

TRAFFIC SIGNAL MODIFCATION PLANS

2ND STREET AND SE MAIN STREET
LEE'S SUMMIT, MISSOURI



UTILITY COMPANIES:

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GOOGLE FIBER

TIMEWARNER



Know what's below.
Call before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN.
UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR
LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN
THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL
FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

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PREPARED & SUBMITTED BY:

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CONSULTANTS.

TRAFFIC SIGNAL MODIFICATION

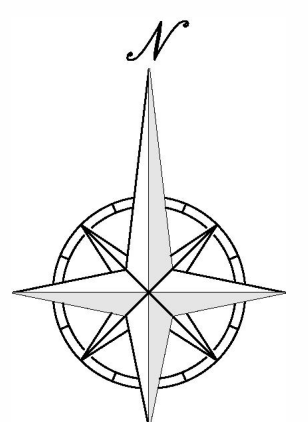
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ROJ NO: P101190281
SCALE: 1" = 10'
DATE: 06/01/2020
DESIGNED BY: JJW
DRAWN BY: CTM
CHECKED BY: JJW

HEET TITLE:

COVER

SHEET NO. 1



**RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI**

06/15/2020

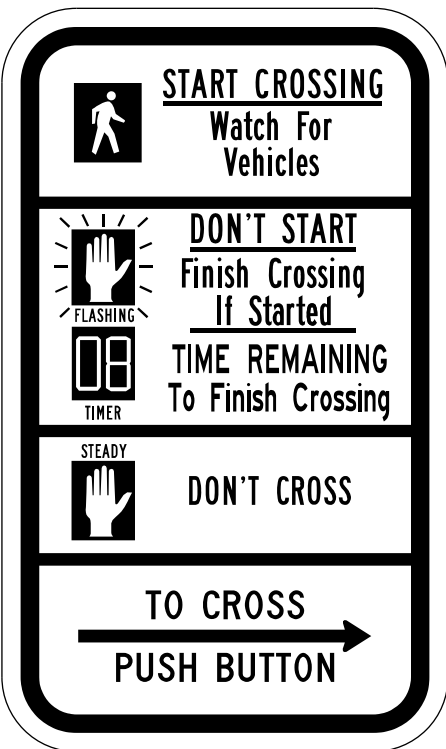
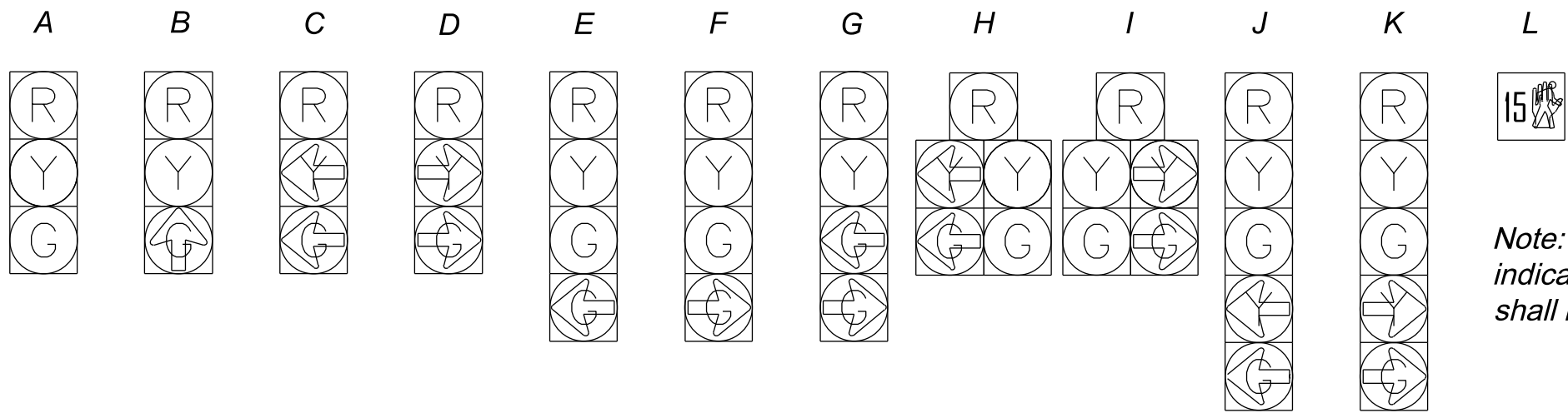
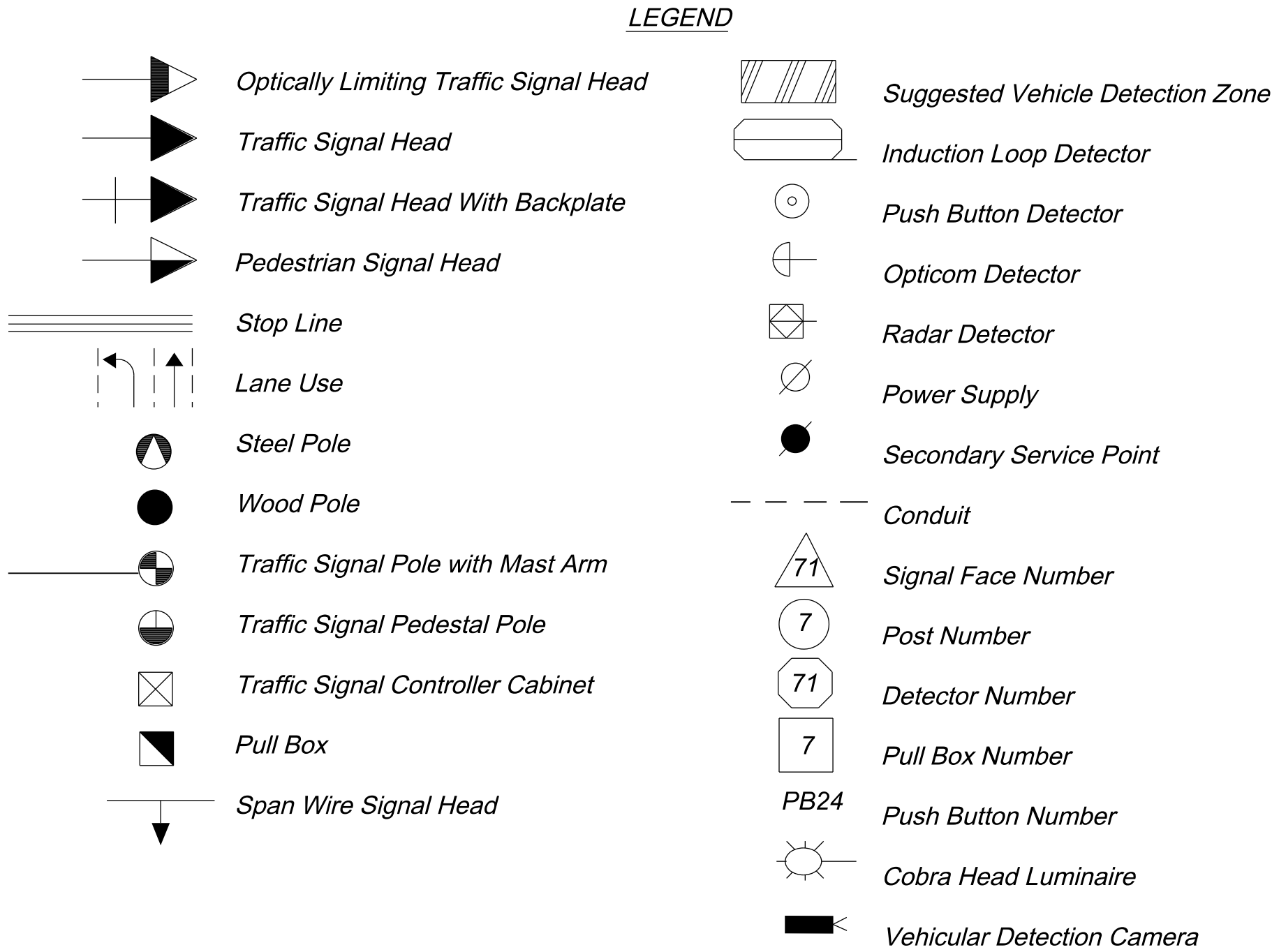
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GENERAL NOTES:

1. The contractor shall have one (1) signed copy of the plans (approved by the City of Lee's Summit) and one (1) copy of the appropriate Design and Construction Standards and Specification at the job site at all times.
2. Construction of the improvements shown or implied by this set of drawings shall not be initiated or any part thereof undertaken until the Director of Public works or his agent is notified of such intent, and all required and properly executed bonds and contract agreements are received and approved by the City.
3. The Construction covered by these plans shall conform to all applicable standards and specifications of the Public Works Department of the City of Lee's Summit, Missouri, in current use. Specifically, but not exclusive to: Traffic Signal Specification: Section 2900. Traffic Signal Standard Drawings: TS-1 through TS-10.
4. All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit, Missouri.
5. Right-Of-Way limits should be cross checked by the Contractor and approved by the field inspector before undertaking any excavations at the site.
6. The contractor shall stake the location of all poles, pull boxes, and controller cabinet base, then provide the City one week notice prior to the start of construction, and subsequent construction activities, for inspection and approval. The contractor shall provide a work schedule, contact names, and phone numbers. Notification and coordination shall be with the City's Traffic Engineer.
7. All locations indicated in drawings, including conduit runs are subject to adjustment to clear obstructions and to meet site conditions, if any, by the City.
8. Existence and location of any underground or overhead facilities shown on these drawings or reference to any soil conditions, if made, are approximate only. It is the Contractor's responsibility to verify all site conditions and to locate all utilities, including depth, before starting construction so that any adjustments to design can be made prior to pole ordering or fabrication. In addition, the Contractor shall avoid disruption of services provided by the utilities and shall insure that proper clearances (overhead and underground) are maintained for the duration of construction. The Contractor shall be fully responsible for any and all damages caused by failure to exactly locate and preserve all utilities.
9. The contractor shall coordinate with the City Traffic Engineer for any necessary changes to the traffic signals resulting from existing utilities or other construction issues.
10. Any equipment damaged during construction shall be replaced at the Contractor's expense.
11. Signal equipment shall not form an obstruction to the movement of pedestrian and wheelchair traffic and shall be ADA accessible. Where sidewalks are present, a minimum clear width of 48 inches shall be available for pedestrian and wheelchair movement. Pull boxes shall not be installed on wheelchair ramps.
12. Conduits to be placed outside of paved areas shall be trenched in place. If the project includes roadway improvements, the conduit shall be trenched after the roadway rough grade is established and prior to any final roadway paving, curb & gutter, median or sidewalk sections are placed. All compaction and backfill shall meet City of Lee's Summit requirements. At the option of the contractor, conduits may be bored outside paved areas, but there will be no adjustment to the unit prices for conduit installation and any change in cost would be the contractor's responsibility. Any conduit bore outside paved areas shall be done after roadway improvements are complete. Conduits to be placed within the limits of pavement shall be bored unless otherwise authorized by the City Traffic Engineer. If the project includes roadway improvements, the conduit shall be bored prior to any final roadway paving. Potholing for utilities on road bores after final paving will not be allowed.
13. The traffic signal controller, cabinet and related equipment, as specified for this project, shall be delivered to the City for testing prior to installation. All signal timings will be provided by the City Traffic Engineer. The Contractor shall coordinate material delivery and pick-up with the Public Works Operations Department (969-1870) at least 48 hours prior to transportation. A minimum of 4 weeks shall be permitted for testing between delivery and pick-up. The Contractor assumes all damage liability and should inspect all materials before and after transportation of equipment.
14. The Contractor shall coordinate all electrical power requirements and connection activities with the Utility Company, including location of the meter, circuitry and connection requirements, and powering up the complete system. The Contractor shall order the meter and pay electrical bills until testing is complete, at which time the Contractor shall coordinate with the City for transferring the electrical billing services to the City.
15. All disturbed surfaces shall be made good to match existing at the Contractor expense.
16. Contractor shall maintain at all times access for Emergency Vehicles and residents along the entire project.
17. Substantial completion of the traffic signals shall be defined as all components of the traffic signal operated fully and satisfactorily with red, yellow, and green cycles. Substantial completion shall allow for testing of the signals, including a flash period, prior to signals operating with cycles.
18. Final acceptance of traffic signals shall be defined as final written approval and acceptance by the City, including completion or correction of all punch list items and the traffic signals fully operational for a time period of fifteen (15) days, without any problem, as noted in the specifications. As-built plans shall be submitted prior to final acceptance by the City.

PROJECT SPECIFIC NOTES:

1. Signal poles, mast arms, luminarie arms, cabinets (signal an street light) and components including mounting hardware and brackets shall be power coated black.
2. Any condition of existing equipment/materials proposed for re-use, if damaged or not suitable for re-use at the time or during construction would require new installations at the Contractor's expense. Any damages prior to removal (intended for re-use) shall be documented and reported prior to work and Contractor shall be responsible for repair or replacement.



SIGN R10-3E
9' X 15'

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Tran Systems

2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-9800
FAX: 816-329-9801

STATE OF MISSOURI
JEFFREY L. WILKE
6-3-20
NUMBER
BE-2007032448
PROFESSIONAL ENGINEER

CONSULTANTS:

2ND STREET AND SE MAIN STREET
TRAFFIC SIGNAL MODIFICATION

LS

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64083

REVISIONS:

NO.	DESCRIPTION	DATE	MARK

PROJ NO: P101190281
SCALE: NONE
DATE: 6/3/2020
DESIGNED BY: EHM
DRAWN BY: EHM
CHECKED BY: JJW

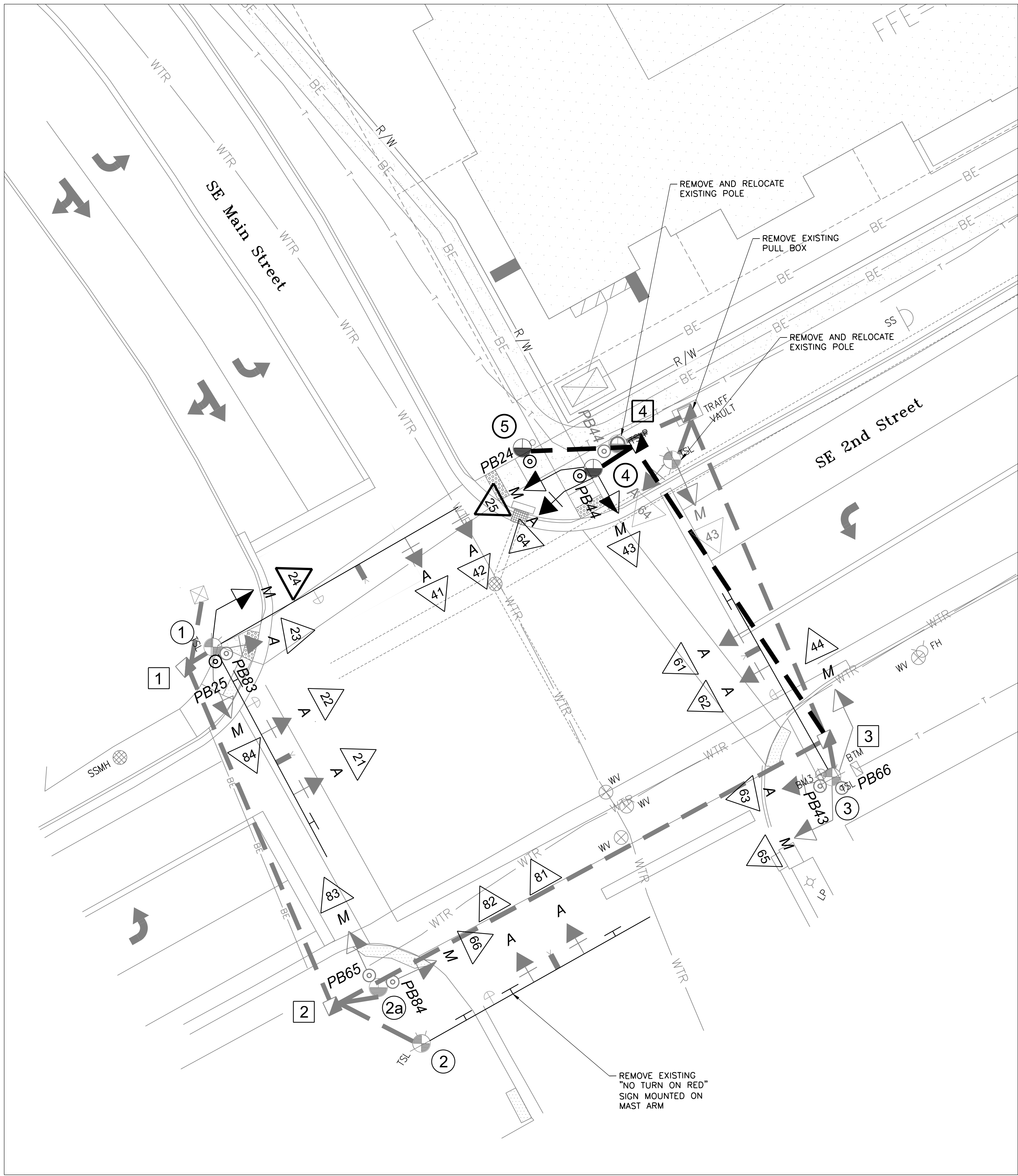
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TRAFFIC SIGNAL
GENERAL NOTES
AND LEGEND

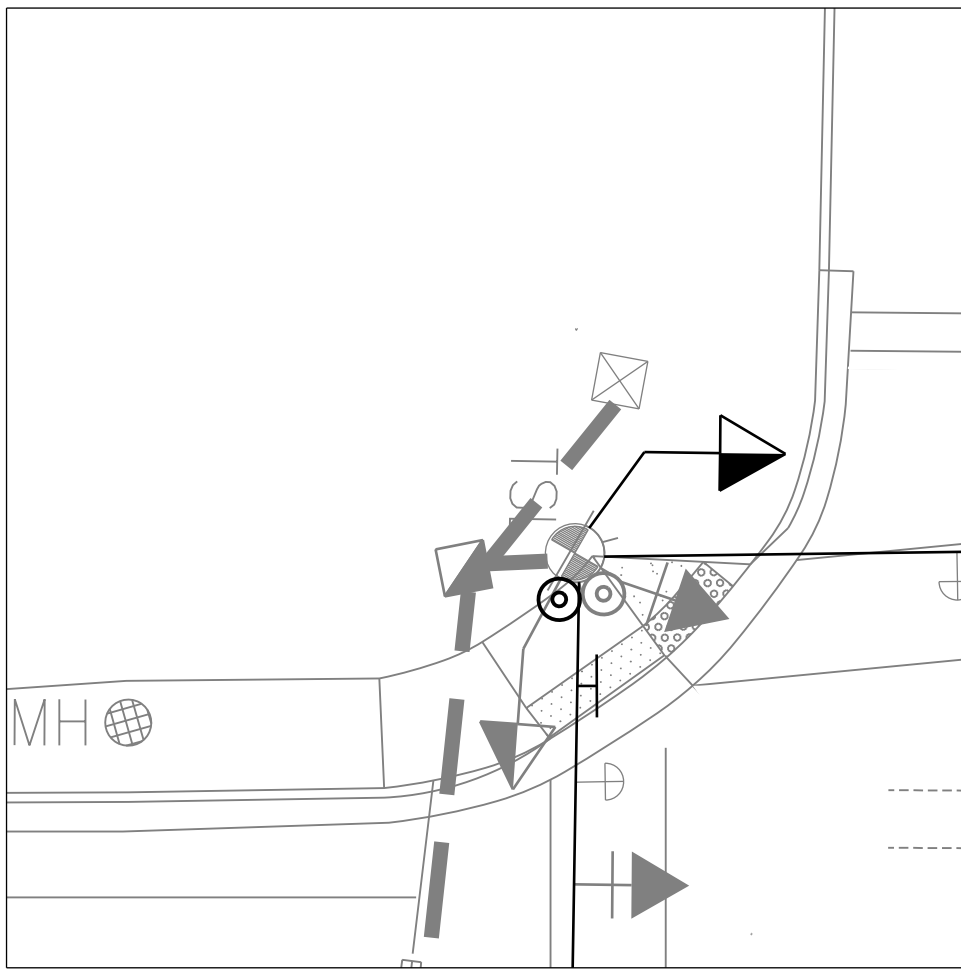
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TS-1

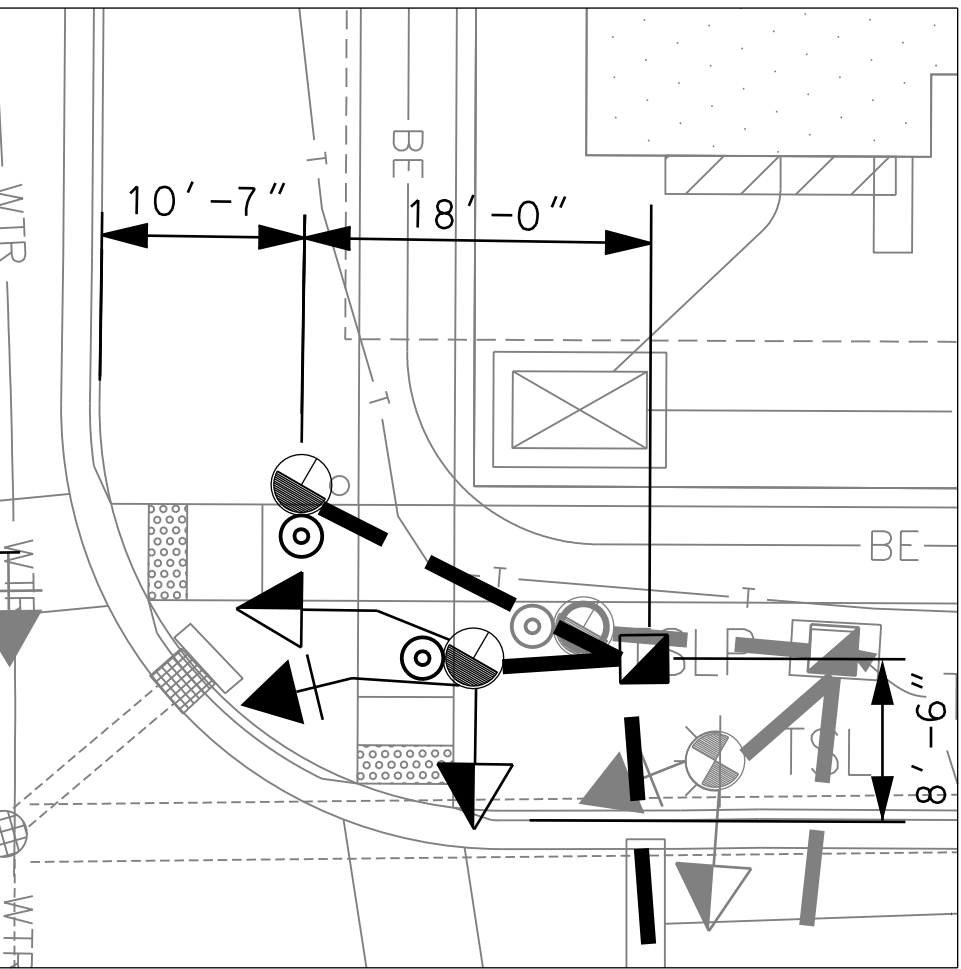
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NORTHWEST QUADRANT



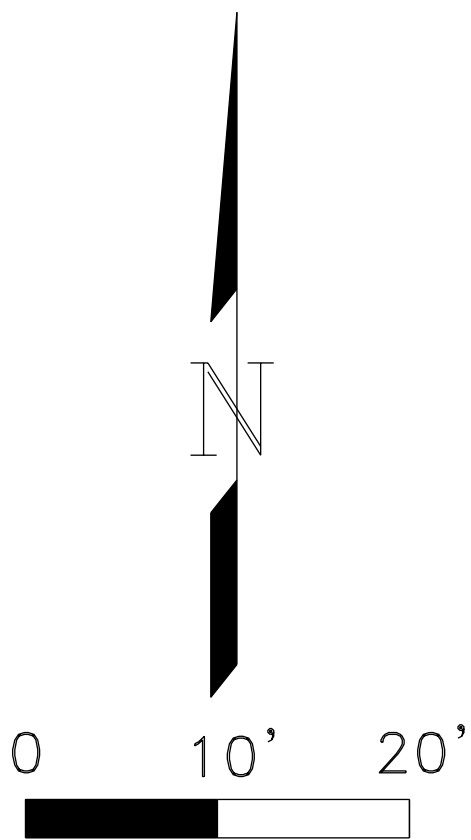
NORTHEAST QUADRANT



NOTES:

1. Install PB25 on the south side of signal pole 1 with the face of the button parallel to the crosswalk across SE Main Street.
2. Relocate existing pole 4, including signal heads 43 and 64 to the location shown. Install signal head 25 and push button 44 on the pole.
3. Relocate existing pole 5, including push button, to the location shown.
4. Disconnect existing cables from signal heads 43, 64, and push button 44. Pull these existing cables into box 3, and coil them in the box while work is in progress on the northeast corner of the intersection. After poles 4 and 5 are installed, reconnect the existing cables to the relocated equipment.
5. Construct new pole bases adjacent to the proposed sidewalk. Use isolation joint between sidewalk and base.
6. All other existing signal equipment shall be used in place, and remain operational throughout construction.
7. Dimensions shown are measured from the backs of curbs to the center of signal equipment.

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TRAFFIC SIGNAL MODIFICATION

LS LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64083

REVISIONS:

MARK	DATE	DESCRIPTION

SHEET TITLE:

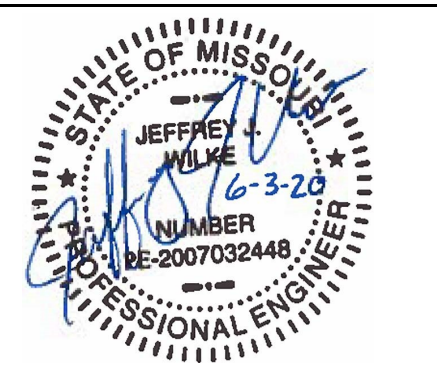
TRAFFIC
SIGNAL
LAYOUT

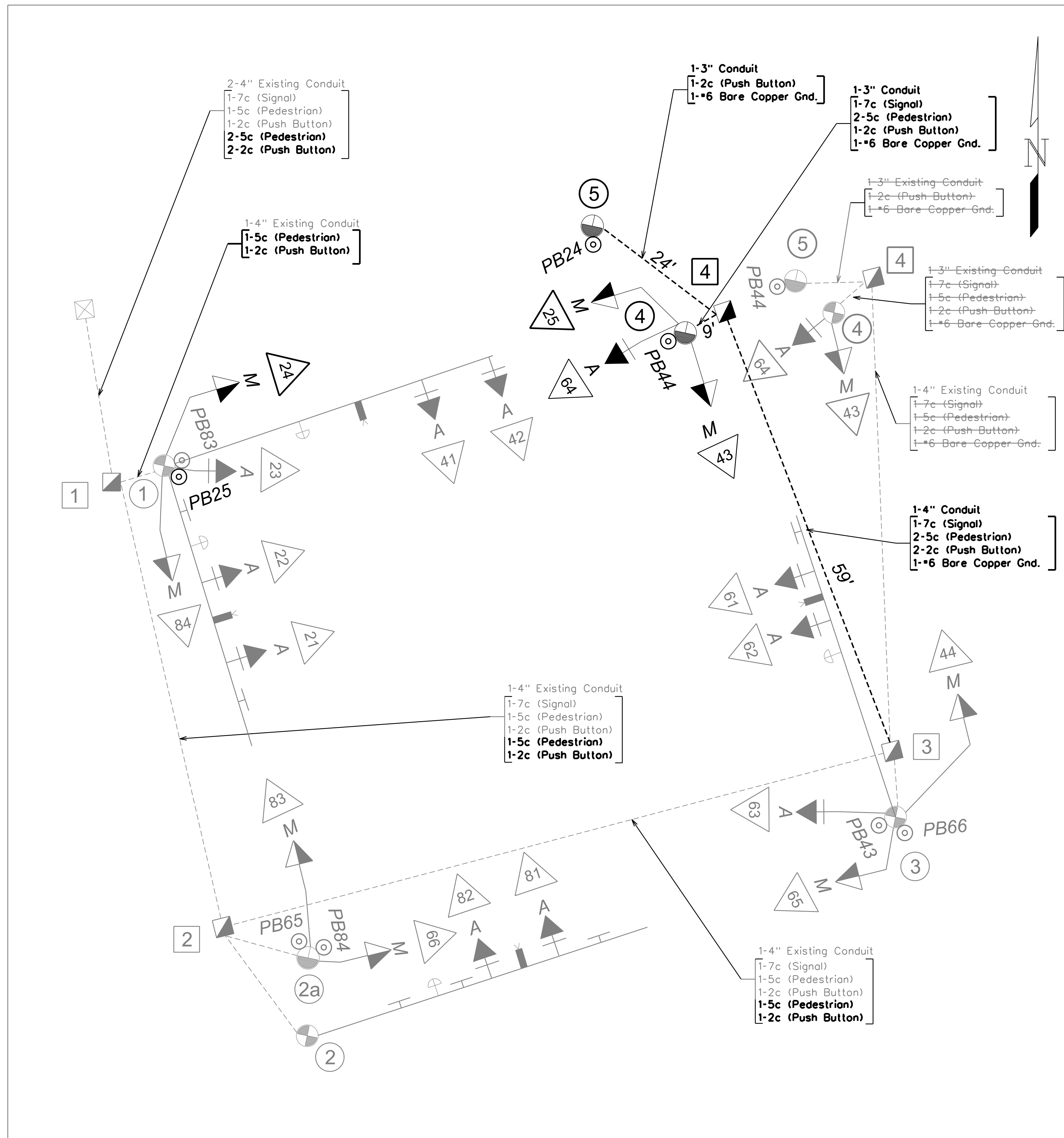
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TS-2

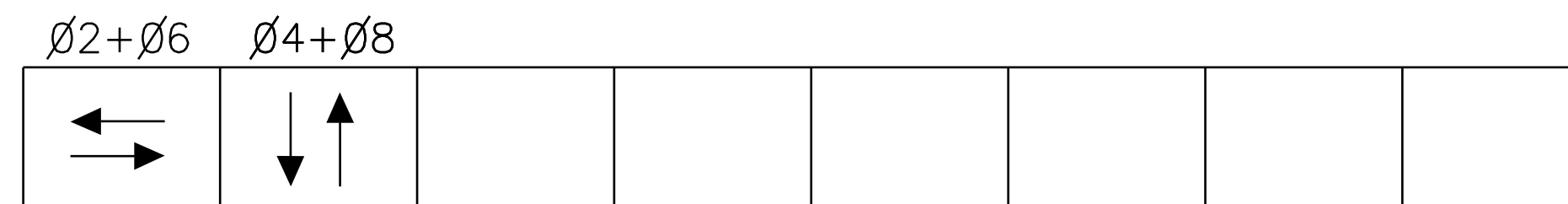
TranSystems

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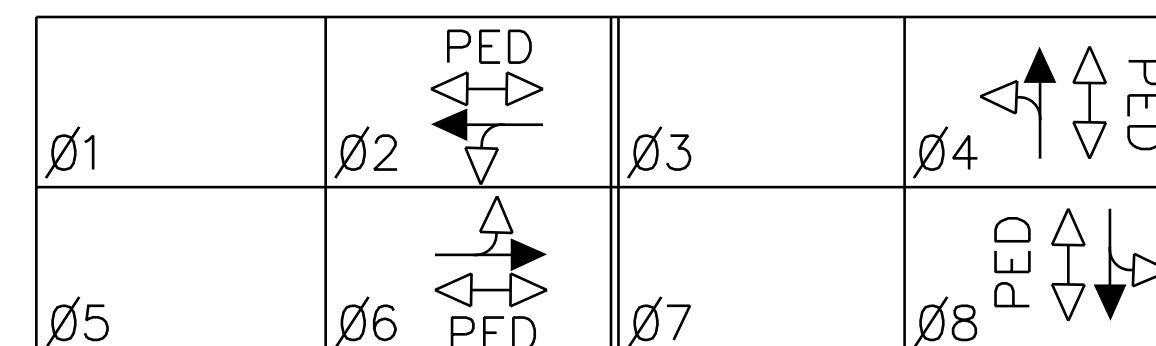




SEQUENCING



PHASE DIAGRAM



OUTPUT FILE ASSIGNMENTS

FR1	ø1	ø2	PED ø2	ø3	ø4	PED ø4	MONITOR
FR2							
FR3	ø5	ø6	PED ø6	ø7	ø8	PED ø8	
FR4							

1	2	3	4	5	6	7	8	9	10	11	12	13	14
											PED ø2	PED ø4	FL
											PED ø6	PED ø8	ST TIM

FLASHING OPERATIONS	
EMERGENCY	SCHEDULED
Peds Dark	Peds Dark
FR-All Ø's	FR-All Ø's

Legend

- 1-7c (Signal) – Existing equipment
~~1-7c (Signal)~~ – Existing equipment to be removed
1-7c (Signal) – New equipment to be installed

Wiring and Phasing General Notes

1. *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. All vehicular signal heads located on the pole shall each be served by one 7c#14 cable extending from the head back to the controller. No cable splices are allowed, including at the base of the pole and inside pull boxes.*
2. *Street lighting cable, not signal cable, may be spliced inside of pull boxes using a split bolt connector and resin filled splice kit as described in Section 2800 of the Technical Specifications.*
3. *A continuous 1c #6 AWG bare solid copper ground wire shall be provided in addition to ground rods. All grounding and ground rods shall be tied together using 1c #6 AWG bare solid copper wire to bond the system.*
4. *Wiring diagram reflects signal modifications only and is not a comprehensive diagram of all existing wiring.*

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[illegible]

*NOTE: Signal head spacing (feet) may be adjusted to site conditions as approved by the project inspector.

Luminaires quantified in street lighting plans.

[illegible]

P – Pole Mounted Signal Head
M – Mast Arm Mounted Signal Head
S – Span Wire Mounted Signal Head

NOTE :

THE TRAFFIC SIGNAL SYSTEM SHALL BE COMPLETE AND THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS NECESSARY FOR THE SATISFACTORY OPERATION OF ELECTRICAL APPARATUS AND FOR COMPLETE OPERATION OF THE TRAFFIC SIGNAL SYSTEM WHETHER SPECIFICALLY MENTIONED OR NOT.

[illegible][illegible][illegible]

SIGNS				
SIGN	LEGEND	NO.	S.F.	TOTAL S.F.
R10-3e	PEDESTRIAN CROSSING SIGN	2	0.9	1.8
TOTAL		2		2

[illegible]

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PHONE: 816-329-8600
FAX: 816-329-8601



CONSULTANTS:

LEE'S SUMMIT
MISSOURI

[illegible]

PROJ NO: P101190281
SCALE: NONE
DATE: 6/3/2020
DESIGNED BY: EHM
DRAWN BY: EHM
CHECKED BY: JJW

SHEET TITLE:

TRAFFIC SIGNAL QUANTITIES

SHEET NO.
TS-4

**RELEASE FOR
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