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CITY OF SPOKANE STANDARD PLANS – SECTION J

B-101B = Revised Standard Plan
***W-108A = New Standard Plan
#A-1 = Renumbered Standard Plan

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CITY OF SPOKANE STANDARD PLANS – SECTION J continued

B-101B = Revised Standard Plan
***W-108A = New Standard Plan
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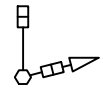
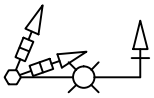
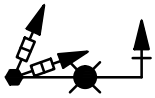
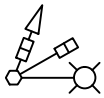
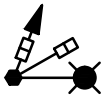
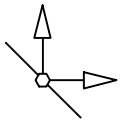
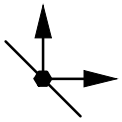
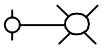
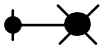
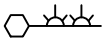
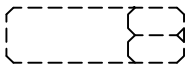
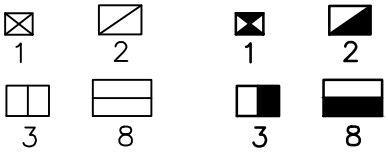
TRAFFIC SYMBOLS

SYMBOL EXISTING	SYMBOL PROPOSED	DESCRIPTION
POLES		
		SIGNAL POLE TYPE 1
		SIGNAL POLE TYPE 2
		SIGNAL POLE TYPE 3
		SIGNAL POLE TYPE 4
		SUSPENDED SIGNALS
		MAST ARM SIGNAL WITH GREEN LEFT TURN ARROW
		SIGNAL BASE & STANDARD
		PEDESTRIAN PUSH BUTTON
		LUMINAIRE
		FLASHING WARNING SYSTEM
SIGNAL HEADS		
		TRAFFIC SIGNAL HEAD W/OUT BACKPLATE
		TRAFFIC SIGNAL HEAD W/ BACKPLATE
		TRAFFIC SIGNAL HEAD W/ OUT BACKPLATE AND W/ LOUVERS
		TRAFFIC SIGNAL HEAD W/ BACKPLATE & LOUVERS
		PEDESTRIAN SIGNAL HEAD

SYMBOL EXISTING	SYMBOL PROPOSED	DESCRIPTION
DETECTORS		
		DETECTOR LOOP TYPE 1
		DETECTOR LOOP TYPE 2
		DETECTOR LOOP TYPE 3
		DETECTOR LOOP TYPE 4 (MICRO-LOOPS)
		DETECTOR LOOP TYPE 5
		RADAR VEHICLE DETECTOR
		VIDEO DETECTION CAMERA
		CCTV (CLOSED CIRCUIT TELEVSION CAMERA)
BOXES/VAULT & CONTROLLER		
		JUNCTION BOX TYPE 1 TYPE 2 TYPE 3 TYPE 8
		TRAFFIC MONUMENT
		CABLE VAULT
		PULL BOX
		TRAFFIC SIGNAL CONTROLLER CABINET
		SERVICE CABINET
		VMS CONTROL CABINET
EMERGENCY VEHICLE INDICATOR LIGHTS		
		EVP GPS SENSOR
		INDICATOR LIGHTS
		EVP OPTICAL SENSOR

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

ADOPTED: 02/1986
REVISED: 11/2018
SUPERSEDES: 02/2015
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH/JHM

TRAFFIC SYMBOLS

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-100

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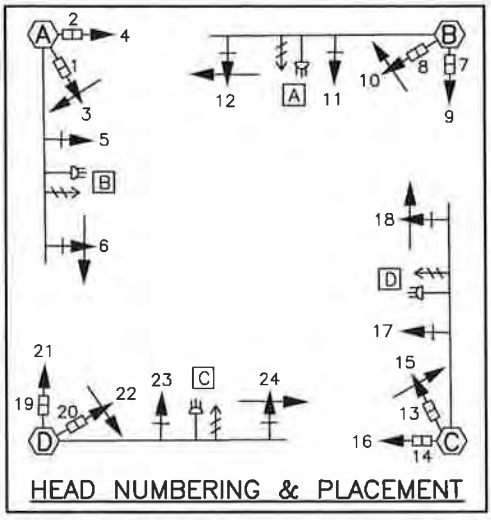
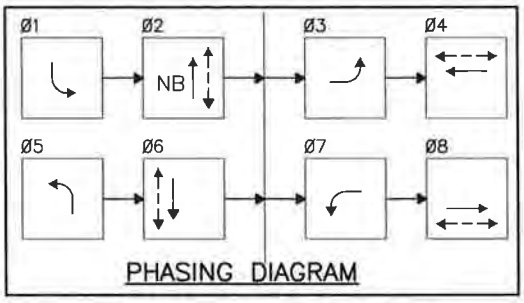
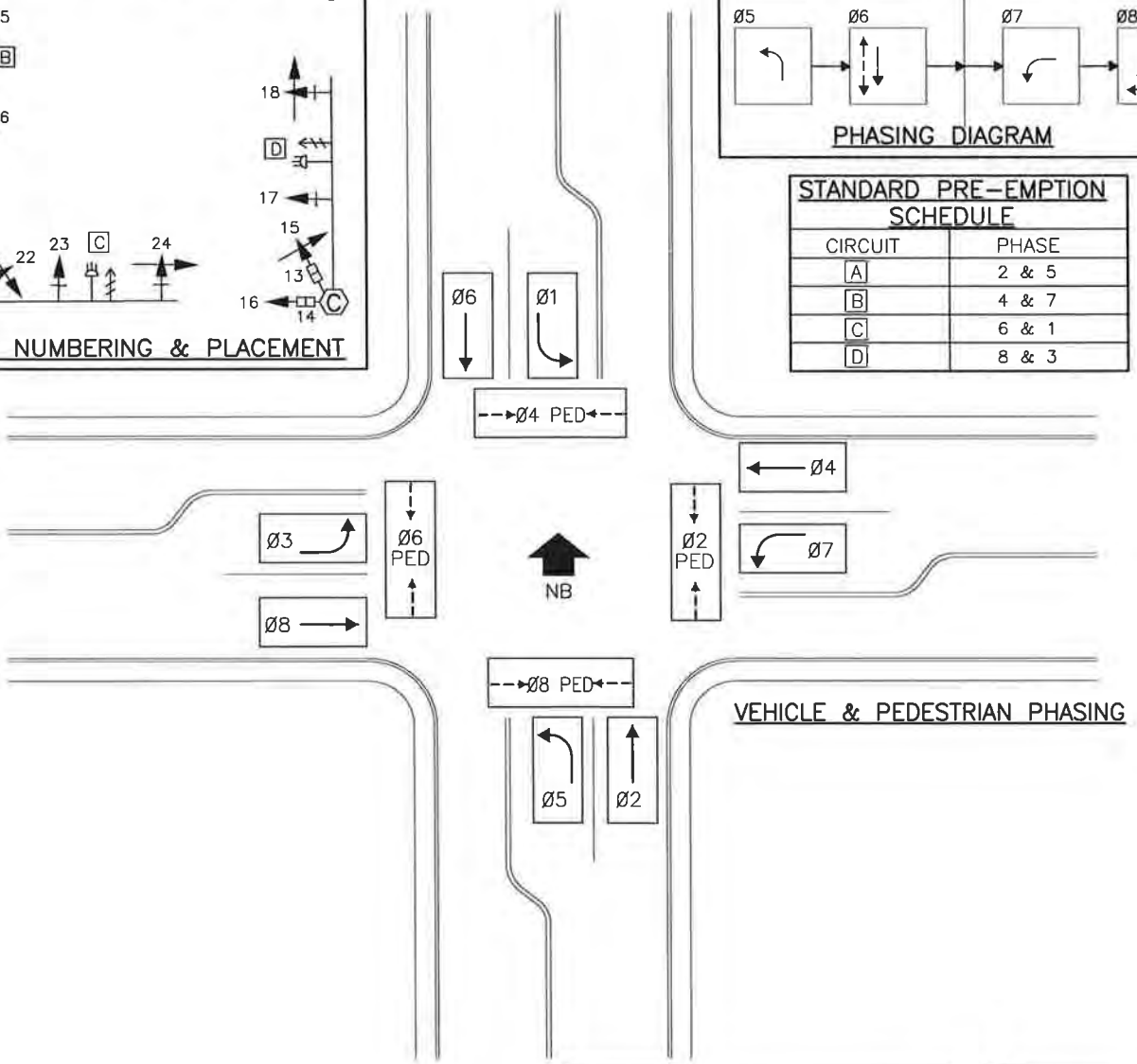


HEAD NUMBERING & PLACEMENT



PHASING DIAGRAM

STANDARD PRE-EMPTION SCHEDULE	
CIRCUIT	PHASE
A	2 & 5
B	4 & 7
C	6 & 1
D	8 & 3



VEHICLE & PEDESTRIAN PHASING

NOTES

1. SIGNAL & WIRING PLANS SHALL BE ORIENTED IN THE NORTH DIRECTION. Ø2 SHALL CORRESPOND WITH THE NORTHBOUND TRAFFIC OR CLOSEST TRAFFIC IN THE NORTHBOUND DIRECTION.
2. SHEET SCALE FOR SIGNAL & WIRING PLAN IS 1"=20'.
3. LETTER LABELS FOR SIGNAL STANDARDS SHALL START WITH "A" IN THE NORTHWEST CORNER & CONTINUES IN THE CLOCKWISE DIRECTION.
4. LETTER LABELS FOR PRE-EMPTIONS SHALL START WITH "A" FOR Ø2 & Ø5 & CONTINUE IN THE COUNTER-CLOCKWISE DIRECTION.
5. LABELS FOR HEADS SHALL START WITH "1" WITH STANDARD "A" WITH PED. HEADS, THEN SIGNAL HEADS ON VERTICAL POLE, & CONTINUES WITH HEAD(S) ON MAST ARM CLOSEST TO POLE.

HEAD PHASING ASSIGNMENTS (TYPICAL NUMBERING)								
PHASE	Ø1 SB LT TURN	Ø2 NB THRU	Ø3 EB LT TURN	Ø4 WB THRU	Ø5 NB LT TURN	Ø6 SB THRU	Ø7 WB LT TURN	Ø8 EB THRU
12" VEHICLE	—	9,11	—	4,5	—	22,23	—	16,17
12" VEHICLE LEFT TURN INDICATOR	15,24	—	10,18	—	3,12	—	6,21	—
PEDESTRIAN COUNTDOWN	—	7,13	—	2,8	—	1,20	—	14,19

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

PRINCIPAL ENGINEER, CONST. — KENNETH M. BROWN, P.E.

ADOPTED: 2/2015
REVISED:
SUPERSEDES:
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

BASIC 8 PHASE INTERSECTION
PHASING & EQUIPMENT LAYOUT

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-100A

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SIGNAL MOUNTING BRACKET DESIGNATION

TOP OF POLE	# OF SECTIONS	# OF VEHICLE HEADS	TOP OF POLE	# OF PED DISPLAYS	BACK OF POLE MOUNTED	# OF SECTIONS	# OF VEHICLE HEADS	POLE MOUNTED	# OF PED DISPLAYS	MAST ARM MOUNTED	# OF SECTIONS
A	(X)	X	F	X	B	(X)	X	P	(X)	D	(X)

EXAMPLE
A(4)1–A(3)1,
F2

–TOP OF POST MOUNTED
–ONE 4 SECTION HEAD
–ONE 3 SECTION HEAD
–TWO PED DISPLAYS

SIGNAL HEAD WIRING

CONDUCTOR NO.	INSULATION COLOR	#14–5 COND. FOR 3 SECTION HEAD D(3)–A(3)–B(3)	#14–7 COND. FOR 4 SECTION HEAD D(4)–A(4)–B(4)	#14–7 COND. FOR 5 SECTION HEAD D(5)–A(5)–B(5)	#14–10 COND. FOR A(3,4)2–B(3.4)2 A(3)2–B(3)2 HEADS
1	BLACK	SPARE	FLASHING YELLOW	YELLOW ARROW	FLASHING YELLOW/SPARE
2	WHITE	COMMON–AC	COMMON–AC	COMMON–AC	COMMON–AC
3	RED	RED	RED	RED	RED PH 2 OR 6
4	GREEN	GREEN	GREEN ARROW	GREEN	GREEN PH 2 OR 6
5	ORANGE	YELLOW	YELLOW	YELLOW	YELLOW PH 2 OR 6
6	BLUE		GREEN ARROW/SPARE	GREEN ARROW	ARROW/SPARE
7	WHITE/BLACK*		SPARE	SPARE	SPARE
8	RED/BLACK*				RED PH 4 OR 8
9	GREEN/BLACK*				GREEN PH 4 OR 8
10	ORANGE/BLACK*				YELLOW PH 4 OR 8

*TRACER COLOR

SIGNAL POLE PEDESTRIAN DISPLAY & BUTTON WIRING

CONDUCTOR NO.	INSULATION COLOR	#14–5 COND. 1 PEDESTRIAN HEAD DISPLAY	#14–10 COND. 2 PEDESTRIAN HEAD DISPLAY
1	BLACK	SPARE	SPARE
2	WHITE	COMMON–AC	COMMON–AC
3	RED	DON'T WALK	DON'T WALK PH 2 OR 6
4	GREEN	WALK	WALK PH 2 OR 6
5	ORANGE		PUSH BUTTON PH 2 OR 6
6	BLUE		SPARE
7	WHITE/BLACK*		COMMON–PUSH BUTTON
8	RED/BLACK*		DON'T WALK PH 4 OR 8
9	GREEN/BLACK*		WALK PH 4 OR 8
10	ORANGE/BLACK*		PUSH BUTTON PH 4 OR 8

*TRACER COLOR

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

CITY ENGINEER — DANIEL ALBERT BULLER, P.E.

ADOPTED: 3/2015
REVISED: 11/2018
SUPERSEDES: 3/2015
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

SIGNAL HEAD & PEDESTRIAN DISPLAY WIRING

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–100B

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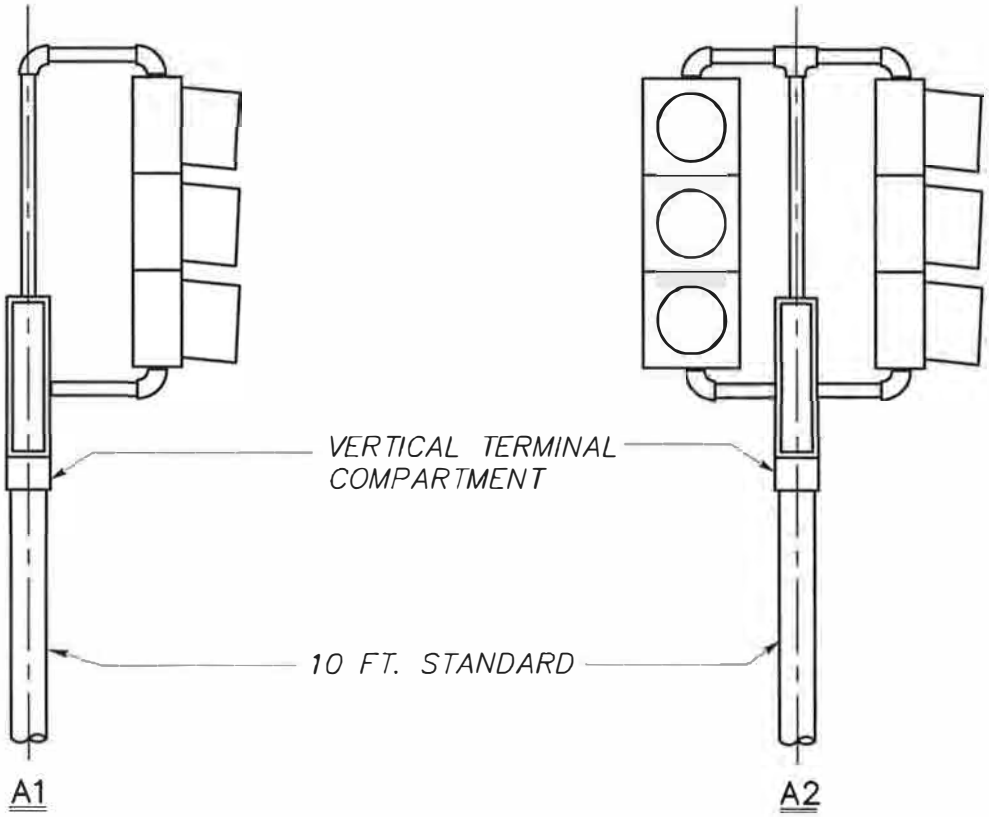

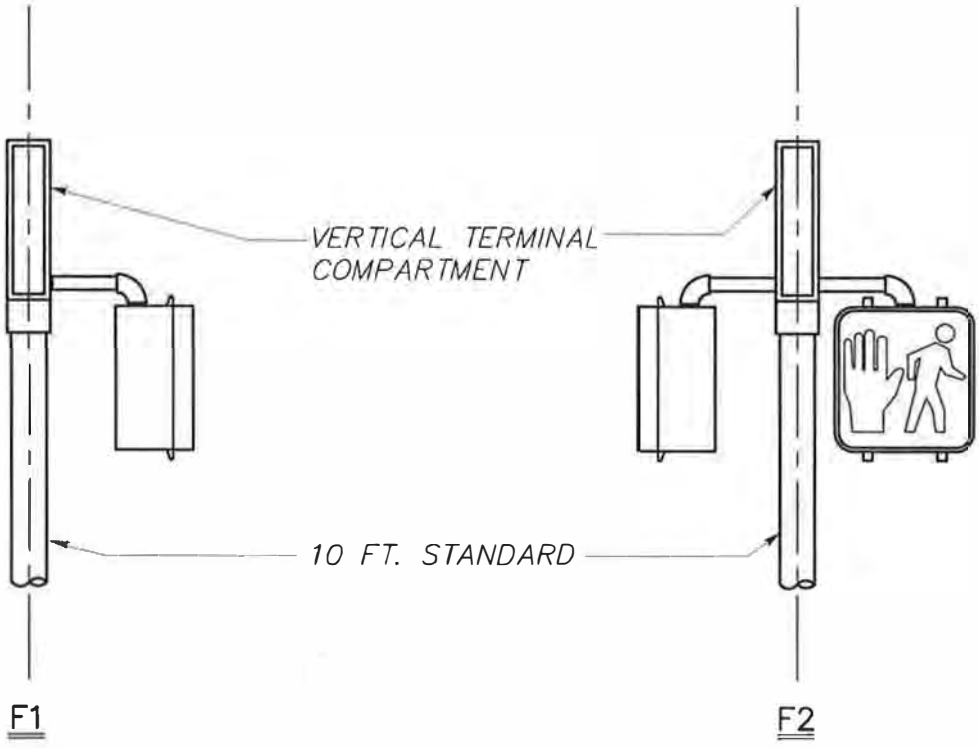

APPROVED BY

DIRECTOR, ENGINEERING SERVICES — TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN — KEN M. BROWN, P.E.

ADOPTED: 2/86
REVISED: 4/2004
SUPERSEDES: 3/99
SCALE: NTS
DWG/REV. BY: SRM

SIGNAL MOUNTINGS, POST TOP

TYPES A1, A2, F1, F2

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–101

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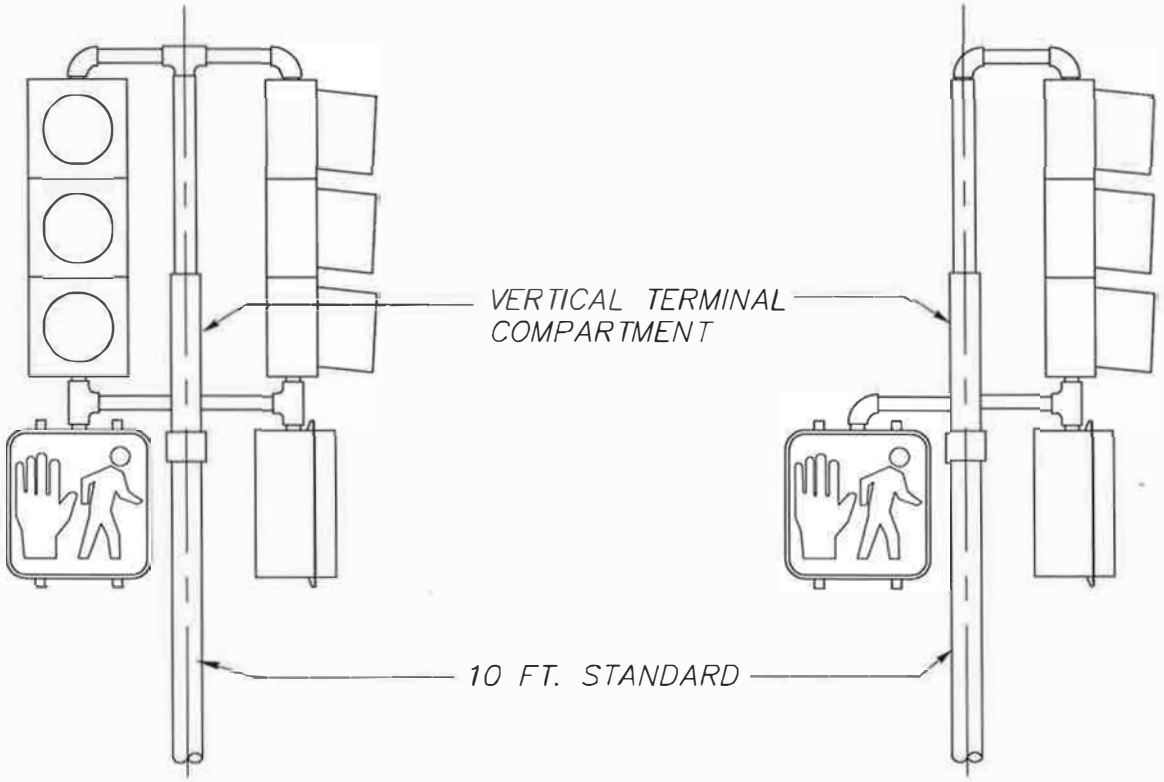
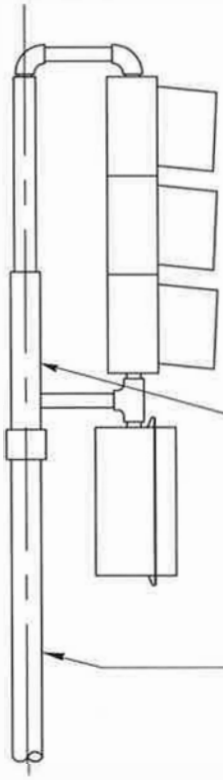
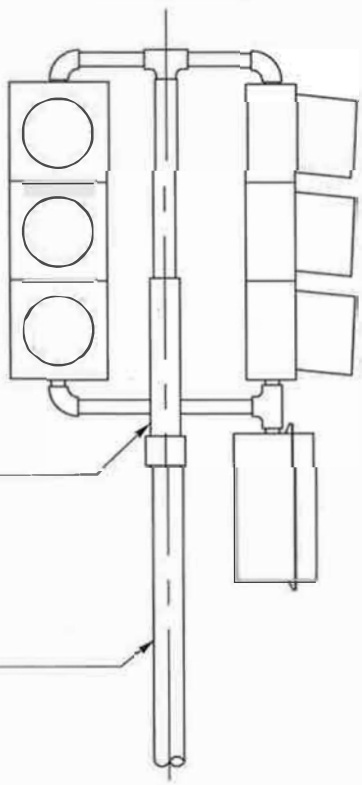


A(3)2–F2

A(3)1–F2



A(3)1–F1



A(3)2–F1

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

PRINCIPAL ENGINEER, CONST. — KENNETH M. BROWN, P.E.

ADOPTED:	2/86
REVISED:	04/2015
SUPERSEDES:	04/2004
CHECKED BY:	GTQ
SCALE:	N TS
DWG/REV. BY:	GOM

SIGNAL MOUNTINGS, POST TOP

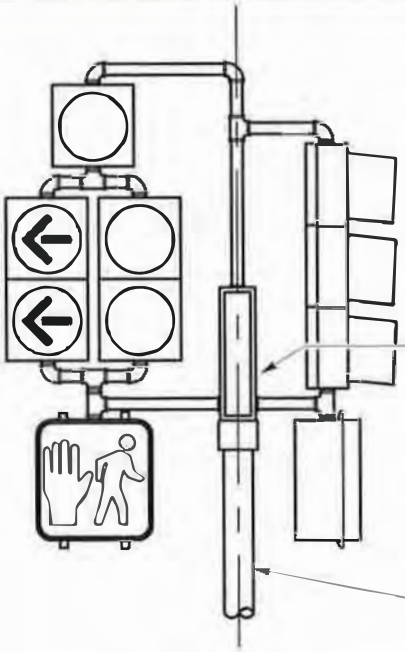
TYPES A(3)2–F2 , A(3)1–F2 , A(3)1–F1 , A(3)2–F1

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–101B

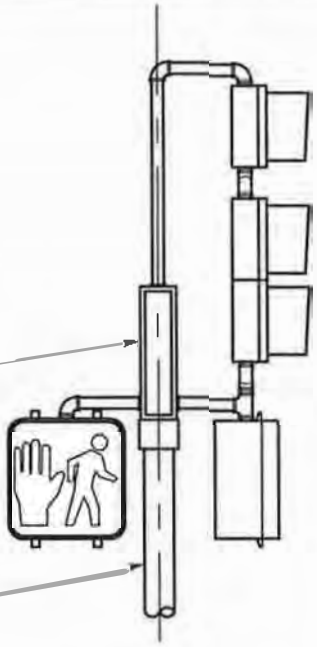
Back to Section J - TOC



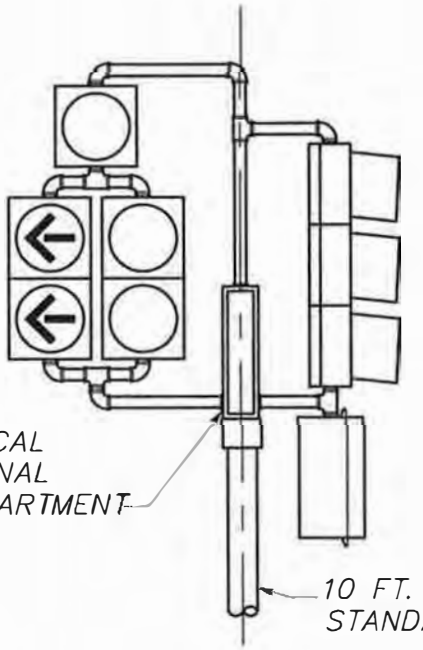
VERTICAL TERMINAL COMPARTMENT

10 FT. STANDARD

A(5)1–A(3)1
F2



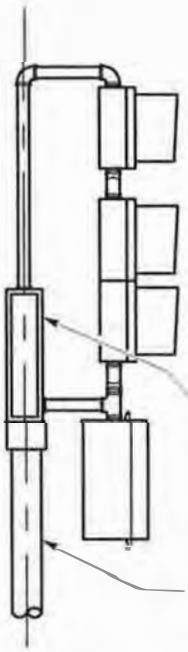
A(5)1
F2



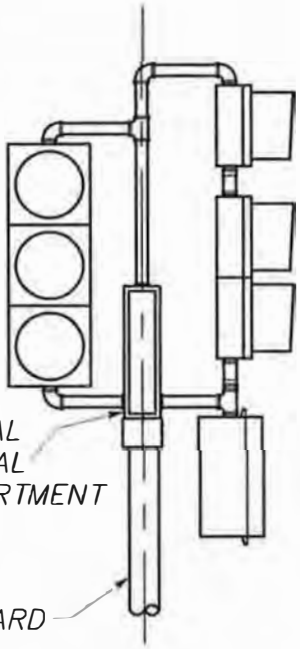
VERTICAL TERMINAL COMPARTMENT

10 FT. STANDARD

A(5)1–A(3)1
F1



A(5)1
F1



VERTICAL TERMINAL COMPARTMENT

10 FT. STANDARD

A(3)1–A(5)1
F1

APPROVED BY

DIRECTOR, ENGINEERING SERVICES TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN KEN M. BROWN, P.E.

ADOPTED: 5/97
REVISED: 4/2004
SUPERSEDES: 3/99
SCALE: NTS
DWG/REV. BY: SRM

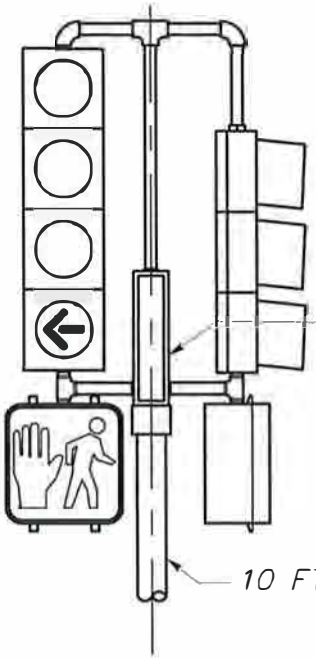
SIGNAL MOUNTINGS, POST TOP

TYPES A(5)1–A(3)1–F2, A(5)1–F2, A(5)1–A(3)1–F1, A(5)1–F1, A(3)1–A(5)1–F1

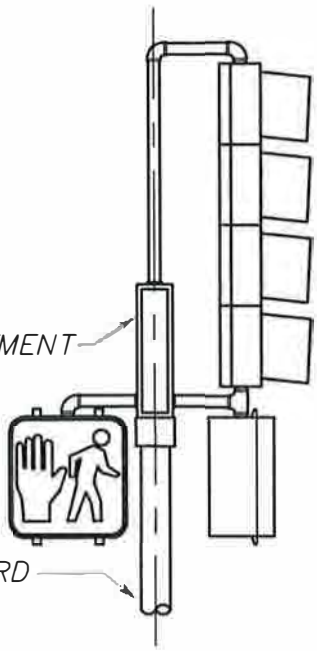
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–101C

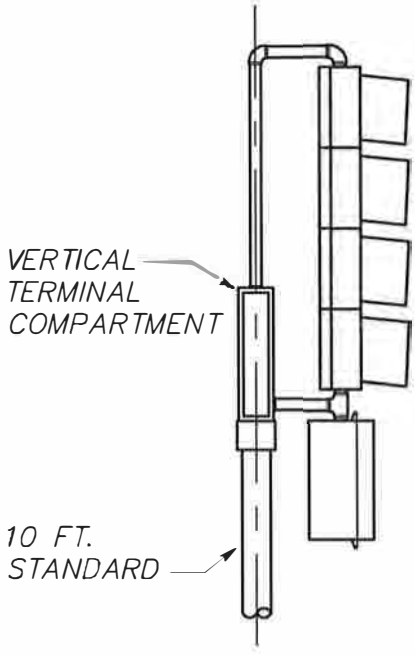
Back to Section J - TOC



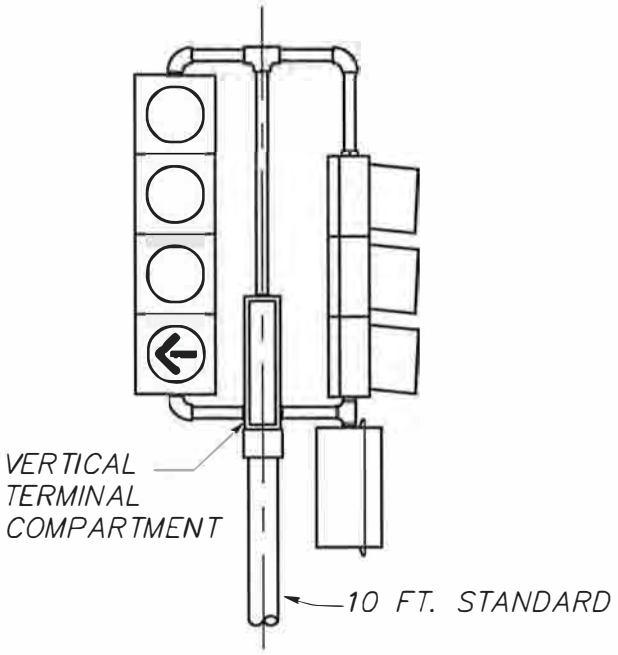
A(4)1–A(3)1
F2



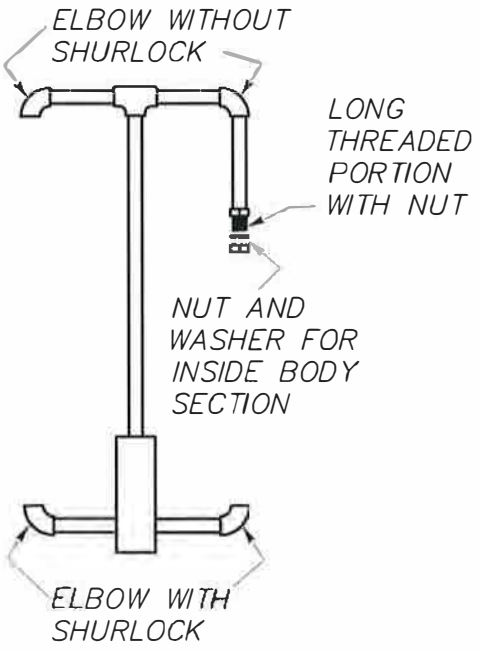
A(4)1
F2



A(4)1
F1



A(4)1–A(3)1
F1



APPROVED BY

DIRECTOR, ENGINEERING SERVICES — TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN — KEN M. BROWN, P.E.

ADOPTED: 4/2004
REVISED:
SUPERSEDES:
SCALE: NTS
DWG/REV. BY: SRM

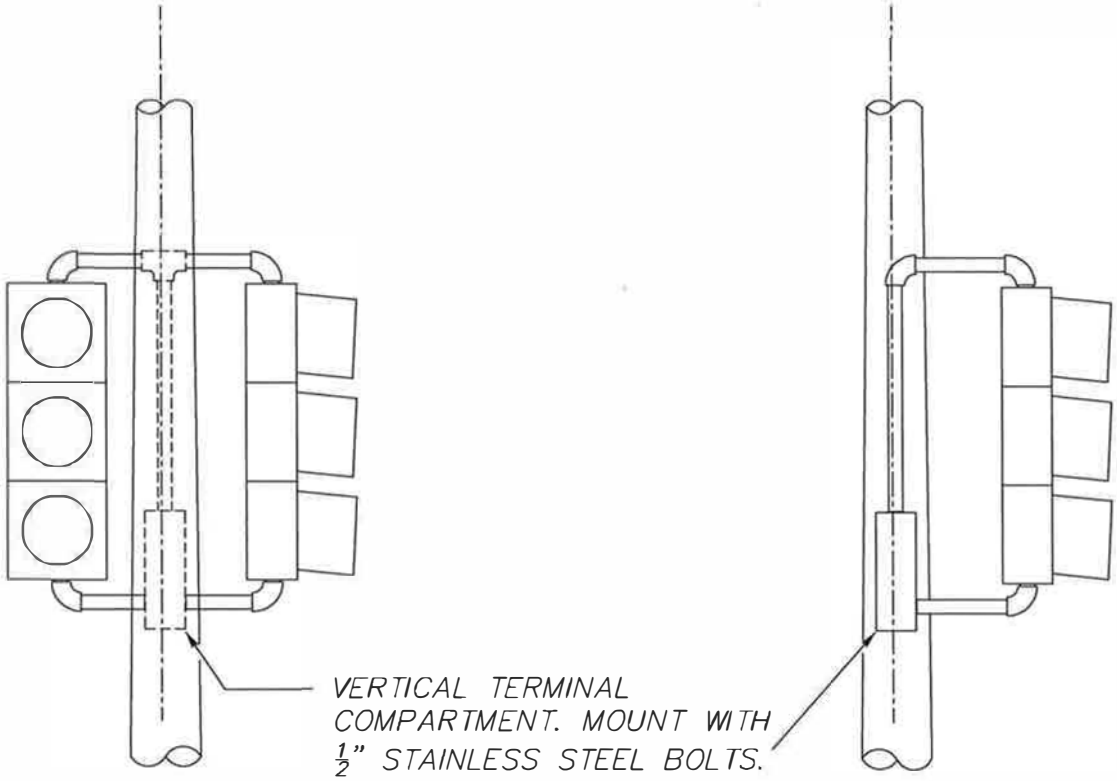
SIGNAL MOUNTINGS, POST TOP

TYPES A(4)1–A(3)1–F2, A(4)1–F2, A(4)1–A(3)1–F1, A(4)1–F1

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

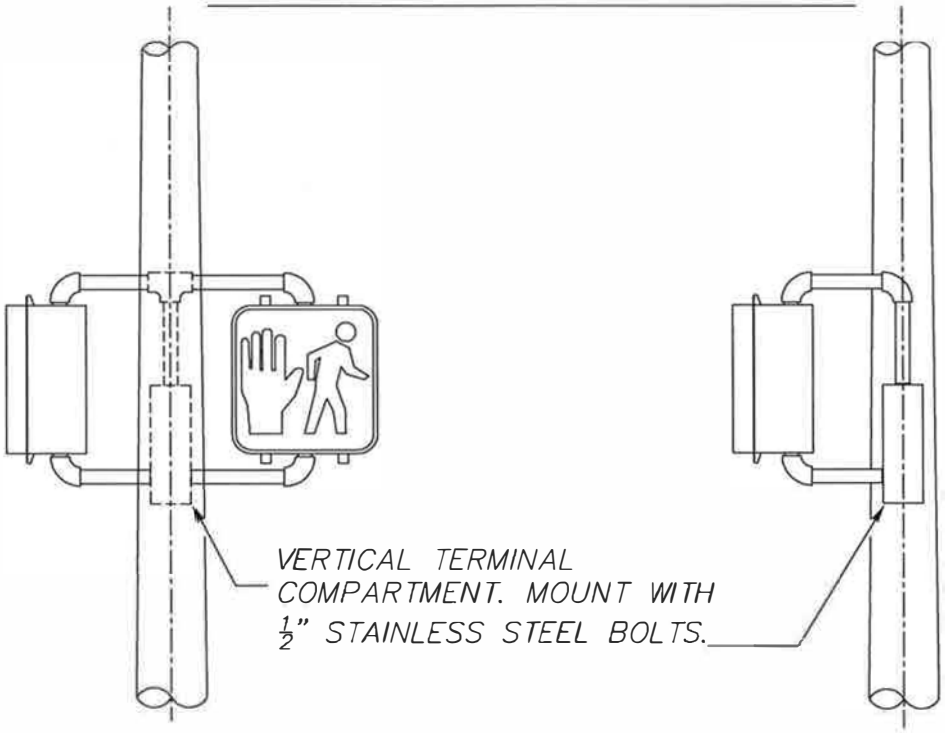
STANDARD PLAN No. J–101D

Back to Section J - TOC



B(3)2 B(3)1

SIGNAL MOUNT COLOR – DARK GREEN



P2 P1

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

PRINCIPAL ENGINEER, CONST. KENNETH M. BROWN, P.E.

ADOPTED: 05/1997
REVISED: 04/2015
SUPERSEDES: 05/2007
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: GOM

BRACKET SIGNAL MOUNTINGS

TYPES B(3)2–B(3)1 & P2–P1

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–102

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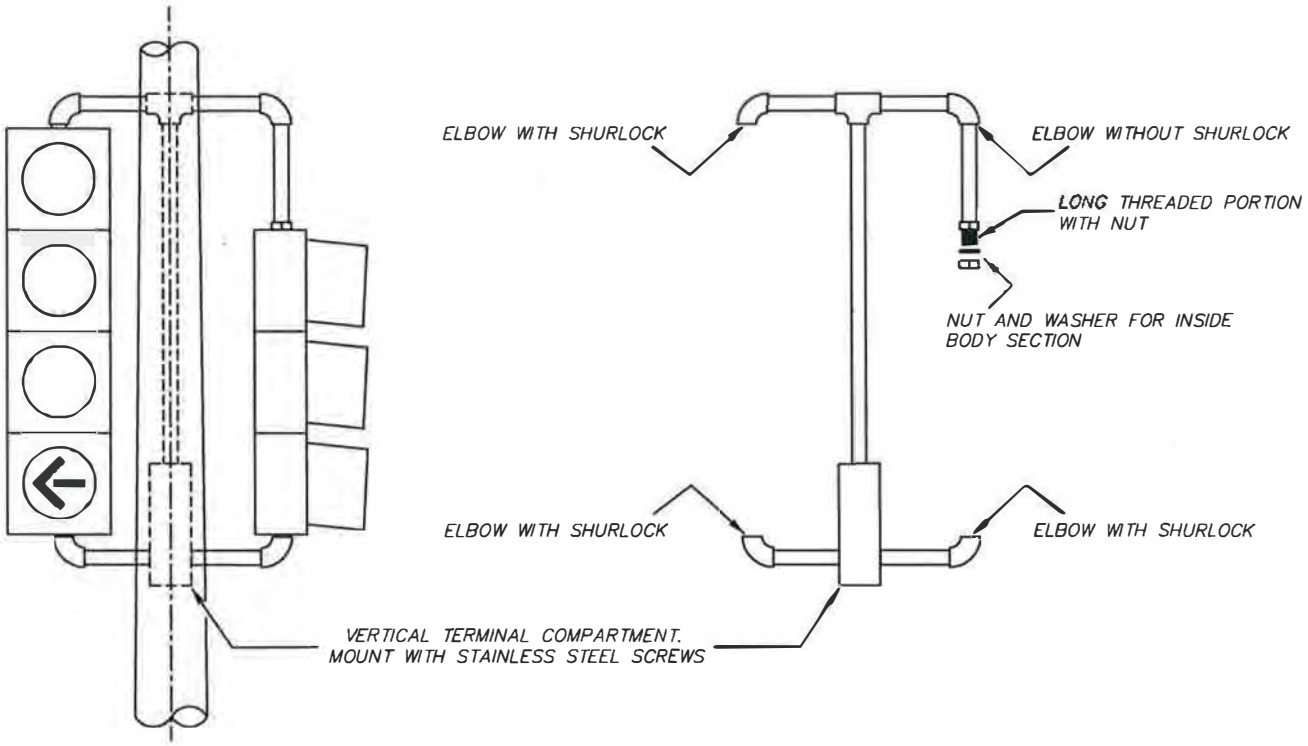
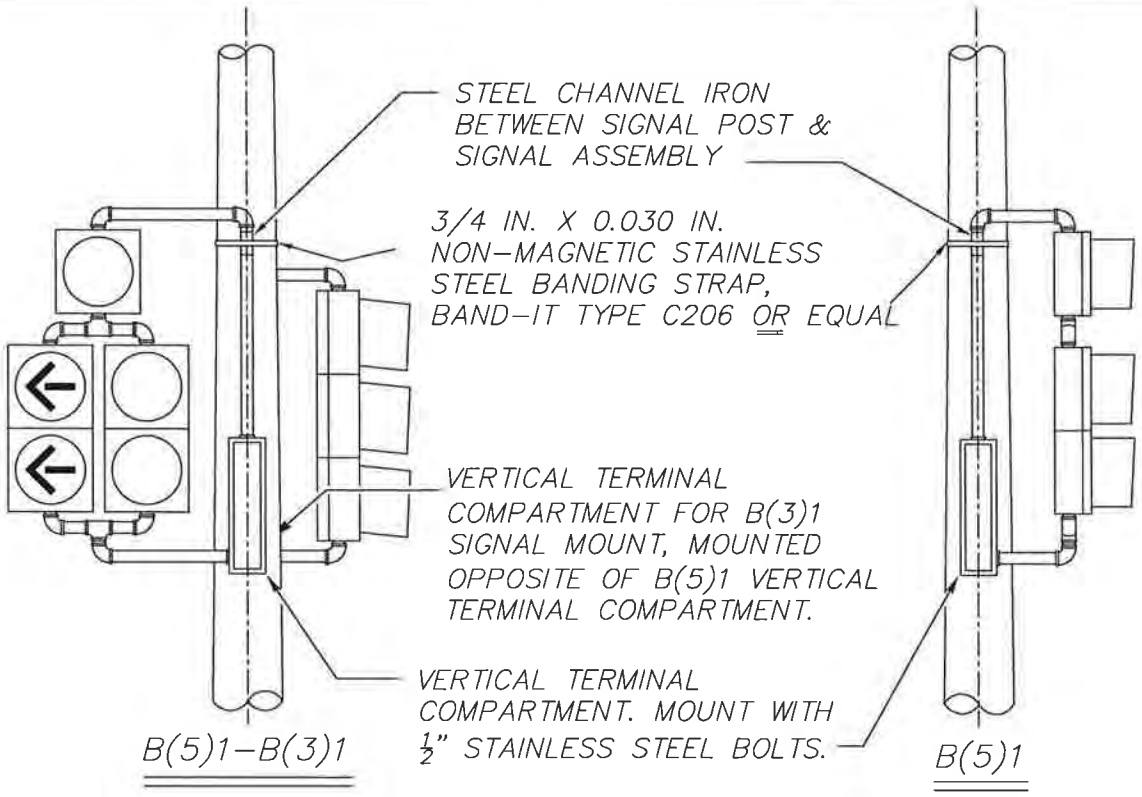
SIGNAL MOUNT COLOR – DARK GREEN

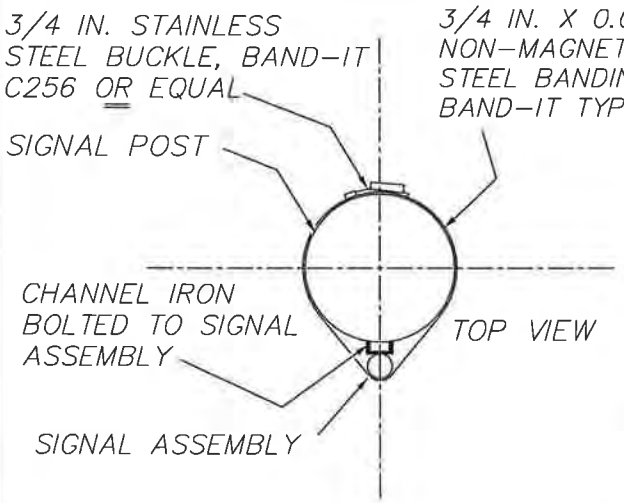


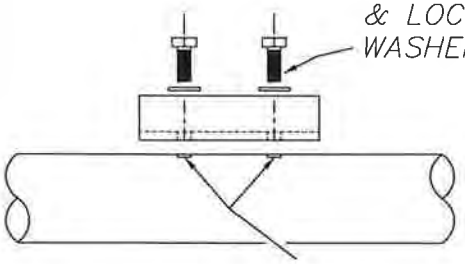
B(4,3)2

APPROVED BY		
ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG	ADOPTED: 04/2015	BRACKET SIGNAL MOUNTINGS TYPE B(4,3)2
PRINCIPAL ENGINEER, CONST. — KENNETH M. BROWN, P.E.	REVISED:	
	SUPERSEDES:	
	CHECKED BY: GTO	ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON
	SCALE: NTS	STANDARD PLAN No. J–102A
	DWG/REV. BY: GOM	

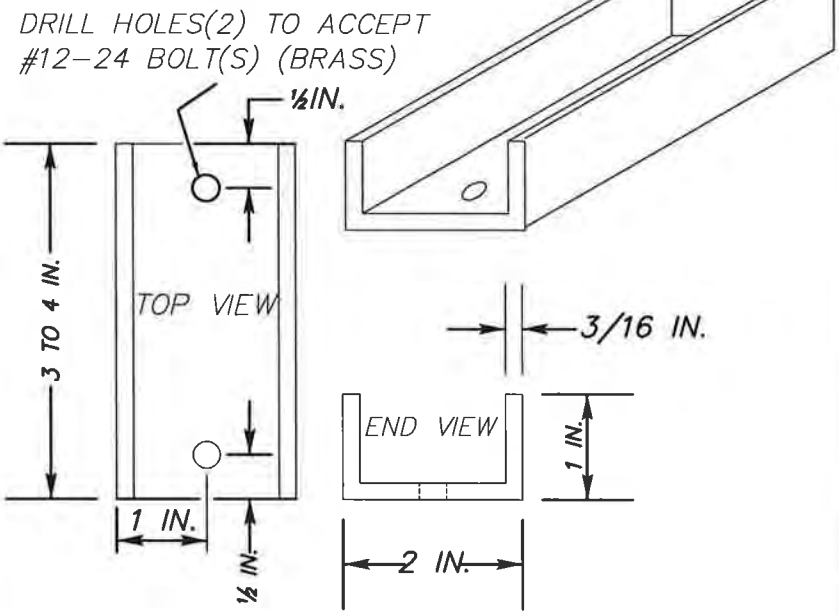
Back to Section J - TOC







DRILL AND TAP HOLE(S) IN SIGNAL ASSEMBLY TO ACCEPT #12-24 BOLT(S)



* STEEL CHANNEL IRON AND APPLICABLE APPURTENANCES SHALL BE SUPPLIED BY THE CONTRACTOR INSTALLING THESE TYPES OF SIGNAL MOUNTS.

SIGNAL MOUNT COLOR – DARK GREEN

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

PRINCIPAL ENGINEER, CONST. KENNETH M. BROWN, P.E.

ADOPTED:	05/1997
REVISED:	04/2015
SUPERSEDES:	05/2007
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	GOM

BRACKET SIGNAL MOUNTS

TYPES B(5)1-B(3)1 & B(5)1

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-102B

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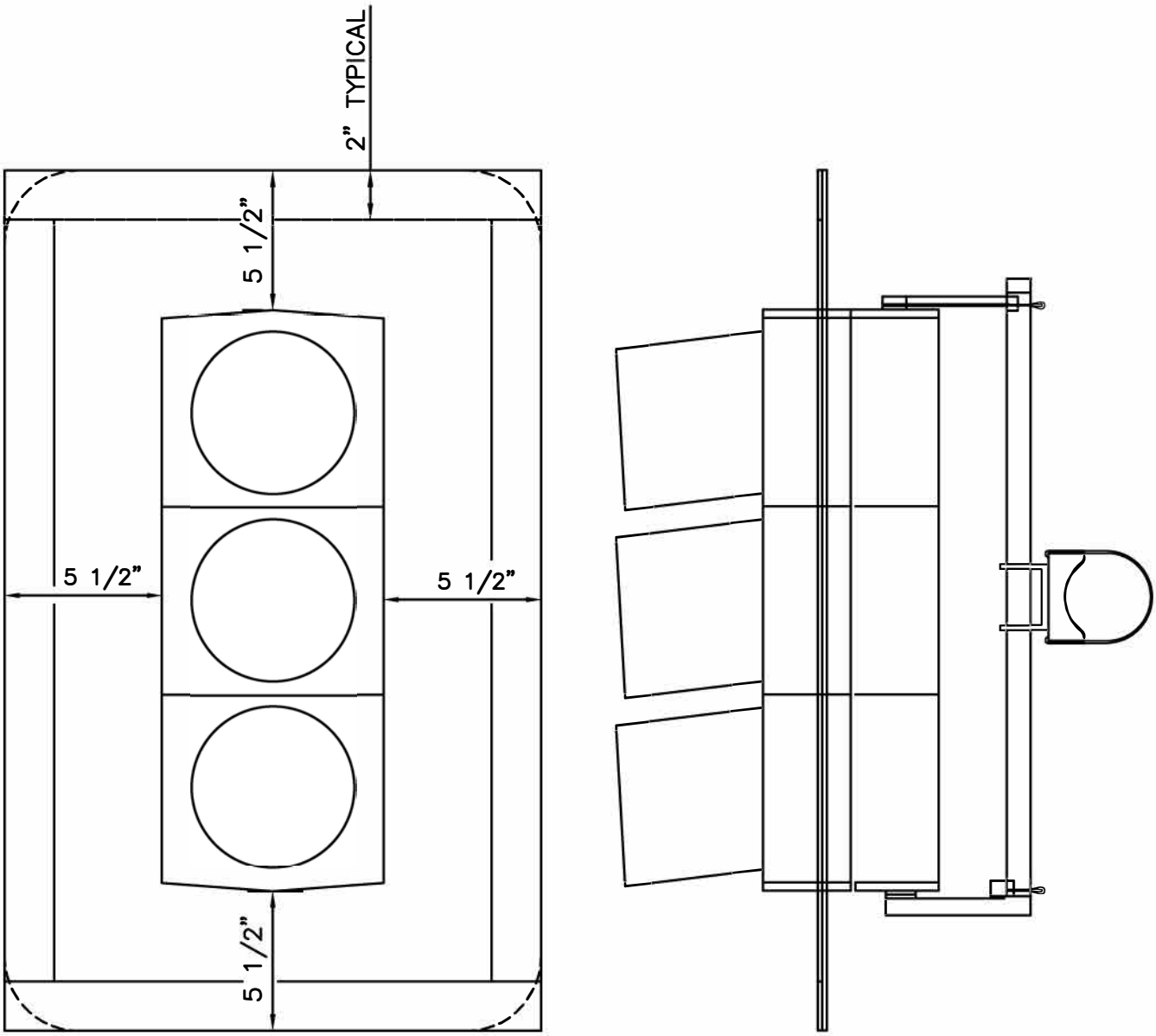


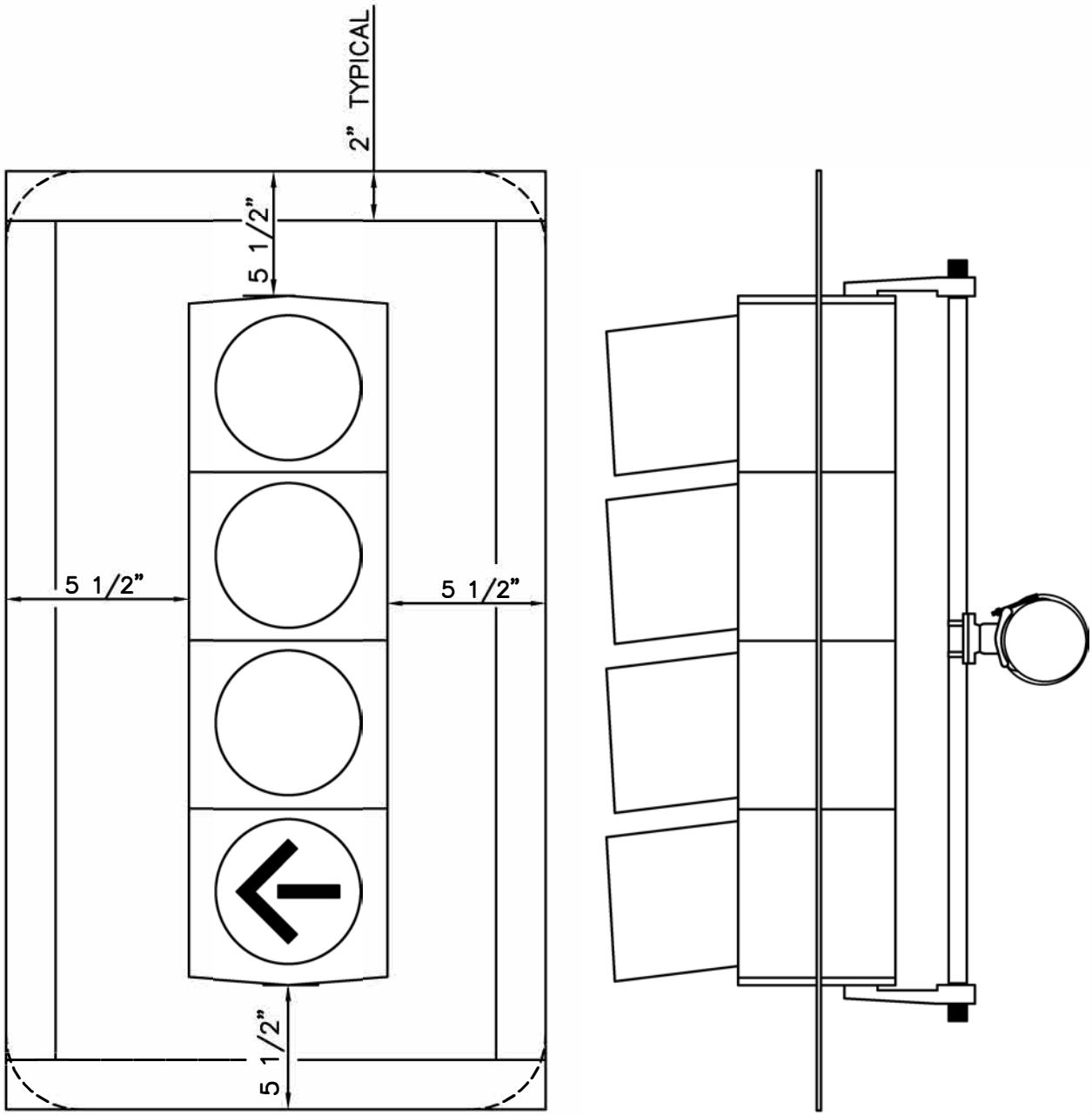
D(3)

NOTE

INSTALL 2 INCHES OF #3931 YELLOW TYPE 4 HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING ON SIGNAL BACK PLATE ALONG PERIMETER.

APPROVED BY ENGINEERING OPERATIONS MANAGER KYLE TWOHIG CITY ENGINEER DANIEL ALBERT BULLER, P.E.	ADOPTED: 03/88 REVISED: 11/2018 SUPERSEDES: 04/2015 CHECKED BY: GTO SCALE: NTS DWG/REV. BY: GOM/JHM	SIGNAL MOUNT, MAST ARM TYPE D(3) ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON STANDARD PLAN No. J–103A

Back to Section J - TOC



D(4)

NOTE

INSTALL 2 INCHES OF #3931 YELLOW TYPE 4 HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING ON SIGNAL BACK PLATE ALONG PERIMETER.

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

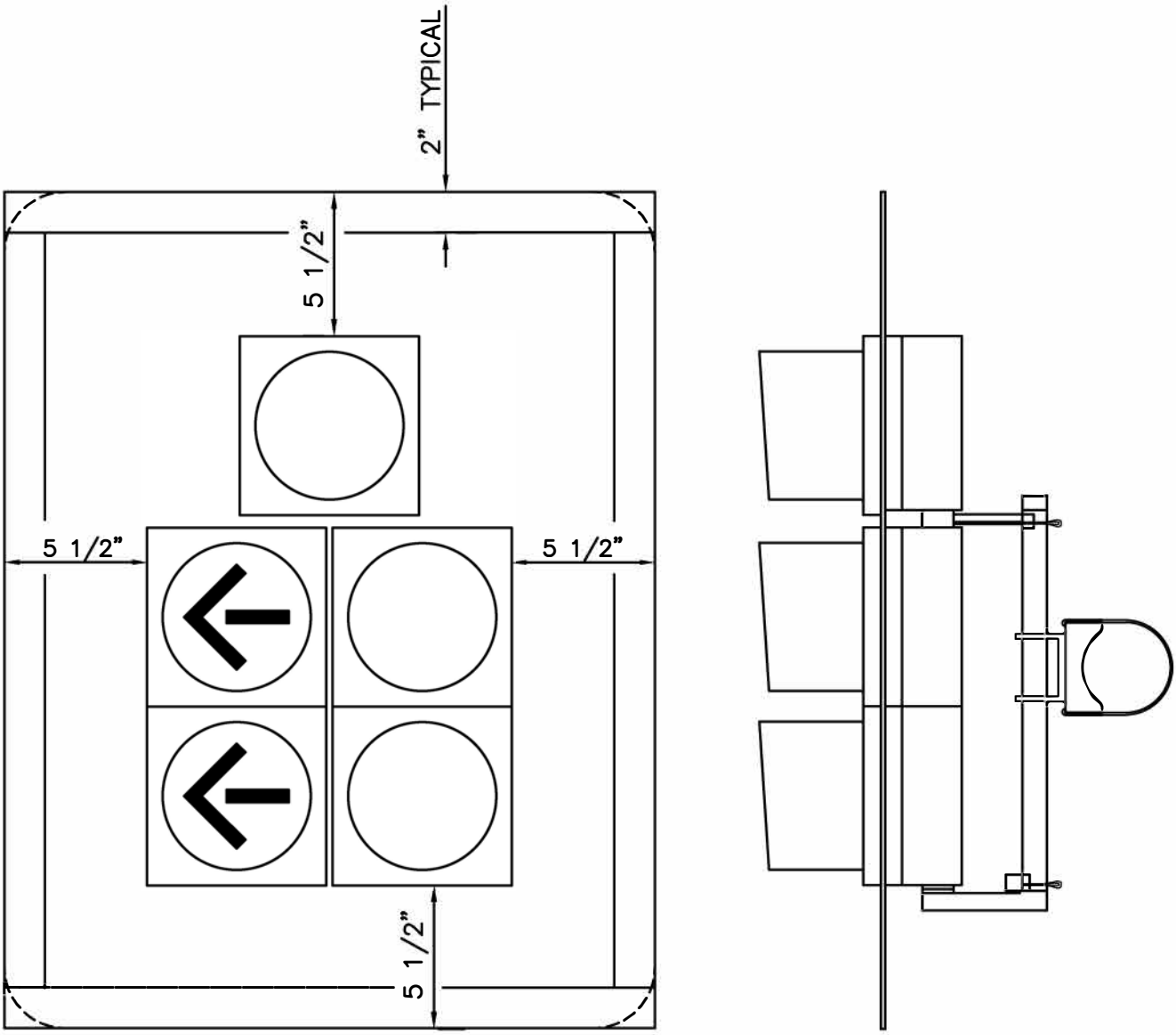
ADOPTED: 03/88
REVISED: 11/2018
SUPERSEDES: 04/2015
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: GOM/JHM

SIGNAL MOUNT, MAST ARM
TYPE D(4)

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–103B

Back to Section J - TOC



D(5)

NOTE

INSTALL 2 INCHES OF #3931 YELLOW TYPE 4 HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING ON SIGNAL BACK PLATE ALONG PERIMETER.

APPROVED BY ENGINEERING OPERATIONS MANAGER KYLE TWOHIG CITY ENGINEER DANIEL ALBERT BULLER, P.E.	ADOPTED: 03/99 REVISED: 11/2018 SUPERSEDES: 04/2004 SCALE: NTS DWG/REV. BY: SRM/MDH	**SIGNAL MOUNT, MAST ARM** **TYPE D(5)** ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **J–103C**

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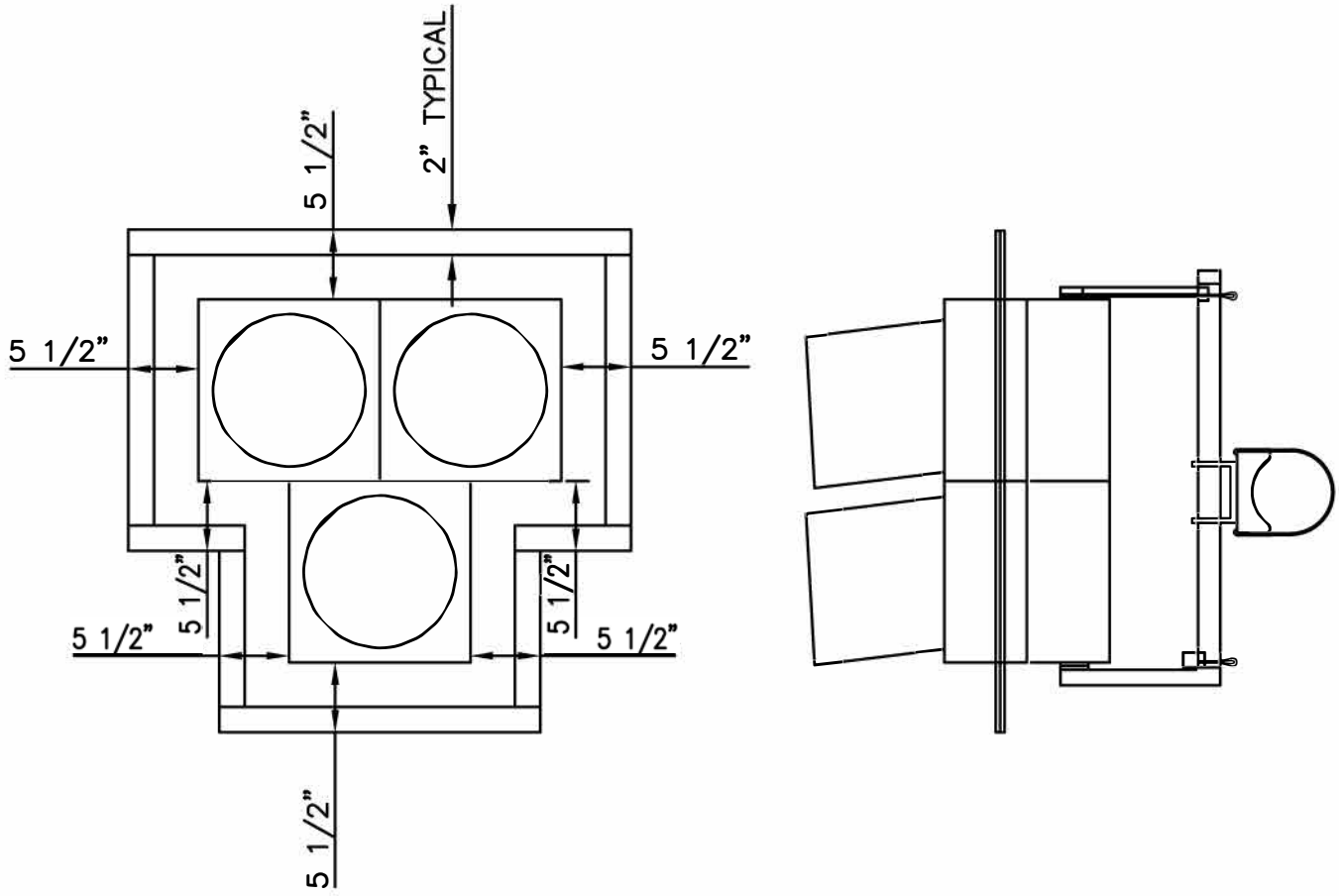


D(3B)

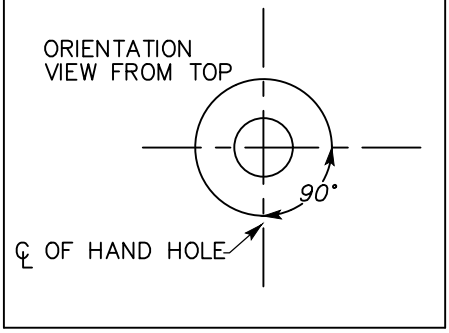
NOTE

INSTALL 2 INCHES OF #3931 YELLOW TYPE 4 HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING ON SIGNAL BACK PLATE ALONG PERIMETER.

APPROVED BY ENGINEERING OPERATIONS MANAGER KYLE TWOHIG CITY ENGINEER DANIEL ALBERT BULLER, P.E.	ADOPTED: 11/2018 REVISED: SUPERSEDES: CHECKED BY: GTO SCALE: NTS DWG/REV. BY: MDH	SIGNAL MOUNT, MAST ARM TYPE D(3B) ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON	STANDARD PLAN No. J-103D

Back to Section J - TOC

APPURTENANCE ORIENTATION



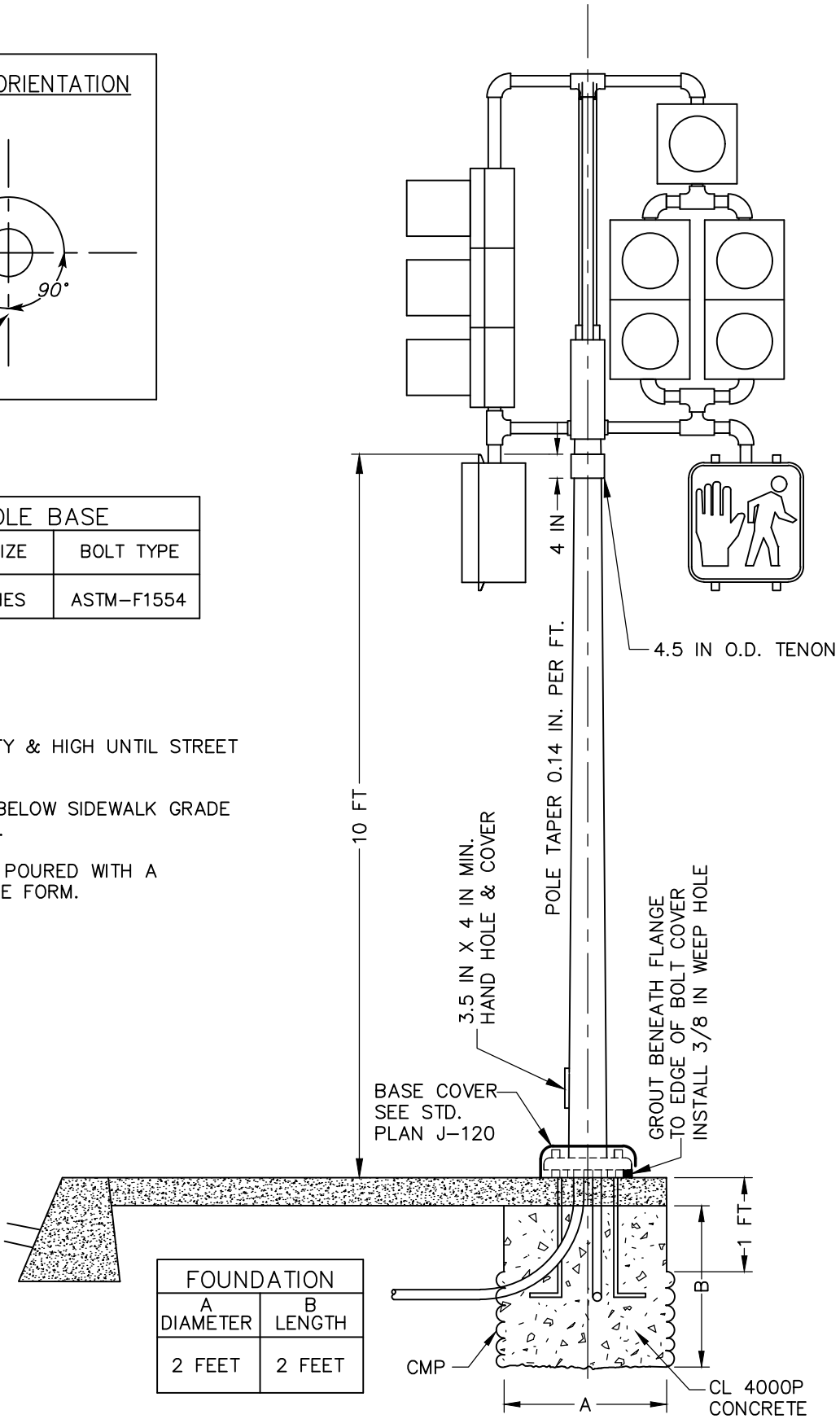
VERTICAL POLE BASE		
BOLT CIRCLE	BOLT SIZE	BOLT TYPE
8½ INCHES	¾ INCHES	ASTM–F1554

NOTES

1. CMP SHALL BE LEFT EMPTY & HIGH UNTIL STREET CURB IS INSTALLED.

2. CMP SHALL BE CUT OFF BELOW SIDEWALK GRADE PRIOR TO FOUNDATION POUR.

3. THE TOP 1 FT. SHALL BE POURED WITH A STRIPPABLE CARDBOARD TYPE FORM.



FOUNDATION	
A DIAMETER	B LENGTH
2 FEET	2 FEET

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 10/2020
SUPERSEDES: 01/2017
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH/MLD

SIGNAL POLE & FOUNDATION
TYPE 1

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **J–104**

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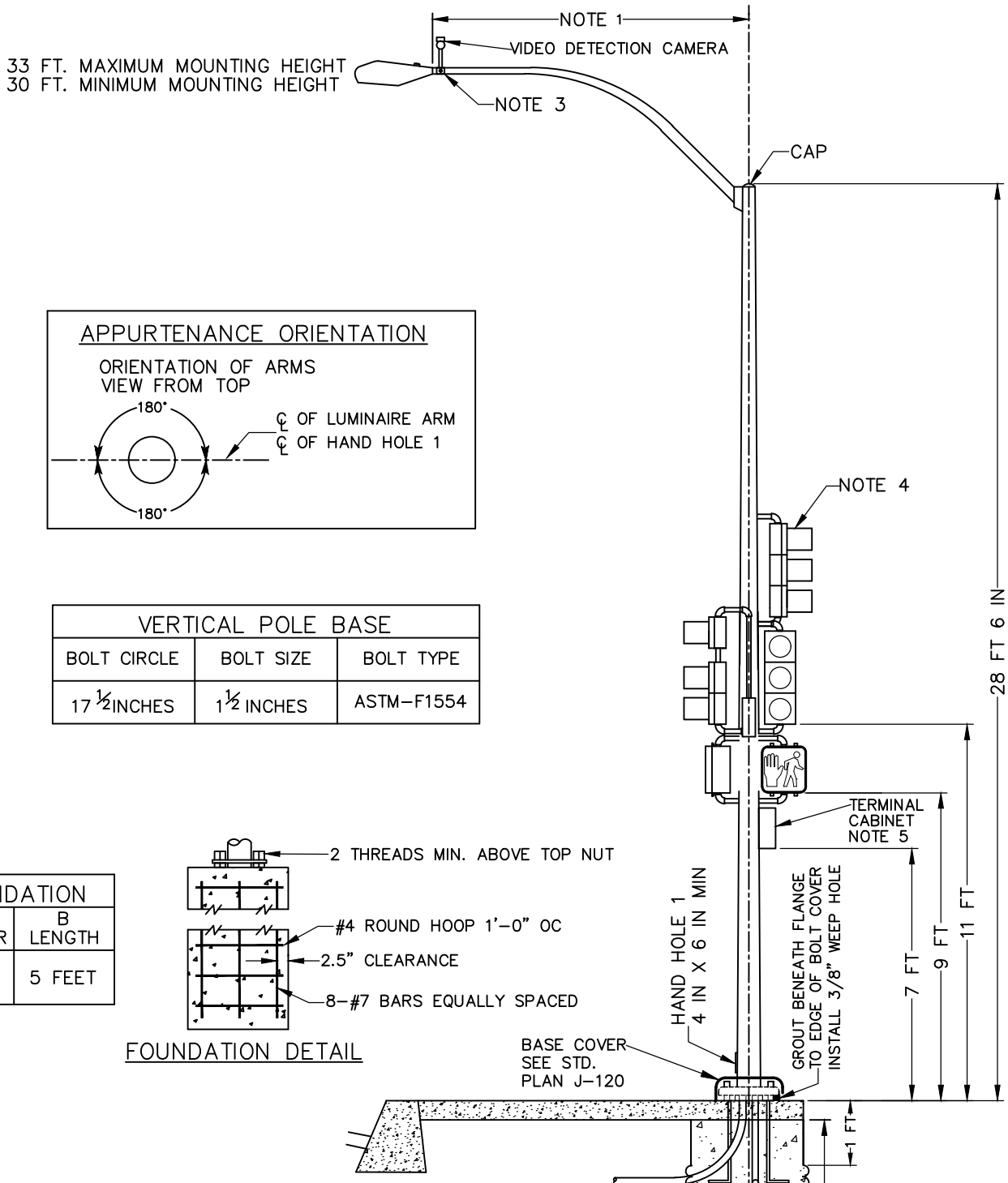

APPURTENANCE ORIENTATION

ORIENTATION OF ARMS
VIEW FROM TOP

VERTICAL POLE BASE		
BOLT CIRCLE	BOLT SIZE	BOLT TYPE
17 ½ INCHES	1½ INCHES	ASTM–F1554

FOUNDATION	
A DIAMETER	B LENGTH
3 FEET	5 FEET

FOUNDATION DETAIL

NOTES

1. SIGNAL STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. LUMINAIRE ARMS GREATER THAN 20 FEET ARE TO BE SPECIAL DESIGN STANDARDS.
3. 1 3/8 INCH HOLE UNDERNEATH MAST ARM FOR VIDEO WIRES–ACCESS TO BE DRILLED BY CONTRACTOR.
4. OPTIONAL–NEAR RIGHT OR LEFT SIDE B(3) VEHICLE HEAD FOR APPROACH TRAFFIC IN RADIUS. SIDE OF POLE, HEIGHT VEHICLE HEAD IS LOCATED & DIRECTION VEHICLE HEAD IS FACING MAY VARY DEPENDING ON SPECIFIC DESIGN NEEDS OF THE INTERSECTION.
5. INSTALLATION OF A TERMINAL CABINET WILL VARY WITH SPECIFIC DESIGN NEEDS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 10/2020
SUPERSEDES: 01/2017
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH/MLD

SIGNAL POLE/LUMINAIRE MAST ARM & FOUNDATION
TYPE 4

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
J–105

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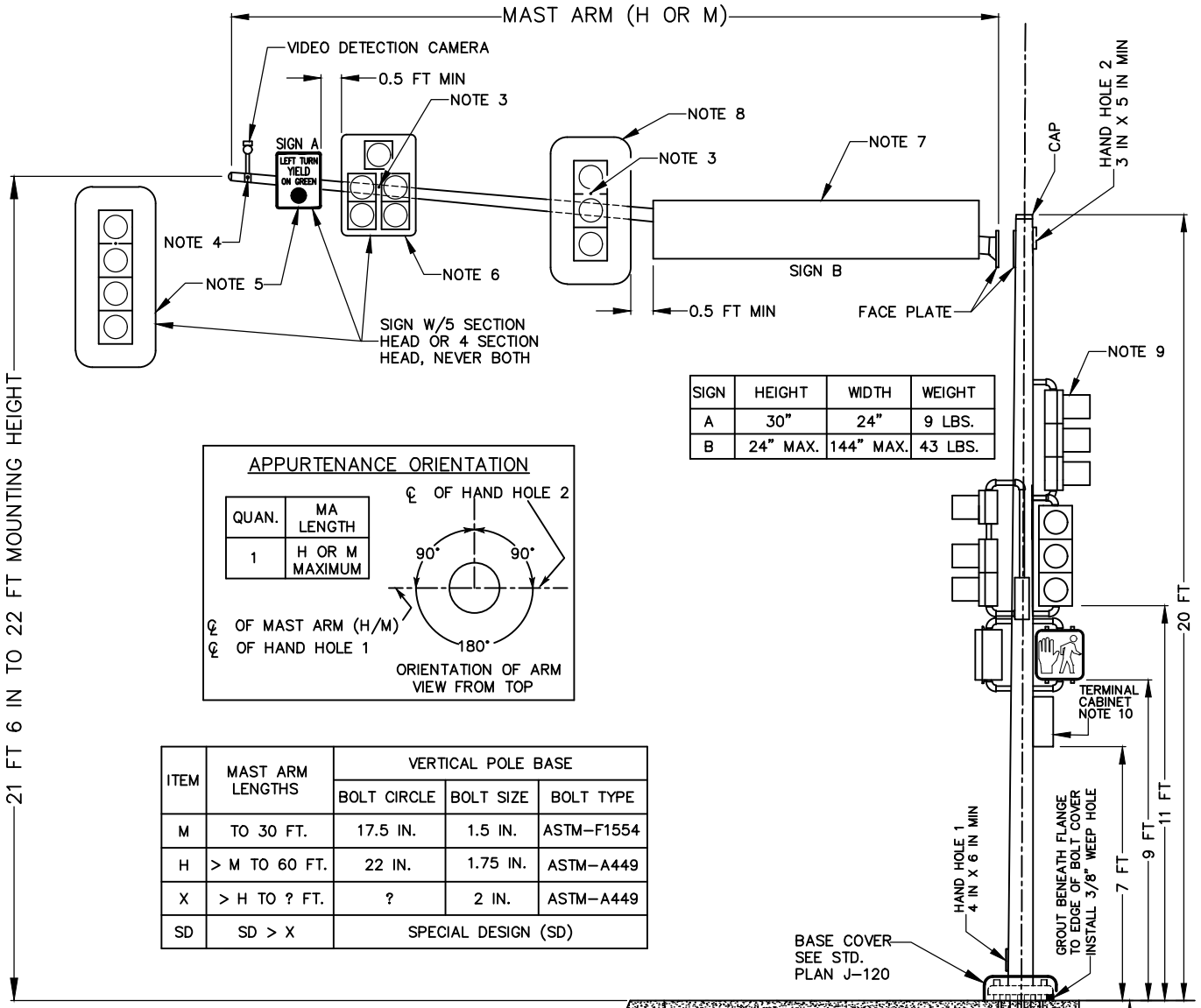


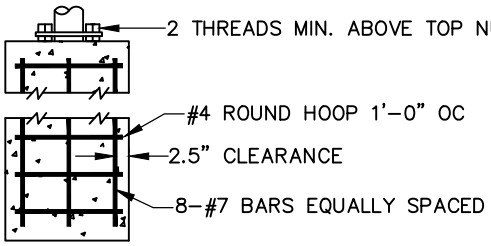
SIGN	HEIGHT	WIDTH	WEIGHT
A	30"	24"	9 LBS.
B	24" MAX.	144" MAX.	43 LBS.

APPURTENANCE ORIENTATION

QUAN.	MA LENGTH
1	H OR M MAXIMUM

ORIENTATION OF ARM VIEW FROM TOP

ITEM	MAST ARM LENGTHS	VERTICAL POLE BASE		
		BOLT CIRCLE	BOLT SIZE	BOLT TYPE
M	TO 30 FT.	17.5 IN.	1.5 IN.	ASTM-F1554
H	> M TO 60 FT.	22 IN.	1.75 IN.	ASTM-A449
X	> H TO ? FT.	?	2 IN.	ASTM-A449
SD	SD > X	SPECIAL DESIGN (SD)		



FOUNDATION DETAIL

FOUNDATION		
MAST-ARM LENGTH (FT.)	A DIA.	B LENGTH
≤30	3 FT.	5 FT.
35, 40, 45	4 FT.	7 FT.
50, 55	4 FT.	9 FT.
≥60	4 FT.	12 FT.

NOTES

1. SIGNAL STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. WHEN MACHINE VISION REQUIRES HIGHER ELEVATIONS, SEE TYPE 3 SIGNAL POLE/SINGLE MAST ARM & FOUNDATION. USE WITH OR WITHOUT LUMINAIRE.
3. 1 3/8 INCH HOLE ON SIDE OF MAST ARM FOR SIGNAL WIRE-ACCESS TO BE DRILLED BY CONTRACTOR.
4. 1 3/8 INCH HOLE UNDERNEATH MAST ARM FOR VIDEO WIRES-ACCESS TO BE DRILLED BY CONTRACTOR.
5. MOUNT SIGN OR SIGNAL HEAD CENTERED OVER TURN LANE.
6. MOUNT SIGNAL HEAD OVER TURN POCKET LANE LINE.
7. MOUNT SIGN CENTERED OVER CURB LINE.
8. MOUNT SIGNAL HEAD ON SKIP STRIPE WHEN USING 5 SECTION HEAD FOR LEFT TURN LANE.
9. OPTIONAL-NEAR RIGHT OR LEFT SIDE B(3) VEHICLE HEAD FOR APPROACH TRAFFIC IN RADIUS. SIDE OF POLE, HEIGHT VEHICLE HEAD IS LOCATED & DIRECTION VEHICLE HEAD IS FACING MAY VARY DEPENDING ON SPECIFIC DESIGN NEEDS OF THE INTERSECTION.
10. INSTALLATION OF A TERMINAL CABINET WILL VARY WITH SPECIFIC DESIGN NEEDS.
11. MOUNT TWO 3 SECTION SIGNAL HEADS CENTERED ON LANES WHEN USING 3 SECTION HEAD FOR LEFT TURN LANE.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 10/2020
SUPERSEDES: 01/2017
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH/MLD

SIGNAL POLE/SINGLE MAST ARM AND FOUNDATION
TYPE 2

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-105A

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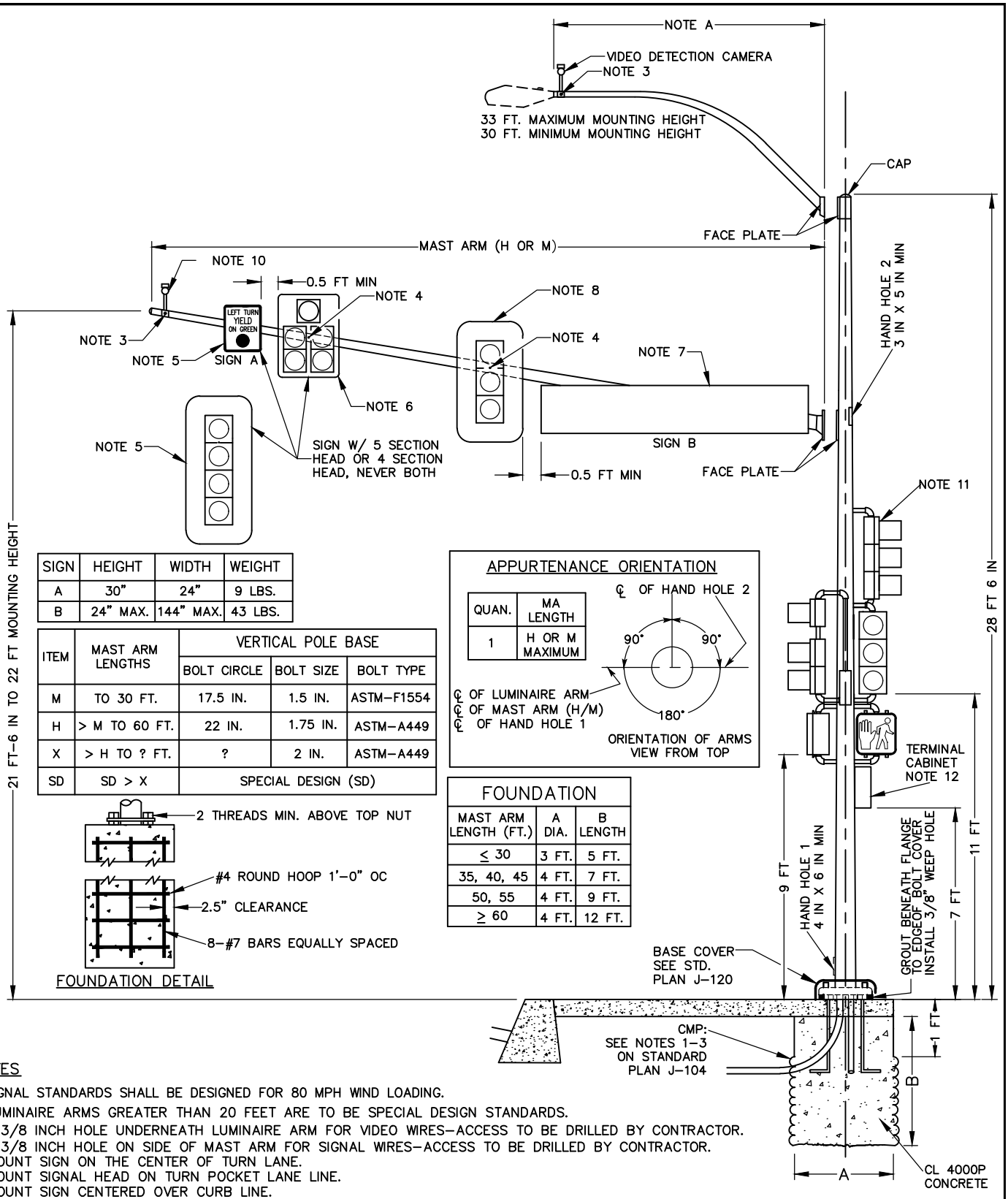

SIGN	HEIGHT	WIDTH	WEIGHT
A	30"	24"	9 LBS.
B	24" MAX.	144" MAX.	43 LBS.

ITEM	MAST ARM LENGTHS	VERTICAL POLE BASE		
		BOLT CIRCLE	BOLT SIZE	BOLT TYPE
M	TO 30 FT.	17.5 IN.	1.5 IN.	ASTM-F1554
H	> M TO 60 FT.	22 IN.	1.75 IN.	ASTM-A449
X	> H TO ? FT.	?	2 IN.	ASTM-A449
SD	SD > X	SPECIAL DESIGN (SD)		

APPURTENANCE ORIENTATION

QUAN.	MA LENGTH
1	H OR M MAXIMUM

FOUNDATION DETAIL

FOUNDATION

MAST ARM LENGTH (FT.)	A DIA.	B LENGTH
≤ 30	3 FT.	5 FT.
35, 40, 45	4 FT.	7 FT.
50, 55	4 FT.	9 FT.
≥ 60	4 FT.	12 FT.

NOTES

1. SIGNAL STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. LUMINAIRE ARMS GREATER THAN 20 FEET ARE TO BE SPECIAL DESIGN STANDARDS.
3. 1 3/8 INCH HOLE UNDERNEATH LUMINAIRE ARM FOR VIDEO WIRES-ACCESS TO BE DRILLED BY CONTRACTOR.
4. 1 3/8 INCH HOLE ON SIDE OF MAST ARM FOR SIGNAL WIRES-ACCESS TO BE DRILLED BY CONTRACTOR.
5. MOUNT SIGN ON THE CENTER OF TURN LANE.
6. MOUNT SIGNAL HEAD ON TURN POCKET LANE LINE.
7. MOUNT SIGN CENTERED OVER CURB LINE.
8. MOUNT SIGNAL HEAD ON SKIP STRIPE WHEN USING 5 SECTION HEAD FOR LEFT TURN LANE.
9. MOUNT TWO-3 SECTION SIGNAL HEADS CENTERED ON LANES WHEN USING 3 SECTION HEAD FOR LEFT TURN LANE.
10. VIDEO DETECTION CAMERA WILL BE INSTALLED ON SIGNAL MAST ARM AS OPTION ONLY, PRIMARY LOCATION SHALL BE LUMINAIRE ARM.
11. OPTIONAL-NEAR RIGHT OR LEFT SIDE B(3) VEHICLE HEAD FOR APPROACH TRAFFIC IN RADIUS. SIDE OF POLE, HEIGHT VEHICLE HEAD IS LOCATED & DIRECTION VEHICLE HEAD IS FACING MAY VARY DEPENDING ON SPECIFIC DESIGN NEEDS OF THE INTERSECTION.
12. INSTALLATION OF A TERMINAL CABINET WILL VARY WITH SPECIFIC DESIGN NEEDS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 10/2020
SUPERSEDES: 11/2018
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH/MLD

SIGNAL POLE/SINGLE MAST ARM/ LUMINAIRE ARM & FOUNDATION TYPE 3

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-105B

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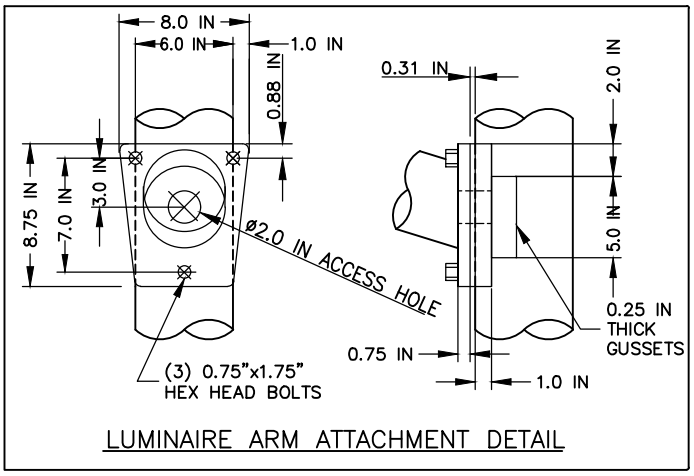
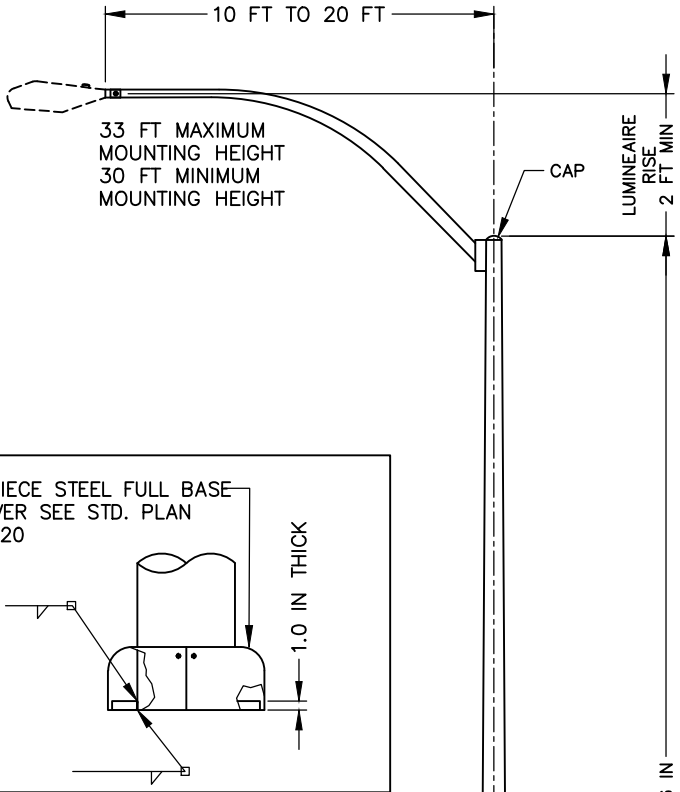
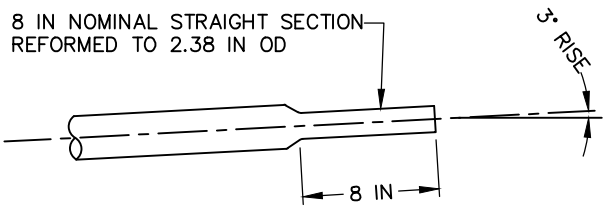
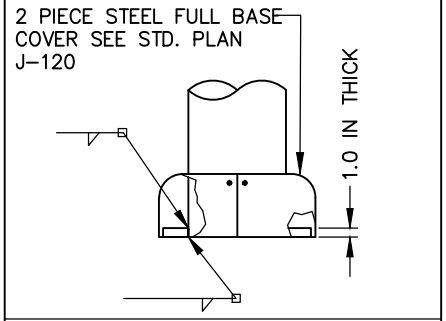


LUMINAIRE ARM ATTACHMENT DETAIL





ARM END

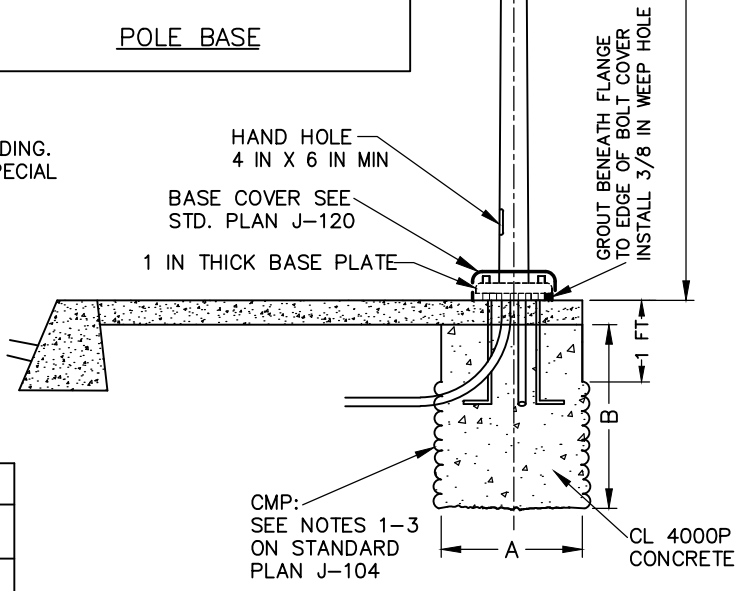


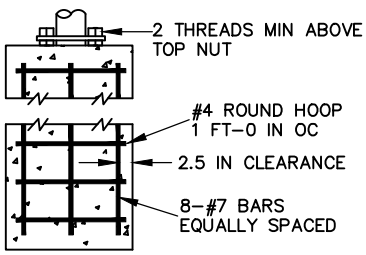
POLE BASE

MATERIAL DATA		
COMPONENT	ASTM DESIGNATION	MINIMUM YIELD
TAPERED TUBES	A595 GR.A OR A572	55
BASE PLATE	A36	36
ANCHOR BOLTS	F1554 GR.55	55
LUM. ARM ATTACHMENT	A36	36
LUM. ARM CONN. BOLTS	SAE GR. 5	–
GALVANIZING–STRUCTURE	A123	–
GALVANIZING–HARDWARE	F2329	–

VERTICAL POLE BASE PLATE		
BOLT CIRCLE	BOLT SIZE	BOLT TYPE
11.0 IN TO 11.5 IN	1 IN	ASTM–F1554

NOTES:
1. STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. LUMINAIRE ARMS GREATER THAN 20 FEET ARE TO BE SPECIAL DESIGN STANDARDS.





FOUNDATION DETAIL

FOUNDATION	
A DIAMETER	B LENGTH
3 FT	5 FT

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 10/2020
SUPERSEDES: 01/2017
SCALE: NTS
DWG/REV. BY: MDH/MLD

LUMINAIRE POLE & FOUNDATION

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-105C

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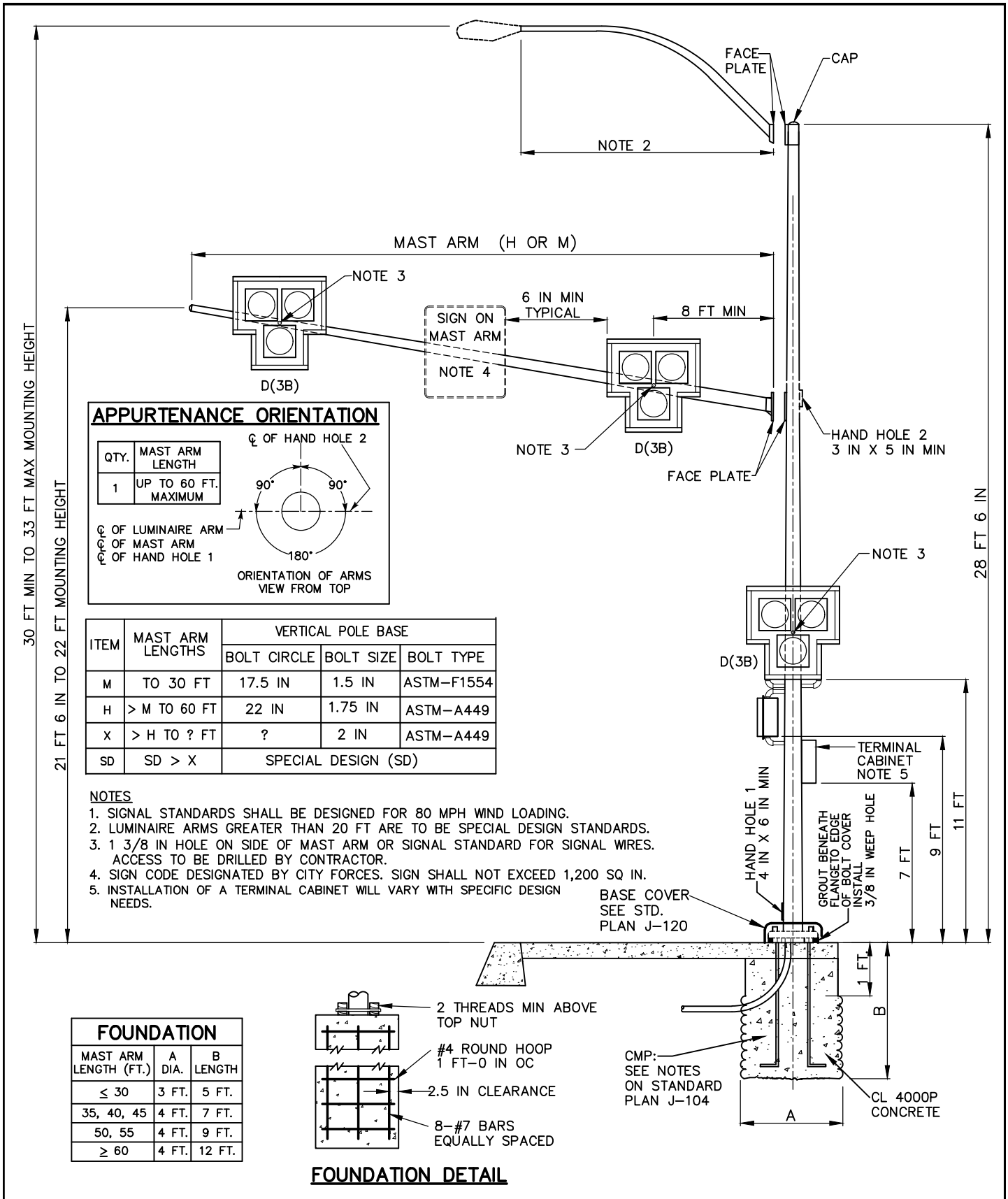

APPURTENANCE ORIENTATION

QTY.	MAST ARM LENGTH
1	UP TO 60 FT. MAXIMUM

ORIENTATION OF ARMS VIEW FROM TOP

ITEM	MAST ARM LENGTHS	VERTICAL POLE BASE		
		BOLT CIRCLE	BOLT SIZE	BOLT TYPE
M	TO 30 FT	17.5 IN	1.5 IN	ASTM-F1554
H	> M TO 60 FT	22 IN	1.75 IN	ASTM-A449
X	> H TO ? FT	?	2 IN	ASTM-A449
SD	SD > X	SPECIAL DESIGN (SD)		

NOTES

1. SIGNAL STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. LUMINAIRE ARMS GREATER THAN 20 FT ARE TO BE SPECIAL DESIGN STANDARDS.
3. 1 3/8 IN HOLE ON SIDE OF MAST ARM OR SIGNAL STANDARD FOR SIGNAL WIRES. ACCESS TO BE DRILLED BY CONTRACTOR.
4. SIGN CODE DESIGNATED BY CITY FORCES. SIGN SHALL NOT EXCEED 1,200 SQ IN.
5. INSTALLATION OF A TERMINAL CABINET WILL VARY WITH SPECIFIC DESIGN NEEDS.

FOUNDATION

MAST ARM LENGTH (FT.)	A DIA.	B LENGTH
≤ 30	3 FT.	5 FT.
35, 40, 45	4 FT.	7 FT.
50, 55	4 FT.	9 FT.
≥ 60	4 FT.	12 FT.

FOUNDATION DETAIL

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 10/2020
SUPERSEDES: 11/2018
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

PEDESTRIAN HYBRID BEACON SINGLE MAST ARM/LUMINAIRE ARM AND FOUNDATION TYPE 3

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-105D

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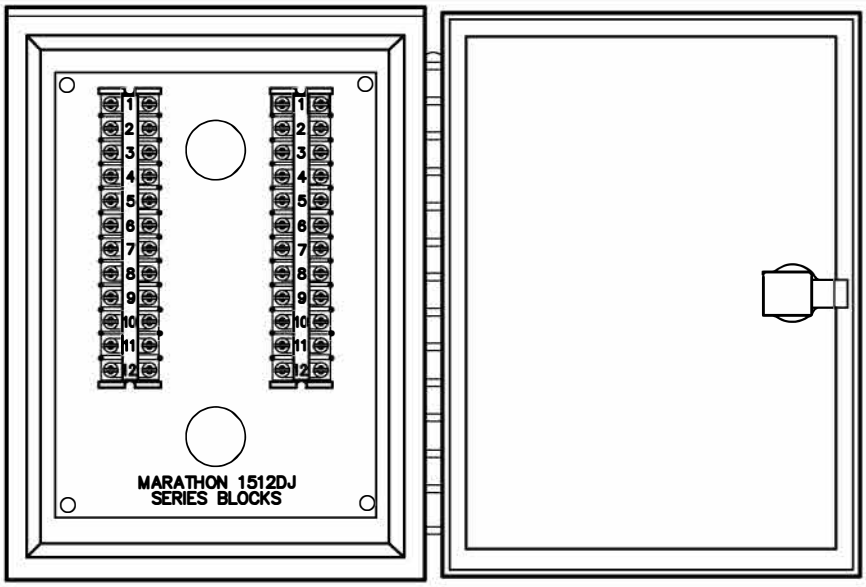
TERMINAL CABINET NOTES

1. COMPLETELY FABRICATED FROM .125" THICK TYPE 5052–H32 VINYL COATED, MILL FINISHED ALUMINUM UTILIZING CONTINUOUS WELDED CONSTRUCTION.
2. NORMAL DIMENSIONS OF 16" (407mm) HEIGHT X 12" (305mm) WIDTH X 8" (203mm) DEPTH.
3. HEAVY GAGE STAINLESS STEEL PIANO HINGE.
4. MEET NEMA 3R RATING AND HAS A DOUBLE FLANGED DOOR.
5. INCLUDES A DRIP SHIELD.
6. (2–4) 12 POSITION 600V TERMINAL BLOCKS (MARATHON 1512DJ).
7. MARKER STRIPS PER FIELD REQUIREMENTS.
8. MAIN DOOR LOCK IS BEST CX SERIES GREEN CORE LOCK WITH A LATCH TYPE LOCKING BOLT.
9. CLOSED CELL NEOPRENE DOOR GASKET USED.
10. FABRICATED IN THE USA.



20 CONDUCTOR CABLE CONFIGURATION

NORTH/SOUTH PHASE 2 & 6–SOLIDS
- RED–RED BALL
- AMBER–AMBER BALL
- GREEN–GREEN BALL
- BLUE–WALK
- BLACK–DON'T WALK
- BLUE W/ WHITE–PED CALL
- WHITE W/ BLACK–PED COMMON

EAST/WEST PHASE 4 & 8–STRIPES
- RED W/ BLACK–RED BALL
- AMBER W/ BLACK–AMBER BALL
- GREEN W/ BLACK–GREEN BALL
- BLUE W/ BLACK–WALK
- BLACK W/ WHITE–DON'T WALK
- BLACK W/ RED–PED CALL
- WHITE W/ BLACK–PED COMMON

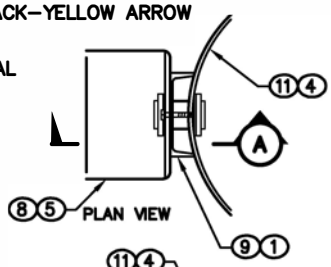
FLASHING YELLOW ARROW PHASE 1,3,5,7
- GREEN W/ WHITE–GREEN ARROW LEFT TURN
- RED W/ WHITE–RED ARROW
- AMBER W/ RED–AMBER ARROW
- BLUE W/ RED FLASHING–YELLOW ARROW
- WHITE–NEUTRAL

16 CONDUCTOR CABLE CONFIGURATION

NORTH/SOUTH PHASE 2 & 6–SOLIDS
- RED–RED BALL
- AMBER–AMBER BALL
- GREEN–GREEN BALL
- BLUE–WALK
- BLACK–DON'T WALK
- BLUE W/ WHITE–PED CALL
- WHITE–PED COMMON

EAST/WEST PHASE 4 & 8–STRIPES
- RED W/ BLACK–RED BALL
- AMBER W/ BLACK–AMBER BALL
- GREEN W/ BLACK–GREEN BALL
- BLUE W/ BLACK–WALK
- BLACK W/ WHITE–DON'T WALK
- BLACK W/ RED–PED CALL
- WHITE–PED COMMON

PHASE 1,3,5,7
- GREEN W/ WHITE–GREEN ARROW LEFT TURN
- RED W/ WHITE–RED ARROW
- WHITE W/ BLACK–YELLOW ARROW
- WHITE–NEUTRAL



(1) 6.57" (IN) x 15.75" (IN) GAL. STEEL CHANNEL

(2) TWO EACH:
- 1/2" (IN) – 13 NC x 2 1/2" (IN) S.S. HEX HEAD BOLT
- LOCK WASHERS (DRILL AND TAP POLE TO ACCEPT)

(3) WIREWAY (SEE DETAIL THIS SHEET)

(4) METAL POLE

(5) CABINET

(6) END BUSHING

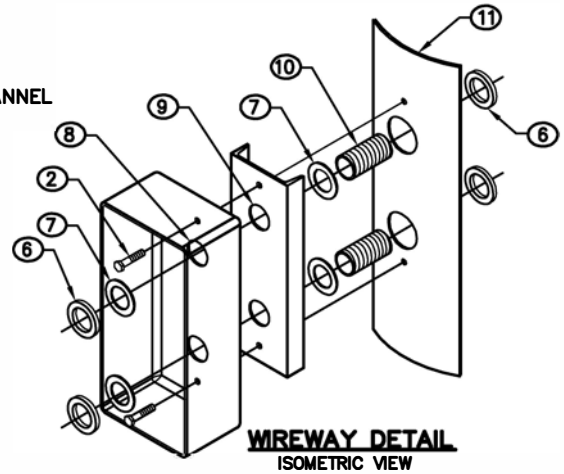
(7) SEALING LOCKNUT

(8) CABINET WALL DRILLED 1/8" (IN) OVERSIZE OF NIPPLE

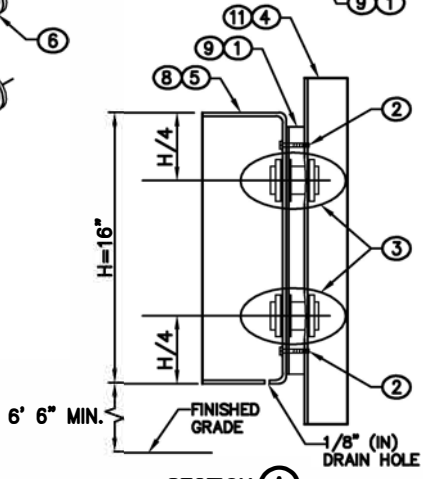
(9) CHANNEL DRILLED 1/8" (IN) OVERSIZE OF NIPPLE

(10) 2" (IN) DIAM. x 4" (IN) NIPPLE (UNLESS OTHERWISE NOTED)

(11) POLE WALL DRILLED SO BUSHING WILL PASS THROUGH ~ HOLE SIZE TO BE A MAXIMUM OF 1/8" (IN) LARGER DIAMETER THAN THE CONDUIT NIPPLE END BUSHING ~ INSTALL NIPPLE IN POLE WITH BUSHING INSTALLED



WIREWAY DETAIL
ISOMETRIC VIEW



SECTION (A)

CABINET MOUNTING DETAIL
ELEVATION VIEW

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

CITY ENGINEER — DANIEL ALBERT BULLER, P.E.

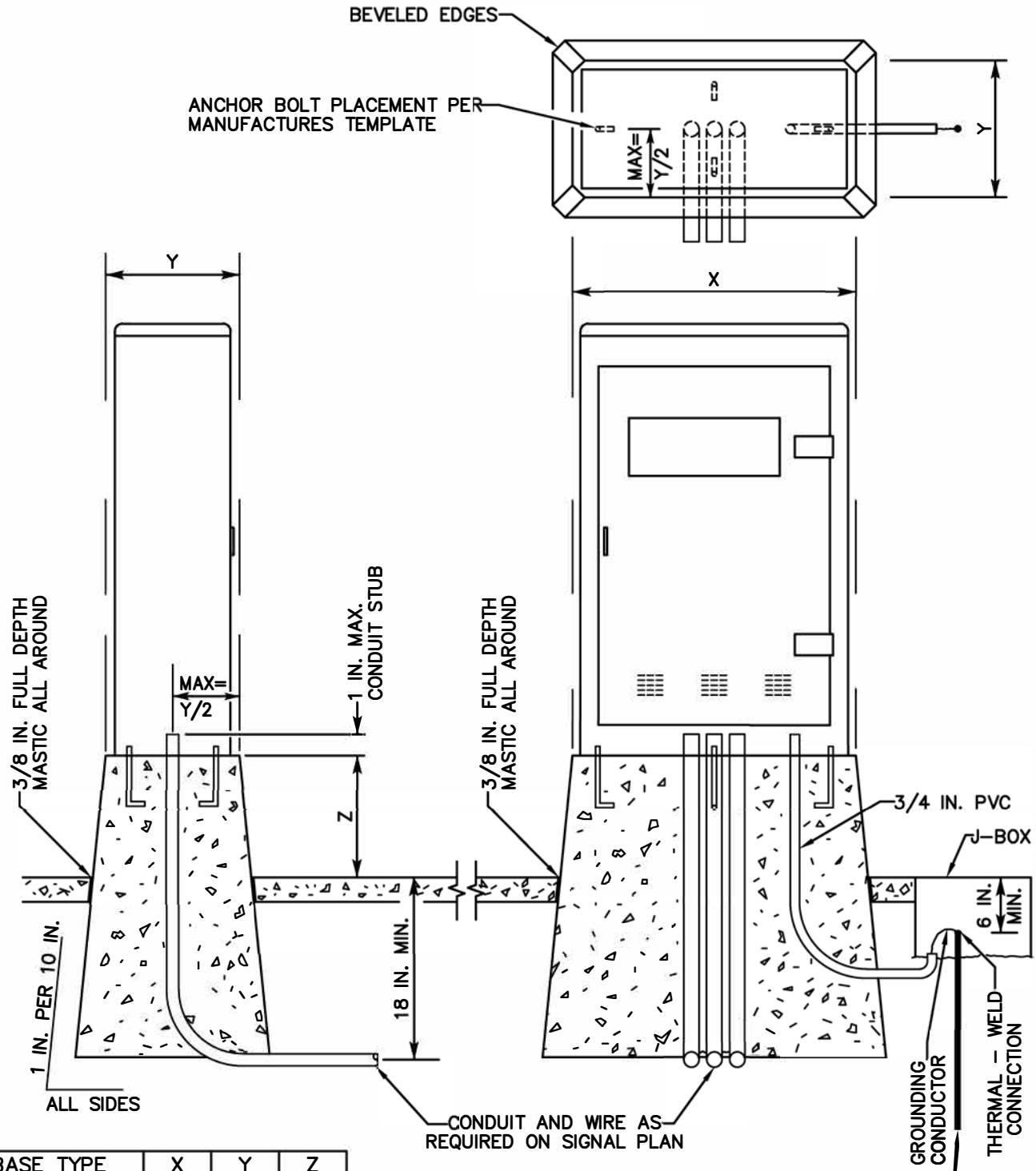
ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

TERMINAL CABINET

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–105E

Back to Section J - TOC



BASE TYPE	X	Y	Z
TYPE 4 BASE	28 IN.	22 IN.	22 IN.
TYPE M BASE	35 IN.	21 IN.	22 IN.
TYPE P BASE	48 IN.	30 IN.	18 IN.
FIELD ADJUST BACK OF FORM FOR INSTALLATIONS WHERE ROW IS AN ISSUE			

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

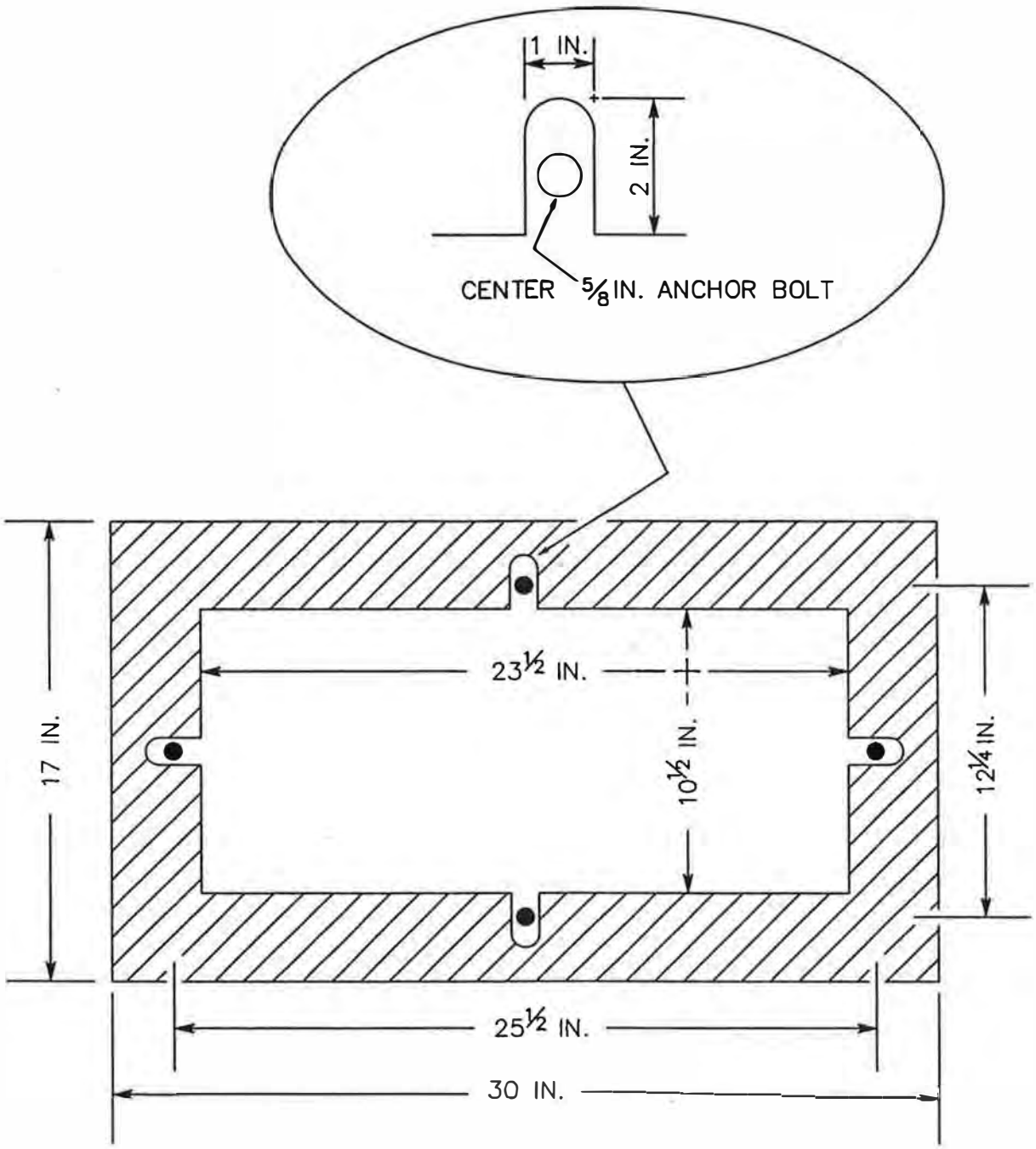
ADOPTED: 01/2012
REVISED: 11/2018
SUPERSEDES: 01/2012
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: JHM/MDH

FOUNDATION CONCRETE CONTROLLER BASE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-106

Back to Section J - TOC



APPROVED BY

Katy D Allen
DIRECTOR, ENGINEERING SERVICES — KATY D. ALLEN P.E.

Donald A Ramsey
CITY TRAFFIC ENGINEER — DONALD A. RAMSEY P.E.

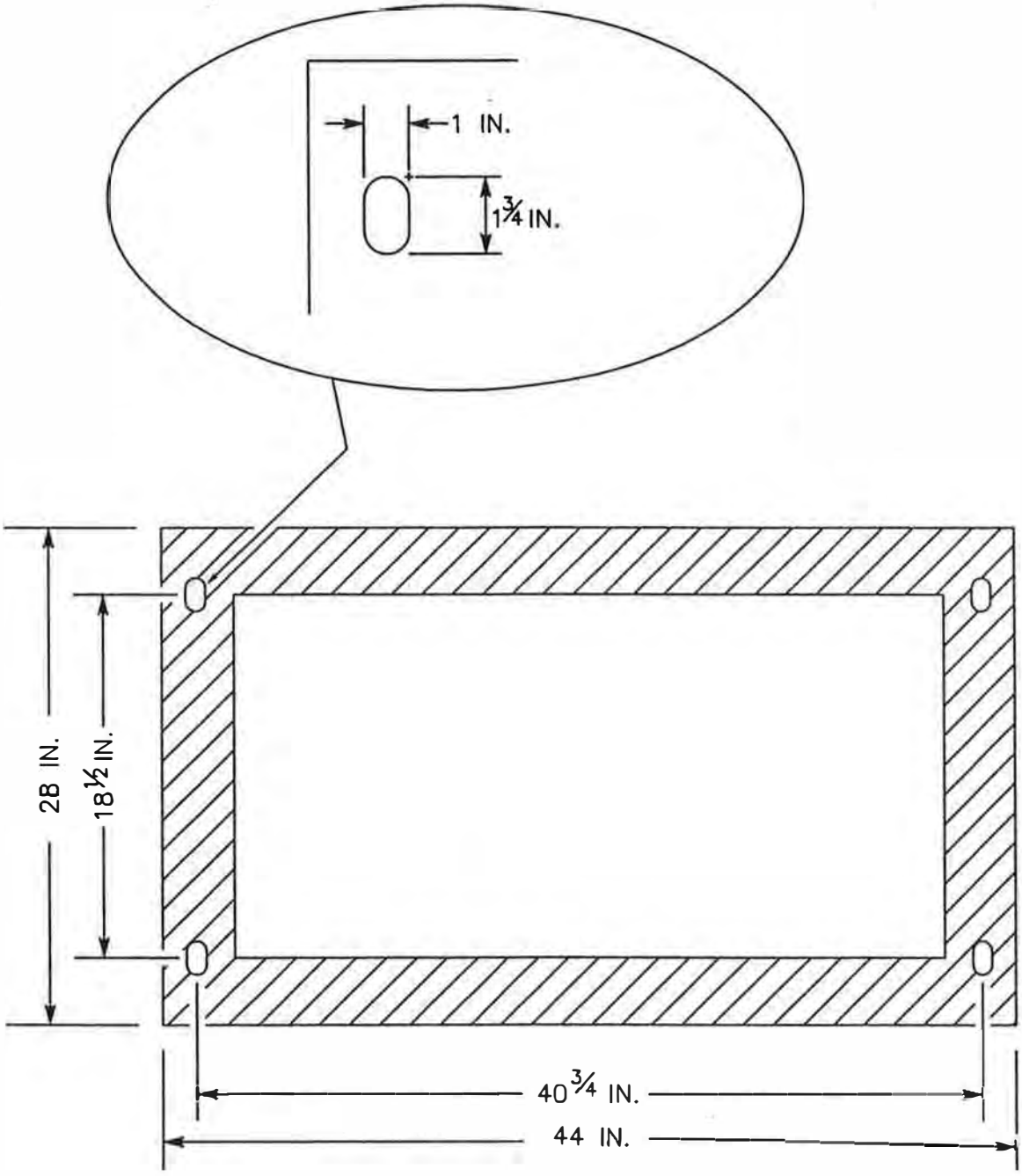
SCALE NONE
ADOPTED 3-99
REVISED
SUPERSEDES

ANCHOR BOLT LOCATION
TYPE "M" CABINET

TRANSPORTATION DEPARTMENT
CITY OF SPOKANE, WASHINGTON

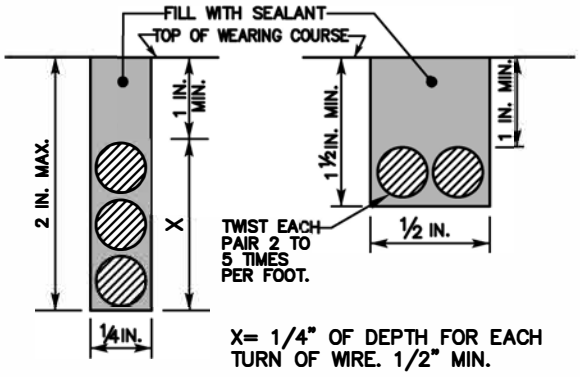
STANDARD PLAN No.
J-106a

Back to Section J - TOC



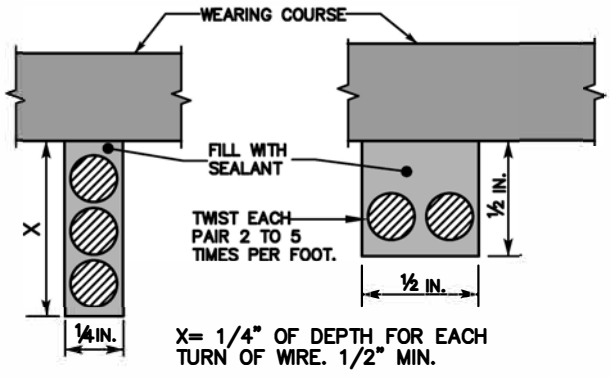
APPROVED BY Katy D. Allen DIRECTOR, ENGINEERING SERVICES KATY D. ALLEN P.E. Donald A Ramsey CITY TRAFFIC ENGINEER DONALD A. RAMSEY P.E.	SCALE NONE ADOPTED 3-99 REVISED SUPERSEDES	ANCHOR BOLT LOCATION TYPE "P" CABINET SPOKANE TRANSPORTATION DEPARTMENT CITY OF SPOKANE, WASHINGTON STANDARD PLAN No. J-106b

Back to Section J - TOC



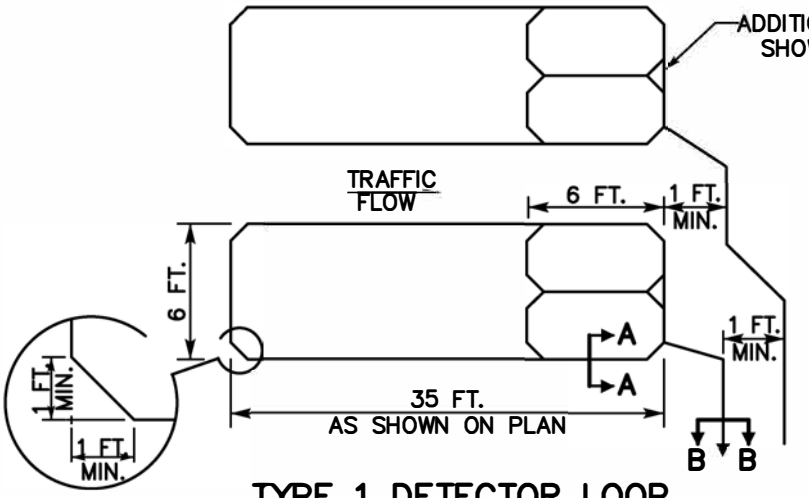
SECTION AA SECTION BB

EXISTING PAVEMENT

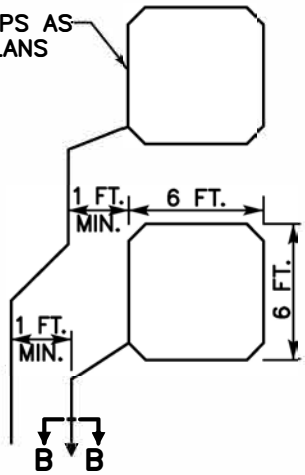


SECTION AA SECTION BB

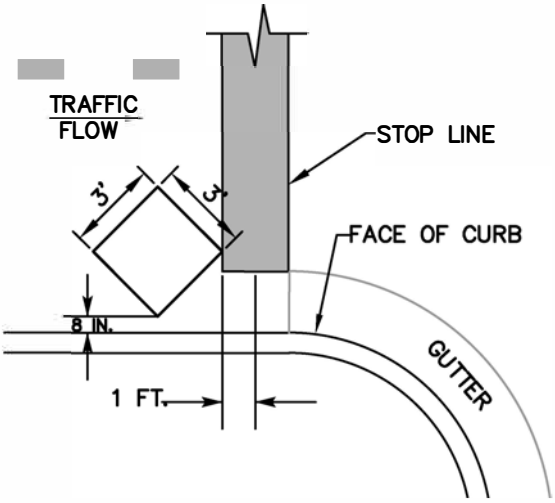
NEW PAVEMENT OR RESURFACING



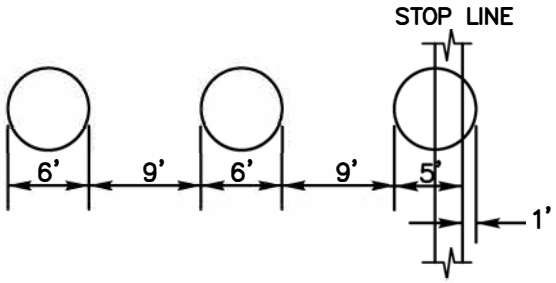
TYPE 1 DETECTOR LOOP



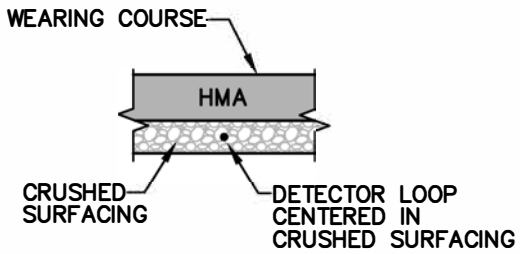
TYPE 2 DETECTOR LOOP



TYPE 5 BICYCLE DETECTOR LOOP



TYPE 3 DETECTOR LOOP



CRUSHED SURFACING INSTALLATION

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

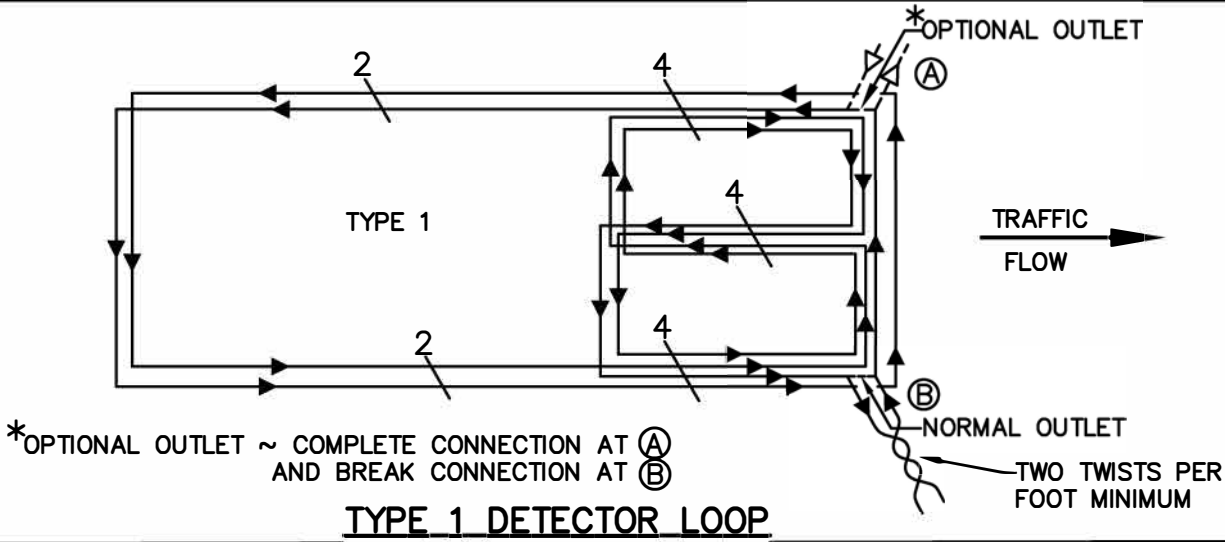
ADOPTED: 02/1986
REVISED: 11/2018
SUPERSEDES: 04/2015
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: GOM/MDH

VEHICLE INDUCTION LOOPS TYPES 1, 2, 3 AND 5

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

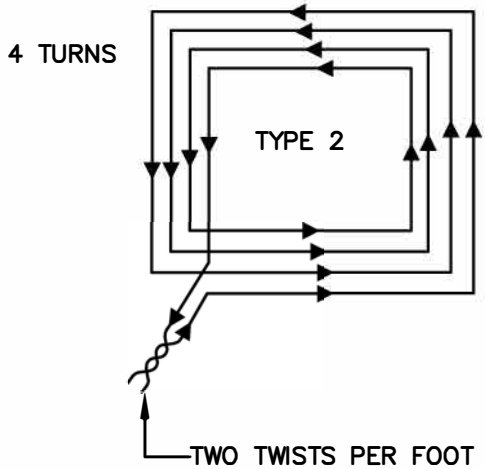
STANDARD PLAN No. J–107

Back to Section J - TOC



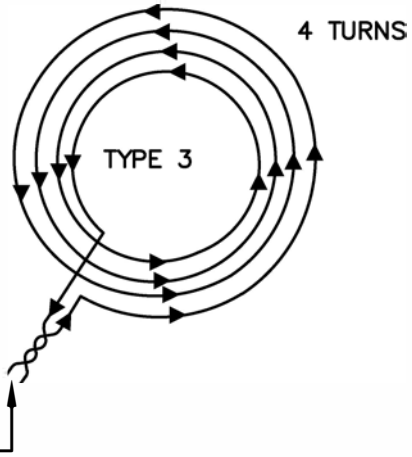
TYPE 1 DETECTOR LOOP

6 FT. SQUARE



ADDITIONAL TURNS MAY BE REQUIRED FOR LOOPS INSTALLED UNDER CONCRETE INTERSECTION OR LOOPS INSTALLED MORE THAN 350 FT. FROM THE CONTROLLER

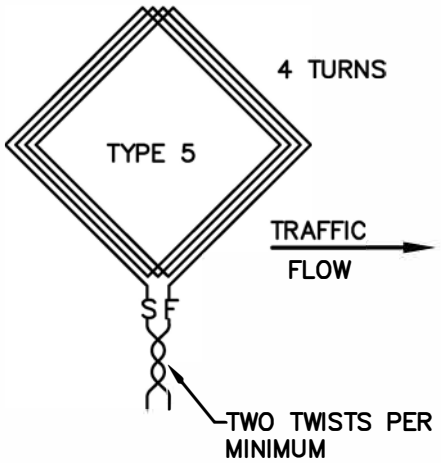
6 FT. ROUND



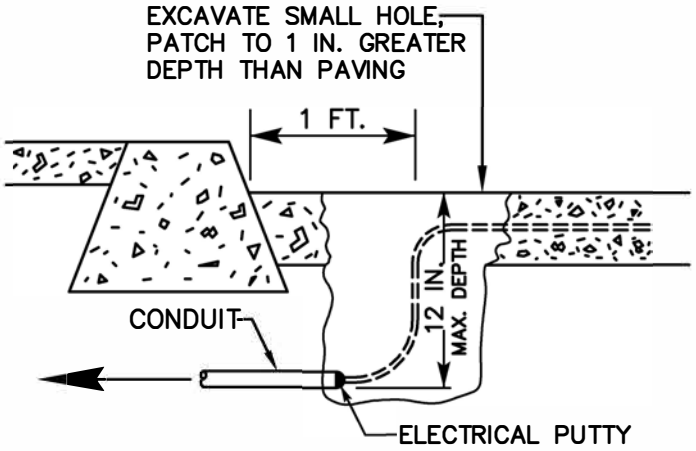
TWO TWISTS PER FOOT MINIMUM TYPICAL FOR ALL LOOPS

TYPE 2 DETECTOR LOOP

TYPE 3 DETECTOR LOOP



TYPE 5 BICYCLE DETECTOR LOOP



TYPICAL CONDUIT LOCATION

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

CITY ENGINEER — DANIEL ALBERT BULLER, P.E.

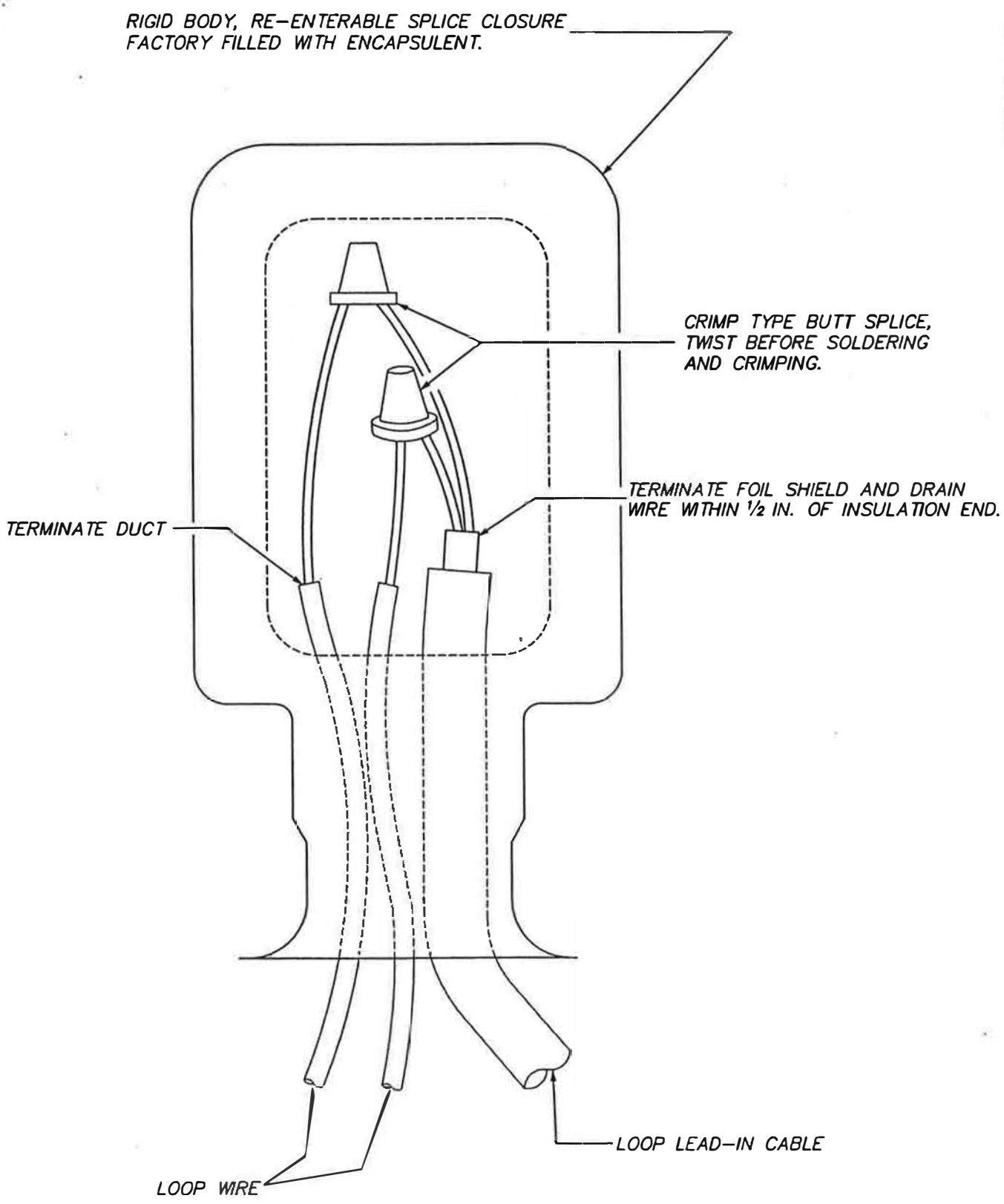
ADOPTED:	01/2012
REVISED:	11/2018
SUPERSEDES:	04/2015
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	GOM/MDH

VEHICLE INDUCTION LOOP WIRING TYPES 1, 2, 3 AND 5

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

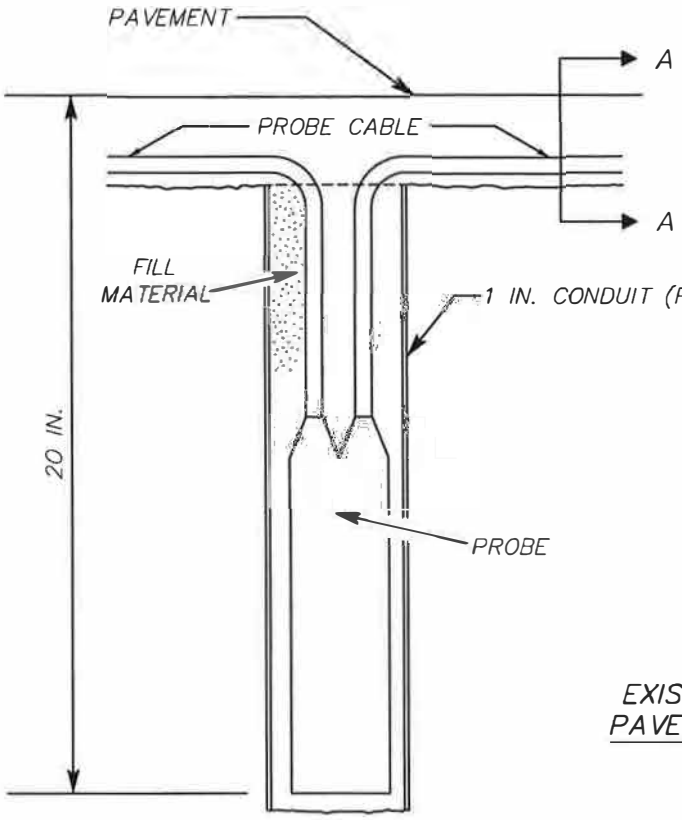
STANDARD PLAN No. J–107A

Back to Section J - TOC



APPROVED BY Katy D. Allen DIRECTOR, ENGINEERING SERVICES KATY D. ALLEN P.E. Donald A. Ramsey CITY TRAFFIC ENGINEER DONALD A. RAMSEY P.E.	SCALE NONE ADOPTED 2-86 REVISED 3-99 SUPERSEDES 1-88	LOOP LEAD-IN SPLICING RE-ENTERABLE CLOSURE SPOKANE TRANSPORTATION DEPARTMENT CITY OF SPOKANE, WASHINGTON STANDARD PLAN No. J-107b

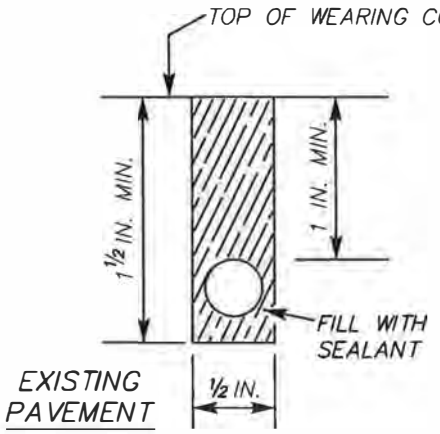
Back to Section J - TOC



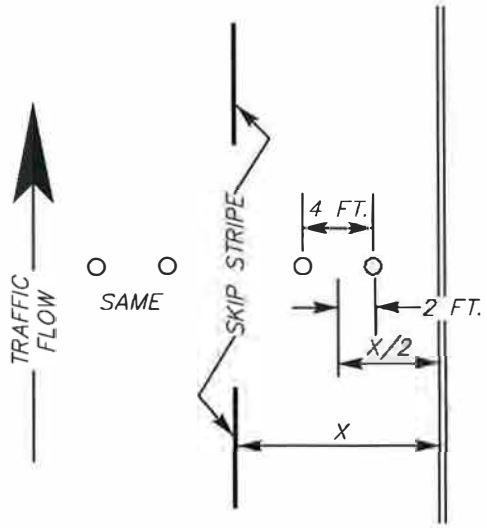
NOTE:

PROBE SHALL BE VERTICAL

TYPICAL MICROLOOP BURIAL INSTALLATION

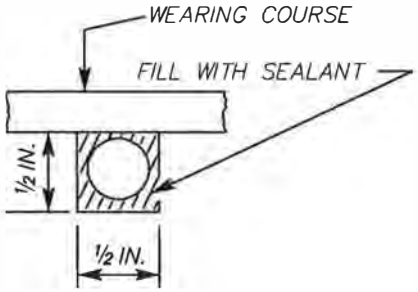


SECTION A–A



TYPICAL MICROLOOP INSTALLATION

TYPICAL SAWCUTS



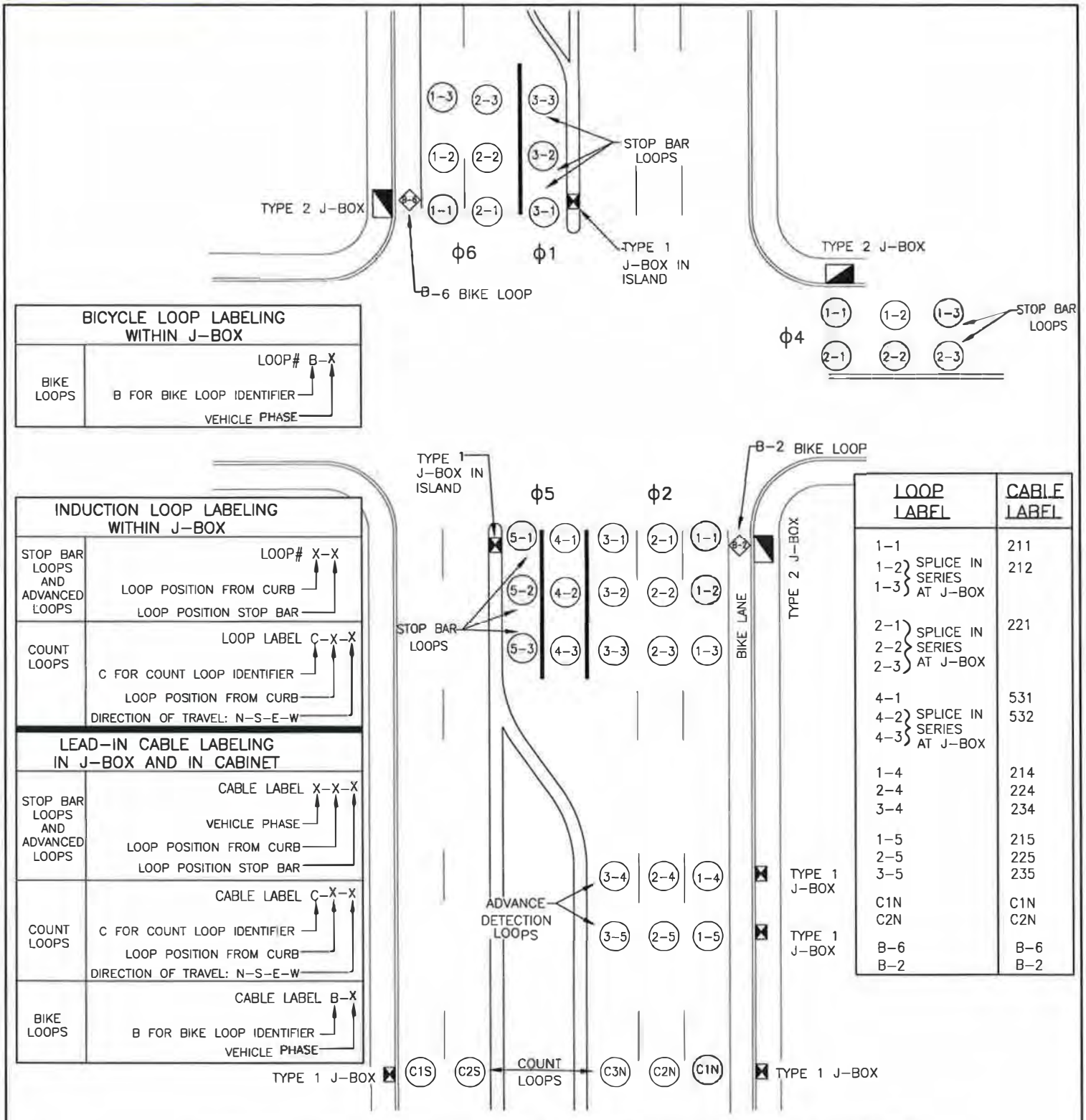
SECTION A–A

NEW PAVEMENT OR RESURFACING

THE INFORMATION PROVIDED HEREON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.

APPROVED BY			
ENGINEERING OPERATIONS MANAGER	KYLE TWOHIG	ADOPTED: 05/1989	MICROLOOP PROBE
PRINCIPAL ENGINEER, CONST.	KENNETH M. BROWN, P.E.	REVISED: 04/2015 SUPERSEDES: 04/1999 CHECKED BY: GTO SCALE: NTS DWG/REV. BY: GOM	DETECTOR LOOP TYPE 4 ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON STANDARD PLAN No. J–107C

Back to Section J - TOC



LOOP LABEL	CABLE LABEL
1-1	211
1-2 } SPLICE IN SERIES AT J-BOX	212
1-3 } SPLICE IN SERIES AT J-BOX	
2-1 } SPLICE IN SERIES AT J-BOX	221
2-2 } SPLICE IN SERIES AT J-BOX	
2-3 } SPLICE IN SERIES AT J-BOX	
4-1	531
4-2 } SPLICE IN SERIES AT J-BOX	532
4-3 } SPLICE IN SERIES AT J-BOX	
1-4	214
2-4	224
3-4	234
1-5	215
2-5	225
3-5	235
C1N	C1N
C2N	C2N
B-6	B-6
B-2	B-2

DETECTION LOOP, COUNT LOOP AND BICYCLE LOOP LAYOUT AND LABELING

NOTES

1. PREFORMED LOOPS SHALL BE INSTALLED IN THE CRUSHED SURFACING WITH 3 INCHES OF COVER.
2. PREFORMED LOOPS SHALL BE LABELED ACCORDING TO THE LANE POSITION ON THE STREET SIDE OF SPLICE AND ACCORDING TO THE CABLE LABELING ON THE CONTROLLER SIDE OF THE SPLICE.
3. LOOP LEAD-INS SHALL BE LABELED ACCORDING TO THIS PLAN IN THE JUNCTION BOX ADJACENT TO THE CURB & IN THE TRAFFIC ISLAND.
4. LOOP CLOSEST TO STOP BAR, IN BIKE LANE, CURB LANE AND LEFT TURN LANE EACH HAVE A HOME RUN CABLE TO CONTROLLER CABINET. IF NO LEFT TURN LANE, THEN THE LANE THE VEHICLE WILL TURN LEFT FROM.
5. CABLE LABELING FOR LOOPS SPLICED IN SERIES UTILIZE THE LOWEST LOOP NUMBER.

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

PRINCIPAL ENGINEER, CONST. — KENNETH M. BROWN, P.E.

ADOPTED: 3/2015
REVISED:
SUPERSEDES:
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

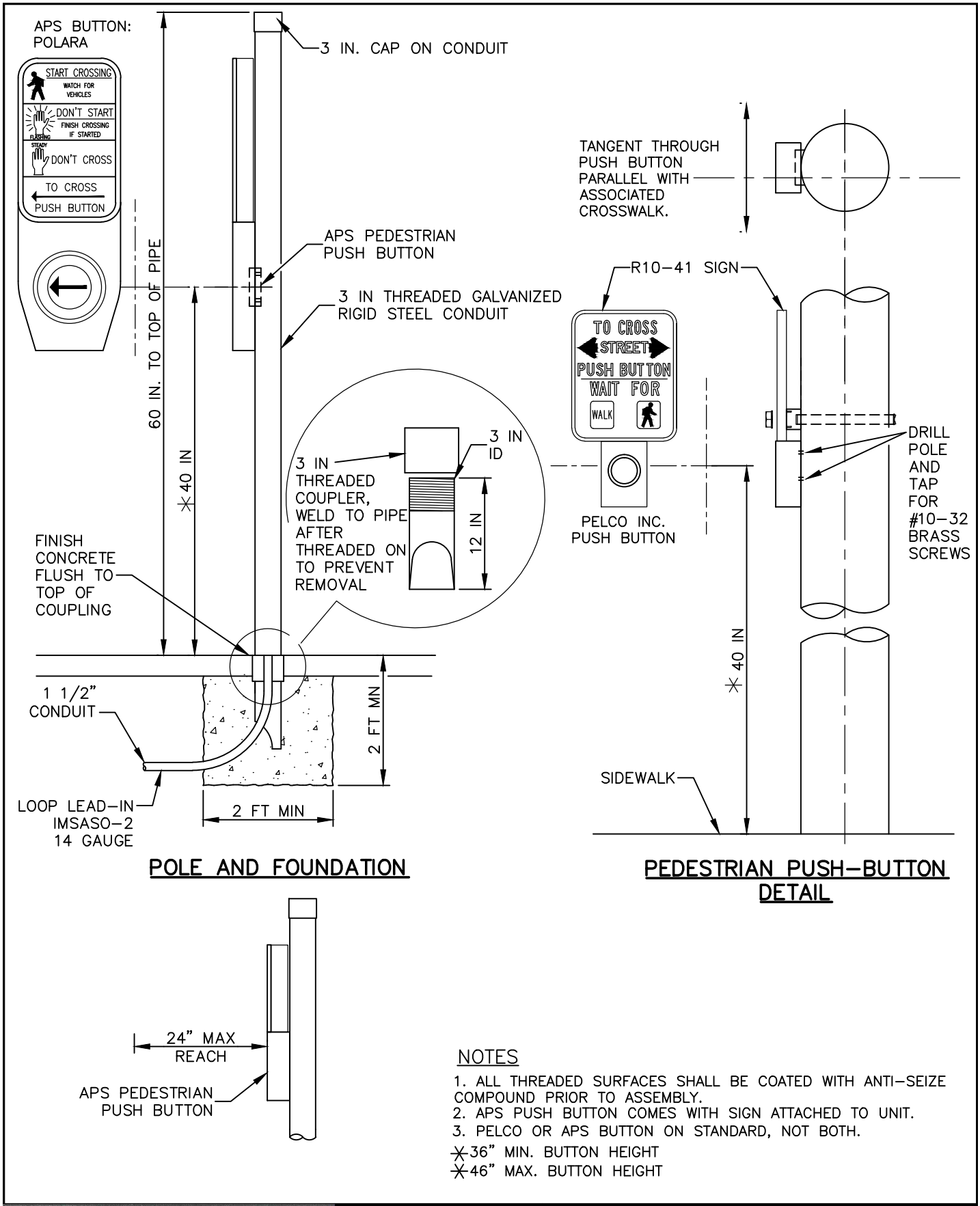
VEHICLE INDUCTION LOOP LABELING

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-107D

Back to Section J - TOC



NOTES

1. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO ASSEMBLY.
2. APS PUSH BUTTON COMES WITH SIGN ATTACHED TO UNIT.
3. PELCO OR APS BUTTON ON STANDARD, NOT BOTH.

✳36" MIN. BUTTON HEIGHT
✳46" MAX. BUTTON HEIGHT

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 11/2018
SCALE: NTS
DWG./REV BY: MDH/MLD

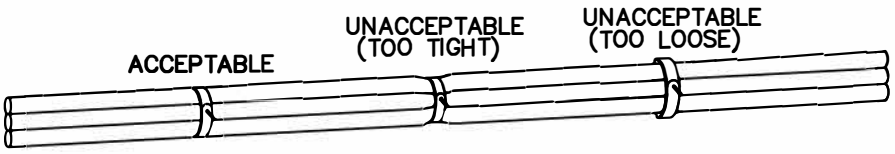
PEDESTRIAN PUSH BUTTON
POLE, FOUNDATION, APS & SILENT PUSH-BUTTON

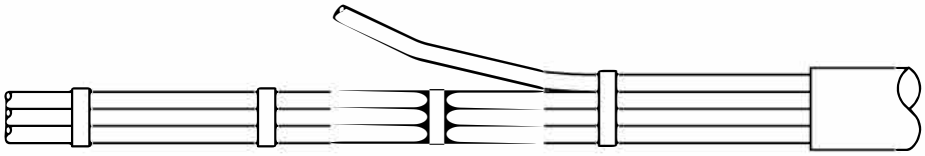
SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

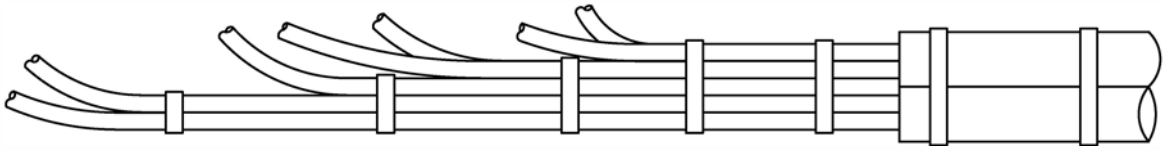
STANDARD PLAN No. J-108

Back to Section J - TOC

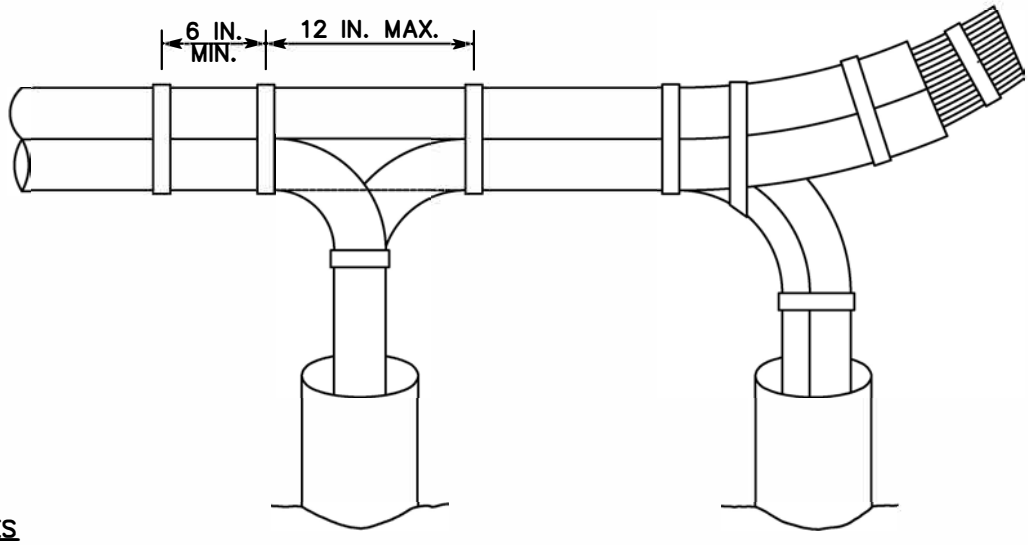




SINGLE BREAKOUT



MULTIPLE BREAKOUT



NOTES

CABLES AND CONDUCTORS WITHIN THE CABINET SHALL BE ROUTED AND BUNDLED TOGETHER IN SUCH A MANNER AS TO PRESENT A NEAT APPEARANCE. SELF-CLINCHING NYLON CABLE TIES SHALL BE USED TO SECURELY BUNDLE TOGETHER CABLES AND CONDUCTORS. CABLE TIES SHALL BE SPACED NOT MORE THAN 12-INCHES APART NOR CLOSER THAN 6-INCHES, UNLESS BREAKOUTS OR ROUTING DICTATES.

CABLES AND CONDUCTORS FOR THE TRAFFIC SIGNAL CIRCUITS, LOOP DETECTORS AND TELEMETRY CIRCUITS SHALL BE ROUTED TO THE FRONT OF THE CABINET, THEN CLOCKWISE AROUND THE LEFT SIDE TO BENEATH THE APPROPRIATE TERMINATION POINT. THE AC SERVICE AND THE LUMINAIRE WIRING SHALL BE ROUTED TO THE FRONT OF THE CABINET, THEN COUNTER-CLOCKWISE TO THE RIGHT SIDE OF THE CABINET.

TRAFFIC SIGNAL CABLES AND CONDUCTORS JACKET IS TO BE STRIPPED TO WITHIN 2-INCHES OF BELL END.

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

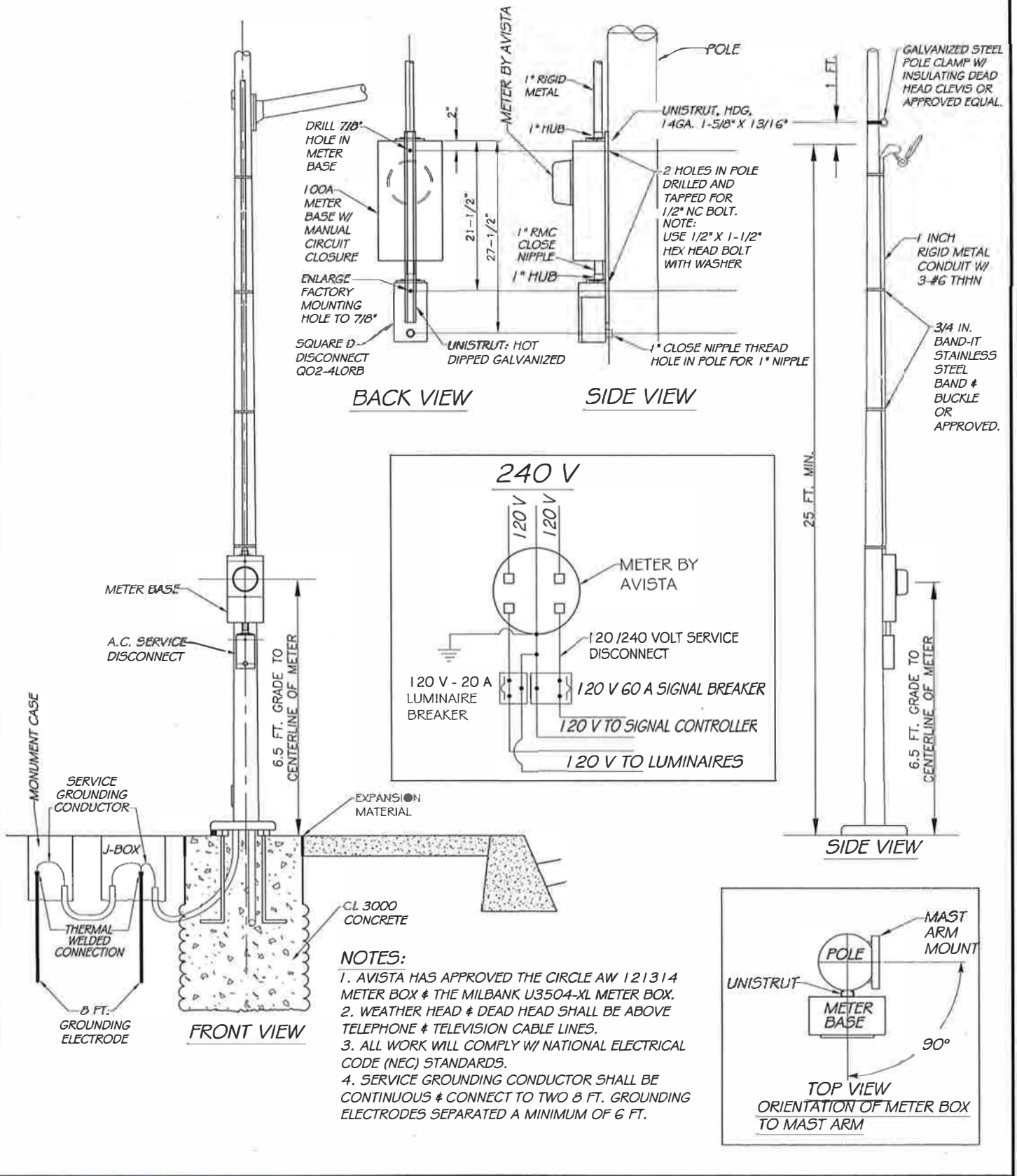
ADOPTED: 02/1986
REVISED: 11/2018
SUPERSEDES: 03/1999
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

TYPICAL CABINET CABLE ROUTING AND CABLE TIES

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-109

Back to Section J - TOC



NOTES:

1. AVISTA HAS APPROVED THE CIRCLE AW 121314 METER BOX & THE MILBANK U3504-XL METER BOX.
2. WEATHER HEAD & DEAD HEAD SHALL BE ABOVE TELEPHONE & TELEVISION CABLE LINES.
3. ALL WORK WILL COMPLY W/ NATIONAL ELECTRICAL CODE (NEC) STANDARDS.
4. SERVICE GROUNDING CONDUCTOR SHALL BE CONTINUOUS & CONNECT TO TWO 8 FT. GROUNDING ELECTRODES SEPARATED A MINIMUM OF 6 FT.

APPROVED BY

DIRECTOR, ENGINEERING SERVICES — TERRY M. TAYLOR, P.E.

PRINCIPAL ENGINEER, DESIGN — GARY S. NELSON, P.E.

ADOPTED:	02/1986
REVISED:	01/2012
SUPERSEDES:	11/2011
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	MDH

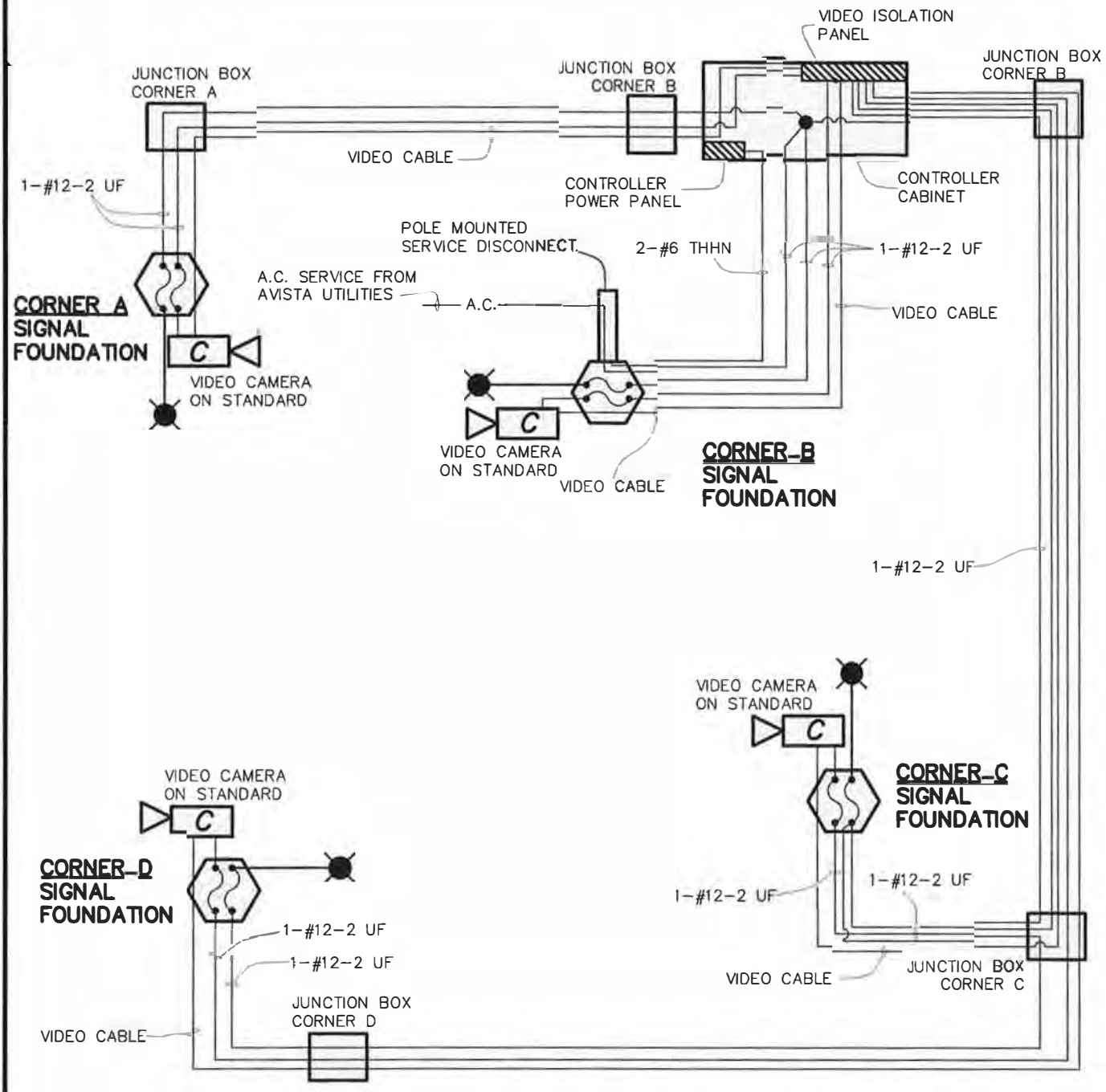
AERIAL ELECTRICAL SERVICE

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-110

Back to Section J - TOC



APPROVED BY

Thomas L. Arnold

DIRECTOR, ENGINEERING SERVICES TOM L. ARNOLD, P.E.

K Brown

PRINCIPAL ENGINEER, DESIGN KEN M. BROWN, P.E.

ADOPTED: 4/99
REVISED: 4/2004
SUPERSEDES:
SCALE: NTS
DWG/REV. BY: SRM

ILLUMINATION/MACHINE VISION DIAGRAM
TYPICAL

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-111

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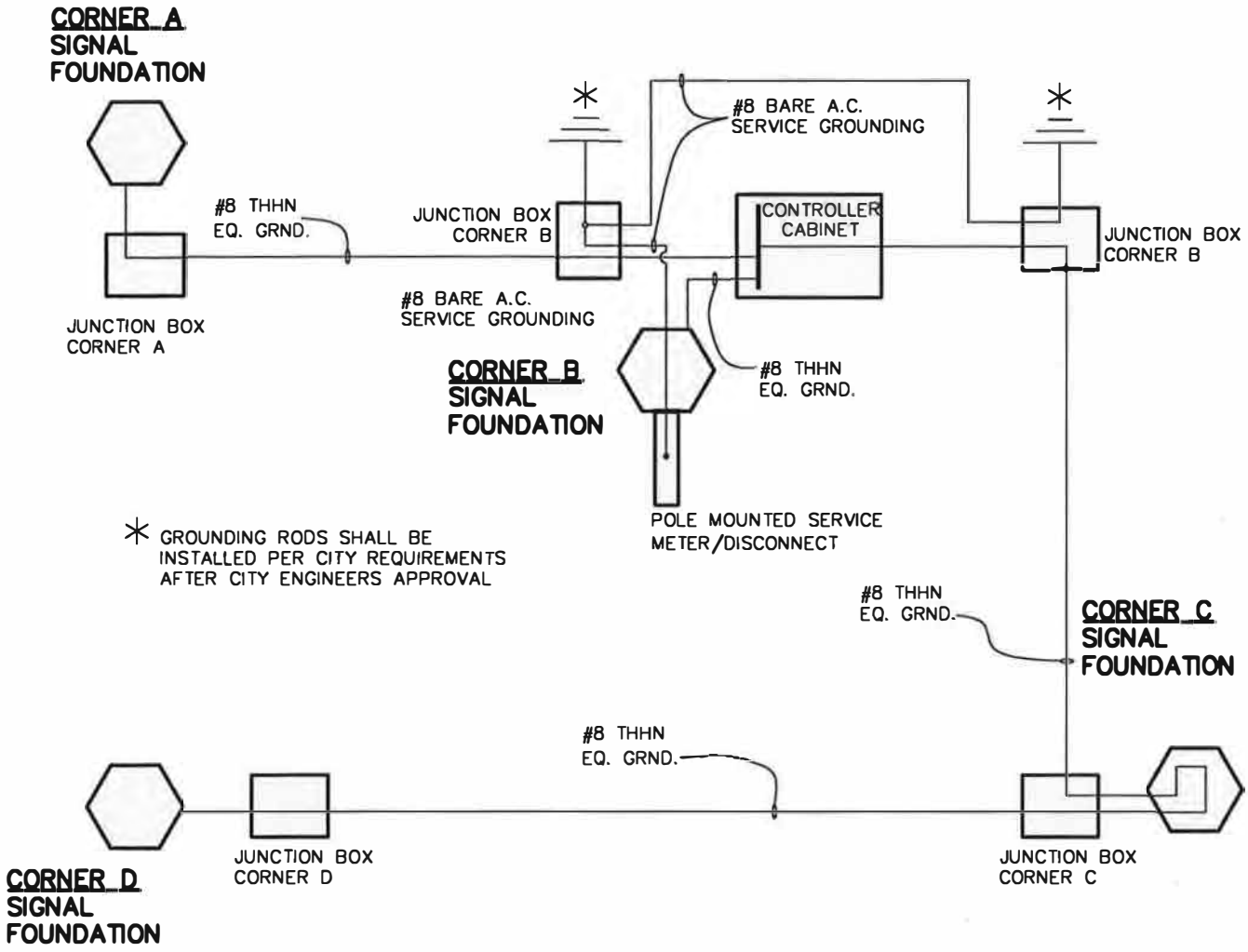


APPROVED BY

Eldon Brown

ACTING DIRECTOR, ENGINEERING SERVICES — ELDON W. BROWN, P.E.

PRINCIPAL ENGINEER, DESIGN — GARY S. NELSON, P.E.

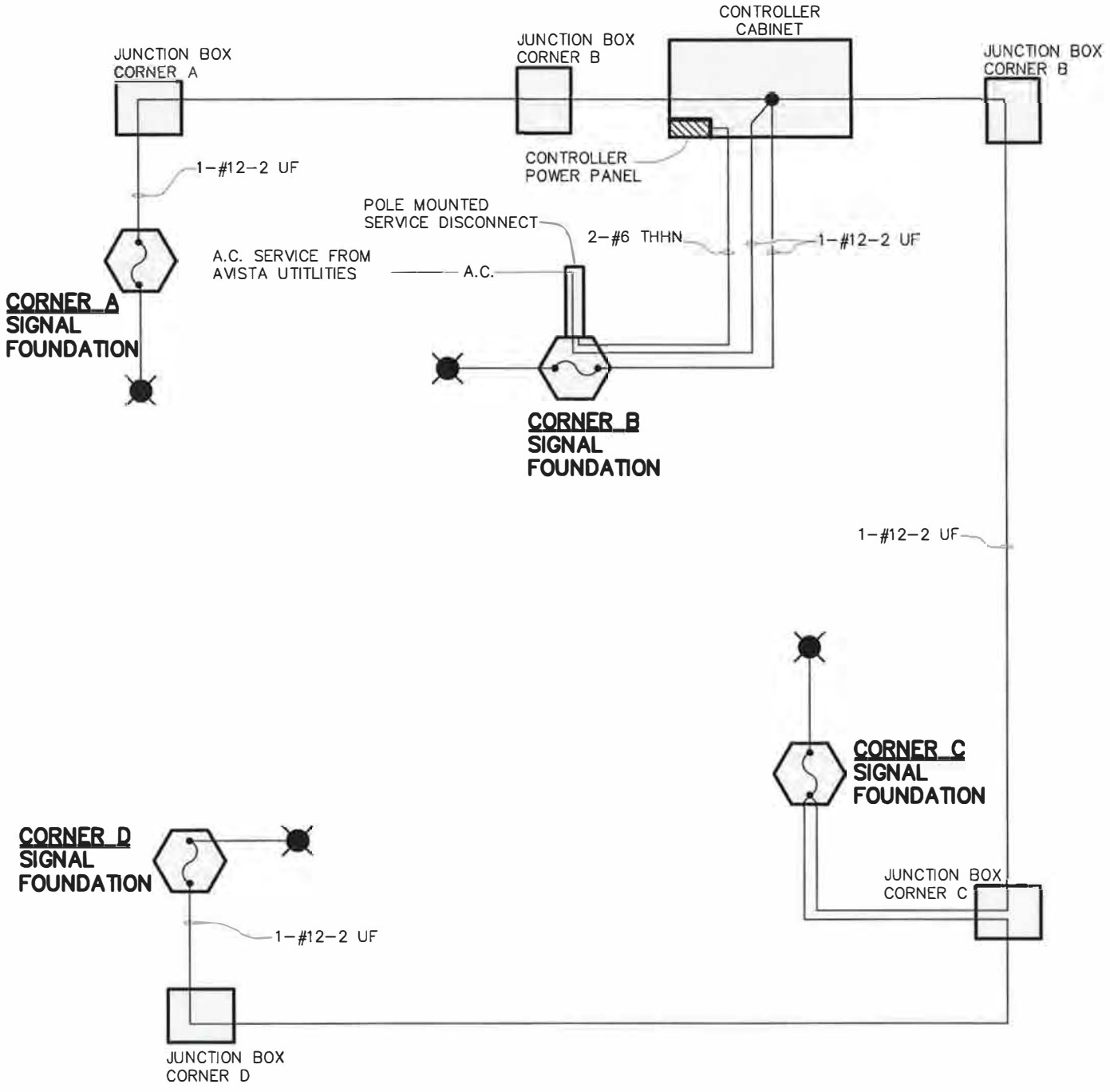
ADOPTED: 04/1999
REVISED: 01/2008
SUPERSEDES: 04/2004
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: SRM/CVH

GROUNDING WIRE DIAGRAM
TYPICAL

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-111A

Back to Section J - TOC



APPROVED BY

Thomas L. Arnold

DIRECTOR, ENGINEERING SERVICES TOM L. ARNOLD, P.E.

K Brown

PRINCIPAL ENGINEER, DESIGN KEN M. BROWN, P.E.

ADOPTED: 4/99
REVISED: 4/2004
SUPERSEDES:
SCALE: NTS
DWG/REV. BY: SRM

ILLUMINATION DIAGRAM
TYPICAL

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
J-111B

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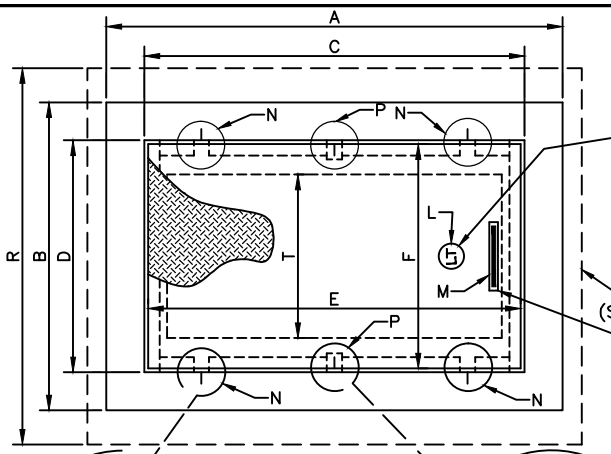
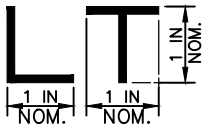


PLAN VIEW

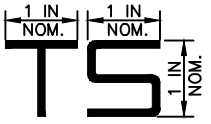
BOX FOUNDATION (SEE DRAWING BELOW)

LEGEND DETAIL (MARK L)

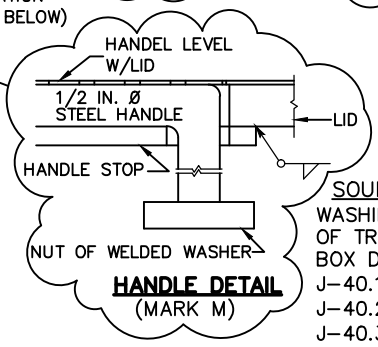
FORM LETTERS WITH 1/8 IN. WELD BEAD. GRIND OFF DIAMOND PATTERN BEFORE FORMING LETTERS.



ILLUMINATION SYSTEM LEGEND



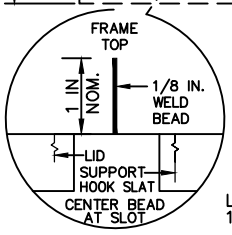
TRAFFIC SIGNAL SYSTEM LEGEND



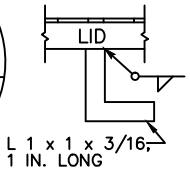
HANDLE DETAIL (MARK M)

SOURCE

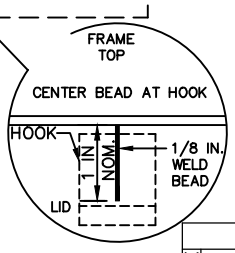
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION JUNCTION BOX DETAILS, STANDARD PLAN J-40.10-04 4/25/16, J-40.20-03 4/25/16, J-40.30-04 4/25/16.



FRAME SLOT (MARK N)

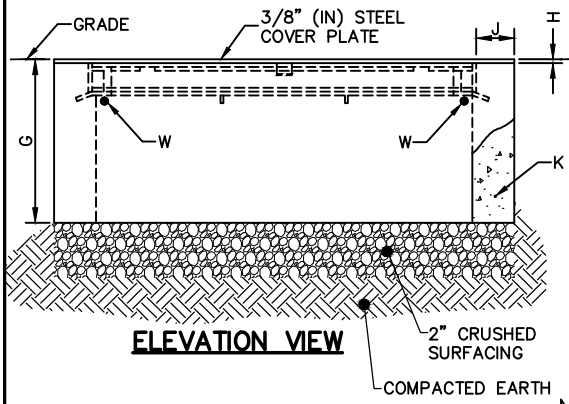


HOOK DETAIL (2 HOOKS PER LID)

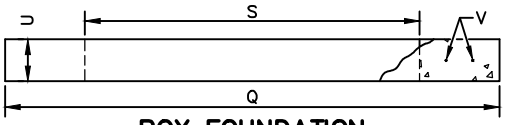


LID HOOK (MARK P)

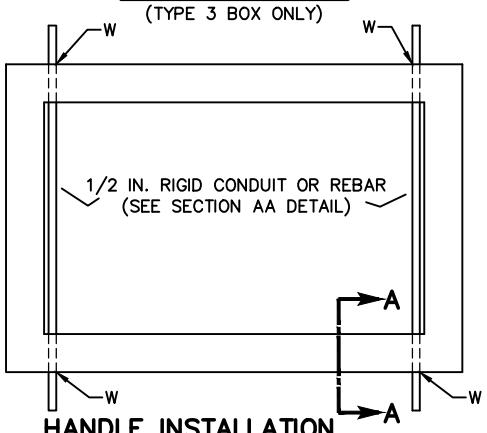
JUNCTION BOX DIMENSION TABLE					
MARK	ITEM	BOX TYPE TYPE 1	TYPE 2	TYPE 3	TYPE 8
A	Box Outside Length	22 IN.	33 IN.	42 IN.	42 IN.
B	Box Outside Width	17 IN.	22.5 IN.	30 IN.	30 IN.
C	Box Inside Length	18–19 IN.	28–30 IN.	36 IN.	36 IN.
D	Box Inside Width	13–14 IN.	17–19.5 IN.	24 IN.	24 IN.
E	Lid Length	17 5/8 IN.	28 5/8 IN.	38 IN.	2 x 19 IN.
F	Lid Width	12 5/8 IN.	18 1/8 IN.	26 IN.	26 IN.
G	Box Depth	12 IN.	12 IN.	12 IN.	12 IN.
H	Lid & Frame Depth	5/16 IN.	5/16 IN.	1/2 IN.	1/2 IN.
J	Wall Thickness (Min.)	1 1/2 IN.	1 1/2 IN.	3 IN.	3 IN.
K	Wire Reinforcement	W-3	W-2.5	W-5	W-5
L	Legend	See Detail	See Detail	See Detail	See Detail
M	Handle	None	None	See Detail	See Detail
N	Frame Slot Mark	None	None	See Detail	See Detail
P	Lid Hook Mark	None	None	See Detail	See Detail
Q	Found, Outside Length	None	None	48 IN.	48 IN.
R	Found, Outside Width	None	None	36 IN.	36 IN.
S	Found, Inside Length	None	None	36 IN.	36 IN.
T	Found, Inside Width	None	None	20 IN.	20 IN.
U	Found, Depth	None	None	3 IN.	3 IN.
V	Found, Reinforcement	None	None	2-W-5	2-W-5
W	Drilled hole for conduit/rebar	1/2 IN.	1/2 IN.	1/2 IN.	1/2 IN.
	CAPACITY -Conduit Inch DIA.	6	12	24	24



ELEVATION VIEW



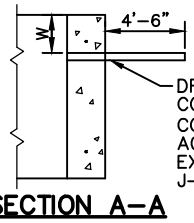
BOX FOUNDATION
(TYPE 3 BOX ONLY)



HANDLE INSTALLATION PLAN VIEW

NOTES

1. ALL DIMENSIONS ARE MINIMUM. EXACT CONFIGURATIONS VARY AMONG DIFFERENT MANUFACTURERS.
2. MINIMUM LID THICKNESS SHOWN. JUNCTION BOXES INSTALLED IN SIDEWALKS, WALKWAYS, AND SHARED-USE PATHS SHALL HAVE SKID RESISTANT COATING ON THE LID AND LIP COVER PLATE, AND SHALL BE INSTALLED WITH THE SURFACE FLUSH WITH AND MATCHED TO THE GRADE OF THE SIDEWALK, WALKWAY, OR SHARED-USE PATH.
3. LID SUPPORT MEMBERS SHALL BE WELDED TO THE FRAME.
4. 4000 PSI CONCRETE IS ALLOWED IF BOX REINFORCEMENT CONSISTS OF 6 X 6 – W3 X W3 WELDED WIRE FABRIC WELDED TO THE FRAME.
5. WHEN NOTED IN THE CONTRACT, TYPE 2 AND TYPE 8 BOXES SHALL BE PROVIDED WITH 12 IN. DEEP EXTENSION BOXES.
6. WHEN NOTED IN THE CONTRACT, TYPE 2 BOXES SHALL BE PROVIDED WITH A 10 IN. X 27 1/2 IN. 10 GAUGE DIVIDER PLATE COMPLETE WITH FASTENERS.
7. NON-CONCRETE BOXES NOT ALLOWED.
8. FRAME & LID SHALL BE HOT DIPPED GALVANIZED AND SKID RESISTANT.



DRILL AND PLACE 1/2 IN. RIGID CONDUIT OR REBAR. CONDUIT/REBAR MUST LAY AGAINST INSIDE OF J-BOX AND EXTEND 4-6 INCHES OUT OF J-BOX.

SECTION A-A

LEGEND
BOX TYPES

Proposed		Existing	
1	2	1	2
3	8	3	8

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 11/2018
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

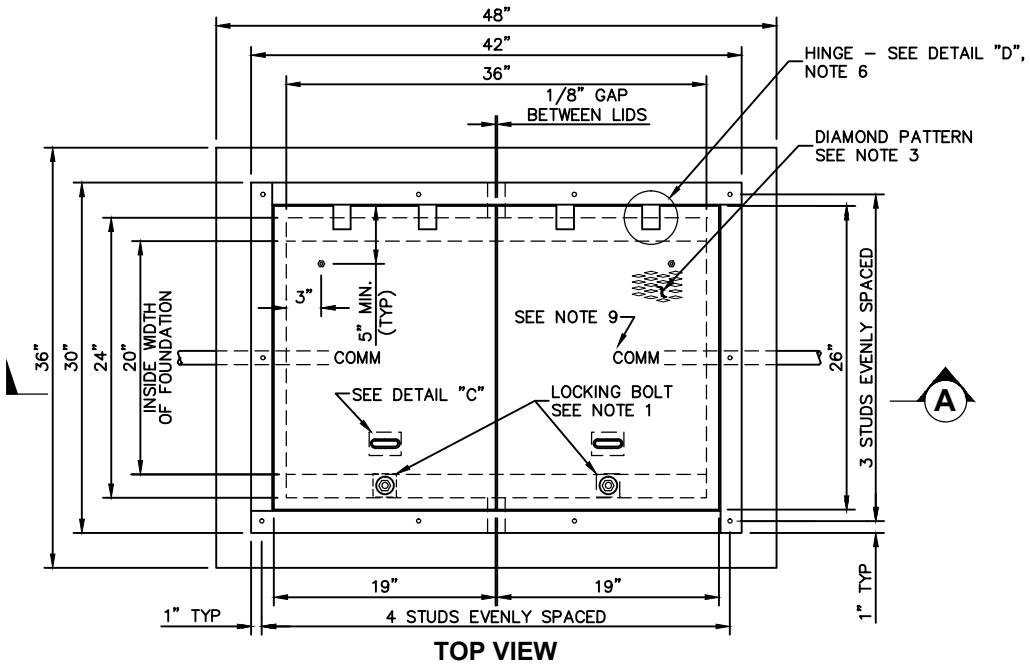
JUNCTION BOX DETAILS

SHEET 1 OF 3

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

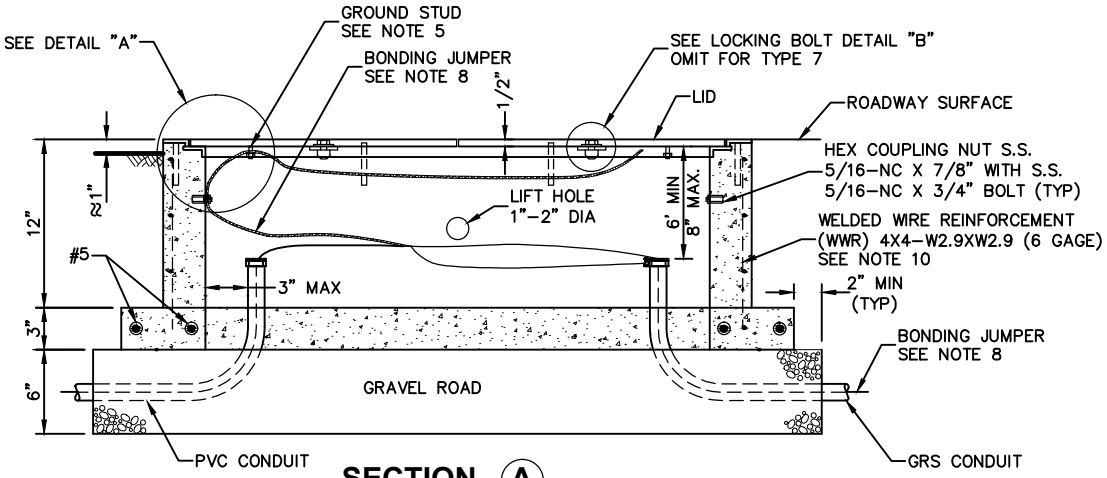
STANDARD PLAN No. **J-112**

Back to Section J - TOC



TOP VIEW

USE LOCKING BOLTS ONLY FOR TYPE 8



SECTION (A)

NOTES:

1. JUNCTION BOXES TYPE 7 AND TYPE 8 ARE IDENTICAL EXCEPT FOR THE ADDITION OF LOCKING BOLTS ON THE TYPE 8.

2. ALL BOX DIMENSIONS ARE APPROXIMATE. EXACT CONFIGURATIONS VARY AMONG MANUFACTURERS

3. MINIMUM LID THICKNESS SHOWN. JUNCTION BOXES INSTALLED IN SIDEWALKS, WALKWAYS, AND SHARED–USE PATHS SHALL HAVE A SKID RESISTANT COATING ON THE LID AND LIP COVER PLATE, AND SHALL BE INSTALLED WITH THE SURFACE FLUSH WITH AND MATCHED TO THE GRADE OF THE SIDEWALK, WALKWAY, OR SHARED–USE PATH.

4. LID SUPPORT MEMBERS SHALL BE 3/16" MIN. THICK STEEL C, L, OR T SHAPE, WELDED TO THE FRAME. EXACT CONFIGURATIONS VARY AMONG MANUFACTURERS.

5. A 1/4–20NC X 3/4" S.S GROUND STUD SHALL BE WELDED TO THE BOTTOM OF EACH LID; INCLUDE S.S NUT AND FLAT WASHER.

6. THE HINGES SHALL ALLOW THE LIDS TO OPEN 180°.

7. BOLTS AND NUTS SHALL BE LIBERALLY COATED WITH ANIT–SEIZE COMPOUND.

8. CONNECT A BONDING JUMPER TO STEEL CONDUIT BUSHING FOR GRS CONDUIT; CONNECT TO EQUIPMENT GROUNDING CONDUCTOR FOR PVC CONDUIT. AS AN ALTERNATIVE TO THE GROUND STUD CONNECTION, THE BONDING JUMPER SHALL BE ATTACHED TO THE FRONT FACE OF THE HINGE POCKET WITH A 5/16–20NC X 3/4" S.S. BOLT, NUT, AND FLAT WASHER. BONDING JUMPER SHALL BE #8 MIN. X 4' OF TINNED BRAIDED COPPER.

9. THE SYSTEM IDENTIFICATION LETTERS SHALL BE 1/8" LINE THICKNESS FORMED BY ENGRAVING, STAMPING, OR WITH A S.S. WELD BEAD. GRIND OFF DIAMOND PATTERN BEFORE FORMING LETTERS. SEE SYSTEM IDENTIFICATION DETAIL.

10. SEE THE STANDARD SPECIFICATIONS FOR ALTERNATIVE REINFORCEMENT AND CLASS OF CONCRETE.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 02/2015
CHECKED BY: GTO
SCALE: NTS
REVISED BY: MDH/MLD

JUNCTION BOX DETAILS
TYPE 8
SHEET 2 OF 3

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–112

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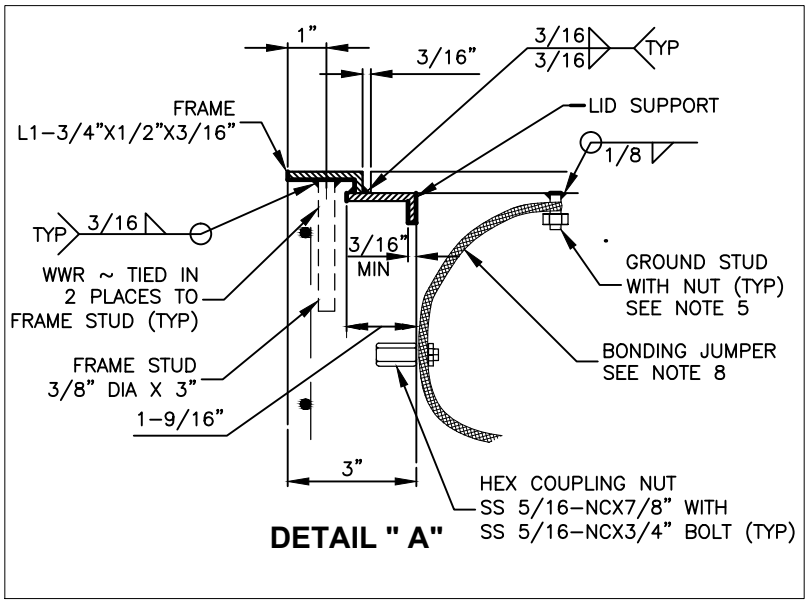

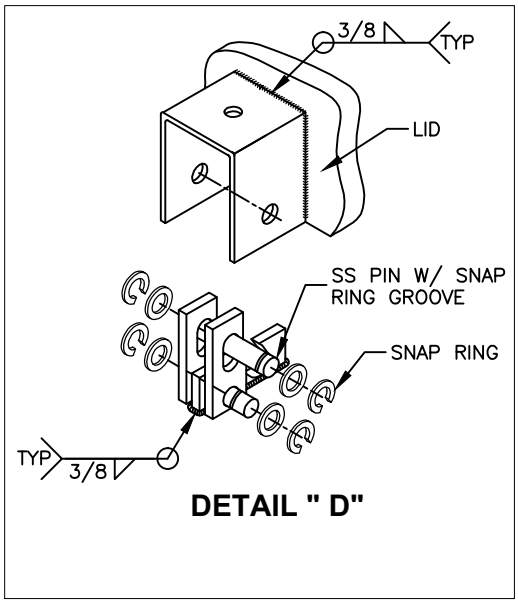

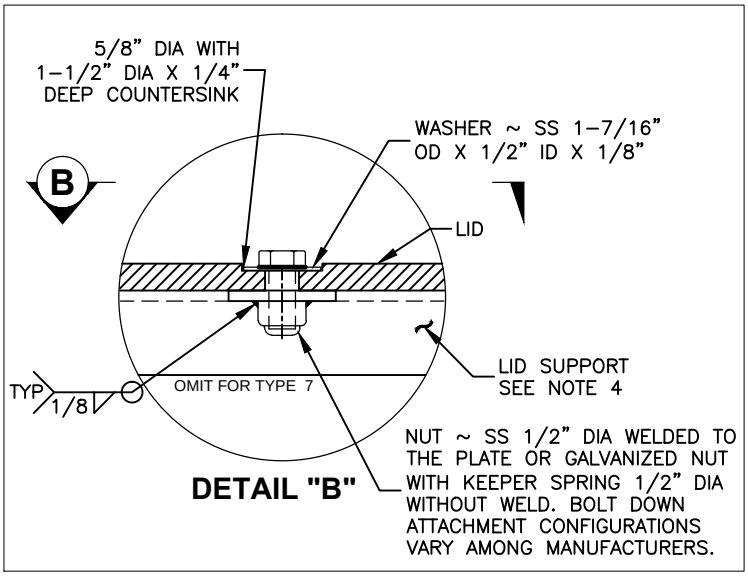

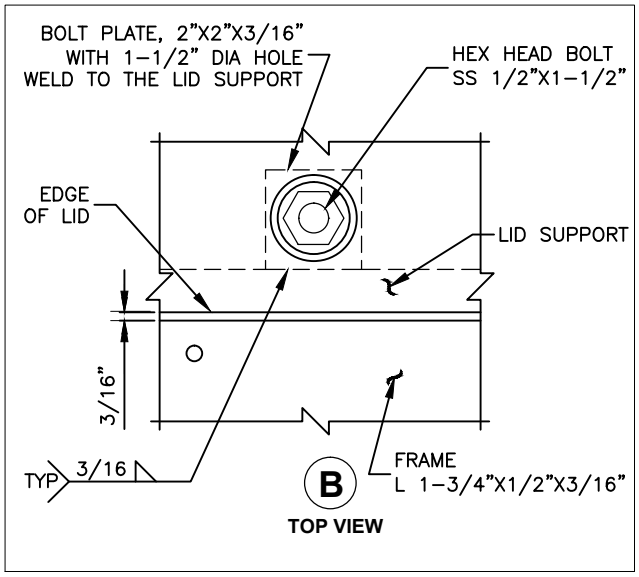

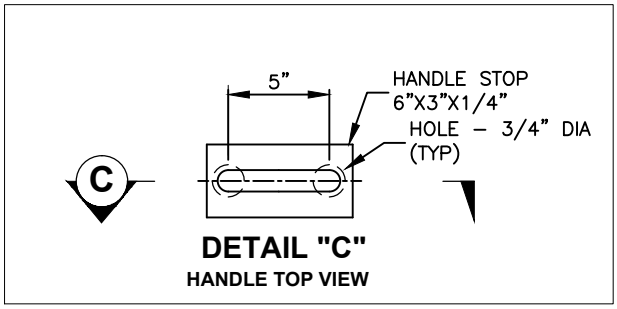

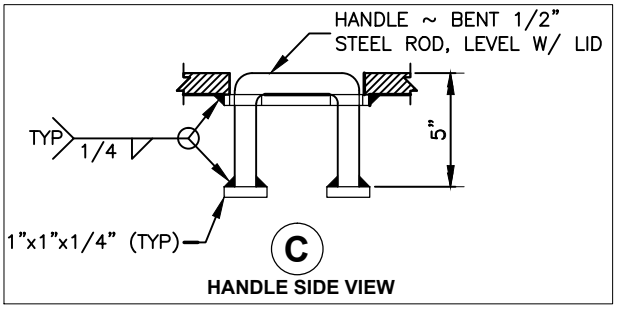

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED:	
REVISED:	08/2019
SUPERSEDES:	08/2019
CHECKED BY:	GTO
SCALE:	NTS
REVISED BY:	MDH/MLD

JUNCTION BOX DETAILS

TYPE 7

SHEET 3 OF 3

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-112

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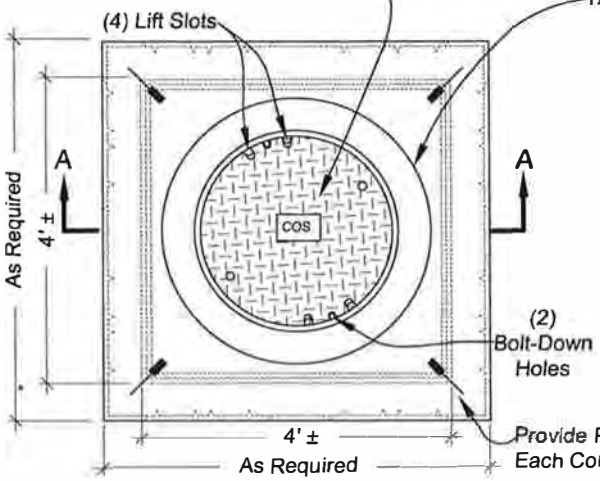
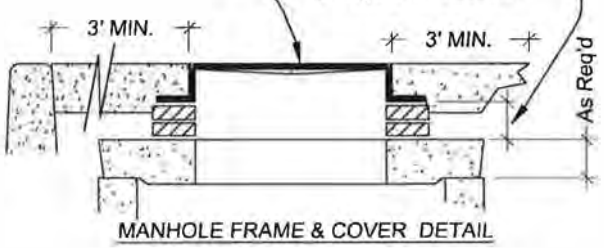
See City Standard Plan J-112 for Legend Detail



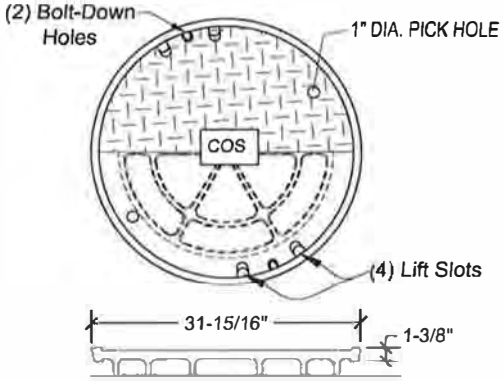
PULL BOX PLAN VIEW

MODIFIED U.S. WEST FRAME & COVER 30" DIA. CLEAR OPENING

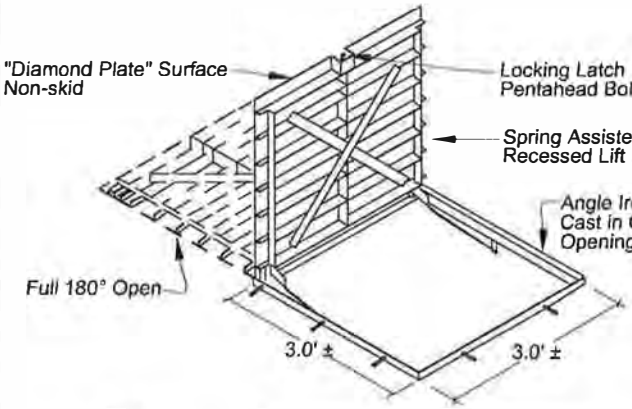


MANHOLE FRAME & COVER DETAIL

Note: The Manhole Ring & Cover, and Lid Must be Road Rated. Handles on Lids Not Allowed.



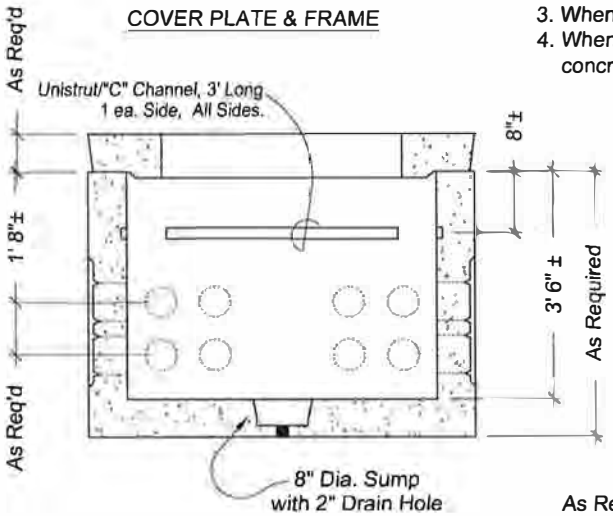
MANHOLE COVER PLAN/PROFILE DETAIL



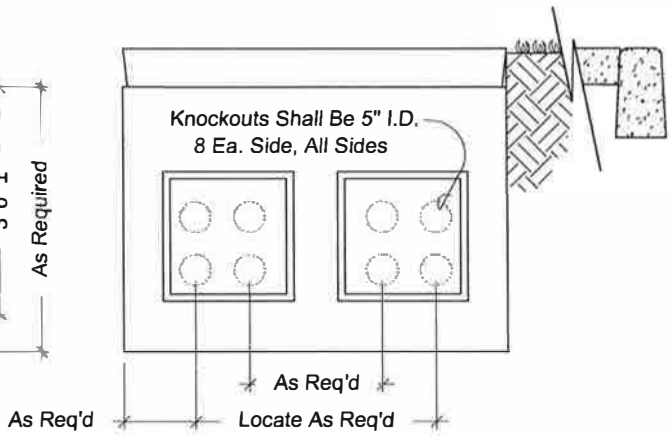
COVER PLATE & FRAME

NOTES

1. Unistruts/ "C" Channel's to Accept Industry Standard Racking and Hardware Appurtenances.
2. Rack Cable Per J-112C.
3. When installed in a planting strip the lid shall be even with top of curb.
4. When manhole with frame & cover is installed in a planting strip, install concrete flush with lid & curb, at least 3' wide all around lid perimeter.



SECTION AA



END VIEW

General Drawing Notes:
Dimensions Shown Are Desired but Can Be Adjusted to Accommodate Construction of Box. "+/-" is 4" - 6".
"As Required" Note Indicates Dimensions Are Dependent Upon Design of Pull Box for Traffic Designs.

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

PRINCIPAL ENGINEER, CONST. — KENNETH M. BROWN, P.E.

ADOPTED:	05/2007
REVISED:	03/2015
SUPERSEDES:	01/2012
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	MDH

PULL BOX INSTALLATION

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–112A

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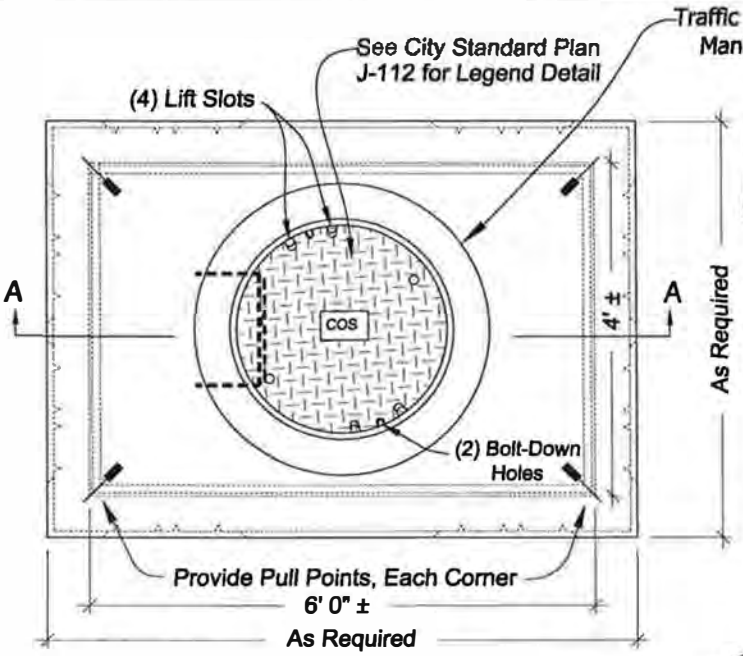
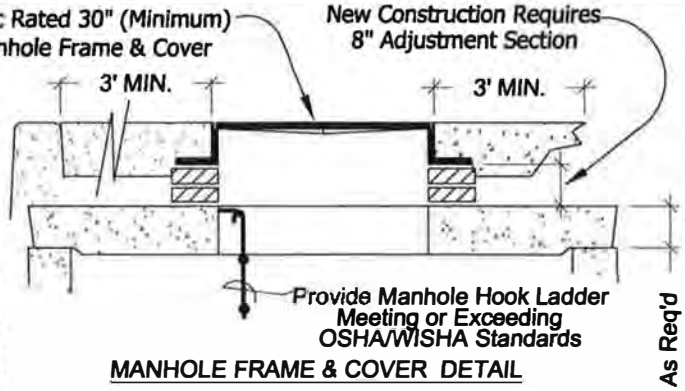
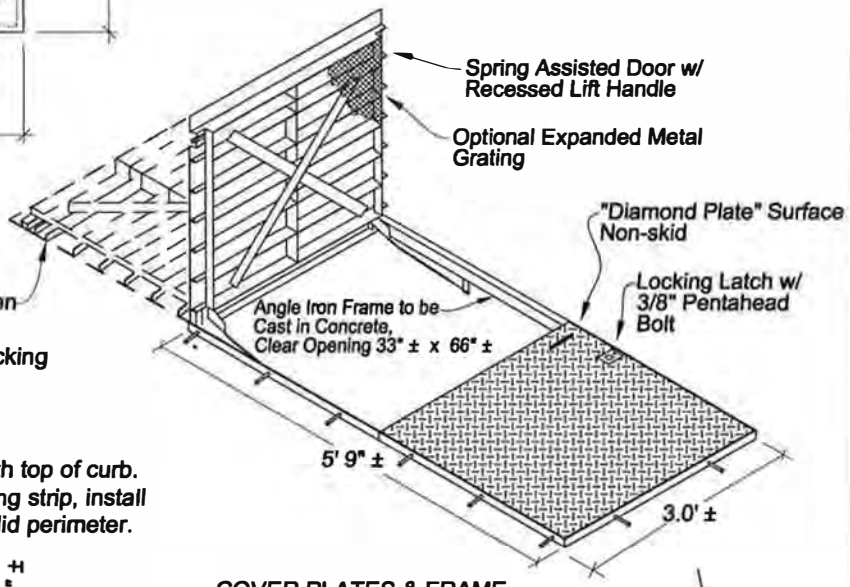


CABLE VAULT PLAN VIEW
MODIFIED U.S. WEST FRAME & COVER
30" DIA. CLEAR OPENING



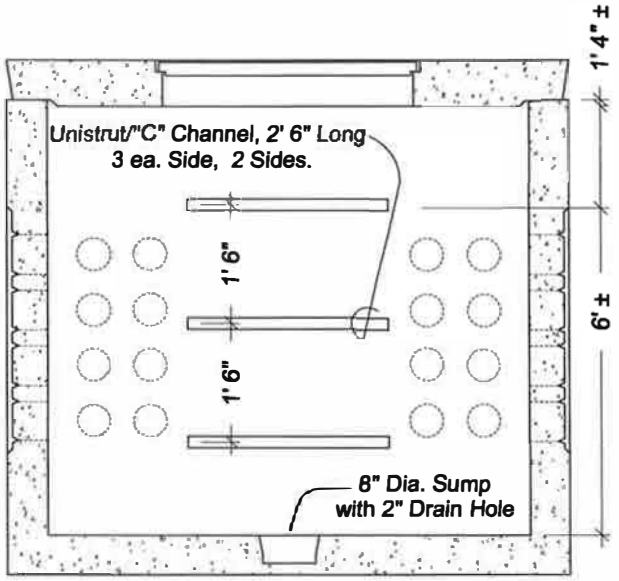
MANHOLE FRAME & COVER DETAIL

Notes: The Manhole Ring & Cover, and Lid Must be Road Rated.
Handles on Lids Not Allowed.
For Manhole Cover Plan/Profile, Please See Pull Box Std. Plan J-112A.

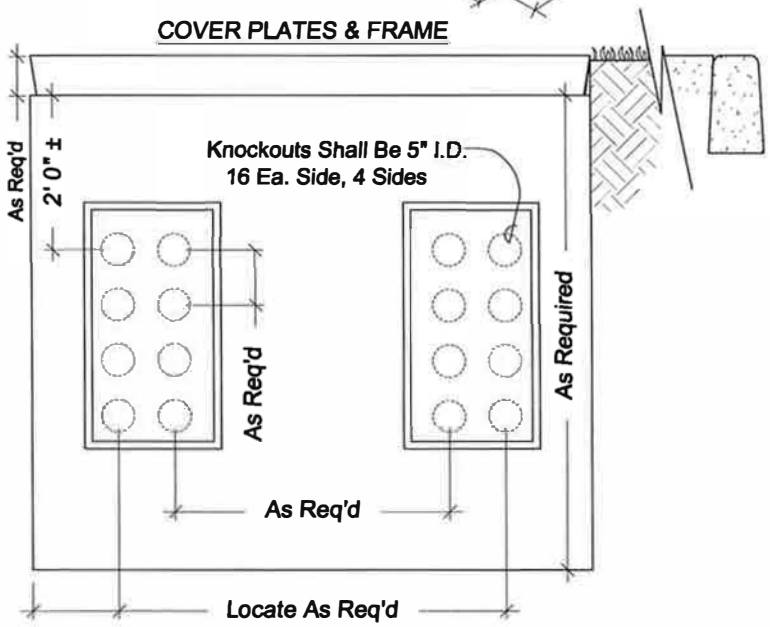


NOTES

1. Unistruts/ "C" Channel's to Accept Industry Standard Racking and Hardware Appurtenances.
2. Locate Ladders so as to Allow for Ease of Access.
3. Rack Cable Per J-112C.
4. When installed in a planting strip the lid shall be even with top of curb.
5. When manhole with frame & cover is installed in a planting strip, install concrete flush with lid & curb, at least 3' wide all around lid perimeter.



SECTION AA

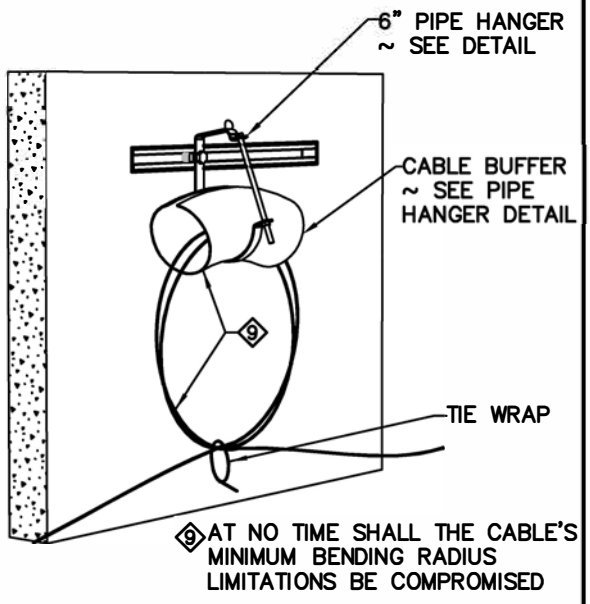


END VIEW

General Notes:
Dimensions Shown Are Desired but Can Be Adjusted to Accommodate Construction of Vault. "+/-" is 4" - 6".
"As Required" Note Indicates Dimensions Are Dependent Upon Design of Cable Vault for Traffic Designs.

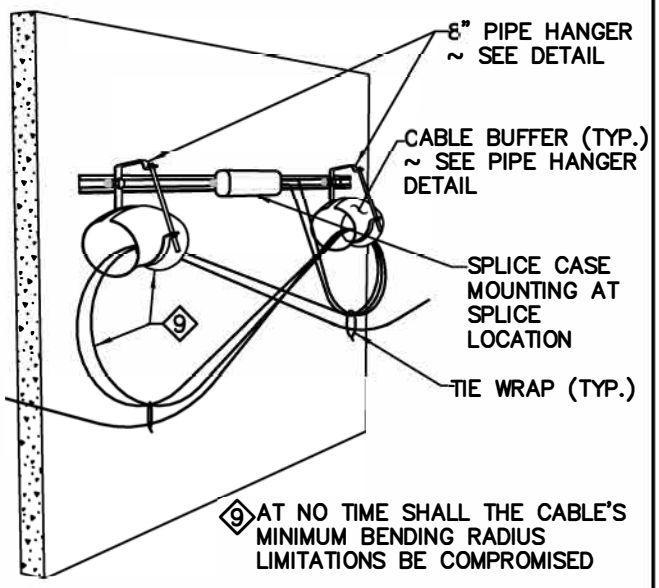
APPROVED BY ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG PRINCIPAL ENGINEER, CONST. — KENNETH M. BROWN, P.E.	ADOPTED: 05/2007 REVISED: 03/2015 SUPERSEDES: 01/2012 CHECKED BY: GTO SCALE: NTS DWG/REV. BY: MDH	CABLE VAULT INSTALLATION ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON STANDARD PLAN No. J–112B

Back to Section J - TOC

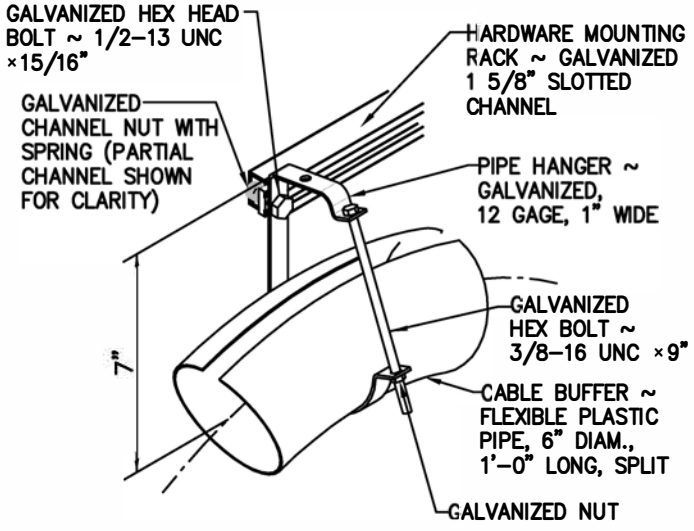


INTERNAL OBLIQUE VIEW

COIL THE CABLE BY USING A "FIGURE 8"
FOLDED IN THE MIDDLE TO FORM A LOOP

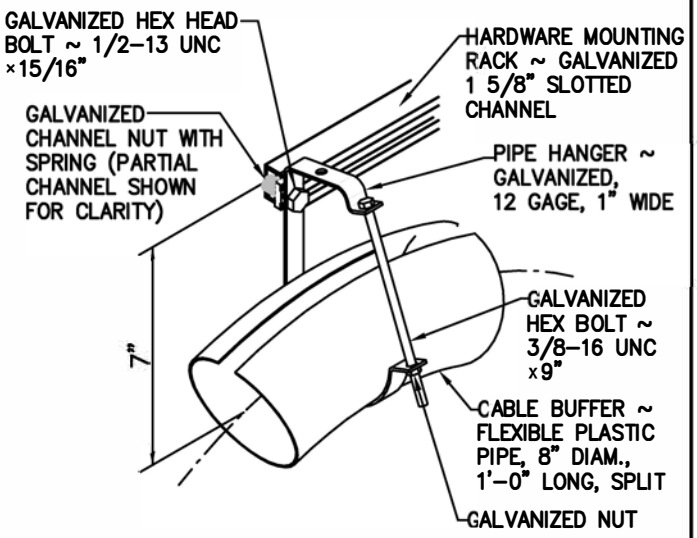


INTERNAL OBLIQUE VIEW



PIPE HANGER DETAIL

FABRICATE IF NOT AVAILABLE COMMERCIALLY



PIPE HANGER DETAIL

FABRICATE IF NOT AVAILABLE COMMERCIALLY

PULL BOX
DETAILS

CABLE VAULT
DETAILS

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

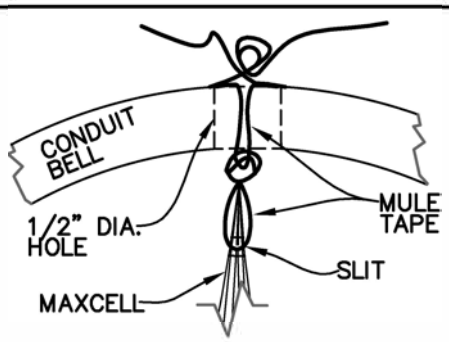
ADOPTED:	01/2012
REVISED	11/2018
SUPERSEDES:	01/2012
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	MDH

CABLE RACKING FOR PULL BOX & CABLE VAULT INSTALLATION

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-112C

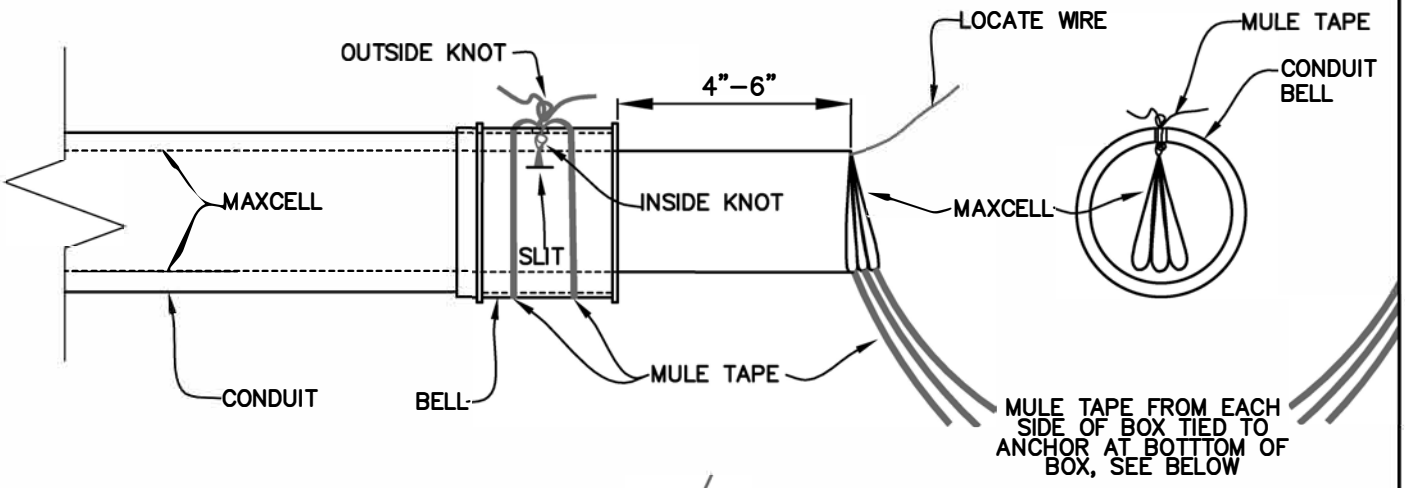
Back to Section J - TOC

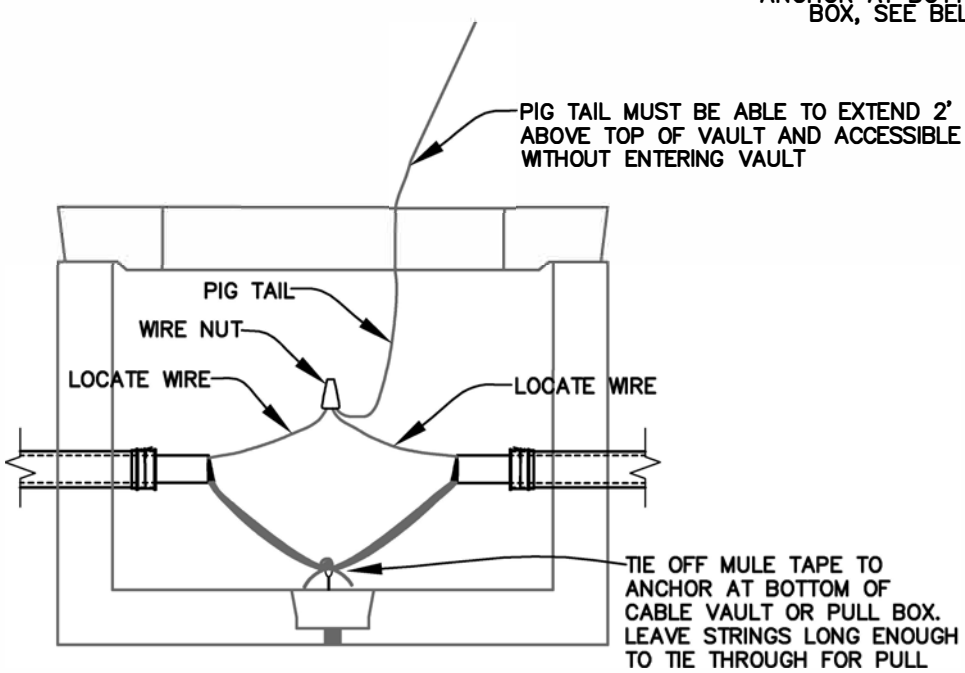


MULE TAPE AT TOP OF MAXCELL AND CONDUIT BELL
NTS

MULE TAPE TIES

1. DRILL A 3/8" to 1/2" DIA. HOLE IN TOP OF BELL.
2. LOOP APPROX. 3–4 FT. MULE TAPE THROUGH 1/2" HORIZONTAL SLIT MADE IN TOP OF MAXCELL. TIE A KNOT ABOVE MAXCELL INSIDE CONDUIT.
3. FEED BOTH ENDS OF MULE TAPE UP THROUGH HOLE IN BELL AND WRAP AROUND OUTSIDE OF CONDUIT BELL 2 TIMES AND SECURE WITH A KNOT ON TOP.





CABLE VAULT OR PULL BOX

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

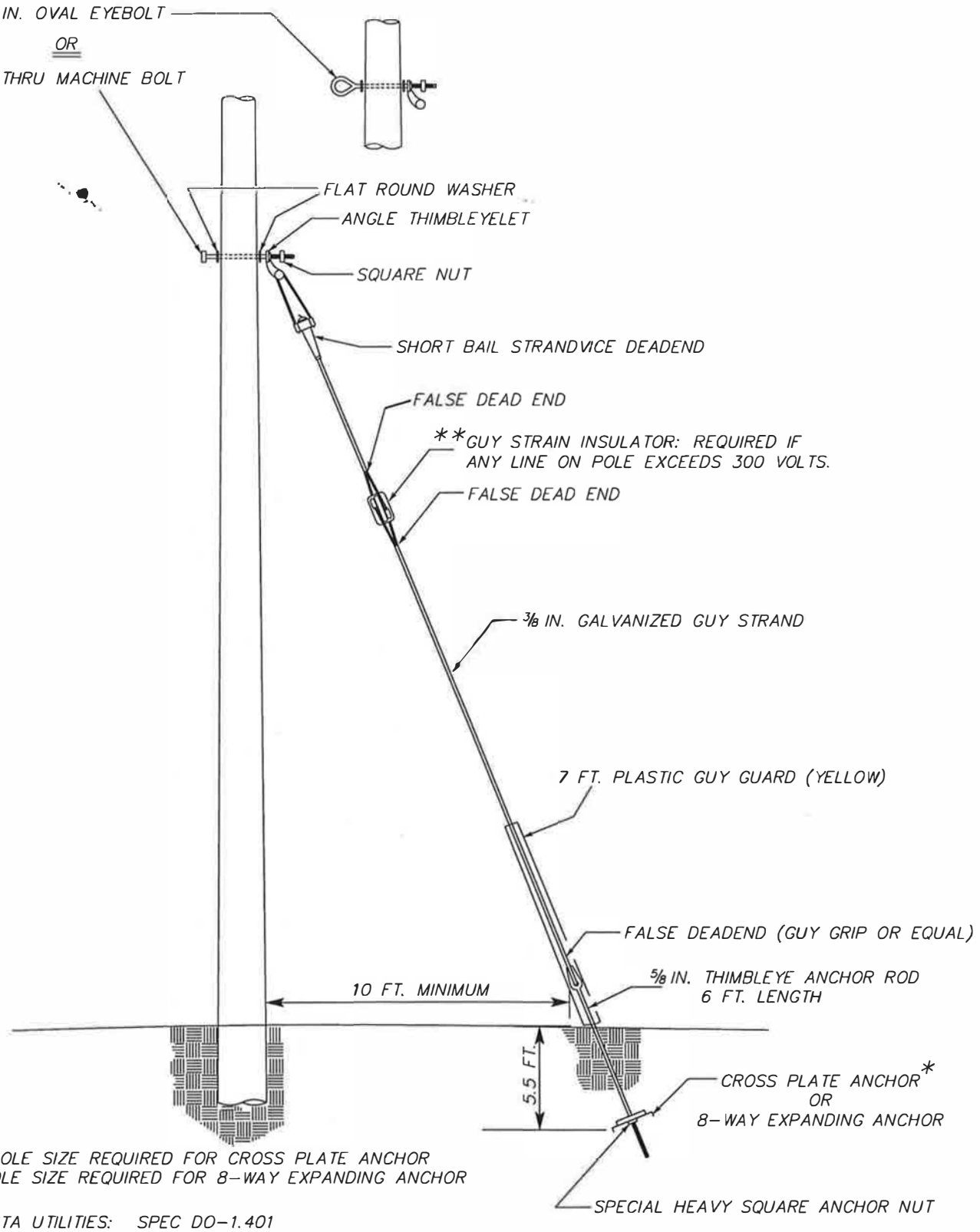
ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: JHM

MAXCELL ANCHORED IN PULL BOX OR CABLE VAULT

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–112D

Back to Section J - TOC



* 20 IN. HOLE SIZE REQUIRED FOR CROSS PLATE ANCHOR
8 IN. HOLE SIZE REQUIRED FOR 8-WAY EXPANDING ANCHOR

** PER AVISTA UTILITIES: SPEC DO-1.401
(JOINT USE GENERAL REQUIREMENTS)

THE INFORMATION PROVIDED HEREON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.

APPROVED BY

DIRECTOR, ENGINEERING SERVICES — TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN — GARY S. NELSON, P.E.

ADOPTED:	01/1988
REVISED:	05/2007
SUPERSEDES:	04/1999
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	CVH

DOWN GUY

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-113

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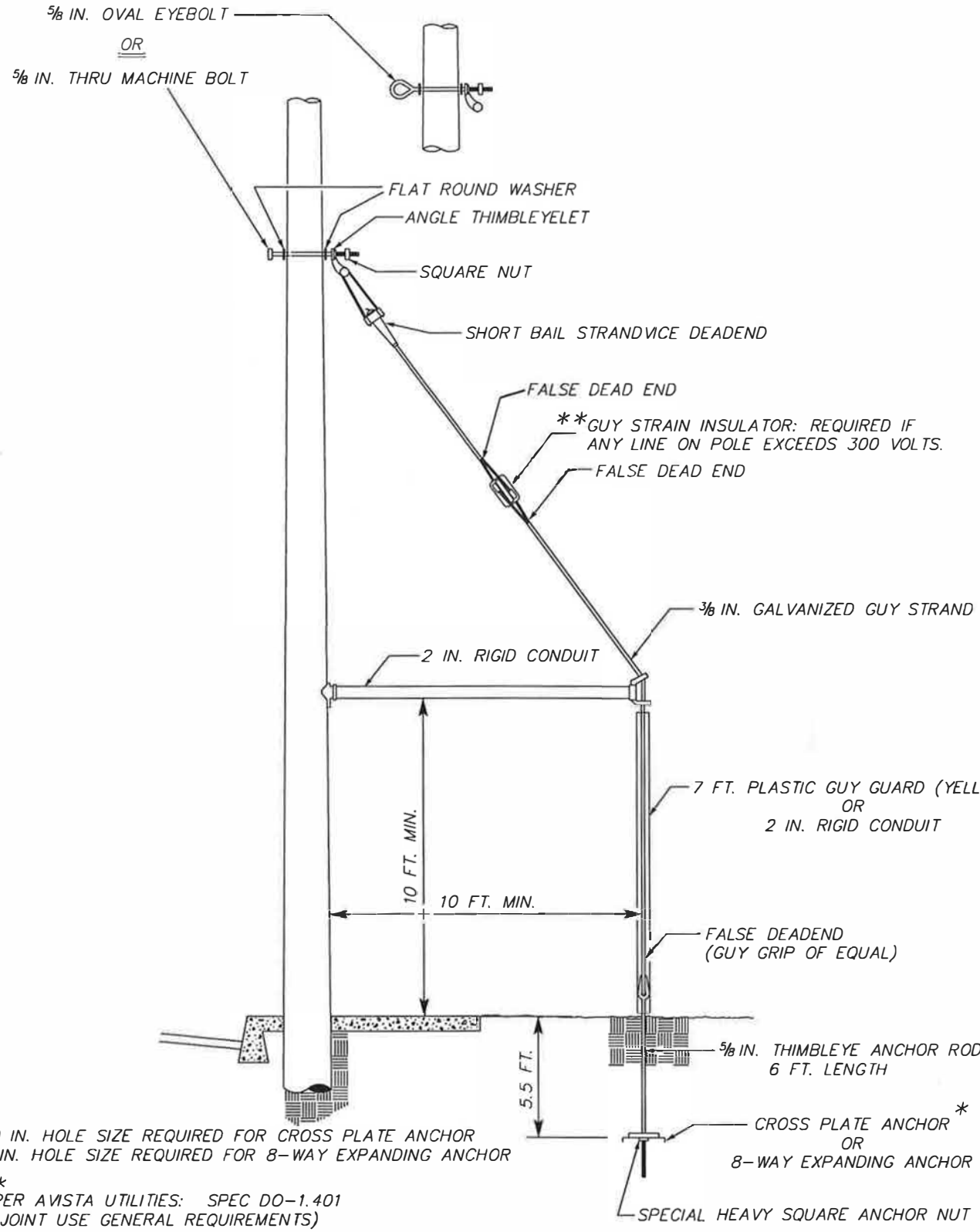

* 20 IN. HOLE SIZE REQUIRED FOR CROSS PLATE ANCHOR
8 IN. HOLE SIZE REQUIRED FOR 8-WAY EXPANDING ANCHOR

** PER AVISTA UTILITIES: SPEC DO-1.401
(JOINT USE GENERAL REQUIREMENTS)

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APPROVED BY

DIRECTOR, ENGINEERING SERVICES TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN GARY S. NELSON, P.E.

ADOPTED:	01/1988
REVISED:	05/2007
SUPERSEDES:	04/1999
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	CVH

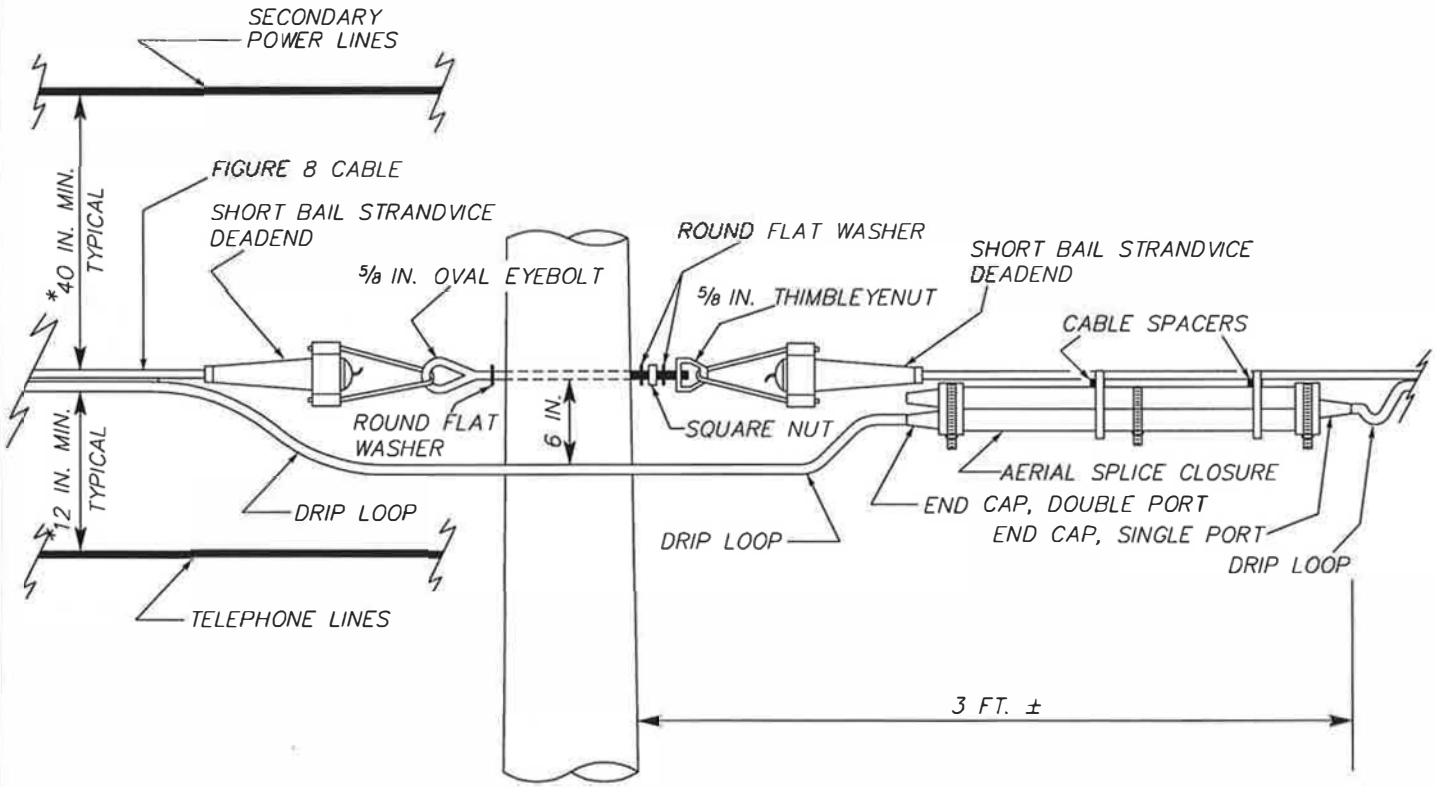
SIDEWALK BACK GUY

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-114

Back to Section J - TOC



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*SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS DWG. DO-1.401 AND DO-1.407

APPROVED BY

DIRECTOR, ENGINEERING SERVICES TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN GARY S. NELSON, P.E.

ADOPTED:	01/1988
REVISED:	05/2007
SUPERSEDES:	04/1999
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	CVH

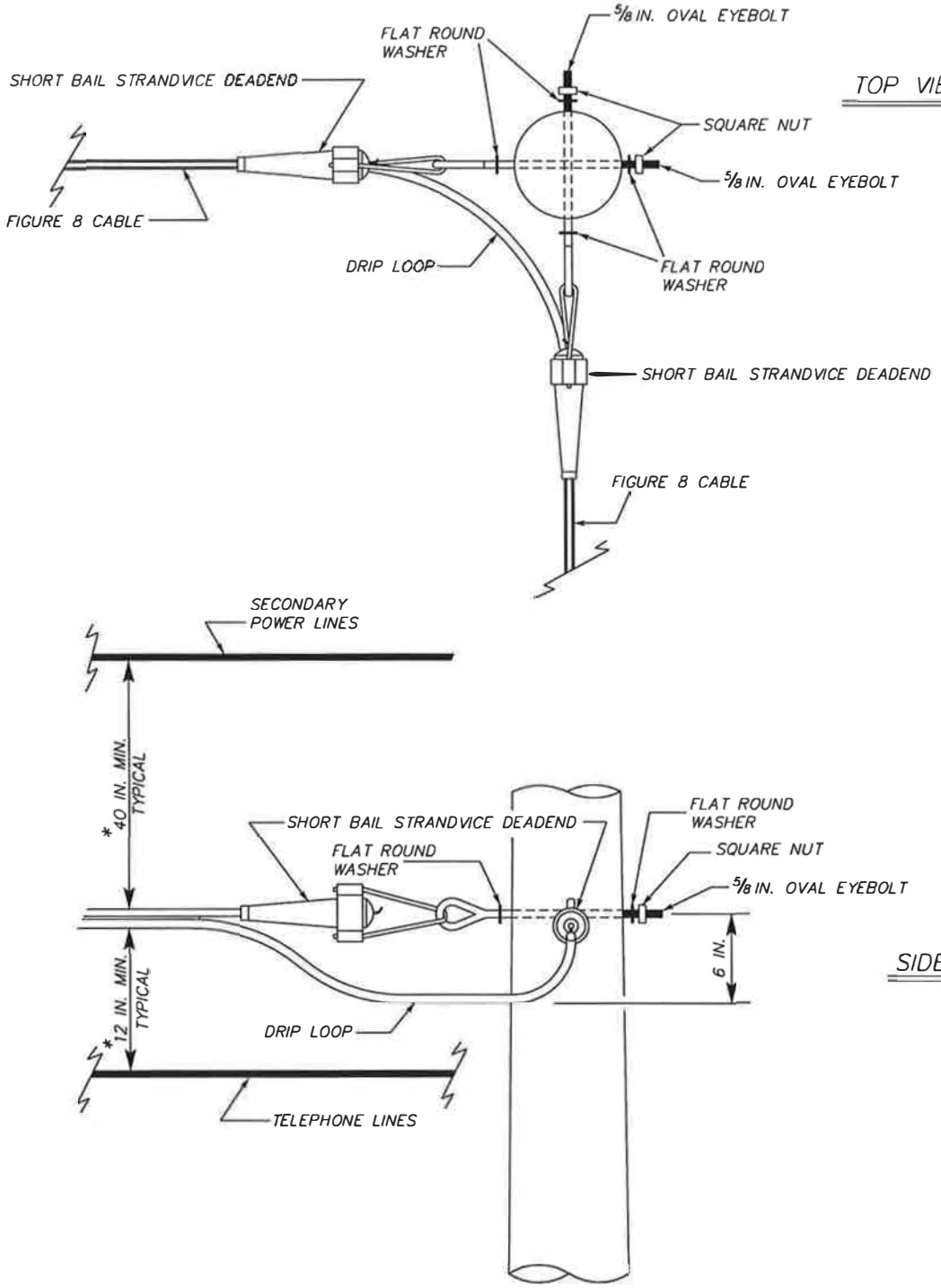
AERIAL SPLICE CLOSURE

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-115

Back to Section J - TOC



THE INFORMATION PROVIDED HEREON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.

*SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS DWG. DO-1.401 AND DO-1.407

APPROVED BY

DIRECTOR, ENGINEERING SERVICES TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN GARY S. NELSON, P.E.

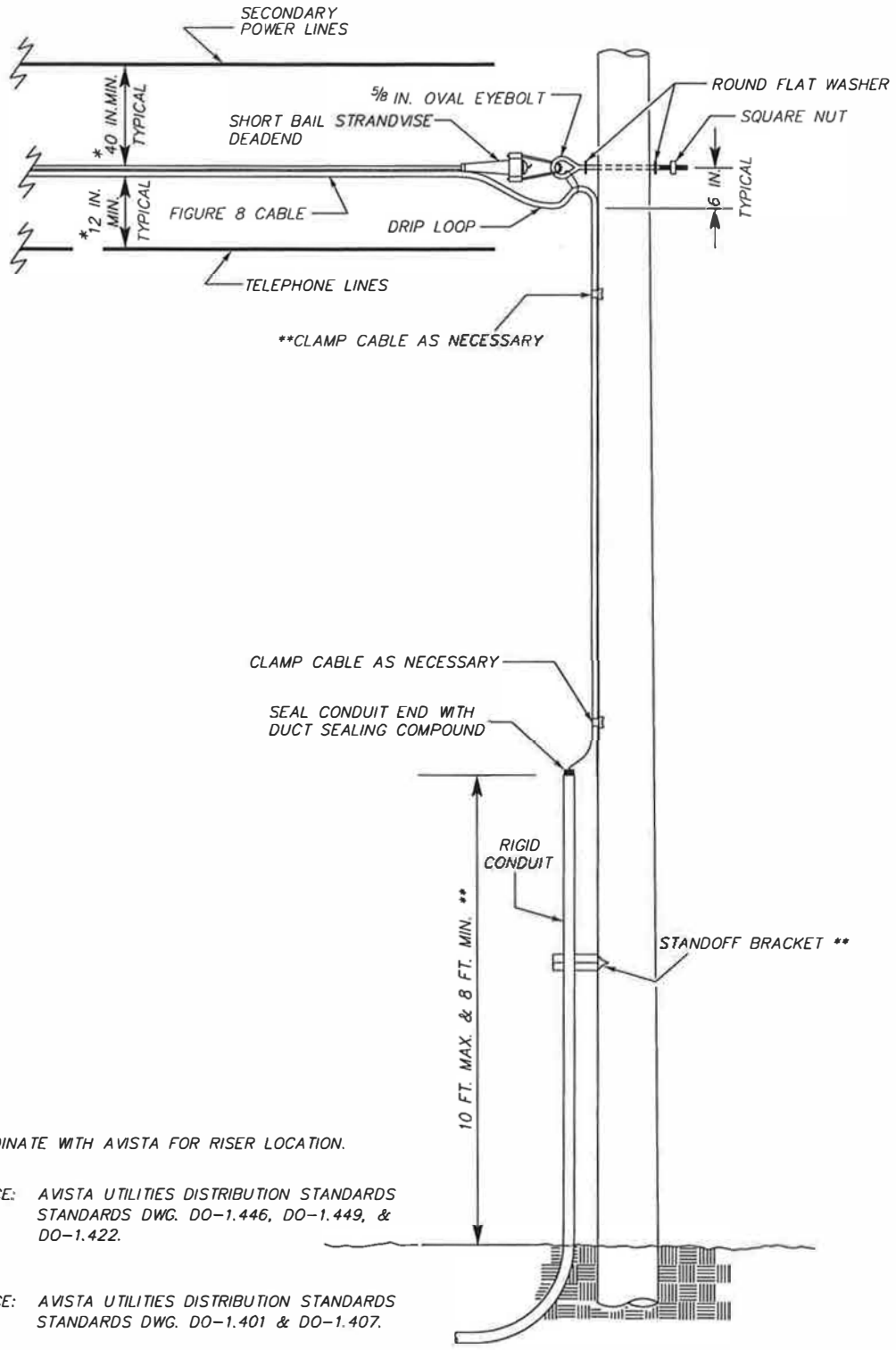
ADOPTED:	01/1988
REVISED:	05/2007
SUPERSEDES:	04/1999
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	CVH

CORNER DEAD END

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-116

Back to Section J - TOC



COORDINATE WITH AVISTA FOR RISER LOCATION.

** SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS STANDARDS DWG. DO-1.446, DO-1.449, & DO-1.422.

* SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS STANDARDS DWG. DO-1.401 & DO-1.407.

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APPROVED BY

DIRECTOR, ENGINEERING SERVICES TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN GARY S. NELSON, P.E.

ADOPTED:	01/1988
REVISED:	05/2007
SUPERSEDES:	04/1999
CHECKE BY:	GTO
SCALE:	NTS
DWG/REV. BY:	CVH

DEADEND & UNDERGROUND ENTRANCE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-117

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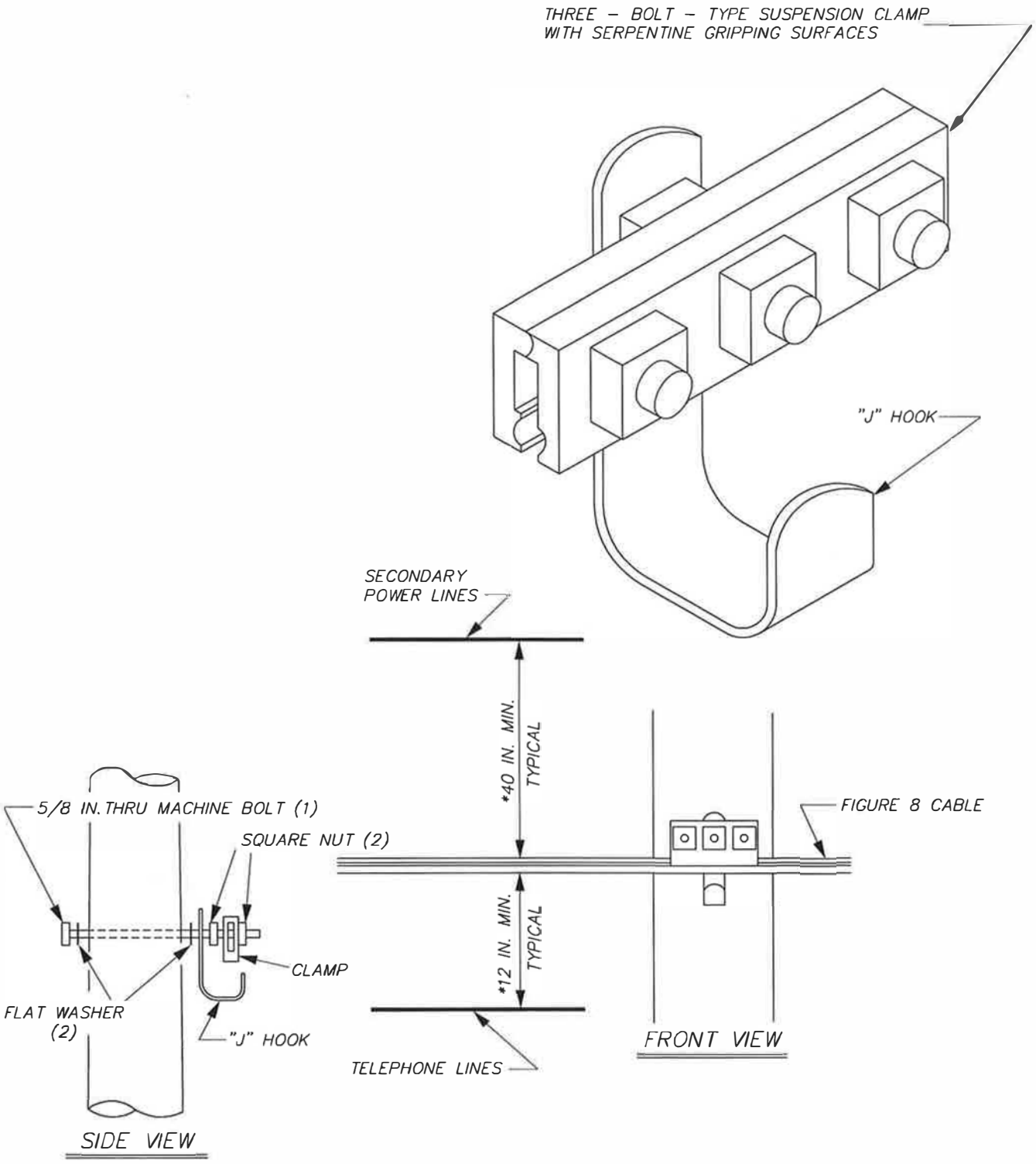

*SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS DWG. DO–1.401 & DO–1.407.

APPROVED BY

DIRECTOR, ENGINEERING SERVICES TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN GARY S. NELSON, P.E.

ADOPTED:	01/1988
REVISED:	05/2007
SUPERSEDES:	04/1999
CHECKED BY:	GTO
SCALE:	NTS
DWG/REV. BY:	CVH

SUSPENSION CLAMP
FIGURE 8 SYSTEM

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–118

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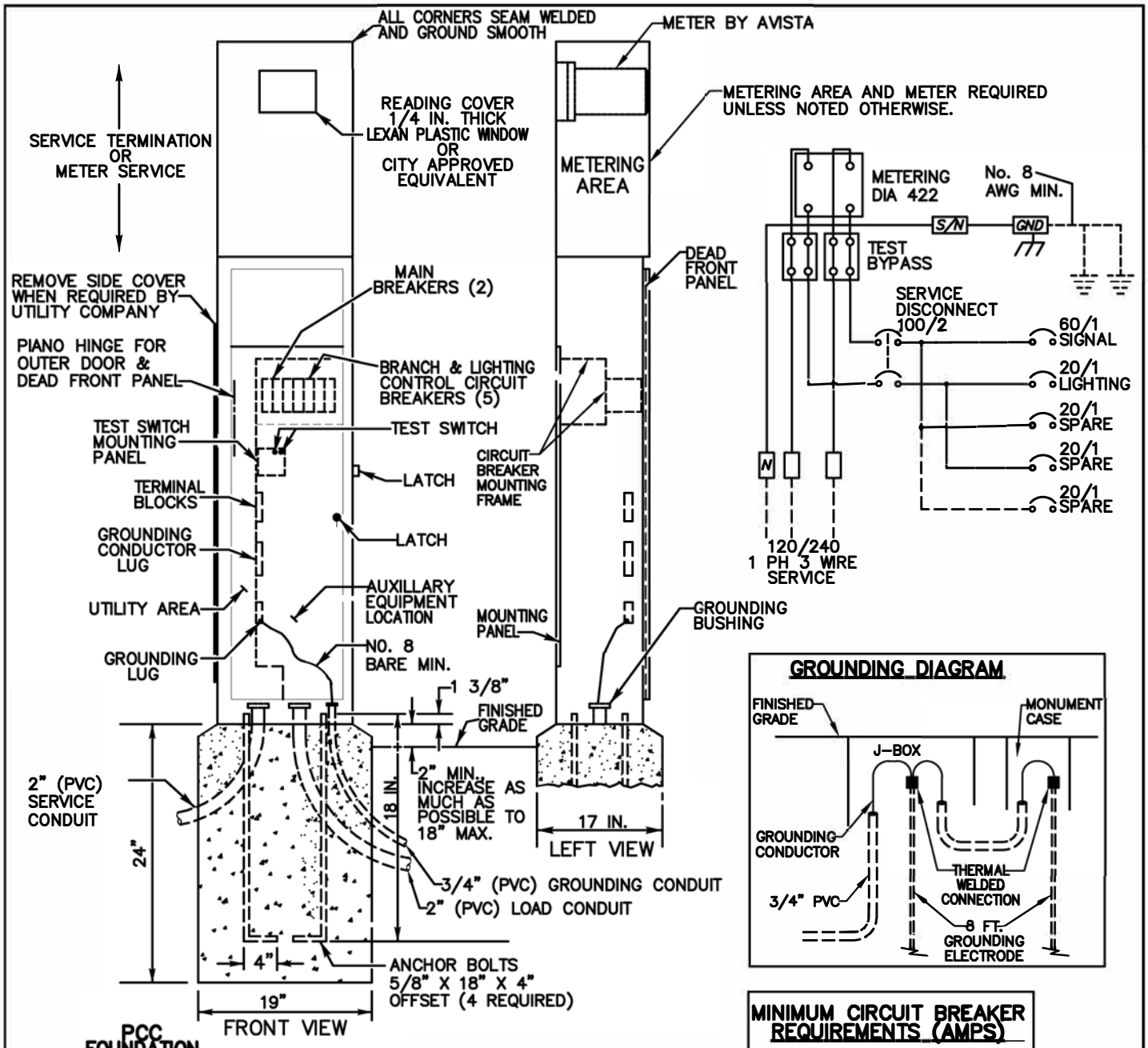
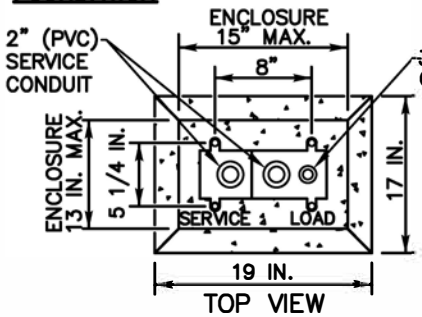


GROUNDING DIAGRAM

PCC FOUNDATION



MINIMUM CIRCUIT BREAKER REQUIREMENTS (AMPS)

200–2 MAIN
60–1 SIGNALS
20–1 LIGHTING
20–1 SPARE
20–1 SPARE
20–1 SPARE

NOTES:

1. TERMINATE CONDUITS 1 INCH MAXIMUM ABOVE TOP OF FOUNDATION.
2. IN UNPAVED AREAS A RAISED PCC PAD 24" X 4" X WIDTH OF FOUNDATION SHALL BE PLACED IN FRONT OF NEW SERVICE INSTALLATION. PAD SHALL BE SET TO ELEVATION OF FOUNDATION.
3. ALL NUTS, BOLTS, SCREWS AND HINGES WILL BE STAINLESS STEEL.
4. NUTS, BOLTS AND SCREWS WILL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
5. PHENOLIC NAMEPLATES WILL BE PROVIDED AS REQUIRED.
6. CONTROL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
7. CONTACTOR(S) ARE NOT REQUIRED BECAUSE EACH LUMINAIRE HAS IT'S OWN PHOTOELECTRIC CELL.
8. SERVICE GROUNDING CONDUCTOR SHALL BE CONTINUOUS AND CONNECT TO 8 FT. GROUNDING ELECTRODES SEPARATED A MINIMUM OF 6 FT.

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

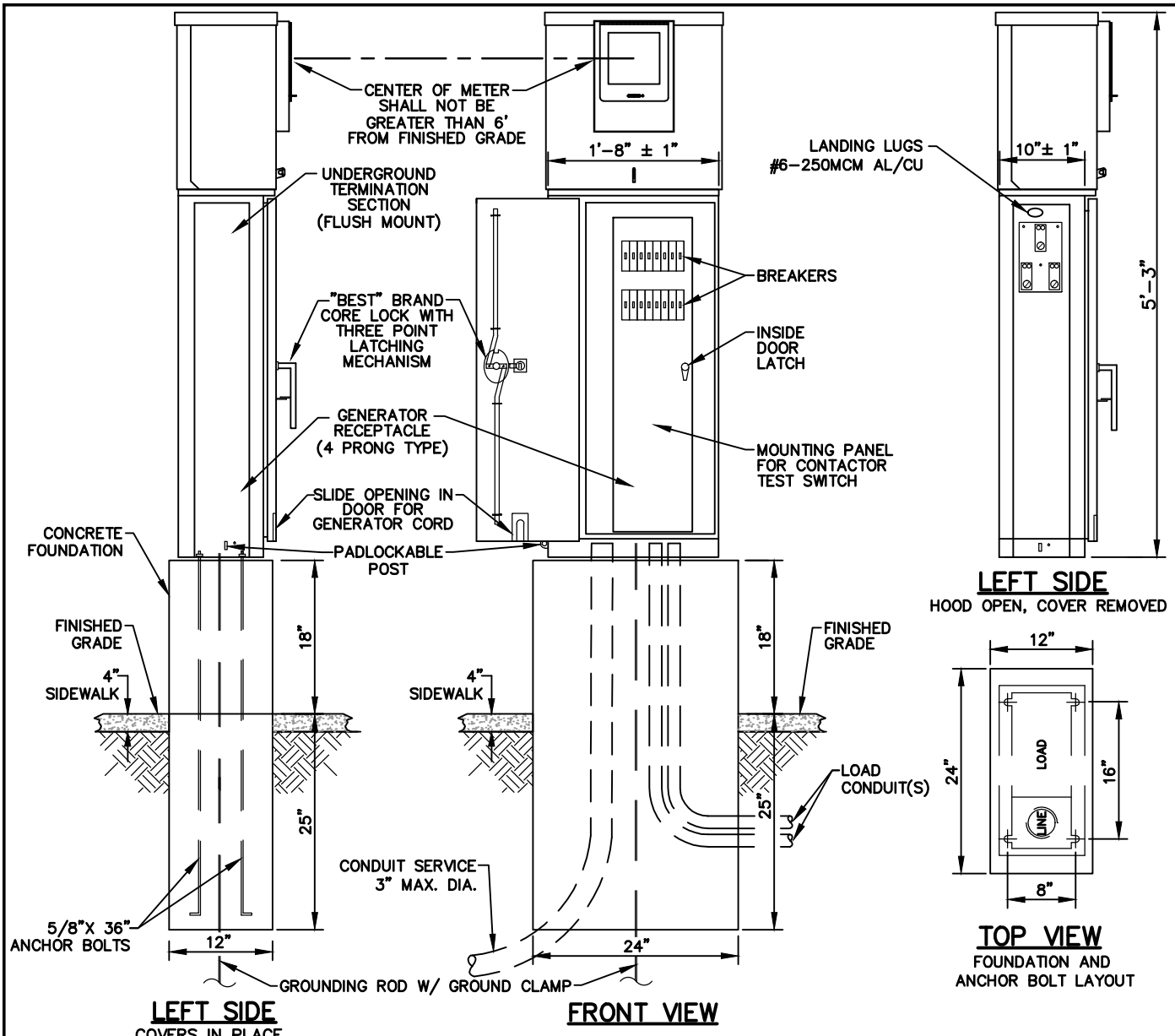
ADOPTED: 12/96
REVISED: 11/2018
SUPERSEDES: 02/2015
SCALE: NTS
DWG/REV. BY: MDH

UNDERGROUND ELECTRICAL SERVICE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–119

Back to Section J - TOC



BASE MOUNTED SERVICE CABINET WITH METER

NOTES

1. SERVICE CABINET SHALL BE A TAMPER RESISTANT, SLIMLINE, WEATHERPROOF, PAD MOUNTED PEDESTAL WITH MAIN AND SUBFEED CIRCUIT BREAKERS AND CONTROLS AS SHOWN.
2. THE SERVICE CABINET SHALL BE METERED. MAIN CIRCUIT BREAKER SHALL BE 100K AIC SERIES RATED.
3. CONSTRUCTION WILL BE NEMA 3R AND 12, RAINTIGHT, DUST TIGHT, WITH MILL FINISH.
4. METAL WORK SHALL BE FABRICATED FROM; EXTERNAL–1/8" ALUMINUM SHEET STOCK AND INTERNAL–14 GA. COLD ROLLED STEEL, ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
5. EXTERNAL CORNERS AND SEAMS SHALL BE GROUND SMOOTH.
6. ALL NUTS, BOLTS, AND SCREWS WILL BE STAINLESS STEEL.
7. NUTS, BOLTS AND SCREWS WILL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
8. HINGES SHALL BE CONTINUOUS ALUMINUM PIANO TYPE.
9. ENCLOSURE WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA AND UL STANDARDS.
10. CONTROL WIRING SHALL BE SEVEN STRAND NO. 14 TW EXCEPT FOR HINGE WIRING, WHICH SHALL BE 19 STRAND NO. 14 THHN.
11. WIRING SHALL BE ARRANGED SO THAT ANY PIECE OF APPARATUS MAY BE REMOVED WITHOUT DISCONNECTING ANY WIRING EXCEPT THE LEADS TO PERMANENT CLIP SLEEVE WIRE MARKERS.
12. ALL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
13. A PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
14. NAMEPLATES SHALL BE PROVIDED FOR EACH CONTROL COMPONENT.
15. CABINET SHALL HAVE A 508 UL LABEL "INDUSTRIAL CONTROL PANEL" UL 508.
16. THE SERVICE CABINET SHALL BE SIMILAR IN DESIGN TO THE TESCO CLASS 27–100 SERVICE PEDESTAL.

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

CITY ENGINEER — DANIEL ALBERT BULLER, P.E.

ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

DOWNTOWN UNDERGROUND ELECTRICAL SERVICE CABINET

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–119A

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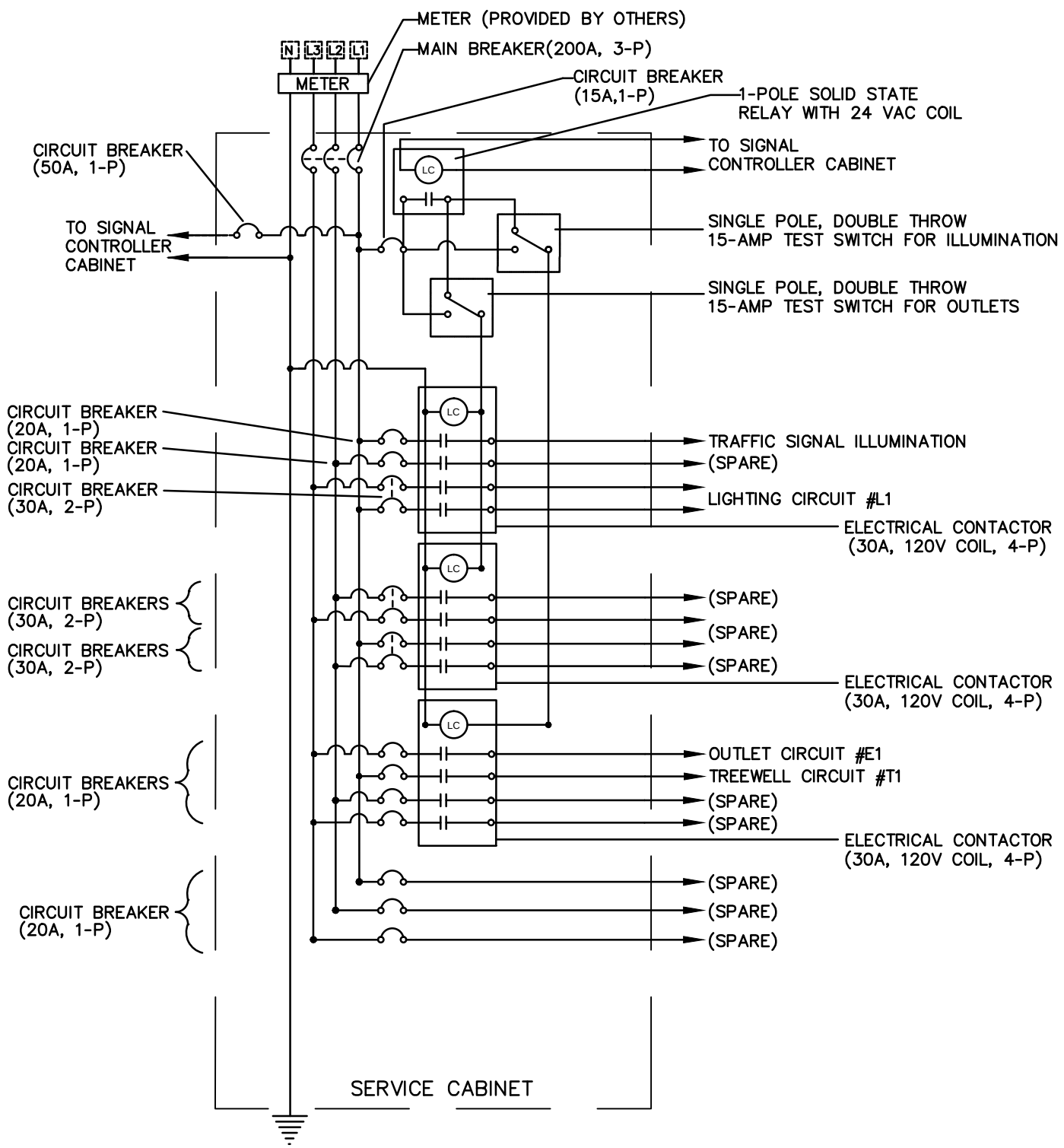


SERVICE CABINET WIRING WITH 208 VOLT ILLUMINATION

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

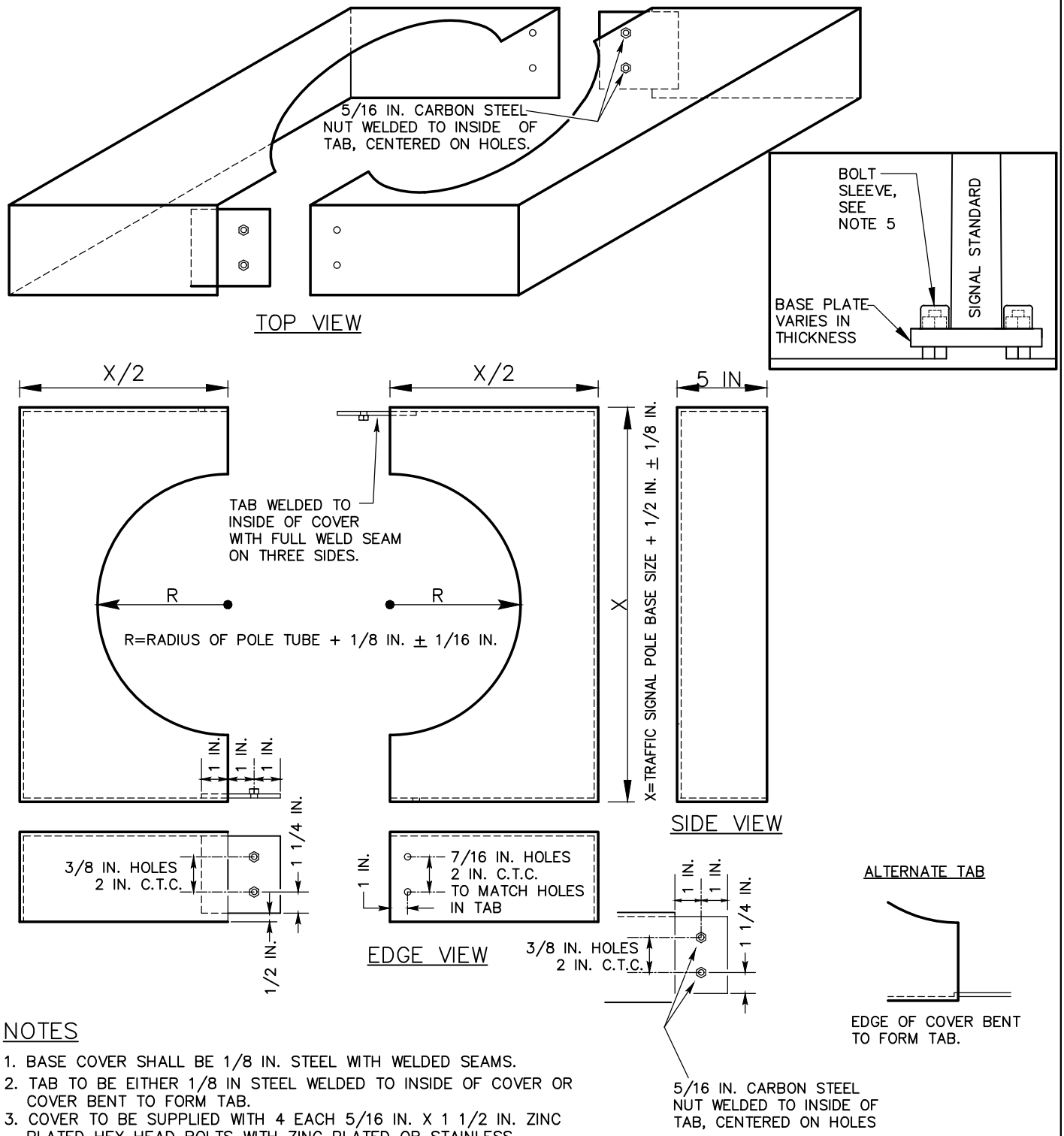
ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

DOWNTOWN TYPICAL SERVICE CABINET WIRING

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **J–119B**

Back to Section J - TOC



NOTES

1. BASE COVER SHALL BE 1/8 IN. STEEL WITH WELDED SEAMS.
2. TAB TO BE EITHER 1/8 IN STEEL WELDED TO INSIDE OF COVER OR COVER BENT TO FORM TAB.
3. COVER TO BE SUPPLIED WITH 4 EACH 5/16 IN. X 1 1/2 IN. ZINC PLATED HEX HEAD BOLTS WITH ZINC PLATED OR STAINLESS STEEL SPLIT LOCKING WASHERS.
4. COMPLETED BASE COVER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION, IN ACCORDANCE WITH ASTM 123. NUTS AND BOLTS SHALL BE ABLE TO MATE SECURELY AFTER GALVANIZATION.
5. BASE COVERS SHALL BE INSTALLED ON ALL SIGNAL STANDARDS EXCEPT WHEN BOLT SLEEVES ARE CALLED OUT ON THE CONTRACT PLANS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

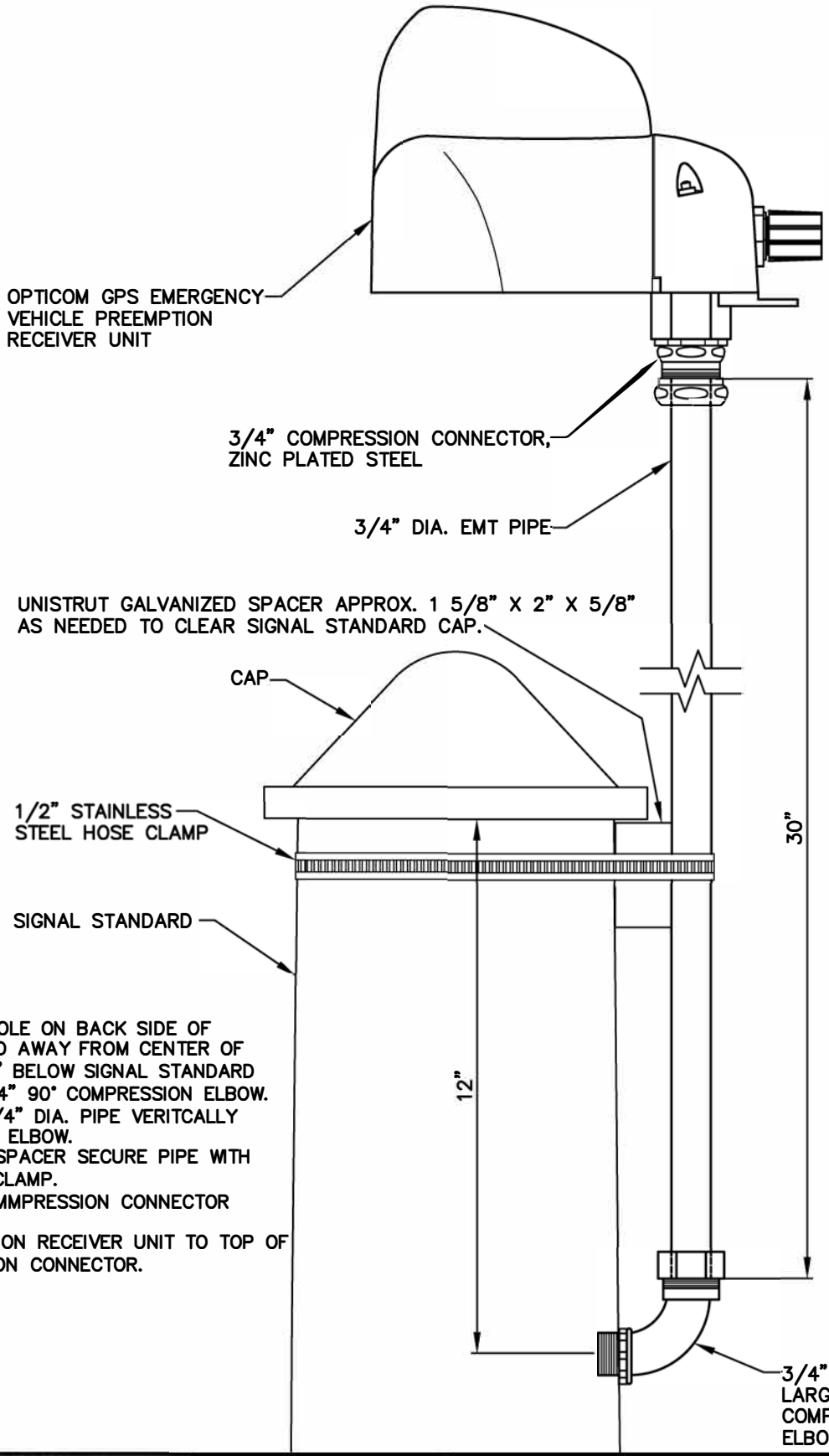
ADOPTED: _____
REVISED: 10/2020
SUPERSEDES: 2/2015
SCALE: NTS
DWG/REV. BY: MDH

SIGNAL POLE BASE COVER

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–120

Back to Section J - TOC



NOTES

1. DRILL AND TAP HOLE ON BACK SIDE OF SIGNAL STANDARD AWAY FROM CENTER OF INTERSECTION 12" BELOW SIGNAL STANDARD CAP. ATTACH 3/4" 90° COMPRESSION ELBOW.
2. ATTACH 30" X 3/4" DIA. PIPE VERITCALLY TO COMPRESSION ELBOW.
3. USING UNISTRUT SPACER SECURE PIPE WITH 3'–6" OF HOSE CLAMP.
4. ATTACH 3/4" COMMPRESSION CONNECTOR TO TOP OF PIPE.
5. ATTACH PREEMPTION RECEIVER UNIT TO TOP OF 3/4" COMPRESSION CONNECTOR.

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

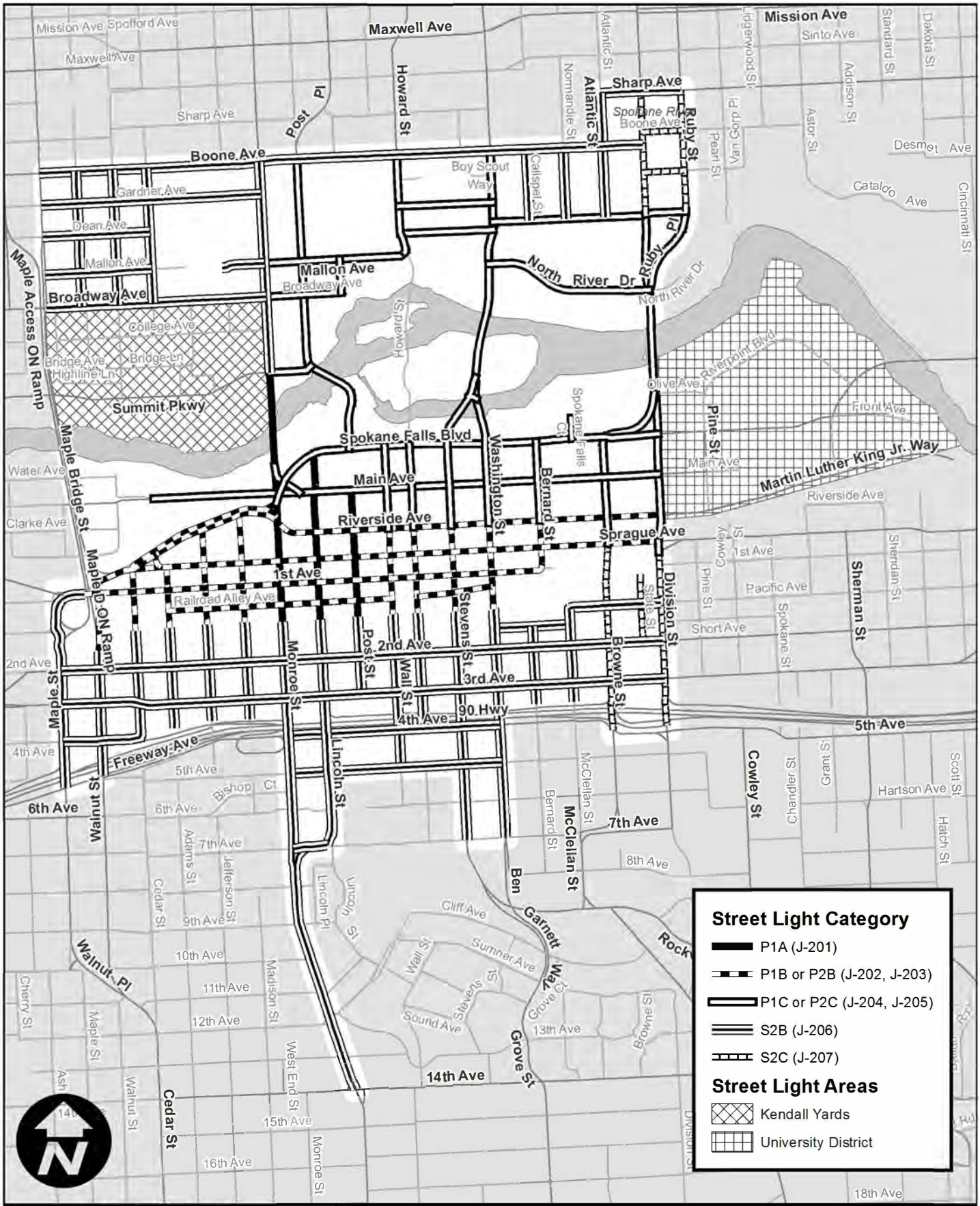
ADOPTED: 01/2009
REVISED: ~~11/2018~~
SUPERSEDES: 02/2015
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

GPS EMERGENCY VEHICLE PREEMPTION UNIT AND MOUNTING

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–121

Back to Section J - TOC



APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

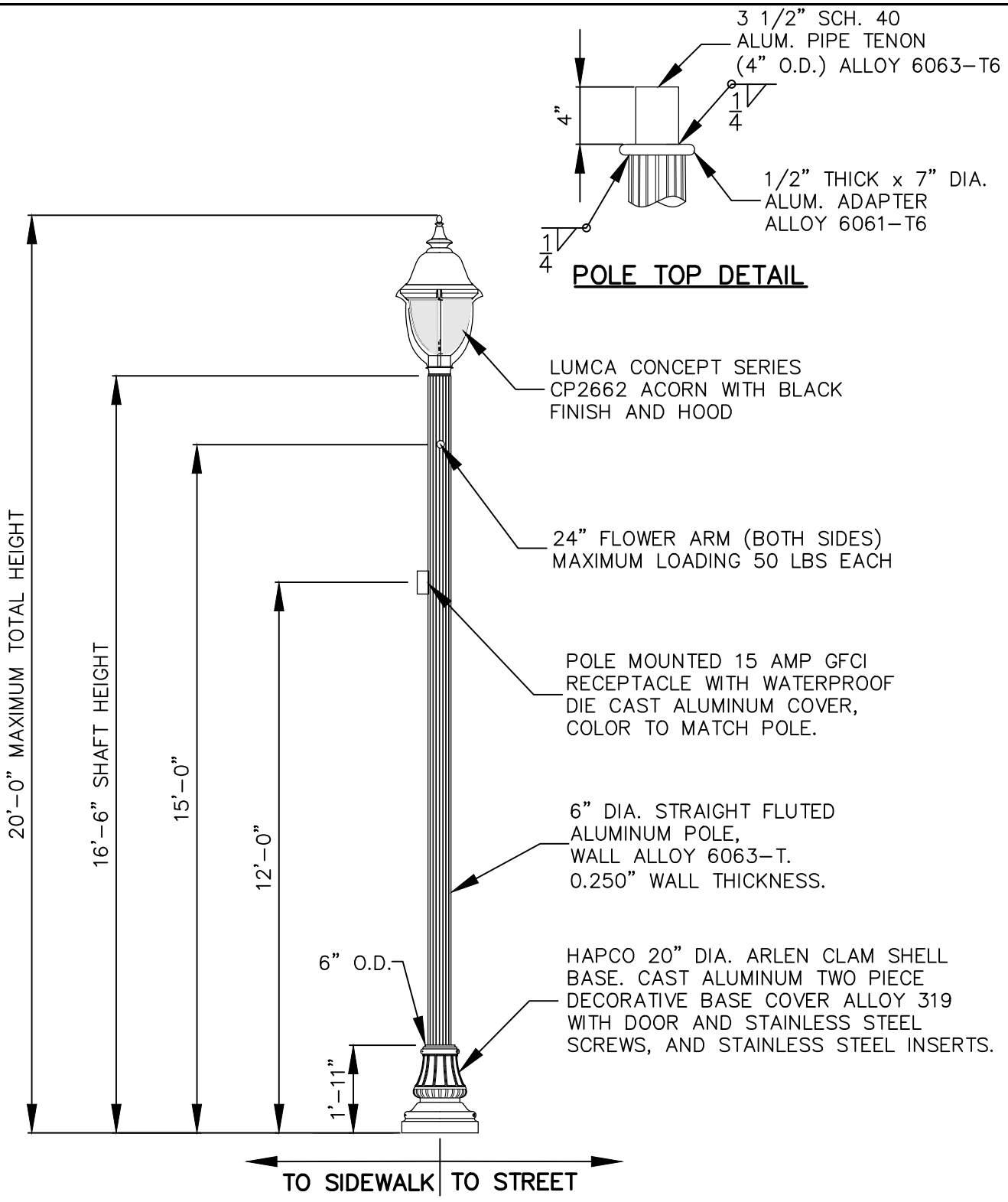
ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: CMC

DECORATIVE STREET LIGHTING DISTRICTS

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–200

Back to Section J - TOC



NOTES

1. SEE STD. PLAN J–200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J–208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J–211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5–AMP GLR IN–LINE FUSE.
5. USE ANTI–SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

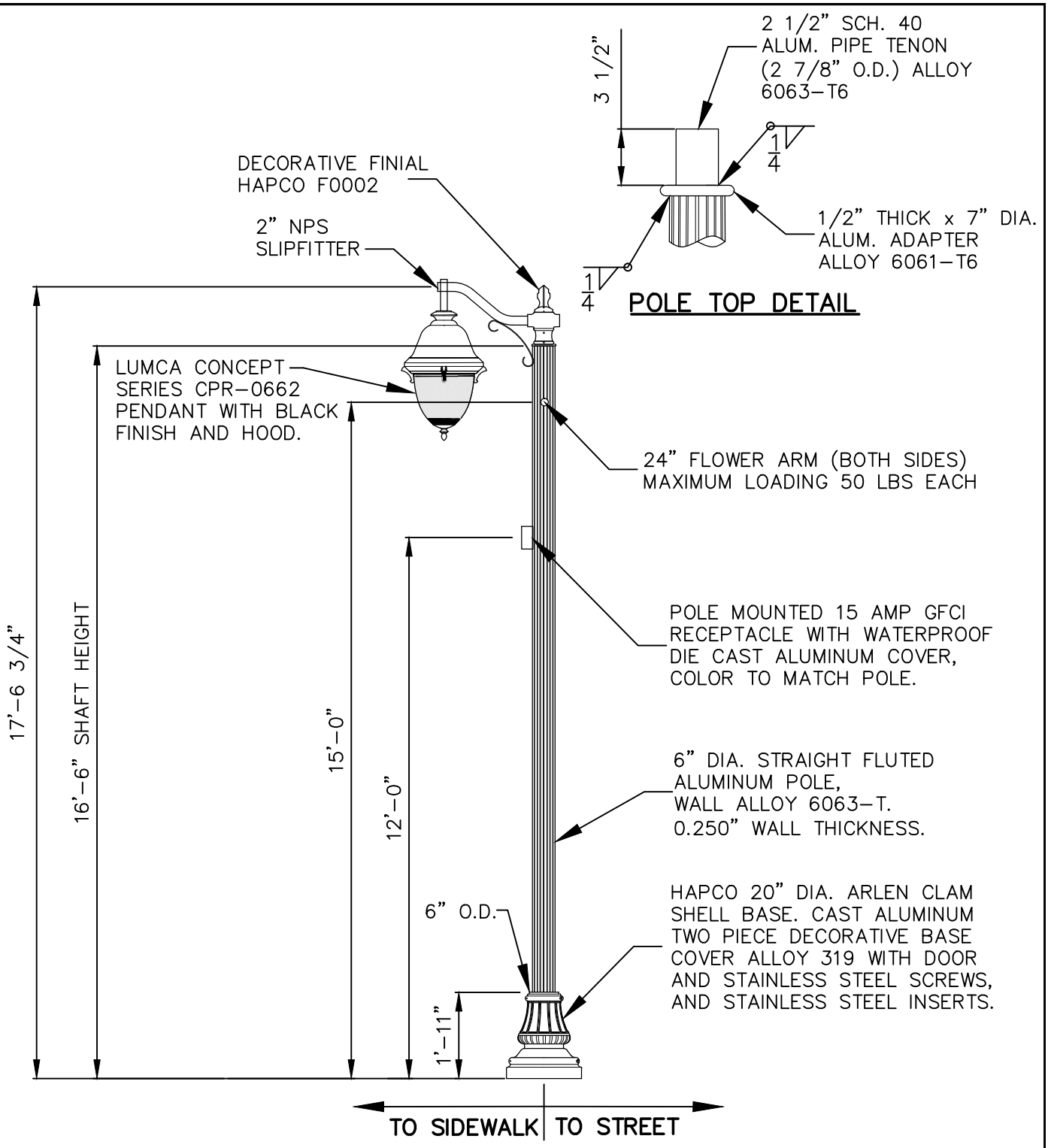
ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 11/2018
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

P1A LUMINAIRE POLE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–201

Back to Section J - TOC



NOTES

1. SEE STD. PLAN J–200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J–208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J–211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5–AMP GLR IN–LINE FUSE.
5. USE ANTI–SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

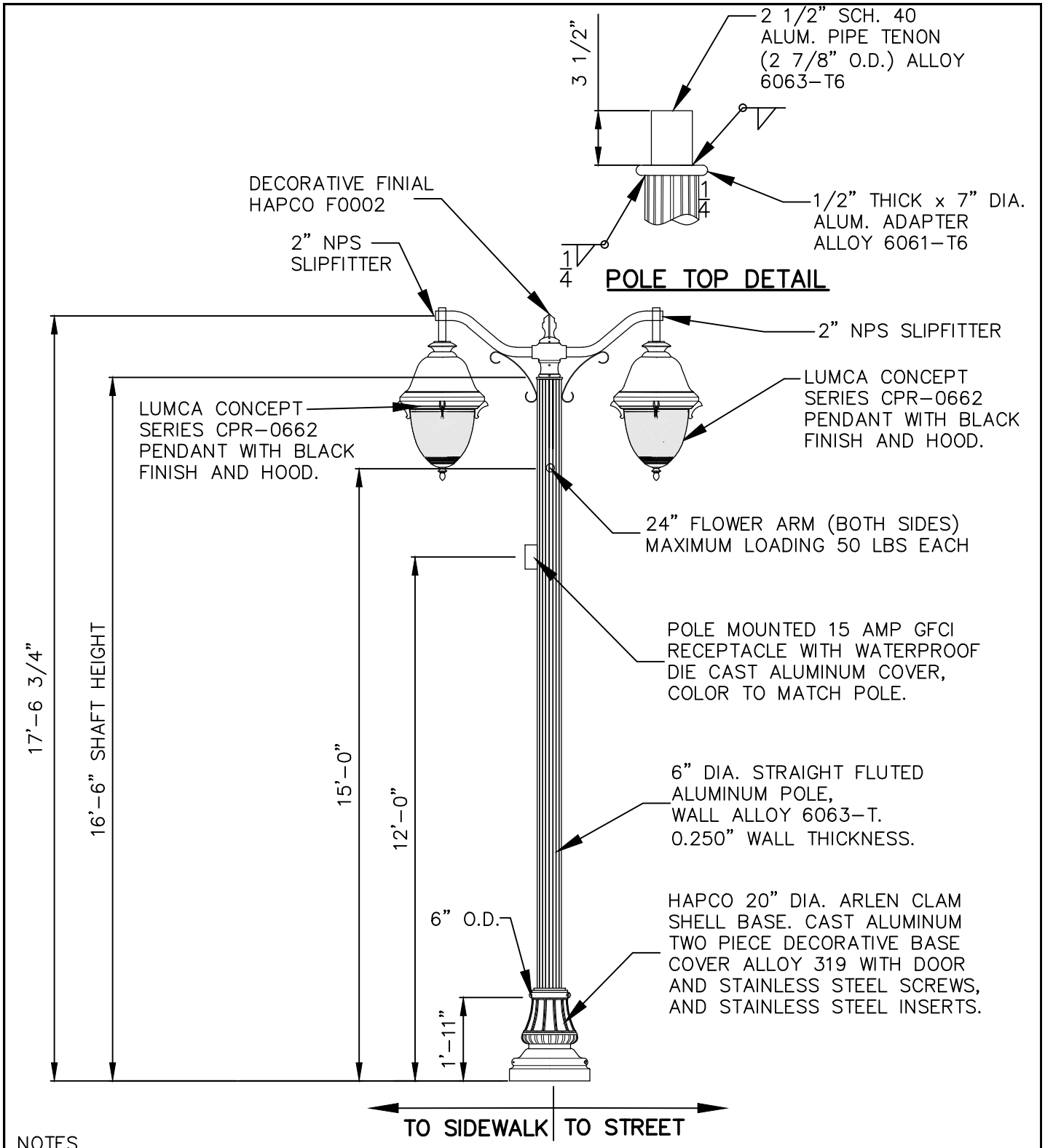
ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 11/2018
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

P1B LUMINAIRE POLE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–202

Back to Section J - TOC



NOTES

1. SEE STD. PLAN J–200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J–208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J–211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5–AMP GLR IN–LINE FUSE.
5. USE ANTI–SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

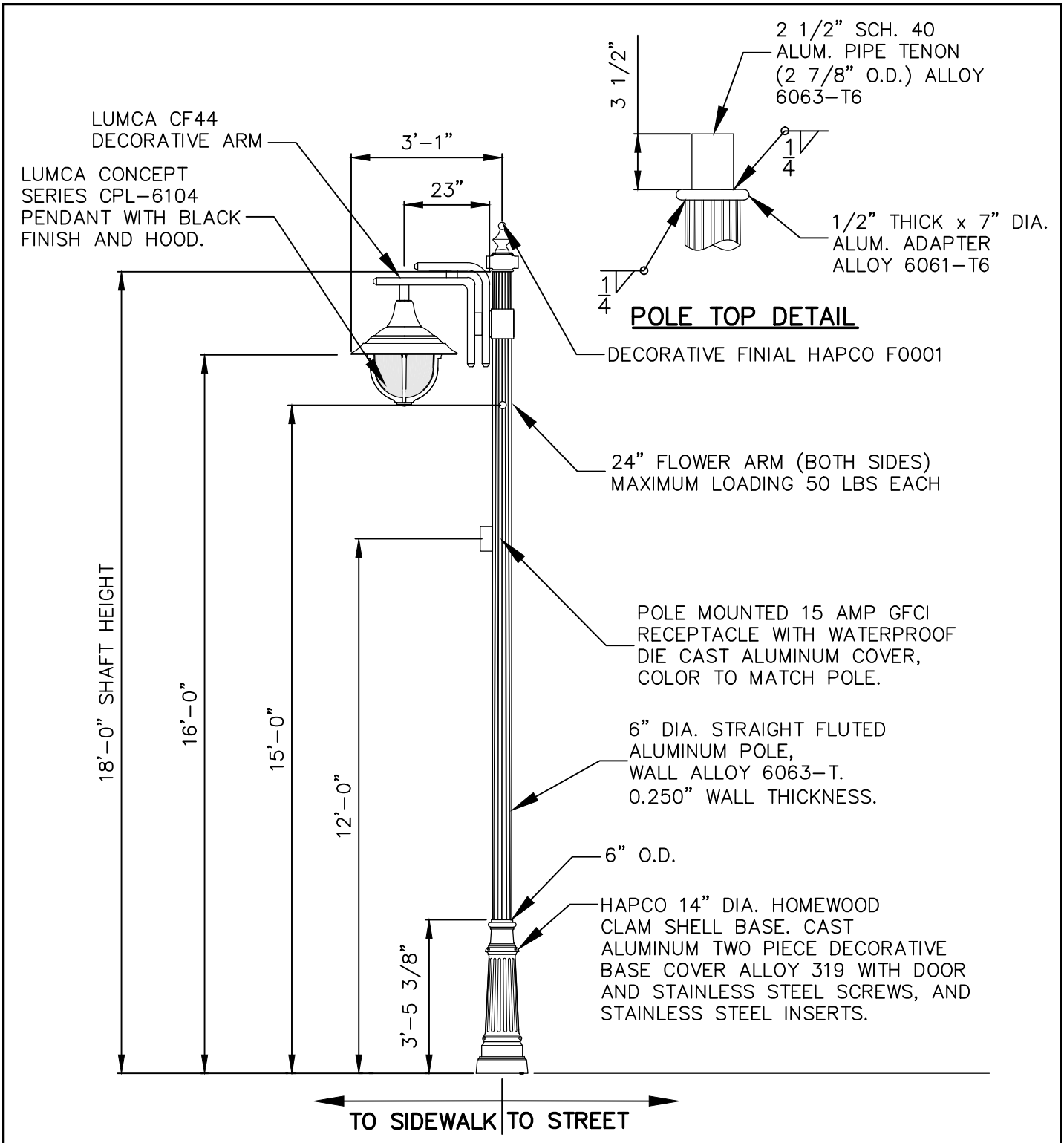
ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 11/2018
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

P2B LUMINAIRE POLE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–203

Back to Section J - TOC



NOTES

1. SEE STD. PLAN J–200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J–208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J–211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5–AMP GLR IN–LINE FUSE.
5. USE ANTI–SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

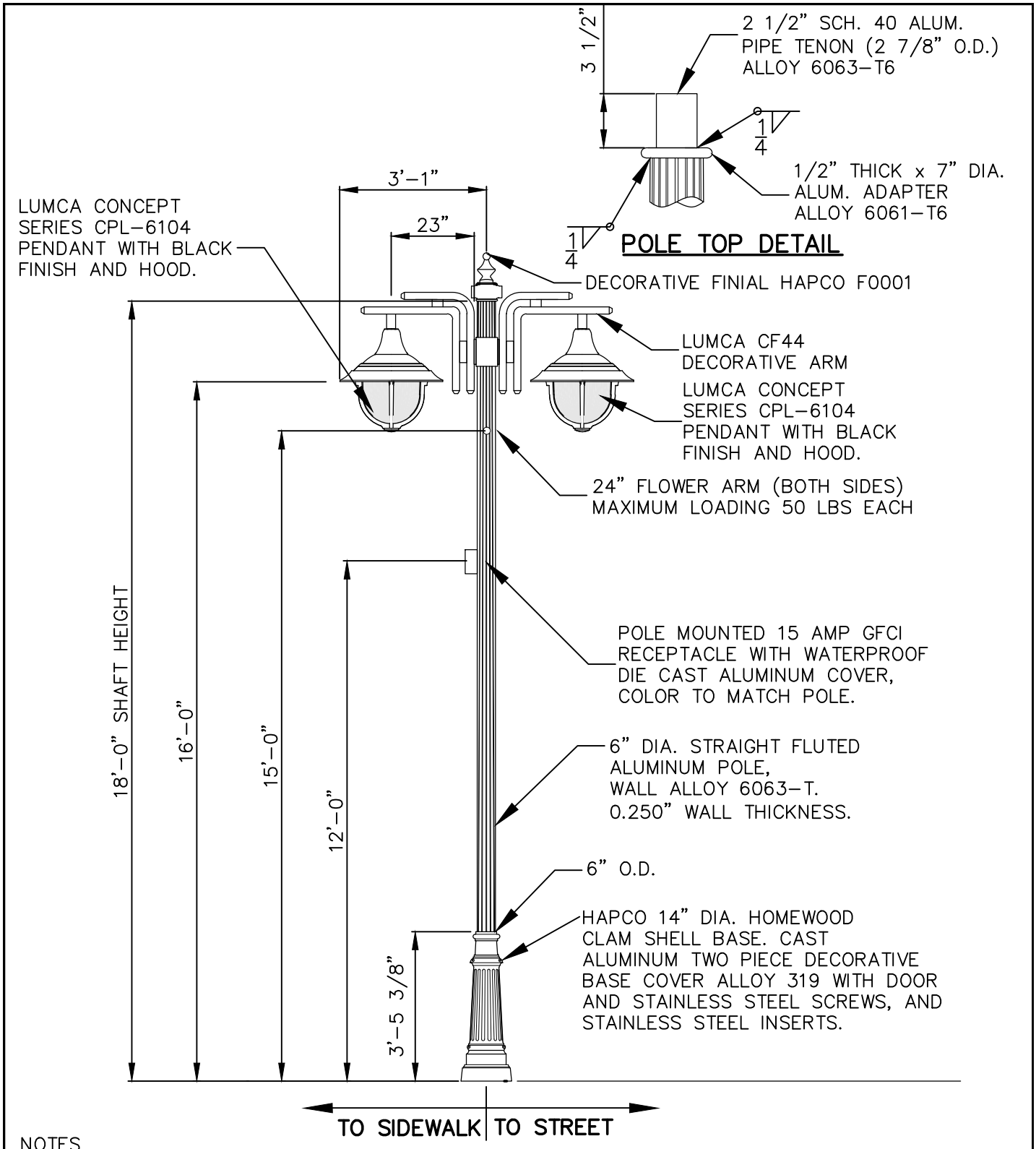
ADOPTED:	
REVISED:	08/2019
SUPERSEDES:	11/2018
CHECKED BY:	ANM
SCALE:	NTS
DWG/REV. BY:	MDH

P1C LUMINAIRE POLE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–204

Back to Section J - TOC



NOTES

1. SEE STD. PLAN J–200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J–208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J–211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5–AMP GLR IN–LINE FUSE.
5. USE ANTI–SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR KYLE TWOHIG

CITY ENGINEER DAN BULLER, P.E.

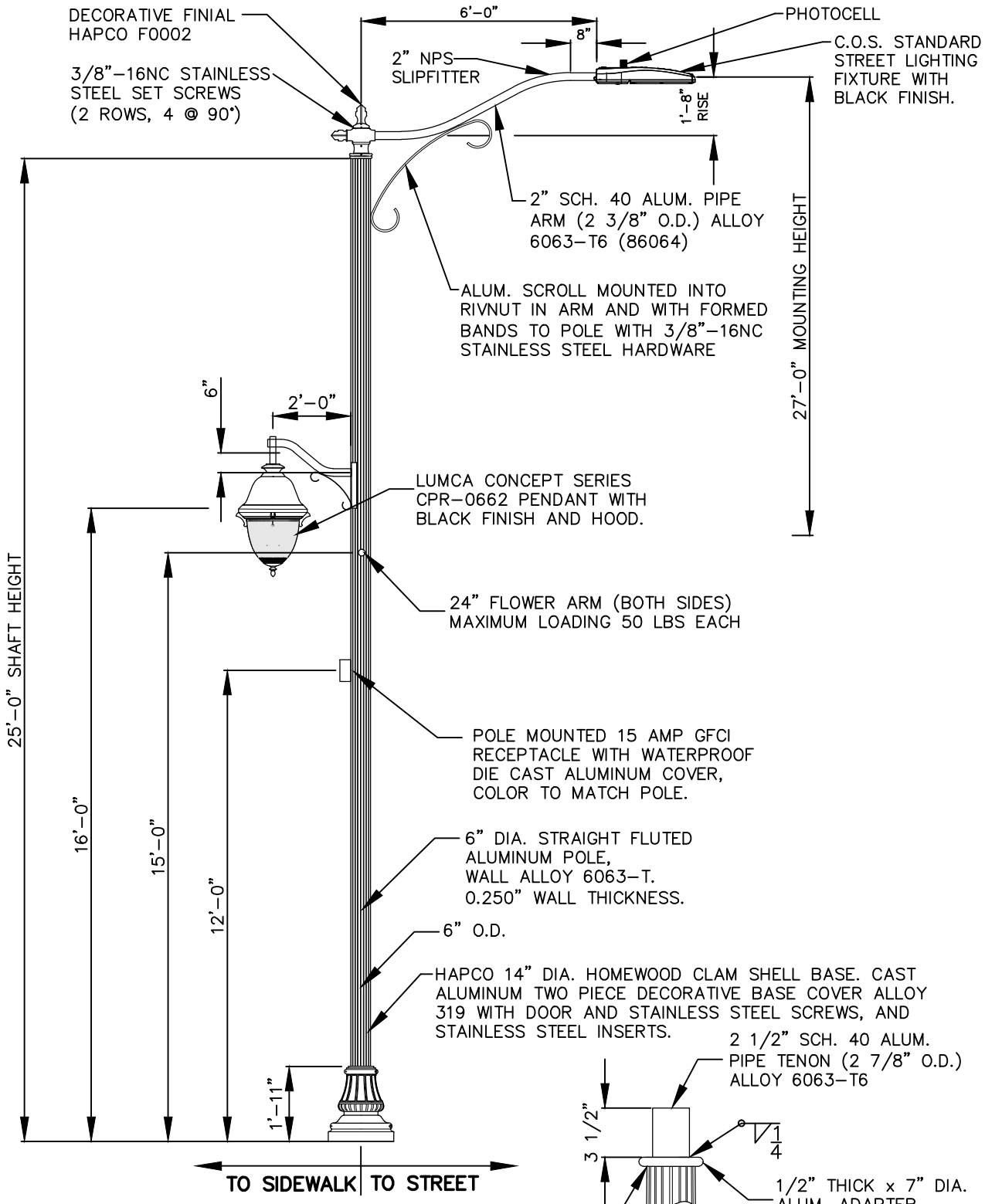
ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 11/2018
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

P2C LUMINAIRE POLE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–205

Back to Section J - TOC



POLE TOP DETAIL

NOTES

1. SEE STD. PLAN J–200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J–208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J–212.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5–AMP GLR IN–LINE FUSE.
5. USE ANTI–SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

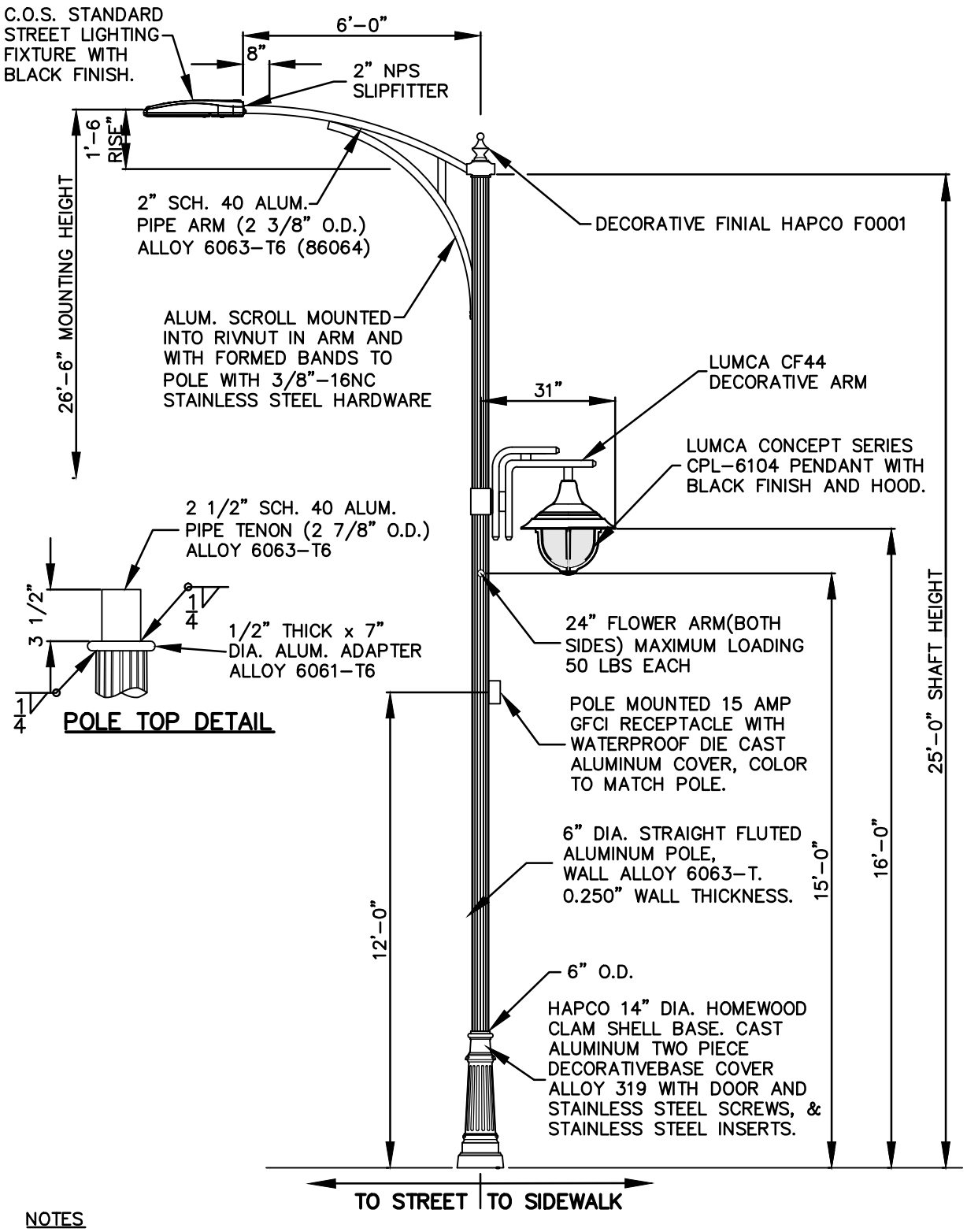
ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 11/2018
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

S2B LUMINAIRE POLE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–206

Back to Section J - TOC



NOTES

1. SEE STD. PLAN J-200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J-208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J-212.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5-AMP GLR IN-LINE FUSE.
5. USE ANTI-SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

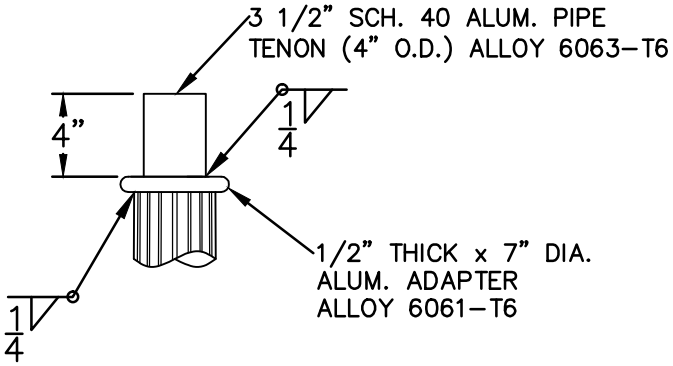
ADOPTED:	
REVISED:	08/2019
SUPERSEDES:	11/2018
CHECKED BY:	ANM
SCALE:	NTS
DWG/REV. BY:	MDH

S2C LUMINAIRE POLE

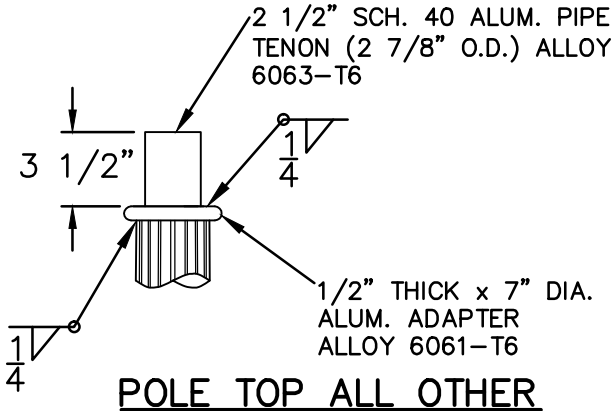
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINANMN

STANDARD PLAN No. J-207

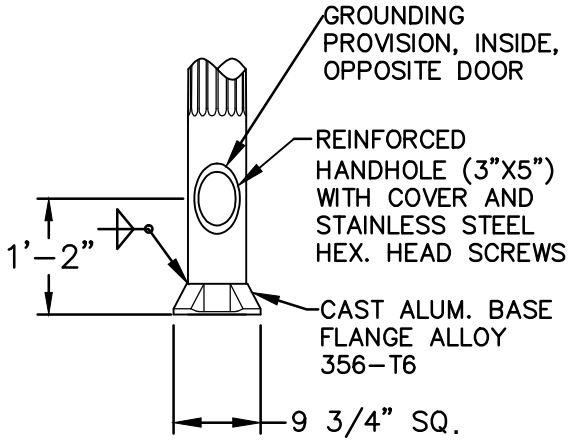
Back to Section J - TOC



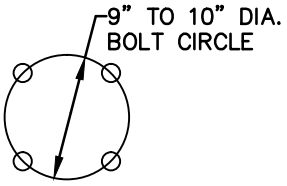
POLE TOP P1A LUMINAIRE



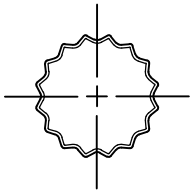
POLE TOP ALL OTHER LUMINAIRES



POLE BASE



BOLT CIRCLE



CROSS SECTION OF FLUTES

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

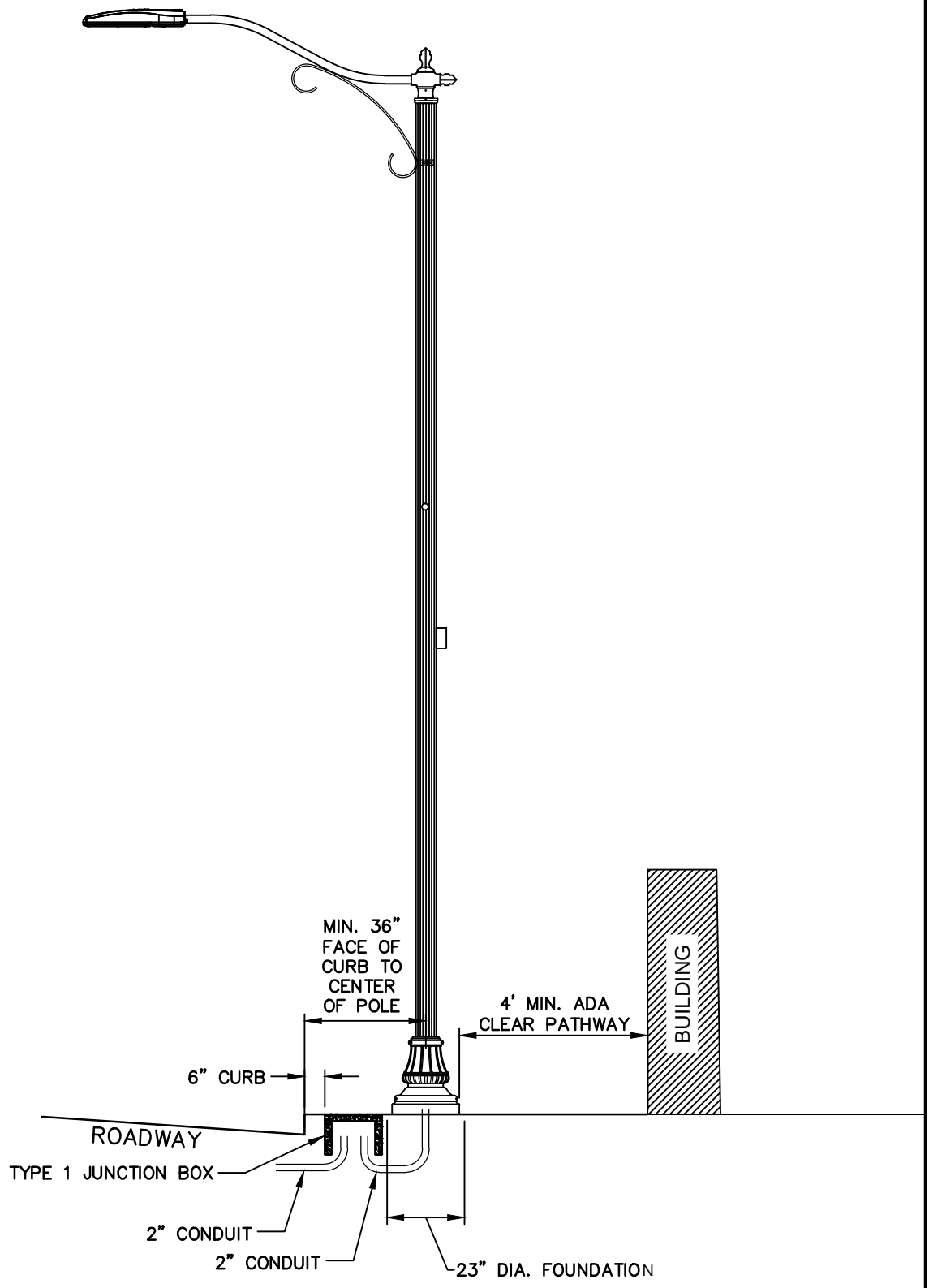
ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

LUMINAIRE POLE DETAILS

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–208

Back to Section J - TOC



APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

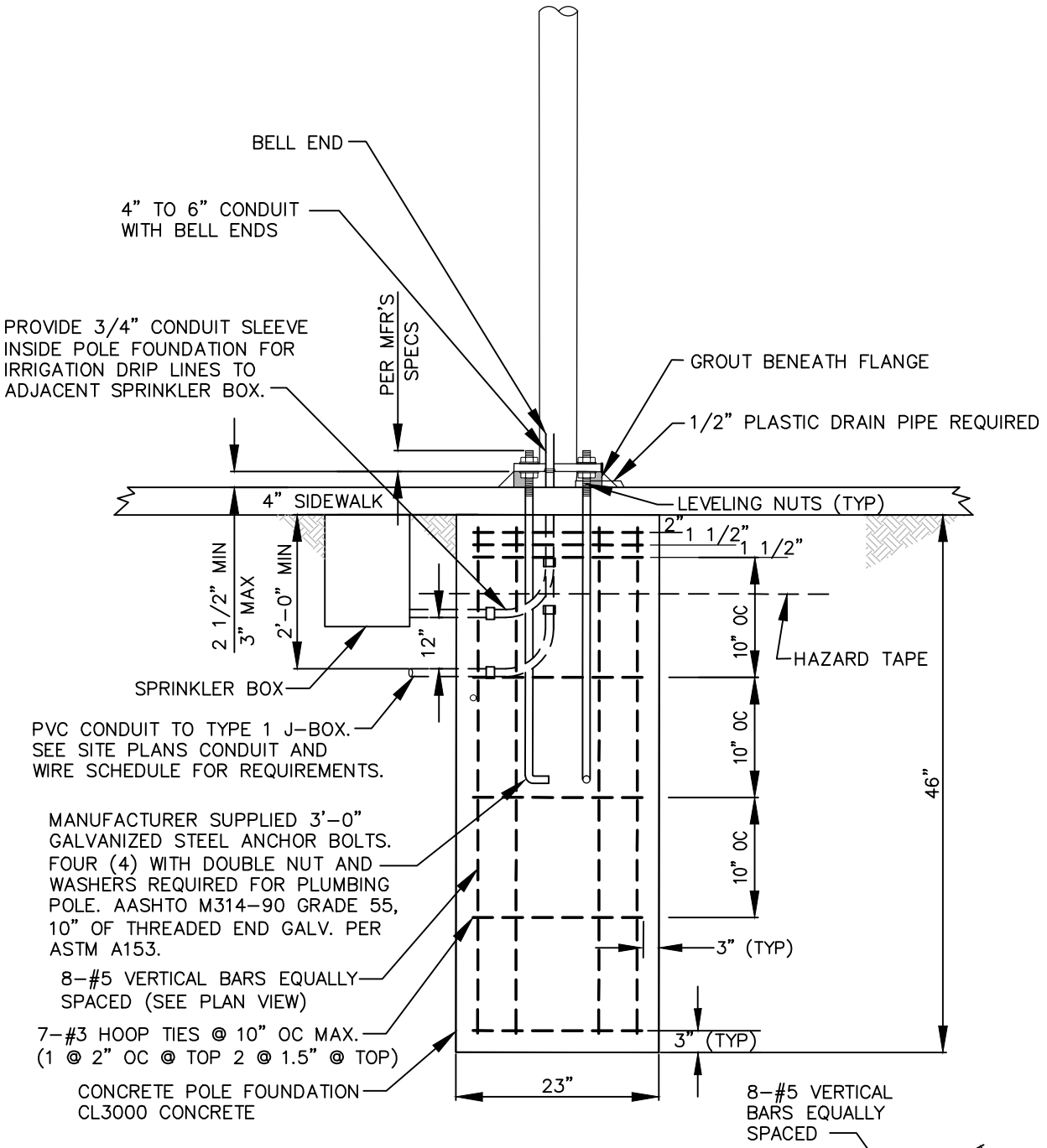
ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

STREET LIGHTING LOCATION

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

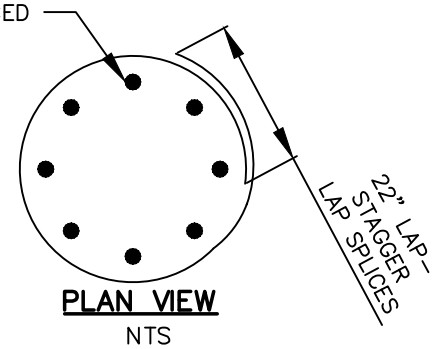
STANDARD PLAN No.
J–210

Back to Section J - TOC



"P" SERIES FOUNDATION

NTS



PLAN VIEW

NTS

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 08/2019
SUPERSEDES: 11/2018
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

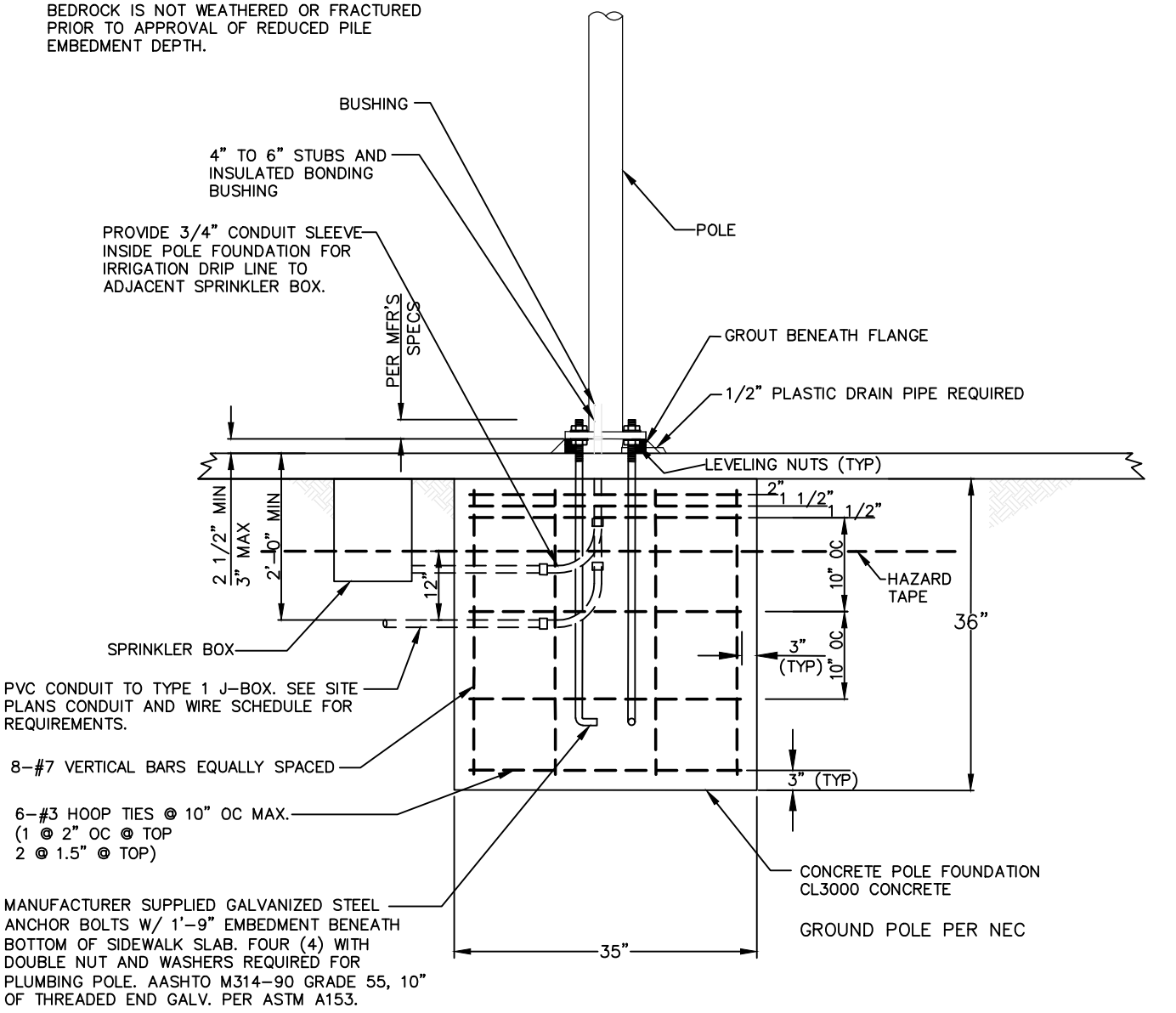
"P" SERIES LUMINAIRE FOUNDATION

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINANMN

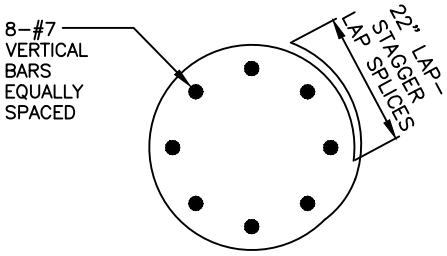
STANDARD PLAN No. J-211

Back to Section J - TOC

NOTE: WHERE SOLID BEDROCK IS ENCOUNTERED PRIOR TO REACHING 36" PILE EMBEDMENT DEPTH, PILE EMBEDMENT DEPTH CAN BE REDUCED TO 24". EMBED VERTICAL #7 REINFORCEMENT BARS 12" INTO BEDROCK W/ SIMPSON SET-XP EPOXY. GEOTECHNICAL ENGINEER TO PROVIDE SPECIAL INSPECTION TO VERIFY THAT ENCOUNTERED BEDROCK IS NOT WEATHERED OR FRACTURED PRIOR TO APPROVAL OF REDUCED PILE EMBEDMENT DEPTH.



NOTE: FOR USE ONLY WHEN SHALLOW ROCK ENCOUNTERED



"P" SERIES FOUNDATION

NTS

PLAN VIEW

NTS

APPROVED BY

ENGINEERING SERVICES DIRECTOR KYLE TWOHIG

CITY ENGINEER DAN BULLER, P.E.

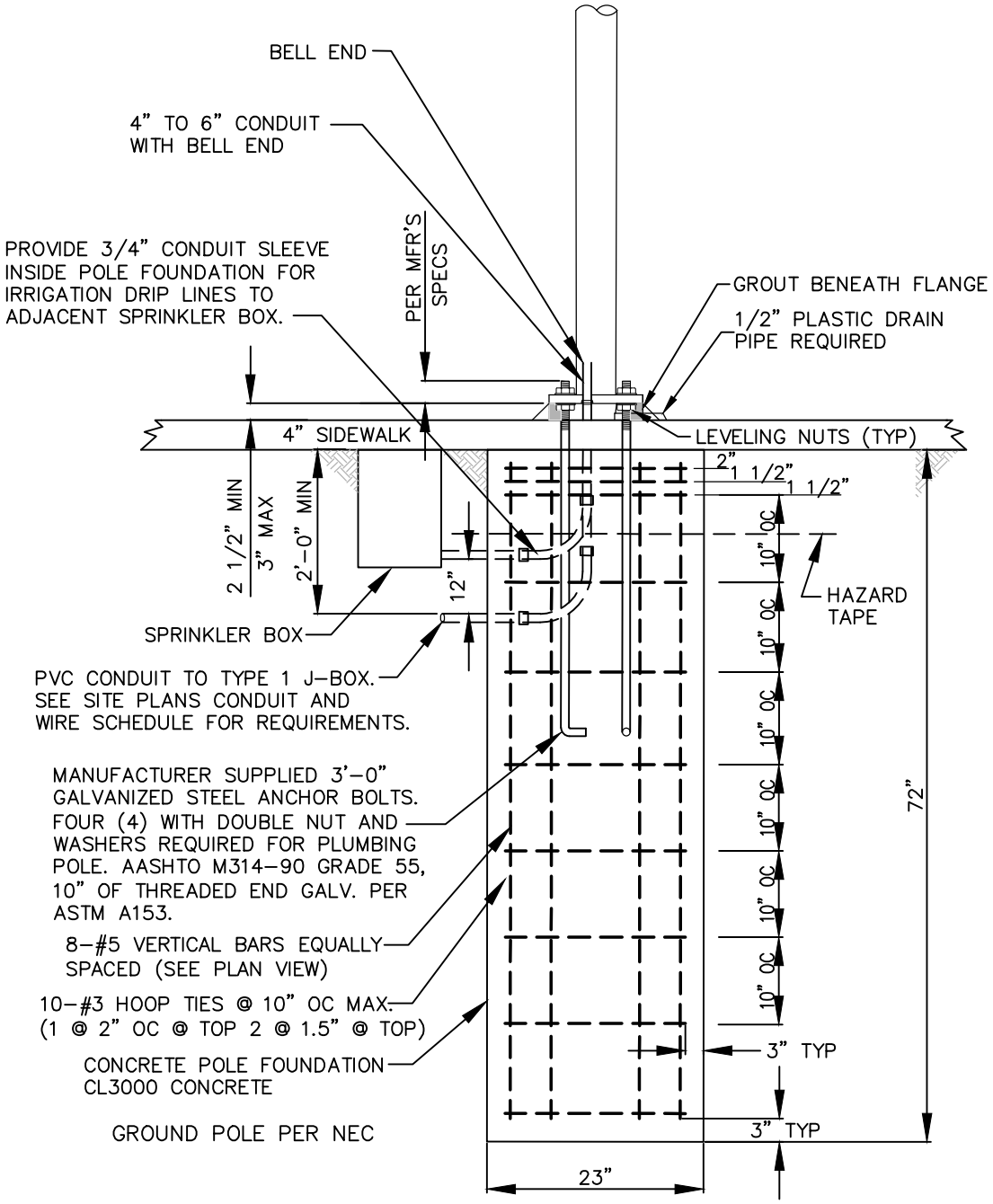
ADOPTED: _____
REVISED: 09/2020
SUPERSEDES: 08/2019
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

"P" SERIES LUMINAIRE FOUNDATION SHALLOW

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

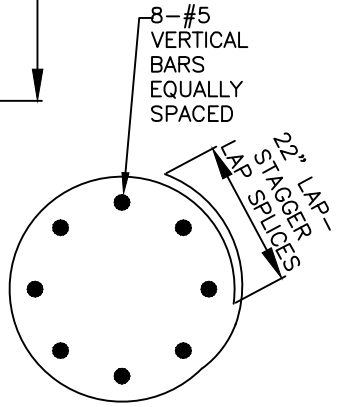
STANDARD PLAN No. J-211A

Back to Section J - TOC



"S" SERIES FOUNDATION

NTS



PLAN VIEW

NTS

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED:	
REVISED:	08/2019
SUPERSEDES:	11/2018
CHECKED BY:	ANM
SCALE:	NTS
DWG/REV. BY:	MDH

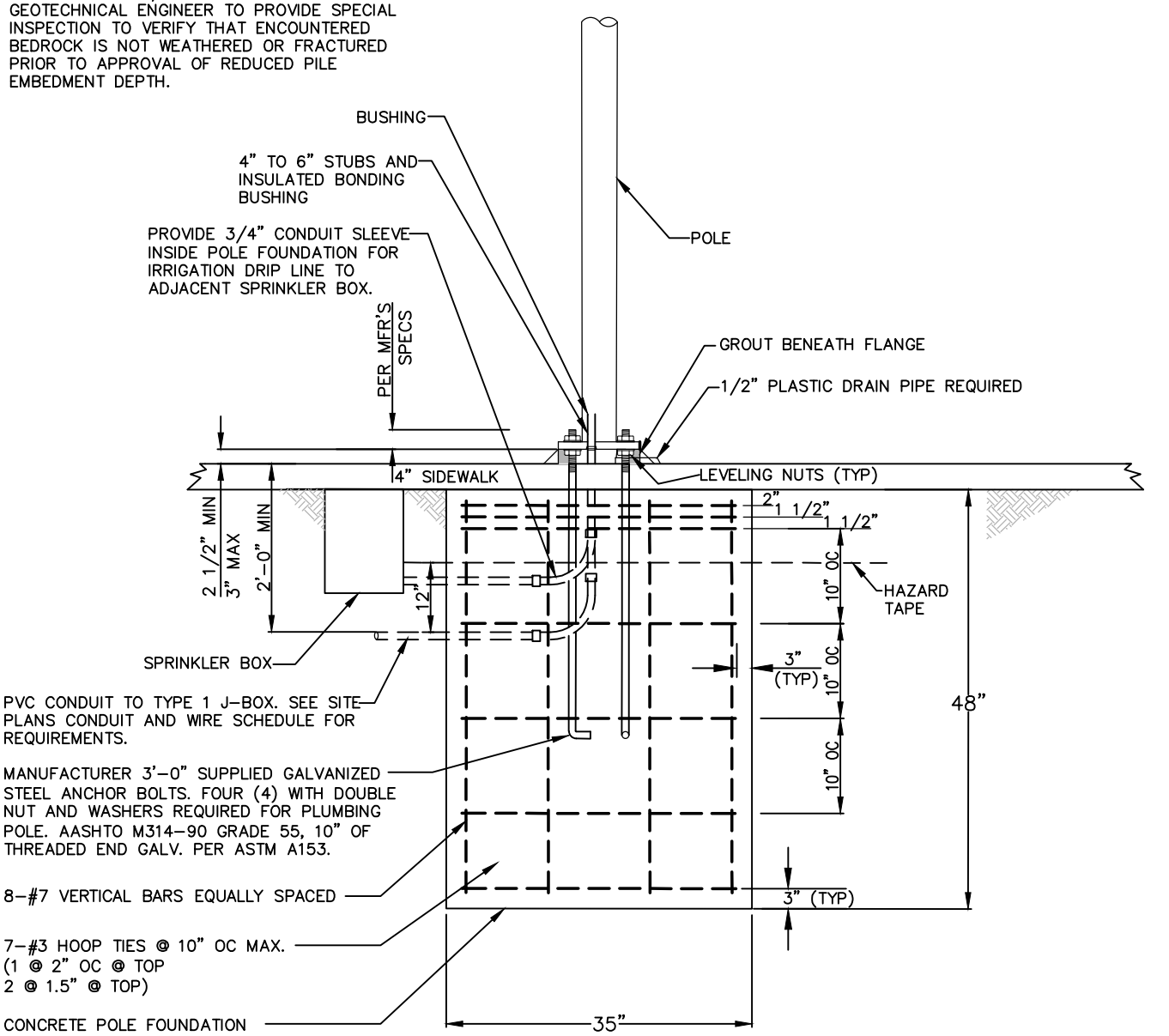
"S" SERIES LUMINAIRE FOUNDATION

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

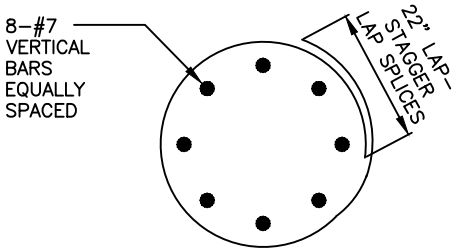
STANDARD PLAN No. J-212

Back to Section J - TOC

NOTE: WHERE SOLID BEDROCK IS ENCOUNTERED PRIOR TO REACHING 48" PILE EMBEDMENT DEPTH, PILE EMBEDMENT DEPTH CAN BE REDUCED TO 36". EMBED VERTICAL #7 REINFORCEMENT BARS 12" INTO BEDROCK W/ SIMPSON SET-XP EPOXY. GEOTECHNICAL ENGINEER TO PROVIDE SPECIAL INSPECTION TO VERIFY THAT ENCOUNTERED BEDROCK IS NOT WEATHERED OR FRACTURED PRIOR TO APPROVAL OF REDUCED PILE EMBEDMENT DEPTH.



GROUND POLE PER NEC



NOTE: FOR USE ONLY WHEN SHALLOW ROCK ENCOUNTERED

"S" SERIES FOUNDATION
NTS

PLAN VIEW
NTS

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED:	
REVISED:	09/2020
SUPERSEDES:	08/2019
CHECKED BY:	ANM
SCALE:	NTS
DWG/REV. BY:	MDH

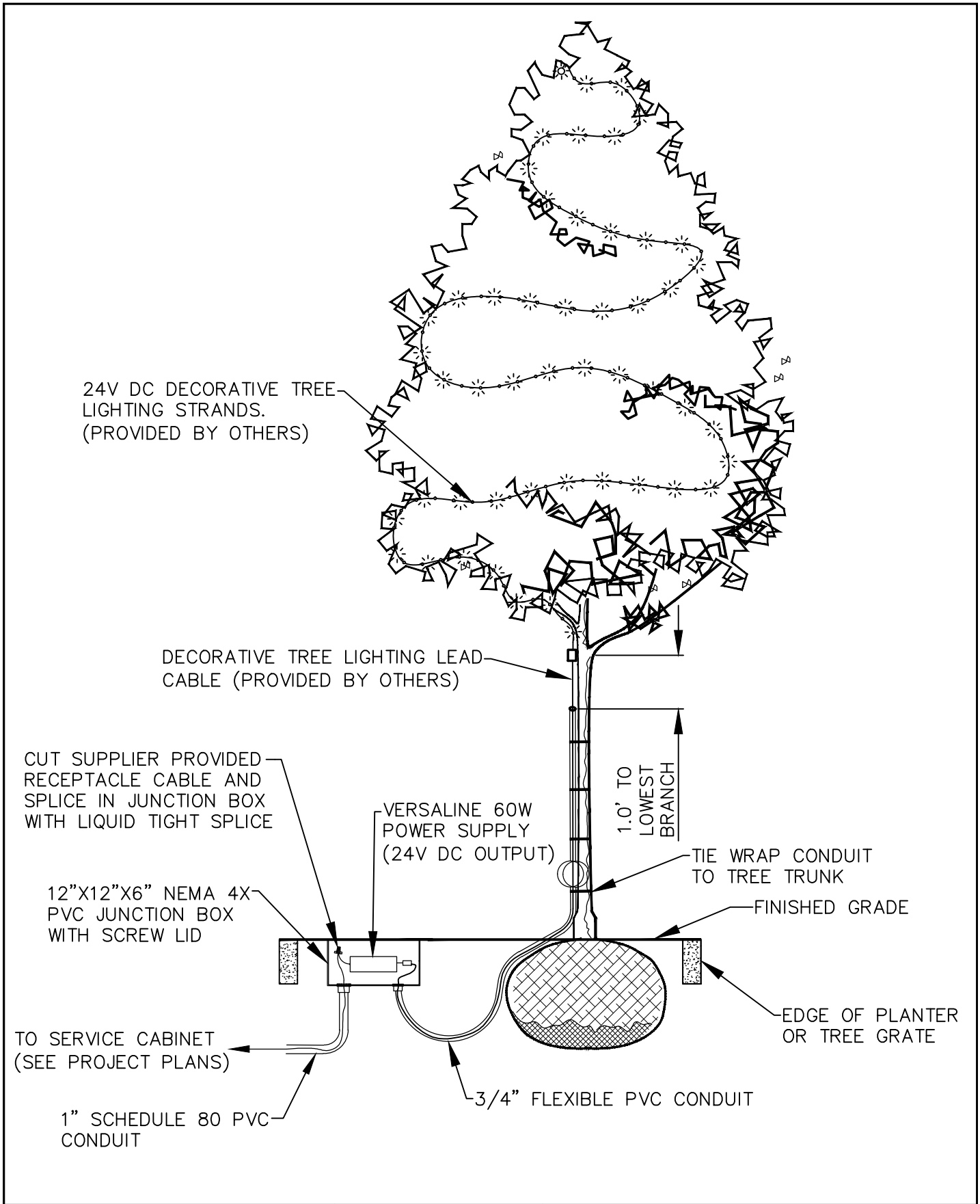
"S" SERIES LUMINAIRE FOUNDATION SHALLOW

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-212A

Back to Section J - TOC



APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

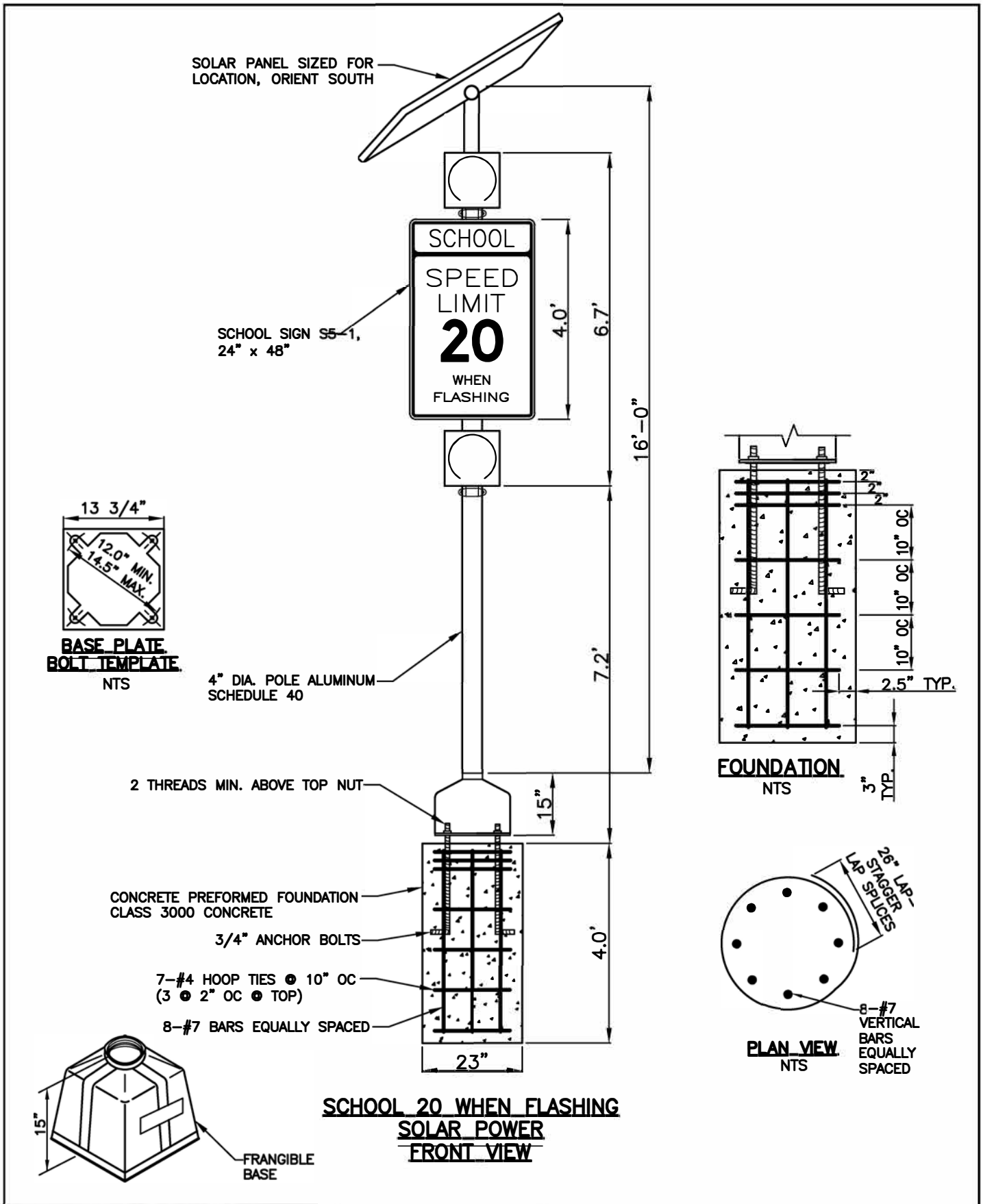
ADOPTED:	
REVISED:	08/2019
SUPERSEDES:	11/2018
CHECKED BY:	ANM
SCALE:	NTS
DWG/REV. BY:	MDH

DECORATIVE TREE LIGHTING

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINANMN

STANDARD PLAN No. J–213

Back to Section J - TOC

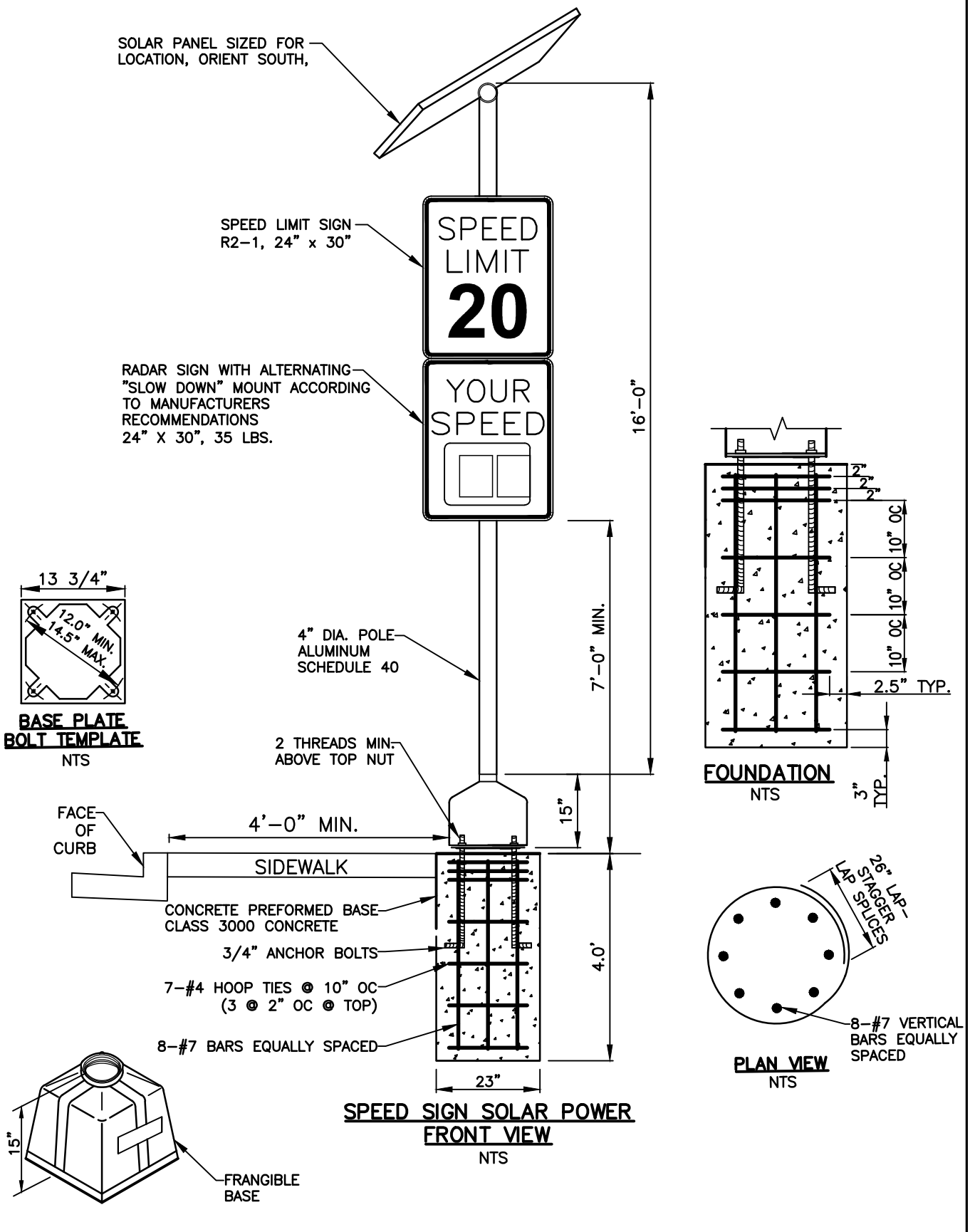


SCHOOL 20 WHEN FLASHING SOLAR POWER FRONT VIEW

APPROVED BY ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG CITY ENGINEER — DANIEL ALBERT BULLER, P.E.	ADOPTED: 11/2018 REVISED: SUPERSEDES: CHECKED BY: GTO SCALE: NTS DWG/REV. BY: MDH	SCHOOL 20 WHEN FLASHING SOLAR POWER ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-300

Back to Section J - TOC



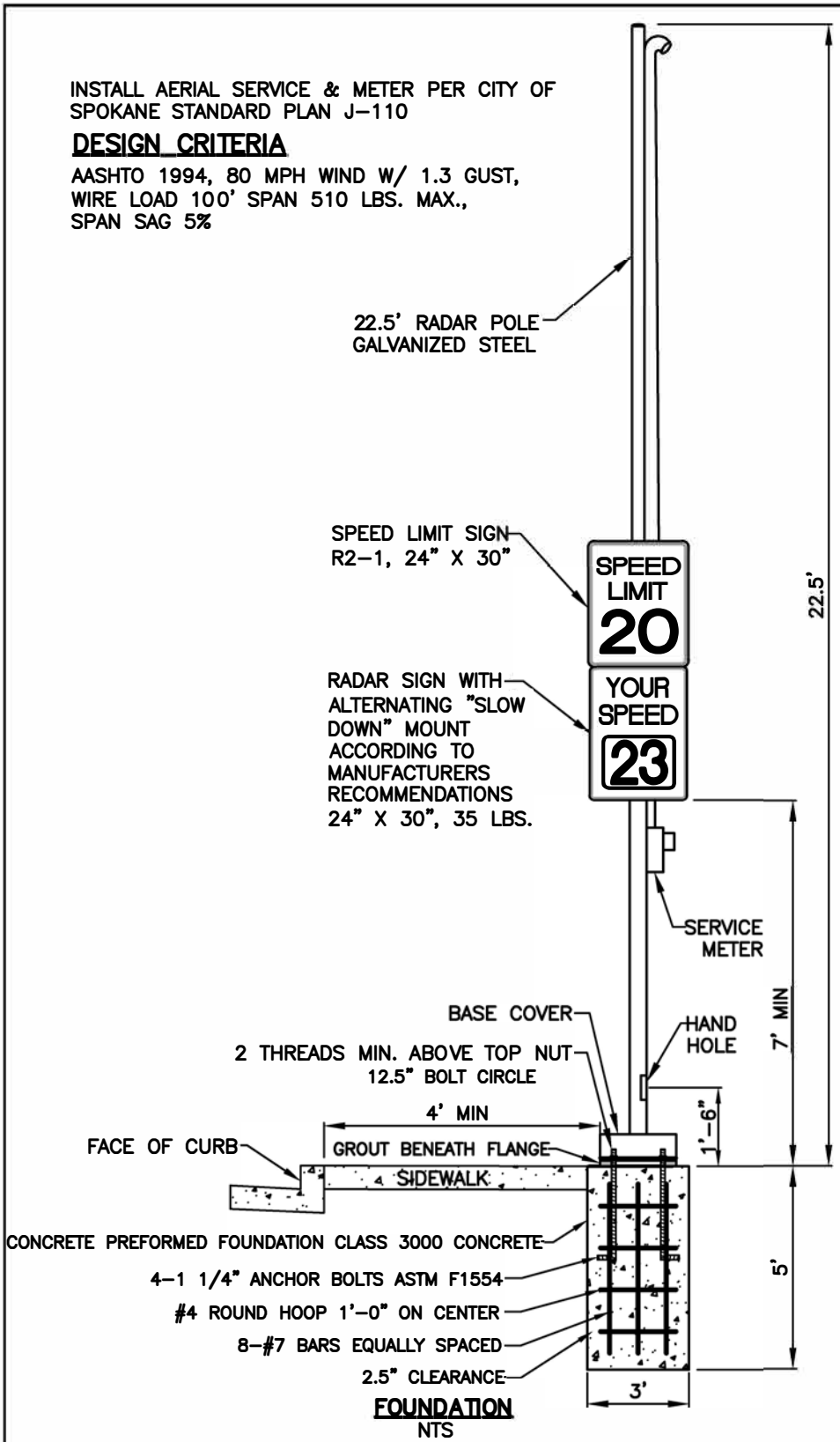
APPROVED BY ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG CITY ENGINEER — DANIEL ALBERT BULLER, P.E.	ADOPTED: 11/2018 REVISED: SUPERSEDES: CHECKED BY: GTO SCALE: NTS DWG/REV. BY: MDH	SPEED SIGN–SOLAR POWER ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON STANDARD PLAN No. J–301

Back to Section J - TOC

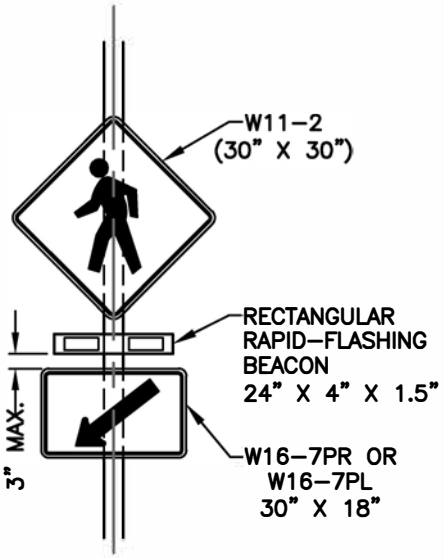
INSTALL AERIAL SERVICE & METER PER CITY OF SPOKANE STANDARD PLAN J–110

DESIGN CRITERIA

AASHTO 1994, 80 MPH WIND W/ 1.3 GUST, WIRE LOAD 100' SPAN 510 LBS. MAX., SPAN SAG 5%



FOUNDATION
NTS



RRFB & SIGNS
NTS

SEE CONTRACT PLANS FOR SINGLE SIDED OR DOUBLE SIDED SIGNS AND SINGLE SIDED OR DOUBLE SIDED LIGHT BAR INSTALLATION.

RRFB/SPEED SIGN AERIAL POWER FRONT VIEW
NTS

APPROVED BY

ENGINEERING OPERATIONS MANAGER — KYLE TWOHIG

CITY ENGINEER — DANIEL ALBERT BULLER, P.E.

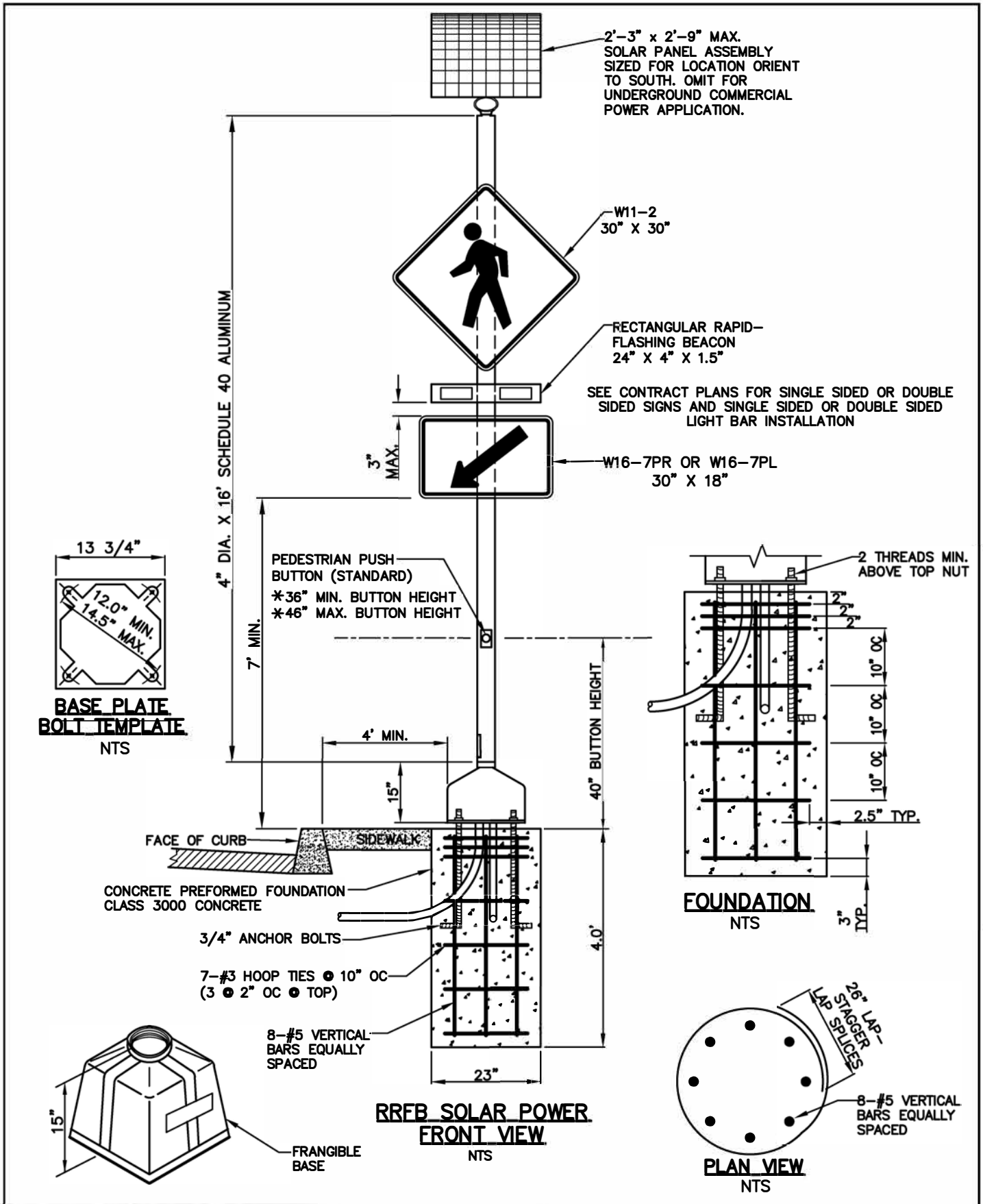
ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

RRFB/SPEED SIGN–AERIAL POWER

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–301A

Back to Section J - TOC



APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

ADOPTED: 11/2018
REVISED:
SUPERSEDES:
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

RECTANGULAR RAPID-FLASHING BEACON (RRFB) SOLAR POWER

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-302