

# CITY OF LATHROP

Department of Public Works

## *DESIGN & CONSTRUCTION*

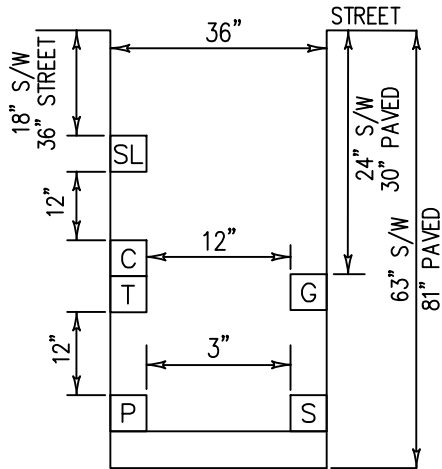
### *Standard Details*



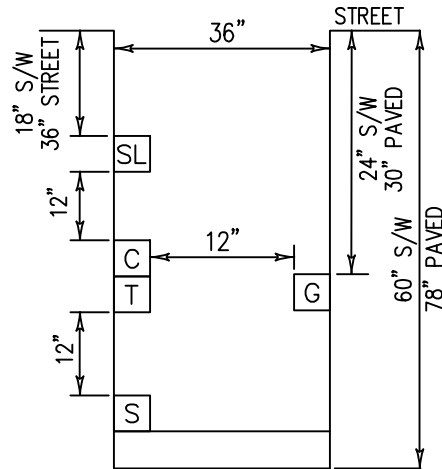
July 2024

**Electric**

Typical Trench Sections	E-1
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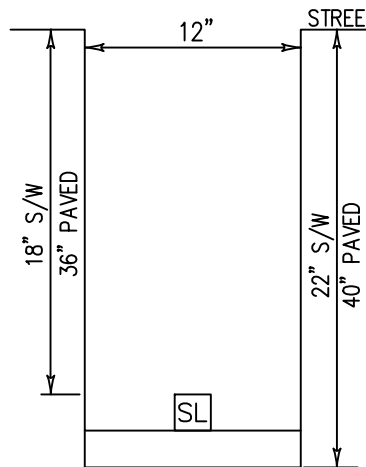
**TYPICAL JOINT TRENCH SECTION WITH PRIMARY**



**TYPICAL JOINT TRENCH SECTION WITHOUT PRIMARY**

**NOTES FOR STREET LIGHT:**

1. The street light trench shall be located underneath the sidewalk and flush with the back of walk.
2. Street light conduit road crossings shall be in their own trench if applicable or in a joint trench with approval of the City Engineer.
3. The street light pull box shall have lockjaw security lid by Sipra Corp. or approved equal.



**TYPICAL STREET LIGHT TRENCH SECTION**

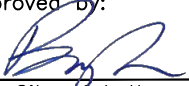
LEGEND

- G GAS
- P ELECTRIC PRIMARY
- S ELECTRIC SECONDARY
- T TELEPHONE
- C CATV
- SL STREET LIGHT

**NOTES:**

1. All existing pavement shall be neatly sawcut to line prior to trench excavation.
2. All backfill materials shall be mechanically compacted unless approved otherwise by City Engineer.
3. Sand shall be clean natural sand per Caltrans Standard Specifications, Section 19-3.025B or native material at the direction of the City Engineer.
4. Minimum 6 ton roller shall be used to compact final lift of asphalt concrete. Hand operated asphalt compaction equipment may be used on first lift of asphalt only.
5. Street light conduit may be placed at the same level as the telephone or cable T.V. conduit.
4. Asphalt in trench to be installed to a depth 1" below the existing asphalt and paved in 1 1/2" minimum, 2 1/2" maximum lifts.

NOT TO SCALE

Approved by: 		
City of Lathrop City Engineer		
No	Revised	Date

**CITY OF LATHROP**  
DEPARTMENT OF PUBLIC WORKS

**TYPICAL TRENCH SECTIONS**

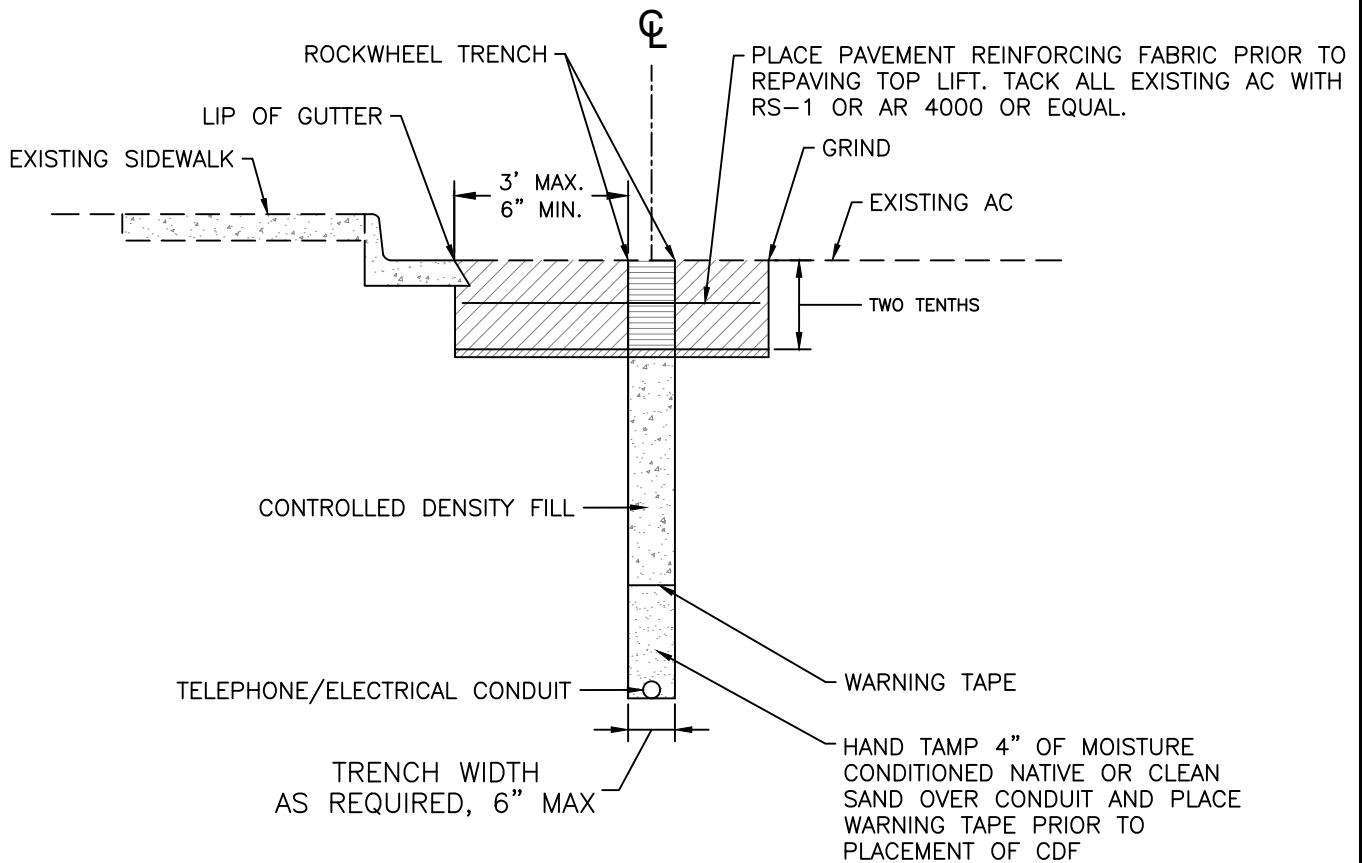


**STANDARD  
DETAIL**

Date: **JULY 2024**

Drawing No:

**E-1**



**NOTES:**

1. Allow controlled density fill (cdf) to set a minimum of 12 hours before placing asphalt concrete in trench.
2. The use of Rockwell Trenching shall be approved by the City Engineer.

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Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

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**TRENCH BACKFILL**  
**ROCKWHEEL TRENCH**

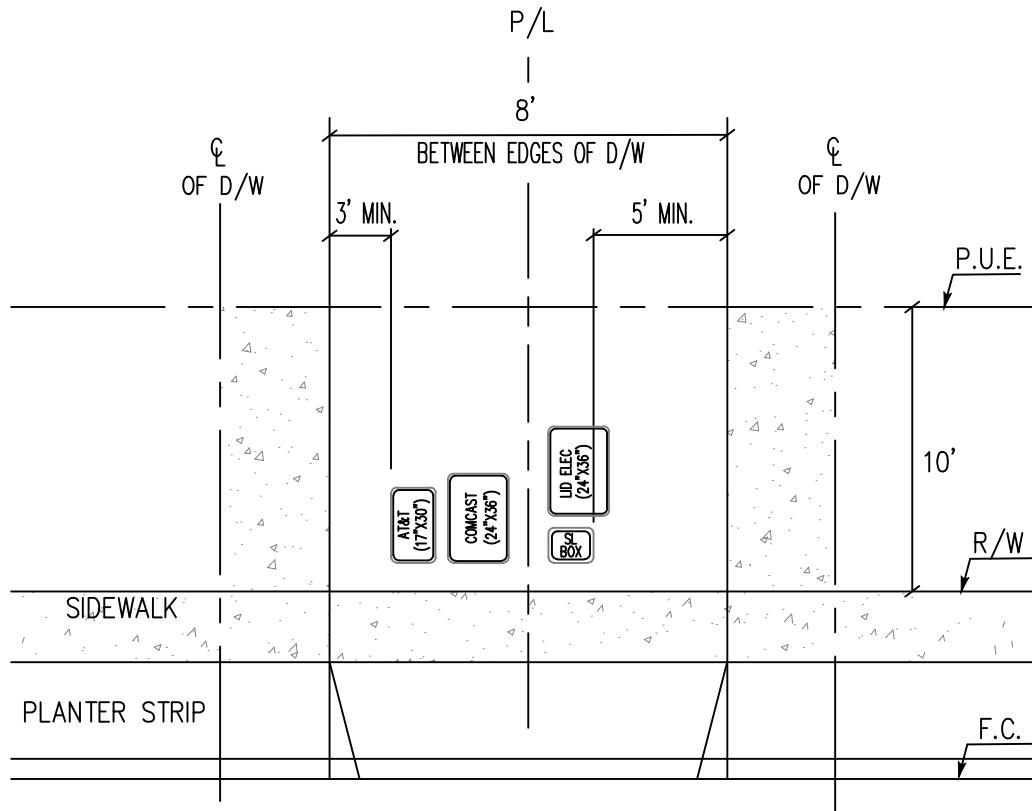


**STANDARD**  
**DETAIL**

Date: JULY 2024

Drawing No:

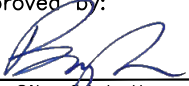
**E-2**



NOTES:  
 Configurations are not limited to the above detail. Contractor to verify configurations with utility companies and City staff prior to construction.

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Approved by:



City of Lathrop  
City Engineer

No	Revised	Date

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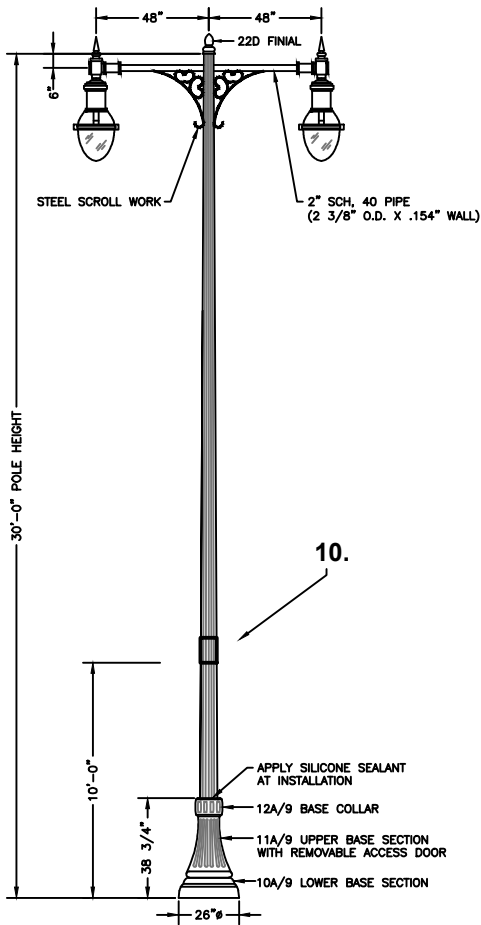
**DRY UTILITY BOX/PEDESTAL  
 CONFIGURATION BETWEEN EDGES  
 OF RESIDENTIAL DRIVEWAYS**



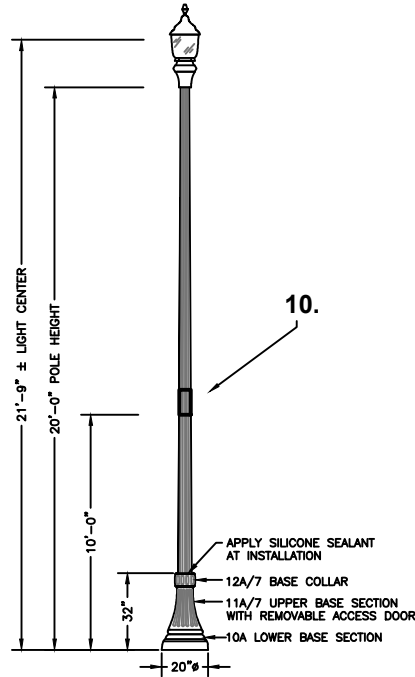
**STANDARD  
 DETAIL**

Date: **JULY 2024**  
 Drawing No:  
**E-3**

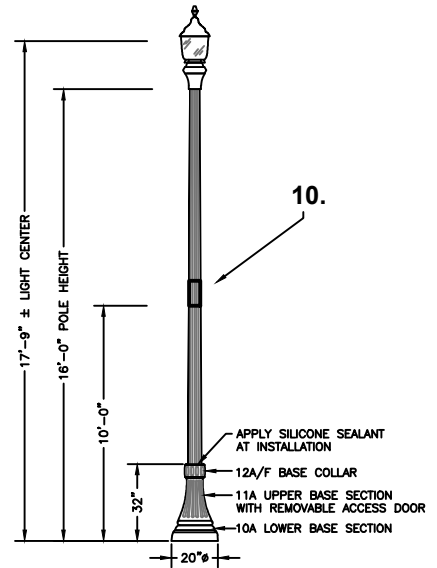
**"LED" LIGHTS ONLY**



7.



8.



9.

**NOTES:**

1. See improvement plans for pole height, luminaire wattage and distribution. Lighting spacing and brightness shall meet city, PG&E and State of California standards for illumination and safety.
2. Projects requiring installation of 4 or more electroliers shall be required to have plans prepared by and signed by a registered Electrical Engineer.
3. Electroliers along expressways and arterials shall be required to have plans prepared by and signed by a registered Electrical Engineer.
4. Electrolier finish shall be cast iron and steel, factory finish painted green-black, RAL-6012, per city standards.
5. Structural design of electroliers shall be performed by licensed structural or civil engineer.
6. Light poles shall be 11 ga., steel fluted tapered pole with 0.14 inches per foot taper.
7. Electroliers for arterial streets shall have a light post that is 9-inches in diameter, and a Lumec Luminaire #RN20-110W64LED4K-G3-ACDR-LE3R-UNV-DMG-SMA-RC-GN8TX.
8. Electroliers for collector streets shall have a light post that is 7-inches in diameter, and a Lumec Luminaire #S56-72W32LED4K-G3-ACDR-LE3W-UNV-DMG-SFX-FN1-HS-RC-TN2.875C-GN8TX.
9. Electroliers for residential streets shall have a light post that is 5 3/4-inches in diameter, and a Lumec Luminaire #S56-35W32LED4K-G3-ACDR-LE3W-UNV-DMG-SFX-FN1-HS-RC-TN2.875C-GN8TX.
10. Street light numbers to be on stickers, 2" letter size reflective black on white. Place numbers on street side of pole perpendicular to street.

NOT TO SCALE

Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

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DEPARTMENT OF PUBLIC WORKS

**ELECTROLIER**

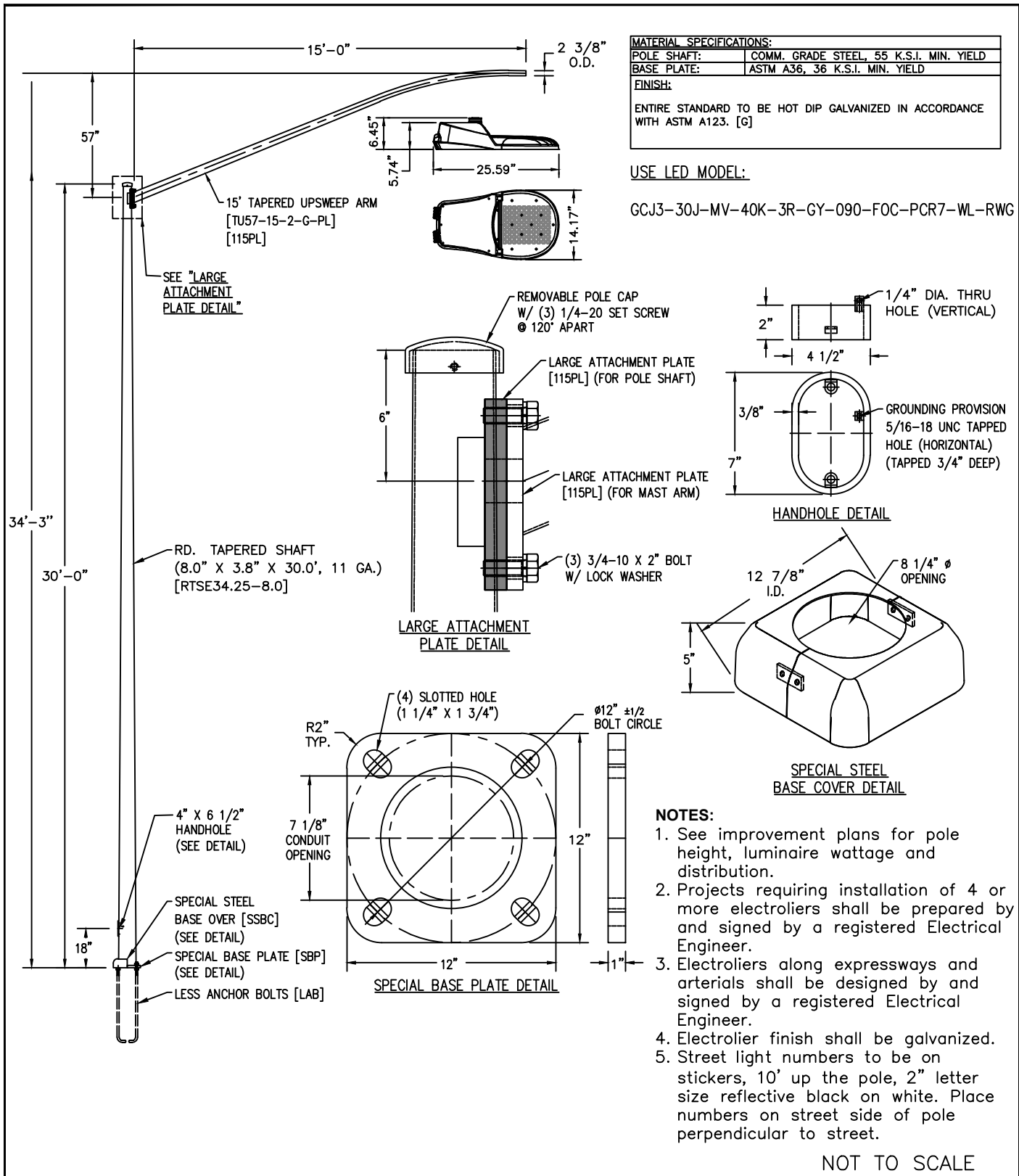


**STANDARD  
DETAIL**

Date: **JULY 2024**

Drawing No:

**E-4**



Approved by:



City of Lathrop  
City Engineer

No	Revised	Date

**CITY OF LATHROP**  
DEPARTMENT OF PUBLIC WORKS

**COBRA HEAD LIGHT DETAILS FOR  
COMMERCIAL AND INDUSTRIAL**



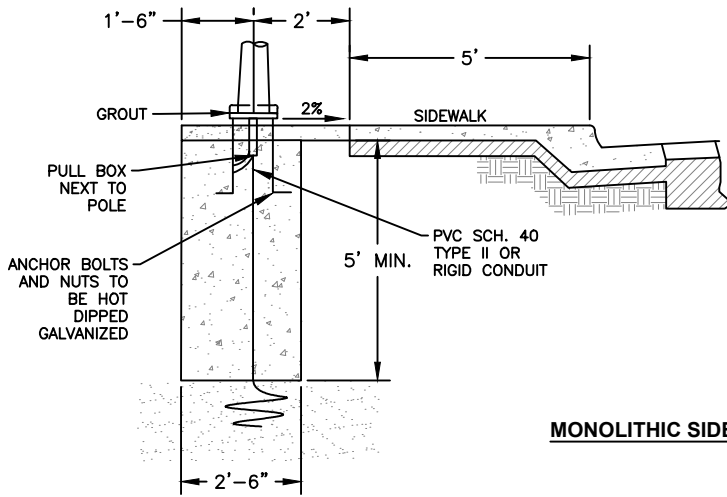
NOT TO SCALE

**STANDARD  
DETAIL**

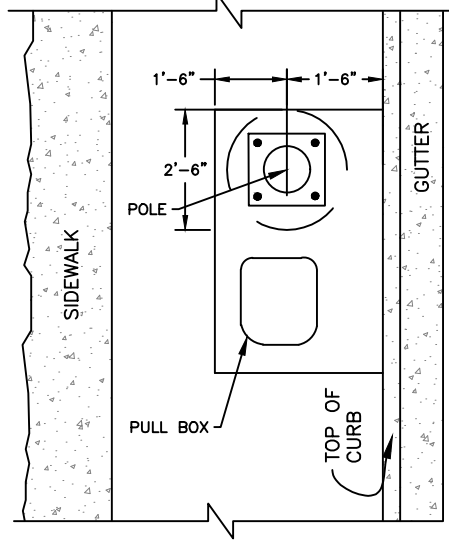
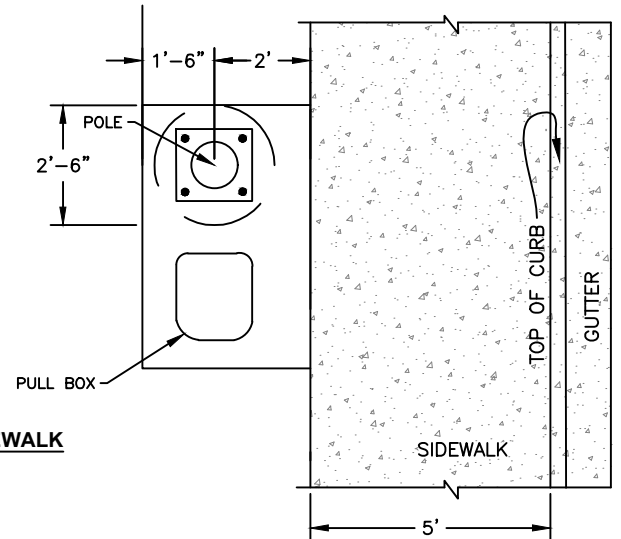
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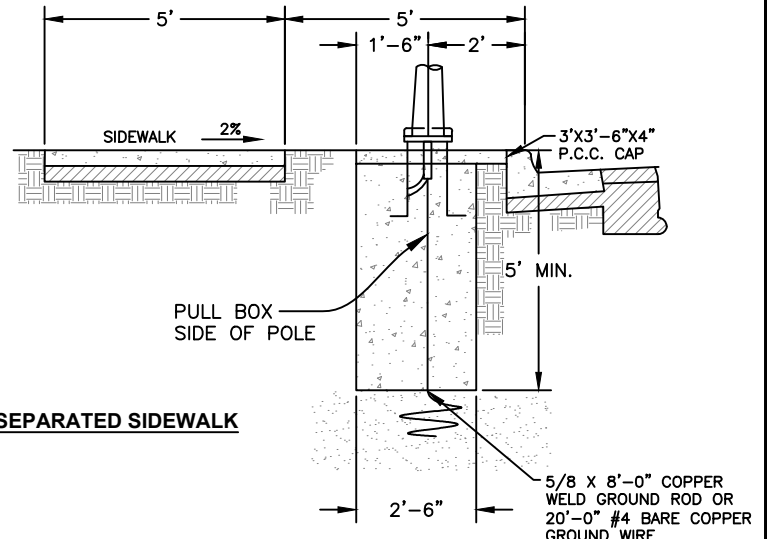
**E-5**



**MONOLITHIC SIDEWALK**



**SEPARATED SIDEWALK**



**NOTES:**

1. Secure electrolier to grounded stud.
2. 20' #4 bare copper, ground wire or 5/8" x 8' copper weld ground rod shall be covered with 2" of soil prior to pouring base.
3. Base shall be 3,000 PSI concrete field cast.
4. Street light pull box to have lockjaw security lid by Sipra Corp. or approved equal.
5. Minimum conduit size shall be 1 1/2", minimum radius at bends shall be 18".
6. Pull boxes shall be installed down stream and incorporated into pad.
7. All connection shall be waterproof.
8. Minimum cover over conduit shall be 18" under sidewalks.
9. All wiring shall extend 30" min. into pull box, with extra slack to be coiled in box.
10. All conduits terminating in pull boxes shall have duct sealant.
11. Ground Rods shall be installed at the beginning of all runs.
12. See Standard Detail E-11 for service box detail.

NOT TO SCALE

Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

**CITY OF LATHROP**  
DEPARTMENT OF PUBLIC WORKS

**ELECTROLIER  
BASE**

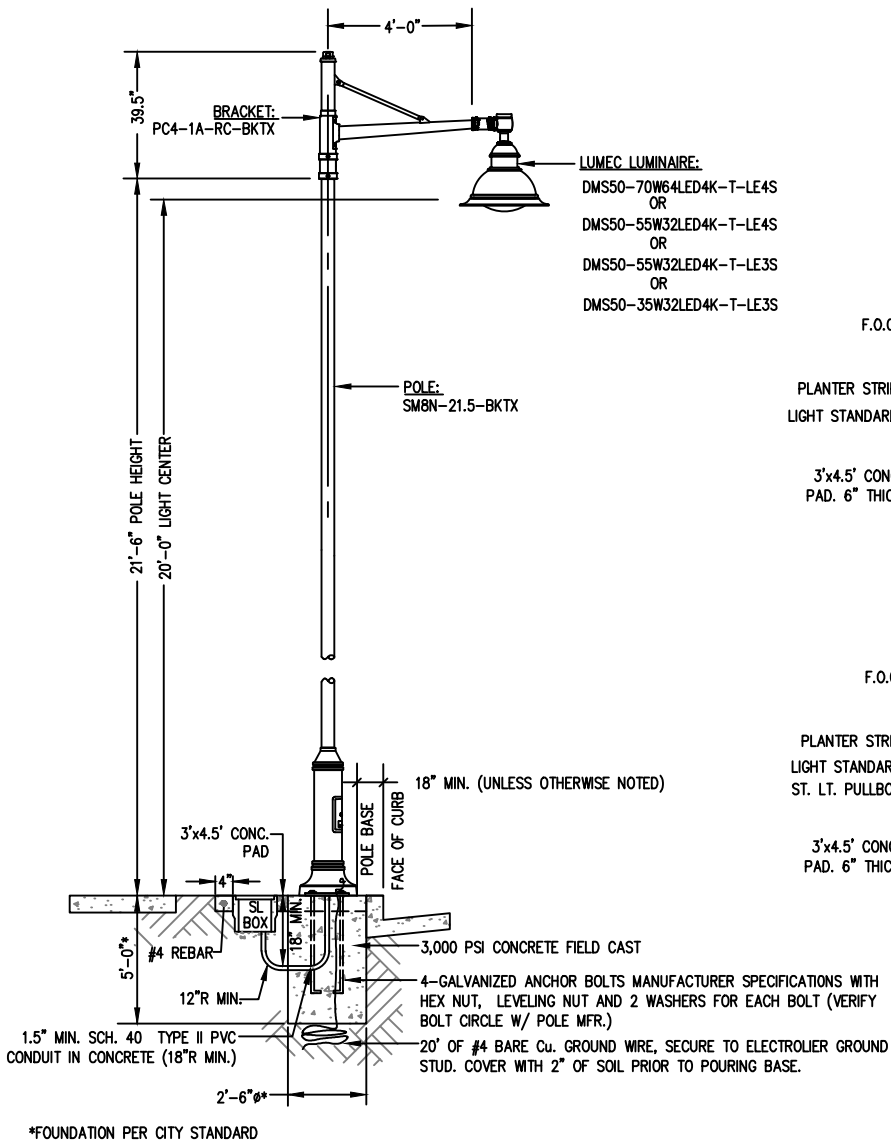


**STANDARD  
DETAIL**

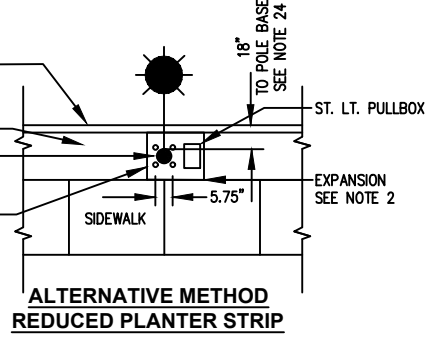
Date: **JULY 2024**  
Drawing No:

**E-6**

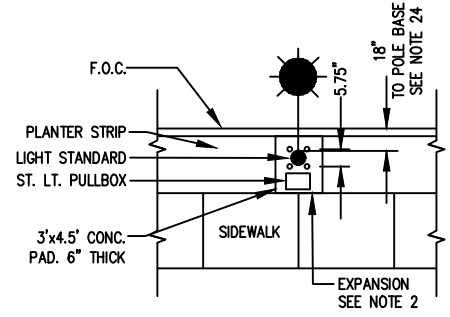




**STREET LIGHT AND BOX  
PROFILE VIEW**



**ALTERNATIVE METHOD  
REDUCED PLANTER STRIP**



**STREET LIGHT AND BOX  
CONFIGURATION**

**NOTE:**

1. If concrete pad is poured between the back of curb and front of sidewalk, then felt or other expansion material will be required.
2. See Standard Detail E-11 for service box detail.

NOT TO SCALE

Approved by:



City of Lathrop  
City Engineer

No	Revised	Date

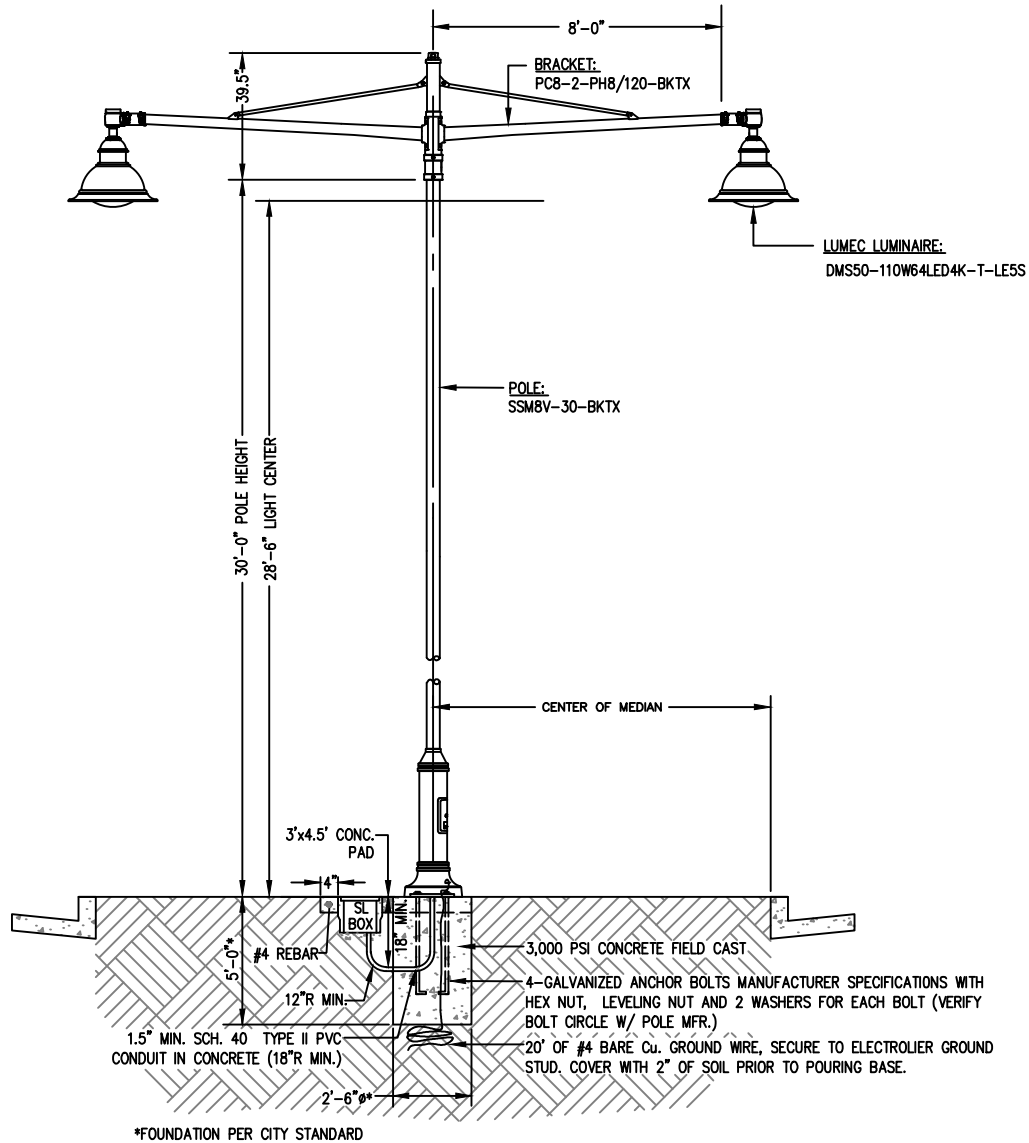
**CITY OF LATHROP**  
DEPARTMENT OF PUBLIC WORKS

**RIVER ISLANDS  
ELECTROLIER DETAILS**



**STANDARD  
DETAIL**

Date: **JULY 2024**  
Drawing No:  
**E-7**



**STREET LIGHT AND BOX  
PROFILE VIEW**

**NOTE:**

1. If concrete pad is poured between the back of curb and front of sidewalk, then felt or other expansion material will be required.
2. See Standard Detail E-12 for service box detail.

NOT TO SCALE

Approved by:		
City of Lathrop Public Works Director		
No	Revised	Date

**CITY OF LATHROP**  
DEPARTMENT OF PUBLIC WORKS  
**RIVER ISLANDS**  
**DOUBLE ARM**  
**ELECTROLIER DETAILS**



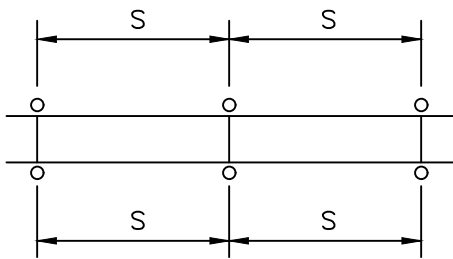
**STANDARD  
DETAIL**

Date: **JULY 2024**

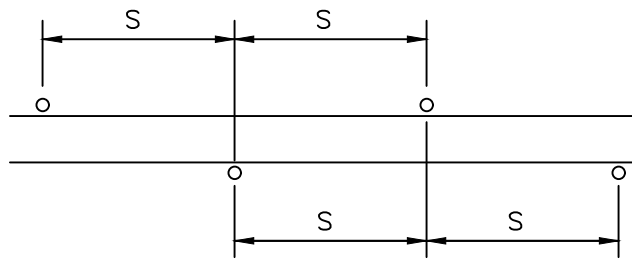
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**E-8**

STREET CLASSIFICATION	STREET R/W WIDTH	NORMAL MOUNTING HEIGHT	LIGHT EMITTING DIODE LAMP WATTAGE	FRONT OF LOT	BACK OF LOT
				SPACING (BOTH SIDES)	
EXPRESSWAY	128'	*	250/400	*	*
MAJOR ARTERIAL	104'	*	250	*	*
MINOR ARTERIAL	84'	*	150	*	*
<b>SPACING (ALTERNATE SIDES)</b>					
COLLECTOR/ INDUSTRIAL/ COMMERCIAL					
	60'	30'	150	190'	
LOCAL/COLLECTOR	64'	22'	150	150'	
RESIDENTIAL	60'	18'	100	150'	



**SPACING BOTH SIDES**



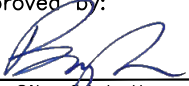
**SPACING (ALTERNATE SIDES)**

**NOTES:**

1. Lamp wattage shall be for light emitting diode lamp only.
2. Spacing may be adjusted to allow for driveways, street intersections, etc.
3. Light distribution pattern shall be Type III per the latest Caltrans Standard Plans unless otherwise specified on improvement plans.

\*Electroliers along expressways and arterials shall be required to have plans prepared and signed by a registered Electrical Engineer.

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Approved by: 		
City of Lathrop City Engineer		
No	Revised	Date

**CITY OF LATHROP**  
DEPARTMENT OF PUBLIC WORKS

**STREET LIGHT POLE  
SPACING GUIDE**

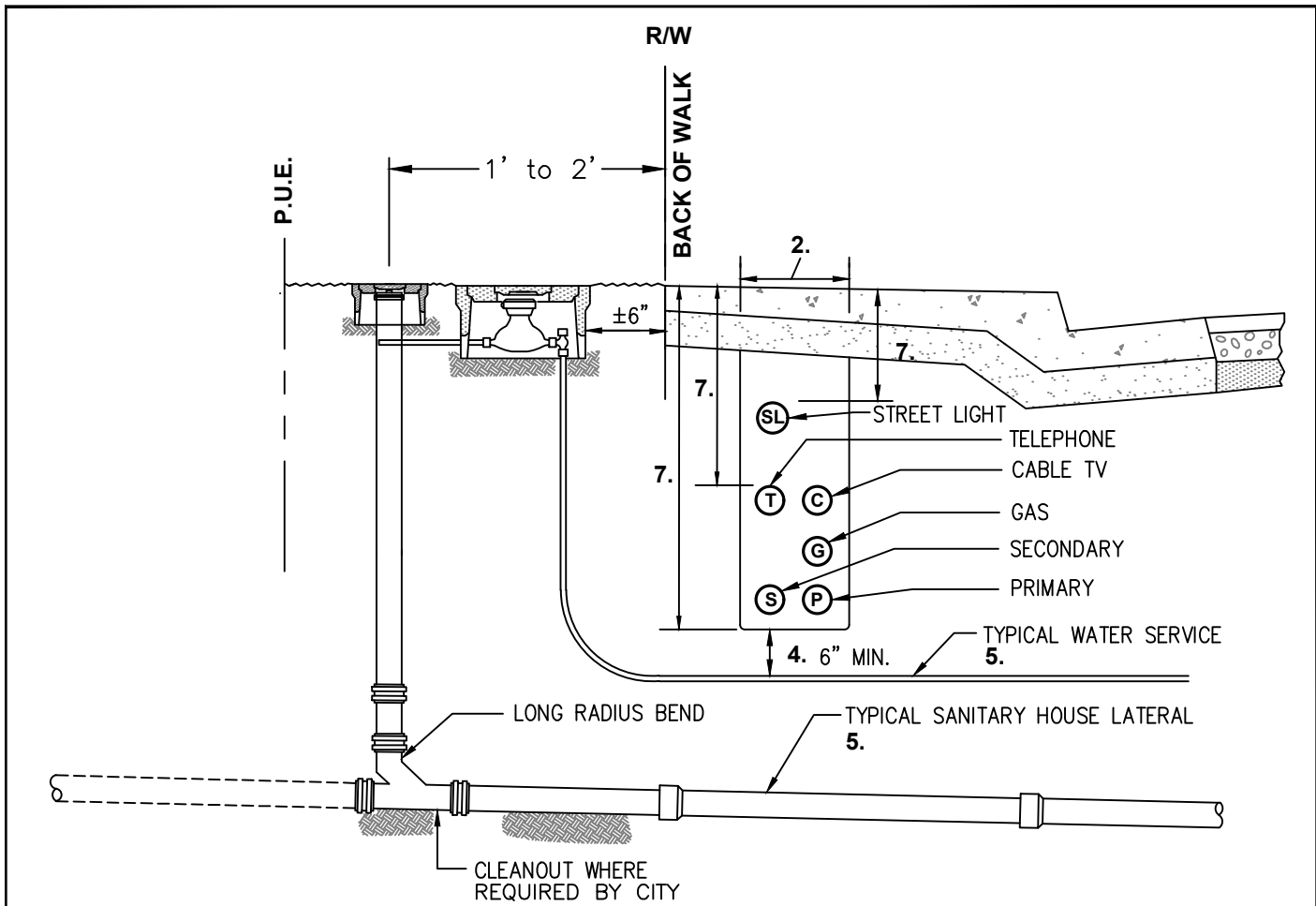


**STANDARD  
DETAIL**

Date: **JULY 2024**

Drawing No:

**E-9**



**NOTES:**

**TYPICAL SECTION**

1. © Denotes cable and / or conduit.
2. Compaction shall be per Standard Detail No. R-56
3. Utilities to be placed as per public utility company regulations.
4. All Services crossing underneath electrical lines shall have a minimum 6" clearance. Electrical lines shall have a minimum of 12" clearance if placed below service laterals.
5. Water service and Sanitary service shall have a lateral clearance of 48" minimum.
6. The location of trench shall conform to City requirements.
7. Refer to Standard Detail No. E-1 for depth requirements.
8. Tree Planting must be 5' from utilities.

NOT TO SCALE

Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

**CITY OF LATHROP**  
 DEPARTMENT OF PUBLIC WORKS  
**UNDERGROUND UTILITIES**  
**LOCATIONS BEHIND FACE**  
**OF CURB**

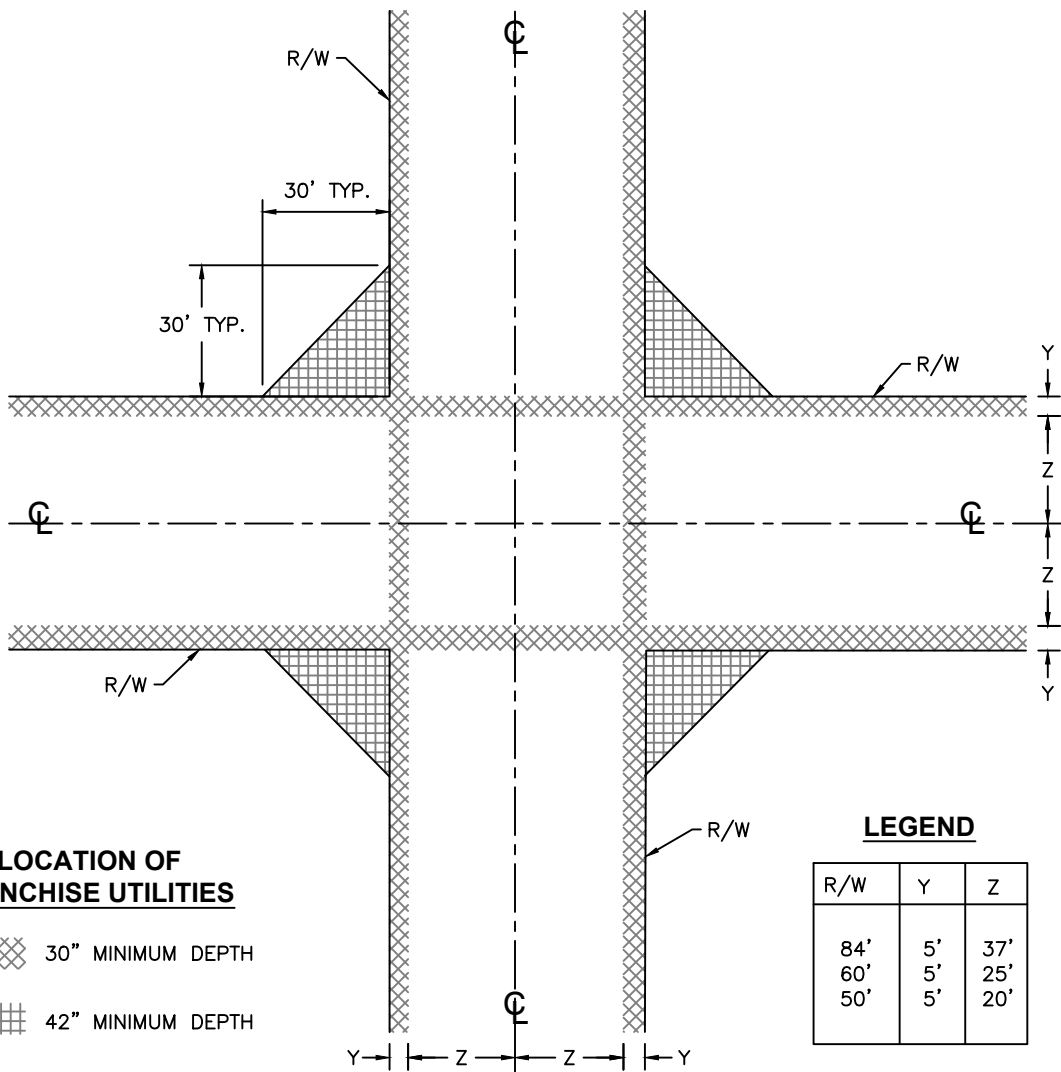


**STANDARD**  
**DETAIL**

Date: **JULY 2024**

Drawing No:

**E-10**

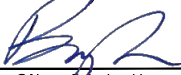


**NOTES:**

1. Any deviations from the standard locations are subject to the approval of the City Engineer.
2. Franchise utilities shall include telephone, gas, electrical, television cable, etc.

NOT TO SCALE

Approved by:



City of Lathrop  
City Engineer

No	Revised	Date

**CITY OF LATHROP**  
 DEPARTMENT OF PUBLIC WORKS  
**UNDERGROUND UTILITIES**  
**LOCATIONS**  
**AT EXISTING INTERSECTIONS**



**STANDARD**  
**DETAIL**

Date: **JULY 2024**  
 Drawing No:

**E-11**