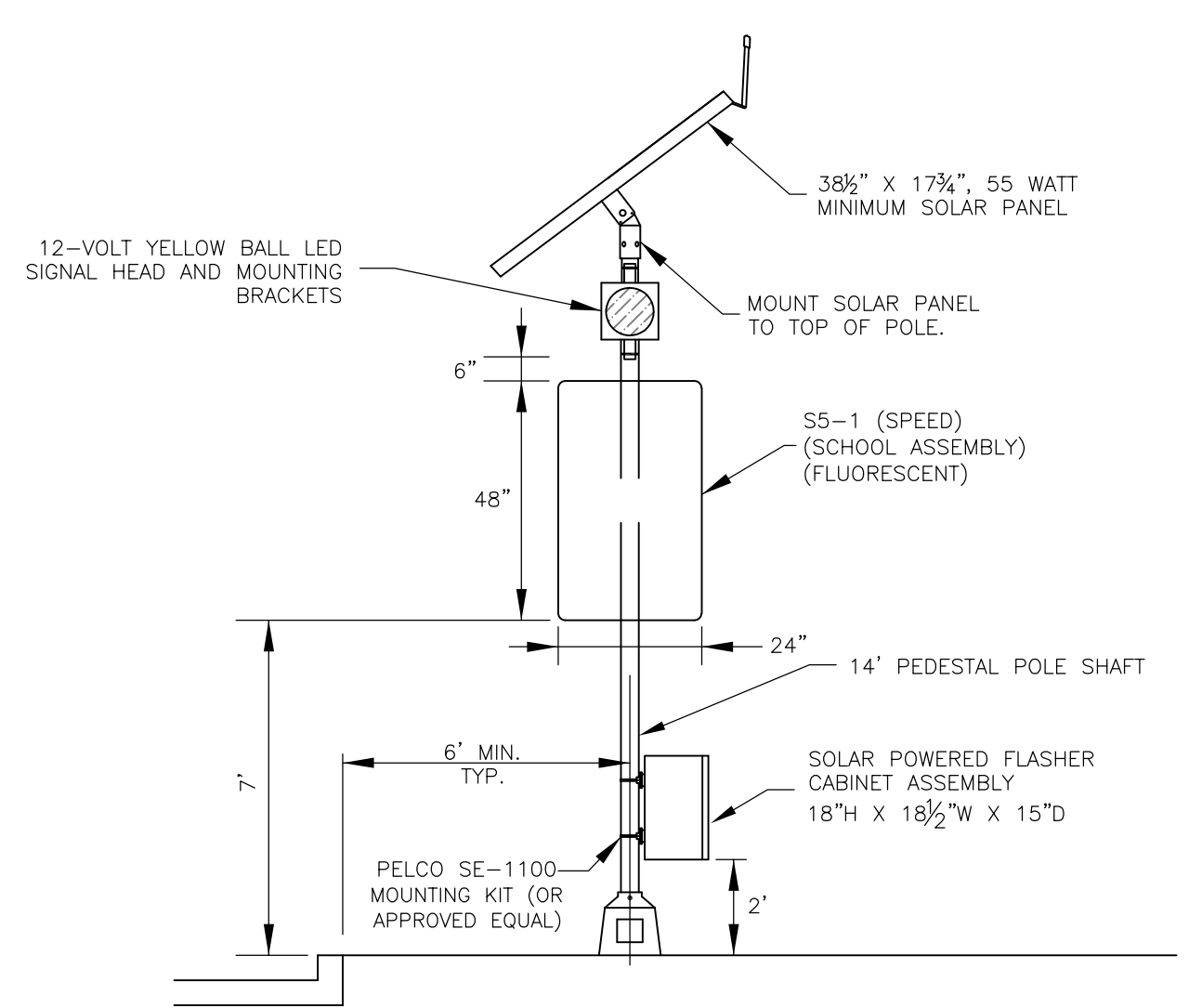
- BASEPLATE: ASTM A36-(latest revision) hot rolled steel plate.
- SHAFT: STEEL PIPE PILES, SEAMLESS OR STRAIGHT WELDED, GRADE PER ASTM A252. ALTERNATE MATERIAL: STEEL PIPE TYPE E OR S, GRADE B PER ASTM A53.
- HELIX: ASTM A635-(LATEST REVISION) HOT ROLLED STEEL PLATE.
- PILOT POINT: ASTM A575-(LATEST REVISION) HOT ROLLED STEEL.
- BOLT: ASTM A325 OR SAE J429 GRADE 5, 1" DIAMETER HOT DIP GALVANIZED HEX HEAD BOLT. BOLT SHALL INCLUDE ONE HEX NUT AND ONE EACH LOCK AND FLAT WASHER.



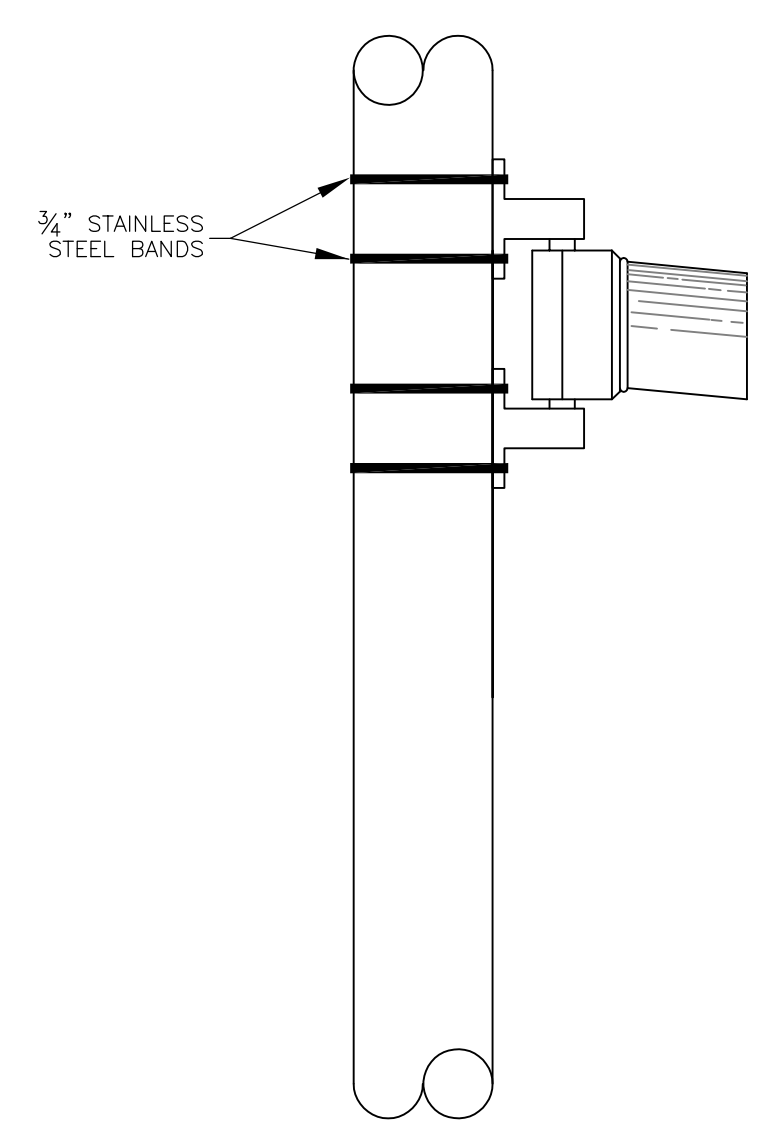
**HEX HEAD BOLT**



**VIEW A-A**



**ALUMINUM SIGNAL PEDESTAL POLE WITH SOLAR PANEL**



**POLE BAND AND CLAMP MOUNTING DETAIL**

2022 EDITION SHEET \_\_\_\_ OF \_\_\_\_

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STANDARD DETAILS FOR  
SIGNING  
SCHOOL BEACONS

DAVID P. CRONIN CITY ENGINEER      CRAIG S. OWENS CITY MANAGER

MUTCD Designation	Sign Description	Sign Sizes (W x H) (1)		Sign Area Small / Large (S.F.)
		Facing Traffic on Single Lane St or Approach	Facing Traffic on Multi-Lane St or Approach	
	<b>Object Marker Signs</b>	20 mph < V < 55 mph	20 mph < V < 55 mph	
OM1-3	Object Marker (Type 1)	18" x 18"	18" x 18"	2.25
OM-3 (L or R)	Object Marker (Type 3) (Left or Right)	12" x 36"	12" x 36"	3.00
OM4-3	End of Road Marker	18" x 18"	18" x 18"	2.25

MUTCD Designation	Sign Description	Sign Sizes (W x H) (1)			Sign Area Small / Large (S.F.)
		Facing Traffic on Single Lane St or Approach	Facing Traffic on Multi-Lane St or Approach		
	<b>Regulatory Signs</b>	20 mph < V < 55 mph	V < 35 mph	35 mph < V < 55 mph	
R1-1	Stop	30" x 30" (2)	36" x 36"	36" x 36"	5.18 / 7.46
R1-2	Yield	24" x 24" x 24"	36" x 36" x 36"	36" x 36" x 36"	3.90 / 6.93
R1-3P	All Way (Plaque)	18" x 6"	18" x 6"	18" x 6"	0.75
R1-5	Yield Here to Pedestrians	36" x 36"	36" x 36"	36" x 36"	9.00
R2-1	Speed Limit	24" x 30"	24" x 30"	30" x 36"	5.00 / 7.50
R3-1	No Right Turn (Symbol)	24" x 24"	24" x 24"	36" x 36"	4.00 / 9.00
R3-2	No Left Turn (Symbol)	24" x 24"	24" x 24"	36" x 36"	4.00 / 9.00
R3-4	No U-Turn (Symbol)	24" x 24"	24" x 24"	36" x 36"	4.00 / 9.00
R3-5 (L or R)	Overhead Lane Control Left (Right) Arrow	30" x 36"	30" x 36"	30" x 36"	7.50
R3-7 (L or R)	Left (Right) Lane Must Turn Left (Right)	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
R3-8 (2-Lane)	Intersection Lane Control	30" x 30"	30" x 30"	30" x 30"	6.25
R3-8 (3-Lane)	Intersection Lane Control	48" x 30"	48" x 30"	48" x 30"	10.00
R3-8 (4-Lane)	Intersection Lane Control	66" x 30"	66" x 30"	66" x 30"	13.75
R3-9b	Two-Way Left Turn Only	24" x 36"	24" x 36"	24" x 36"	6.00
R4-7	Keep Right (Symbol)	24" x 30"	24" x 30"	24" x 30"	5.00
R5-1	Do Not Enter	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
R5-1a	Wrong Way	36" x 24"	36" x 24"	42" x 30"	6.00 / 8.75
R5-2	No Trucks (Symbol)	24" x 24"	24" x 24"	24" x 24"	4.00
R6-1 (L or R)	One Way (Left or Right)	36" x 12"	36" x 12"	54" x 18"	3.00 / 6.75
R6-2 (L or R)	One Way (Left or Right)	24" x 30"	24" x 30"	30" x 36"	5.00 / 7.50
R6-4	Roundabout Directional (Single Lane)	30" x 24"	30" x 24"	30" x 24"	5.00
R6-4a	Roundabout Directional (Multi-Lane)	48" x 24"	48" x 24"	48" x 24"	8.00
R6-5P	Roundabout Circulation (Plaque)	30" x 30"	30" x 30"	30" x 30"	6.25
R7-108	No Parking (time)	12" x 18"	12" x 18"	12" x 18"	1.50
R7-8	Parking (handicap)	12" x 18"	12" x 18"	12" x 18"	1.50
R7-8P	Van Accessible Plaque	18" x 9"	18" x 9"	18" x 9"	1.125
R8-3 (B, R or L)	No Parking (Symbol) with Arrow	12" x 18"	12" x 18"	12" x 18"	1.50
R8-3bP	No Parking Plaque	6" x 12"	6" x 12"	6" x 12"	0.50
R10-3e	Countdown Pedestrian Pushbutton	9" x 15"	9" x 15"	9" x 15"	0.94
R10-11	No Turn on Red (Red Ball Symbol)	24" x 30"	24" x 30"	36" x 48"	5.00 / 12.00
R10-12	Left Turn on Green (Green Ball Symbol)	30" x 36"	30" x 36"	30" x 36"	7.50
R10-FYA	Left Turn Yield on Flashing Yellow Arrow	30" x 36"	30" x 36"	30" x 36"	7.50
R10-30	Right Turn on Red Must Yield to U-Turn	30" x 36"	30" x 36"	30" x 36"	7.50
R14-1	Truck Route	24" x 18"	24" x 18"	24" x 18"	3.00

**SIGNING NOTES:**

- SIGN SIZES ON ROADWAYS WITH POSTED SPEED LIMITS 55 MPH OR GREATER SHALL BE IN ACCORDANCE WITH THE MUTCD SIGN TABLES FOR "EXPRESSWAYS" OR "OVERSIZED" IN THE CASE OF SCHOOL ZONE SIGNS.
- IF A SIDE STREET INTERSECTS A MULTI-LANE STREET WITH A SPEED LIMIT OF 45 MPH OR HIGHER, USE A 36" X 36" R1-1.

MUTCD Designation	Sign Description	Sign Sizes (W x H) (1)			Sign Area Small / Large (S.F.)
		Facing Traffic on Single Lane St or Approach	Facing Traffic on Multi-Lane St or Approach		
	<b>Warning Signs</b>	20 mph < V < 55 mph	V < 35 mph	35 mph < V < 55 mph	
W1-1 (L or R)	Turn (Left or Right)	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W1-1a (L or R)	Advance Turn (Left or Right)	36" x 36"	36" x 36"	36" x 36"	9.00
W1-2 (L or R)	Curve (Left or Right)	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W1-2a (L or R)	Advance Curve (Left or Right)	36" x 36"	36" x 36"	36" x 36"	9.00
W1-6 (L or R)	One Direction Large Arrow (Left or Right)	48" x 24"	48" x 24"	48" x 24"	8.00
W1-7	Two Direction Large Arrow	48" x 24"	48" x 24"	48" x 24"	8.00
W1-8 (L or R)	Chevron (Left or Right)	18" x 24"	18" x 24"	18" x 24"	3.00
W2-6	Circular Intersection	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W3-1	Stop Ahead	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W3-2	Yield Ahead	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W3-3	Signal Ahead	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W3-5	Speed Reduction	36" x 36"	36" x 36"	36" x 36"	9.00
W4-2 (L or R)	Lane Ends (Left or Right)	36" x 36"	36" x 36"	36" x 36"	9.00
W4-4P	Cross Traffic Does Not Stop Plaque	24" x 12"	24" x 12"	24" x 12"	2.00
W6-1	Divided Highway	36" x 36"	36" x 36"	36" x 36"	9.00
W6-2	Divided Highway Ends	36" x 36"	36" x 36"	36" x 36"	9.00
W6-3	Two-Way Traffic	36" x 36"	36" x 36"	36" x 36"	9.00
W9-1 (L or R)	Left (Right) Lane Ends	36" x 36"	36" x 36"	36" x 36"	9.00
W10-1	R.R. Advance Warning	36" Dia.	36" Dia.	36" Dia.	7.07
W9-2 (L or R)	Lane Ends Merge Left (Right)	36" x 36"	36" x 36"	36" x 36"	9.00
W11-2 (L or R)	Pedestrian Crossing (Left or Right)	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W11-8	Emergency Vehicle	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W11-12P	Emergency Signal Ahead Plaque	36" x 30"	36" x 30"	36" x 30"	7.50
W11-15 (L or R)	Pedestrian/Bicycle Crossing (Left or Right)	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W12-1	Double Down Arrow	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W12-2	Low Clearance	36" x 36"	36" x 36"	36" x 36"	9.00
W13-1P	Advisory Speed Plaque	18" x 18"	18" x 18"	18" x 18"	2.25
W14-2	No Outlet	30" x 30"	30" x 30"	36" x 36"	6.25 / 9.00
W14-2a (L or R)	No Outlet Plaque (Left or Right)	36" x 12"	36" x 12"	36" x 12"	3.00
W14-3	No Passing Zone	48" x 48" x 36"	48" x 48" x 36"	48" x 48" x 36"	5.56
W16-7P (L or R)	Diagonal Arrow Plaque (Left or Right)	24" x 12"	24" x 12"	24" x 12"	2.00
W16-9P	Ahead Plaque	24" x 12"	24" x 12"	24" x 12"	2.00
W16-12P	Traffic Circle Plaque	24" x 18"	24" x 18"	24" x 18"	3.00
W16-17P	Roundabout Plaque	24" x 12"	24" x 12"	24" x 12"	2.00

MUTCD Designation	Sign Description	Sign Sizes (W x H) (1)			Sign Area Small / Large (S.F.)
		Facing Traffic on Single Lane St or Approach	Facing Traffic on Multi-Lane St or Approach		
	<b>School Zone Signs</b>	V < 30 mph	30 mph < V < 55 mph	20 mph < V < 55 mph	
S1-1 (L or R)	School (Left or Right)	30" x 30"	36" x 36"	36" x 36"	4.69 / 6.75
S3-1	School Bus Stop Ahead	30" x 30"	36" x 36"	36" x 36"	6.25 / 9.00
S4-5	Reduced School Speed Limit Ahead	30" x 30"	36" x 36"	36" x 36"	6.25 / 9.00
S4-1P	Time Plaque	24" x 10"	24" x 10"	24" x 10"	1.67
S4-3P	School Plaque	24" x 8"	24" x 8"	24" x 8"	1.33
S4-4P	When Flashing	24" x 10"	24" x 10"	24" x 10"	1.67
S5-1	School Speed Limit XX When Flashing	24" x 48"	24" x 48"	24" x 48"	8.00
S5-2	End School Zone	24" x 30"	24" x 30"	24" x 30"	5.00
S5-3	End School Speed Limit	24" x 30"	24" x 30"	24" x 30"	5.00
W16-5P (L or R)	Turn Arrow (Left or Right)	24" x 12"	24" x 12"	24" x 12"	2.00
W16-6P (L or R)	Advance Turn Arrow (Left or Right)	24" x 12"	24" x 12"	24" x 12"	2.00
W16-7P (L or R)	Diagonal Arrow Plaque (Left or Right)	24" x 12"	24" x 12"	24" x 12"	2.00
W16-9P	Ahead Plaque	24" x 12"	24" x 12"	24" x 12"	2.00

MUTCD Designation	Sign Description	Sign Sizes (W x H)			Sign Area Small / Large (S.F.)
		Facing Traffic on Single Lane St or Approach	Facing Traffic on Multi-Lane St or Approach		
	<b>Bicycle Facility Signs</b>	V < 30 mph	30 mph < V < 55 mph	20 mph < V < 55 mph	
R3-17	Bike Lane	24" x 18"	24" x 18"	24" x 18"	3.00
R3-17aP	Ahead Plaque	24" x 8"	24" x 8"	24" x 8"	1.33
R3-17bP	Ends Plaque	24" x 8"	24" x 8"	24" x 8"	1.33
R3-17cP	Begins Plaque	24" x 8"	24" x 8"	24" x 8"	1.33

2022 EDITION

SHEET \_\_\_\_ OF \_\_\_\_

DATE	BY	REVISION
05-01-22	LJM	REPLACES ALL PREVIOUS VERSIONS OF SIGNING DETAILS
03-01-21	LJM	REPLACES ALL PREVIOUS VERSIONS OF SIGNING DETAILS



STANDARD DETAILS FOR  
SIGNING  
SIGN INFORMATION TABLE

DAVID P. CRONIN CITY ENGINEER CRAIG S. OWENS CITY MANAGER