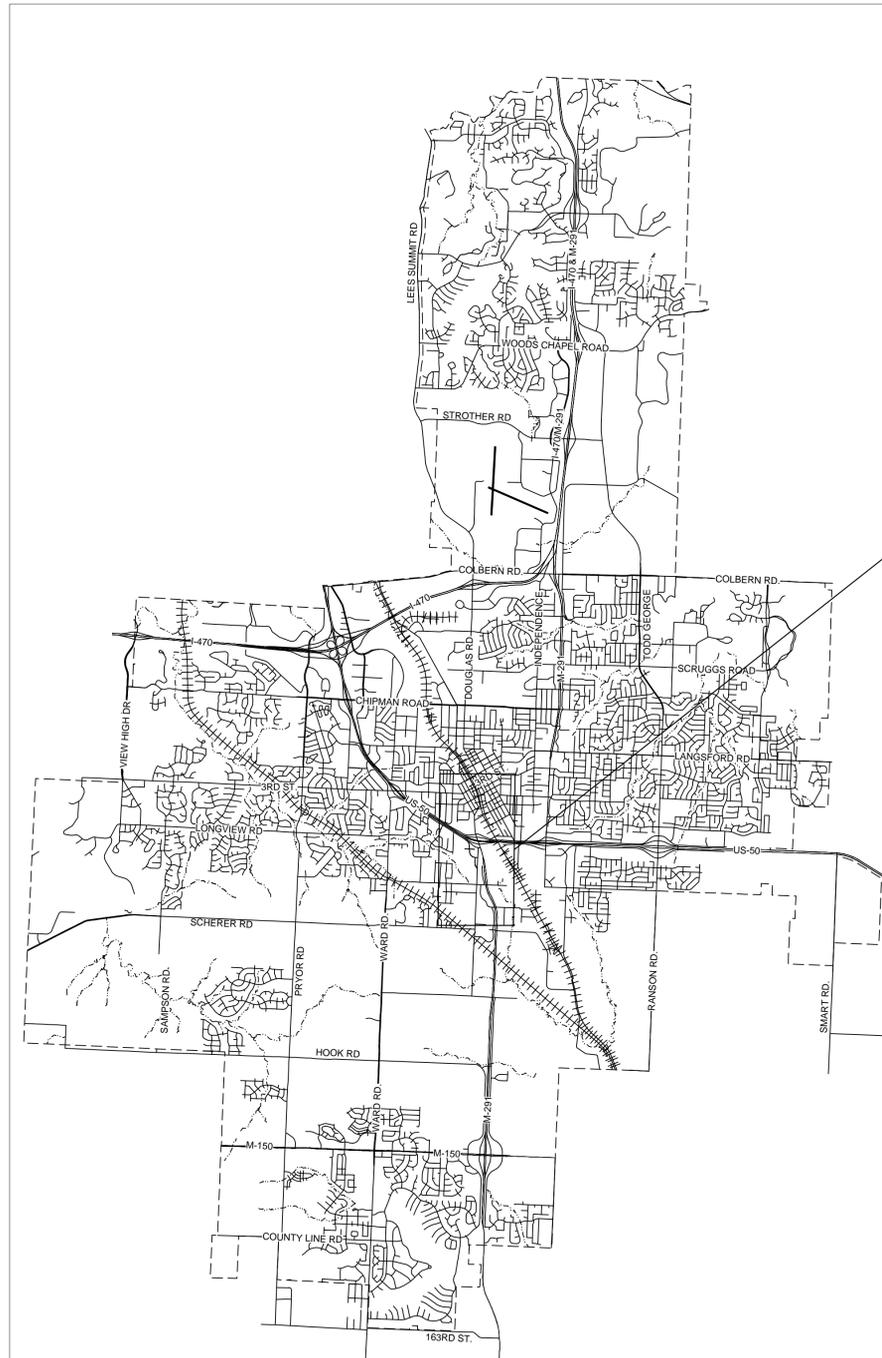


CITY OF LEE'S SUMMIT, MISSOURI PUBLIC WORKS DEPARTMENT TRAFFIC SIGNAL INSTALLATION OLDHAM PARKWAY AND FIELD HOUSE DRIVE

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SHEET NUMBER	SHEET TITLE
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13	CONDUIT & DETECTION DETAILS
14	POWER SUPPLY ASSEMBLY
15	POWER SUPPLY ASSEMBLY 120 V
16	TRAFFIC CONTROL DETAILS



LOCATION MAP
(NOT TO SCALE)



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NOTE:

KNOWN UNDERGROUND UTILITIES IN THE VICINITY OF THE WORK ARE SHOWN ON THESE PLANS, ALTHOUGH OTHERS MAY EXIST. THE LOCATIONS SHOWN ARE BELIEVED TO BE REASONABLY CORRECT, BUT DO NOT PURPORT TO BE ABSOLUTELY SO. BEFORE STARTING WORK, THE CONTRACTOR SHALL GIVE NOTICE TO AND OBTAIN INFORMATION FROM EACH OWNER AND OPERATOR OF EXISTING UNDERGROUND FACILITIES IN ACCORDANCE WITH THE MISSOURI UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION STATUTE (RSMO CHAPTER 319.015 - 319.050).



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SCALE: AS NOTED
DESIGNED BY: JJW
DRAWN BY: CNH
CHECKED BY: JJW



COVER SHEET

**OLDHAM VILLAGE
TRAFFIC SIGNAL**
LEE'S SUMMIT, MO. 64086

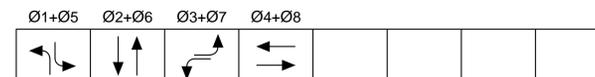
ORIGINAL ISSUE:
01/15/2025
KHA PROJECT NO.
268132012
SHEET NUMBER

Drawing name: K:\NK\TPO\28132012 - Oldham Village Signal\CD\Drawings\1 - COVER SHEET.dwg COVER SHEET - Feb 21, 2025 1:57pm by: Clara Hoggett
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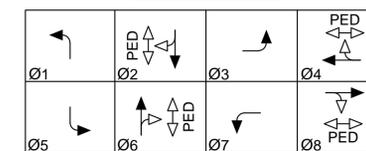
LEGEND

- EVD - EMERGENCY VEHICLE DETECTOR
- GND - GROUND
- PED - PEDESTRIAN SIGNAL HEAD
- PB - PUSHBUTTON
- SIG - VEHICLE SIGNAL HEAD
- SM FO - SINGLE-MODE FIBER OPTIC CABLE
- VIDEO - VIDEO DETECTION
- ST LT - STREET LIGHT
- PWR - POWER CABLE
- TRACE - TRACER WIRE

SEQUENCE



PHASE DIAGRAM



OUTPUT FILE ASSIGNMENTS

FR1	Ø1	Ø2	PED Ø2	Ø4	PED Ø4	Ø3	
FR2							MONITOR
FR3	Ø5	Ø6	Ø6	Ø8	Ø8	Ø7	
FR4							

1	2	3	4	5	6	7	8	9	10	11	12	13	14
											PED Ø2	PED Ø4	FLH
											PED Ø6	PED Ø8	STOP TIME

FLASHING OPERATIONS

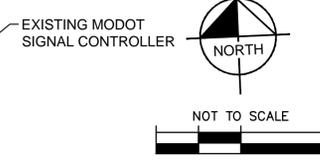
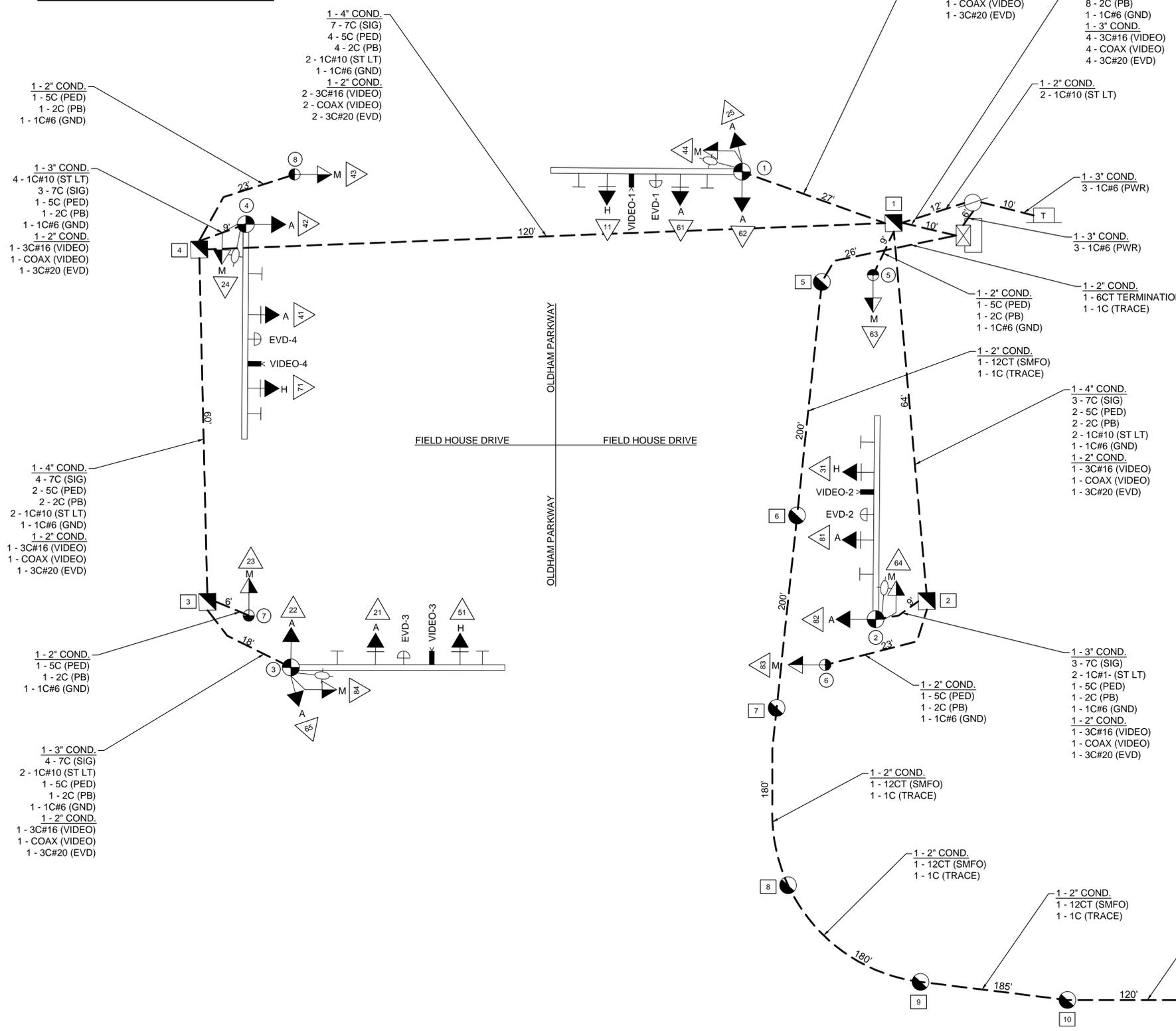
EMERGENCY	SCHEDULED
FY-Ø's	FY-Ø's
FR-ALL Ø's	FR-ALL Ø's

POWER SUPPLY

LOCATION	POWER SUPPLY TYPE	CIRCUIT BREAKER TRIP RATINGS		
		SERVICE DISCONNECT (2-POLE)	TRAFFIC SIGNAL (1-POLE)	LIGHTING (2-POLE)
NE CORNER	1-CIRCUIT	50 AMP	15 AMP	15 AMP

WIRING AND PHASING GENERAL NOTES:

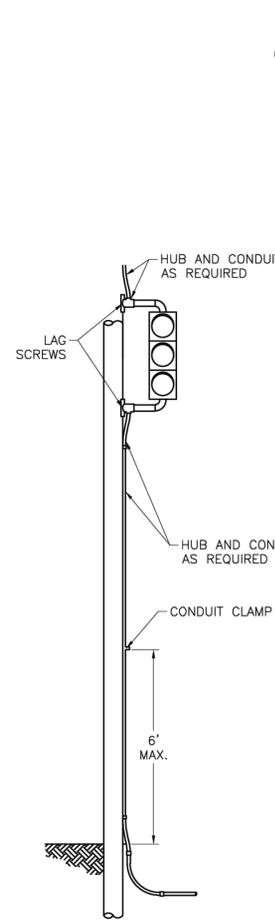
- THE OUTBOARD SIGNAL HEAD (FURTHEST ON THE MAST ARM FROM THE POLE) FOR EACH PHASE SHALL EACH BE SERVED BY ONE 7C#14 CABLE EXTENDING FROM THE HEAD BACK TO THE CONTROLLER. EACH OF THE REMAINING SAME PHASE VEHICLE SIGNAL HEADS LOCATED ON THE MAST ARM SHALL BE CONNECTED TO LIKE PHASE SIGNAL HEADS VIA A 7C#14 CABLE CONNECTED WITHIN THE SIGNAL HEAD TERMINAL BOX. A MAXIMUM OF THREE VEHICLE HEADS MAY BE JOINED TOGETHER, ANY ADDITIONAL SIGNAL HEADS WOULD REQUIRE A SEPARATE CABLE EXTENDING FROM THE HEAD BACK TO THE CONTROLLER.
- NO CABLE SPLICES ARE ALLOWED, INCLUDING AT THE BASE OF THE POLE AND INSIDE THE PULL BOXES, EXCEPT FOR STREET LIGHTING CABLES.
- GROUND RODS SHALL BE INSTALLED ADJACENT TO EACH CONCRETE BASE. ALL GROUND RODS SHALL BE TIED TOGETHER USING 1C#6 AWG BARE SOLID COPPER WIRE TO BOND THE SYSTEM.
- STREET LIGHT CABLE SHALL BE SPLICED IN POLE BASES USING MULTI-TAP CONNECTORS AND FUSE HOLDERS. SEE STREET LIGHTING STANDARDS.



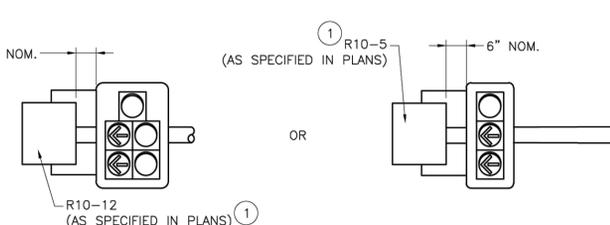
Drawing name: K:\KAC_TPT\2025\132012 - Oldham Village Signal\CAD\Drawings\6 - WIRING & PHASING DIAGRAM.dwg WIRING & PHASING DIAGRAM Feb 21, 2025 1:58pm By: Colin Hoggett
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SCALE: AS NOTED DESIGNED BY: JHT DRAWN BY: CNH CHECKED BY: JJW	
<h3>OLDHAM VILLAGE TRAFFIC SIGNAL</h3> <p>LEE'S SUMMIT, MO, 64086</p>	
ORIGINAL ISSUE: 01/15/2025 KHA PROJECT NO. 268132012 SHEET NUMBER 5	

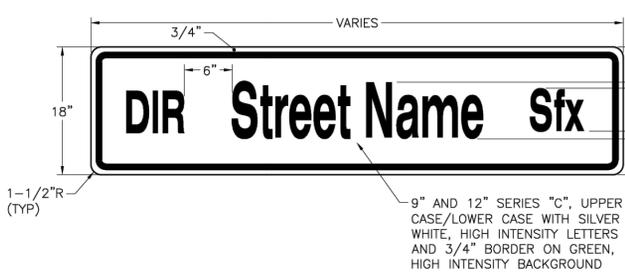
Drawing name: K14K4C_TPT0268132012 - Oldham Village SignalCAD/Plan/Sheet08 - TRAFFIC SIGNAL HEAD MOUNTING DETAILS - 15:00pm By: Clara Hoggatt
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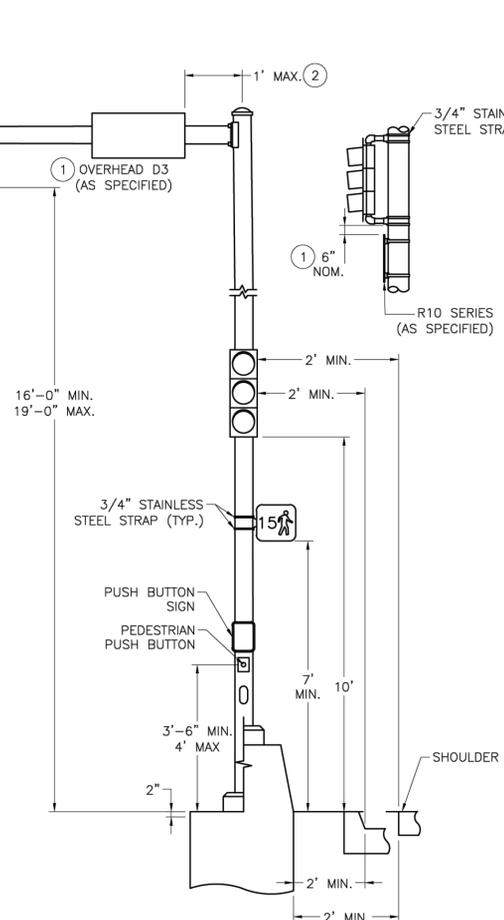
WOOD POLE MOUNTING



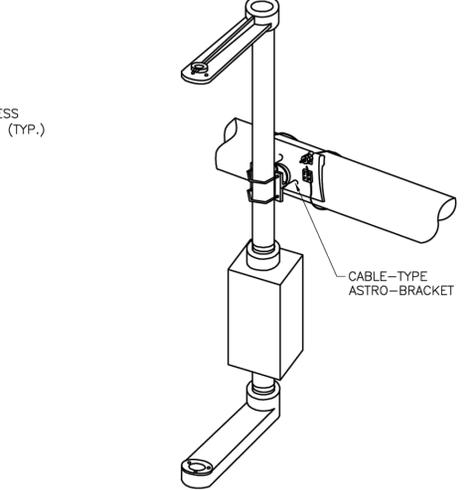
- ① NO SIGN IN EXCESS OF 15.0 SQUARE FEET SHALL BE INSTALLED ON POSTS OR MAST ARMS. SIGNS EXCEEDING 6.0 SQUARE FEET SHALL BE LOCATED SO THAT THE EDGE OF THE SIGN IS NO MORE THAN 12" FROM THE CENTERLINE OF THE POST. D3 SERIES SIGNS AS WELL AS SIGNS INSTALLED ON THE POST SHALL BE MOUNTED WITH A STRAP TYPE SIGN SUPPORT. R10 SERIES SIGNS INSTALLED ON THE MAST ARM SHALL BE MOUNTED WITH AN ASTRO-BRACKET ASSEMBLY.
- ② POST/POLE AND MAST ARM CAPS SHALL BE MADE OF METAL MATERIAL.



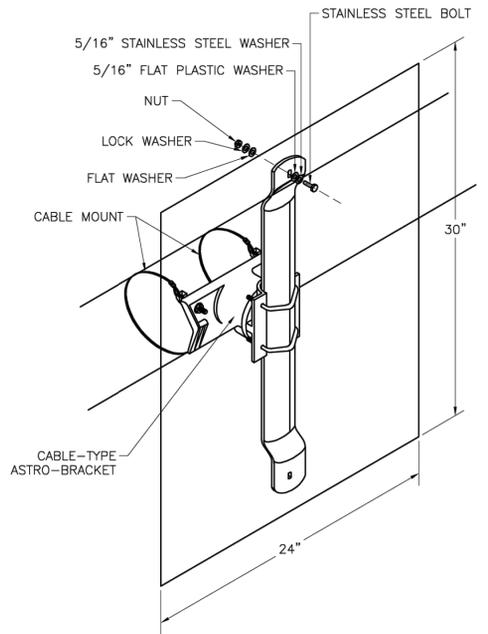
OVERHEAD D3 SIGN



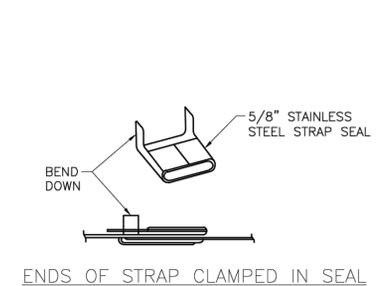
MAST ARM POLE MOUNTING



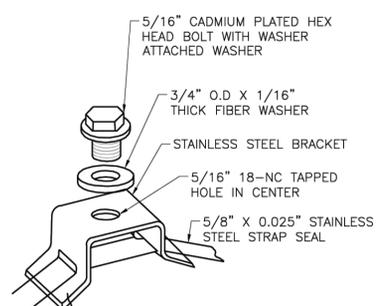
SIGNAL HEAD MAST ARM MOUNTING DETAIL



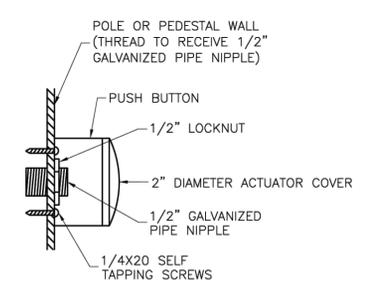
MAST ARM SIGN MOUNTING DETAIL



STRAP TYPE SIGN SUPPORT

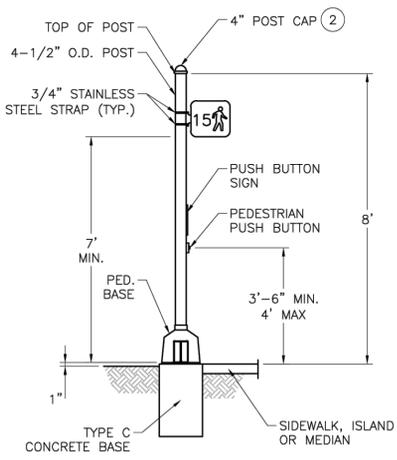
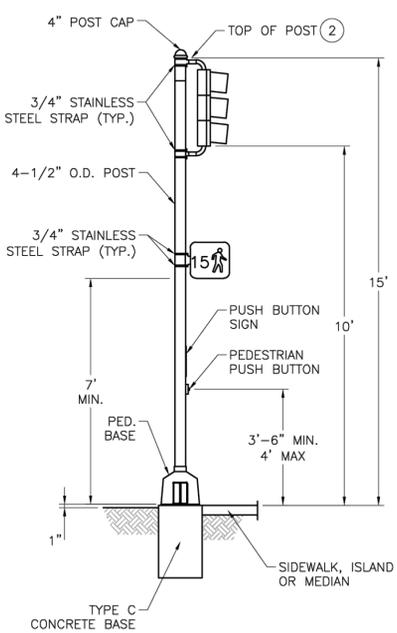


PUSH BUTTON MOUNT DETAIL

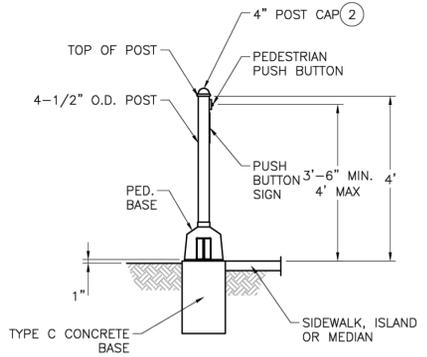


- PUSH BUTTON NOTES:**
1. PUSH BUTTONS SHALL INCLUDE TWO MOUNTING BRACKETS EACH AND BE OF THE TYPE AS NOTED IN THE PLANS.
 2. PUSH BUTTONS SHALL BE ADA APPROVED AND WEATHERPROOF, MOUNTED.

PUSH BUTTON MOUNT DETAIL



PEDESTAL POST MOUNTINGS



GENERAL NOTES:

1. ALL POST WIRE OUTLETS SHALL BE DEBURRED AND EQUIPPED WITH BUSHINGS.
2. BACKPLATES NOT SHOWN IN MOUNTING DIAGRAMS FOR CLARITY. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
3. POSTS SHALL BE GROUNDED WITH #6 AWG BARE COPPER WIRE FROM GROUNDING BUSHING ON CONDUIT TO GROUNDING LUG IN POST BASE IF STEEL CONDUIT IS USED. IF NON-METALLIC CONDUIT IS USED, PROVIDE #6 AWG WIRE FROM GROUNDING LUG IN POST TO POWER SUPPLY GROUND BUSS IN CONTROLLER CABINET.
4. LEADS FROM PEDESTRIAN SIGNAL LAMPS ARE CONNECTED TO THE SIGNAL HEAD TERMINAL COMPARTMENT.
5. ALL SIGNALS SHALL BE MOUNTED VERTICALLY UNLESS OTHERWISE NOTED ON THE TRAFFIC SIGNAL PLANS.
6. SPAN WIRE MOUNTED SIGNALS SHALL HAVE A DISCONNECT HANGER.
7. SIGNAL HEADS ON MAST ARMS SHALL BE TILTED FORWARD FROM THE TOP 3 TO 7 DEGREES FROM VERTICAL.
8. IF A SIGN EXCEEDS 42" IN LENGTH, TWO SUPPORTS ARE REQUIRED AND IF A SIGN EXCEEDS 96" IN LENGTH, THREE SUPPORTS ARE REQUIRED.
9. MAST ARM MOUNTED SIGNALS SHALL HAVE A TERMINAL COMPARTMENT.
10. SIDE-MOUNTED OPTICALLY LIMITING HEADS SHALL HAVE A MINIMUM POST CLEARANCE OF 5-1/2".
11. SYMBOL FOR PEDESTRIAN LENSES SHALL HAVE A MINIMUM HEIGHT OF 11"
12. PUSH BUTTON SIGNS SHALL BE MOUNTED DIRECTLY ABOVE THE ACTUATOR, EXCEPT FOR LOCATIONS ON 4' PEDESTALS THE SIGN SHALL BE LOCATED DIRECTLY BELOW THE ACTUATOR. PUSH BUTTON SIGNS SHALL BE AS SPECIFIED IN THE PLANS.
13. SIGNAL APPURTENANCES SHALL HAVE A HORIZONTAL CLEARANCE NO LESS THAN 2' FROM THE FACE OF A VERTICAL CURB OR FROM THE OUTSIDE EDGE OF A SHOULDER, EXCEPT SIGNALS LOCATED IN A MEDIAN ISLAND.
14. SEE STANDARD DRAWING TS-3 FOR BASE DETAILS.

LEE'S SUMMIT MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: POLE AND LUMINAIRE DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

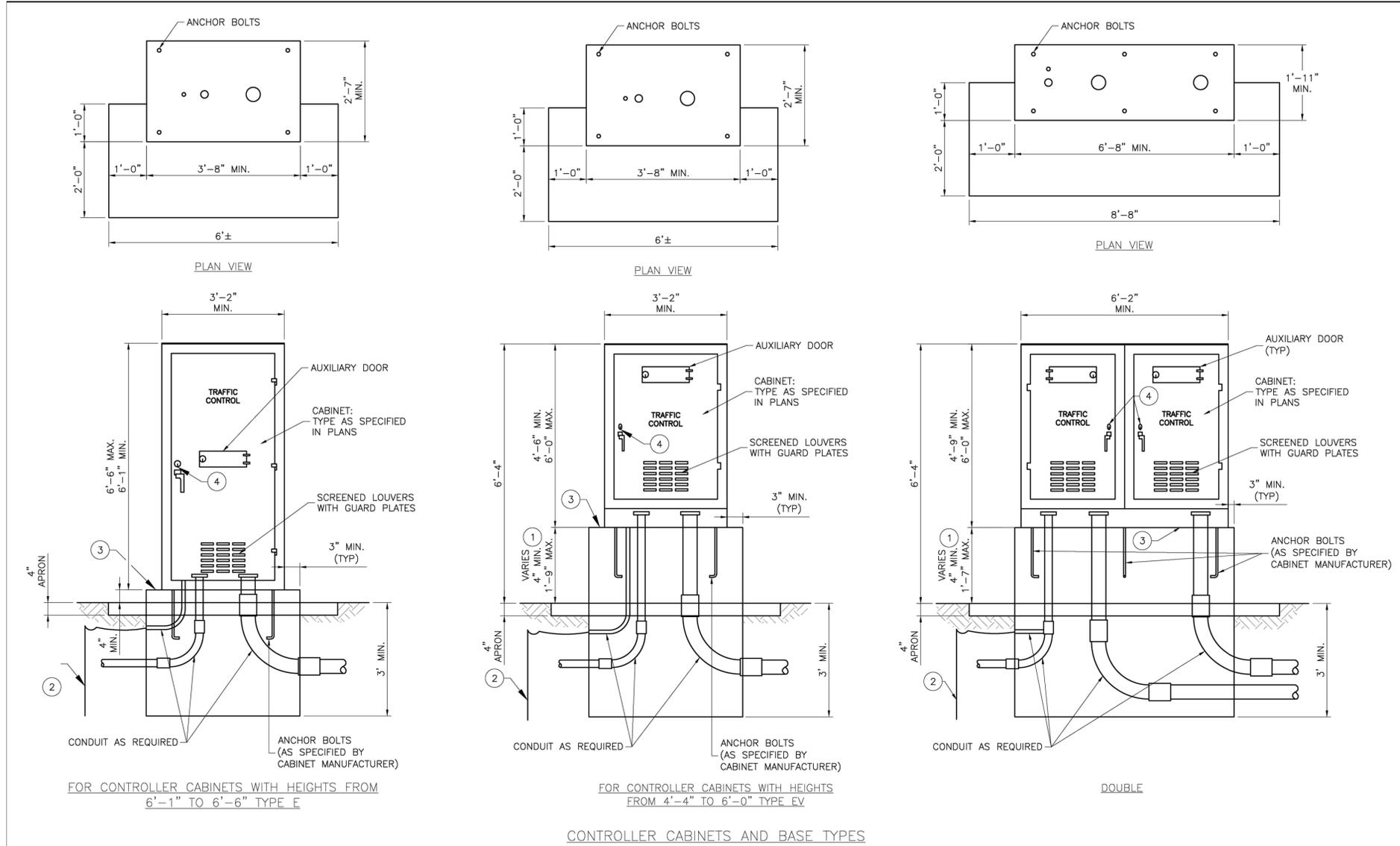
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Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

TS-1

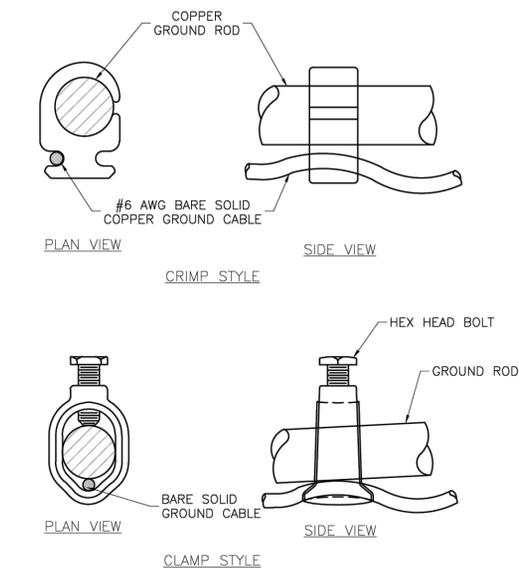
DESIGNED BY: JHT	SCALE: AS NOTED	<p>© 2023 KIMLEY-HORN AND ASSOCIATES, INC. 800 PENNSYLVANIA AVE, SUITE 100 PHOENIX, AZ 85006 WWW.KIMLEY-HORN.COM</p>
DRAWN BY: CNH	NO.	
CHECKED BY: JJW	REVISIONS	
	DATE	
<p>OLDHAM VILLAGE TRAFFIC SIGNAL</p> <p>LEE'S SUMMIT, MO, 64086</p>		<p>ORIGINAL ISSUE: 01/15/2025</p> <p>KHA PROJECT NO. 268132012</p> <p>SHEET NUMBER</p>

Drawing name: K194C_TPT0208132012 - Oldham Village Signal Cabinet & Base Details - Traffic Signal Cabinet & Base Details - File 21, 2025 1:58pm By: Clara Hoggett
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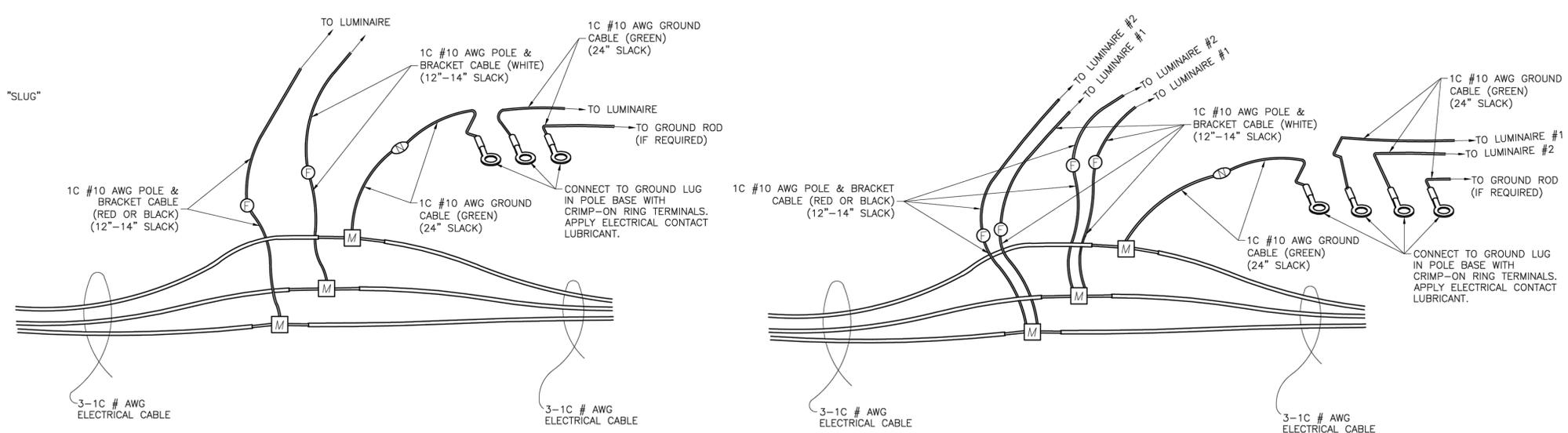
- ① DIMENSION VARIES ACCORDING TO CABINET HEIGHT.
- ② GROUND ROD, 3/4" DIA. X 8' MIN. IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN A VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL OR BURIED IN A TRENCH AT LEAST 30 IN. DEEP. CONNECTION TO GROUND ROD SHALL BE CLAMP TYPE AS DETAILED.
- ③ LIFETIME SILICONE CAULK BETWEEN CABINET AND BASE.
- ④ #2 CORBIN LOCK.

GENERAL NOTES:
 TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE ORIENTED WITH THE BACK OF THE CONTROLLER CABINET FACING THE INTERSECTION, SUCH THAT WHEN THE DOOR IS OPEN THE SIGNAL HEAD INDICATIONS CAN BE VIEWED WHILE LOOKING INSIDE THE CABINET.



- LEGEND**
- M MULTI-TAP ELECTRICAL CONNECTOR
 - F BREAK-AWAY FUSED ELECTRICAL CONNECTOR WITH 8 AMP FUSE
 - N BREAK-AWAY NON-FUSED ELECTRICAL CONNECTOR WITH GROUND "SLUG"

- GENERAL NOTES:**
1. RED CABLES SHALL BE CONNECTED TO WEST OR NORTH ORIENTED LUMINAIRE. BLACK CABLES SHALL BE CONNECTED TO EAST OR SOUTH ORIENTED LUMINAIRE.
 2. THE SPECIFIED CABLE SLACK SHALL BE PROVIDED ON EACH SIDE OF THE FUSED AND UN-FUSED CONNECTORS.
 3. ADDITIONAL SLACK SHALL BE PROVIDED FOR THE #4 AWG CABLE SUCH THAT WHEN EXTENDED UPWARD, THE TOP OF THE MULTI-TAP CONNECTORS ARE NO LESS THAN 1" AND NO MORE THAN 3" ABOVE THE TOP OF THE HAND HOLE OPENING.



ELECTRICAL CONNECTOR KIT SCHEMATIC (SINGLE LUMINAIRE)

ELECTRICAL CONNECTOR KIT SCHEMATIC (TWIN LUMINAIRES)

LEE'S SUMMIT MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

POLE AND LUMINAIRE DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO

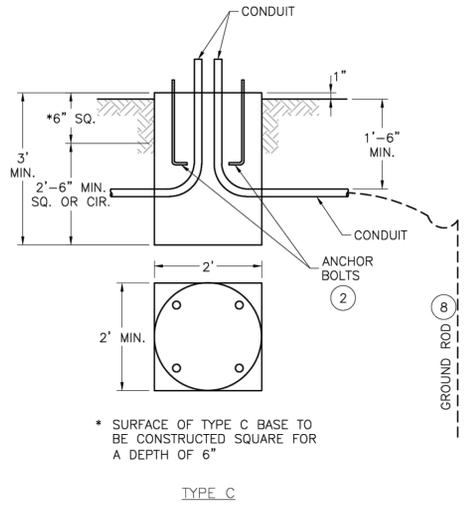
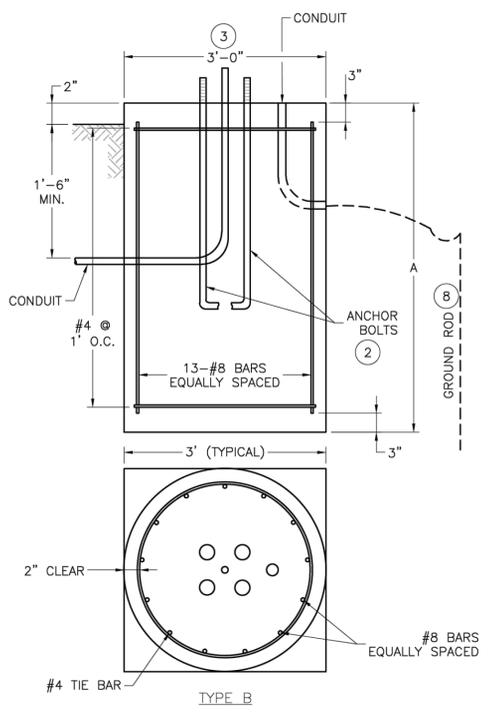
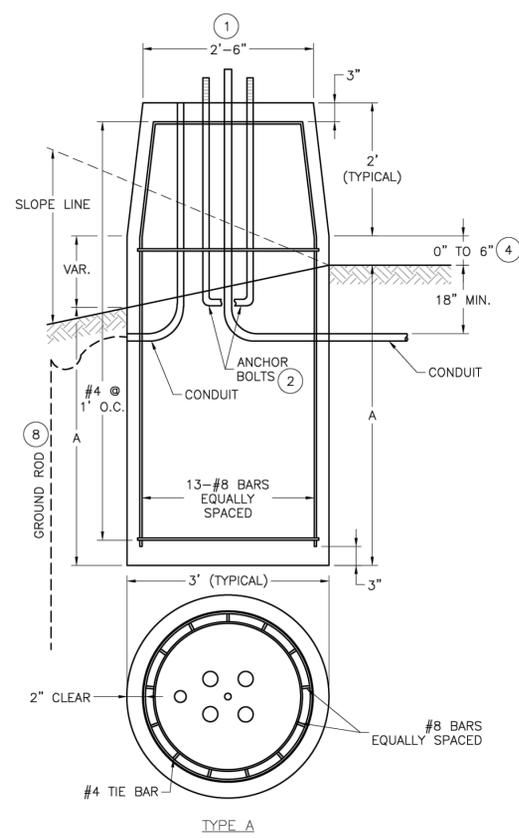
Project Name:
CONTROLLER CABINET & BASE DETAILS

Drawn By: BWC
 Checked By: MP
 Date: 01/2020
 Proj. #:

TS-2

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<p>AS NOTED SCALE: _____</p>	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>No.</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	DATE	BY												
No.	DATE	BY														
<p>STATE OF MISSOURI JEFFREY W. KIMLEY LICENSE NO. 0032448 PROFESSIONAL ENGINEER</p>																
<p>CONTROLLER CABINET & BASE DETAILS</p>																
<p>OLDHAM VILLAGE TRAFFIC SIGNAL LEE'S SUMMIT, MO. 64066</p>																
<p>ORIGINAL ISSUE: 01/15/2025 KHA PROJECT NO. 268132012 SHEET NUMBER</p>																
<p>8</p>																

Drawing name: K:\KAC_T\PT0208132012 - Oldham Village Signal\Drawings\8 - TRAFFIC SIGNAL DETAILS.dwg File: 21_2025_138mm by: Clara Hegger
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POST BASES		
POST TYPE	ARM LENGTH (FT.)	BASE TYPE
B, BL, C & CL	8 - 14	A-8 OR B-8
B, BL, C & CL	15 - 34	A-10 OR B-10
B, BL, C & CL	35 - 54	A-13 OR B-13

STEEL & CONCRETE REQUIREMENTS FOR POST BASES				
TYPE	BASES		#8 STEEL BAR	
	A (10)	LENGTH	WEIGHT LBS (11)	CONC. C.Y.
A-8	8'-0"	9'-6"	399	2.53
A-10	10'-0"	11'-6"	481	3.06
A-13	13'-0"	14'-6"	604	3.84
B-8	8'-0"	7'-6"	317	2.09
B-10	10'-0"	9'-6"	400	2.62
B-13	13'-0"	12'-6"	523	3.40
C*				0.44

SOLID ROCK ENCOUNTER POINT	REQUIRED EMBEDMENT FOR BASE TYPE		
	A-8 B-8	A-10 B-10	A-13 B-13
AT SURFACE	4'-6"	4'-9"	5'-9"
AT ONE-FOURTH NORMAL DEPTH	3'-6"	4'-0"	5'-0"
AT ONE-HALF NORMAL DEPTH	3'-0"	3'-3"	3'-3"
AT THREE-FOURTHS NORMAL DEPTH	1'-3"	1'-3"	1'-0"

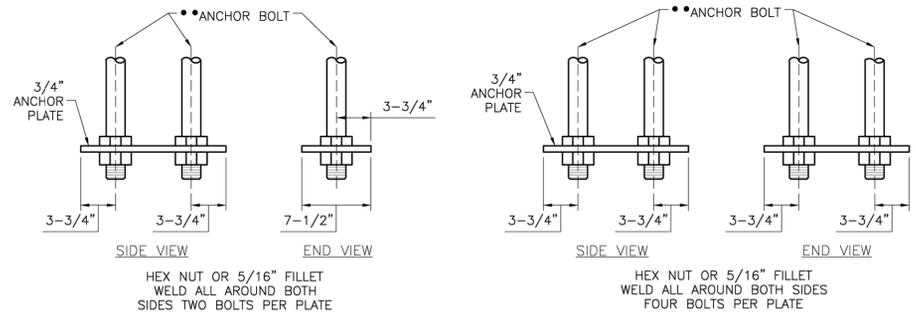
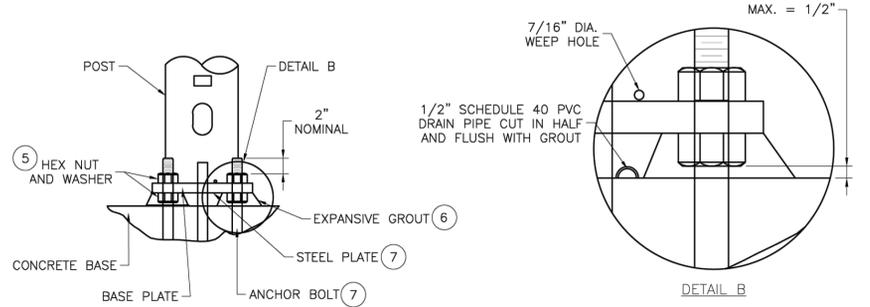
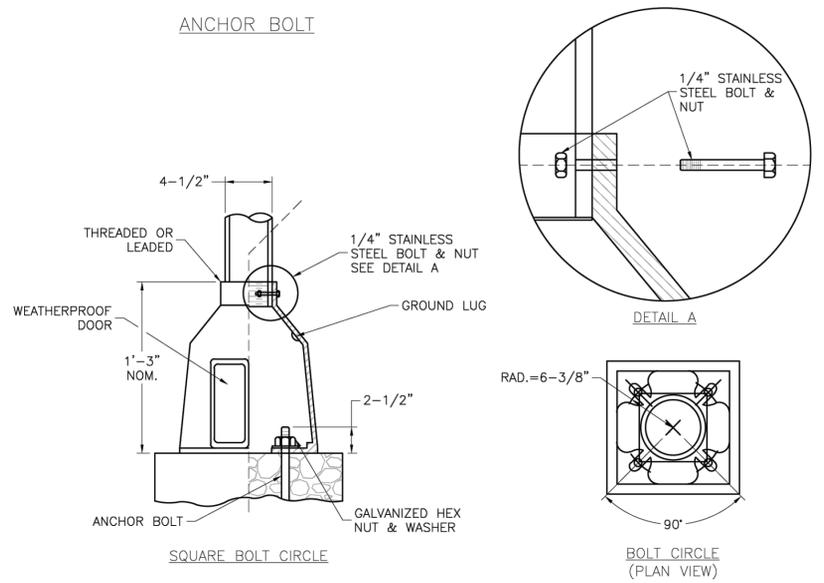
- ARM LENGTH DETERMINED BY LENGTH OF LONGEST ARM FOR TYPE B & BL SIGNAL POSTS.
- BASE TYPE A OR B DETERMINED BY LOCATION OF POST BASE.
- SPECIAL DESIGN REQUIREMENTS:**
- SIGNAL STRUCTURES WHICH WILL EXCEED THE DIMENSION LIMITS SHOWN ON STANDARD DRAWING TS-5 SHALL HAVE ITS POST BASE DESIGNED BY A PROFESSIONAL ENGINEER AND APPROVED BY THE CITY ENGINEER (OR DESIGNEE). A SET OF DRAWINGS INCLUDING SPECIFICATIONS AND DESIGN COMPUTATIONS SHALL BE SUBMITTED FOR RECORD AND REFERENCE. THE SUBMITTED DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE LAWS RELATING TO ARCHITECTS AND PROFESSIONAL ENGINEERS (CHAPTER 327, RSMO) AND SHALL INCLUDE A TITLE BLOCK OR SUMMARY SHEET WHICH LISTS AND CERTIFIES THAT THE FOUNDATION WILL MEET THE DESIGN CRITERIA.
- IF BOLT CIRCLE IS 22 INCHES OR GREATER, USE TYPE B BASE. IF TYPE B BASE IS USED ANYWHERE, ALL TYPE B, BL, C, AND CL POSTS SHALL HAVE TYPE B BASE. BASE PLATE SHALL STAY WITHIN THE TOP OF THE POST BASE DIAMETER.
 - ANCHOR BOLT DIMENSIONS ARE SHOWN ON THE MANUFACTURER'S APPROVED DRAWINGS.
 - MAXIMUM BOLT CIRCLE DIAMETER IS 26". BASE PLATE SHALL STAY WITHIN THE TOP OF THE POST BASE DIAMETER.
 - 0" TO 6" VARIATION IN BASE HEIGHT IS FOR OBTAINING 16"-0" CLEARANCE. 0.13" C.Y. CONCRETE AND 3 LBS. REINFORCING STEEL PER 6".

- POSTS SHALL BE FURNISHED WITH INDIVIDUAL NUT COVERS.
- EXPANSIVE GROUT SHALL BE USED BETWEEN THE POST BASE PLATE AND CONCRETE BASE.
- PLATE AND BOLT SIZES SHALL BE SHOWN ON FABRICATOR'S SHOP DRAWINGS AND SHALL BE SUBJECT TO APPROVAL.
- 3/4" X 8" MINIMUM GROUND ROD. IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL OR BURIED IN A TRENCH AT LEAST 30 IN. DEEP. CONNECTION TO GROUND ROD SHALL BE CLAMP TYPE AS DETAILED ON STANDARD DRAWING TS-2.

- REQUIRED EMBEDMENT DEPTHS CAN BE INTERPOLATED BETWEEN ENCOUNTER POINTS FOR OTHER SOLID ROCK ENCOUNTER DEPTHS.
- NORMAL LENGTHS FOR ANCHOR BOLTS AND REINFORCING STEEL WILL BE REQUIRED.
- CORE DRILL HOLES FOR ANCHOR BOLTS AND REINFORCING STEEL IN SOLID ROCK SHALL BE PROVIDED. CORE DRILL HOLES SHALL BE TWICE THE DIAMETER OF THE ANCHOR BOLT AND REINFORCING STEEL DIAMETER AND TO WITHIN 3 INCHES OF THE NORMAL BASE DEPTH.
- IF SOIL, SHALE, GRAVEL, FRACTURED ROCK, OR VOIDS ARE ENCOUNTERED DURING CORE DRILLING, THE ROCK SHALL BE REMOVED TO THE POINT OF ENCOUNTER.
- ANCHOR BOLTS AND REINFORCING STEEL SHALL BE GROUTED IN THE CORE DRILL HOLES WITH NON-SHRINK GROUT HAVING A MINIMUM STRENGTH OF 9,000 POUNDS IN 24 HOURS.
- STRAIGHT ANCHOR BOLTS OF THE LENGTH SHOWN IN THE ANCHOR BOLT TABLE UNDER THE COLUMN "BOLT LENGTH" ARE ADEQUATE FOR USE IN GROUTED CORE DRILLED HOLES. NO HEAT INDUCED ALTERATION OR BENDING OF ANCHOR BOLTS WILL BE PERMITTED.

BOLT LENGTH INCHES	VERT HT. A INCHES	THREAD LEN. B INCHES	DIA. C INCHES
19	17	1.50	0.625
57	51	7.00	1.250
79	73	7.50	1.500
94	88	8.00	1.750
121	115	8.50	2.000
120	114	9.00	2.250
146	140	9.50	2.500

NOTE: ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED.



OPTIONAL STEEL PLATE FOR ANCHOR BOLTS

LEE'S SUMMIT MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

POST BASE DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

POLE AND LUMINAIRE DETAILS

Project: OLDHAM VILLAGE TRAFFIC SIGNAL
Lee's Summit, MO. 64086

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

TS-3

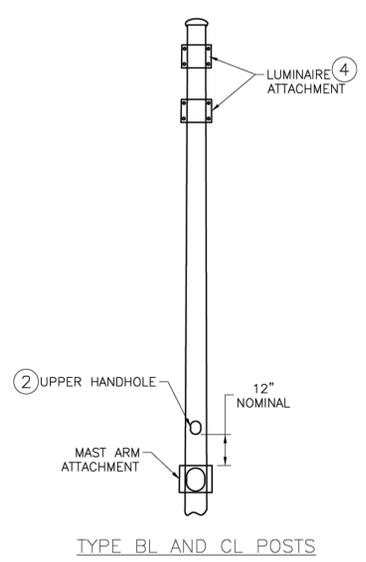
DESIGNED BY: JHT	SCALE: AS NOTED	NO.	DATE
DRAWN BY: CNH	REVISIONS		
CHECKED BY: JJW			

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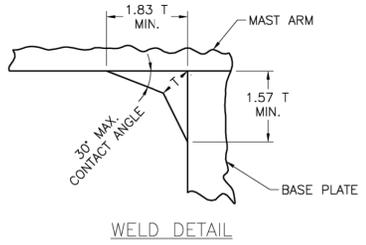
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ORIGINAL ISSUE: 01/15/2025
KHA PROJECT NO. 268132012
SHEET NUMBER 9

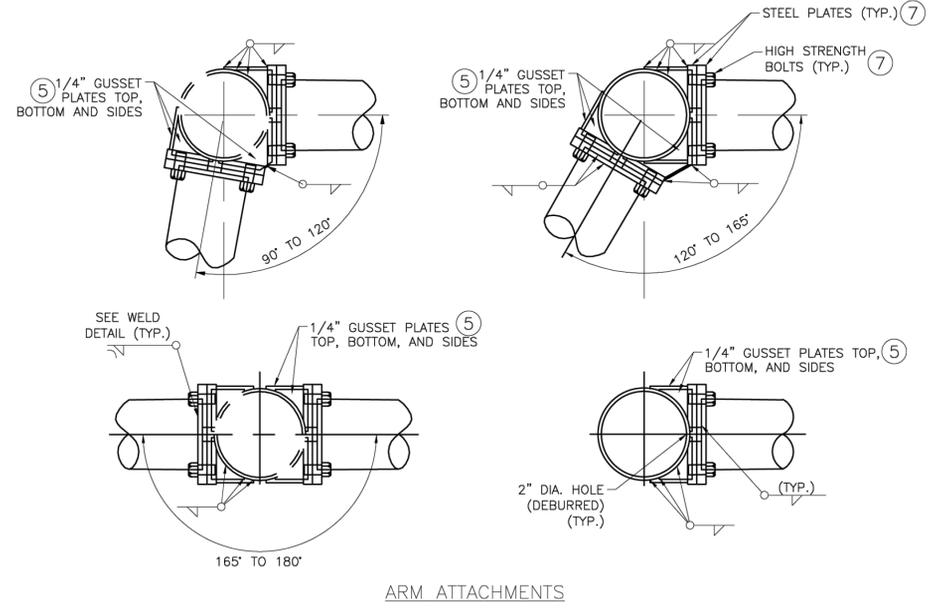
Drawing name: K:\KAC_T\PT0268132012 - Oldham Village Signal\CAD\Drawings\8 - TRAFFIC SIGNAL DETAILS\8 - TUBULAR STEEL POST DETAILS Feb 21, 2025 1:59pm By: Clara Hogsett
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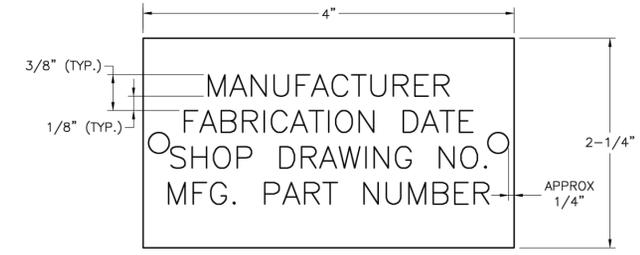
TYPE BL AND CL POSTS



WELD DETAIL

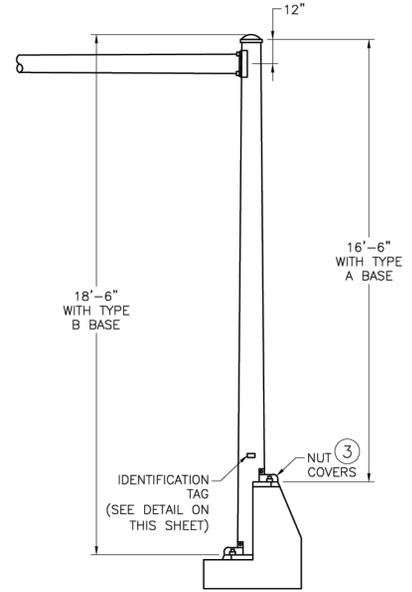


ARM ATTACHMENTS

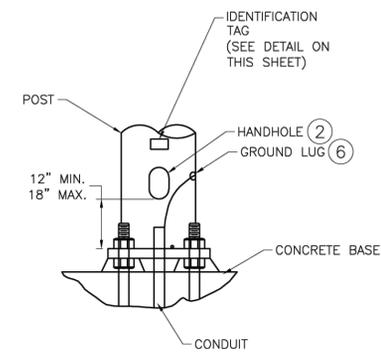


NOTE:
TAG SHALL BE ALUMINUM OR STAINLESS STEEL AND ATTACHED TO POLE OR MAST ARM USING TWO RIVETS OR STAINLESS STEEL DRIVE SCREWS. ID TAG HOLES SHALL BE DRILLED PRIOR TO GALVANIZING.

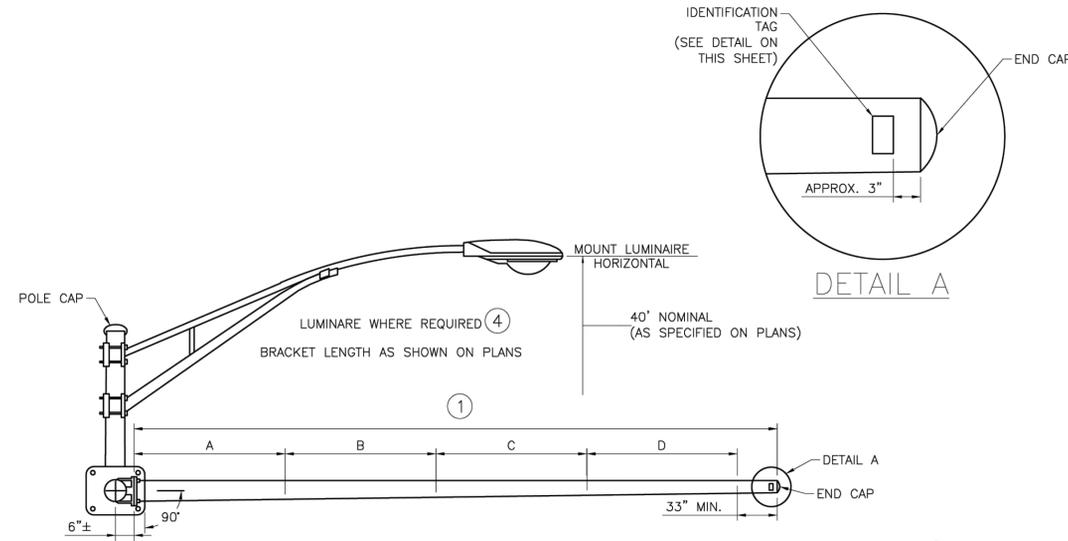
IDENTIFICATION TAG



POLE BASE WITH TYPE A AND B POST

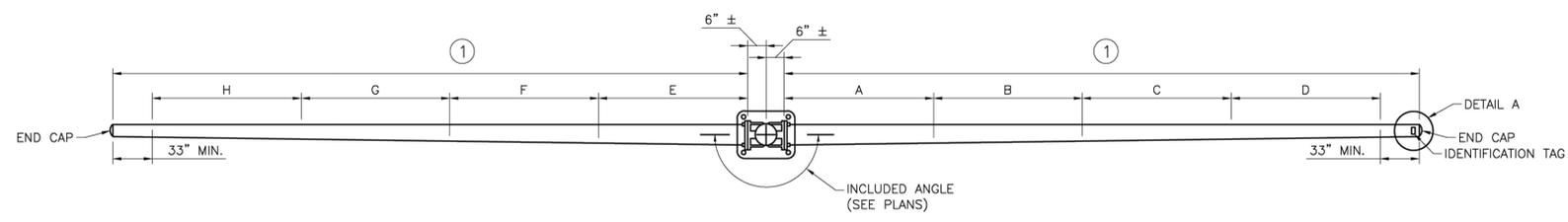


POLE BASE



NOTE:
A, B, C, AND D - SIGNAL SPACING AS SHOWN ON THE TRAFFIC SIGNAL PLANS.

TYPE C AND TYPE CL (WITH LUMINAIRE)



NOTE:
A, B, C, D, E, F, G AND H - SIGNAL SPACING AS SHOWN ON THE TRAFFIC SIGNAL PLANS.

TYPE B AND TYPE BL (WITH LUMINAIRE)

- ① ARM LENGTHS SHALL NOT EXCEED 54 FEET. SEE TRAFFIC SIGNAL PLANS FOR DIMENSIONS.
- ② HANDHOLES SHALL BE APPROXIMATELY 4" X 6-1/2". HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.
- ③ POSTS SHALL BE FURNISHED WITH INDIVIDUAL NUT COVERS.
- ④ SEE STREET LIGHTING STANDARD DETAILS FOR TYPICAL BRACKET ARM MOUNTING FOR TYPE BL AND TYPE CL POSTS.
- ⑤ ANY OPENINGS BETWEEN TOP AND SIDE GUSSET PLATES SHALL BE SEALED WITH LIFETIME CAULK AT TIME OF INSTALLATION.
- ⑥ POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90' OR 180' FROM THE HANDHOLE.
- ⑦ PLATE AND BOLT SIZES SHALL BE SHOWN ON FABRICATORS SHOP DRAWINGS AND SHALL BE SUBJECT TO APPROVAL.

GENERAL NOTES:

ARMS SHALL BE RAKED UP 0.25" PER FOOT MINIMUM. ARMS SHALL BE PROVIDED WITH A PERMANENT MARKING INDICATING PROPER ORIENTATION FOR INSTALLATION.

TO DETERMINE LEFT OR RIGHT ON TYPE B OR C SIGNAL POST, VIEWING POSITION SHALL BE FROM THE CENTER OF THE INTERSECTION BEING CONTROLLED AND FACING THE SIGNAL INVOLVED.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

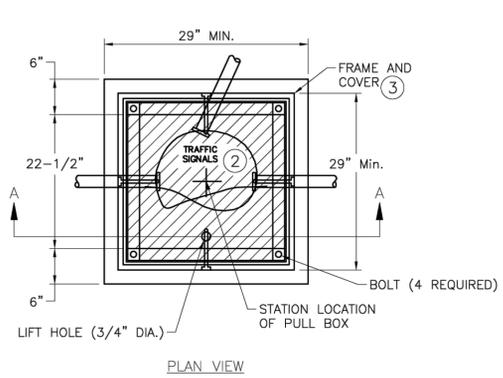
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CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: TUBULAR STEEL POST DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

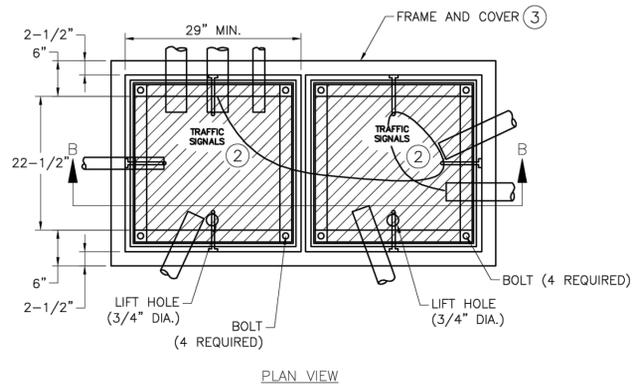
TS-4

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<p>TUBULAR STEEL POST DETAILS</p>	<p>TUBULAR STEEL POST DETAILS</p>
<p>OLDHAM VILLAGE TRAFFIC SIGNAL LEE'S SUMMIT, MO. 64066</p>	<p>ORIGINAL ISSUE: 01/15/2025 KHA PROJECT NO. 268132012 SHEET NUMBER 10</p>

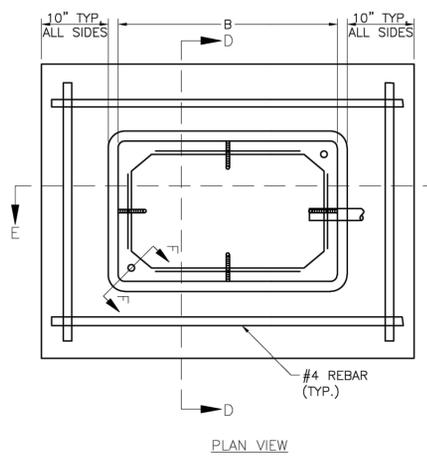
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 Designer: JWH
 Checker: JWH
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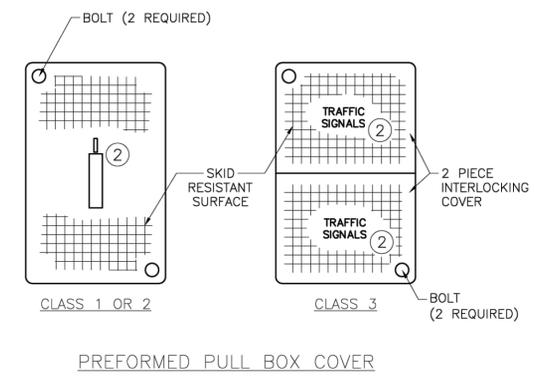
PLAN VIEW



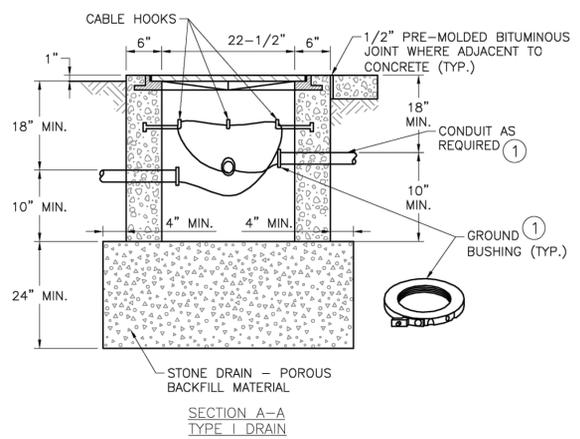
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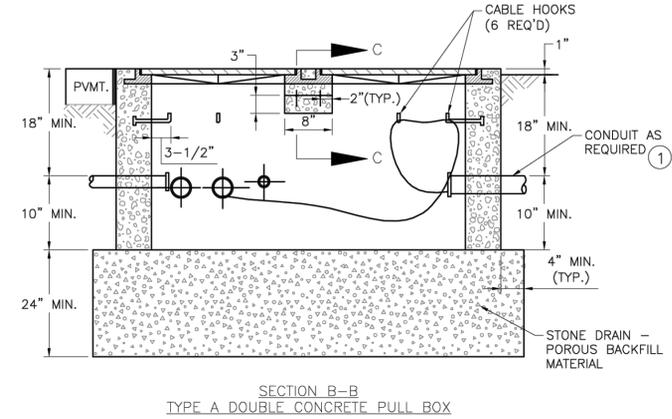
PLAN VIEW



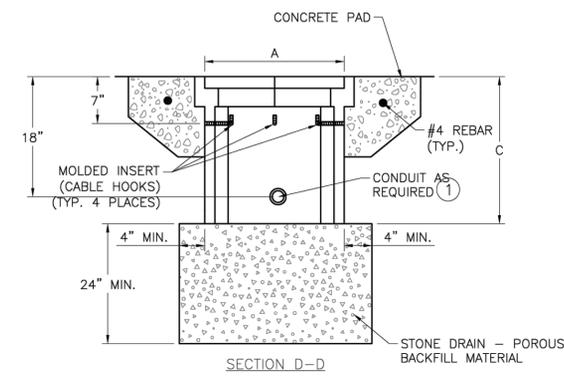
PREFORMED PULL BOX COVER



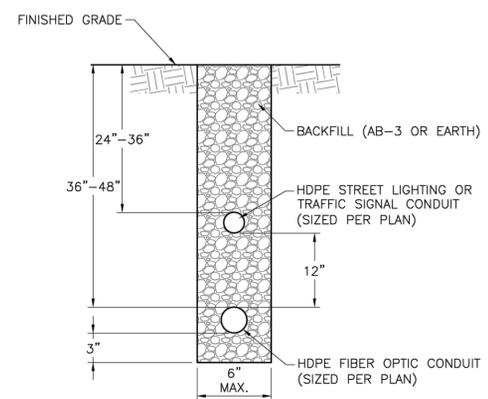
SECTION A-A
TYPE 1 DRAIN



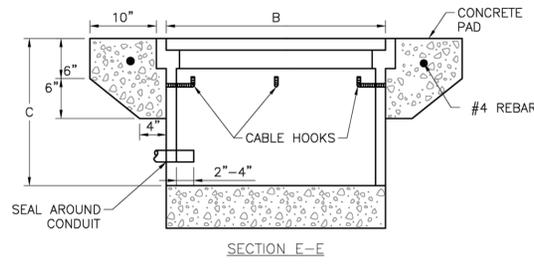
SECTION B-B
TYPE A DOUBLE CONCRETE PULL BOX



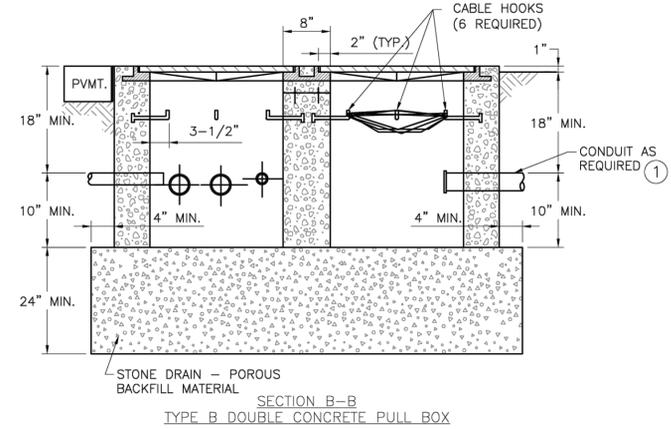
SECTION D-D



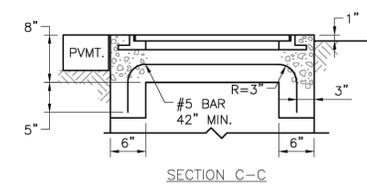
TRENCH DETAIL



SECTION E-E

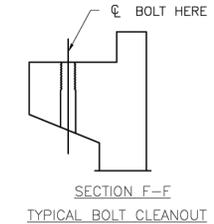


SECTION B-B
TYPE B DOUBLE CONCRETE PULL BOX

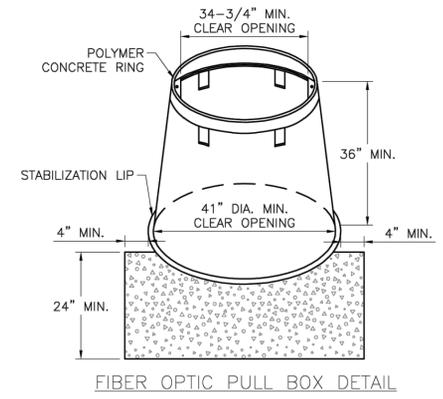


SECTION C-C
DOUBLE CONCRETE PULL BOX

NUMBER OF ENTERING CONDUCTORS	CLASS	PREFORMED PULL BOX MINIMUM DIMENSIONS		
		A	B	C
< 23	1	17"	30"	20"
23 - 68	2	24"	36"	24"
> 68	3	30"	48"	24"



SECTION F-F
TYPICAL BOLT CLEANOUT



FIBER OPTIC PULL BOX DETAIL

- ① ALL METAL CONDUITS SHALL BE ELECTRICALLY BONDED BY A GROUND BUSHING AND #6 AWG BARE COPPER WIRE. FOR PVC, ALL GROUND WIRES SHALL BE CONNECTED.
- ② SIGNAL PULL BOX COVERS SHALL BE EMBOSSED "TRAFFIC SIGNALS" OR HAVE COVER LABEL (APPLIED WITH EPOXY).
- ③ PULL BOX FRAMES AND COVERS SHALL BE CAST IRON AND THE FOLLOWING MINIMUM DIMENSIONS:

FRAME SIZE:	29" X 29"
OPENING SIZE:	22 1/2" X 22 1/2"
FRAME HEIGHT:	4-1/4"
FRAME WEIGHT:	120 LBS.
COVER SIZE:	22-5/8" X 22-5/8"
COVER THICKNESS:	3/4"
COVER WEIGHT:	140 LBS.

GENERAL NOTES:

1. ALL DIMENSIONS SHOWN ARE NOMINAL.
2. BOLT CLEANOUT DETAIL SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER.
3. ALL CONCRETE SHALL BE 3,000 PSI MINIMUM, AND SHALL BE SUBSIDIARY TO THE PULL BOX.
4. PAVEMENT AND SUBGRADE SHALL BE AS SHOWN ON PLANS.
5. STONE DRAIN MATERIAL SHALL BE 1/2" - 3/4" CLEAN ROCK.
6. LIFT OPENING REQUIRED ON ALL COVERS.
7. PREFORMED BOX WALLS MAY BE EITHER FLARED OR VERTICAL.
8. IF AN EXTENSION IS USED WITH A PREFORMED BOX, THE LIP OF THE EXTENSION MAY BE INTERIOR OR EXTERIOR. THE EXTENSION SHALL BE COMPATIBLE AND FROM THE SAME MANUFACTURER.
9. IF PREFORMED PULL BOXES ARE SPECIFIED, THE CONTRACTOR MAY USE THE STANDARD CONCRETE PULL BOX IN LIEU OF THE CLASS 1 OR 2 PREFORMED PULL BOX OR THE DOUBLE CONCRETE PULL BOX, TYPE A, IN LIEU OF THE CLASS 3 PREFORMED PULL BOXES.

LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

POLE AND LUMINAIRE DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 Sheet Name: PULL BOX DETAILS

Drawn By: BWC
 Checked By: MP
 Date: 01/2020
 Proj. #:

TS-6

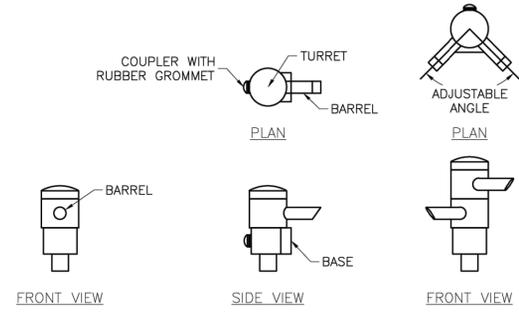
Kimley»Horn <small>© 2025 KIMLEY-HORN AND ASSOCIATES, INC. 800 PENNSYLVANIA AVE., SUITE 100 PHOENIX, AZ 85006 WWW.KIMLEY-HORN.COM</small>	OLDHAM VILLAGE TRAFFIC SIGNAL <small>LEE'S SUMMIT, MO, 64066</small>
SCALE: AS NOTED DESIGNED BY: JWH DRAWN BY: CNH CHECKED BY: JWH	PULL BOX DETAILS
	ORIGINAL ISSUE: 01/15/2025 KHA PROJECT NO. 268132012 SHEET NUMBER

Drawing name: K194C_TPT0208132012 - Oldham Village Signal/Conduit/Plan/Details - TRAFFIC SIGNAL DETAILS - Feb 21, 2025 1:58pm by: Clara Hoggett
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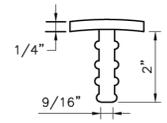
RADAR/VIDEO DETECTION NOTES:

1. THE RADAR/VIDEO DETECTION SYSTEM SHALL CONSIST OF VIDEO CAMERA(S), VIDEO DETECTION PROCESSOR (VDP), CABLES, BRACKETS, AND ALL OTHER MATERIALS NECESSARY FOR A FULLY FUNCTIONAL SYSTEM.
2. THE VIDEO DETECTION SYSTEM SHALL INCLUDE SOFTWARE THAT DETECTS VEHICLES IN MULTIPLE LANES OF EACH DIRECTION USING ONLY ONE VIDEO CAMERA. DETECTION ZONES (DZ) SHALL BE DEFINED USING ONLY A VIDEO MENU AND A POINTING DEVICE TO DEFINE AND PLACE ZONES ON A VIDEO IMAGE. UP TO 24 DZ PER CAMERA SHALL BE AVAILABLE.
3. THE ACTUAL NUMBER AND LOCATION OF DZ SHALL BE DETERMINED IN THE FIELD BY THE CITY TRAFFIC ENGINEER. THE CITY RESERVES THE RIGHT TO HAVE ADDITIONAL ZONES PROGRAMMED OR MODIFY THOSE SHOWN BASED ON THE FIELD PROGRAMMING PERIOD COMPLETED PRIOR TO TURNING ON THE SIGNAL.
4. VIDEO CAMERAS ARE TO BE MOUNTED AS SHOWN ON THE TRAFFIC SIGNAL PLANS. IF THE CAMERA IS MOUNTED ON A TYPE BL OR CL POLE, THE CAMERA SHALL BE MOUNTED DIRECTLY TO THE LUMINAIRE BRACKET ARM. IF THE CAMERA IS MOUNTED ON A TYPE B OR C POLE, THE CAMERA SHALL BE MOUNTED ON THE MAST ARM USING A 6-FOOT RISER.
5. VIDEO CAMERA PLACEMENT, ADJUSTMENT, SETUP AND INITIAL PROGRAMMING SHALL BE AT THE DIRECTION OF THE MANUFACTURER'S REPRESENTATIVE. THE MANUFACTURER'S REPRESENTATIVE SHALL ASSIST WITH IDENTIFYING OPTICAL CAMERA LOCATIONS, SYSTEM SETUP, PROGRAMMING, AND TURN-ON.

RADAR/VIDEO DETECTION



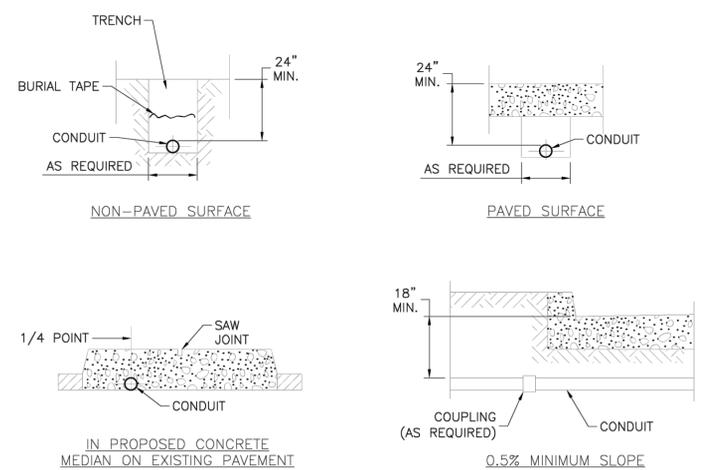
SINGLE BARREL ONE CHANNEL **DOUBLE BARREL ONE OR TWO CHANNEL**



CONDUIT MARKER NOTES:

1. WHEREVER A CONDUIT PASSES BENEATH A CURBED STREET, ALUMINUM CONDUIT MARKERS SHALL BE INSTALLED IN THE CURB IMMEDIATELY OVER THE CONDUIT LOCATION. CONDUIT MARKERS SHALL BE FURNISHED BY THE CONTRACTOR AS DETAILED AND SHALL BE INSTALLED IN THE TOP OF THE CURB BY DRILLING THE CURB AND EPOXYING THE CONDUIT MARKER IN PLACE. CONDUIT MARKERS SHALL BE FLUSH WITH THE CURB. CONDUIT MARKERS SHALL BE SUBSIDIARY TO CONDUIT.

CONDUIT MARKER



CONDUIT LOCATION NOTES:

1. CONDUIT SHALL BE INSTALLED TO DRAIN, AND IF METALLIC ALL ENDS SHALL BE THREADED AND CAPPED.
2. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT, DEPARTMENT OF PUBLIC WORKS TRAFFIC DIVISION AT (816) 969-1807 FOR INSPECTION OF THE CONDUIT INSTALLATION. AT LEAST 24 HOURS NOTICE SHALL BE PROVIDED. THE CONDUIT SHALL NOT BE COVERED UNLESS INSPECTED AND APPROVED BY THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE, SO AS TO ENSURE PROPER DEPTH, CORRECT CONDUIT MATERIAL AND PROPER CONDUIT END TREATMENT AS DESCRIBED ABOVE.

CONDUIT LOCATIONS

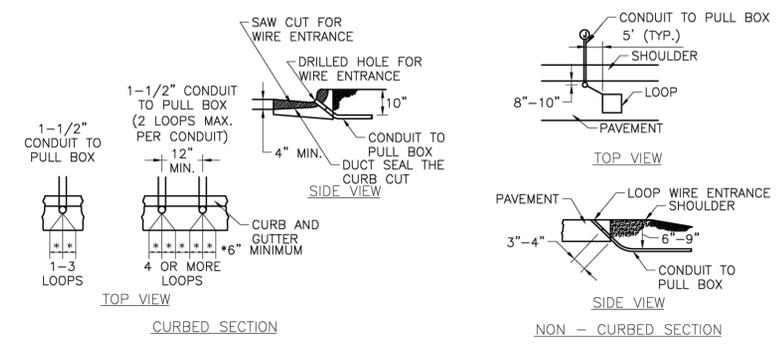
EMERGENCY VEHICLE DETECTION NOTES:

1. THE DETECTOR CABLE SHALL BE CONTINUOUS FROM THE OPTICAL DETECTOR TO THE TRAFFIC SIGNAL CONTROLLER. NO SPLICES SHALL BE ALLOWED.
2. THE CONTRACTOR SHALL LABEL THE OPTICAL DETECTOR CABLE IN ALL PULL BOXES BY CHANNELS AS INDICATED ON THE PLANS. THIS SHALL BE ACCOMPLISHED WITH ALUMINUM TAGS ATTACHED TO THE CABLE WITH ALUMINUM WIRE. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK.
3. OPTICOM SHALL BE MOUNTED INSIDE THE CONTROLLER CABINET. UNLESS OTHERWISE INDICATED ON THE PLANS, THE PLACEMENT OF THE OPTICAL DETECTORS SHALL BE CENTERED BETWEEN THE SIGNAL HEADS AND/OR SIGNAL HEAD AND SIGN LOCATED ON THE MAST ARMS. FURTHER INFORMATION ON OPTICAL DETECTOR PLACEMENT IS SHOWN IN THE DETAILS. THE FINAL PLACEMENT OF THE OPTICAL DETECTOR MAY BE ADJUSTED FOR LINE OF SIGHT REQUIREMENTS.
4. THE EQUIPMENT MANUFACTURER SHALL BE RESPONSIBLE FOR PROVIDING ONSITE TECHNICAL ASSISTANCE TO THE CONTRACTOR IN FINAL PLACEMENT OF THE OPTICAL DETECTORS, AS WELL AS IN ALL THE ASPECTS OF THE SYSTEM INSTALLATION.
5. PREEMPTION SEQUENCES AND TIMINGS SHALL BE DEVELOPED BY THE EQUIPMENT SUPPLIER. TIMINGS SHALL BE MARKED UP ON THE TIMING SHEETS FROM THE SPECIFIC MODEL OF CONTROLLER AT EACH INTERSECTION AND SUBMITTED FOR REVIEW BY THE CITY PRIOR TO IMPLEMENTATION BY THE SUPPLIER. PRE-EMPTION SEQUENCES SHALL USE AN ALL RED INTERVAL OR OTHER METHODS TO PREVENT THE OCCURRENCE OF "YELLOW TRAPS" AT INTERSECTIONS WITH PROTECTED/PERMITTED LEFT-TURN PHASING.
6. PREEMPTS ARE TO BE ASSIGNED AS FOLLOWS UNLESS OTHERWISE INDICATED IN THE PLANS:

DIRECTION	PREEMPT NO.	CHANNEL
NORTHBOUND	1	A
SOUTHBOUND	2	B
EASTBOUND	3	C
WESTBOUND	4	D

7. THE CONTRACTOR SHALL INSTALL THE EQUIPMENT CONSISTENT WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES AND INTERFACE DIAGRAMS IN A NEAT AND WORKMANLIKE MANNER. EMERGENCY VEHICLE DETECTION SYSTEM SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AND SHALL CONSIST OF ALL DETECTORS, PROCESSORS, MOUNTING BRACKETS, ETC FOR A FULLY OPERATIONAL SYSTEM.

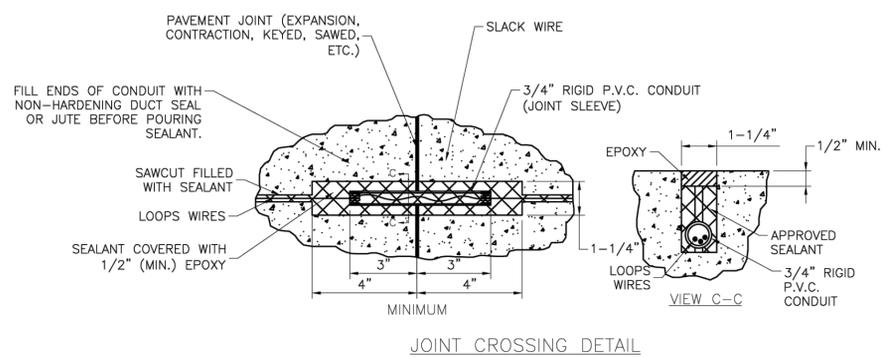
OPTICAL DETECTOR



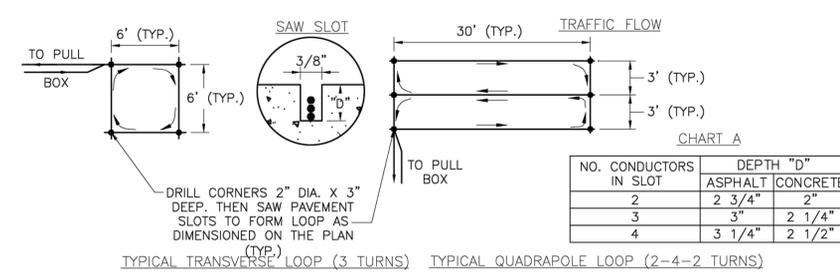
LOOP WIRE ENTRANCE NOTES:

1. SAW CUT IN THE CURB AND GUTTER SECTION AND CONDUIT ENTRANCE TO BE SEALED WITH A PLIABLE, NON-HARDENING DUCT SEALANT PRIOR TO APPLICATION OF LOOP SEALANT. NO LOOP SEALANT SHALL BE APPLIED IN THE CURB AND GUTTER SECTION OR AT CONDUIT ENTRANCE.
2. GROUT AROUND CONDUIT INSERTED INTO CURB OR PAVEMENT SECTION.
3. EACH LOOP SHALL HAVE A SEPARATE LEAD-IN-SAW CUT TO THE LOOP WIRE ENTRANCE IN THE CURB OR AT THE EDGE OF PAVEMENT.

LOOP WIRE ENTRANCE DETAIL



JOINT CROSSING DETAIL



TYPICAL LOOP DETAIL

LOOP DETECTION NOTES:

1. QUADRAPOLE LOOP TO BE ONE CONTINUOUS WIRE PLACED IN TWO TURNS. ALL LOOPS TO BE WOUND IN SAME DIRECTION, WITH START AND END CLEARLY MARKED AT PULL BOX.
2. TRANSVERSE LOOP TO BE ONE CONTINUOUS WIRE PLACED IN THREE TURNS. ALL LOOPS TO BE WOUND IN SAME DIRECTION, WITH START AND END CLEARLY MARKED AT PULL BOX.
3. SLOT IN PAVEMENT FOR LOOPS TO BE CUT 3/8" WIDE AT MINIMUM DEPTH "D" AS INDICATED IN CHART A. SLOT IN PAVEMENT FOR LEAD SHALL BE 1/2" WIDE AT MINIMUM DEPTH "D". FILL SLOTS WITH AN APPROVED ASPHALT SEALER (ASPHALT PAVEMENT) OR AN APPROVED ELASTIC EPOXY SEALANT (CONCRETE PAVEMENT) TO WITHIN 1/8" OF PAVEMENT SURFACE.
4. OTHER THAN SOLDERED TYPE SPLICE OR SPLICE MADE WITH WIRE NUTS AT THEIR JUNCTION, FEEDER CABLE AND LOOP WIRE SHALL BE OF CONTINUOUS RUN WITH NO SPLICES. ALL CONNECTIONS TO BE WATERTIGHT WITH APPROVED SPLICE KITS. WATERTIGHT CONNECTIONS SHALL EXTEND TO AND ENCOMPASS EACH OUTER JACKET OF THE DETECTOR FEEDER AND LOOP WIRE CABLES.
5. ALL LEADS FOR INDIVIDUAL LOOPS TO BE KEPT SEPARATE AND LOOP WIRE BETWEEN THE LOOP AND THE FEEDER CABLE CONNECTION SHALL BE TWISTED THREE TURNS PER FOOT.
6. ALL LOOPS SHALL BE WET CUT WITH EQUIPMENT APPROVED BY THE CITY TRAFFIC ENGINEER.
7. WHERE LOOPS ARE TO BE INSTALLED ON PROJECTS INVOLVING EITHER ASPHALT PAVEMENT CONSTRUCTION OR MILLING AND OVERLAY OF AN EXISTING ASPHALT PAVEMENT, LOOPS SHALL BE INSTALLED IN THE BASE COURSE PRIOR TO PLACEMENT OF THE ASPHALT SURFACE COURSE.
8. IF EXISTING LOOPS ARE TO BE ABANDONED AND NEW LOOP INSTALLED, ABANDONED LOOP WIRES SHALL BE REMOVED OR CUT COMPLETELY THROUGH ALONG ALL SLOTS PARALLEL TO VEHICLE FLOW.
9. LOOPS SHALL BE #14 AWG STRANDED WIRE IN PVC DUCT MADE UP OF 2 NON-TWISTED TURNS IN SINGLE SLOT OR AS RECOMMENDED BY MANUFACTURER OF THE DETECTOR AMPLIFIER. LOOP SHALL BE PLACED IN SAWED SLOTS IN A FIGURE EIGHT MANNER WITH DEVICE WHICH WILL NOT DAMAGE THE WIRE INSULATION. LEAD-IN CABLE SHALL BE 2-1C #14 AWG TWISTED.

LOOP DETECTION

CHART A

NO. CONDUCTORS IN SLOT	DEPTH "D"	
	ASPHALT	CONCRETE
2	2 3/4"	2"
3	3"	2 1/4"
4	3 1/4"	2 1/2"

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

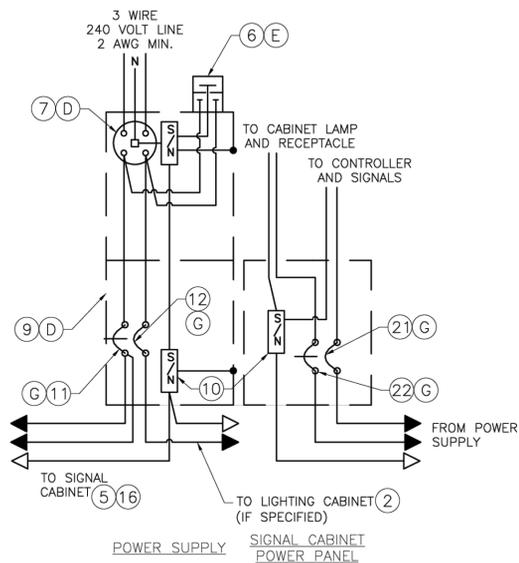
POLE AND LUMINAIRE DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CONDUIT & DETECTION DETAILS

Project: **OLDHAM VILLAGE TRAFFIC SIGNAL**
Sheet Name: **LEE'S SUMMIT, MO. 64066**
Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

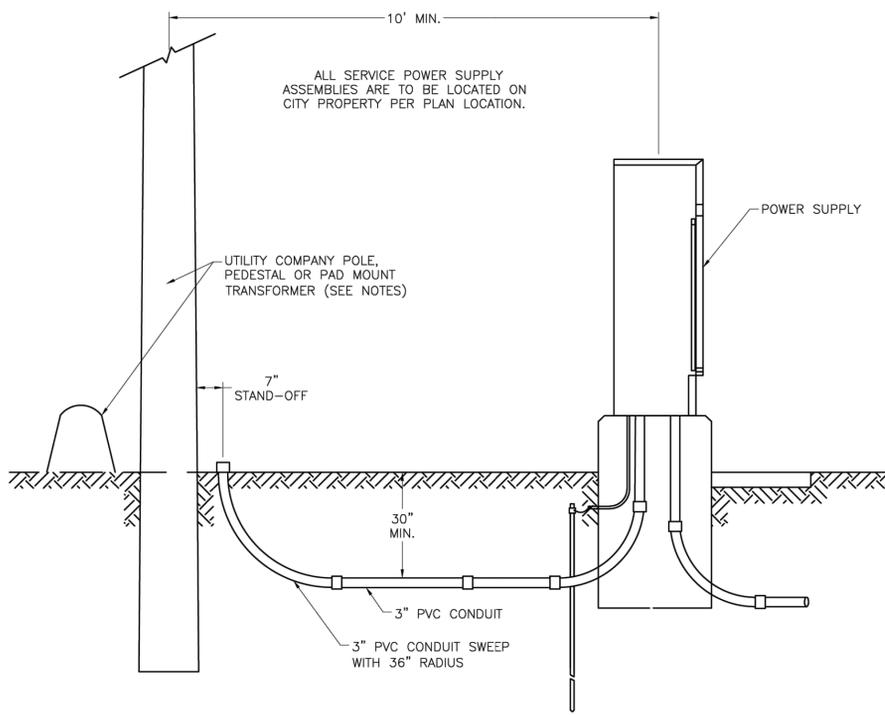
TS-7

DESIGNED BY: JHT	SCALE: AS NOTED
DRAWN BY: CNH	NO. _____
CHECKED BY: JHW	DATE _____
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OLDHAM VILLAGE TRAFFIC SIGNAL LEE'S SUMMIT, MO. 64066	
ORIGINAL ISSUE: 01/15/2025 KHA PROJECT NO. 268132012 SHEET NUMBER	
13	

Drawing name: K:\KAC_TPT\0268132012 - Oldham Village Signal\CAD\Drawings\9 - TRAFFIC SIGNAL DETAILS.dwg POWER SUPPLY ASSEMBLY 120 V File 21, 2025 1:59pm By: Dana Heggett
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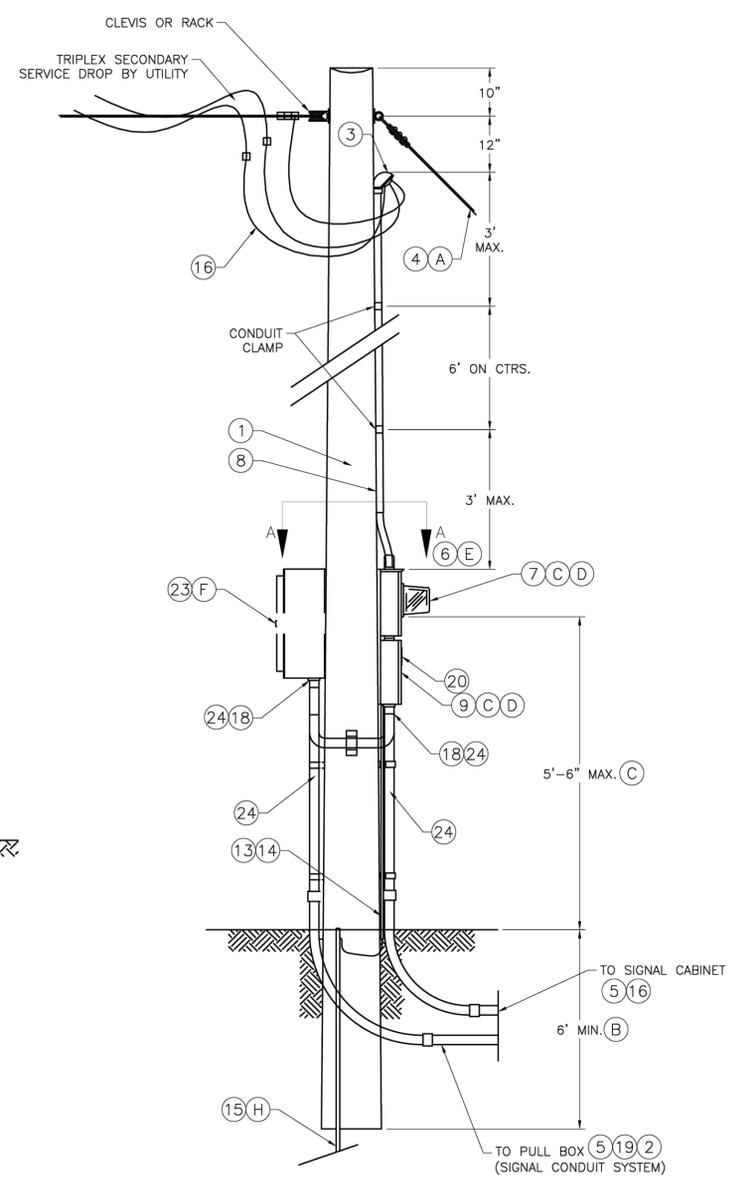
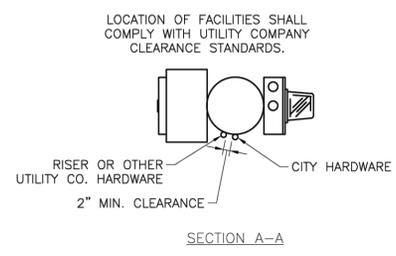


OVERHEAD SERVICE POWER SUPPLY WIRING SCHEMATIC SIGNALS AND/OR LIGHTING



SECONDARY SERVICE CONNECTION DETAILS

- NOTES:
- CONTRACTOR SHALL INSTALL A CONDUIT STUB 24" TO 6" ABOVE GROUND AT UTILITY POLES. CONDUIT SHALL BE STUBBED TO THE SIDE OF THE POLE THAT WILL ALLOW A DIRECT RUN UP THE POLE TO THE TRANSFORMER WITHOUT CROSSING OTHER UTILITY LINES OR CABLES. THE END OF THE CONDUIT SHALL BE CAPPED.
 - CONTRACTOR SHALL INSTALL CONDUIT IN A TRENCH TO WITHIN 24" OF PEDESTALS OR PAD MOUNT TRANSFORMERS AND LEAVE A 36" X 36" X 36" ACCESS HOLE IN THE GROUND. CONTRACTOR SHALL KEEP OPEN TRENCH COVERED AND PROMPTLY BACKFILL ACCESS HOLE WHEN SERVICE IS COMPLETED.



OVERHEAD SERVICE POWER SUPPLY TEMPORARY SPAN WIRE SIGNAL ONLY

LIST OF MATERIALS	
ITEM	DESCRIPTION
1	SERVICE POLE 30' MIN., CLASS IV WOOD, CONTRACTOR PROVIDED, CITY OWNED. *
2	#8 AWG MIN. CABLE, 600 VOLT *
3	SERVICE ENTRANCE HEAD
4	GUY CABLE, AS REQUIRED
5	2" MIN. RIGID CONDUIT WITH PREFORMED ELBOWS
6	LIGHTNING ARRESTOR, VALVE TYPE, 2 POLE, 650 VOLT
7	240 VOLT METER SOCKET, 100 AMP FOR SIGNALS
8	2" MIN. RIGID CONDUIT
9	SERVICE DISCONNECT BOX, LOCKING, RAIN-TIGHT, NEMA 4
10	INSULATED, GROUNDABLE NEUTRAL, 200 AMP MINIMUM
11	SIGNAL BREAKER, SINGLE POLE, 40 AMP MIN., TYPE A OR B
12	LIGHTING BREAKER, SINGLE POLE, 40 AMP OR B
13	METAL CONDUIT, 1/2"
14	GROUND WIRE, #2 AWG MIN.
15	GROUND ROD, 3/4" X 8' MIN.
16	#2 AWG MIN. CABLE, 600 VOLT
17	RESERVED
18	THREADED CONDUIT HUB WITH SEALING WASHERS
19	LIGHTING CABLES *
20	WEATHERPROOF ADHESIVE LABEL (SIGNALS) VINYL RAISED LETTERING
21	TYPE B CONTROLLER AND SIGNAL BREAKER, AS SPECIFIED.
22	TYPE B AUXILIARY BREAKER, 15 AMP
23	LIGHTING CONTROL CABINET
24	2" STEEL CONDUIT (MIN.)
*	SEE PLANS

- NOTES:
- SERVICE POLE SHALL BE GUYED WHEN SPAN OF OVERHEAD WIRE EXCEEDS 50 FEET.
 - INCREASE 1 FOOT FOR EACH 5 FEET ABOVE 50 FEET.
 - SERVICE DISCONNECT BOXES AND METER BOXES SHALL BE ALUMINUM OR STAINLESS STEEL. ALL HARDWARE, HINGES, CATCHES, ETC. SHALL BE STAINLESS STEEL. METER SOCKET AND OTHER EQUIPMENT SHALL BE U.L. APPROVED AND CONFORM TO THE REQUIREMENTS OF THE UTILITY COMPANY PROVIDING POWER.
 - SCHEMATIC DIAGRAM SHALL BE MOUNTED ON INSIDE OF DOOR.
 - UTILITY COMPANY SHALL DECIDE IF LIGHTING ARRESTERS ARE TO BE CONNECTED ON THE LOAD SIDE OR LINE SIDE OF THE METER. THE UTILITY COMPANY SHALL ALSO DECIDE IF THE LIGHTING ARRESTER IS TERMINATED IN THE METER OR DISCONNECT CABINET. IF TERMINATED IN THE DISCONNECT CABINET, IT SHALL BE INSTALLED ON THE CONNECT CABINET.
 - IF LIGHTING IS SPECIFIED, INSTALL LIGHTING CONTROL ON POWER SUPPLY.
 - BREAKERS SHALL CONFORM TO THE STANDARD SPECIFICATIONS.
 - IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES BURIED IN A TRENCH AT LEAST 30 IN. DEEP. CONNECTION TO GROUND ROD SHALL BE CLAMP TYPE AS DETAILED ON STANDARD DRAWING TS-2.

- GENERAL NOTES:
- FOR CABLE TYPES AND INSTALLATION, SEE STANDARD SPECIFICATIONS.
 - THE TYPE OF POWER SUPPLY ASSEMBLY IS SHOWN ON THE PLANS OR IS DESIGNATED ON THE CONTRACT.
 - THE UTILITY COMPANY SHALL BE NOTIFIED 30 DAYS PRIOR TO THE DATE OF SERVICE WILL BE REQUIRED.
 - ALL OPENINGS IN ANY UTILITY ENCLOSURE, SERVICE BOX, OR METER SHALL BE COVERED AND SEALED WITH LIFETIME SILICONE CAULK.
 - CONTRACTOR TO PROVIDE SUFFICIENT NUMBER OF GROUND ROD(S) AS REQUIRED FOR MAXIMUM OF 25 OHMS RESISTANCE TO GROUND.
 - ALL MATERIALS REQUIRED EXCLUDING REFERENCED ITEMS AS SHOWN ON DRAWING SHALL BE INCLUDED IN PRICE BID FOR POWER SUPPLY ASSEMBLY.

LEE'S SUMMIT MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: POLE AND LUMINAIRE DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

SHEET NAME: POWER SUPPLY ASSEMBLY (120 VOLTS) DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

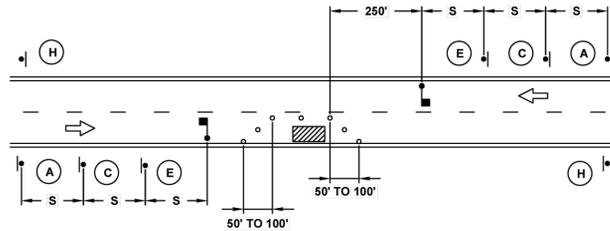
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<p>SCALE: AS NOTED</p> <p>DESIGNED BY: JMT</p> <p>DRAWN BY: CNH</p> <p>CHECKED BY: JJW</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	DATE	BY			
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<p>OLDHAM VILLAGE TRAFFIC SIGNAL</p> <p>LEE'S SUMMIT, MO. 64066</p>	<p>POWER SUPPLY ASSEMBLY 120 V</p>						
<p>ORIGINAL ISSUE: 01/15/2025</p> <p>KHA PROJECT NO. 268132012</p> <p>SHEET NUMBER</p>	<p>15</p>						

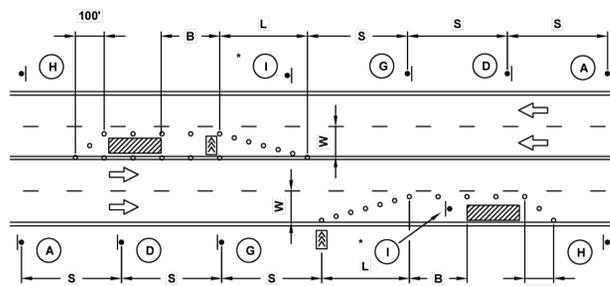
Drawing name: K124C_TPO268132012 - Oldham Village SignalCAD/Planview/8 - TRAFFIC SIGNAL DETAILS File: 21_199.dwg by: Clara Hoggett
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SYMBOL LEGEND

- WORK AREA
- CHANNELIZER
- SIGN
- ARROW PANEL
- BARRICADE
- FLAGGER
- DIRECTION OF TRAVEL

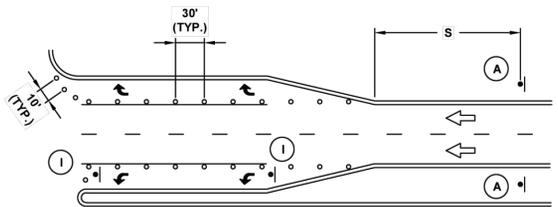


LANE CLOSURE - TWO LANE STREET

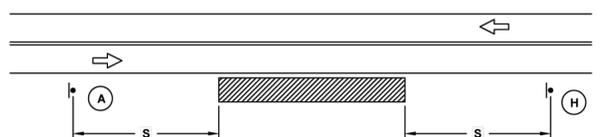


LANE CLOSURE - FOUR LANE STREET

*INSTALL SIGNS EVERY 200 FEET THROUGHOUT THE CLOSED LANE OR AS NEEDED



TURN LANE CLOSURE



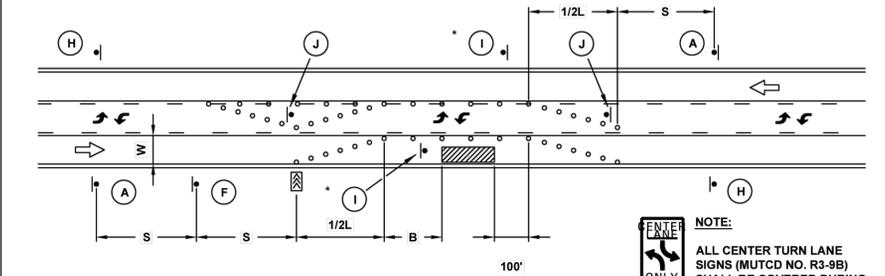
TYPICAL SIGNING FOR WORK ADJACENT TO THE STREET

GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE "B"		MAXIMUM CHANNELIZER SPACING		
SPEED LIMIT (MPH)	LENGTH (FEET)	SPEED LIMIT (MPH)	WITHIN TAPER (FEET)	OUTSIDE TAPER (FEET)
25	35	25	25	50
30	55	30	30	60
35	85	35	35	70
40	120	40	40	80
45	170	45	45	90

TAPER DIMENSIONS (FEET)				SIGN SPACING "S"	
SPEED LIMIT (MPH)	MINIMUM TAPER LENGTH "L", PER LANE WIDTH "W"			SPEED LIMIT (MPH)	SPACING (FEET)
	10	11	12		
25	105	115	125	6	100
30	150	165	180	7	30-35
35	205	225	245	8	≥ 40
40	270	295	320	9	350
45	450	495	540	13	

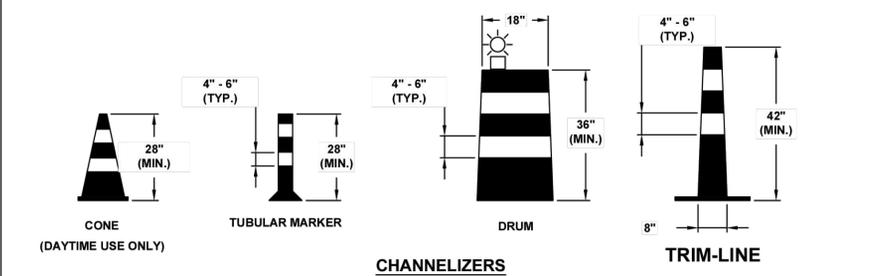
SIGN LEGEND

- ROAD WORK AHEAD
- ROAD CLOSED AHEAD
- ONE LANE ROAD AHEAD
- RIGHT LANE CLOSED AHEAD
- LEFT LANE CLOSED AHEAD
- PEDESTRIAN
- NARROW LANES
- W20-1 36" x 36"
- W20-2 36" x 36"
- W20-4 36" x 36"
- W20-5R 36" x 36"
- W20-7a 36" x 36"
- W1-4L 36" x 36"
- W4-2L 36" x 36"
- W4-2R 36" x 36"
- G20-2 36" x 18"
- R3-2 24" x 24"
- R4-7a 24" x 30"
- R11-2 48" x 30"
- R11-4 60" x 30"
- END ROAD WORK
- KEEP RIGHT
- ROAD CLOSED
- ROAD CLOSED THRU TRAFFIC



LANE CLOSURE - THREE LANE STREET

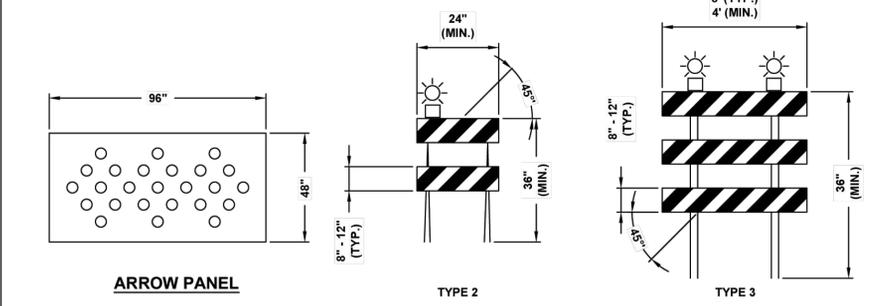
*INSTALL SIGNS EVERY 200 FEET THROUGHOUT THE CLOSED LANE OR AS NEEDED



CHANNELIZERS

TRIM-LINE

NOTE: WHITE BANDS ON BARRICADES AND CHANNELIZERS SHALL BE MADE FROM HIGH INTENSITY SHEETING MATERIAL.



ARROW PANEL

TYPE 2

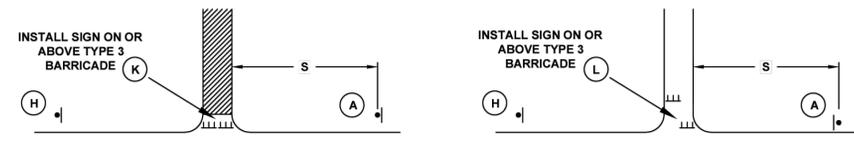
TYPE 3

BARRICADES

(OPTIONAL ON TWO LANE AND THREE LANE STREETS WITH SPEEDS LESS THAN 35 MPH)

GENERAL NOTES:

- ALL SIGNS, BARRICADES, CHANNELIZERS, MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL TRAFFIC CONTROL DEVICES SHALL BE STANDARD IN SIZE, SHAPE, COLOR, AND MESSAGE, IN GOOD CONDITION, AND RETRO-REFLECTORIZED. ALL SIGNS SHALL BE SECURELY MOUNTED WITH HEIGHT AND LATERAL LOCATION AS DESCRIBED IN THE MUTCD.
- WARNING LIGHTS SHALL BE USED ON BARRICADES IN PLACE AT NIGHT AND ON WARNING SIGNS WHICH ALERT DRIVERS ABOUT A CHANGE IN ALIGNMENT, TRAFFIC CONTROL, LANE CLOSURE, OR ROAD CLOSURE.
- FLAGGERS SHALL BE USED WHERE INDICATED ON THE PLANS, WHERE CONSTRUCTION VEHICLES INTERACT WITH NORMAL TRAFFIC, OR WHERE CONSTRUCTION ACTIVITIES IMPOSE A RESTRICTION ON TRAFFIC AS DIRECTED BY THE CITY TRAFFIC ENGINEER. WHERE FLAGGERS ARE USED, ADVANCE SIGNING SHALL BE ERECTED AS SHOWN IN THE DETAILS OR AS SPECIFIED IN THE MUTCD. FLAGGERS SHALL MEET THE REQUIREMENTS IN THE MUTCD IN REGARD TO CHARACTER, TRAINING, ATTIRE, AND BEHAVIOR.
- TRIM-LINES ARE THE CITY'S PREFERRED CHANNELIZING DEVICE. CONES MAY NOT BE USED AT NIGHTTIME.
- TRAFFIC CONTROL DEVICES NOT IN USE OR NOT APPLICABLE SHALL BE EITHER COVERED OR REMOVED FROM THE WORK AREA.
- THE CONTRACTOR SHALL USE BARRICADES, STREET PLATES, OR FENCING AS NEEDED TO EFFECTIVELY SHIELD PEDESTRIAN AND VEHICULAR TRAFFIC FROM EXPOSED OBJECTS, EXCAVATIONS, AND CONSTRUCTION ACTIVITIES.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND SIDE STREETS UNLESS NOTED OTHERWISE ON THE PLANS.
- NO STREET SHALL BE CLOSED WITHOUT THE APPROVAL OF THE CITY TRAFFIC ENGINEER. THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT LEAST 7 DAYS IN ADVANCE OF ANY STREET CLOSURE. IF A DETOUR ROUTE AROUND THE CLOSURE IS TO BE PROVIDED, ALL DETOUR SIGNING SHALL BE AS SHOWN ON A PLAN APPROVED BY THE CITY TRAFFIC ENGINEER.
- CONSTRUCTION VEHICLES PARKED ALONG STREETS SHALL BE LOCATED WITHIN THE WORK AREA (TRAFFIC CONTROL) OR WHERE OTHERWISE NORMALLY PERMITTED. CONSTRUCTION MATERIALS, INCLUDING TRAFFIC CONTROL, AND VEHICLES SHALL NOT RESTRICT SIGHT DISTANCE FOR VEHICLES EXITING AT STREETS OR DRIVES.
- CONSTRUCTION MATERIALS SHALL BE KEPT OFF OF SIDEWALKS, CONSOLIDATED IN ONE LOCATION WITHIN CITY RIGHT-OF-WAY, AND REMOVED DAILY UNLESS OTHERWISE APPROVED BY THE INSPECTOR. DIRT, MUD, AND OTHER CONSTRUCTION DEBRIS ON STREETS AND SIDEWALKS SHALL BE REMOVED IMMEDIATELY.
- THE CONTRACTOR SHALL NOT PERFORM ANY WORK THAT WILL RESTRICT VEHICULAR TRAFFIC IN ANY WAY BETWEEN THE HOURS OF 7:00 A.M. AND 9:00 A.M. OR 4:00 P.M. AND 6:00 P.M. MONDAY THROUGH FRIDAY UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS.
- ALL TRAVEL LANES SHOULD BE AT LEAST 11 FEET WIDE UNLESS OTHERWISE AUTHORIZED BY THE CITY TRAFFIC ENGINEER. A "NARROW LANES" SIGN SHALL BE INSTALLED IN ADVANCE OF A LANE WIDTH REDUCTION TO LESS THAN 11 FEET.
- ALL EDGE DROP-OFFS OF MORE THAN 2 INCHES AND LESS THAN 4 INCHES SHOULD BE PROTECTED BY A WEDGE OR BARRIER AND ALL EDGE DROP-OFFS GREATER THAN 4 INCHES SHALL HAVE EDGE PROTECTION (SEE TRAFFIC CONTROL SPECIFICATIONS FOR EDGE TREATMENT REQUIREMENTS).
- THE "WORKERS" SYMBOLIC SIGN (MUTCD NO. W21-1A) MAY BE USED INSTEAD OF THE "ROAD WORK AHEAD" SIGN FOR WORK WITH A DURATION OF 12 HOURS OR LESS. THE "END ROAD WORK" SIGN IS NOT REQUIRED TO BE INSTALLED AFTER THE "WORKERS" SIGN.
- NO TRAFFIC SIGNAL SHALL BE ALTERED OR MODIFIED IN ANY WAY WITHOUT A PLAN APPROVED BY THE CITY TRAFFIC ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES ON AN AROUND-THE-CLOCK BASIS, WHETHER OR NOT WORK IS ACTIVELY BEING PURSUED AND ANY DEFICIENCIES NOTED SHALL BE CORRECTED IMMEDIATELY.
- THE TRAFFIC CONTROL REQUIREMENTS SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION HAS STARTED. IN NO WAY DO THE REQUIREMENTS SHOWN ON THESE PLANS RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR SELECTING THE PROPER TRAFFIC CONTROL DEVICES AND IMPLEMENTATION PROCEDURES THAT WILL ASSURE THE SAFETY OF DRIVERS, PEDESTRIANS, AND WORKERS AT ALL TIMES.
- SHOULD THE CONTRACTOR FAIL TO ENFORCE THE TRAFFIC CONTROL PLAN OR FAIL TO CLEAN, REPLACE OR OTHERWISE MAINTAIN THE TRAFFIC CONTROL DEVICES WHEN DIRECTED TO DO SO BY THE CITY TRAFFIC ENGINEER OR REPRESENTATIVE, THE CITY MAY TAKE ONE OR MORE OF THE FOLLOWING ACTIONS:
 - EMPLOY ANOTHER AGENCY TO CORRECT DEFICIENCIES IN TRAFFIC CONTROL DEVICES AND DEDUCT THE COST FROM THE CONTRACTOR'S PAY ESTIMATE.
 - STOP THE WORK UNTIL DEFICIENCIES ARE CORRECTED.
 - SUSPEND ALL PAY ESTIMATES UNTIL DEFICIENCIES ARE CORRECTED, OR
 - PLACE THE CONTRACTOR IN DEFAULT.



TYPICAL STREET CLOSURE

DATE	DESCRIPTION	REV

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
PUBLIC WORKS ENGINEERING
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

TRAFFIC CONTROL DETAILS

PROJECT: LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
SHEET NAME: TRAFFIC CONTROL DETAILS

DRAWN BY: CNS
CHECKED BY: MJF
DATE: 05/13/2024
PROJECT #:

TC-1

OLDHAM VILLAGE TRAFFIC SIGNAL
LEE'S SUMMIT, MO. 64066

ORIGINAL ISSUE: 01/15/2025
KHA PROJECT NO. 268132012
SHEET NUMBER 16

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