

CITY OF RIDGELAND, MISSISSIPPI

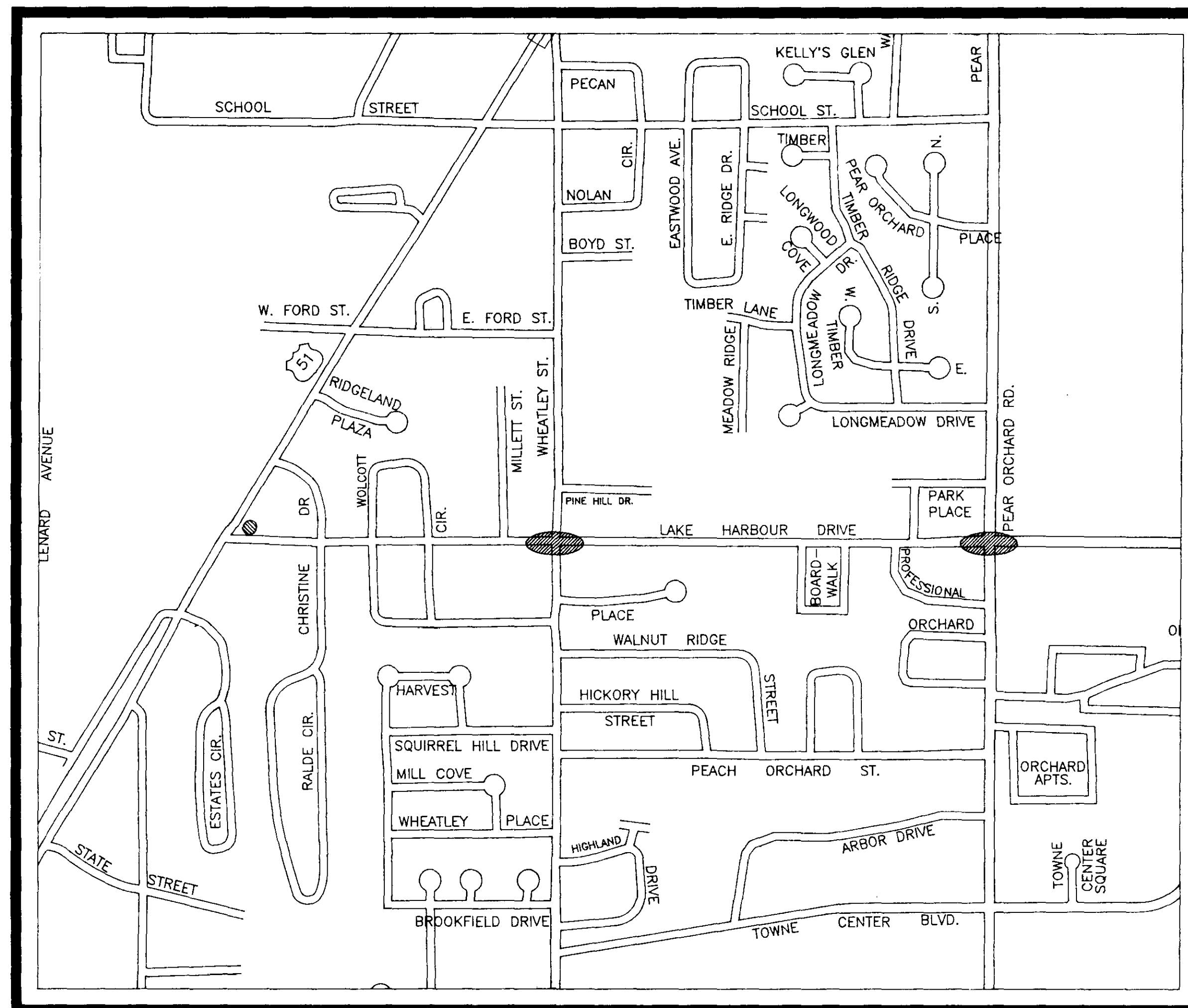
FEDERAL AID SYSTEM

1992 TRAFFIC SIGNAL IMPROVEMENTS

LAKE HARBOUR DRIVE @ WHEATLEY AND PEAR ORCHARD ROAD

MADISON COUNTY, MS.

FEDERAL AID PROJECT NO. STP-8323 (1)/48-8323-00-001-10



VICINITY MAP

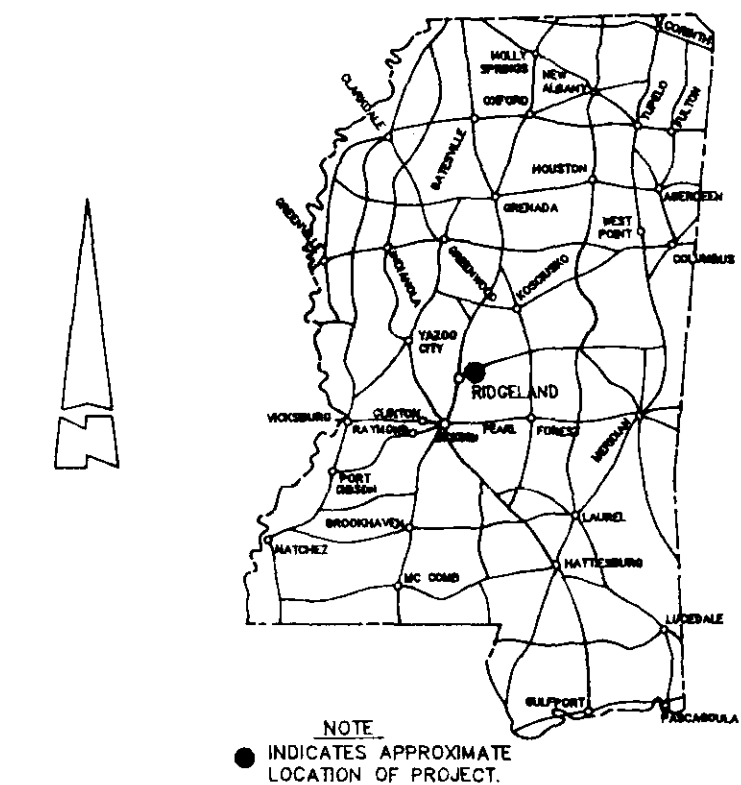
JUNE, 1992

WAGGONER ENGINEERING, INC.
 Consulting Engineers
 Jackson, Mississippi

Mayor:
 Gene F. McGee

Mayor Pro Tem:
 Harvey Carr, Jr.

City Attorney:
 Jerry Mills



Aldermen:
 Brian Barcellona
 Al Bible
 Harvey Carr, Jr.
 Linda Davis
 Daryl Smith

Public Works Director:
 Sam Vinson

City Clerk:
 Micheal McPhearson



DESIGN CONTROL

35 MPH = V (SPEED DESIGN)
 ADT (1990) = 9950; ADT (2010) = 14925
 DHV = 1493 D = 60 - 40% T = 4.5%

| | |
|--------------------------------------|---------|
| APPROVED | DATE |
| <i>Gene F. McGee</i> | 7-21-92 |
| MAYOR | |
| CITY OF RIDGELAND | |
| APPROVED | DATE |
| <i>John R. Stahl</i> | 7-24-92 |
| DIRECTOR | |
| MISSISSIPPI STATE HIGHWAY DEPARTMENT | |
| APPROVED | |
| DIVISION ADMINISTRATOR DATE | |
| FEDERAL HIGHWAY ADMINISTRATION | |
| DEPARTMENT OF TRANSPORTATION | |

PWP 01201

SUMMARY OF QUANTITIES

| PAY ITEM NO. | PAY ITEM | UNIT | LAKE HARBOUR WEATLEY STREET | | LAKE HARBOUR PEAR ORCHARD ROAD | | TOTAL | |
|--------------|--|------|-----------------------------|-------|--------------------------------|-------|---------|-------|
| | | | PRELIM. | FINAL | PRELIM. | FINAL | PRELIM. | FINAL |
| 618-A | MAINTENANCE OF TRAFFIC | L.S. | L.S. | | L.S. | | L.S. | |
| 620-A | MOBILIZATION | L.S. | L.S. | | L.S. | | L.S. | |
| | TRAFFIC SIGNAL ITEMS | | | | | | | |
| 908-635-A | VEHICLE LOOP ASSEMBLIES | LF. | 1466 | | 1844 | | 3310 | |
| 908-636-A | SHIELDED CABLE (UNDERGROUND) | LF. | 1696 | | 2316 | | 4012 | |
| 908-638-A | LOOP DETECTOR AMPLIFIER CARD RACK MOUNTED (4 CHANNEL) | EA. | 1 | | 1 | | 2 | |
| 907-639-C | STEEL TRAFFIC SIGNAL & EQUIP. POLES (TYPE II) (SINGLE MAST ARM) (16' SHAFT LENGTH) | EA. | | | 4 | | 4 | |
| 907-639-C | STEEL TRAFFIC SIGNAL & EQUIP. POLES (TYPE III) (DOUBLE MAST ARM) (16' SHAFT LENGTH) | EA. | 2 | | | | 2 | |
| 908-640-A | TRAFFIC SIGNAL HEADS (TYPE I) | EA. | 8 | | 8 | | 16 | |
| 908-642-A | SOLID STATE TRAFFIC ACTUATED CONTROLLERS (TYPE 8A) | EA. | 1 | | 1 | | 3 | ① |
| 908-643-A | CLOSED LOOP ON STREET MASTER SYSTEM | EA. | | | | | 1 | |
| 908-644-A | OPTICAL DETECTOR | EA. | 4 | | 4 | | 8 | |
| 908-644-B | OPTICAL DETECTOR CABLE | LF. | 359 | | 586 | | 945 | |
| 908-647-A | PULLBOXES (TYPE 1) | EA. | 4 | | 4 | | 8 | |
| 908-647-A | PULLBOXES (TYPE 2) | EA. | 4 | | | | 4 | |
| 907-649 | STREET NAME SIGNS | S.F. | 30 | | 30 | | 60 | |
| 908-666-B | ELECTRIC CABLE (UNDERGROUND IN CONDUIT) (POWER LEAD IN) (AWG #6) (2 CONDUCTOR) | LF. | 122 | | 338 | | 460 | |
| 908-666-B | ELECTRIC CABLE (UNDERGROUND IN CONDUIT) (SIGNAL CABLE) (AWG #14) (5 CONDUCTOR) | LF. | | | 227 | | 227 | |
| 908-666-B | ELECTRIC CABLE (UNDERGROUND IN CONDUIT) (SIGNAL CABLE) (AWG #14) (7 CONDUCTOR) | LF. | 387 | | 596 | | 983 | |
| 908-666-B | ELECTRIC CABLE (UNDERGROUND IN CONDUIT)(COMMUNICATION CABLE)(MSA40-4)(AWG #19)(6 PAIR) | LF. | 244 | | 69 | | 313 | |
| 908-666-C | ELECTRIC CABLE (AERIAL SUPPORTED)(COMMUNICATIONS CABLE) (MSA 40-4)(AWG #6) (6 PAIR) | LF. | 2000 | | 2700 | | 4700 | |
| 908-668-A | TRAFFIC SIGNAL CONDUIT (UNDERGROUND) (TYPE 1) (1") | LF. | 358 | | 312 | | 670 | |
| 908-668-A | TRAFFIC SIGNAL CONDUIT (JACKED) (TYPE 1) (3") | LF. | 171 | | | | 171 | |
| 908-668-B | TRAFFIC SIGNAL CONDUIT (UNDERGROUND) (TYPE IV) (1") | LF. | 271 | | 486 | | 757 | |
| 908-668-B | TRAFFIC SIGNAL CONDUIT (UNDERGROUND) (TYPE IV) (2") | LF. | 134 | | 60 | | 194 | |
| 908-668-B | TRAFFIC SIGNAL CONDUIT (UNDERGROUND) (TYPE IV) (3") | LF. | 36 | | 18 | | 54 | |

INDEX

| SHEET NO. | TITLE |
|-----------|--|
| 1 | COVER SHEET |
| 2 | SUMMARY OF QUANTITIES, INDEX, APPLICATION RATES & GENERAL NOTES |
| 3 | PROJECT LOCATION MAP |
| 4 | TRAFFIC SIGNALIZATION DETAILS (LAKE HARBOUR DRIVE • PEAR ORCHARD ROAD) |
| 5 | TRAFFIC SIGNALIZATION DETAILS (LAKE HARBOUR DRIVE • WHEATLEY STREET) |
| 6 | TRAFFIC SIGNAL INSTALLATION DETAIL |
| 7 | STANDARD DETAILS TYPICAL TRAFFIC CONTROL PLANS |
| 8 | STANDARD SIGNS FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION |
| 9 | STANDARD SIGNAL DETAILS VEHICLE LOOP DETECTOR ASSEMBLY |
| 10 | STANDARD SIGNAL DETAILS CONDUIT, PULLBOX AND PEDESTRIAN PUSHBUTTON |

① ONE SOLID STATE TRAFFIC ACTUATED CONTROLLER AND CLOSED LOOP MASTER TO BE PLACED IN NORTHEAST QUADRANT OF U.S. HIGHWAY 51/LAKE HARBOUR DRIVE ON EXISTING CONCRETE PAD. EXISTING CONTROLLER BOX TO BE REMOVED BY CONTRACTOR AND STORED ON SITE FOR PICKUP BY STATE.

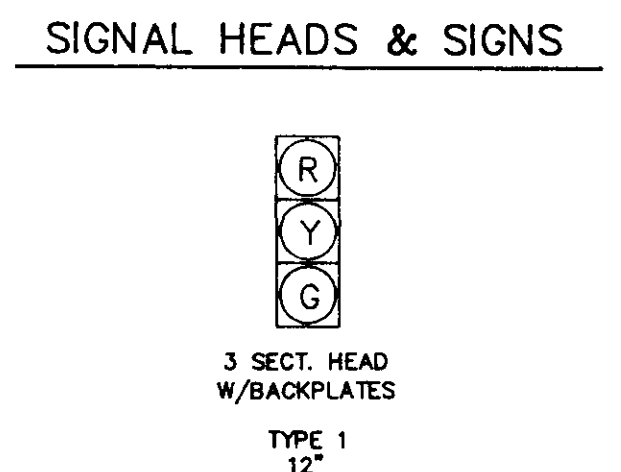
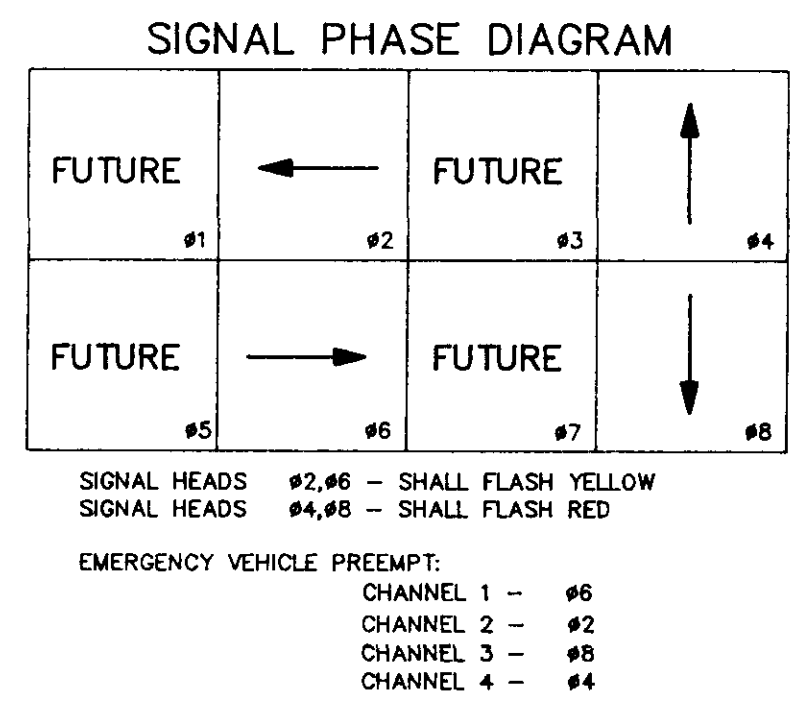
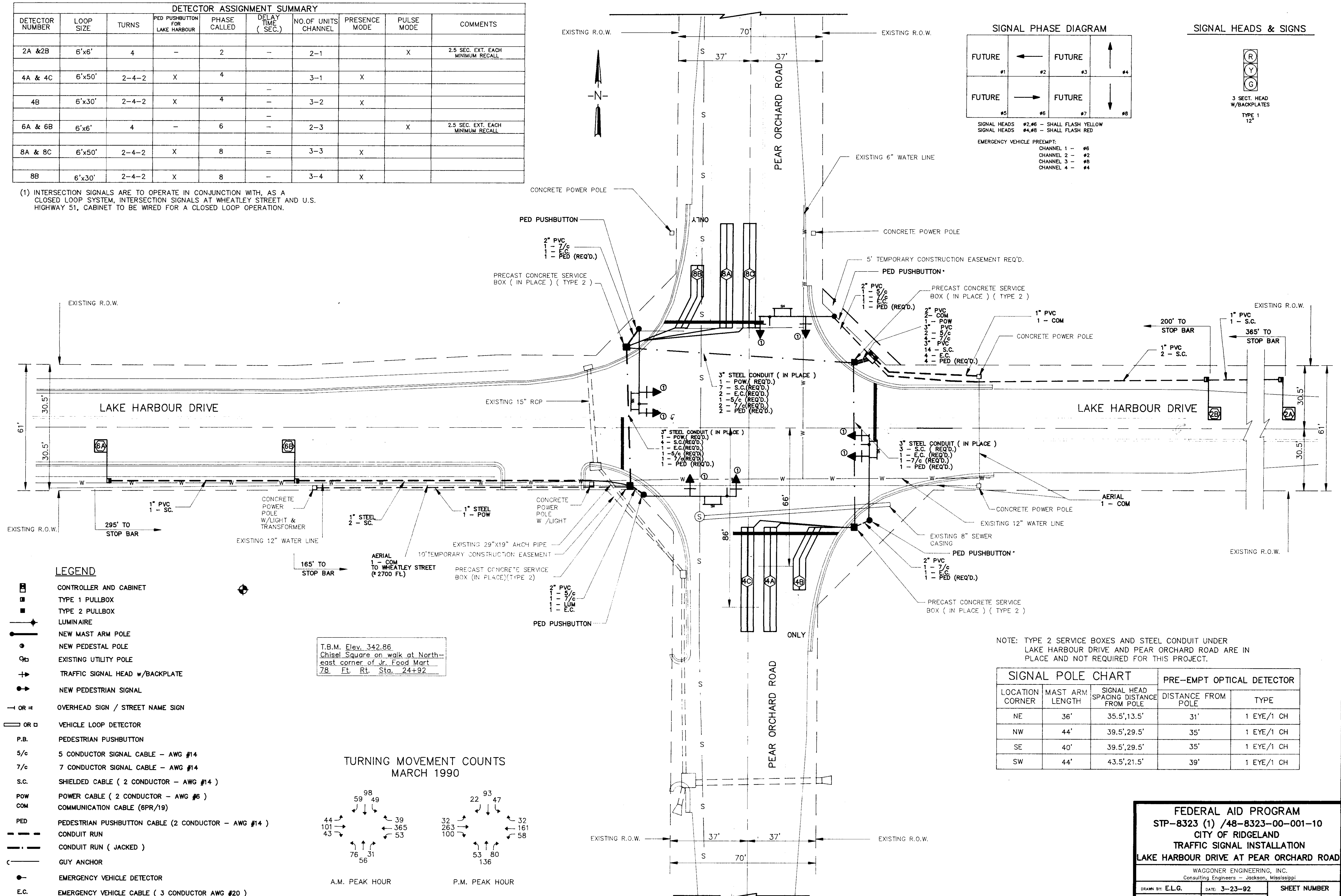
Traffic Signal Installation General Notes

- The plan locations of underground utilities are approximate only. The contractor shall notify all the utility companies prior to starting any excavation on the project, in order to establish exact locations. The contractor shall be responsible for making independent investigations, as necessary, to verify all utility locations at no cost to the owner.
- All signs, signals, pavement markings and temporary traffic control devices are to conform to the Manual on Uniform Traffic Control Devices (1988 Edition) and all subsequent revisions.
- All raised objects are to be placed a minimum of 2' behind the face of curb. New traffic signal poles are to be placed a minimum of 5' behind the face of curb except where conflicts with utilities and/or right-of-way exists.
- All poles, pullboxes, controllers and pavement markings shall be field located by the Engineer and the Contractor at the nearest practical location indicated on the plan sheets.
- The signal controller timings shall be provided by the Engineer.
- The Contractor shall make application for power service, coordinating with City Officials and utility company involved, in advance of requiring the electrical service.
- The Contractor is responsible for the maintenance of existing traffic signals and/or signs after work begins at either site. Cost to be included in other items bid.
- All existing detector cabinets, controllers, signal heads, cable, poles, signs, etc. are to be removed and stored on site to be picked up by the City. Cost to be included in other items bid.
- All detector cabinet and controller bases are to be completely removed. All existing pole bases are to be removed a minimum of 6" below finished ground level. Cost to be included in other items bid.
- The Contractor shall schedule work so that the change over from existing controller cabinet to the new controller cabinet shall be done expeditiously. The Contractor shall notify the city at least 24 hours prior to signal being out of operation for traffic control by local law enforcement.
- All pavement markings, etc. will be provided by others in a separate contract prior to initiation of construction activities under this project.
- Cost of pedestrian pushbuttons and related signing R10-3, "Push Button For Green Light", to be included in Pay Item No. 908-642-A
- Contractor to strip away support cable from communication cable, Pay Item No. 908-666-B, prior to installation in underground conduit. Cost to be absorbed in Pay Item No. 908-666-B.



| DETECTOR ASSIGNMENT SUMMARY | | | | | | | | | |
|-----------------------------|-----------|-------|---------------------------------|--------------|-------------------|----------------------|---------------|------------|-----------------------------------|
| DETECTOR NUMBER | LOOP SIZE | TURNS | PED PUSHBUTTON FOR LAKE HARBOUR | PHASE CALLED | DELAY TIME (SEC.) | NO. OF UNITS CHANNEL | PRESENCE MODE | PULSE MODE | COMMENTS |
| 2A & 2B | 6'x6' | 4 | - | 2 | - | 2-1 | | X | 2.5 SEC. EXT. EACH MINIMUM RECALL |
| 4A & 4C | 6'x50' | 2-4-2 | X | 4 | - | 3-1 | X | | |
| 4B | 6'x30' | 2-4-2 | X | 4 | - | 3-2 | X | | |
| 6A & 6B | 6'x6' | 4 | - | 6 | - | 2-3 | | X | 2.5 SEC. EXT. EACH MINIMUM RECALL |
| 8A & 8C | 6'x50' | 2-4-2 | X | 8 | = | 3-3 | X | | |
| 8B | 6'x30' | 2-4-2 | X | 8 | - | 3-4 | X | | |

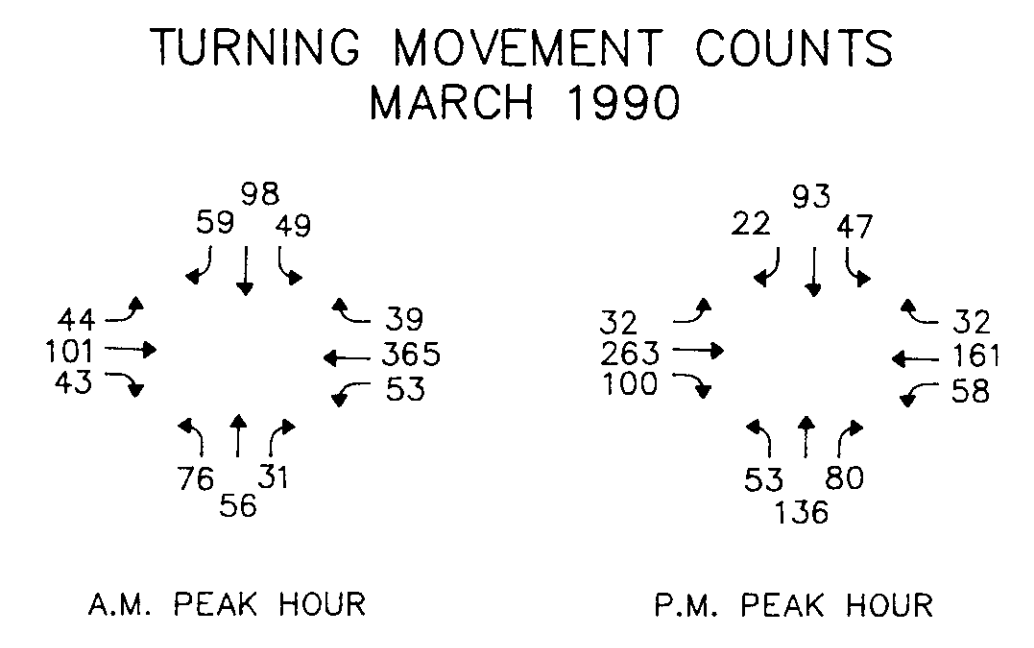
(1) INTERSECTION SIGNALS ARE TO OPERATE IN CONJUNCTION WITH, AS A CLOSED LOOP SYSTEM, INTERSECTION SIGNALS AT WHEATLEY STREET AND U.S. HIGHWAY 51, CABINET TO BE WIRED FOR A CLOSED LOOP OPERATION.



SIGNAL HEADS #2, #6 - SHALL FLASH YELLOW
 SIGNAL HEADS #4, #8 - SHALL FLASH RED
 EMERGENCY VEHICLE PRE-EMPT:
 CHANNEL 1 - #6
 CHANNEL 2 - #2
 CHANNEL 3 - #8
 CHANNEL 4 - #4

- LEGEND**
- CONTROLLER AND CABINET
 - TYPE 1 PULLBOX
 - TYPE 2 PULLBOX
 - LUMINAIRE
 - NEW MAST ARM POLE
 - NEW PEDESTAL POLE
 - EXISTING UTILITY POLE
 - TRAFFIC SIGNAL HEAD w/BACKPLATE
 - NEW PEDESTRIAN SIGNAL
 - OR ← OVERHEAD SIGN / STREET NAME SIGN
 - OR ▭ VEHICLE LOOP DETECTOR
 - P.B. PEDESTRIAN PUSHBUTTON
 - 5/c 5 CONDUCTOR SIGNAL CABLE - AWG #14
 - 7/c 7 CONDUCTOR SIGNAL CABLE - AWG #14
 - S.C. SHIELDED CABLE (2 CONDUCTOR - AWG #14)
 - POW POWER CABLE (2 CONDUCTOR - AWG #6)
 - COM COMMUNICATION CABLE (6PR/19)
 - PED PEDESTRIAN PUSHBUTTON CABLE (2 CONDUCTOR - AWG #14)
 - CONDUIT RUN
 - - - CONDUIT RUN (JACKED)
 - GUY ANCHOR
 - EMERGENCY VEHICLE DETECTOR
 - E.C. EMERGENCY VEHICLE CABLE (3 CONDUCTOR AWG #20)

T.B.M. Elev. 342.86
 Chisel Square on walk at North-east corner of Jr. Food Mart
 78 Ft. Rt. Sta. 24+92



NOTE: TYPE 2 SERVICE BOXES AND STEEL CONDUIT UNDER LAKE HARBOUR DRIVE AND PEAR ORCHARD ROAD ARE IN PLACE AND NOT REQUIRED FOR THIS PROJECT.

| SIGNAL POLE CHART | | | PRE-EMPT OPTICAL DETECTOR | |
|-------------------|-----------------|--|---------------------------|------------|
| LOCATION CORNER | MAST ARM LENGTH | SIGNAL HEAD SPACING DISTANCE FROM POLE | DISTANCE FROM POLE | TYPE |
| NE | 36' | 35.5', 13.5' | 31' | 1 EYE/1 CH |
| NW | 44' | 39.5', 29.5' | 35' | 1 EYE/1 CH |
| SE | 40' | 39.5', 29.5' | 35' | 1 EYE/1 CH |
| SW | 44' | 43.5', 21.5' | 39' | 1 EYE/1 CH |

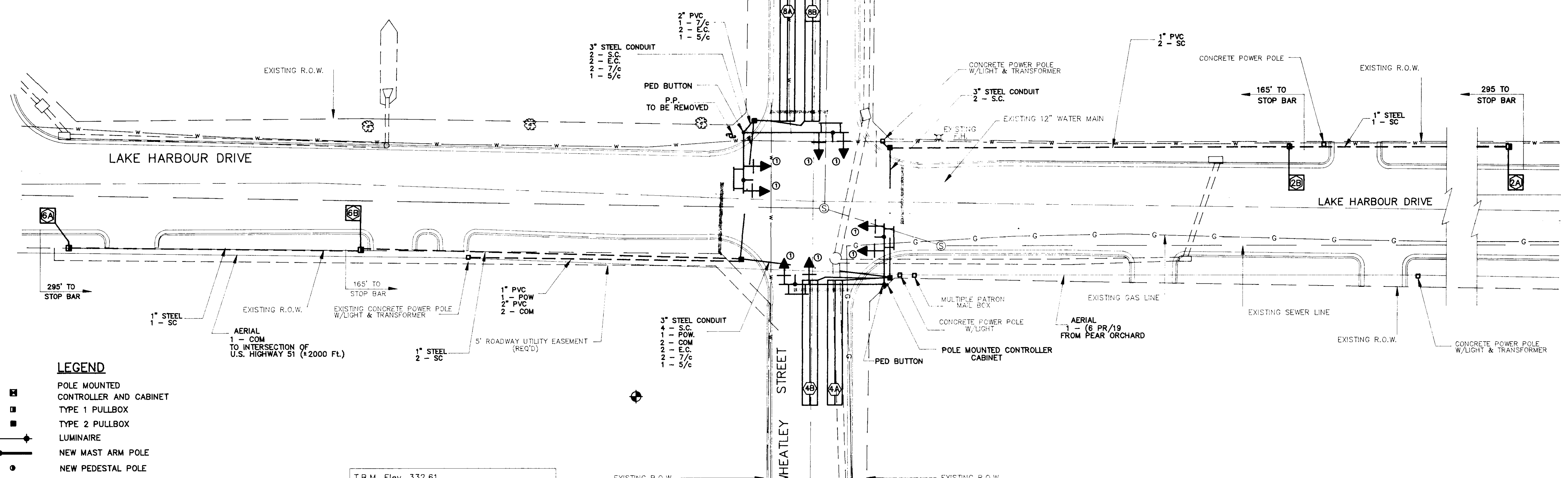
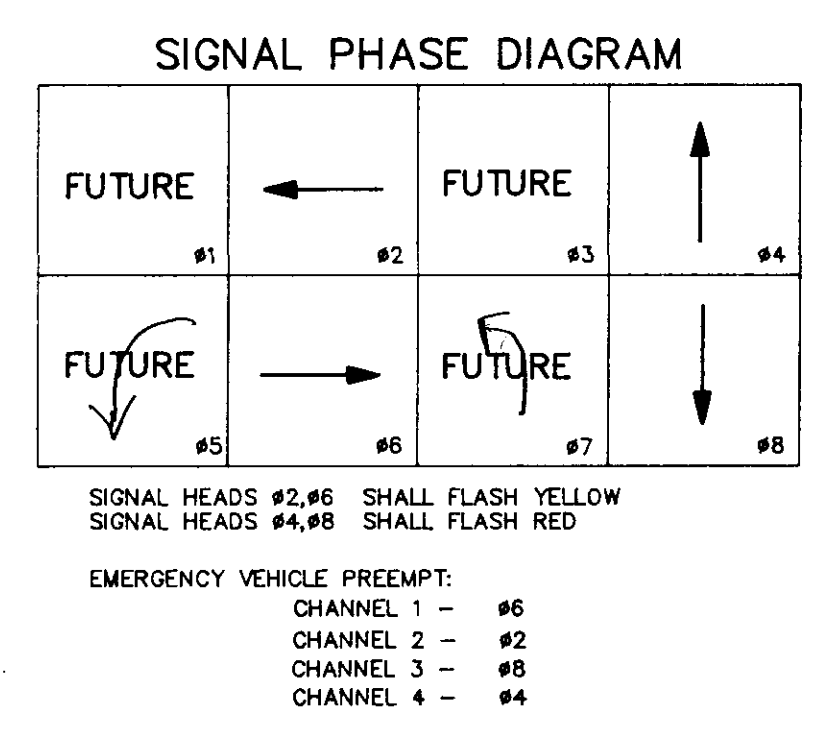
**FEDERAL AID PROGRAM
 STP-8323 (1) /48-8323-00-001-10
 CITY OF RIDGELAND
 TRAFFIC SIGNAL INSTALLATION
 LAKE HARBOUR DRIVE AT PEAR ORCHARD ROAD**

WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi

DRAWN BY: E.L.G. DATE: 3-23-92 SHEET NUMBER
 REVIEWED BY: K.O. SCALE: 1"=20' 4 OF 10

| DETECTOR ASSIGNMENT SUMMARY | | | | | | | | | |
|-----------------------------|-----------|-------|------------------------|--------------|-------------------|----------------------|---------------|------------|-------------------------------------|
| DETECTOR NUMBER | LOOP SIZE | TURNS | PEDESTRIAN PUSH BUTTON | PHASE CALLED | DELAY TIME (SEC.) | NO. OF UNITS CHANNEL | PRESENCE MODE | PULSE MODE | COMMENTS |
| 2A & 2B | 6'x6' | 3 | - | 2 | - | 2-1,2-2 | | X | 2.5 SEC. EXT. (EACH) MINIMUM RECALL |
| 4A & 4B | 6'x50' | 2-4-2 | X | 4 | - | 5-1 | X | | |
| 6A & 6B | 6'x6' | 3 | - | 6 | - | 3-1,3-2 | | X | 2.5 SEC. EXT. (EACH) MINIMUM RECALL |
| 8A & 8B | 6'x50' | 2-4-2 | X | 8 | - | 5-2 | X | | |

NOTE: INTERSECTION SIGNALS ARE TO OPERATE IN CONJUNCTION WITH, AS A CLOSED LOOP SYSTEM, INTERSECTION SIGNALS AT U.S. HIGHWAY 51 AND PEAR ORCHARD ROAD. CABINET SHALL BE WIRED FOR CLOSED LOOP OPERATION.

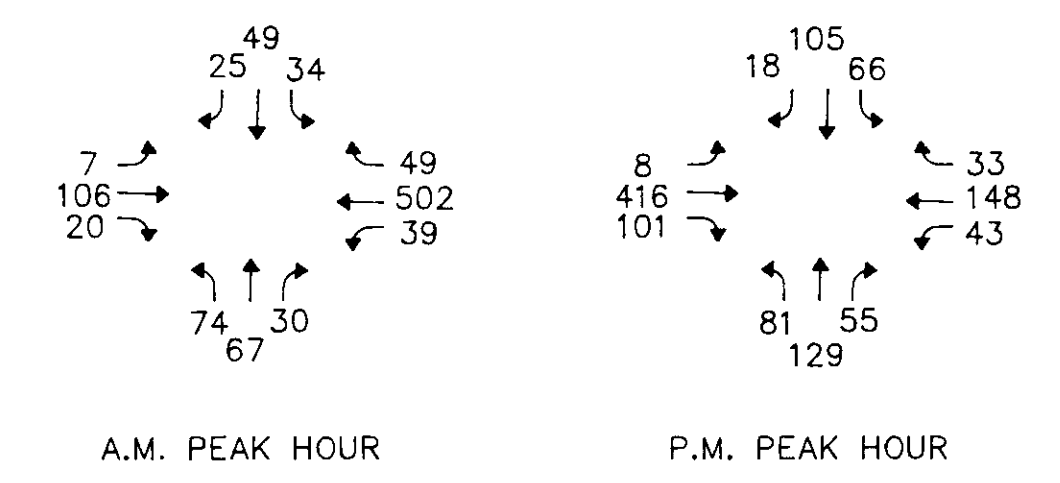


LEGEND

- ☐ POLE MOUNTED CONTROLLER AND CABINET
- ☐ TYPE 1 PULLBOX
- ☐ TYPE 2 PULLBOX
- ☐ LUMINAIRE
- ☐ NEW MAST ARM POLE
- ☐ NEW PEDESTAL POLE
- ☐ EXISTING UTILITY POLE
- ☐ TRAFFIC SIGNAL HEAD w/BACKPLATE
- ☐ NEW PEDESTRIAN SIGNAL
- OR = OVERHEAD SIGN / STREET NAME SIGN
- ☐ OR □ VEHICLE LOOP DETECTOR
- P.B. PEDESTRIAN PUSHBUTTON
- 5/c 5 CONDUCTOR SIGNAL CABLE - AWG #14
- 7/c 7 CONDUCTOR SIGNAL CABLE - AWG #14
- S.C. SHIELDED CABLE (2 CONDUCTOR - AWG #14)
- POW POWER CABLE (2 CONDUCTOR - AWG #6)
- COM COMMUNICATION CABLE (6 PR/19)
- PED PEDESTRIAN PUSHBUTTON CABLE (2 CONDUCTOR - AWG #14)
- CONDUIT RUN
- CONDUIT RUN (JACKED)
- GUY ANCHOR
- ☐ EMERGENCY VEHICLE DETECTOR
- E.C. EMERGENCY VEHICLE CABLE (3 CONDUCTOR AWG #20)

T.B.M. Elev. 332.61
Chisel Square Southeast corner of porch
at House NO.501 in Southwest corner
of Wheatley Street and Lake Harbour Drive

**TURNING MOVEMENT COUNTS
MARCH 1990**



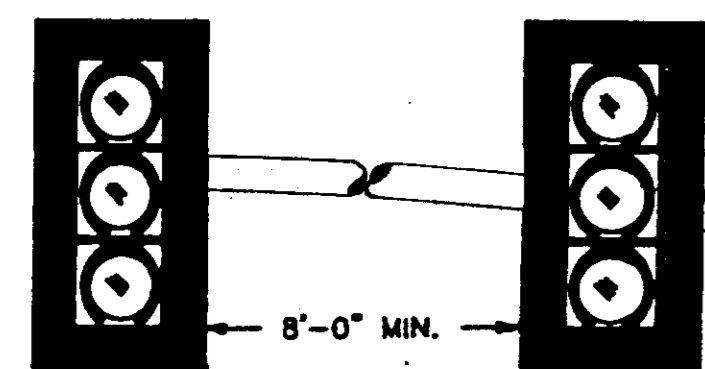
NOTE: 1. CLOSED LOOP ON STREET MASTER TO BE INSTALLED IN EXISTING CABINET LOCATED IN NORTHEAST QUADRANT OF U.S. HIGHWAY 51 IN AT LAKE HARBOUR INTERSECTION.

| SIGNAL POLE CHART | | | PRE-EMPT OPTICAL DETECTOR | |
|-------------------|-----------------|---|---------------------------|------------|
| LOCATION CORNER | MAST ARM LENGTH | SIGNAL HEAD SIGN/SPACING DISTANCE FROM POLE | DISTANCE FROM POLE | TYPE |
| NW | 42' | 30',40' | 35' | 1 EYE/1 CH |
| NW | 24' | 23.5',13.5' | 19' | 1 EYE/1 CH |
| SE | 28' | 27.5',17.5' | 23' | 1 EYE/1 CH |
| SE | 42' | 30',40' | 35' | 1 EYE/1 CH |

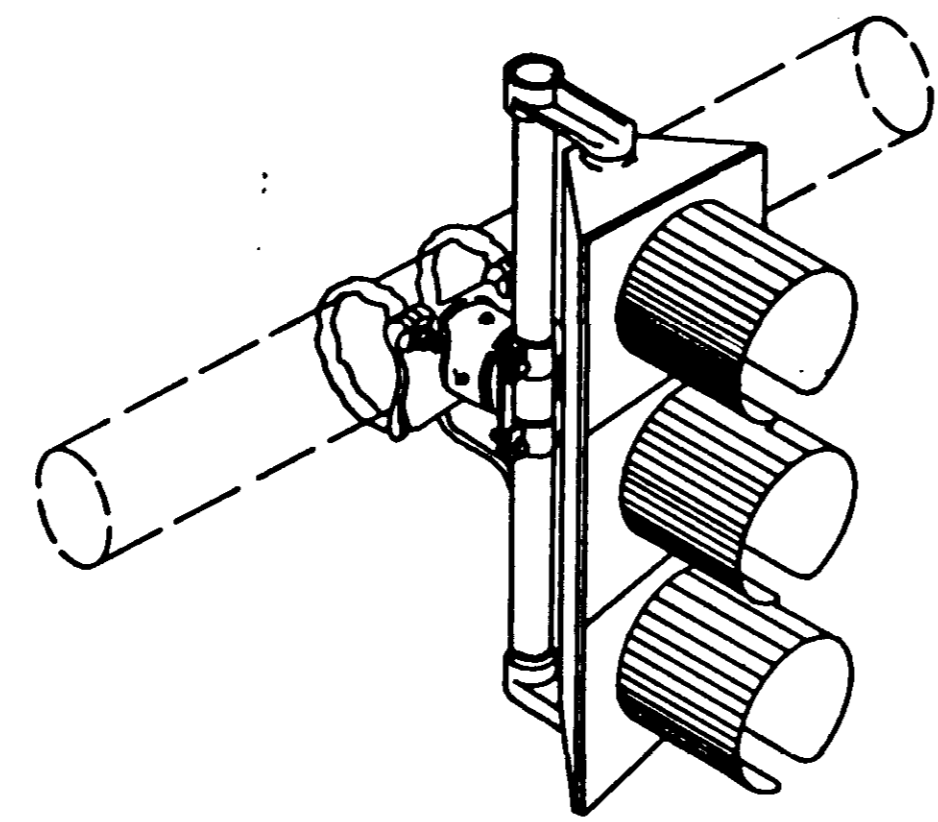
FEDERAL AID PROGRAM
STP-8323 (1) /48-8323-00-001-10
CITY OF RIDGELAND
TRAFFIC SIGNAL INSTALLATION
LAKE HARBOUR DRIVE AT WHEATLEY STREET

AGGONER ENGINEERING, INC.
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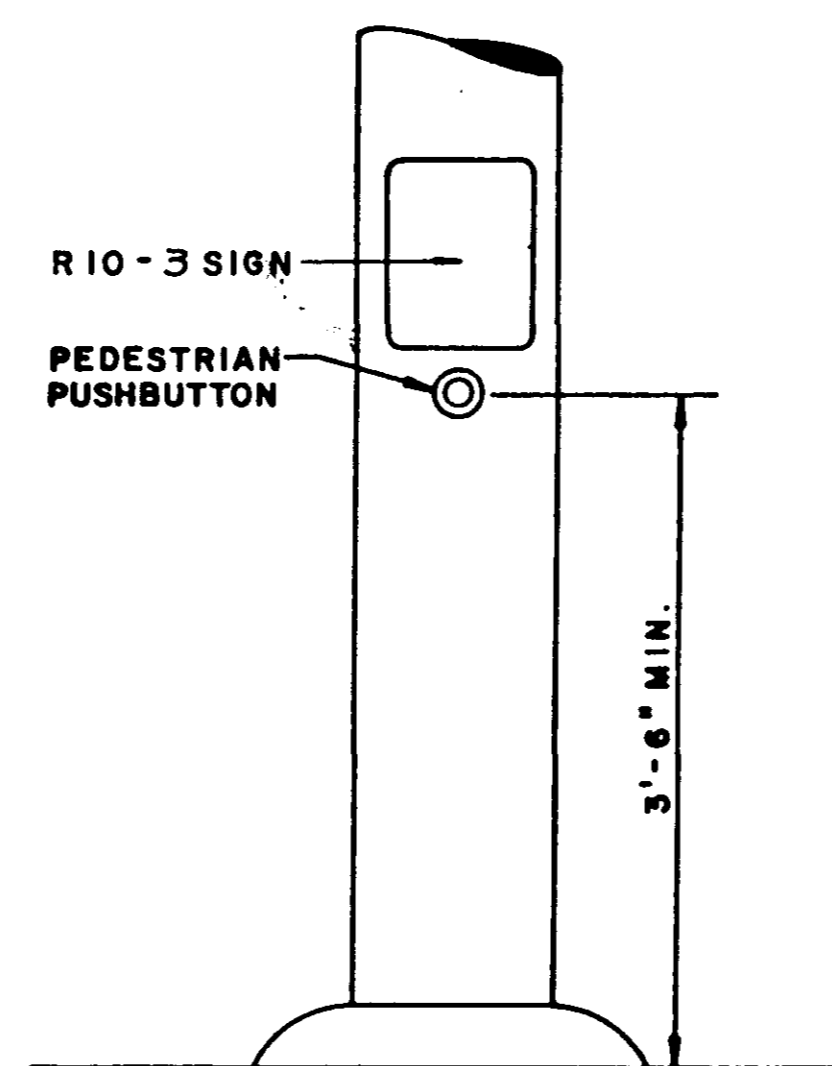
| | | |
|-------------------|-----------------|--------------|
| DRAWN BY: E.L.G. | DATE: 3-23-92 | SHEET NUMBER |
| REVIEWED BY: B.O. | SCALE: 1" = 20' | 5 OF 10 |



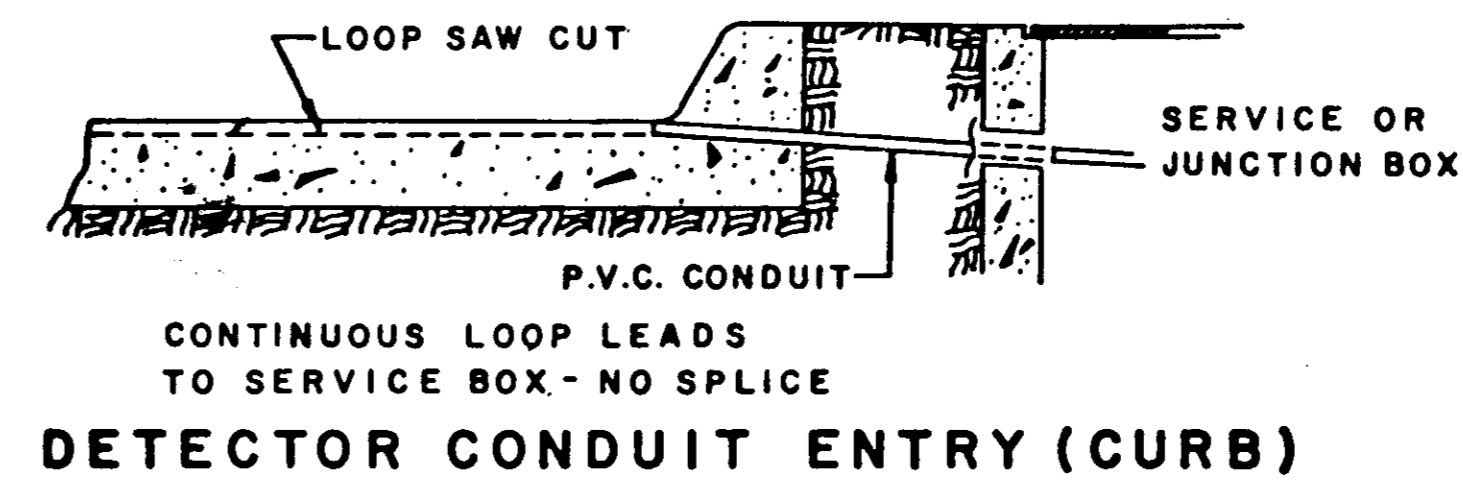
MINIMUM HEIGHT TO BOTTOM OF MAST ARM MOUNTED SIGNAL SHALL BE 17'-0" TO 19'-0" EACH MAST ARM MOUNTED SIGNAL SHALL HAVE A SEPARATE RUN OF SIGNAL CABLE FROM THE HANDHOLE IN POLE BASE TO THE SIGNAL HEAD.



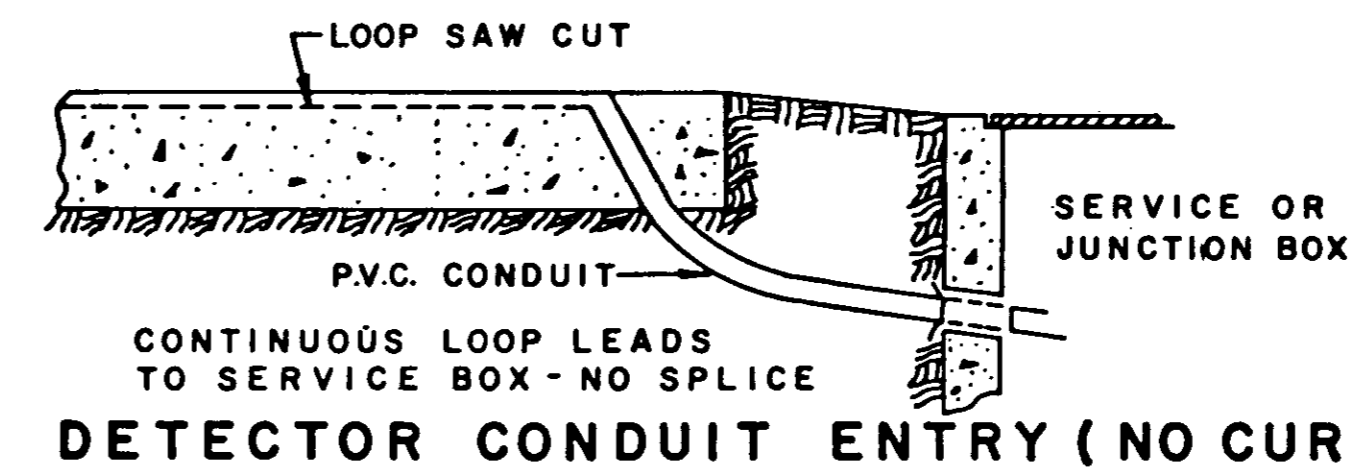
MAST ARM MOUNTING BRACKET



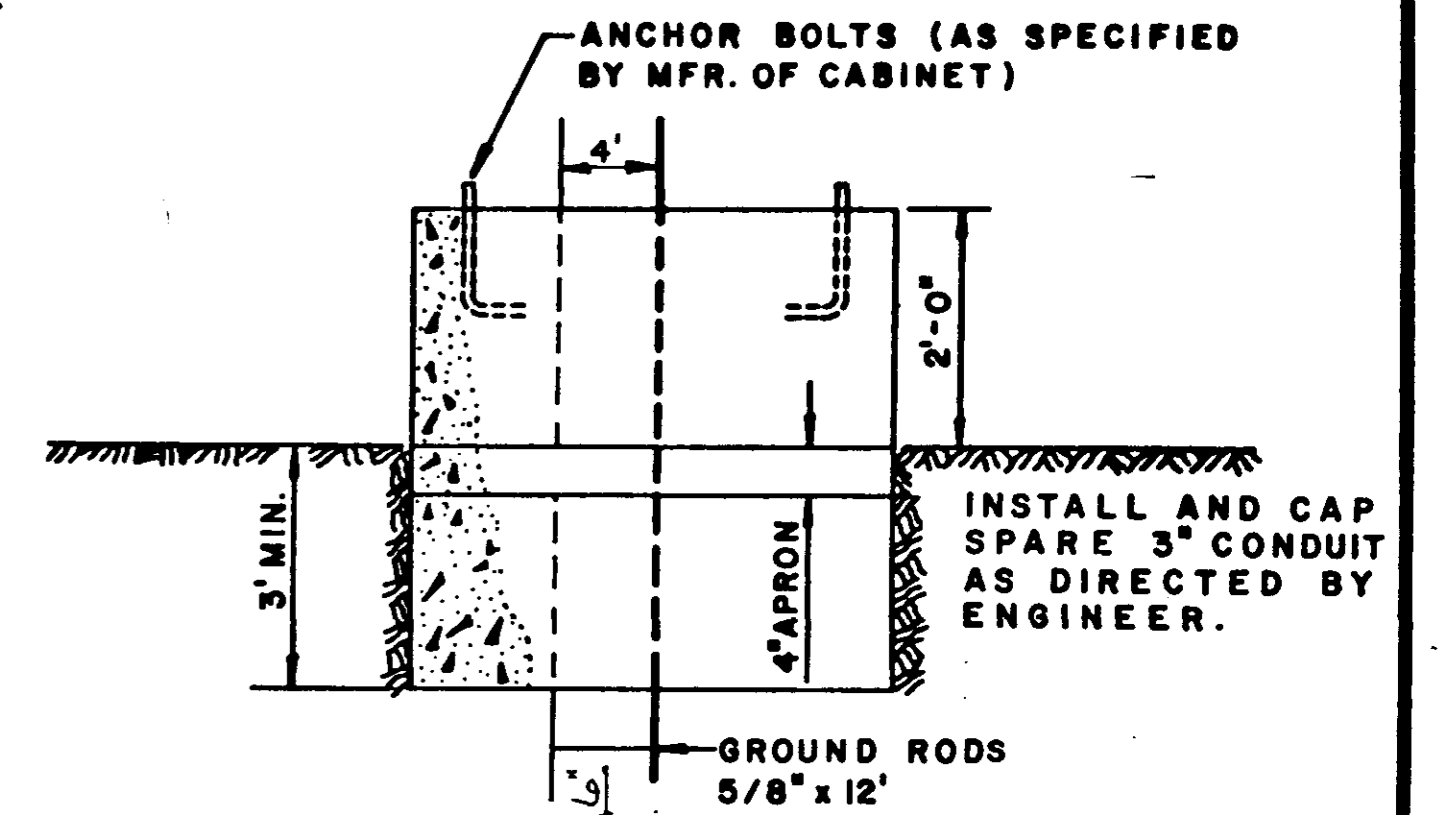
PEDESTRIAN PUSHBUTTON



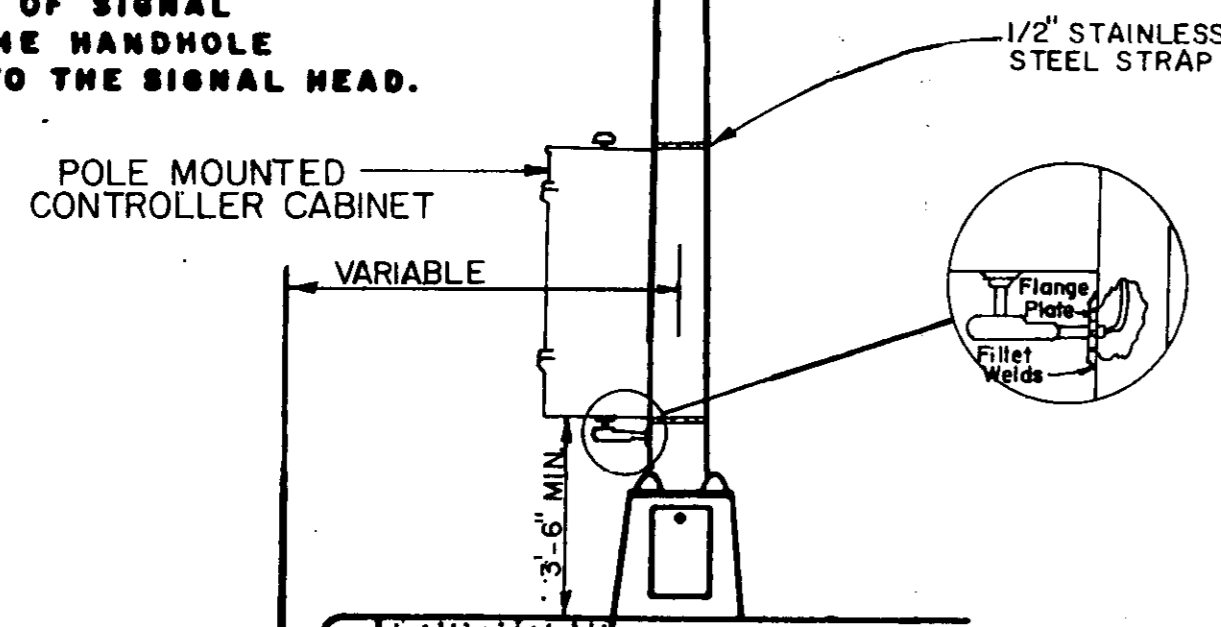
DETECTOR CONDUIT ENTRY (CURB)



DETECTOR CONDUIT ENTRY (NO CURB)

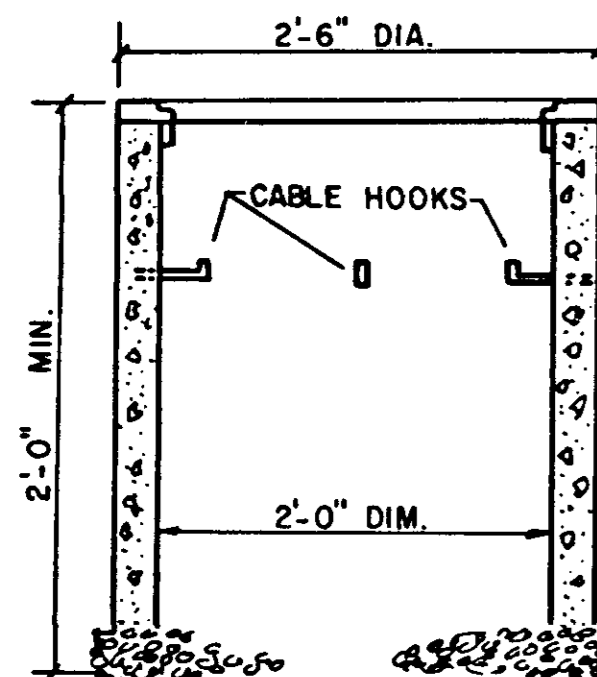


CONTROLLER PAD



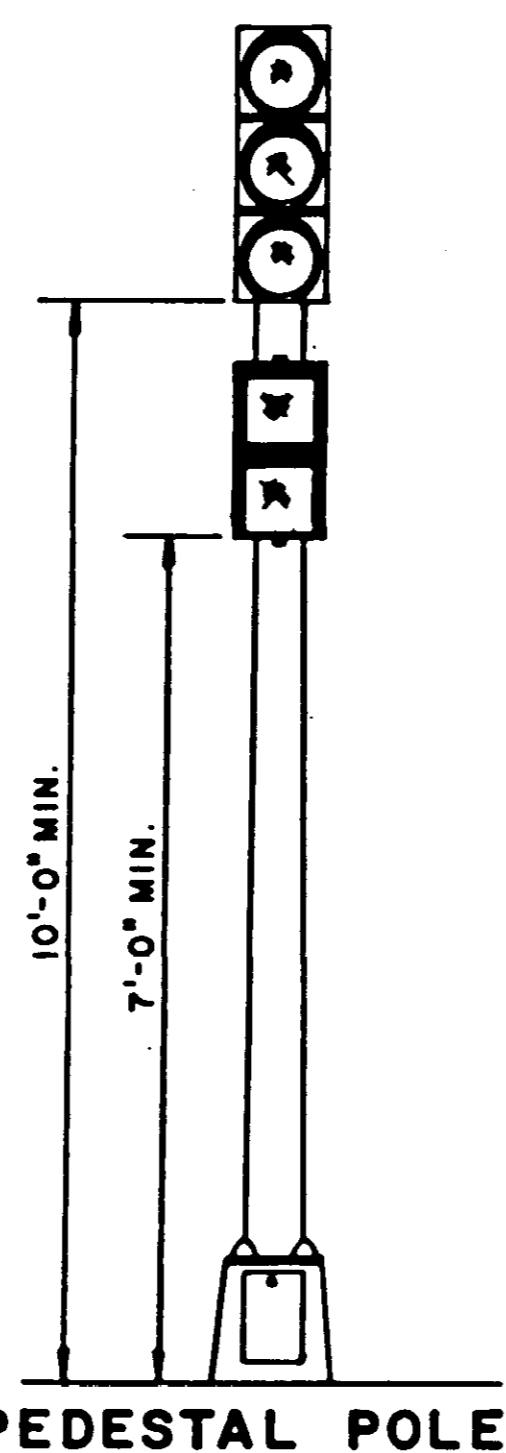
MAST ARM POLE

CAST IRON RING AND COVER, 80 LB. MIN. RAISED LETTERS ON CAST IRON COVER TO READ "SIGNAL" UNLESS OTHERWISE NOTED ON THE PLANS, THE SERVICE BOX MAY ALSO BE POURED IN PLACE WITH 6" PORTLAND CEMENT WALLS.

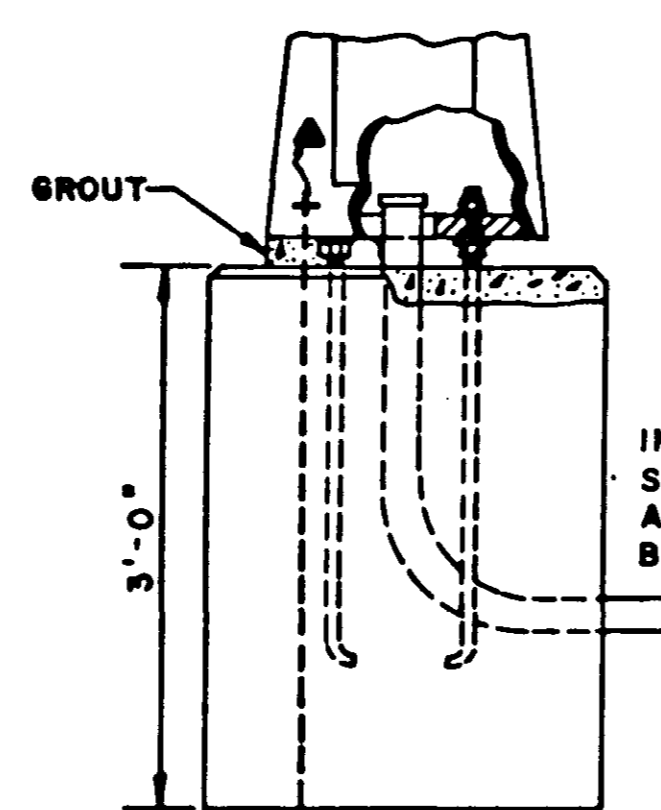
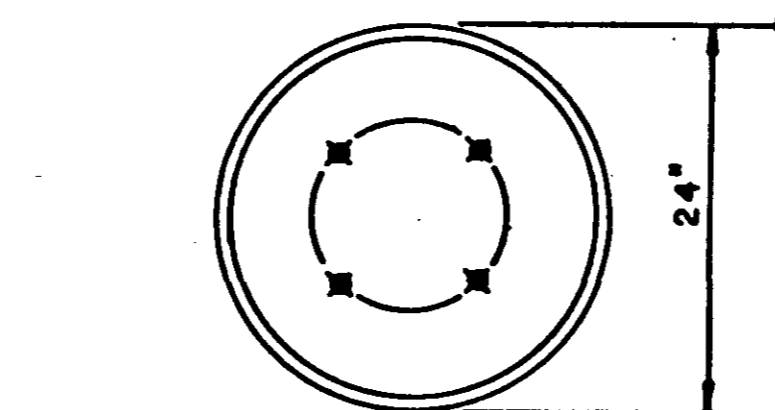


PRE-CAST CONCRETE SERVICE BOX

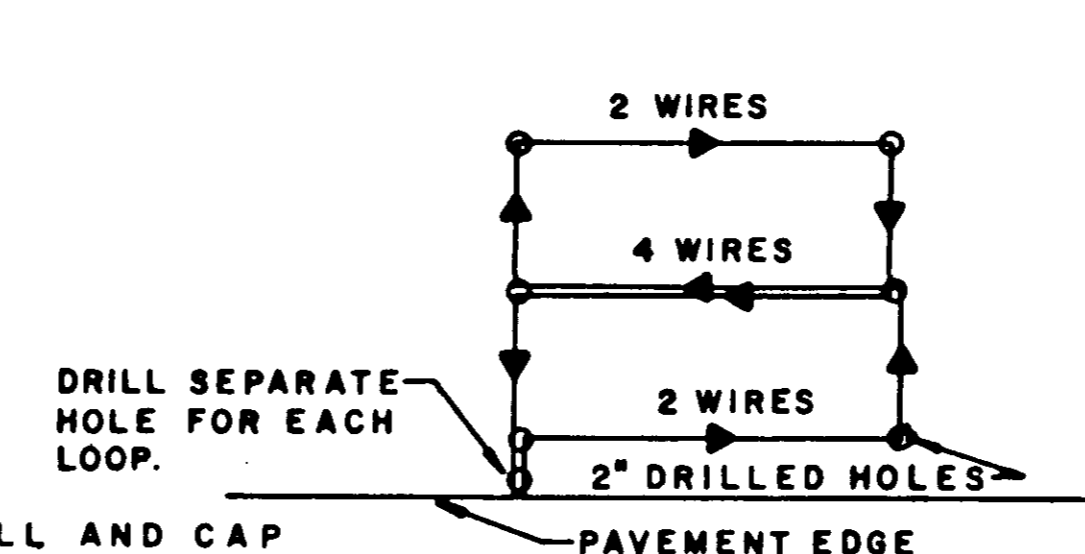
CONDUIT EXTENSIONS ABOVE BASE SHALL HAVE A PLASTIC OR METAL RIM BUSHING TO PREVENT THE CHAFING OF CABLES. TOP OF BASE SHALL NOT BE HIGHER THAN TOP OF SURFACE OR CURB.



PEDESTAL POLE

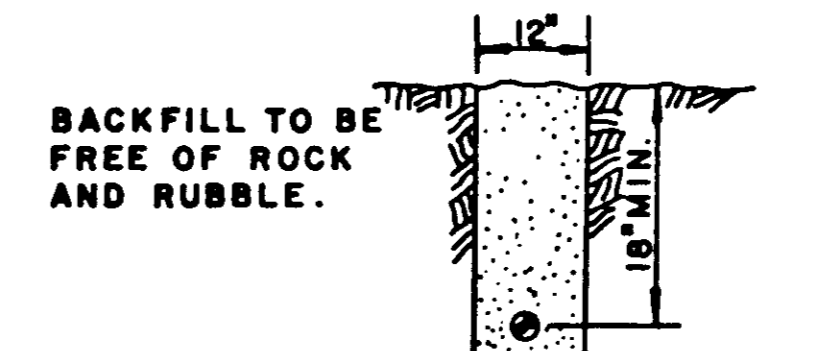


PEDESTAL POLE BASE

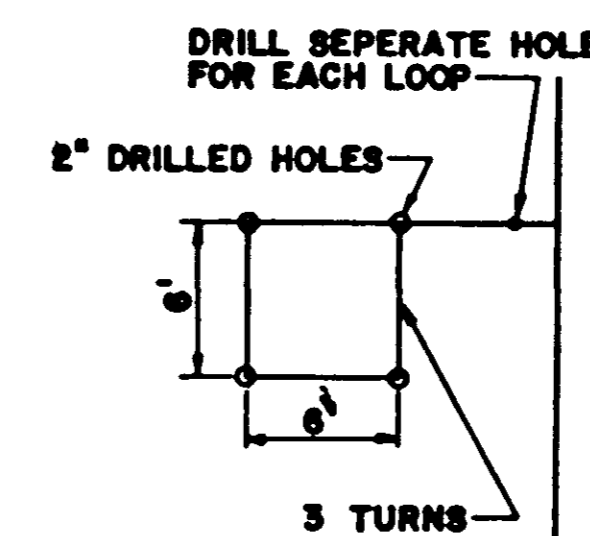


QUADRAPOLE LOOP DETECTOR LOOP

SLOTS IN PAVEMENT FOR LOOPS TO BE CUT A MINIMUM OF 3/8" WIDE AND 1-1/2" TO 2" DEEP. SLOTS TO BE FILLED WITH LOOP SEALANT MATERIAL APPROVED BY THE ENGINEER. THE CONNECTION OF THE LOOP WIRE WITH THE FEEDER CABLE SHALL BE MADE WITH A SOLDERED "WESTERN UNION" TYPE SPLICE, WRAPPED WITH WATERPROOF TAPE AND COATED WITH A WATER-TIGHT PROTECTIVE COVERING. FEEDER CABLE AND LOOP WIRE SHALL BE OF CONTINUOUS RUN WITH NO SPLICES.



TRENCHING IN UNPAVED AREAS



NOTES:

THE ENGINEER IN CHARGE OF CONSTRUCTION SHALL STAKE ALL LOCATIONS FOR TRAFFIC SIGNAL POLES AND PEDESTALS TO BE INSTALLED. FINAL POSITIONS AND POINTING OF SIGNAL FACES TO BE DETERMINED IN THE FIELD.

TRAFFIC SIGNAL HEADS SHALL REMAIN COVERED DURING CONSTRUCTION UNTIL THE ENTIRE INSTALLATION IS IN PLACE AND IN OPERATION.

ALL WIRING INSTALLED SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND LOCAL ORDINANCES AND REQUIREMENTS.

THE POWER COMPANY SHOULD BE NOTIFIED IN ADVANCE AS TO WHEN THE SIGNAL SYSTEM NEED BE ENERGIZED.

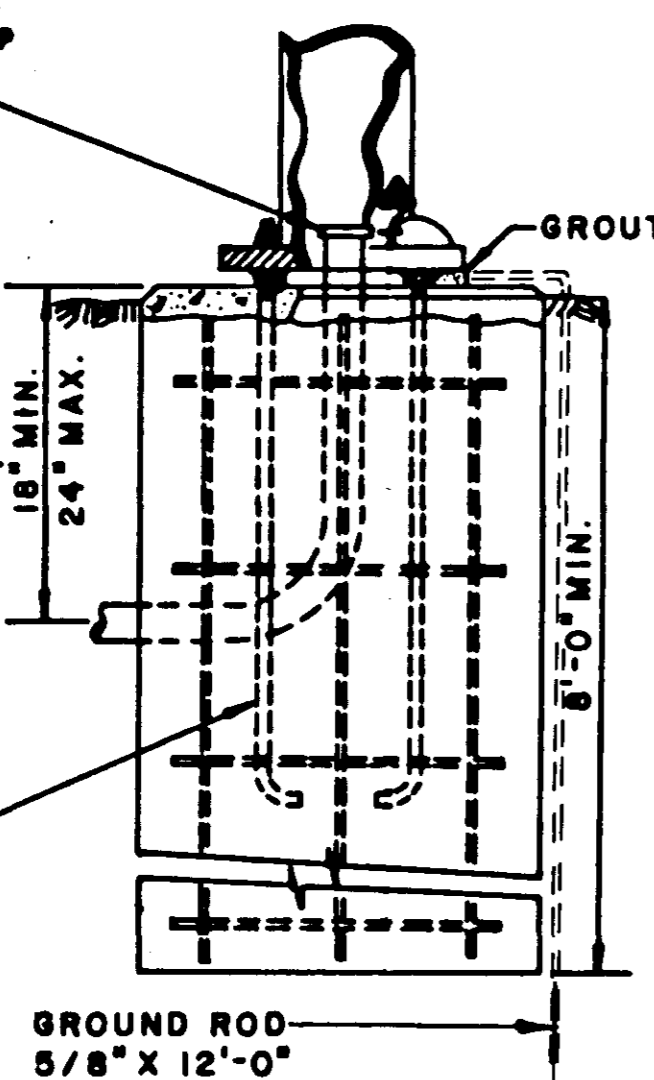
THE TRAFFIC SIGNAL SYSTEM SHALL BE COMPLETE AND THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT NECESSARY FOR THE SATISFACTORY OPERATION OF ELECTRICAL APPARATUS AND FOR THE COMPLETE OPERATION OF THE TRAFFIC SIGNAL SYSTEM WHETHER SPECIFICALLY MENTIONED OR NOT.

IN SIDEWALK AREAS TOP OF BASE TO BE POURED TO BOTTOM OF SIDEWALK. SIDEWALK THEN TO BE POURED OR REPLACED TO NEAREST JOINT OR AS DIRECTED BY THE ENGINEER.

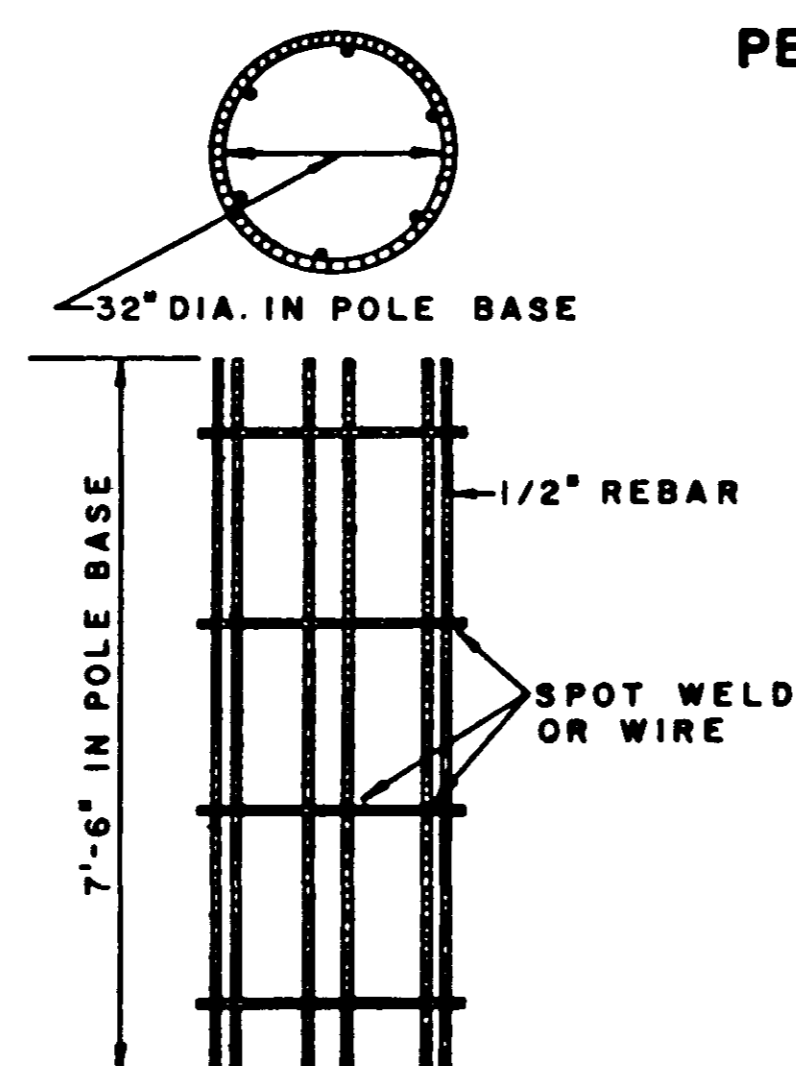
NO. 6 BARE COPPER GROUND CONDUCTOR FROM INTERNAL GROUNDING NUT TO CLAMP ON GROUND ROD.

ANCHOR BOLTS AS SPECIFIED BY POLE MANUFACTURER

INSTALL AND CAP SPARE 2" CONDUIT AS DIRECTED BY ENGINEER.



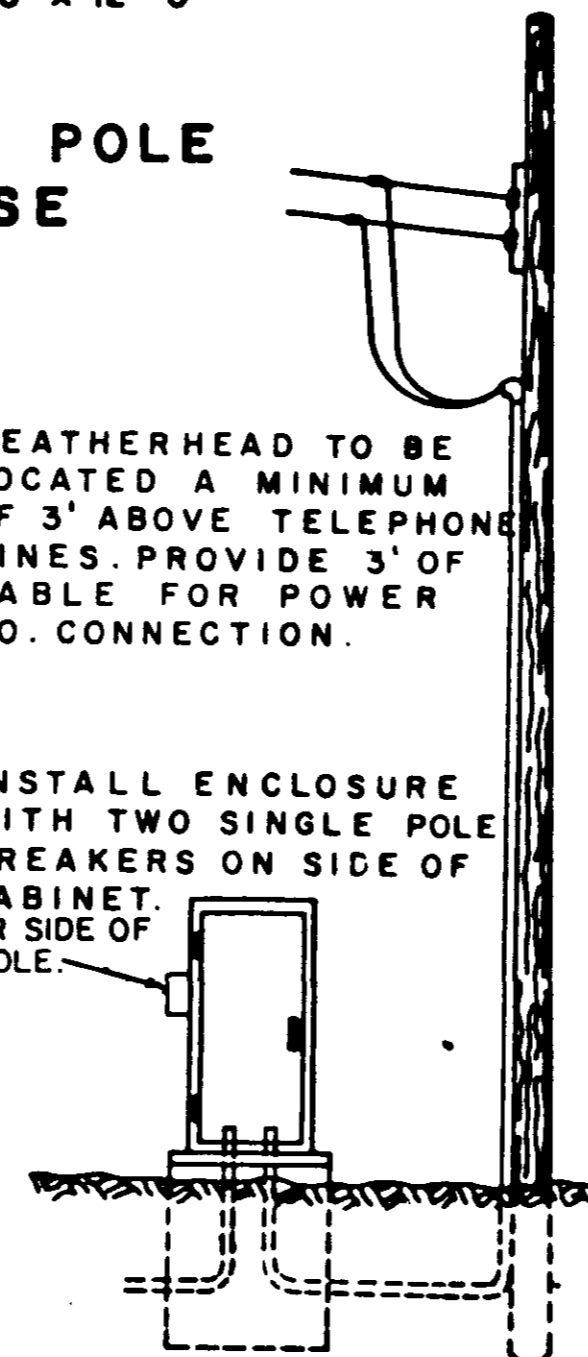
MAST ARM POLE BASE



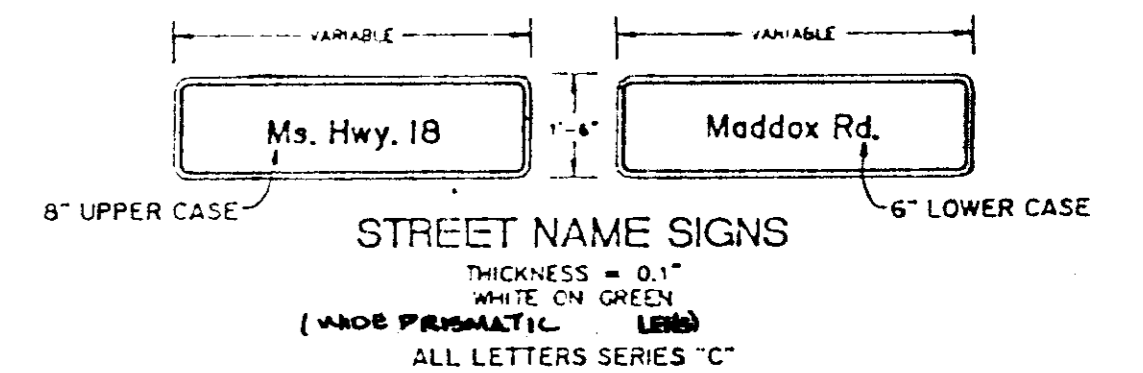
REBAR CAGE

WEATHERHEAD TO BE LOCATED A MINIMUM OF 3' ABOVE TELEPHONE LINES. PROVIDE 3' OF CABLE FOR POWER CO. CONNECTION.

INSTALL ENCLOSURE WITH TWO SINGLE POLE BREAKERS ON SIDE OF CABINET OR SIDE OF POLE.



POWER SERVICE



CITY OF RIDGELAND

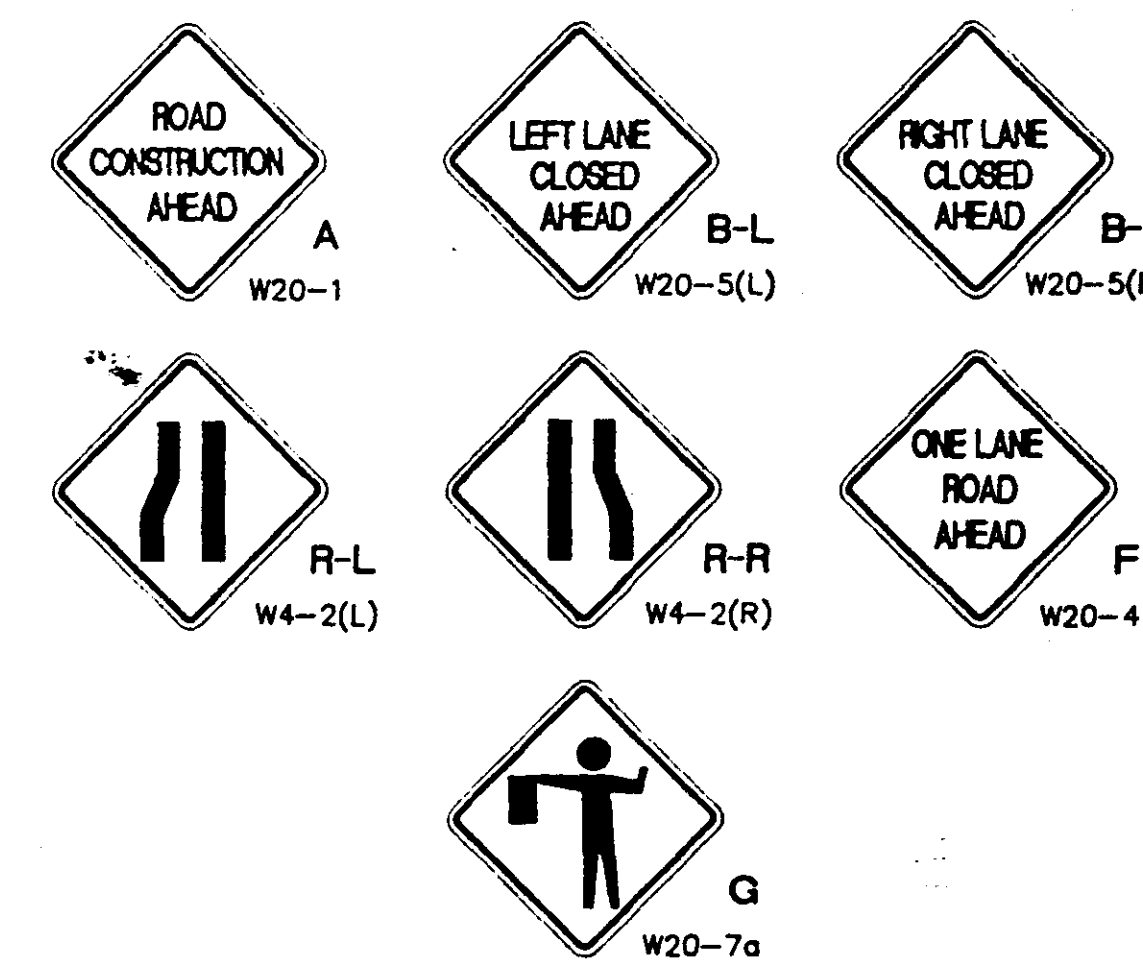
TRAFFIC SIGNAL INSTALLATION

DETAIL SHEET

WAGGONER ENGINEERING CO. INC. Consulting Engineers - Jackson / Brandon, Ms.

DRAWN BY: T.D.L. DATE: AUGUST, 1988 SHEET NO. CHECKED BY: M.L. SCALE: N.T.S. APPROVED BY: J.A.W. 6 OF 10

SIGN LEGEND



GENERAL NOTES

1. ADDITIONAL ADVANCE WARNING SIGNS MAY BE NECESSARY.
2. POST MOUNTED SIGNS SHALL HAVE A 7' MINIMUM MOUNTING HEIGHT.
3. PAYMENT FOR ALL SIGNS, CONES, DRUMS, STEEL PLATES AND OTHER MATERIALS, BARRICADES, LABOR AND INCIDENTALS REQUIRED TO IMPLEMENT THE TRAFFIC CONTROL PLAN SHALL BE INCLUDED UNDER PAY ITEMS 618-A MAINTENANCE OF TRAFFIC.
4. APPROACH SIDE TRAFFIC CONTROL TO BE USED WHEN WORK OCCURS ON EITHER THE APPROACH SIDE OR THE FAR SIDE OF THE INTERSECTION. FAR SIDE TRAFFIC CONTROL IS NOT NEEDED WHEN WORK IS CONFINED TO THE APPROACH SIDE ONLY.
5. FOR A DIVIDED HIGHWAY SITUATION, A SECOND SET OF ADVANCE WARNING SIGNS SHALL BE ERECTED IN MEDIAN AREA (8' MIN. MEDIAN WIDTH REQUIRED).
6. CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE A LANE OF TRAFFIC DURING THE TIME PERIODS OF 7:00 - 9:00 A.M. & 4:00 - 6:00 P.M. WEEKDAYS.

LEGEND

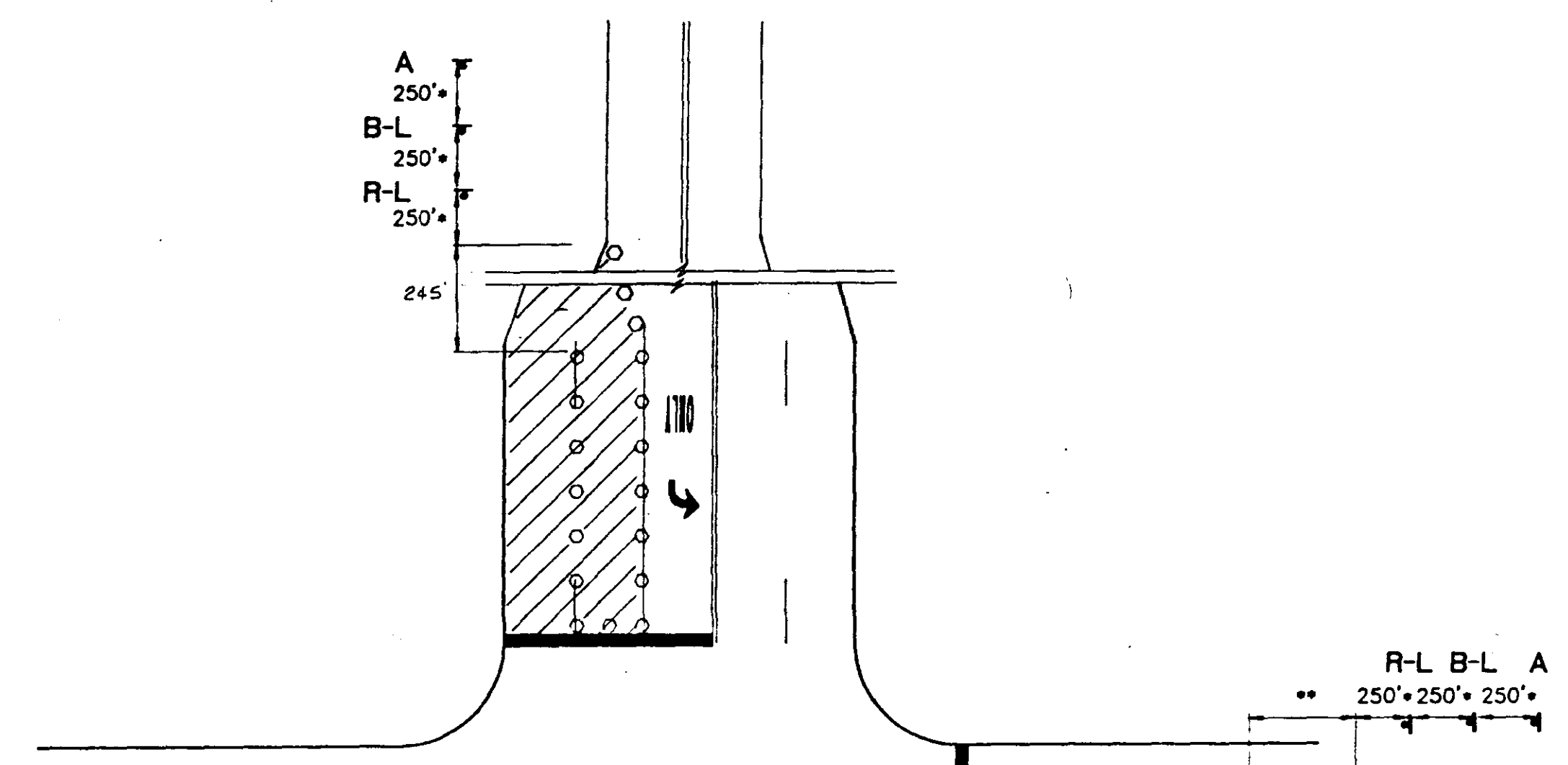
- DRUMS (30' MAXIMUM SPACING) - 36" CONES MAY BE USED AS A SUBSTITUTE FOR SHORT TERM WORK OR AS DIRECTED BY ENGINEER
- 4 A SIGNS - SEE SIGN LEGEND
MIN. SIZE 48" x 48", BLACK ON ORANGE BACKGROUND
- FLAGGER WITH PADDLE - 18" STOP/SLOW PADDLES SHALL BE USED. HANDHELD FLAGS SHALL NOT BE ACCEPTED AS PROPER TRAFFIC CONTROL DEVICES FOR FLAGGING OPERATION.
- ▨ WORK AREA ▩ BUFFER AREA
- * CONSIDERED MINIMUM DISTANCE - ENGINEER TO DETERMINE APPROPRIATE SPACING IN THE FIELD
- ** SPEED LIMIT BUFFER LENGTH TAPER LENGTH

| SPEED LIMIT | BUFFER LENGTH | TAPER LENGTH |
|-------------|---------------|--------------|
| M.P.H. | FEET | FEET |
| 25 | | 125 |
| 30 | 100 | 175 |
| 35 | | 250 |
| 40 | | 325 |
| 45 | | 550 |
| 60 | 300 | 720 |

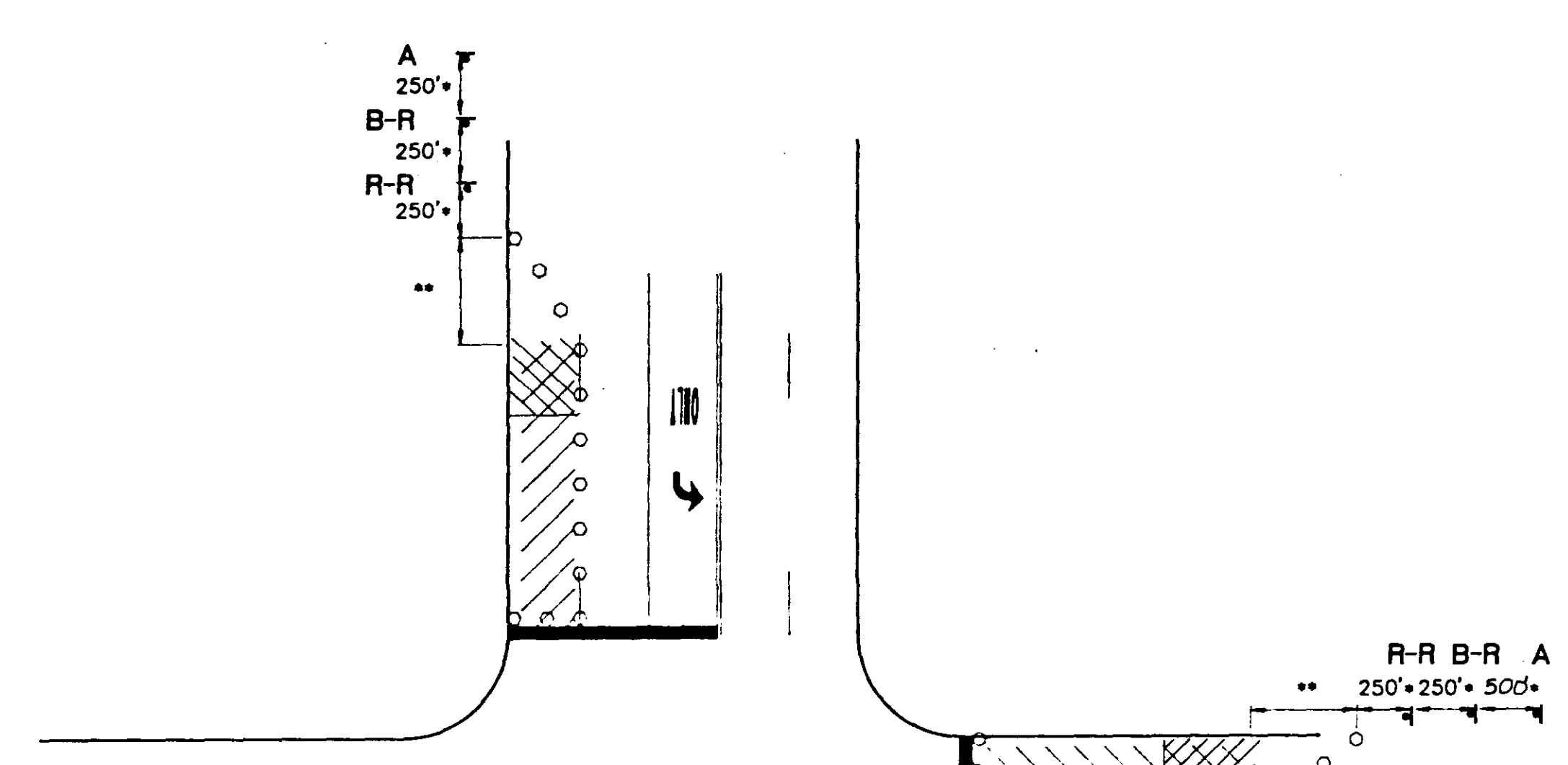
CITY OF RIDGELAND

STANDARD DETAILS
TYPICAL TRAFFIC
CONTROL PLANS

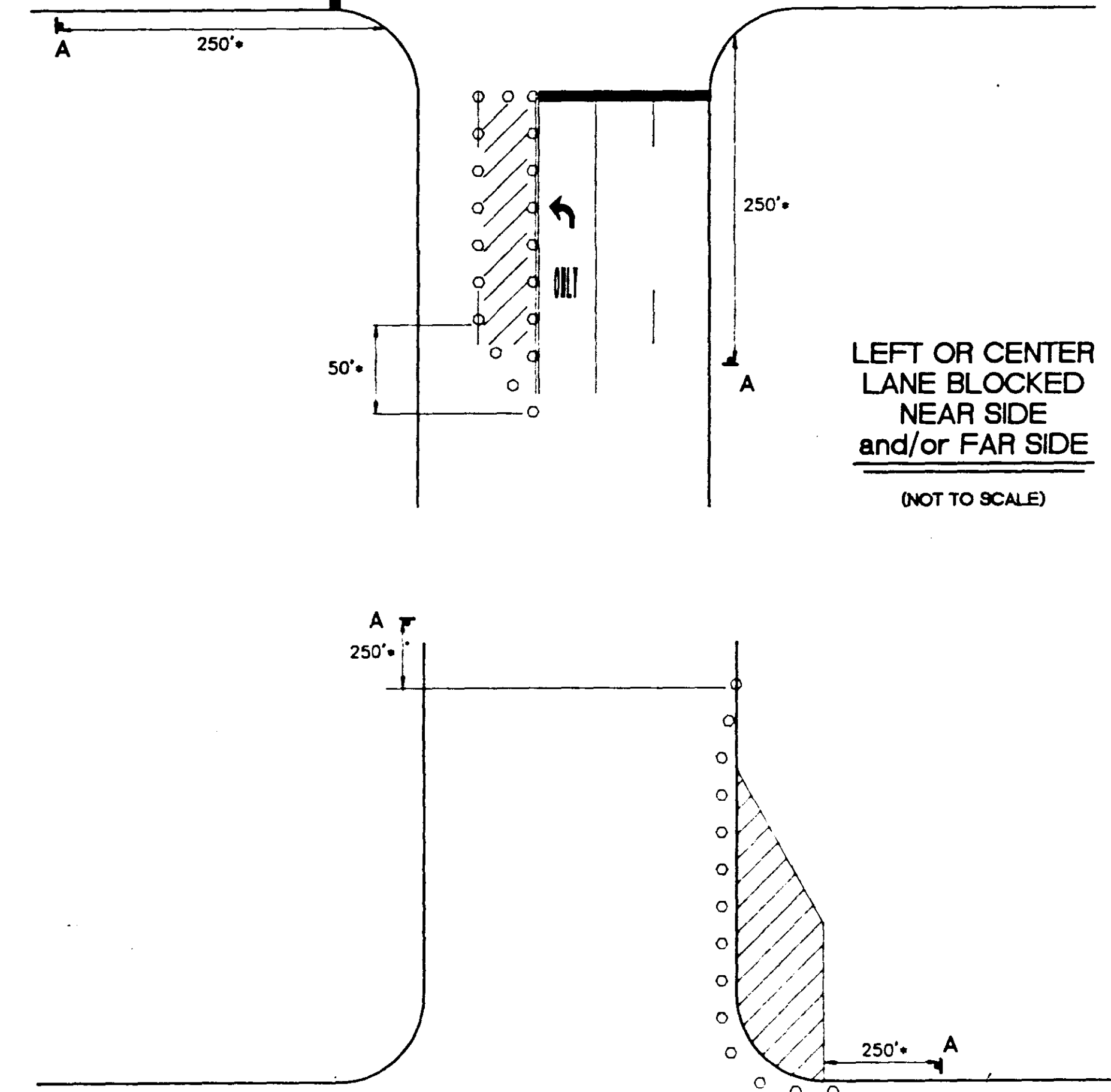
| | | |
|-------|--------------|-------------|
| DSGN: | | DRAWING NO. |
| DRWN: | | 7 OF 10 |
| CHKD: | | |
| SCALE | 1/2" = 1'-0" | |



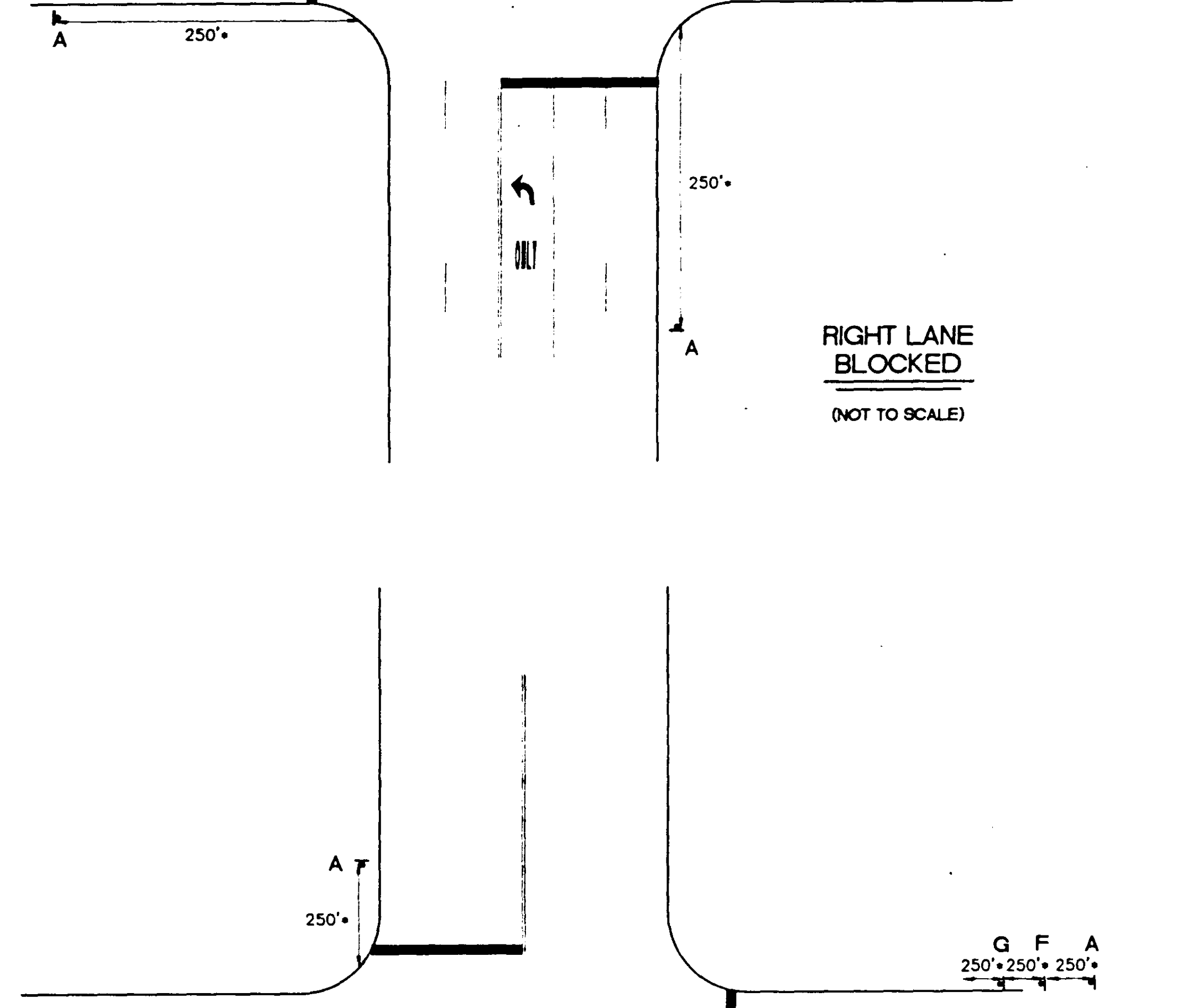
LEFT OR CENTER LANE BLOCKED NEAR SIDE and/or FAR SIDE
(NOT TO SCALE)



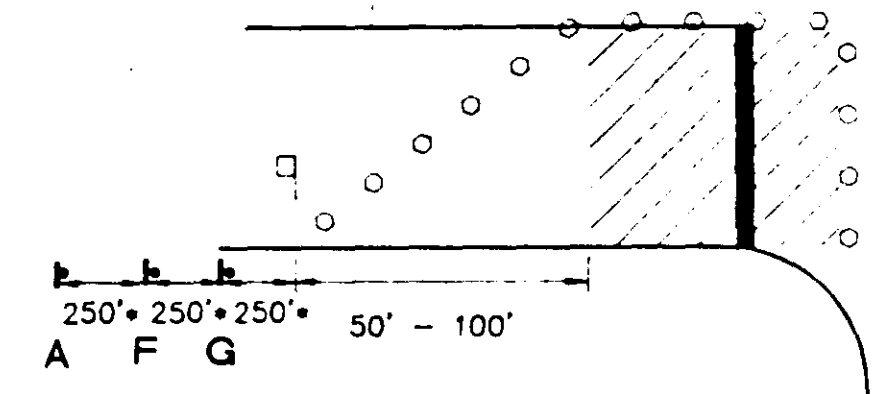
RIGHT LANE BLOCKED
(NOT TO SCALE)



WORK OFF OF ROADWAY
(NOT TO SCALE)



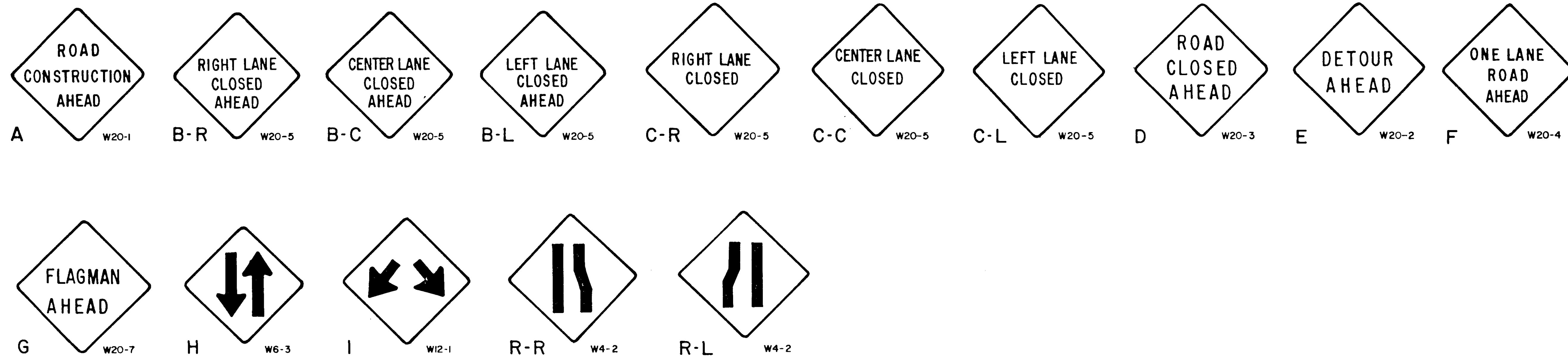
ONE LANE OPERATION
(NOT TO SCALE)



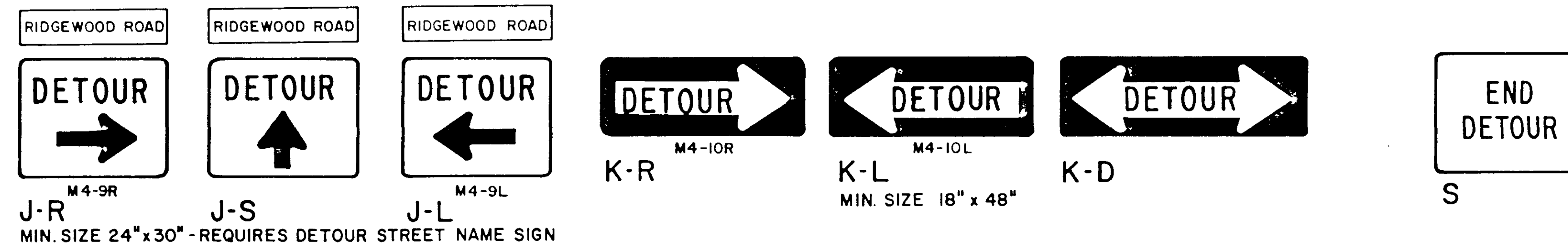
ONE LANE OPERATION
(NOT TO SCALE)

1482-010.DWG(95,35)(03)

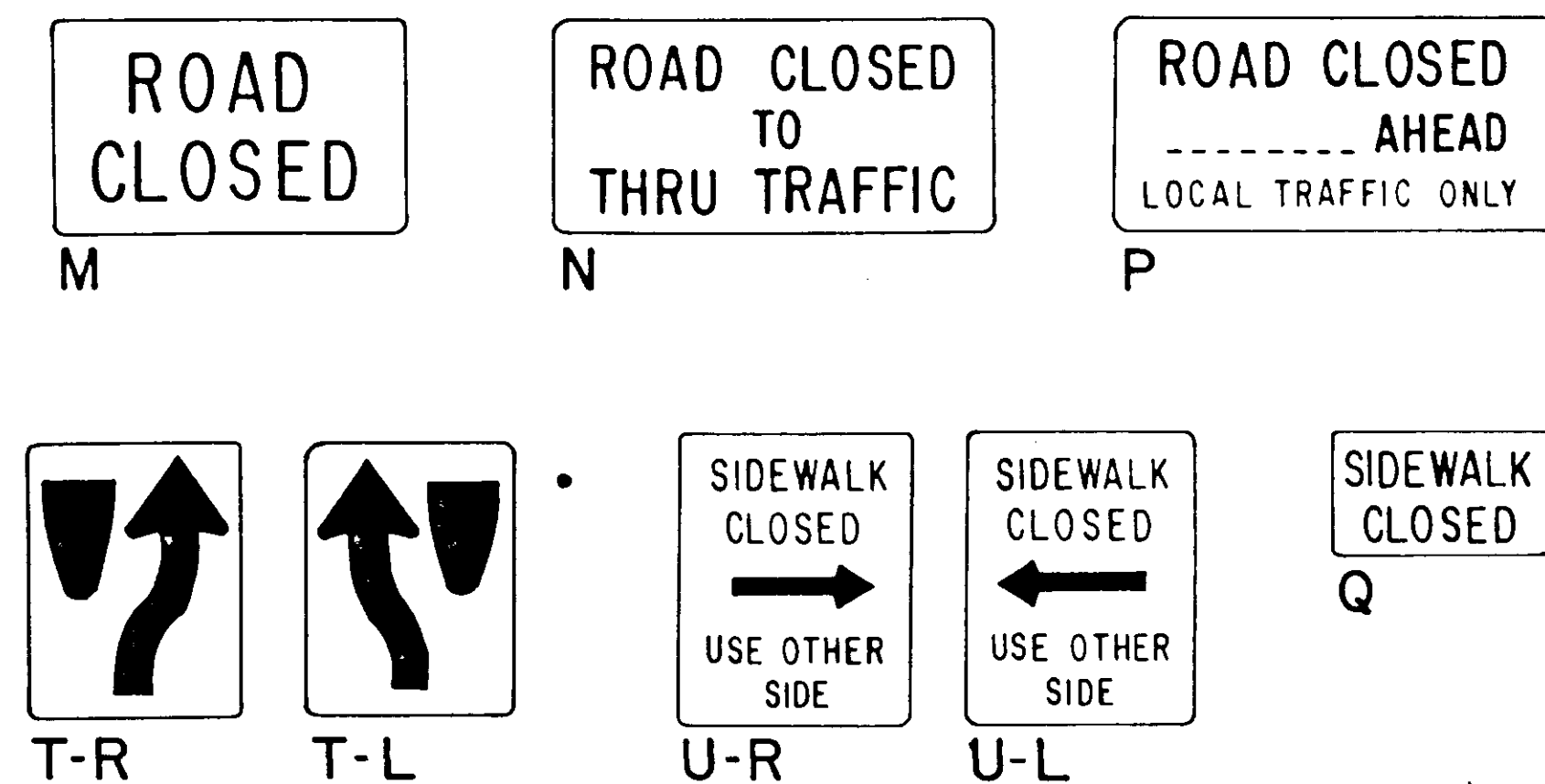
BLACK MESSAGE ON ORANGE REFLECTIVE BACKGROUND - SIGNS A THRU K MIN. SIZE (30"x30")



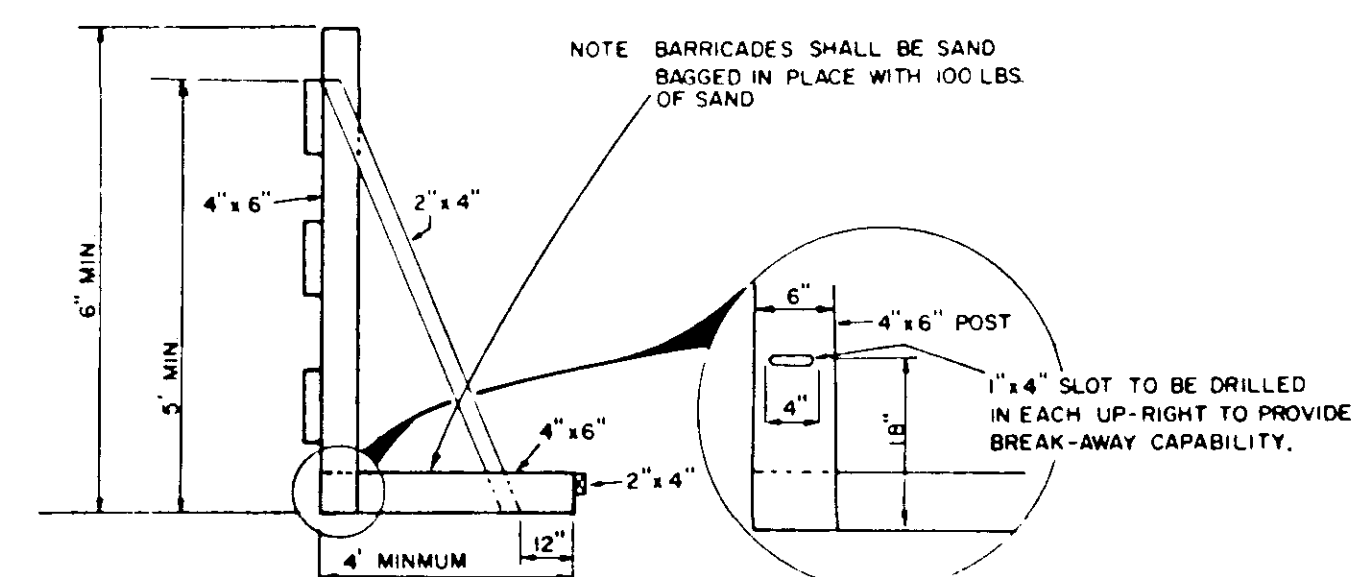
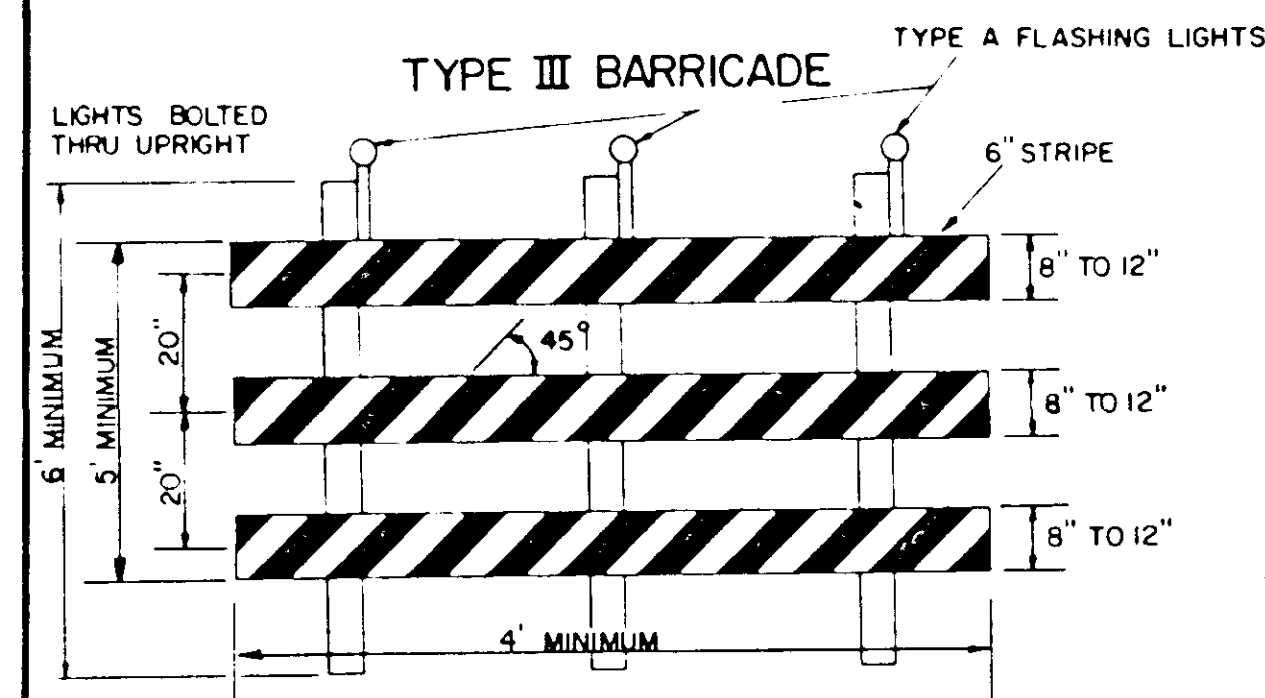
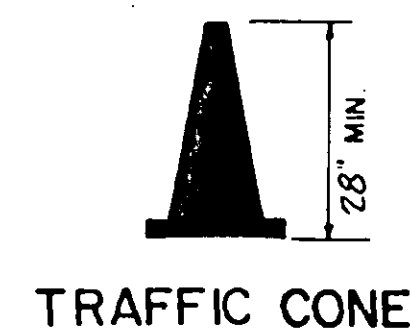
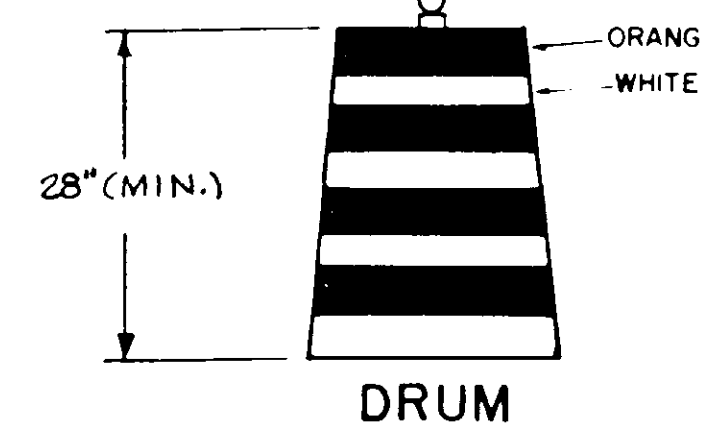
NOTE:
STREET NAME SIGN (8" x 30")
REQUIRED ON ALL M4-9
SERIES SIGNS



BLACK MESSAGE ON WHITE REFLECTIVE BACKGROUND

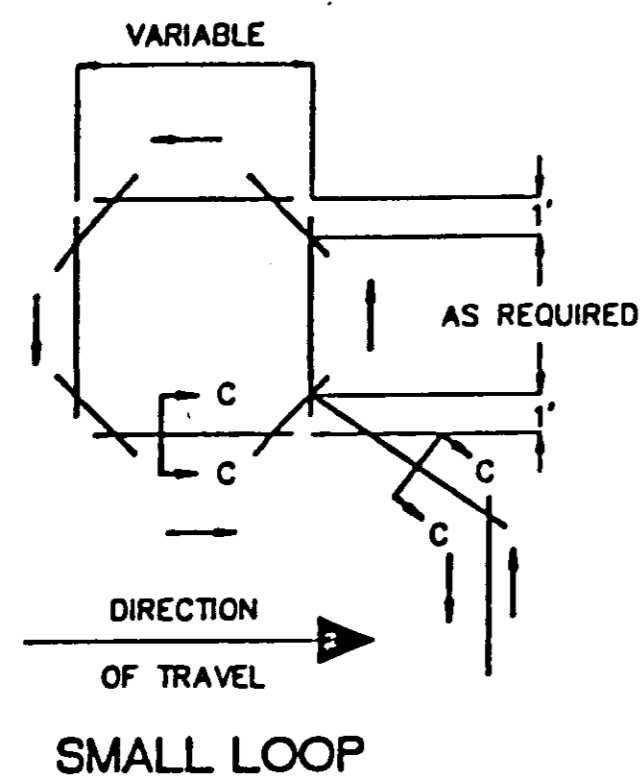


NOTE TYPE "A" OR "C" LIGHT AS REQUIRED BY SECTION VI OF MANUAL OF INSTRUCTIONS FOR TRAFFIC DEVICES, 1988 EDITION



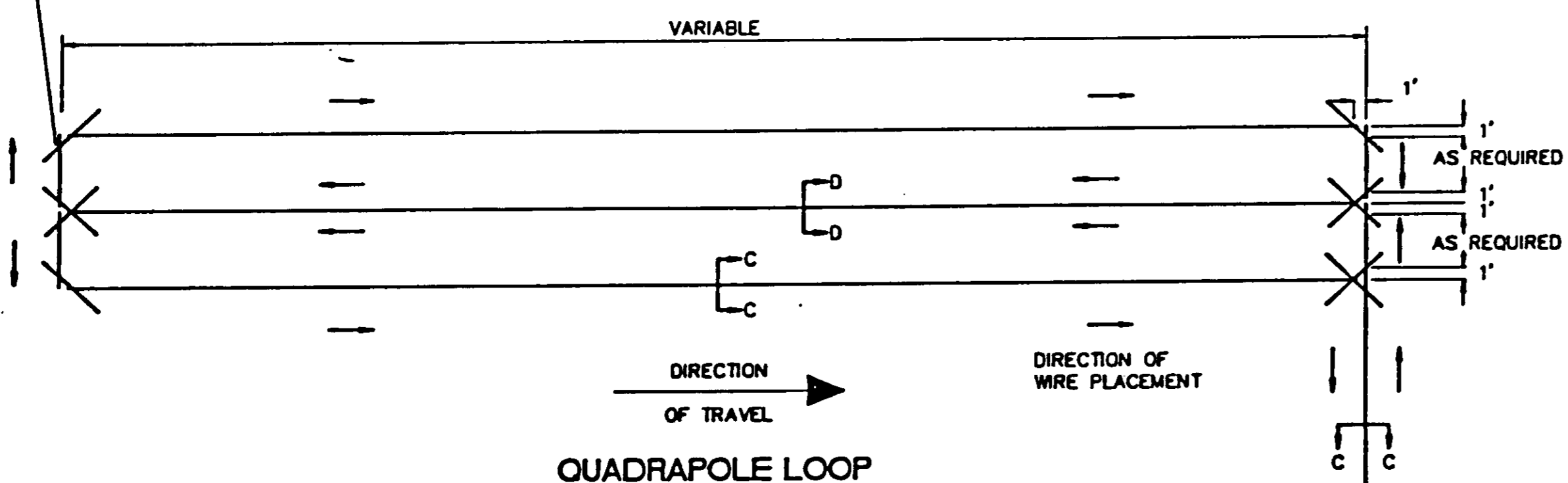
| REVNO | RELEASED BY | DESCRIPTION OF REVISION |
|---|-----------------|-------------------------|
| CITY OF RIDGELAND, MISSISSIPPI | | |
| STANDARD SIGNS FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION | | |
| RIDGWOOD ROAD AND CENTER STREET RECONSTRUCTION | | |
| WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson / Brandon, Ms. | | |
| DRAWN BY: | DATE: FEB. 1992 | SHEET NO. 8 of 10 |
| CHECKED BY: | SCALE: NONE | |
| APPROVED BY: | | |

SIZE AND NUMBER OF TURNS SPECIFIED ON DETECTOR OPERATION CHART

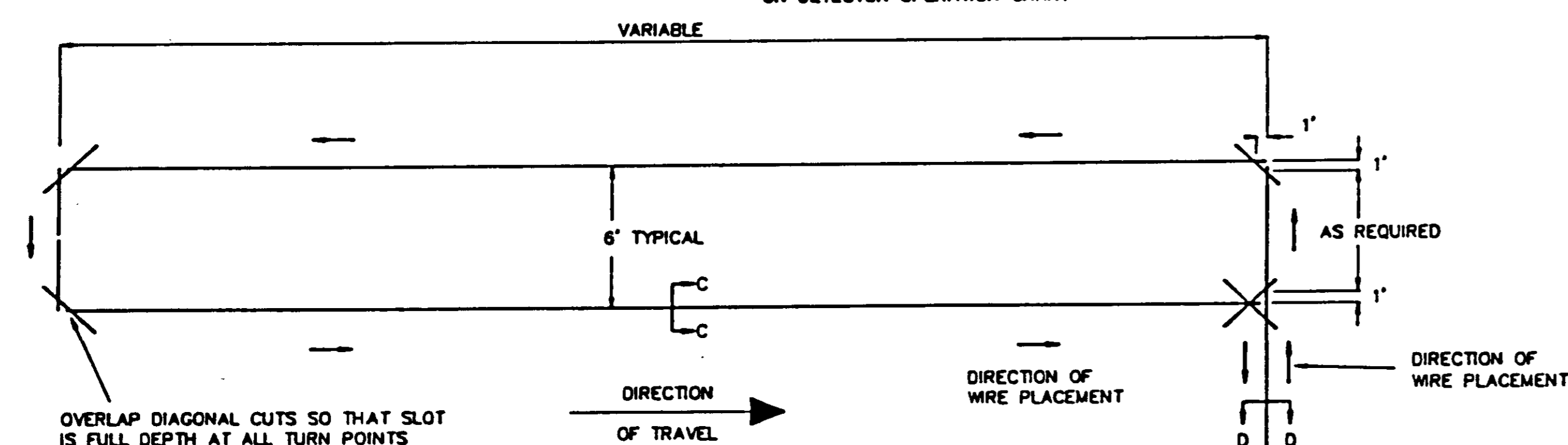


OVERLAP DIAGONAL CUTS SO THAT SLOT IS FULL DEPTH AT ALL TURN POINTS

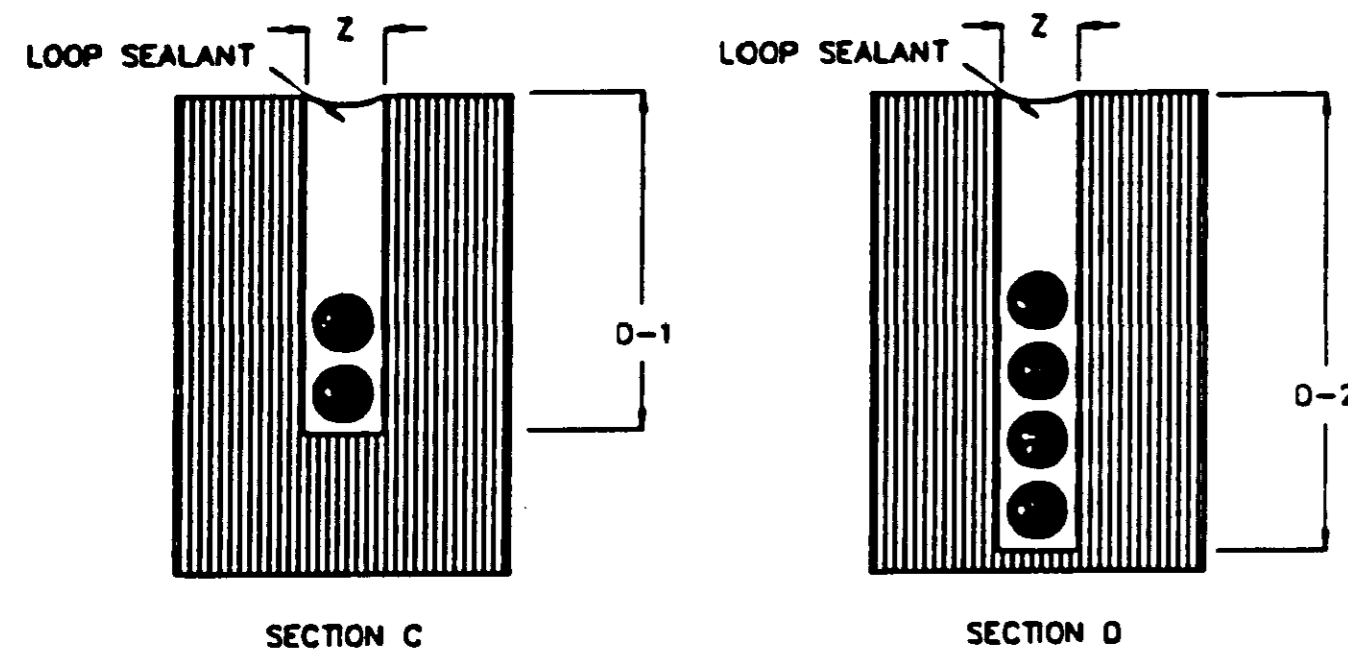
SIZE AND NUMBER OF TURNS SPECIFIED ON DETECTOR OPERATION CHART



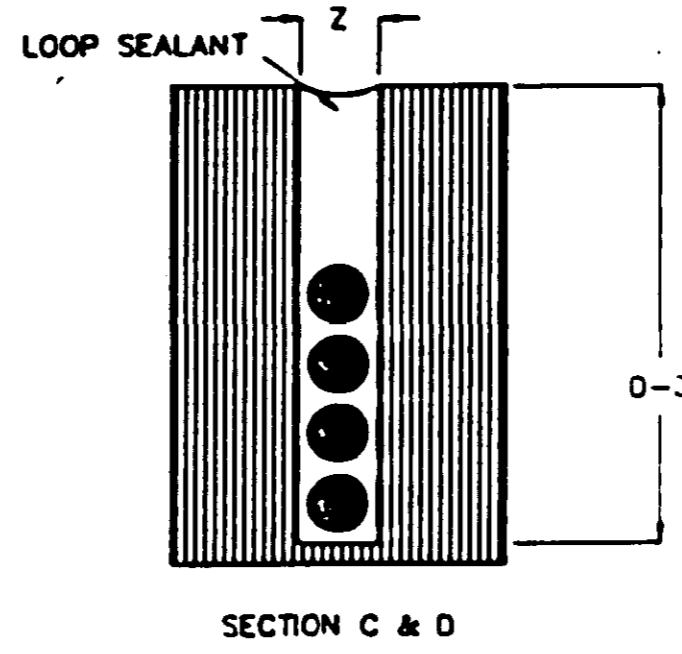
SIZE AND NUMBER OF TURNS SPECIFIED ON DETECTOR OPERATION CHART



RECTANGULAR LOOP
SAW CUT DIAGRAM



LOOP IN CONCRETE

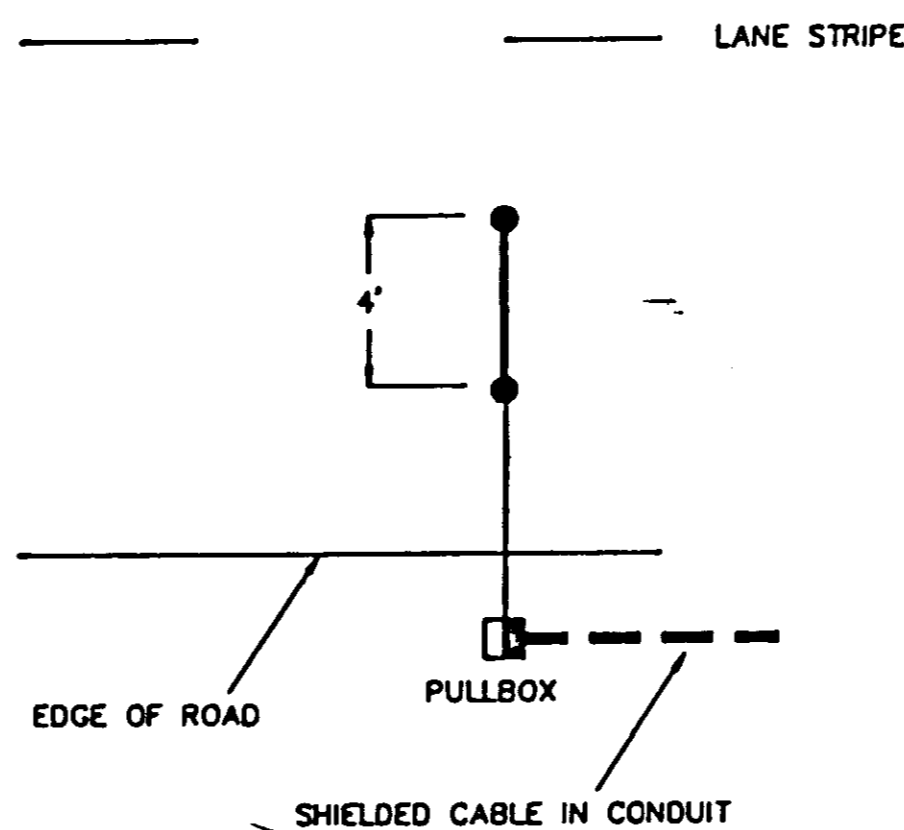


LOOP IN ASPHALT

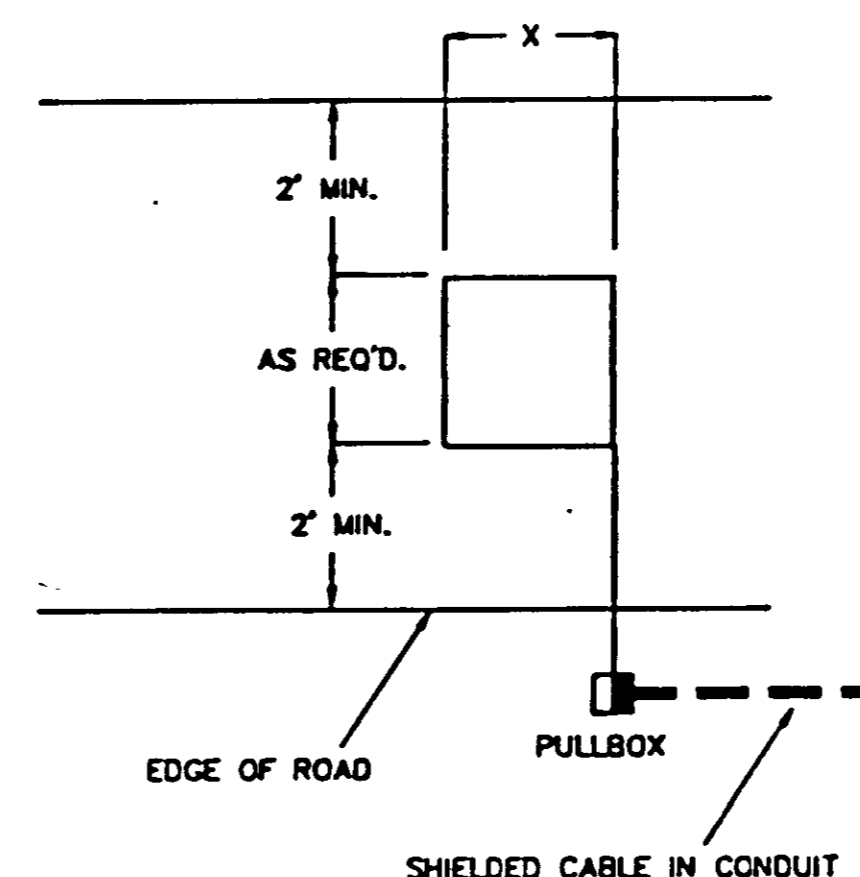
"Z" DIMENSION SHALL BE WIDE ENOUGH TO ACCOMMODATE LOOP WIRE WITHOUT CHAFING THE INSULATION (5/16" NOMINAL).

| DEPTH | NUMBER OF WIRES | | | | |
|-------|-----------------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 6 |
| D-1 | 1.5" | 2.0" | 2.0" | 2.5" | 3.0" |
| D-2 | - | 2.0" | 2.0" | 2.5" | 3.0" |
| D-3 | 2.0" | 2.0" | 2.5" | 3.0" | 3.0" |

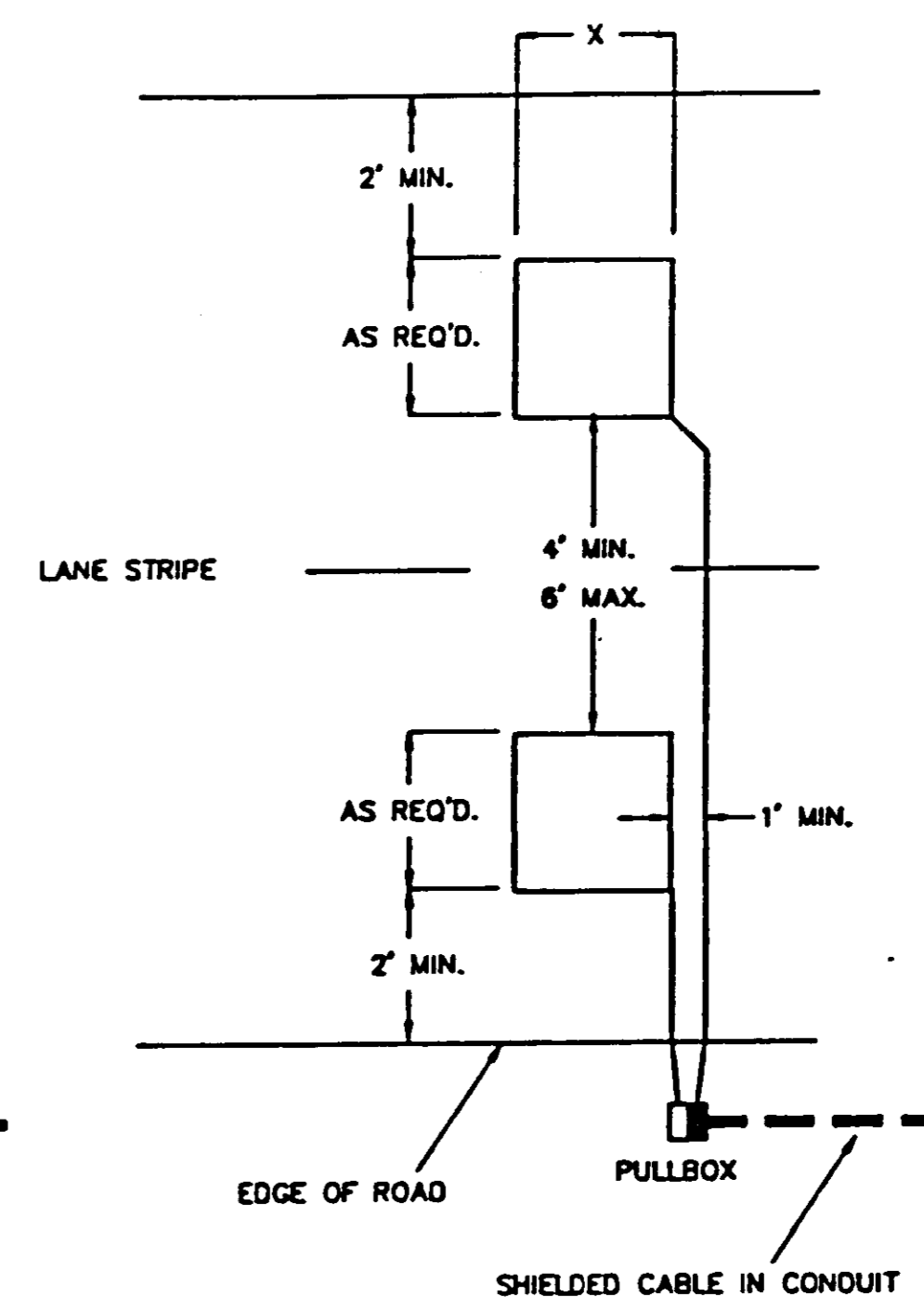
SAW SLOT DETAIL



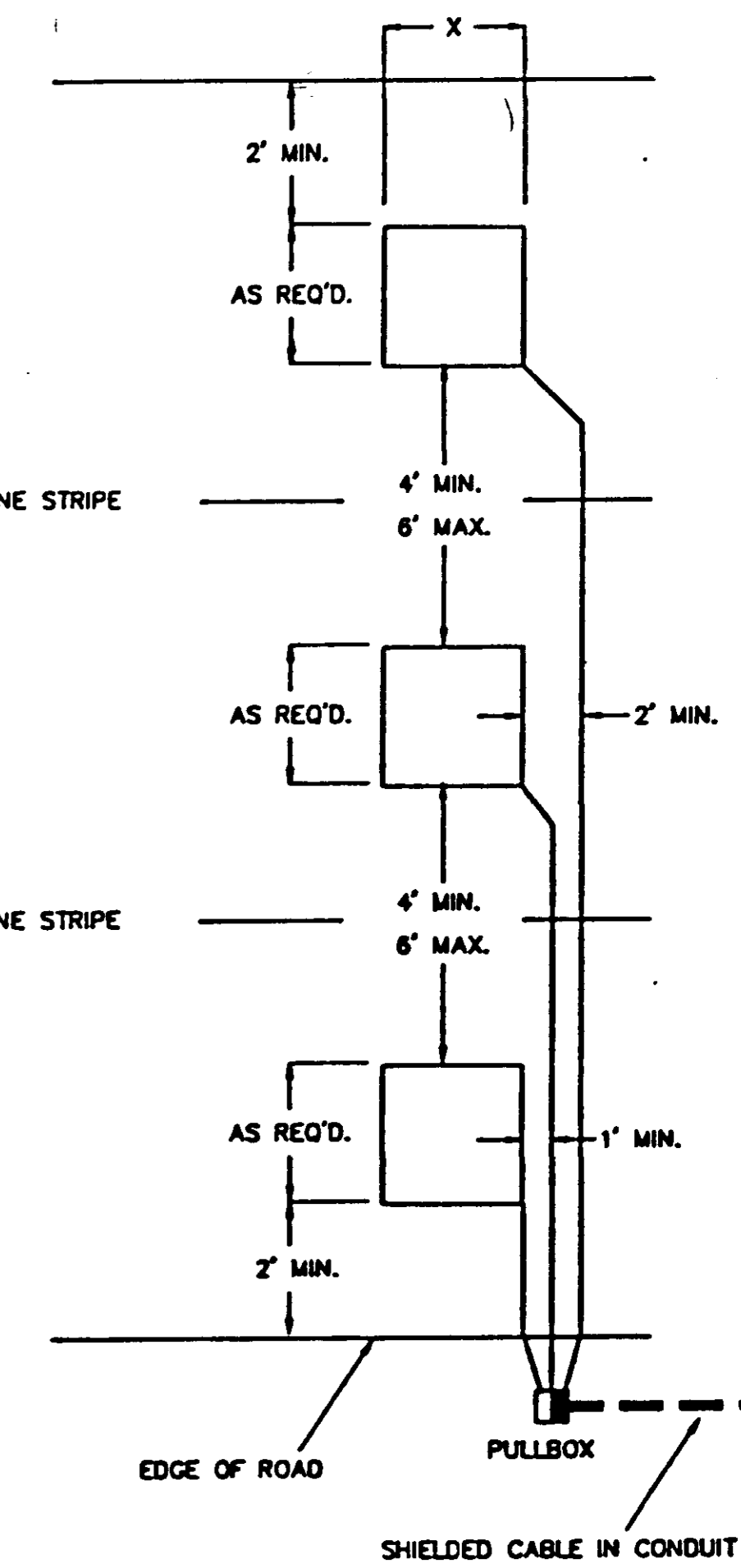
PROBE DETECTOR



ONE LANE COVERAGE



TWO LANE COVERAGE



THREE LANE COVERAGE

TYPICAL LOOP DETECTOR LANE COVERAGE DIAGRAM

"X" DIMENSION SPECIFIED ON PLANS

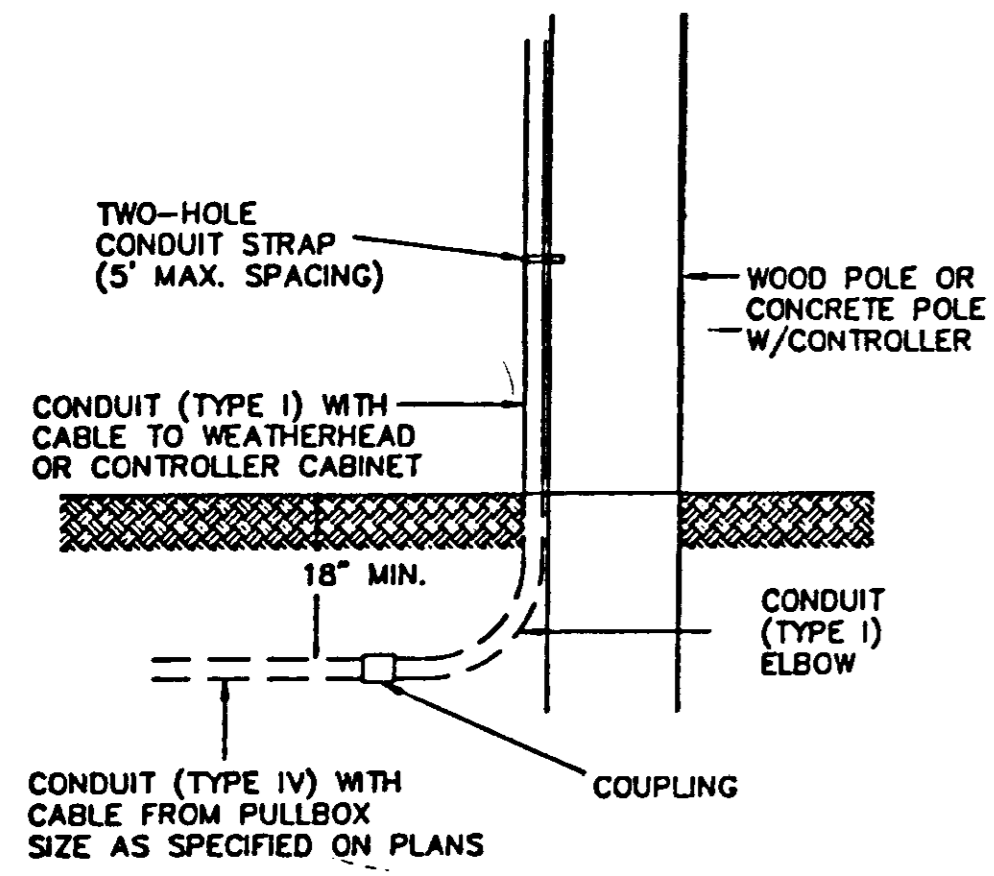
SAW SLOT AND LOOP WIRE INSTALLATION PROCEDURES

1. CONCRETE PAVEMENT JOINTS SHALL NOT BE USED FOR EITHER LOOP OR FEEDER WIRE. NO LOOPS ARE TO BE INSTALLED THROUGH, OVER, OR UNDER TRANSVERSE CONCRETE JOINTS IN CONCRETE PAVEMENT. NO MANHOLES, INLETS, VALVES, ETC. MAY BE LOCATED WITHIN A LOOP. IF JOINTS OR MANHOLES ARE UNAVOIDABLE, SMALLER LOOPS, THE SIZE TO BE DETERMINED BY THE ENGINEER, MAY BE USED INSTEAD OF ONE LARGER LOOP AND SHALL PROVIDE THE SAME AREA OF COVERAGE AS THE LARGE LOOP. THE SMALLER LOOPS USED TO REPLACE THE ONE LARGE LOOP MAY BE CONNECTED TO ONE DETECTOR AMPLIFIER.
2. WHEN A BEND OR CORNER IS REQUIRED THE SLOTS PRODUCING THE "WOULD-BE" RIGHT ANGLE SHALL NOT OVERLAP.
3. WHEN A BEND OR CORNER IS REQUIRED THE SLOTS PRODUCING THE ANGLES APPROXIMATELY 45° SHALL OVERLAP THE SLOTS IT CONNECTS. THIS IS TO INSURE FULL DEPTH OF SLOTS AT BENDS OR CORNERS.
4. ALL CORNERS OF THE LOOP SHALL BE CUT AT A 45° ANGLE AND HAVE A MINIMUM DIAGONAL LENGTH OF 16".
5. SAW CUTS IN THE PAVEMENT SHALL BE FLUSHED WITH CLEAN WATER UNDER SUFFICIENT PRESSURE TO REMOVE MUD AND SMALL DEBRIS. SAW CUTS SHALL THEN BE DRIED AND CLEANED OF ALL DEBRIS BEFORE INSTALLING THE LOOP WIRE.
6. ONE CONTINUOUS, UNBROKEN LENGTH OF WIRE SHALL BE USED TO FORM A LOOP OF THE NUMBER OF TURNS AS SPECIFIED IN THE PLANS. THE CONTINUOUS RUN SHALL BE FROM THE PULLBOX/CONDULET INCLUDING THE LOOP AND RETURN.
7. ALL WIRE SHALL BE PUSHED INTO THE SAW CUT WITH WOOD STICKS TO INSURE THE INSULATION IS NOT DAMAGED. THE USE OF METAL TOOLS IS NOT PERMITTED.
8. SPlice BETWEEN LEAD-IN AND SHIELDED CABLE REQUIRED IN PULLBOX OR CONDULET. ALL SPLICES IN THE LEAD-IN WIRE SHALL BE MADE ONLY IN THE PULLBOX OR CONDULET. ALL SPLICES MUST BE CAREFULLY MADE TO INSURE CONSTANT LOW RESISTANCE AND MUST BE INSULATED IN SUCH A MANNER THAT UNDER THE LOCAL PREVAILING CONDITIONS THE INSTALLATION MAINTAINS A RESISTANCE TO GROUND OF NOT LESS THAN 5 MEGOHMS. TO INSURE CONSISTENT LOW RESISTANCE CONNECTIONS, THE SPLICES SHALL BE SOLDERED WITH RESIN FILLED SOLDER AND WATERPROOFED BY SHRINK WRAP OR BY OTHER METHOD APPROVED BY THE ENGINEER. OPEN FLAME SOLDER SHALL NOT BE PERMITTED.
9. WHERE THE WIRES LEAVE THE SAWCUT, EACH PAIR OF LEAD-IN WIRES MUST BE TWISTED TOGETHER WITH A MINIMUM OF THREE TWISTS PER FOOT. IF THE LEAD-IN IS TAKEN OVERHEAD THE WIRES MUST BE TWISTED TOGETHER WITH UNDERGROUND TO SPAN.
10. WHEN A PULLBOX IS NOT USED IN THE LEAD-IN (THE WIRE WHICH CONDUCTS THE SENSING LOOP TO THE DETECTOR AMPLIFIER), THE LOOP WIRE SHALL BE TWISTED A MINIMUM OF THREE TURNS PER FOOT FROM THE LOOP TO THE DETECTOR AMPLIFIER.

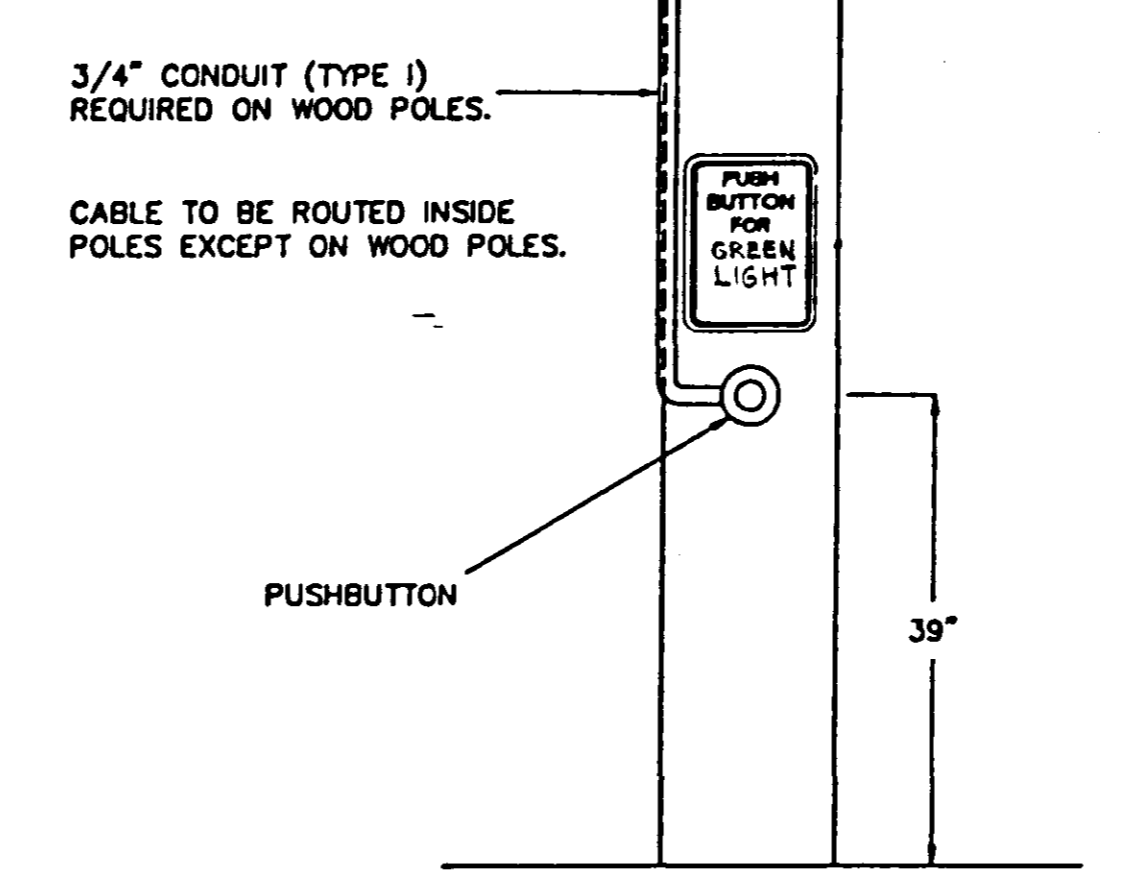
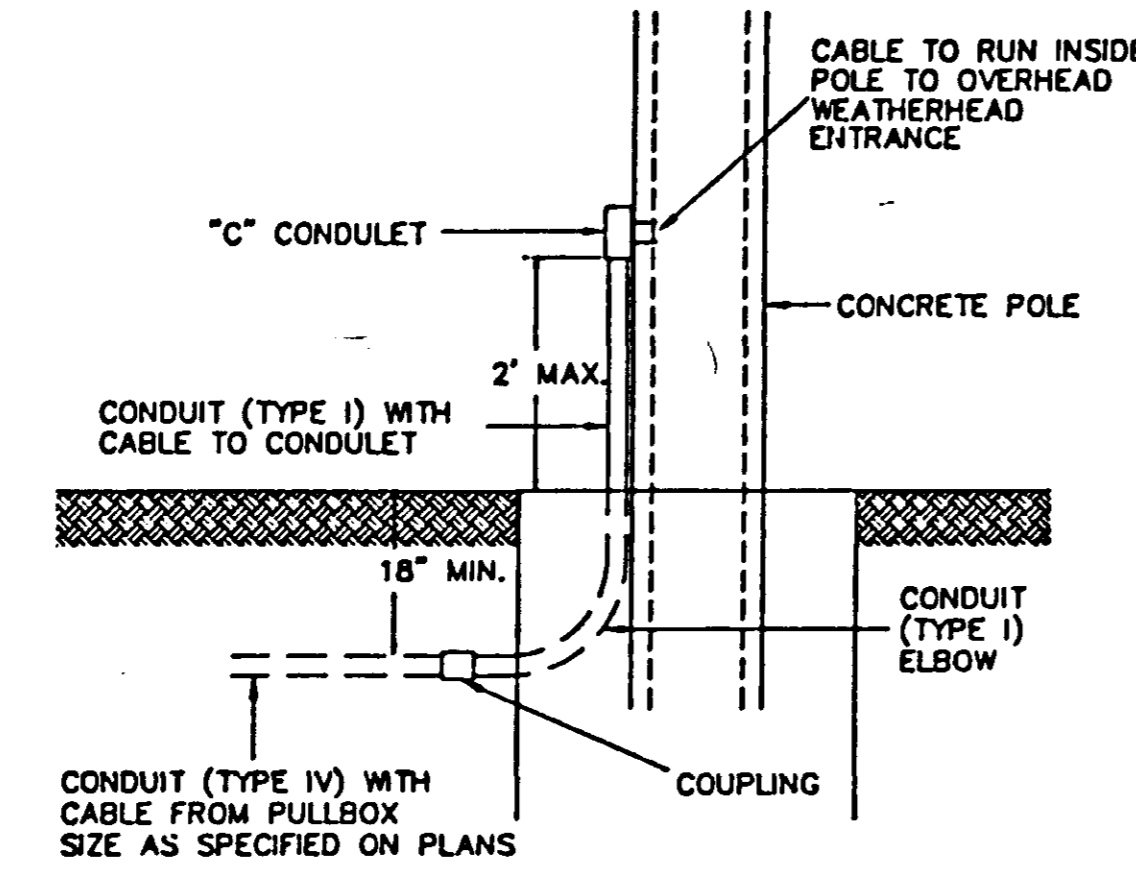
CITY OF RIDGELAND

STANDARD SIGNAL DETAILS
VEHICLE LOOP
DETECTOR ASSEMBLY

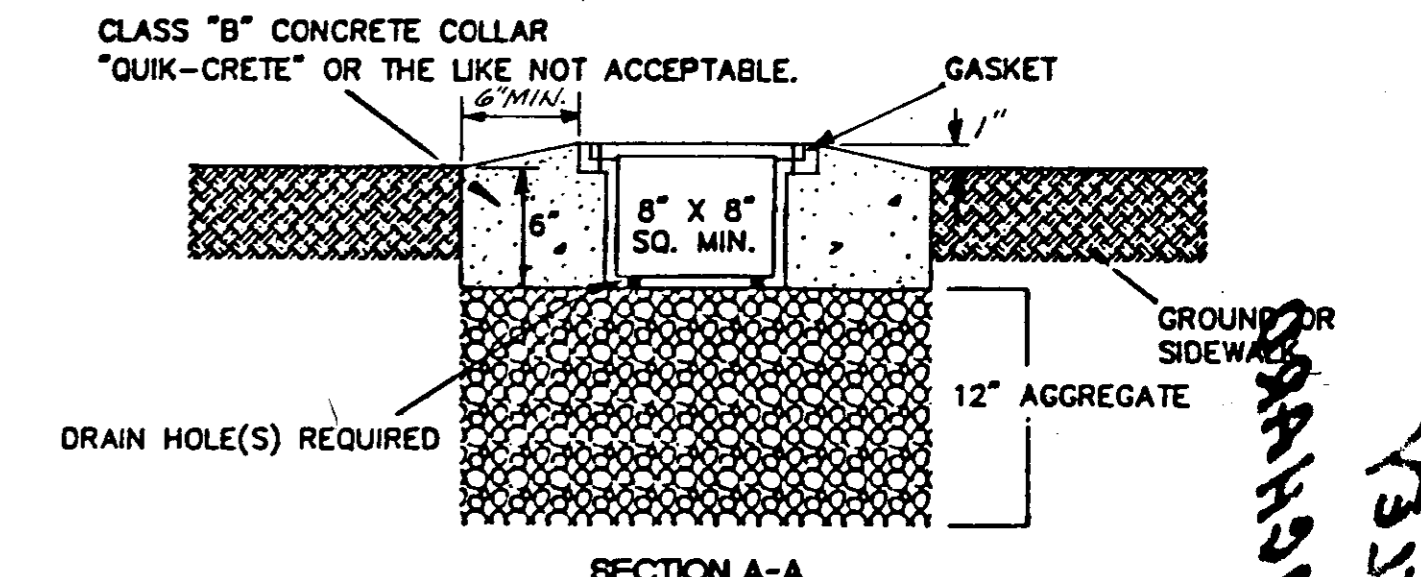
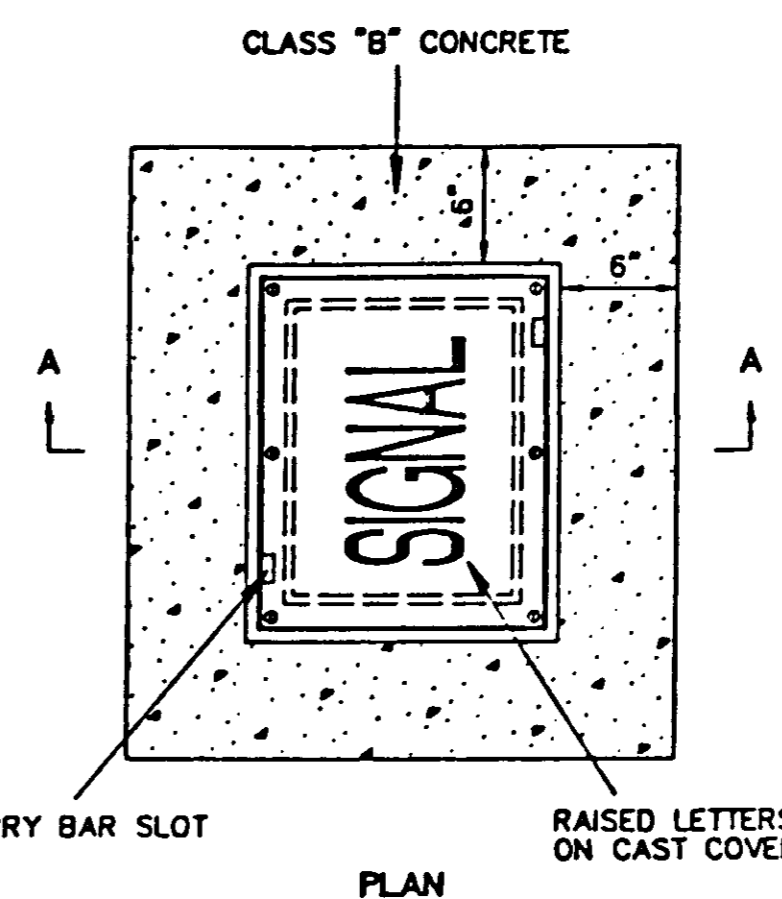
DBGN: _____ DRAWING NO. 9 of 10
DRWN: _____
CHKD: _____
SCALE: _____



CONDUIT DETAIL AT POLES



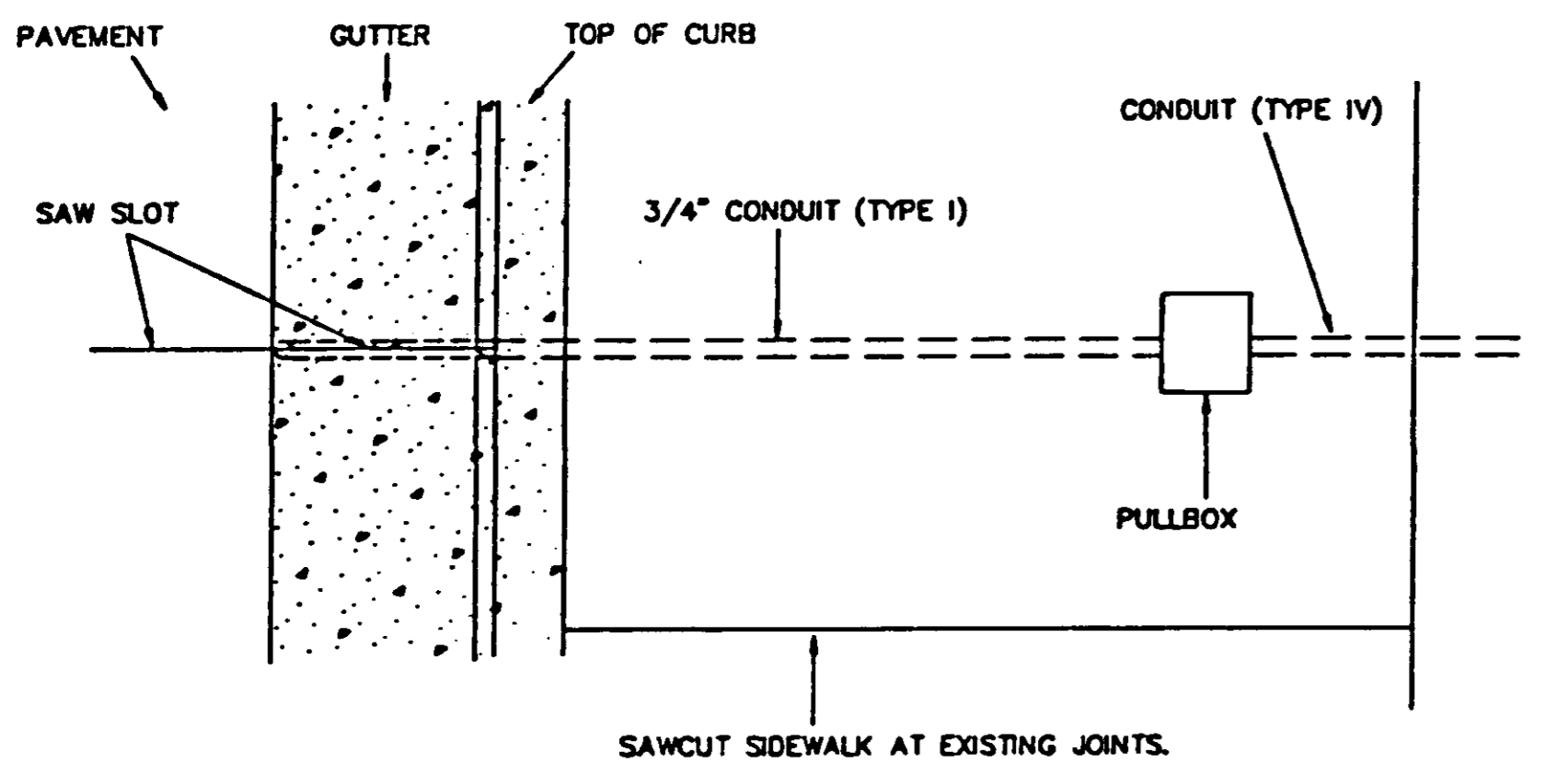
PEDESTRIAN PUSH BUTTON AND SIGN INSTALLATION DETAIL



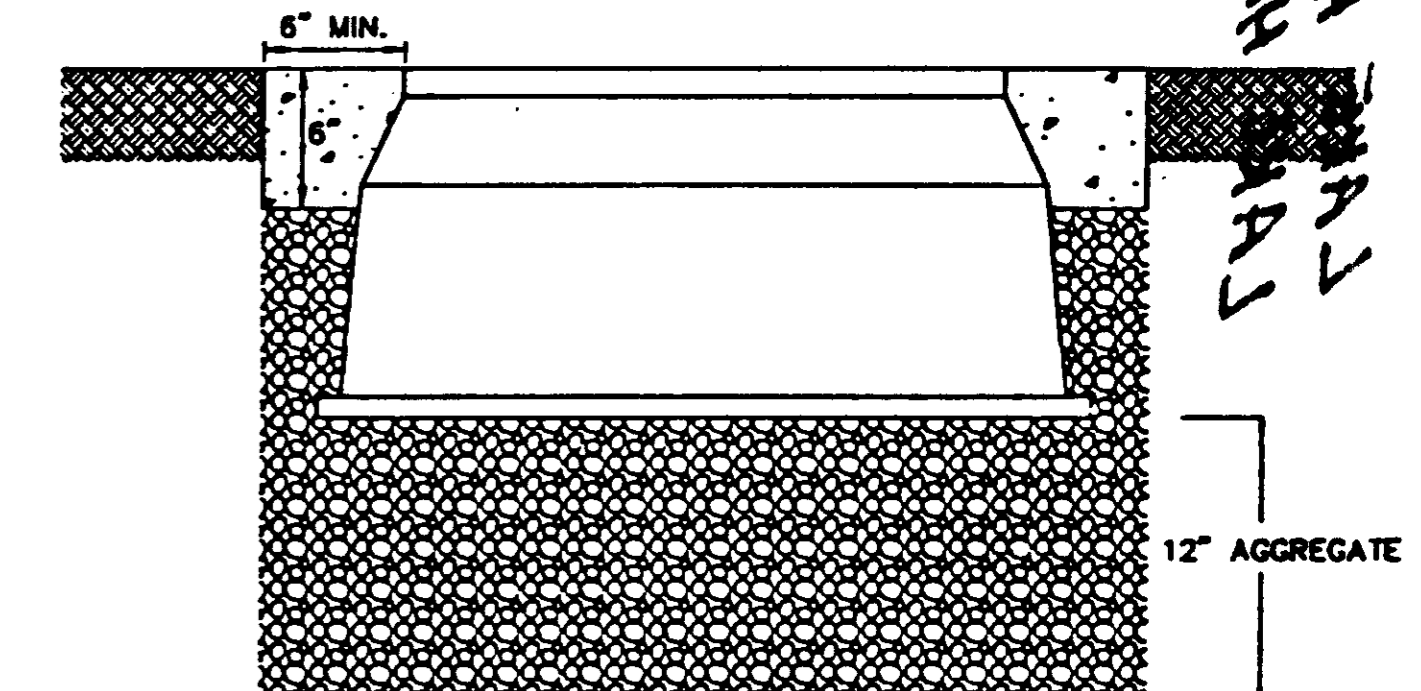
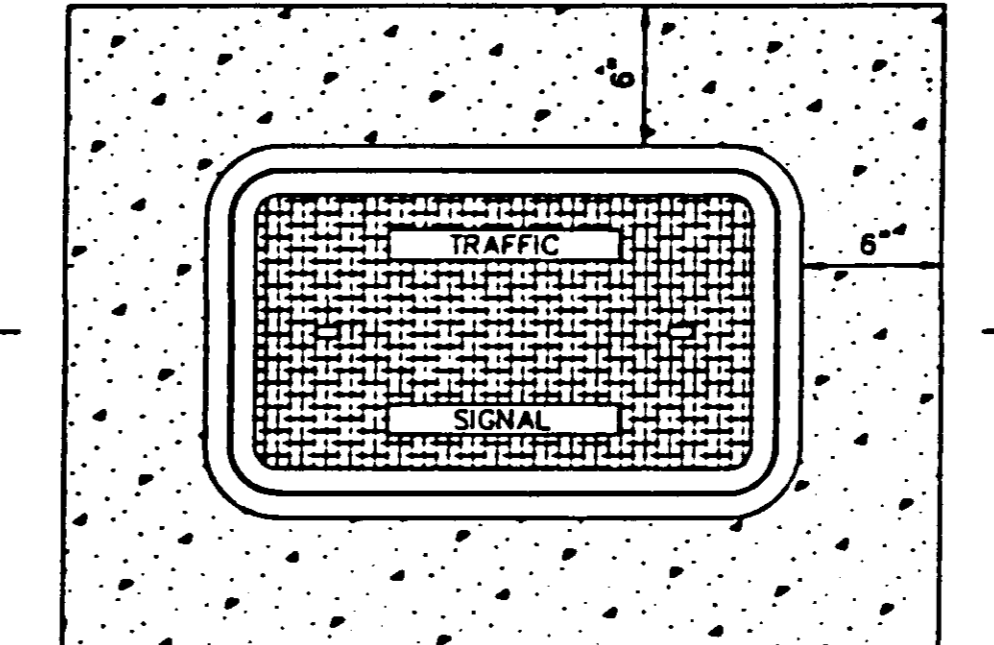
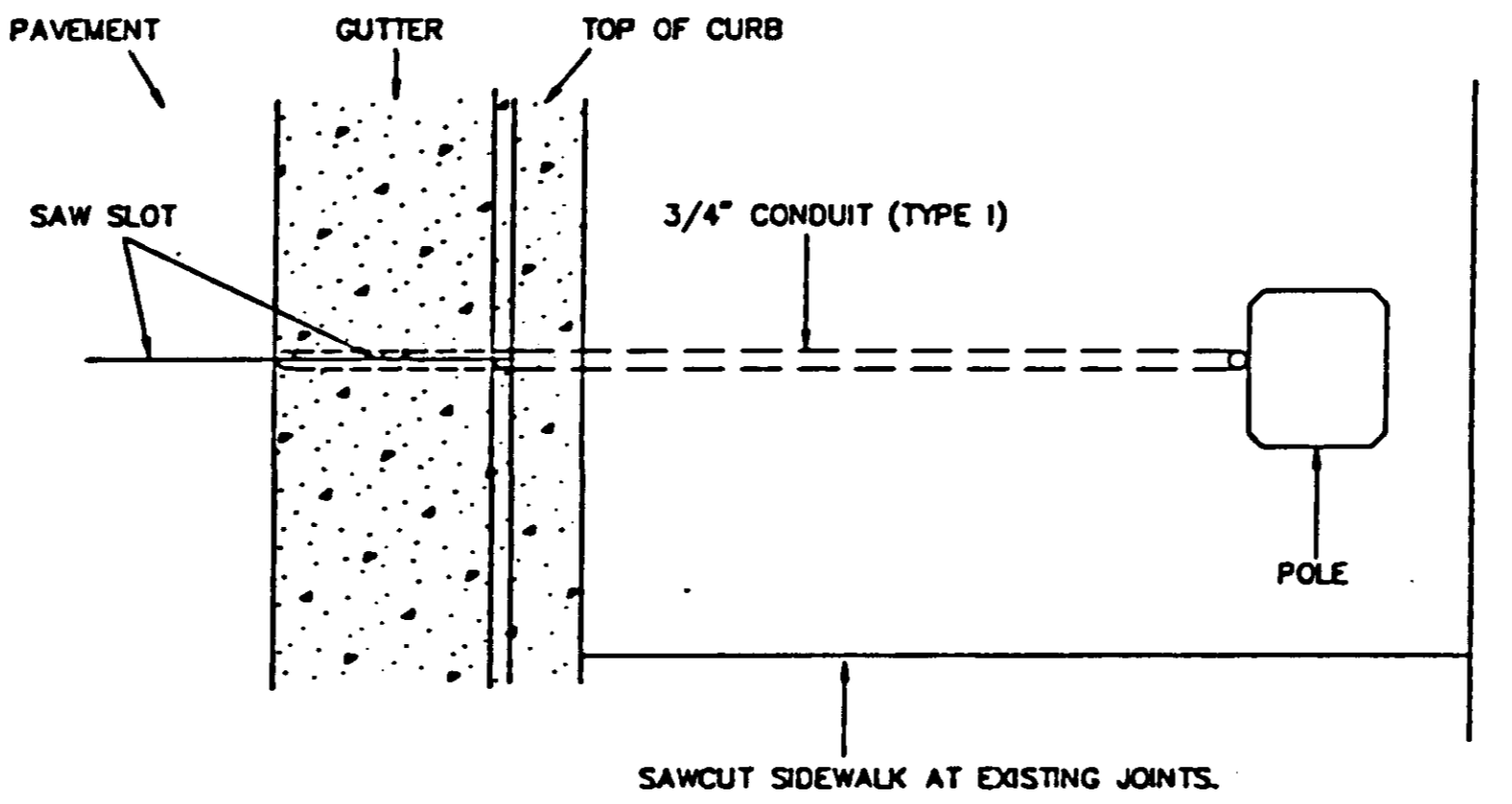
- PULLBOX NOTES:
1. NOMINAL PULLBOX DIMENSIONS:
TYPE 1 - 8" L x 8" W x 6" D
TYPE 2 - TOP BODY - 25" L x 15" W x 15" D
BOTTOM BODY (INSIDE) - 29" L x 15" W x 15" D
 2. GRAVEL, 12" DEEP, IS REQUIRED UNDER PULLBOXES FOR DRAINAGE.
 3. CONCRETE COLLAR, 6" W x 6" D, IS REQUIRED FOR PULLBOXES PLACED IN SOIL.
 4. TRAFFIC SIGNAL, TRAFFIC OR SIGNAL LEGEND REQUIRED.
 5. COVERS SHALL BOLT DOWN.

TWO-PIECE PULLBOX (TYPE 1)

CAST IRON, CAST ALUMINUM, WELDED ALUMINUM, OR APPROVED EQUAL

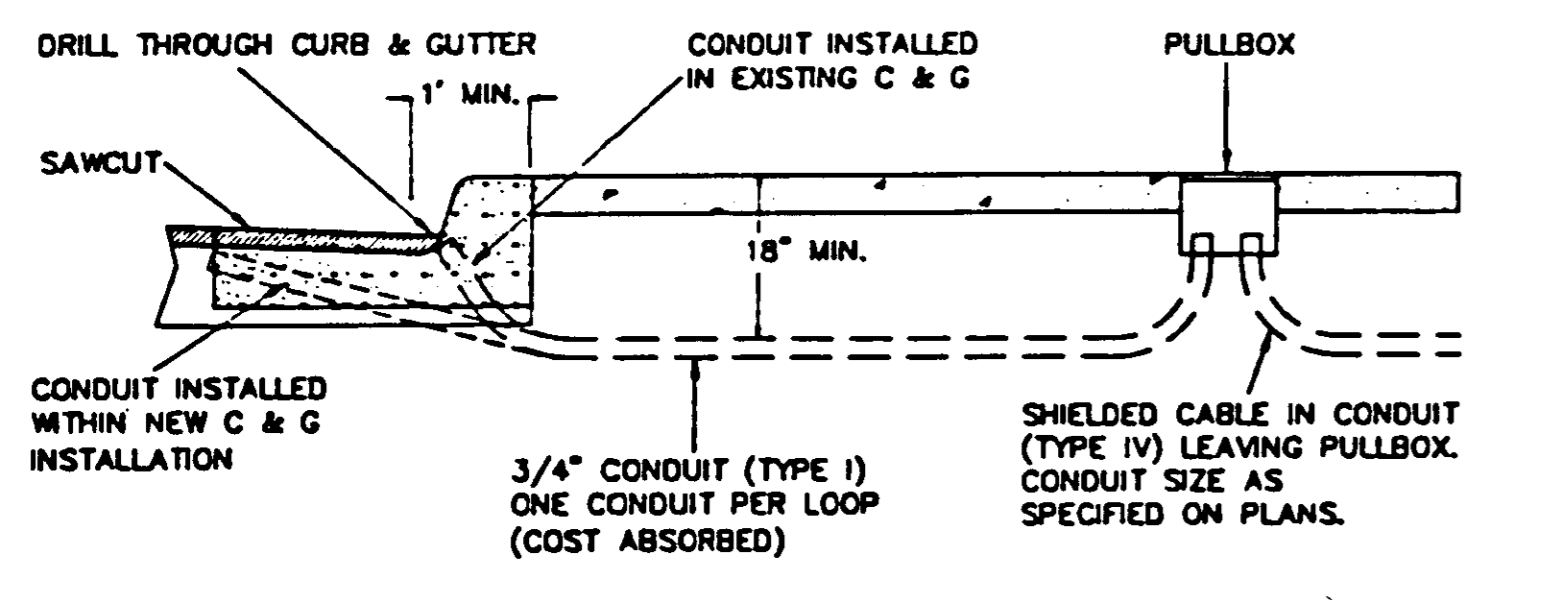


PLAN VIEW - LOOP LEAD-IN CONDUIT

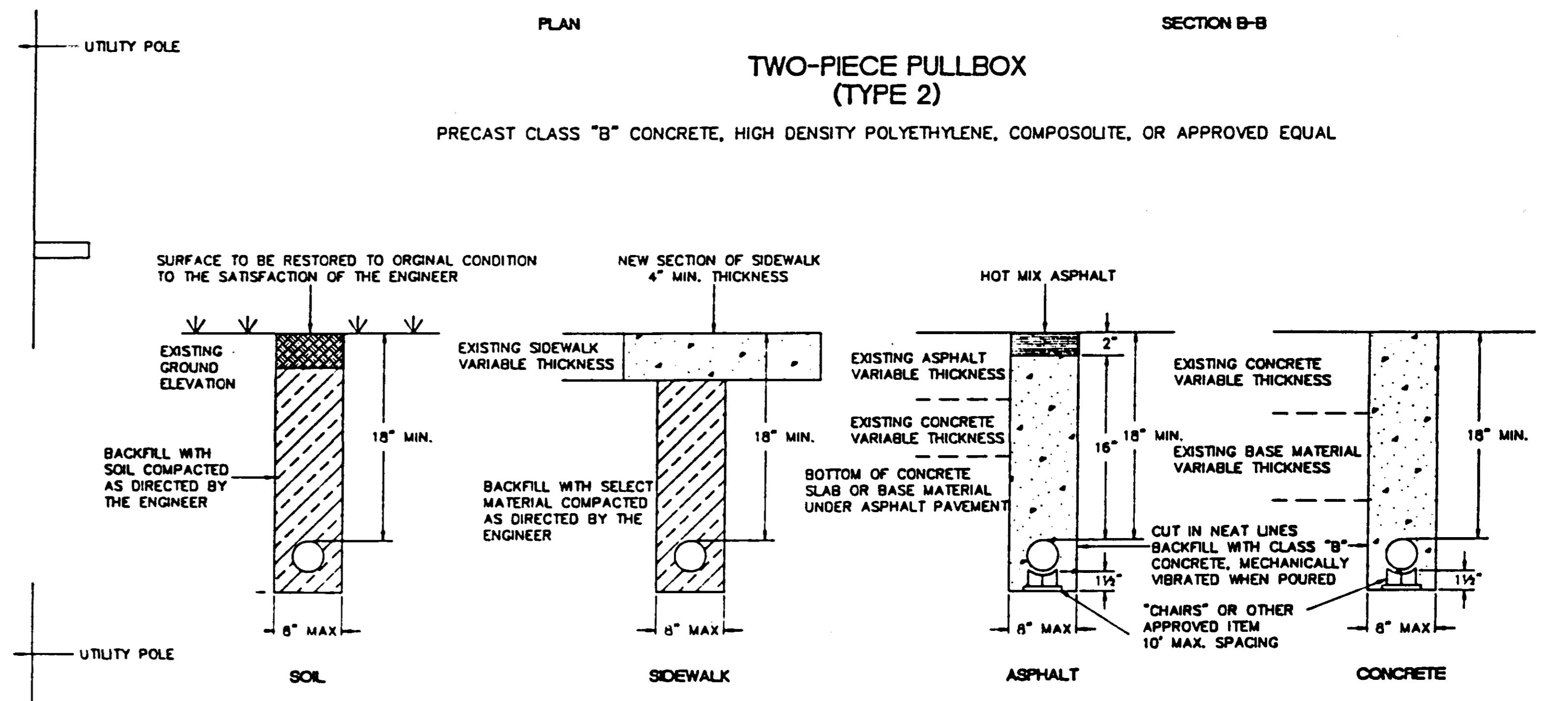
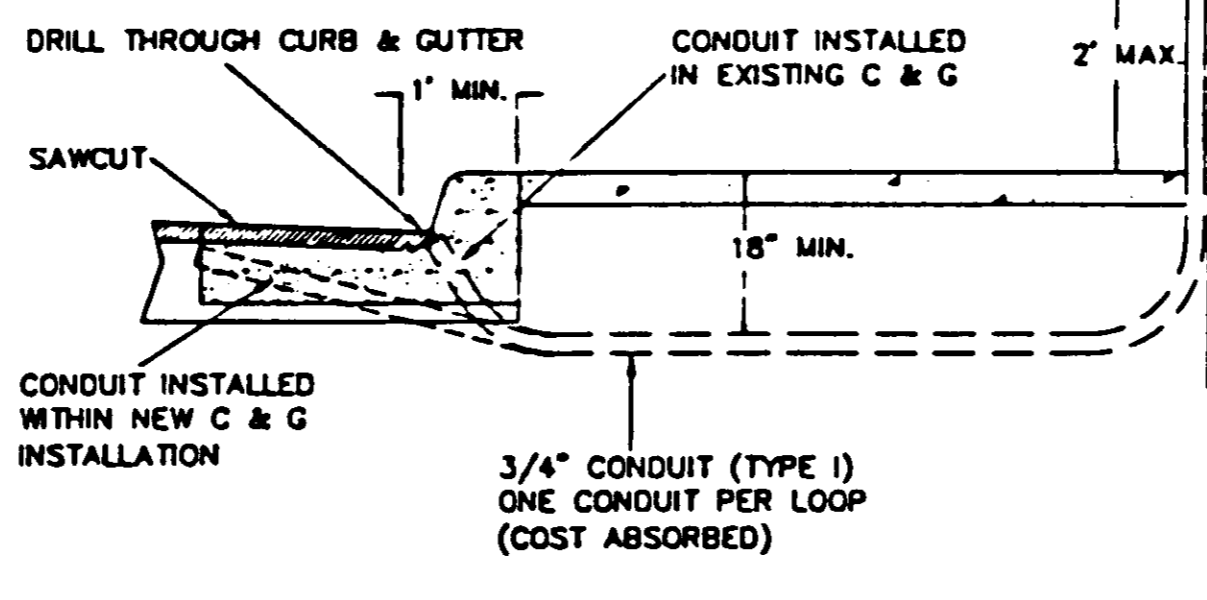


TWO-PIECE PULLBOX (TYPE 2)

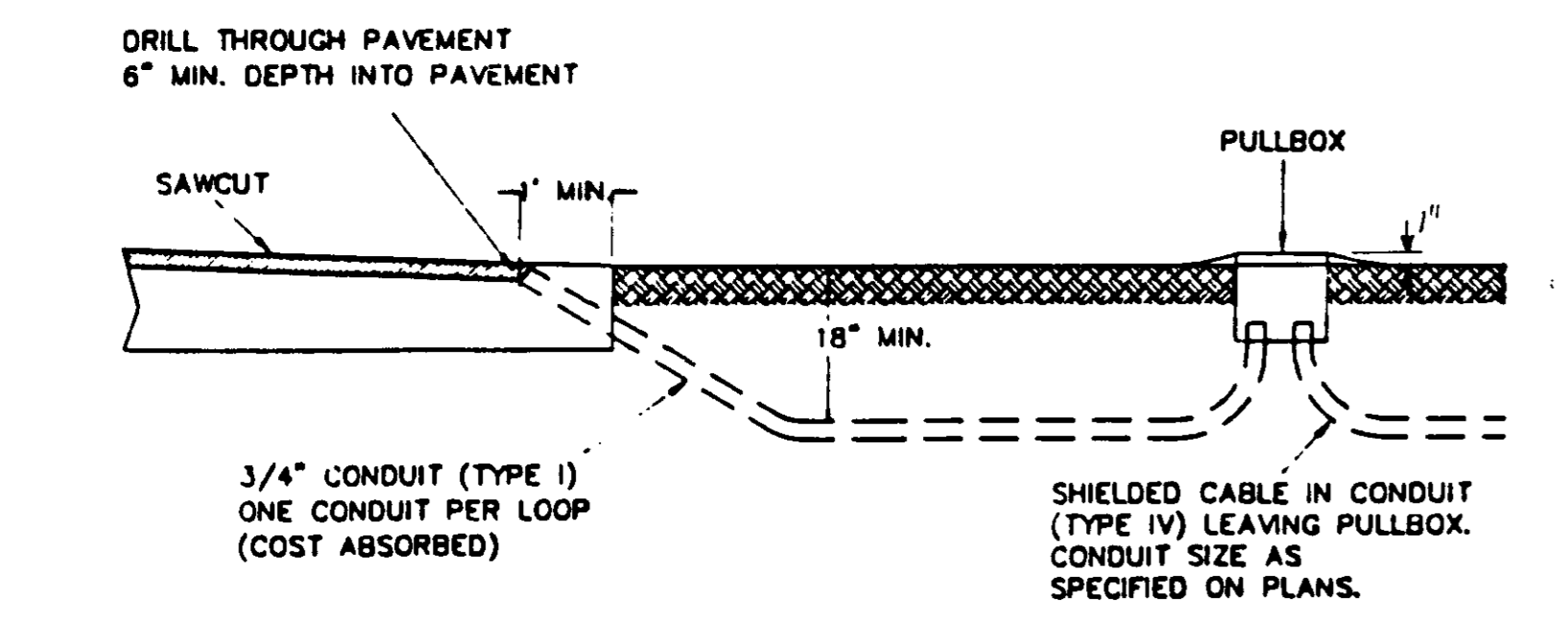
PRECAST CLASS "B" CONCRETE, HIGH DENSITY POLYETHYLENE, COMPOSITE, OR APPROVED EQUAL



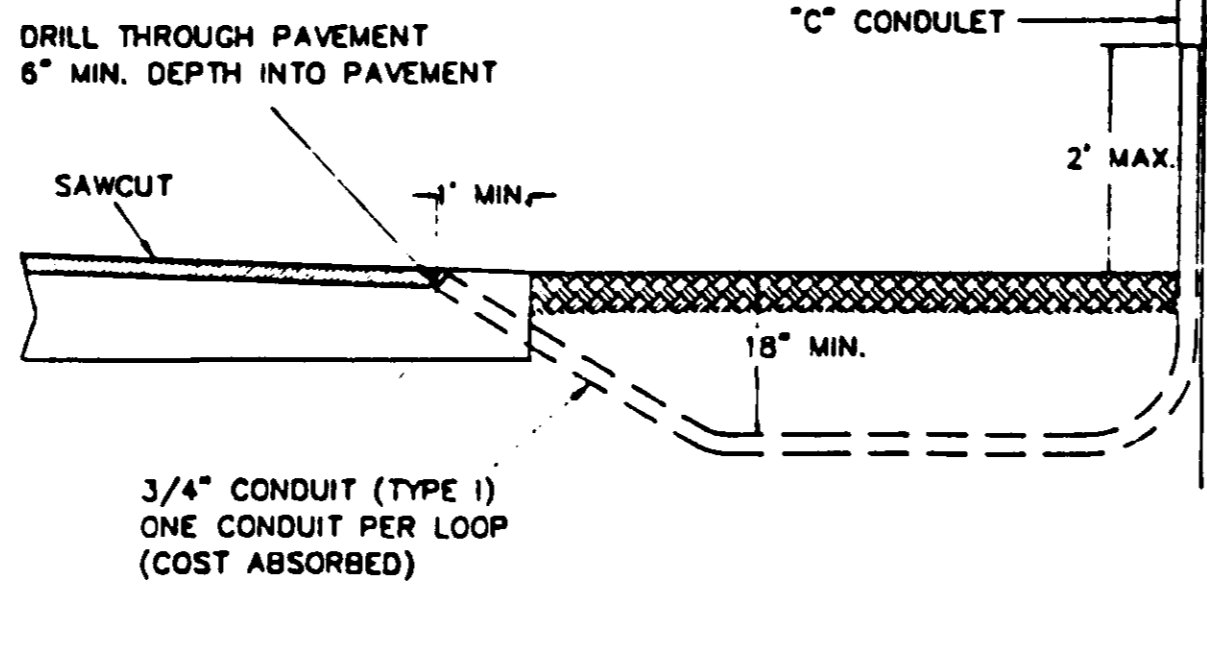
TYPICAL SECTION IN GUTTER AND SIDEWALK



CONDUIT TRENCHING DETAIL



TYPICAL SECTION IN EARTH



NOTES:

1. CONDUIT TO BE SEALED WITH DUCT SEALER ONCE CABLE IS INSTALLED.
2. SAWCUT SIDEWALK AT EXISTING JOINTS AND REPLACE ENTIRE SECTION TO MATCH EXISTING MATERIAL. WHEN NEW SIDEWALK IS BEING CONSTRUCTED, CONDUIT, PULLBOX, AND POLE ARE TO BE INSTALLED BEFORE SIDEWALK IS POURED.
3. TYPE I CONDUIT IS RIGID STEEL; TYPE IV CONDUIT IS PVC.

CITY OF RIDGELAND

STANDARD SIGNAL DETAILS
CONDUIT, PULLBOX AND
PEDESTRIAN PUSHBUTTON

| | | | |
|--------|--------|-------------|----------|
| DSGN: | | DRAWING NO. | |
| DRWN: | | | 10 OF 10 |
| CHKD: | | | |
| SCALE: | N.T.S. | | |

13575341W / 300824H 3M41 J
 300824H 3M41 J
 300824H 3M41 J