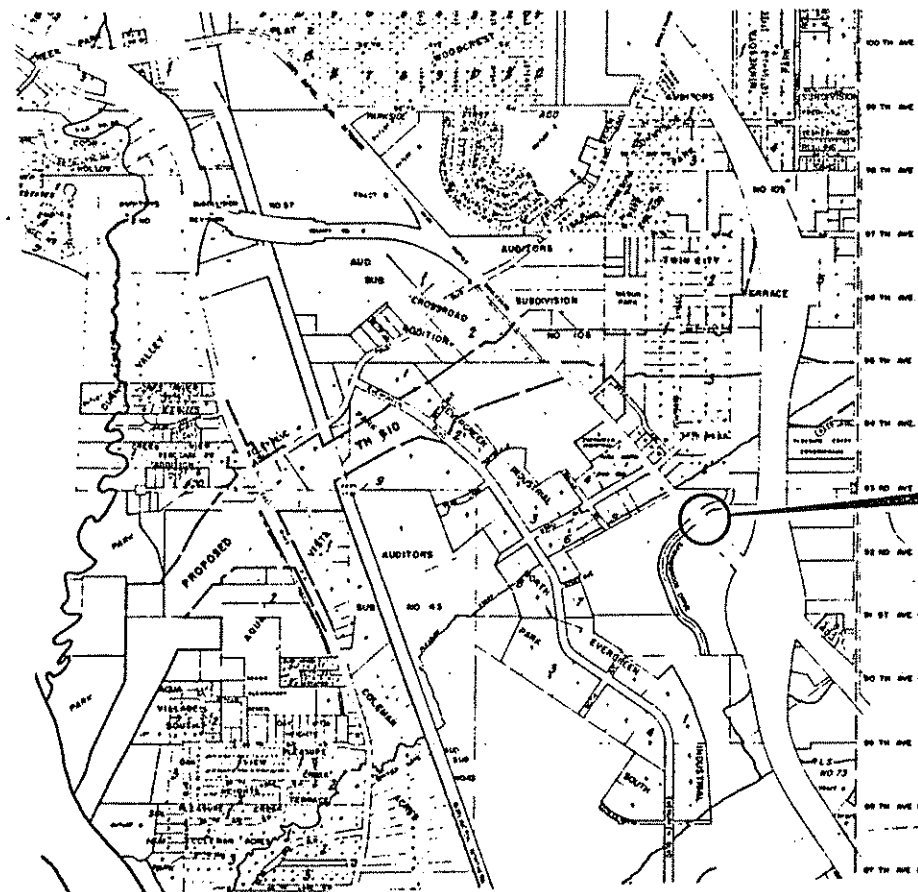
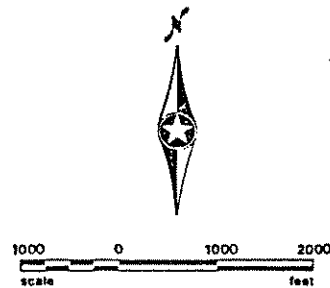


ANOKA COUNTY MINNESOTA

CONSTRUCTION PLANS FOR TRAFFIC SIGNAL SYSTEM

C. R. 3 (COON RAPIDS BOULEVARD)
AT SPRINGBROOK DRIVE



PROJECT LOCATION
S.A.P. 114-116-09
C.P. 87-07-03

GOVERNING SPECIFICATIONS

THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION", INCLUDING ALL SUPPLEMENTS, SHALL GOVERN.

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 INTERSECTION LAYOUT
- 3 FIELD WIRING DIAGRAM
- 4 SIDEWALK AND MEDIAN
- 5 UTILITIES
- 6 DETAILS

THIS PLAN CONTAINS 6 SHEETS

Recommended for Approval _____

Recommended for Approval _____

Recommended for Approval _____

Recommended for Approval _____ 9/1/87

Recommended for Approval _____ 9/4/87

APPROVED _____ 9/2/87 _____

COON RAPIDS, MINNESOTA

ESTIMATED QUANTITIES

PROJECT NO.	ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
	2104.501	REMOVE CONCRETE CURB AND GUTTER	LIN.FT.	200
	2104.505	REMOVE CONCRETE WALK	SQ. FT.	1050
	2521.501	4" CONCRETE WALK	SQ. FT.	840
	2531.501	CONCRETE CURB AND GUTTER (DES.B624)	LIN. FT.	200
	2531.602	PEDESTRIAN CURB RAMP	EACH	5
	2565.511	FULL-TRAFFIC-ACTUATED TRAFFIC CONTROL SIGNAL SYSTEM	SIGNAL SYSTEM	1

"ELECTRICAL ENGINEER CERTIFICATION"
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Robert H. Elton
Date: 9/1/87 Reg.No. 5357

SURVEY	CHECKED BY:	NO	DATE	REVISIONS
DESIGN M.K.	G.V.W.			
DRAWN G.N.				

SHORT - ELLIOTT - HENDRICKSON, INC.
Saint Paul, Minnesota • Chippewa Falls, Wisconsin

SIGNAL SYSTEM
TITLE SHEET
C.R. 3 (COON RAPIDS BOULEVARD)
AT SPRINGBROOK DRIVE

C.P. 87-07-03
S.A.P. 114-116-09
FILE NO.: 87143
DATE: 7/31/87
1
6

NOTES:

- 1) SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR THE LOCATION OF UTILITIES.
- 2) ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.
- 3) LUMINAIRES Δ AND \triangle WITH P.E.C. AND CHECK SWITCH.
- 4) SEE SPECIAL PROVISIONS FOR ANOKA COUNTY SERVICE CABINET DETAILS.
- 5) DIRECTIONAL SIGNS TO BE INSTALLED ON MAST ARMS AT $\textcircled{1}$, $\textcircled{2}$, $\textcircled{3}$ AND $\textcircled{4}$. SEE SPECIAL PROVISIONS.
- 6) ALL HANDHOLES WITH TYPE "C" COVERS.
- 7) LOOP DETECTOR WIRES SHALL BE CROSS LINKED POLYETHYLENE (XLP) IN 1" N.M.C.. SEE DETAIL SHEET.
- 8) ALL PEDESTRIAN INDICATIONS SHALL BE 12"x 12".
- 9) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED EQUIPMENT.
- 10) SEE SHEET 4 FOR SIDEWALK REVISIONS AND MEDIAN DETAILS.

$\textcircled{3}$ TYPE P100-A-40-D40-9
P100 POLE FOUNDATION
TWO-ONE WAY SIGNALS-OVERHEAD
TYPE 20C-POLE MOUNTED 270°
LUMINAIRE-200W H.P.S. (APPROX.350°)
TWO-PEDESTRIAN PUSH BUTTONS AND SIGNS
TWO STEEL GUARD POSTS
EXTEND INTO H.H. 4:
3" R.S.C.
2- 12/C #12
1- 3/C #12
4- 1/C #10

$\textcircled{2}$ TYPE 1A
PEDESTAL FOUNDATION
R10-10L SIGN AND DOWNLIGHT
PEDESTRIAN PUSH BUTTON AND SIGN
4-STEEL GUARD POSTS
(SEE MEDIAN DETAIL, SHEET 4)
EXTEND INTO H.H. 5:
3" R.S.C.
1- 12/C #12
1- 3/C #12

SIGNAL INDICATIONS

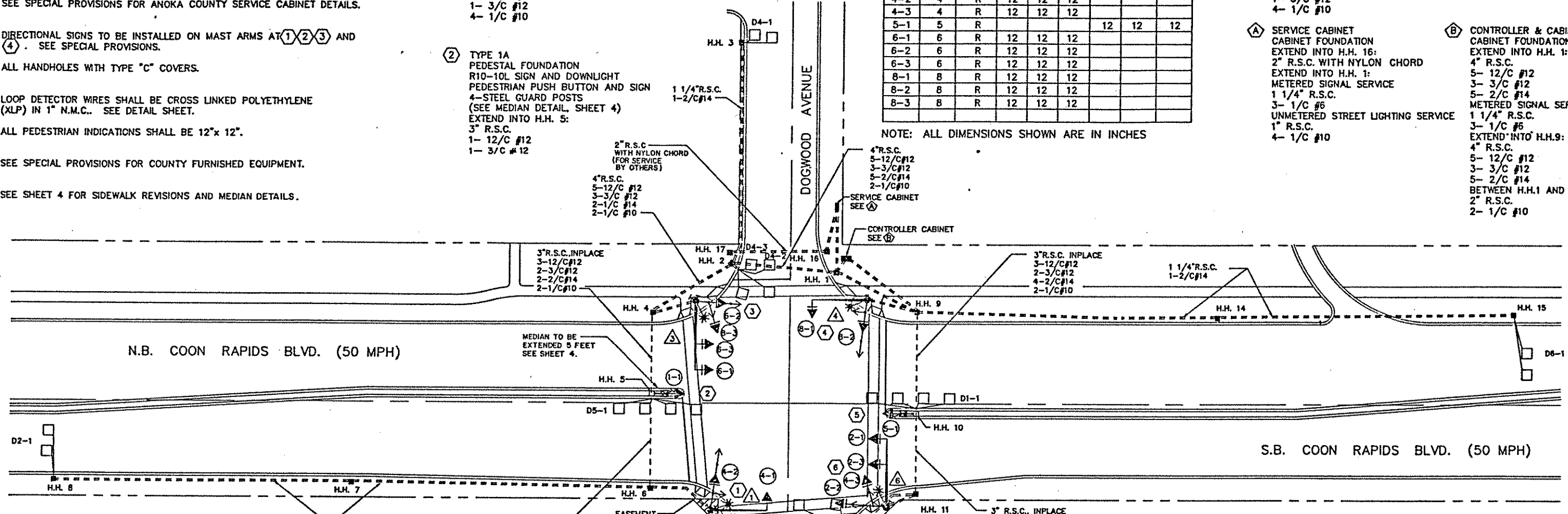
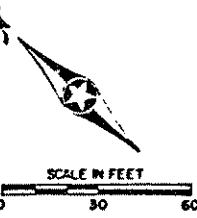
FACE	PHASE	FLASH	R	Y	G	RLTA	YLTA	GLTA
1-1	1	R				12	12	12
2-1	2	R	12	12	12			
2-2	2	R	12	12	12			
2-3	2	R	12	12	12			
4-1	4	R	12	12	12			
4-2	4	R	12	12	12			
4-3	4	R	12	12	12			
5-1	5	R				12	12	12
6-1	6	R	12	12	12			
6-2	6	R	12	12	12			
6-3	6	R	12	12	12			
8-1	8	R	12	12	12			
8-2	8	R	12	12	12			
8-3	8	R	12	12	12			

NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

$\textcircled{4}$ TYPE P90-A-30-D40-9
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 10C-POLE MOUNTED 270°
LUMINAIRE-200W H.P.S. (APPROX. 350°)
TWO-PEDESTRIAN PUSH BUTTONS AND SIGNS
TWO STEEL GUARD POSTS
EXTEND INTO H.H. 9:
3" R.S.C.
2- 12/C #12
1- 3/C #12
4- 1/C #10

\textcircled{A} SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO H.H. 16:
2" R.S.C. WITH NYLON CHORD
EXTEND INTO H.H. 1:
METERED SIGNAL SERVICE
1 1/4" R.S.C.
3- 1/C #6
UNMETERED STREET LIGHTING SERVICE
1" R.S.C.
4- 1/C #10

\textcircled{B} CONTROLLER & CABINET
CABINET FOUNDATION
EXTEND INTO H.H. 1:
4" R.S.C.
5- 12/C #12
3- 3/C #12
5- 2/C #14
METERED SIGNAL SERVICE
1 1/4" R.S.C.
3- 1/C #6
EXTEND INTO H.H.9:
4" R.S.C.
5- 12/C #12
3- 3/C #12
5- 2/C #14
BETWEEN H.H.1 AND H.H.9:
2" R.S.C.
2- 1/C #10



N.B. COON RAPIDS BLVD. (50 MPH)

S.B. COON RAPIDS BLVD. (50 MPH)

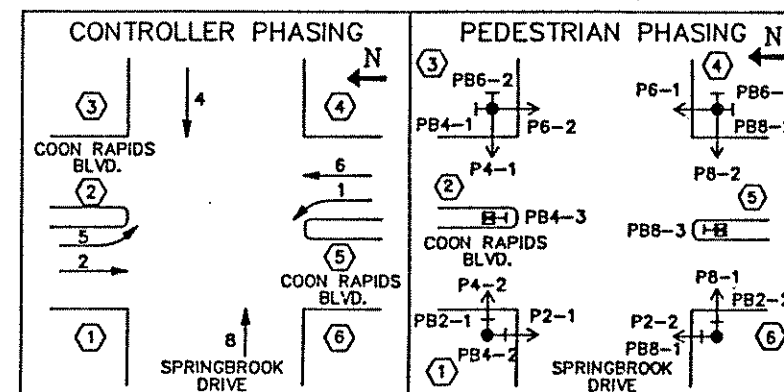
LOOP DETECTORS			
NUMBER	SIZE	LOCATION	FUNCTION
D1-1	MULTIPLE	---	1
D2-1	2-6'x6'	370'	1
D4-1	2-6'x6'	140'	3,8
D4-2	2-6'x6'	---	1
D4-3	2-6'x6'	---	7
D5-1	MULTIPLE	---	1
D6-1	2-6'x6'	370'	1
D8-1	2-6'x6'	140'	3,8
D8-2	2-6'x6'	---	1
D8-3	2-6'x6'	---	7

- FUNCTIONS:**
- 1) CALL AND EXTEND
 - 2) CALL ONLY
 - 3) EXTEND ONLY
 - 4) CALL ONLY DENSITY
 - 5) DELAYED CALL ONLY
 - 6) DELAYED CALL ONLY DENSITY
 - 7) DELAYED CALL - IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)
 - 9) ADVISORY DETECTOR
 - 10) SAMPLING DETECTOR
 - 11) SPECIAL DETECTOR

$\textcircled{1}$ TYPE P90-A-30-D40-9
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 10C-POLE MOUNTED 270°
LUMINAIRE-200W H.P.S. (APPROX.350°)
TWO-PEDESTRIAN PUSH BUTTONS & SIGNS
TWO STEEL GUARD POSTS
EXTEND INTO H.H. 6:
3" R.S.C.
2- 12/C #12
1- 3/C #12
2- 1/C #10

$\textcircled{5}$ TYPE 1A
PEDESTAL FOUNDATION
PEDESTRIAN PUSH BUTTON AND SIGN
R10-10L SIGN AND DOWNLIGHT
4-STEEL GUARD POSTS
(SEE MEDIAN DETAIL, SHEET 4)
EXTEND INTO H.H. 10:
3" R.S.C.
1- 12/C #12
1- 3/C #12

$\textcircled{6}$ TYPE P100-A-40-D40-9
P100 POLE FOUNDATION
TWO-ONE WAY SIGNALS-OVERHEAD
TYPE 20C-POLE MOUNTED 270°
LUMINAIRE-200W H.P.S. (APPROX.350°)
TWO-PEDESTRIAN PUSH BUTTONS AND SIGNS
TWO STEEL GUARD POSTS
EXTEND INTO H.H. 11:
3" R.S.C.
2- 12/C #12
1- 3/C #12
2- 1/C #10



SURVEY:	CHECKED BY:	NO.	DATE	REVISIONS
DESIGN: M.K.	G.V.W.			
DRAW: CAD				

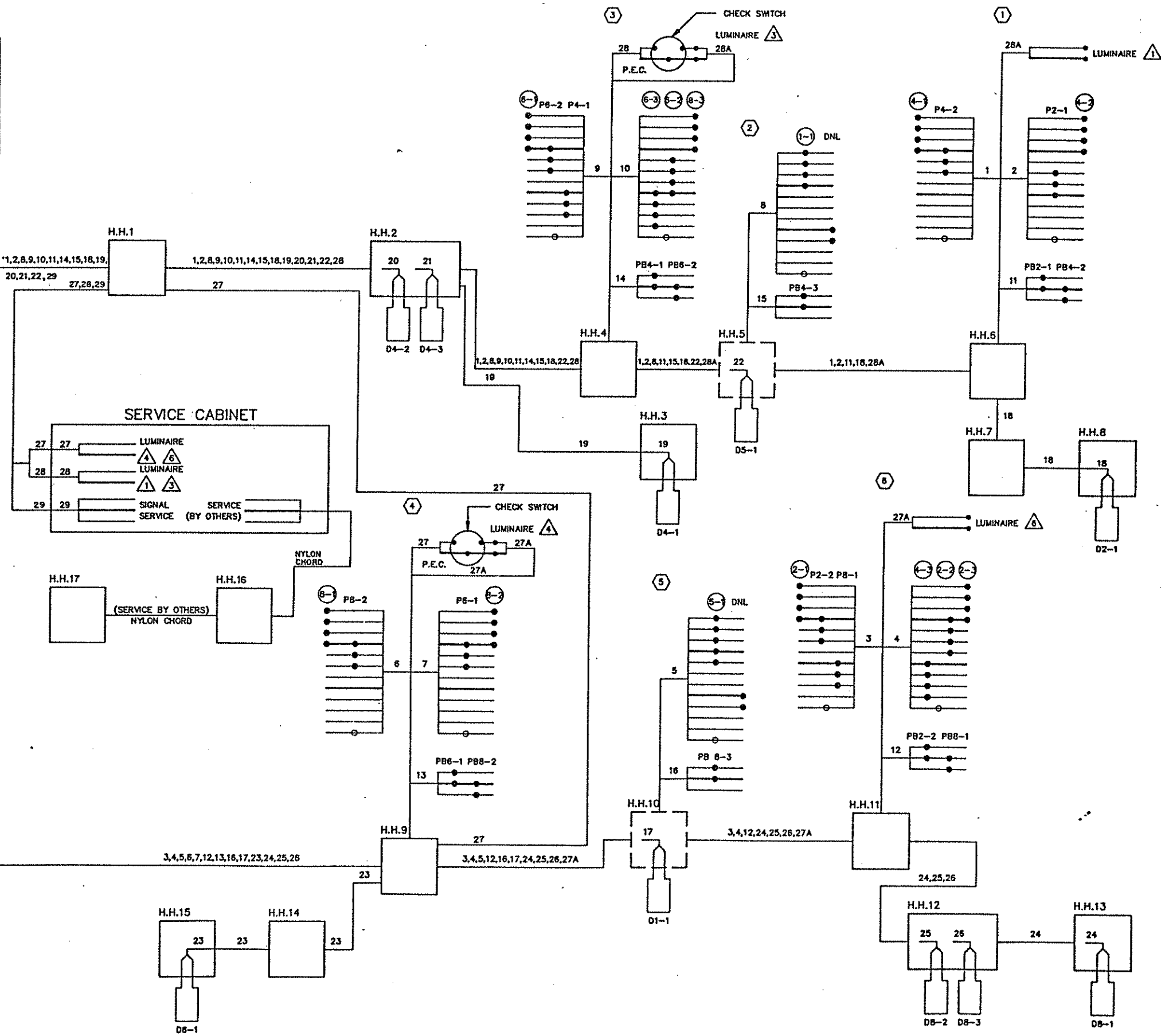
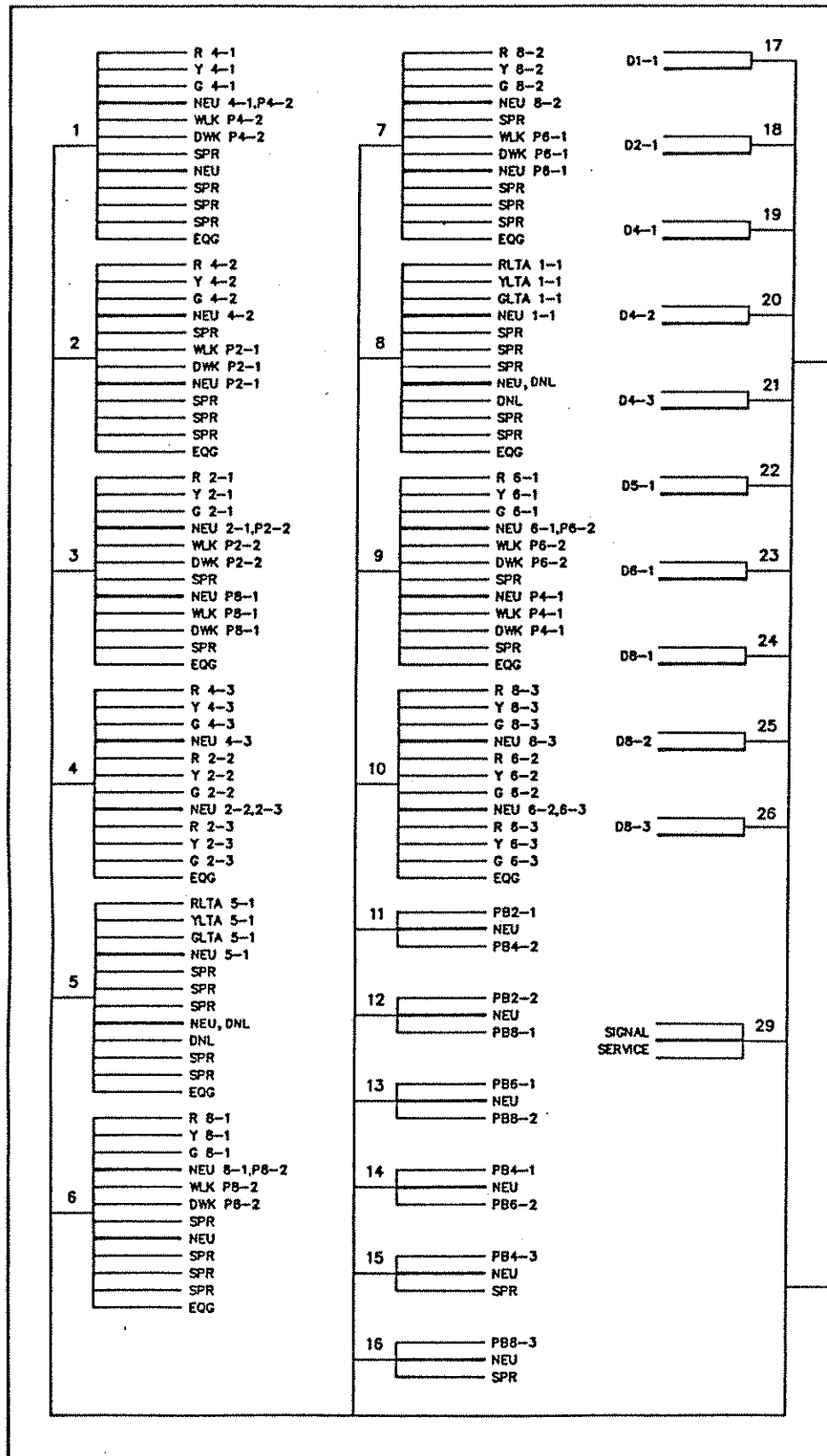
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date: 1/17/73 Reg. No. 2552

SHORT-ELLIOTT-HENDRICKSON, INC.
Saint Paul, Minnesota • Chippewa Falls, Wisconsin

SIGNAL SYSTEM
INTERSECTION LAYOUT
C.R. 3 (COON RAPIDS BOULEVARD)
AT SPRINGBROOK DRIVE

C.P. 87-07-03	FILE NO.:
S.A.P. 114-116-09	87143
	DATE:
	7/31/87

CONTROLLER AND CABINET



SUP. BY	CHECKED BY	NO.	DATE	REVISIONS	DATE
DESIGN. M.J.	G.V.W.				
DRAWN: CAD					

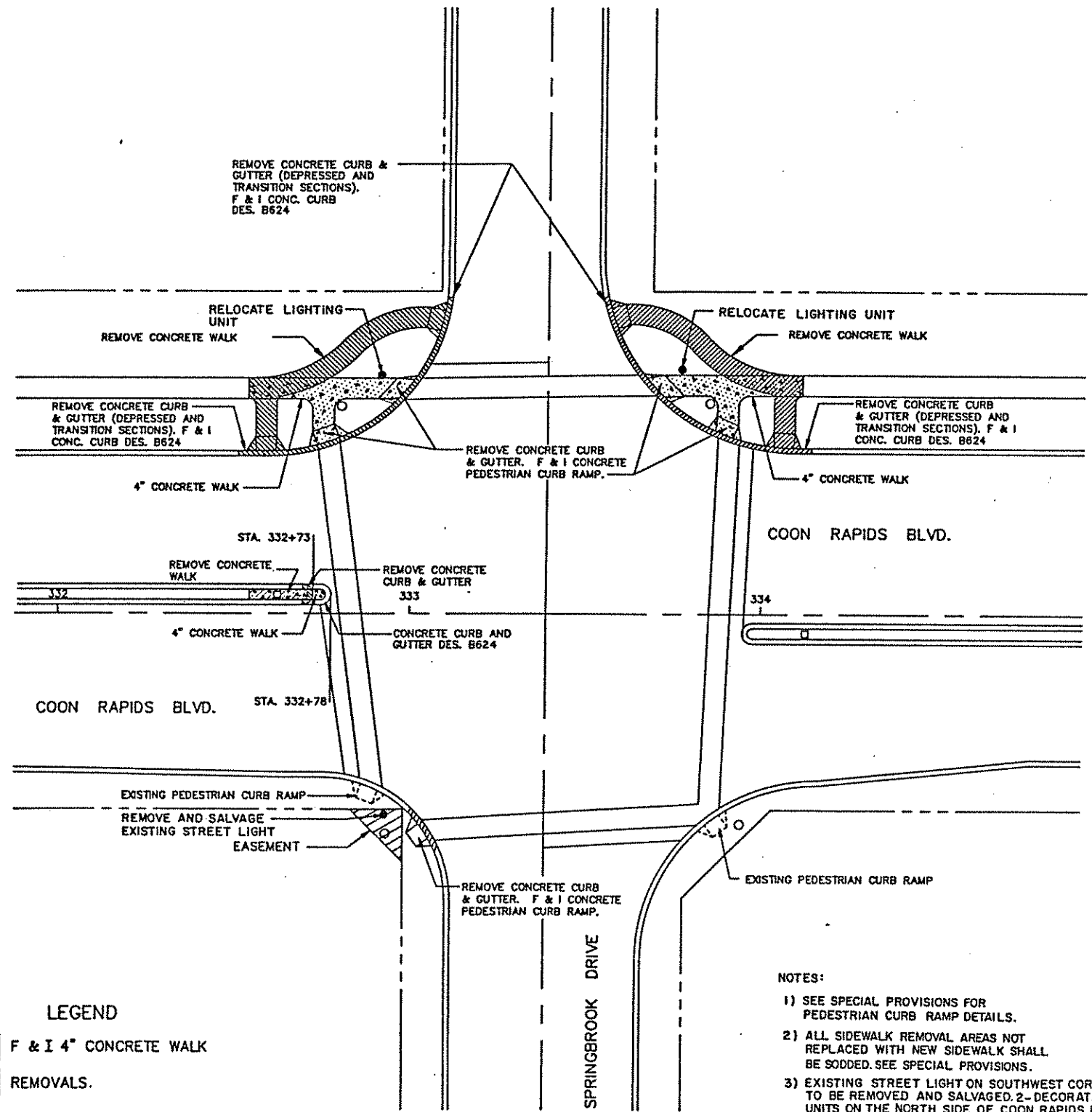
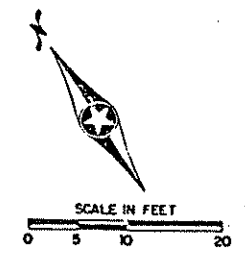
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
 Date: 7/31/87 Reg. No. 3052

SHORT-ELLIOTT-HENDRICKSON, INC.
 Saint Paul, Minnesota • Chippewa Falls, Wisconsin

SIGNAL SYSTEM
 WIRING DIAGRAM
 CR 3 (COGN RAPIDS BOULEVARD)
 AT SPRINGBROOK DRIVE

C.P. 87-07-03
 S.A.P. 114-116-09

FILE NO.:	87143	3
DATE:	7/31/87	6

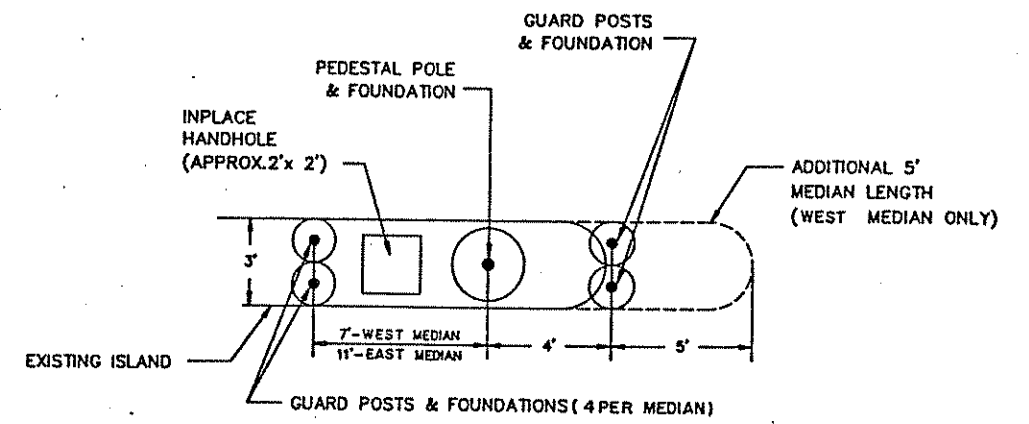


- LEGEND**
- F & I 4" CONCRETE WALK
 - REMOVALS.
 - SIGNAL MAST ARM POLE LOCATIONS

- NOTE:**
- 1) ALL CONCRETE WALK (EXCEPT IN MEDIAN NOSE) SHALL BE SIX FEET IN WIDTH.
 - 2) CORNER RADII AT SIDEWALK INTERSECTIONS SHALL BE THREE FEET.

- NOTES:**
- 1) SEE SPECIAL PROVISIONS FOR PEDESTRIAN CURB RAMP DETAILS.
 - 2) ALL SIDEWALK REMOVAL AREAS NOT REPLACED WITH NEW SIDEWALK SHALL BE SODDED. SEE SPECIAL PROVISIONS.
 - 3) EXISTING STREET LIGHT ON SOUTHWEST CORNER TO BE REMOVED AND SALVAGED. 2-DECORATIVE LIGHTING UNITS ON THE NORTH SIDE OF COON RAPIDS BOULEVARD TO BE RELOCATED AS DIRECTED BY THE ENGINEER. SEE SPECIAL PROVISIONS.

MEDIAN NOSE DETAIL
(NO SCALE)



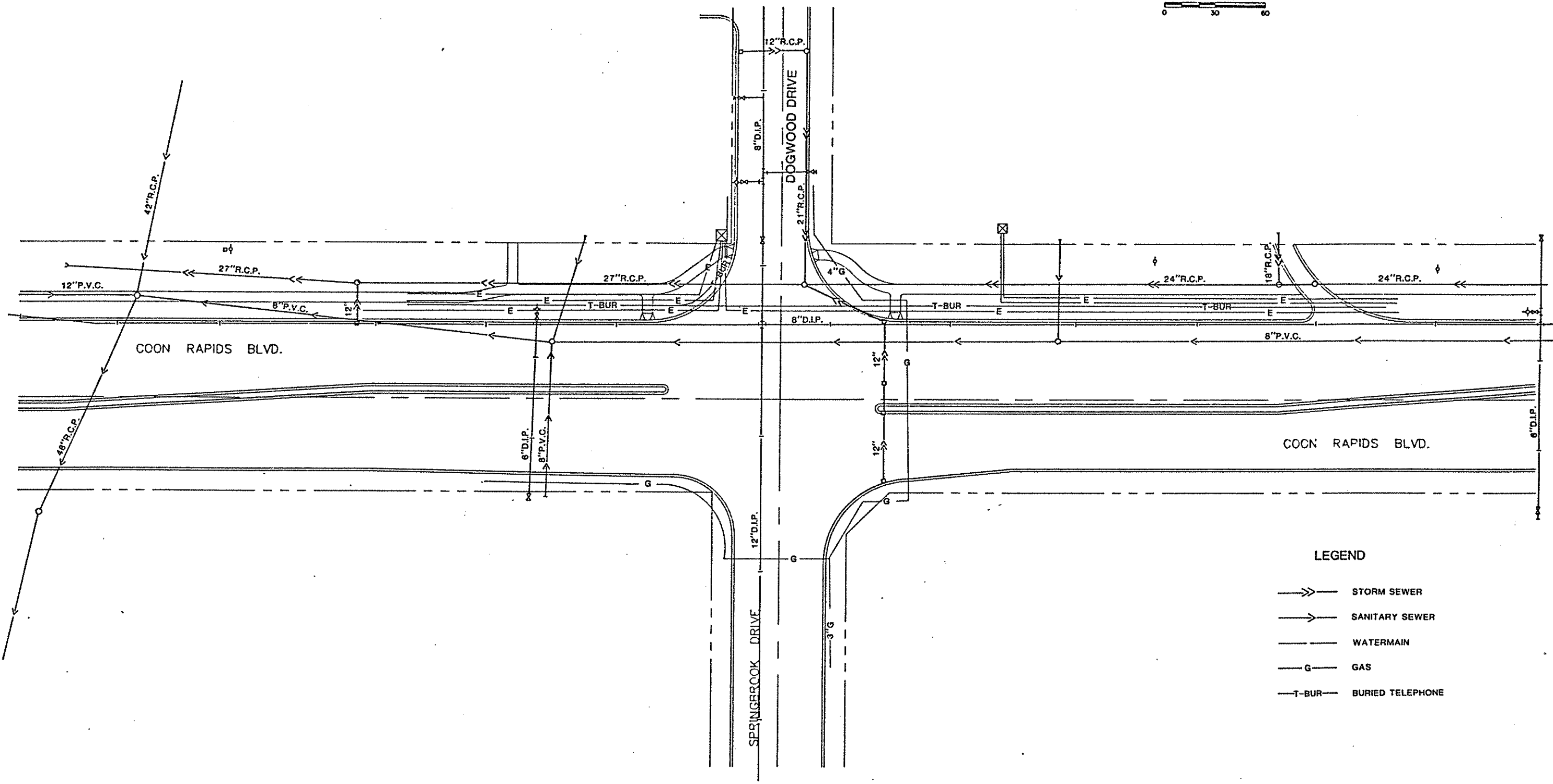
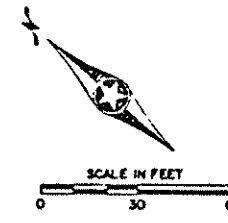
SURVEY:	CHECKED BY:	NO.	DATE	REVISIONS	I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
DESIGN: M.K.	G.V.W.				<i>[Signature]</i>
DRAWN: CAD					Date: _____ Reg. No. 8552

SHORT-ELLIOTT-HENDRICKSON, INC.
Saint Paul, Minnesota • Chippewa Falls, Wisconsin

SIDEWALK AND MEDIAN
CR 3 (COON RAPIDS BOULEVARD)
AT SPRINGBROOK DRIVE

C.P. 87-07-03
S.A.P. 114-116-09

FILE NO.:	87143	4
DATE:	7/31/87	6



- LEGEND**
- STORM SEWER
 - SANITARY SEWER
 - WATERMAIN
 - G — GAS
 - T-BUR — BURIED TELEPHONE

SURVEY:	CHECKED BY:	NO.	DATE	REVISIONS	I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota. <i>Shelton Williams</i> Date: 6/1/87 Reg. No. 8029
DESIGN: M.K.	G.V.W.				
DRAWN: J.N.					

SHORT-ELLIOTT-HENDRICKSON, INC.
 Saint Paul, Minnesota • Chippewa Falls, Wisconsin

SIGNAL SYSTEM
UTILITIES
 C.R. 3 (COON RAPIDS BOULEVARD)
 AT SPRINGBROOK DRIVE

C.P. 87-07-03
 S.A.P. 114-116-09

FILE NO.:	87143	5
DATE:	7/31/87	6

M.U.T.C.D CODE	SIZE		QUANTITY	M.U.T.C.D CODE	SIZE		QUANTITY
STEADY RED							
R1-1	48" X 48"		6	M4-8	24" X 12"		1
R1-3	18" X 6"			M3-3	24" X 12"		
YELLOW FLASH				M1-5A	24" X 24"		1
R11-2	48" X 30"		M3-3 / M3-2	24" X 12"			
TYPE III	8 FT		9	M1-5A / M1-6	24" X 24"		1
YELLOW FLASH				M1-6	24" X 12"		
R11-4	60" X 30"		2	M4-6A	24" X 12"		2
M4-1G(R)	48" X 18"			M4-8	24" X 12"		
YELLOW FLASH				M1-6	24" X 24"		4
R11-3	60" X 30"		M4-8	24" X 12"			
M4-1Q(L)	48" X 18"		2	M3-2	24" X 12"		3
YELLOW FLASH				M1-6	24" X 24"		
YELLOW FLASH			3				4
W3-1	48" X 48"						
YELLOW FLASH			1				3
W20-2	48" X 48"						
YELLOW FLASH			2				3
W20-2	48" X 48"						
YELLOW FLASH			3				2
W20-3	48" X 48"						
YELLOW FLASH			2				3
W20-3	48" X 48"						
YELLOW FLASH			2				5
W20-3	48" X 48"						
M4-6A	24" X 12"		2	M3-2	24" X 12"		1
M4-8	24" X 12"			M1-6	24" X 24"		
M1-5A	24" X 24"		3				1
M4-8	24" X 12"			M3-4	24" X 12"		
M1-5A	24" X 24"		3	M1-6	24" X 24"		1
	15" X 21"						
			3				
			3				
			3				
			3				
			5				