ACAD C:\PROJECTS\88617-10\CMTITLE.DWG 3/21/89

CITY OF FERNDALE

DEPARTMENT OF PUBLIC WORKS
FERNDALE, WASHINGTON

MAIN STREET - FOURTH AVENUE TO FIRST AVENUE

TRAFFIC SIGNAL IMPROVEMENTS

PROJECT NO. 288617-10

SCHEDULE OF DRAWINGS

DWG. NO.	DESCRIPTION OF DRAWINGS
1	TITLE SHEET
2-3	MAIN STREET AT FOURTH AVENUE SIGNAL PLAN, WIRING DIAGRAM
4-5	MAIN STREET AT THIRD AVENUE SIGNAL PLAN, WIRING DIAGRAM
6-7	MAIN STREET AT SECOND AVENUE SIGNAL PLAN, WIRING DIAGRAM
8-9	MAIN STREET AT FIRST AVENUE SIGNAL PLAN, WIRING DIAGRAM
10	SIGNAL POLE SCHEDULE

CITY OFFICIALS

MAYOR

LORNA GEMMELL

CITY COUNCIL MEMBERS

AL SCHMIDT
D.P. (PAT) SIZEMORE
DENNIS HAWKINSON
JACK WILLIAMS
GARY GIBBONS
MADELYN WASLOHN

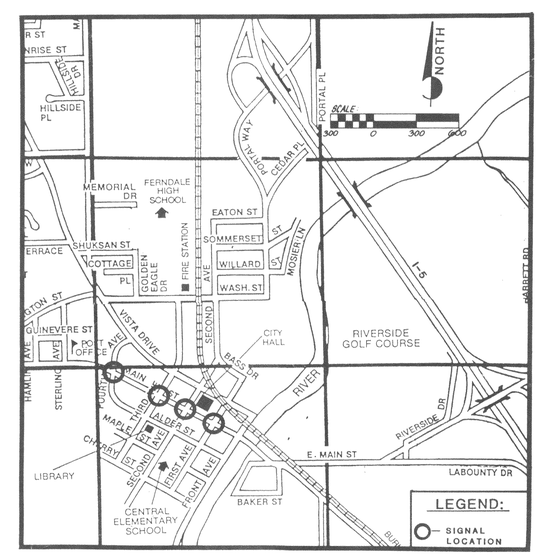
CITY MANAGER

RON S. PETERSON

DIRECTOR OF PUBLIC WORKS

JOHN F. ELEY

VICINITY MAP



ENTRANCO ENGINEERS, INC.

THIS DRAWING HAS BEEN REDUCED ONE HALF SCALE

00175.001 28.00 KR

Int.	Date	Dwg.	Eng.

GENERAL NOTES

1. INSTALL VEHICLE SIGNAL HEADS WITH THE TYPE "N" ASTRO BRAC MOUNTING.
2. INSTALL PEDESTRIAN SIGNAL HEADS WITH THE TYPE "E" CLAMSHELL MOUNTING.
3. ALL VEHICLE SIGNAL HEADS SHALL HAVE TUNNEL VISORS.
4. ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE EGGCRATE VISORS.
5. DELIVER SALVAGED WIRE, CABLE, SIGNAL HEADS AND CONTROLLERS TO THE CITY OF FERNDALE MAINTENANCE YARD.
6. WIRING FOR PEDESTRIAN SIGNALS SHALL BE INSTALLED TO EACH SIGNAL POLE AS PART OF THE BASIC CONTRACT.
7. SIGNAL POLES SHALL BE TAPPED, DRILLED AND PLUGGED BY THE MANUFACTURER TO ACCOMMODATE THE FUTURE INSTALLATION OF PEDESTRIAN PUSH-BUTTON ASSEMBLIES, TYPE PPB-1AB, AND PEDESTRIAN SIGNALS.
8. THE LOCATIONS OF THE JUNCTION BOXES DEPICTED ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD MARK THE LOCATIONS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER BEFORE CONSTRUCTION COMMENCES. JUNCTION BOXES SHALL BE POSITIONED OUT OF EXISTING WHEEL CHAIR RAMPS AND SHALL NOT STRADDLE CONCRETE SCORE LINE.
9. ALL CONDUIT USED FOR RISERS SHALL BE RIGID STEEL CONDUIT.
10. OPTICAL DETECTOR CABLE SHALL NOT BE SPLICED.

CONSTRUCTION NOTES

1. INSTALL A SIGNAL POLE FOUNDATION; A TYPE II GALVANIZED STEEL POLE; A MAST ARM WITH TWO VEHICLE SIGNAL HEADS, ONE OPTICOM PRE-EMPTION SENSOR, ONE STREET NAME SIGN AND ONE LEFT-TURN-YIELD-ON-GREEN SIGN; AND TWO PEDESTRIAN SIGNAL HEADS ON THE POLE.
2. INSTALL A SIGNAL POLE FOUNDATION; A TYPE II GALVANIZED STEEL POLE; A MAST ARM WITH TWO VEHICLE SIGNAL HEADS AND ONE STREET NAME SIGN; TWO PEDESTRIAN SIGNAL HEADS ON THE POLE; AND ONE OPTICOM PREEMPT SENSOR.
3. INSTALL A SIGNAL POLE FOUNDATION; A TYPE II GALVANIZED STEEL POLE; A MAST ARM WITH TWO VEHICLE SIGNAL HEADS AND ONE STREET NAME SIGN; AND TWO PEDESTRIAN SIGNAL HEADS ON THE POLE.
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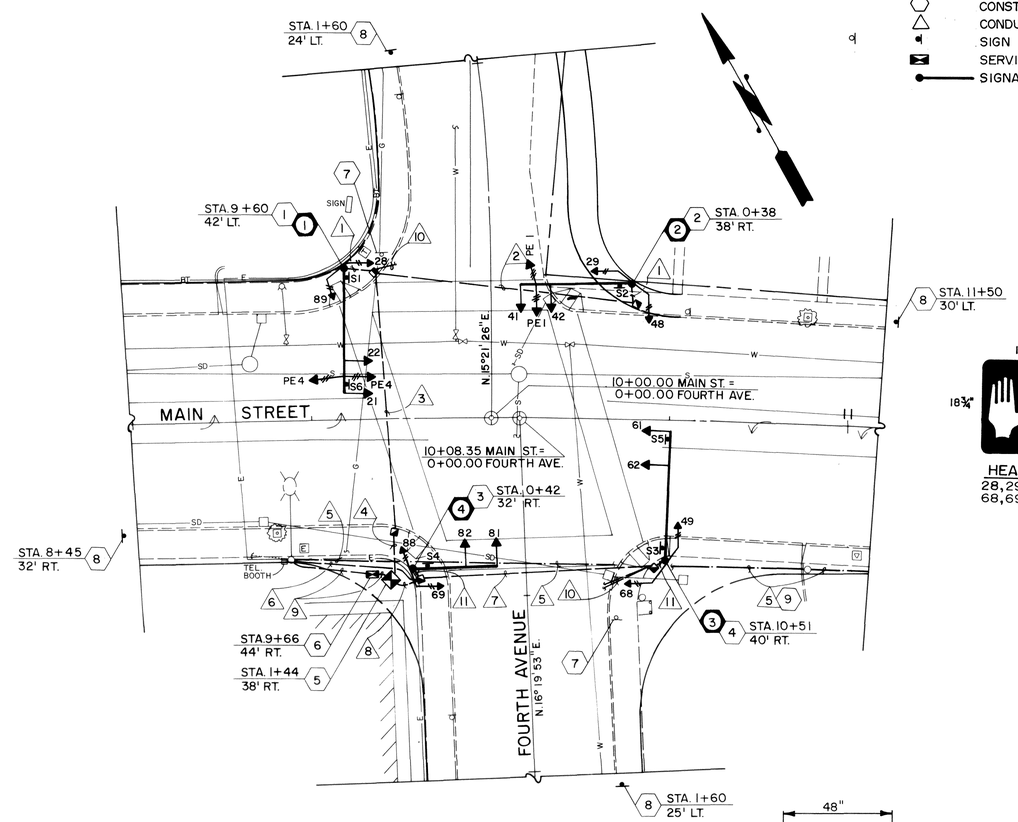
5. INSTALL FOUNDATION, CONTROLLER CABINET AND CONTROLLER AND ASSOCIATED EQUIPMENT.
6. INSTALL MODIFIED TYPE-B PAD-MOUNTED ELECTRICAL SERVICE FOR SIGNAL SYSTEM. SERVICE SHALL BE SINGLE PHASE 120/240 60 HZ AC. COIL FIVE FEET OF SERVICE WIRE IN CABINET FOR SERVICE CONNECTION. INSTALL CONDUIT TO POWER POLE FOR SERVICE DROP. COORDINATE WITH THE POWER COMPANY FOR INSTALLATION AND CONNECTION OF THE POWER DROP TO THE SERVICE CABINET.
7. REMOVE AND SALVAGE STOP SIGN. CUT METAL POLE FLUSH WITH SIDEWALK. GROUT REMAINING PIPE STUB FLUSH WITH SIDEWALK. DELIVER STOP SIGN TO CITY MAINTENANCE YARD.
8. INSTALL METAL POST AND TRAFFIC-REVISION-AHEAD SIGN (W29-901) AT THE FOLLOWING LOCATIONS:

   STA. 1+60 (24' LT.)
   STA. 11+50 (30' LT.)
   STA. 1+60 (25' LT.)
   STA. 8+45 (32' RT.)

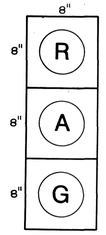
9. INSTALL THE 3CS SUPPORTED BY THE INTERCONNECT CABLE SPAN FROM WOOD POLE TO WOOD POLE. PLASTIC CABLE TIES SHALL SECURE THE CABLE TO THE CABLE. TIES SHALL BE PLACED APPROXIMATELY 18" APART AND ENDS SHALL BE NEATLY TRIMMED.

LEGEND:

EXIST.	PROP.			
		VEHICLE SIGNAL HEAD	—SD—	STORM DRAIN
		PEDESTRIAN SIGNAL HEAD	—S—	SANITARY SEWER
		OPTICOM SENSOR	—W—	WATER
		CONDUIT	—E—	BURIED ELECTRICAL
		LUMINAIRE	—G—	GAS
		TYPE I JUNCTION BOX		CATCH BASIN
		TYPE II JUNCTION BOX		MANHOLE
		TYPE III JUNCTION BOX		UTILITY POLE
		SIGNAL CONTROLLER CABINET		RIGHT-OF-WAY
		INDUCTION LOOP & SAWCUT LEAD IN		METER
		SIGNAL STANDARD NUMBER		VALVE
		CONSTRUCTION NOTE		HYDRANT
		CONDUIT RUN NUMBER		MONUMENT
		SIGN		CLEANOUT
		SERVICE CABINET	—BT—	BURIED TELEPHONE
		SIGNAL POLE & MAST ARM		SPAN WIRE

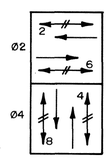


HEADS NO.
28,29,48,49,
68,69,88,89



HEADS NO.
21, 22
41, 42
61, 62
81, 82

PHASING SEQUENCE DIAGRAM



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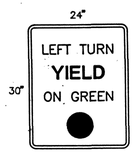
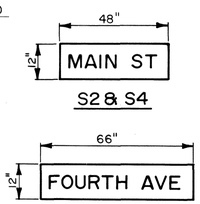
PHASES - 2



S5 & S6
(R10-12)



S2 & S4

S1 & S3

STREET NAME SIGNS
(D3-301)

WIRING SCHEDULE

RUN NO.	CONDUIT SIZE	2CS	3CS	5C	#6	INTER-CONNECT	REMARKS
1	3"		1	3			
2	3"		1	3			
3	4"		2	6			
4	4"		2	6			
	2"						Spare
5	Aerial		1			1	
6	1-1/2"		1			1	
7	3"			3			
8	4"		1	6			
	1-1/2"					1	
	2"						Spare
9	1-1/2"				3		Electrical Service
10	1-1/2"						Cap Ends 2' From Curb
11	3"			3			

No.	Date	By	Ckd.	Appr.	Revision

Approved By:

Drawn By: Date: 5-89
Designed By: 5/23/89
Checked By: 5/23/89
Approved By: 5/24/89

ENTRANCO ENGINEERS, INC.
Kirkland and Everett, WA — Phoenix, AZ

Scale: Horiz. 1"=20' Vert. N/A
Job No.: 288617-10

CITY OF FERNDALE
TRAFFIC SIGNAL IMPROVEMENTS
MAIN STREET AT FOURTH AVENUE
SIGNAL PLAN

Sheet 2 Of 10

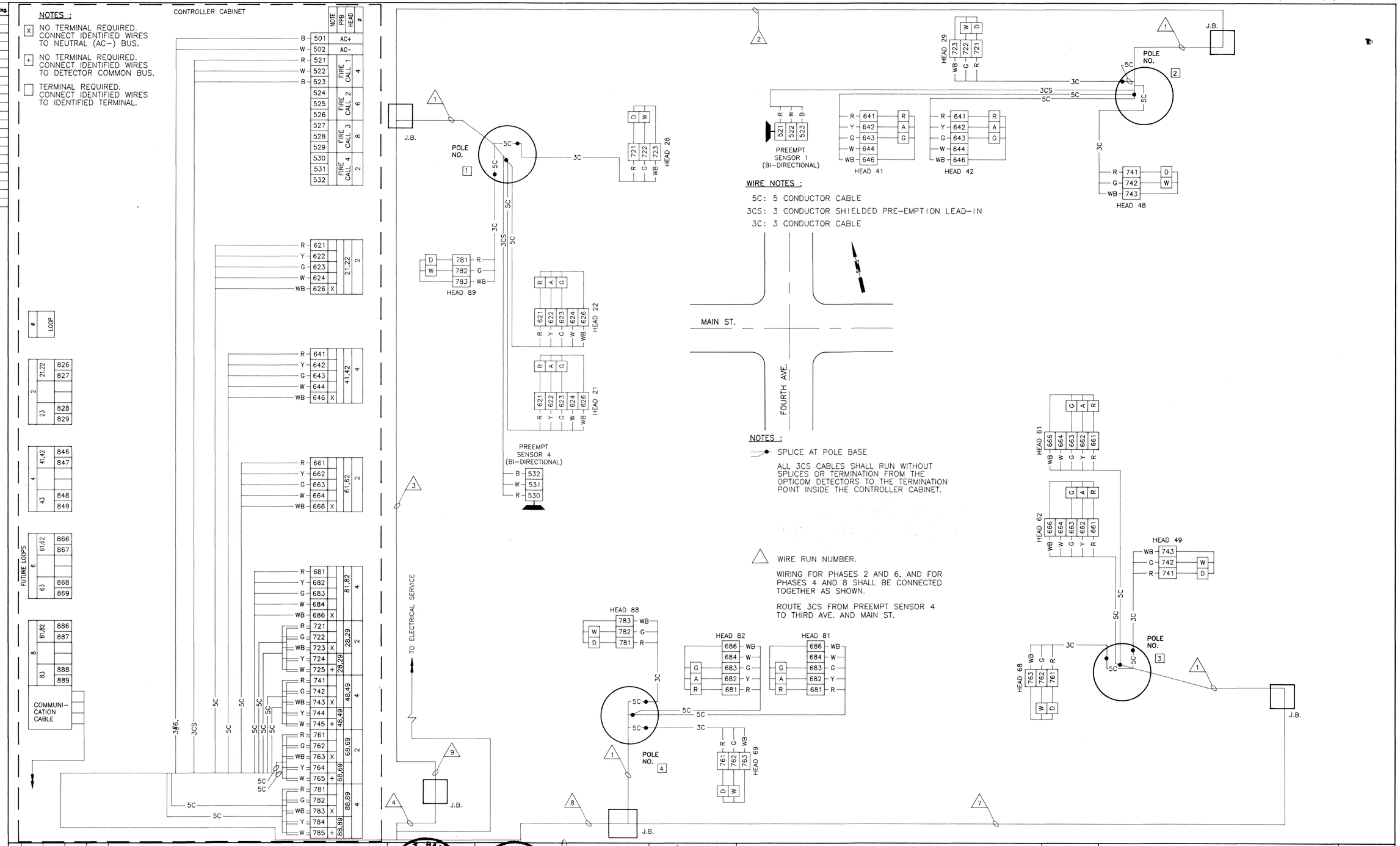
Int.	Date	Dwg.	Eng.

NOTES :

[X] NO TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO NEUTRAL (AC-) BUS.

[+] NO TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO DETECTOR COMMON BUS.

[ ] TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO IDENTIFIED TERMINAL.



No.	Date	By	Ckd.	Appr.	Revision

JOHN T. BANNON — STATE OF WASHINGTON — 8261 — REGISTERED PROFESSIONAL ENGINEER

FOSTER E. ISHERWOOD — STATE OF WASHINGTON — 11627 — REGISTERED PROFESSIONAL ENGINEER

Approved By: John T. Bley

Drawn By:	Date: 7/11/89
Designed By:	7/11/89
Checked By:	7/11/89
Approved By:	7/11/89

ENTRANCO ENGINEERS, INC.

Kirkland and Everett, WA — Phoenix, AZ

Scale: Horiz. NA — Vert. NA

Job No. 88617-10

CITY OF FERNDALE

TRAFFIC SIGNAL IMPROVEMENTS

MAIN STREET AT FOURTH AVENUE

WIRING DIAGRAM

Sheet 3 of 10

Int.	Date	Dwg.	Eng.

GENERAL NOTES

1. INSTALL VEHICLE SIGNAL HEADS WITH THE TYPE "N" ASTRO BRAC MOUNTING.
2. INSTALL PEDESTRIAN SIGNAL HEADS WITH THE TYPE "E" CLAMSHELL MOUNTING.
3. ALL VEHICLE SIGNAL HEADS SHALL HAVE TUNNEL VISORS.
4. ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE EGGCRATE VISORS.
5. DELIVER SALVAGED WIRE, CABLE, SIGNAL HEADS AND CONTROLLERS TO THE CITY OF FERNDALE MAINTENANCE YARD.
6. WIRING FOR PEDESTRIAN SIGNAL SHALL BE INSTALLED TO EACH SIGNAL POLE AS PART OF THE BASIC CONTRACT.
7. SIGNAL POLES SHALL BE TAPPED, DRILLED AND PLUGGED BY THE MANUFACTURER TO ACCOMMODATE THE FUTURE INSTALLATION OF PEDESTRIAN PUSH-BUTTON ASSEMBLIES, TYPE PPB-1AB, AND PEDESTRIAN SIGNALS.
8. THE LOCATIONS OF THE JUNCTION BOXES DEPICTED ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD MARK THE LOCATIONS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER BEFORE CONSTRUCTION COMMENCES. JUNCTION BOXES SHALL BE POSITIONED OUT OF EXISTING WHEEL CHAIR RAMPS AND SHALL NOT STRADDLE CONCRETE SCORE LINE.
9. ALL CONDUIT USED FOR RISERS SHALL BE RIGID STEEL CONDUIT.
10. OPTICAL DETECTOR CABLE SHALL NOT BE SPLICED.

CONSTRUCTION NOTES

1. INSTALL A SIGNAL POLE FOUNDATION; A TYPE II GALVANIZED STEEL POLE; A MAST ARM WITH TWO VEHICLE SIGNAL HEADS, ONE STREET NAME SIGN AND ONE LEFT-TURN-YIELD-ON-GREEN SIGN; AND TWO PEDESTRIAN SIGNAL HEADS ON THE POLE.
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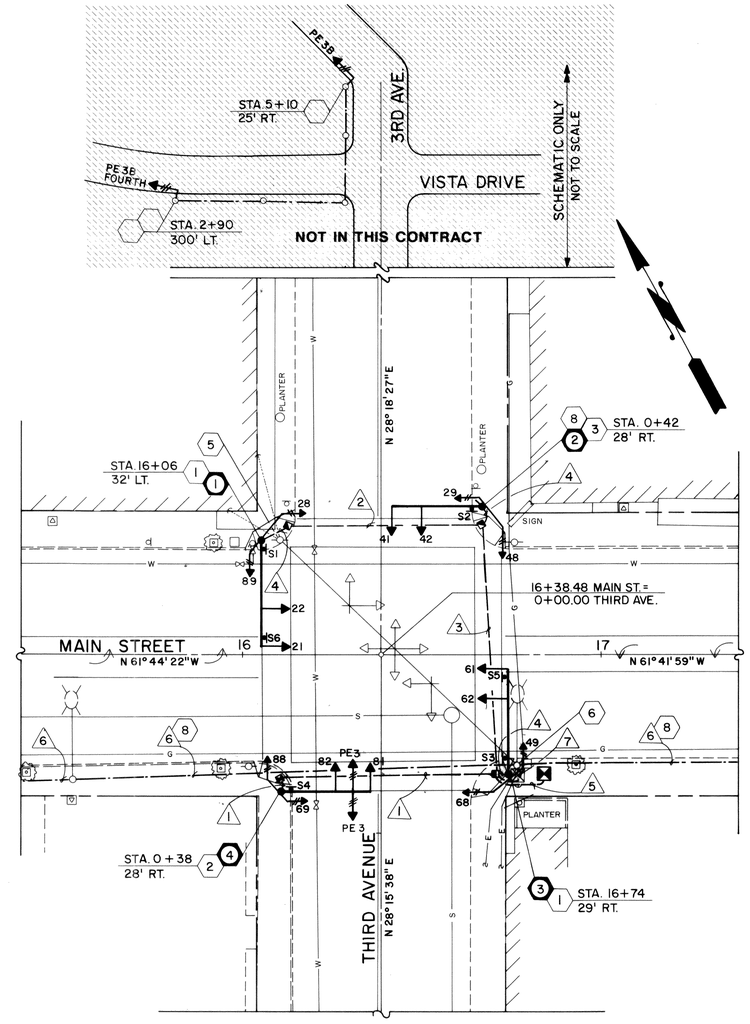
4. NOT IN CONTRACT.
5. REMOVE AND SALVAGE GUY ANCHORS, SPAN WIRE, ELECTRICAL CABLE AND SIGNAL HEADS, CUT SIGNAL POLES FLUSH WITH SIDEWALK, DISPOSE OF SIGNAL POLES. GROUT REMAINING POLE STUBS FLUSH WITH THE SIDEWALK.
6. REMOVE AND SALVAGE EXISTING CONTROLLER.
7. INSTALL FOUNDATION, CONTROLLER CABINET AND CONTROLLER AND ASSOCIATED EQUIPMENT. USE EXISTING POWER DROP AND METER BASE FOR EXISTING CONTROLLER TO EXTEND SERVICE TO NEW CONTROLLER.
8. INSTALL THE 3CS SUPPORTED BY THE INTERCONNECT CABLE SPAN FROM WOOD POLE TO WOOD POLE. PLASTIC CABLE TIES SHALL SECURE THE CABLE TO THE CABLE. TIES SHALL BE PLACED APPROXIMATELY 18" APART AND ENDS SHALL BE NEATLY TRIMMED.



LEGEND:

EXIST.	PROP.			
		VEHICLE SIGNAL HEAD	—SD—	STORM DRAIN
		PEDESTRIAN SIGNAL HEAD	—S—	SANITARY SEWER
		OPTICOM SENSOR	—W—	WATER
		CONDUIT	—E—	BURIED ELECTRICAL
		LUMINAIRE	—G—	GAS
		TYPE I JUNCTION BOX		CATCH BASIN
		TYPE II JUNCTION BOX		MANHOLE
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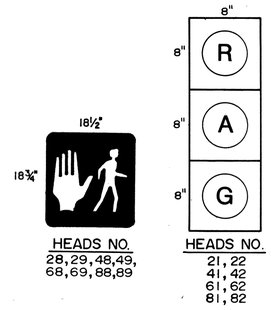
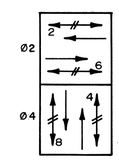
		SIGNAL CONTROLLER CABINET		RIGHT-OF-WAY
		INDUCTION LOOP & SAWCUT LEAD IN		METER
		SIGNAL STANDARD NUMBER		VALVE
		CONSTRUCTION NOTE		HYDRANT
		CONDUIT RUN NUMBER		MONUMENT
		SIGN		CLEANOUT
		SERVICE CABINET	—BT—	BURIED TELEPHONE
		SIGNAL POLE & MAST ARM		SPAN WIRE



HEADS NO.
28,29,48,49,
68,69,88,89

HEADS NO.
21,22
41,42
61,62
81,82

PHASING SEQUENCE DIAGRAM



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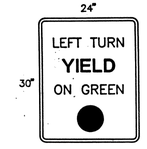
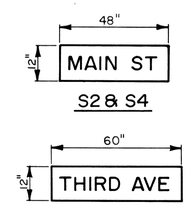


S5 & S6
(R10-12)



S2 & S4

S1 & S3

STREET NAME SIGNS
(D3-301)

WIRING SCHEDULE

RUN NO.	CONDUIT SIZE	2CS	3CS	5C	#6	INTER-CONNECT	REMARKS
1	3"		1	3			
2	3"			3			
3	4"			6			
4	3"			3			
5	4"		3	3			
	4"			9			
	2"					2	
	1-1/2"				3		
	3"						Spare
6	Aerial		1			1	
7	2"					2	
	1-1/2"				3		

No.	Date	By	Ckd.	Appr.	Revision

JOHN T. BANNON — STATE OF WASHINGTON — 8263 — REGISTERED PROFESSIONAL ENGINEER

FOSTER E. ISHERWOOD — STATE OF WASHINGTON — 10262 — REGISTERED PROFESSIONAL ENGINEER

Approved By:

Drawn By: Date: 5-89
Designed By: 5/23/89
Checked By: 5/23/89
Approved By: 5/24/89

ENTRANCO ENGINEERS, INC.
Kirkland and Everett, WA — Phoenix, AZ

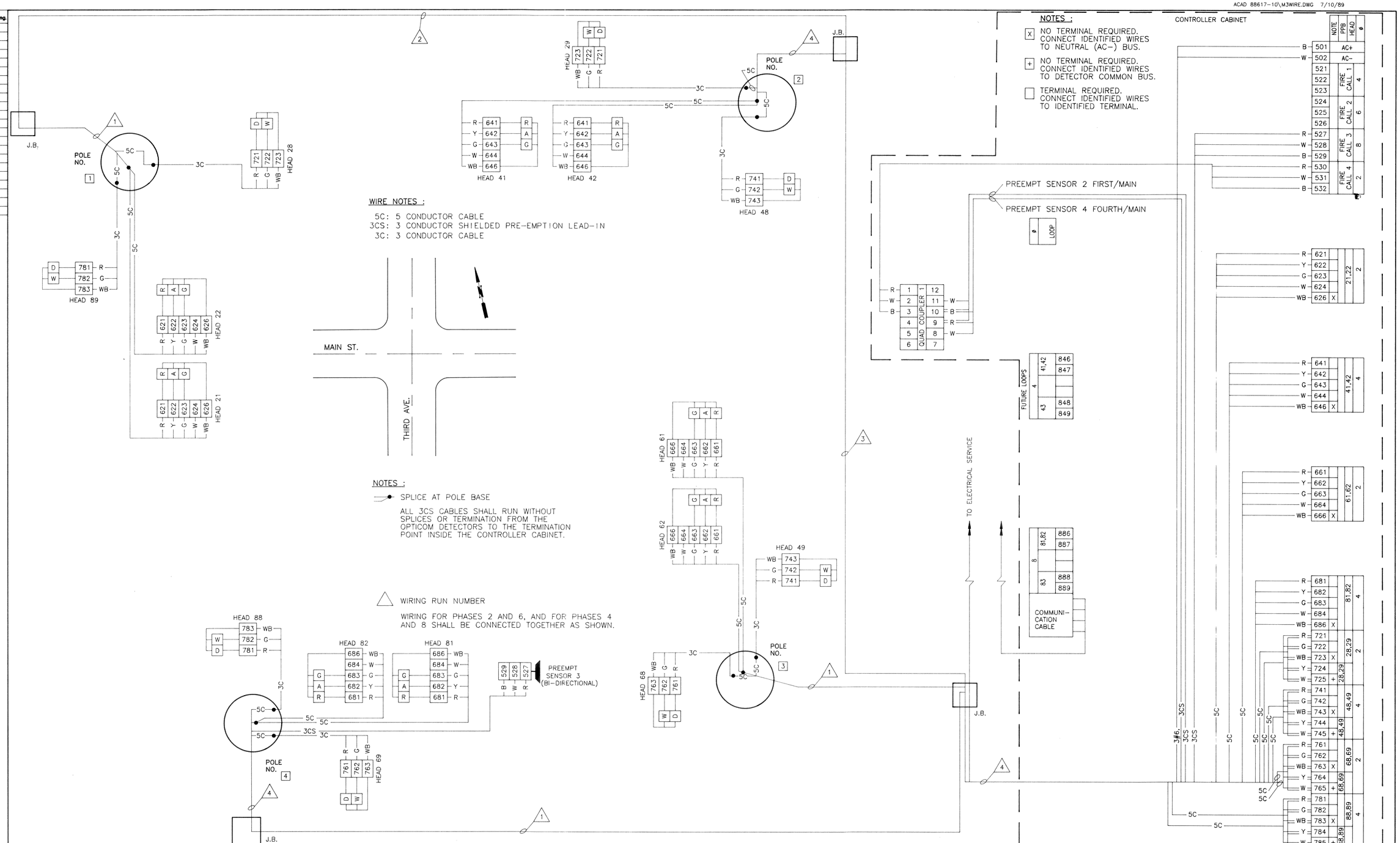
Scale:
Horiz. 1"=20'
Vert. N/A
Job No.: 288617-10

CITY OF FERNDALE
TRAFFIC SIGNAL IMPROVEMENTS
MAIN STREET AT THIRD AVENUE
SIGNAL PLAN

Sheet 4 of 10

ACAD 88617-10\M3WIRE.DWG 7/10/89

Int.	Date	Dwg.	Eng.



No.	Date	By	Ckd.	Appr.	Revision

JOHN T. BANNOR — REGISTERED PROFESSIONAL ENGINEER

FOSTER E. ISHERWOOD — REGISTERED PROFESSIONAL ENGINEER

Approved By: John T. Bley

		Date
Drawn By:		7/11/89
Designed By:		7/11/89
Checked By:		7/11/89
Approved By:		7/11/89

ENTRANCO ENGINEERS, INC.

Kirkland and Everett, WA — Phoenix, AZ

Scale: Horiz. NA — Vert. NA

Job No. 88617-10

CITY OF FERNDALE

TRAFFIC SIGNAL IMPROVEMENTS

MAIN STREET AT THIRD AVENUE

WIRING DIAGRAM

Sheet 5 Of 10

Int.	Date	Dwg.	Eng.

GENERAL NOTES

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2. INSTALL PEDESTRIAN SIGNAL HEADS WITH TYPE TYPE "E" CLAMSHELL MOUNTING.
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CONSTRUCTION NOTES

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3. INSTALL FOUNDATION, CONTROLLER CABINET AND CONTROLLER AND ASSOCIATED EQUIPMENT. USE EXISTING POWER DROP AND METER BASE FOR NEW CONTROLLER SERVICE.
4. REMOVE AND SALVAGE EXISTING CONTROLLER AND ASSOCIATED EQUIPMENT.
5. REMOVE AND SALVAGE GUY ANCHORS, SPAN WIRE, ELECTRICAL CABLE AND SIGNAL HEADS. CUT SIGNAL POLES FLUSH WITH SIDEWALK, DISPOSE OF SIGNAL POLES, GROUT REMAINING POLE STUBS FLUSH WITH SIDEWALK.
6. AWNING TO BE REMOVED BY OTHERS. COORDINATE WITH BUILDING OWNER.
7. INSTALL THE 3CS SUPPORTED BY THE INTERCONNECT CABLE SPAN FROM WOOD POLE TO WOOD POLE. PLASTIC CABLE TIES SHALL SECURE THE CABLE TO THE CABLE. TIES SHALL BE PLACED APPROXIMATELY 18" APART AND ENDS SHALL BE NEATLY TRIMMED.
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LEGEND:

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		PEDESTRIAN SIGNAL HEAD	—S—	SANITARY SEWER
		OPTICOM SENSOR	—W—	WATER
		CONDUIT	—E—	BURIED ELECTRICAL
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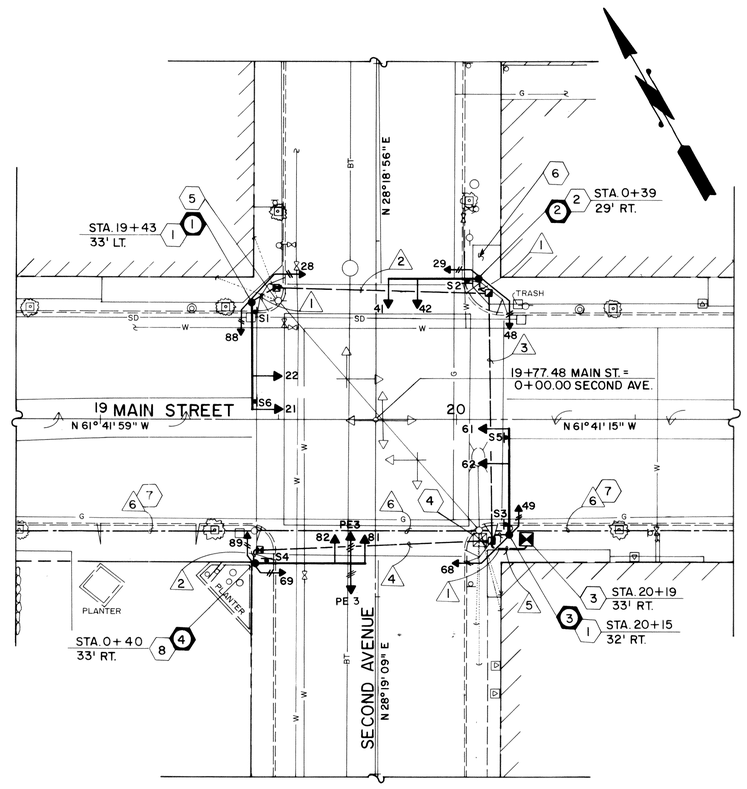
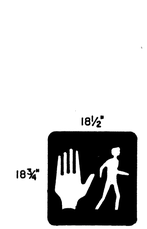
		SIGNAL POLE & MAST ARM		SPAN WIRE





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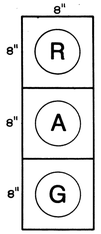

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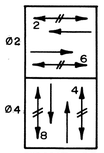
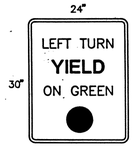
81,82

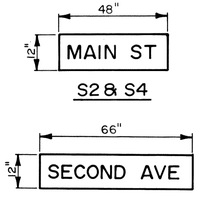
PHASING SEQUENCE DIAGRAM



FRAME - 20
PHASES - 2



S5 & S6
(R10-12)



S2 & S4

S1 & S3

STREET NAME SIGNS
(D3-301)

WIRING SCHEDULE

RUN NO.	CONDUIT SIZE	2CS	3CS	5C	#6	INTER-CONNECT	REMARKS
1	3"			3			
2	3"		1	3			
3	4"			6			
4	3"		1	3			
5	4"		1	3			
	4"			9			
	2"					2	
	1-1/2"				3		
	3"						Spare
6	Aerial					1	

No.	Date	By	Ckd.	Appr.	Revision

JOHN T. BANNON — STATE OF WASHINGTON — 9261 — REGISTERED PROFESSIONAL ENGINEER

FRANCO F. INCORVATI — STATE OF WASHINGTON — PROFESSIONAL ENGINEER

Approved By:

Drawn By: Date: 5-89
Designed By: 5/23/89
Checked By: 5/23/89
Approved By: 5/24/89

ENTRANCO ENGINEERS, INC.
Kirkland and Everett, WA — Phoenix, AZ

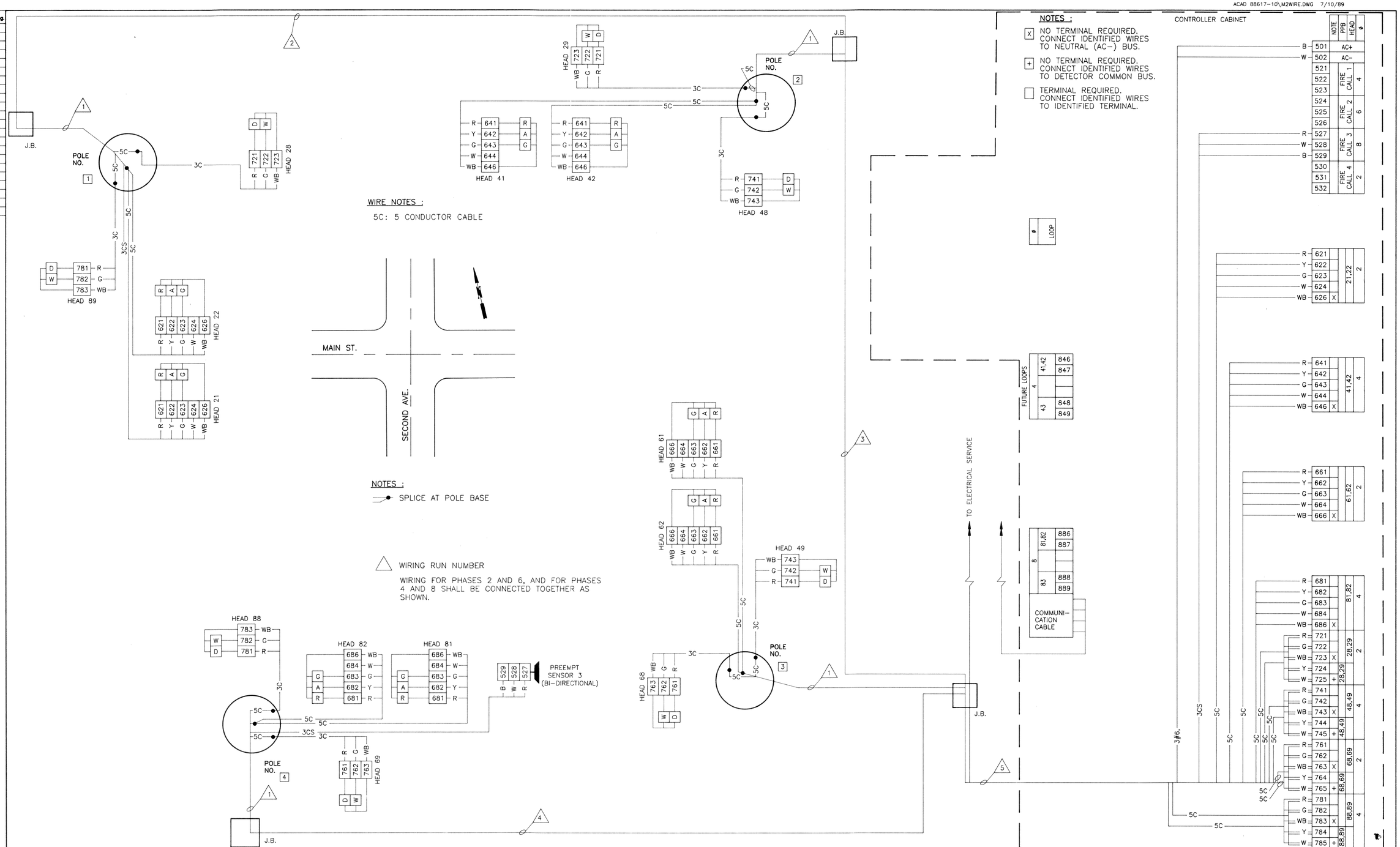
Scale: Horiz. 1" = 20' Vert. N/A
Job No.: 288617-10

CITY OF FERNDALE
TRAFFIC SIGNAL IMPROVEMENTS
MAIN STREET AT SECOND AVENUE
SIGNAL PLAN

Sheet 6 Of 10

ACAD 88617-10\M2WIRE.DWG 7/10/89

Int.	Date	Dwg.	Eng.



WIRE NOTES :

5C: 5 CONDUCTOR CABLE

NOTES :

SPLICE AT POLE BASE

WIRING RUN NUMBER

WIRING FOR PHASES 2 AND 6, AND FOR PHASES 4 AND 8 SHALL BE CONNECTED TOGETHER AS SHOWN.

NOTES :

X NO TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO NEUTRAL (AC−) BUS.

+ NO TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO DETECTOR COMMON BUS.

☐ TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO IDENTIFIED TERMINAL.

No.	Date	By	Ckd.	Appr.	Revision

JOHN T. GANNON REGISTERED PROFESSIONAL ENGINEER

FOSTER E. ISHEY REGISTERED PROFESSIONAL ENGINEER

Approved By: John T. Gannon

Drawn By: Date: 7/11/89
Designed By: 7/11/89
Checked By: 7/11/89
Approved By: 7/11/89

ENTRANCO ENGINEERS, INC.

Kirkland and Everett, WA — Phoenix, AZ

Scale: Horiz. NA Vert. NA

Job No. 88617-10

CITY OF FERNDALE

TRAFFIC SIGNAL IMPROVEMENTS
MAIN STREET AT SECOND AVENUE
WIRING DIAGRAM

Sheet 7 Of 10

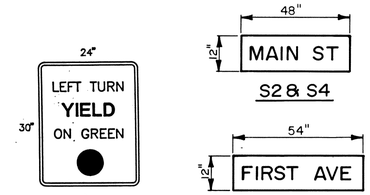
Int.	Date	Dwg.	Eng.

GENERAL NOTES

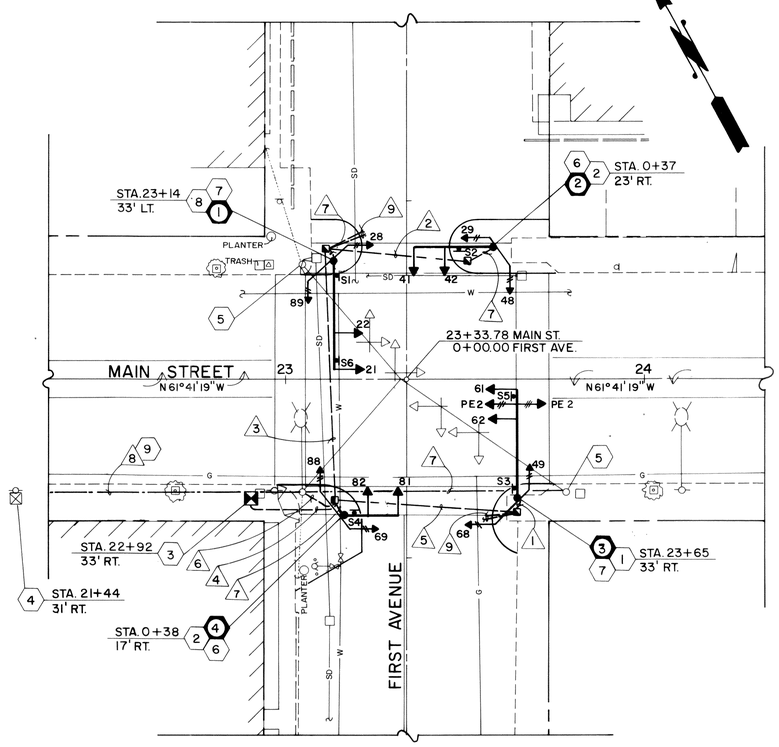
1. INSTALL VEHICLE SIGNAL HEADS WITH THE TYPE "N" ASTRO BRAC MOUNTING.
2. INSTALL PEDESTRIAN SIGNAL HEADS WITH THE TYPE "E" CLAMSHELL MOUNTING.
3. ALL VEHICLE SIGNAL HEADS SHALL HAVE TUNNEL VISORS.
4. ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE EGGCRATE VISORS.
5. DELIVER SALVAGED WIRE, CABLE, SIGNAL HEADS AND CONTROLLERS TO THE CITY OF FERNDALE MAINTENANCE YARD.
6. WIRING FOR PEDESTRIAN SIGNALS SHALL BE INSTALLED TO EACH SIGNAL POLE AS PART OF THE BASIC CONTRACT.
7. SIGNAL POLES SHALL BE TAPPED, DRILLED AND PLUGGED BY THE MANUFACTURER TO ACCOMMODATE THE INSTALLATION OF PEDESTRIAN PUSH-BUTTON ASSEMBLIES, AND PEDESTRIAN SIGNALS.
8. THE LOCATIONS OF THE JUNCTION BOXES DEPICTED ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD MARK THE LOCATIONS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER BEFORE CONSTRUCTION COMMENCES. JUNCTION BOXES SHALL BE POSITIONED OUT OF EXISTING WHEEL CHAIR RAMPS AND SHALL NOT STRADDLE CONCRETE SCORE LINE.
9. ALL CONDUIT USED FOR RISERS SHALL BE RIGID STEEL CONDUIT.

CONSTRUCTION NOTES

1. INSTALL A SIGNAL POLE FOUNDATION; A TYPE II GALVANIZED STEEL POLE; A MAST ARM WITH TWO VEHICLE SIGNAL HEADS, ONE OPTICOM PRE-EMPTION SENSOR, ONE STREET NAME SIGN AND ONE LEFT-TURN-YIELD-ON-GREEN SIGN; AND TWO PEDESTRIAN SIGNAL HEADS ON THE POLE.
2. INSTALL A SIGNAL POLE FOUNDATION; A TYPE II GALVANIZED STEEL POLE; A MAST ARM WITH TWO VEHICLE SIGNAL HEADS AND ONE STREET NAME SIGN; AND TWO PEDESTRIAN SIGNAL HEADS ON THE POLE.
3. INSTALL FOUNDATION, CONTROLLER CABINET AND CONTROLLER.
4. RELOCATE EXISTING POWER DROP, METER BASE FROM POLE AT STA. 21+44 (31' RT.) TO POLE AT STA. 23+05 (32' RT.). COORDINATE WITH POWER COMPANY FOR CONNECTION OF SERVICE TO METER BASE. SALVAGE EXISTING CONTROLLER.
5. REMOVE AND SALVAGE GUY ANCHORS, SPAN WIRE, ELECTRICAL CABLE AND SIGNAL HEADS. CUT SIGNAL POLES FLUSH WITH SIDEWALK. DISPOSE OF SIGNAL POLES. GROUT REMAINING POLE STUBS FLUSH WITH SIDEWALK.
6. INSTALL PUSHBUTTON ASSEMBLY PPB 3A.
7. INSTALL PUSHBUTTON ASSEMBLY PPB 3B.
8. INSTALL A SIGNAL POLE FOUNDATION; A TYPE II GALVANIZED STEEL POLE; A MAST ARM WITH TWO VEHICLE SIGNAL HEADS, ONE STREET NAME SIGN AND ONE LEFT-TURN-YIELD-ON-GREEN SIGN; AND TWO PEDESTRIAN SIGNAL HEADS ON THE POLE.
9. INSTALL THE 3CS SUPPORTED BY THE INTERCONNECT CABLE SPAN FROM WOOD POLE TO WOOD POLE. PLASTIC CABLE TIES SHALL SECURE THE CABLE TO THE CABLE. TIES SHALL BE PLACED APPROXIMATELY 18" APART AND ENDS SHALL BE NEATLY TRIMMED.



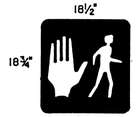
STREET NAME SIGNS
(D3-301)



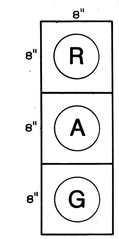
LEGEND:

EXIST.	PROP.	
		VEHICLE SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD
		OPTICOM SENSOR
		CONDUIT
		LUMINAIRE
		TYPE I JUNCTION BOX
		TYPE II JUNCTION BOX
		TYPE III JUNCTION BOX
		SIGNAL CONTROLLER CABINET
		INDUCTION LOOP & SAWCUT LEAD IN
		SIGNAL STANDARD NUMBER
		CONSTRUCTION NOTE
		CONDUIT RUN NUMBER
		SIGN
		SERVICE CABINET
		SIGNAL POLE & MAST ARM

—SD—	STORM DRAIN
—S—	SANITARY SEWER
—W—	WATER
—E—	BURIED ELECTRICAL
—G—	GAS
	CATCH BASIN
	MANHOLE
	UTILITY POLE
	RIGHT-OF-WAY
	METER
	VALVE
	HYDRANT
	MONUMENT
	CLEANOUT
—BT—	BURIED TELEPHONE
	SPAN WIRE

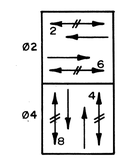


HEADS NO.
28,29,48,49,
68,69,88,89

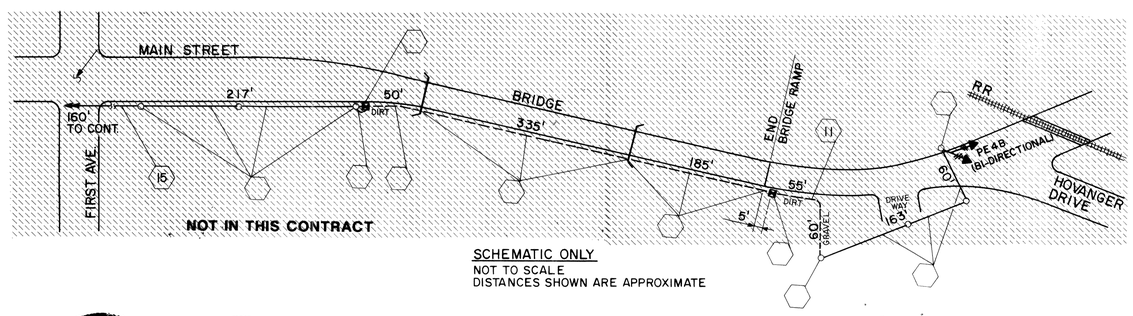


HEADS NO.
21, 22
41, 42
61, 62
81, 82

PHASING SEQUENCE DIAGRAM



FRAME - 20
PHASES - 2



SCHEMATIC ONLY
NOT TO SCALE
DISTANCES SHOWN ARE APPROXIMATE

WIRING SCHEDULE

RUN NO.	CONDUIT SIZE	2CS	3CS	5C	#6	INTER-CONNECT	REMARKS
1	3"		1	3			
2	3"			3			
3	4"			6			
4	4"		2	3			
	4"			9			
	1-1/2"					1	
	1-1/2"				3		
	3"						Spare
5	3"		1	3			
6	1-1/2"		1			1	
	1-1/2"				3		
7	3"			3			
8	Aerial		1			1	
9	1-1/2						Cap Ends 2' From Curb

No.	Date	By	Ckd.	Appr.	Revision

JOHN T. BARNOR — STATE OF WASHINGTON — 8263 — REGISTERED PROFESSIONAL ENGINEER

FOSTER — REGISTERED PROFESSIONAL ENGINEER

Approved By: John T. Foley

Drawn By: TBV	Date: 5-89
Designed By:	5/23/89
Checked By:	5/23/89
Approved By:	5/24/89

ENTRANCO ENGINEERS, INC.
Kirkland and Everett, WA — Phoenix, AZ

Scale:
Horiz. 1"=20'
Vert. N/A
Job No.: 288617-10

CITY OF FERNDALE
TRAFFIC SIGNAL IMPROVEMENTS
MAIN STREET AT FIRST AVENUE
SIGNAL PLAN

Sheet 8 of 10

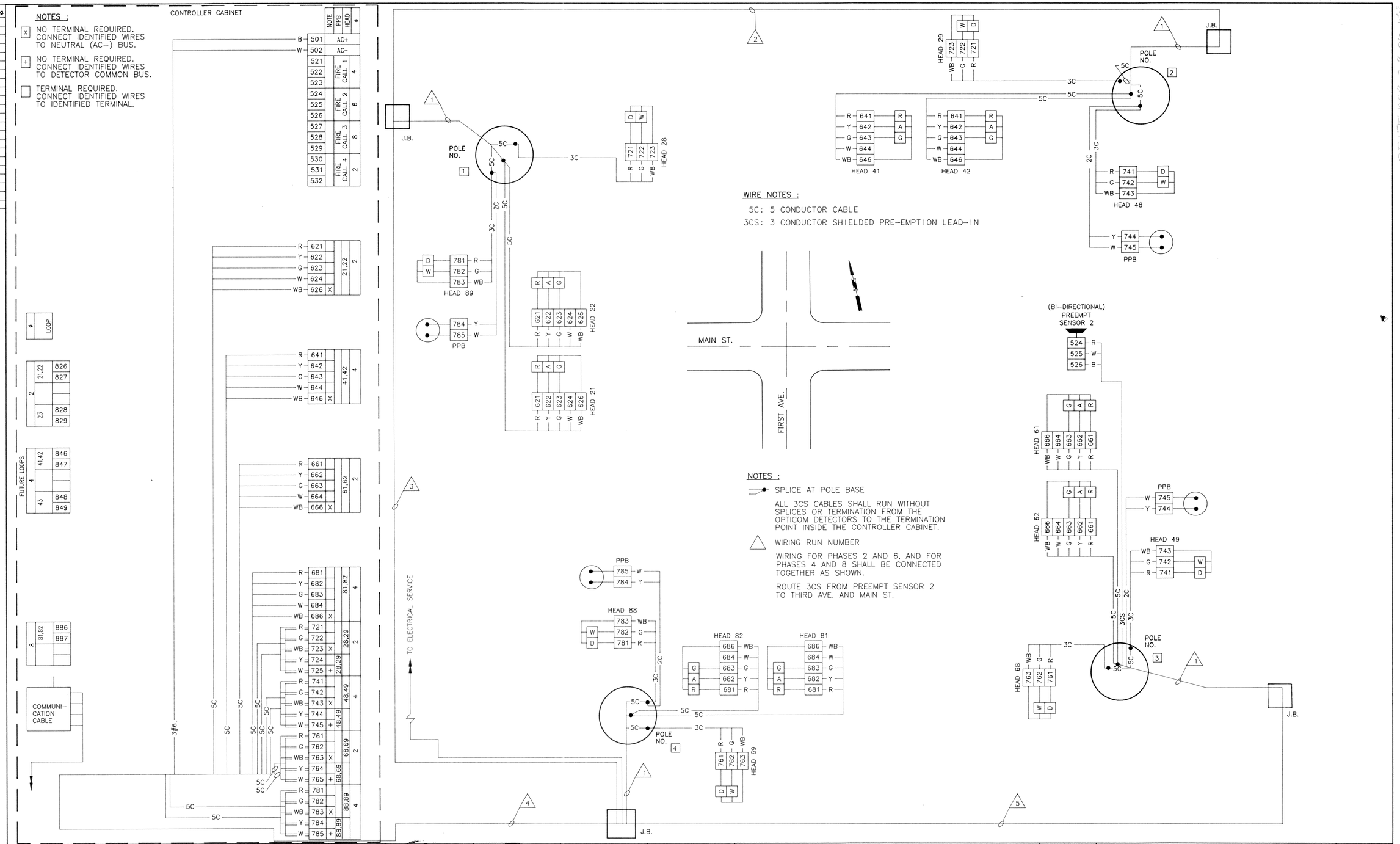
Int.	Date	Dwg.	Eng.

NOTES :

X NO TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO NEUTRAL (AC–) BUS.

+ NO TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO DETECTOR COMMON BUS.

☐ TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO IDENTIFIED TERMINAL.



WIRE NOTES :

5C: 5 CONDUCTOR CABLE

3CS: 3 CONDUCTOR SHIELDED PRE-EMPTION LEAD-IN

NOTES :

SPLICE AT POLE BASE

ALL 3CS CABLES SHALL RUN WITHOUT SPLICES OR TERMINATION FROM THE OPTICOM DETECTORS TO THE TERMINATION POINT INSIDE THE CONTROLLER CABINET.

△ WIRING RUN NUMBER

WIRING FOR PHASES 2 AND 6, AND FOR PHASES 4 AND 8 SHALL BE CONNECTED TOGETHER AS SHOWN.

ROUTE 3CS FROM PREEMPT SENSOR 2 TO THIRD AVE. AND MAIN ST.

No.	Date	By	Ckd.	Appr.	Revision

JOHN T. BARNONI

FOSTER E. IVERSON

Approved By: John T. Bley

		Date
Drawn By:		7/11/89
Designed By:		7/11/89
Checked By:		7/11/89
Approved By:		7/11/89

ENTRANCO ENGINEERS, INC.

Kirkland and Everett, WA — Phoenix, AZ

Scale: Horiz. NA Vert. NA

Job No. 88617-10

CITY OF FERNDALE

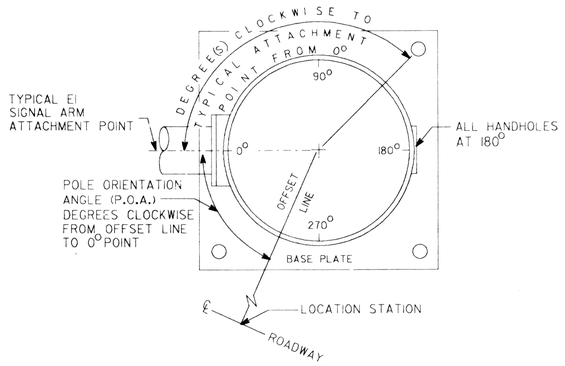
TRAFFIC SIGNAL IMPROVEMENTS

MAIN STREET AT FIRST AVENUE

WIRING DIAGRAM

Sheet 9 Of 10

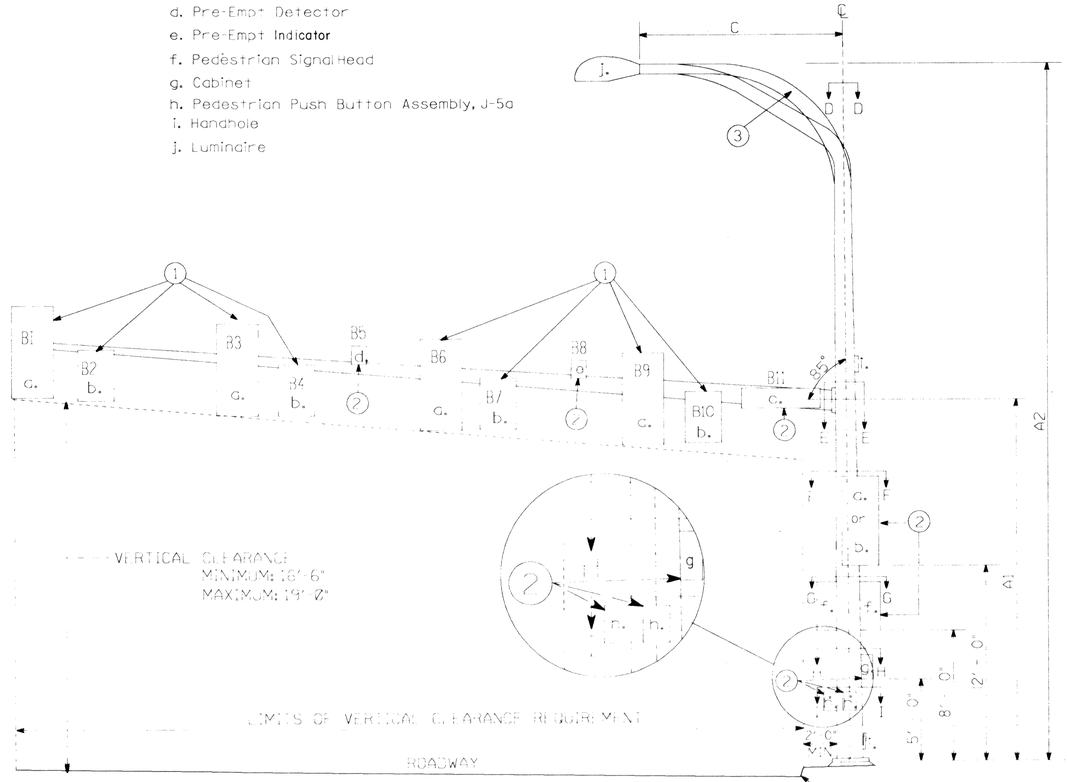
Int.	Date	Dwg.	Eng.

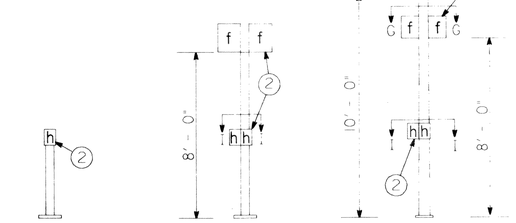


POLE ORIENTATION AND ATTACHMENT POINT DETAIL
PLAN VIEW

LEGEND

a. Vehicle Signal Head
b. Lane Control Sign
c. Street Name Sign
d. Pre-Empt Detector
e. Pre-Empt Indicator
f. Pedestrian Signal Head
g. Cabinet
h. Pedestrian Push Button Assembly, J-5a
i. Handhole
j. Luminaire





TYPE PPB
PPB POST

TYPE PS
PED. HEAD
STANDARD

TYPE I
VEHICLE HEAD
STANDARD

TYPE II
MASTARM
SIGNAL STANDARD

TYPE III
COMBINATION LIGHTING
AND MASTARM
SIGNAL STANDARD

TYPE IV
STRAIN POLE
STANDARD

TYPE V
COMBINATION LIGHTING
AND STRAIN
POLE STANDARD

TYPE SD
SPECIAL DESIGN STANDARD

NOTES

1. MOUNTING COUPLING INSTALLED BY FABRICATOR AT OFFSET DISTANCE INDICATED IN CHART.
2. FIELD INSTALLED.
3. SEE SPECIAL PROVISIONS FOR LUMINAIRE ARM TYPE.
4. FOUNDATIONS SHALL CONFORM TO THE FOUNDATION DETAIL ON STANDARD PLAN J-7c, EXCEPT ANCHOR BOLT SIZE, MATERIAL AND BOLT CIRCLE SHALL CONFORM TO DETAILS ON PRE-APPROVED PLANS OR SHALL BE AS APPROVED BY THE BRIDGE AND STRUCTURES OFFICE. ALL (8) VERTICAL REBARS SHALL BE NO. 7 AND SHALL BE EQUALLY SPACED.
5. MOUNT TERMINAL CABINET BELOW PEDESTRIAN HEADS.

- ANCHOR BOLT SIZE SHALL BE AT A MINIMUM A307, 1¾" DIAMETER, 60" LONG WITH 6" HOOK. TEN INCHES OF THE BOLT SHALL BE THREADED.
- POLE MANUFACTURER SHALL DRILL, TAP AND PLUG THE SIGNAL POLES FOR INSTALLATION OF FUTURE PEDESTRIAN PUSHBUTTON ASSEMBLIES. PER STANDARD PLAN J-5a, TYPE PPB3 AND CLAMSHELL MOUNTED PEDESTRIAN SIGNALS TYPE E. HOLES SHALL BE PLUGGED WITH STAINLESS STEEL BOLTS.

SIGNAL STANDARD DETAIL CHART

STD. NO.	FIELD LOCATION STATION	OFFSET(FT)	LT.	RT.	P.O.A.	STRAIN POLE CLASS	TYPE	MOUNTING HEIGHT(FT) A1	A2	OFFSET DISTANCES (FT) (Z) (POLE ℄ TO ATTACHMENT POINT) B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	WINDLOAD AREAS (FT)²(X)(Y) B1	B2	B3	B4	B6	B7	B9	B10	B11	(X)(Y)(Z) TOTAL(FT)³	LUMINAIRE ARM(FT) C	POLE ATTACHMENT POINT ANGLES(deg) D	E1	E2	F	G1	G2	H	I1	I2	FOUNDATION DEPTHS(FT) (4) 3' RD.	3' SQ.	4' RD.	REMARKS
1	9+60	42	X		0		II	18.5		35	33	25		30						5.0	8	5	8						5.5	672.5			0			70	180		0	270	10	7	7	FOURTH & MAIN
2	0+38	38		X	0		II	18.5		30		22		26						4.0	8		8						4.0	632.0			0			90	180		0	270	10	7	7	"
3	10+51	40		X	0		II	18.5		35	33				26					5.0	8	5			8				5.5	680.5			0			70	180		0	270	10	7	7	"
4	0+42	32		X	0		II	18.5		25		17								4.0	8		8						4.0	352.0			0			90	180		0	270	10	7	7	"
1	16+06	32	X		0		II	18.5		30	28	19								4.5	8	5	8						5.0	554.5			0			90	180		180	270	10	7	7	THIRD & MAIN
2	0+42	28		X	0		II	18.5		25		17								4.0	8		8						4.0	352.0			0			90	180		180	270	10	7	7	"
3	16+74	29		X	0		II	18.5		30	28	22								4.5	8	5	8						5.0	578.5			0			90	180		180	270	10	7	7	"
4	0+38	28		X	0		II	18.5		25				22	15					4.0	8				8				4.0	336.0			0			90	180		180	270	10	7	7	"
1	19+43	33	X		0		II	18.5		30	28	21								5.0	8	5	8						5.5	575.5			0			90	180		180	270	10	7	7	SECOND & MAIN
2	0+39	29		X	0		II	18.5		25		17								4.0	8		8						4.0	352.0			0			90	180		180	270	10	7	7	"
3	20+15	32		X	0		II	18.5		30	28	21								5.0	8	5	8						5.5	567.5			0			90	180		180	270	10	7	7	"
4	0+40	33		X	0		II	18.5		30		22		26						4.0	8		8						4.0	432.0			0			90	180		0	270	10	7	7	"
1	23+14	33	X		0		II	18.5		30	28				20					5.5	8	5	8						4.5	565.0			0			90	180		90	180	10	7	7	FIRST & MAIN (PPB AT I1)
2	0+37	23		X	0		II	18.5		20		12								4.0	8		8						4.0	252.0			0			90	180		180	270	10	7	7	"
3	23+65	37		X	0		II	18.5		30	28	22		26						4.5	8		8						4.5	576.0			0			90	180		90	270	10	7	7	"
4	0+38	17		X	0		II	18.5		15		7								4.0	8		8						4.0	192.0			0			90	180		180	270	10	7	7	"

No.	Date	By	Ckd.	Appr.	Revision

JOHN T. BANNON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

FOSTER E. ISHERWOOD — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

Approved By: John T. Bley

Drawn By: STV — Date: 5-89
Designed By: [illegible] — 5/29/89
Checked By: [illegible] — 5/30/89
Approved By: [illegible] — 5/31/89

ENTRANCO ENGINEERS, INC.
Kirkland and Everett, WA — Phoenix, AZ

Scale: Horiz. N/A, Vert. N/A
Job No.: 2886I7-10

CITY OF FERNDALE
TRAFFIC SIGNAL IMPROVEMENTS
SIGNAL POLE SCHEDULE

Sheet 10 Of 10

00175.010 8-8-00 KK