

10th St. NW & 8th Ave NW

FROM STA. 11+22 TO STA. 24+98

SYSTEM A

INTERCONNECT SYSTEM A to E

SYSTEM B

10th St NW & OLD HWY 8

NEW BRIGHTON

ARDEN HILLS

ROSEVILLE

RAMSEY

HENNEPIN

ANTHON

10th St NW

8th Ave NW

Old Hwy 8

11th St NW

12th St NW

13th St NW

14th St NW

15th St NW

16th St NW

17th St NW

18th St NW

19th St NW

20th St NW

21st St NW

22nd St NW

23rd St NW

24th St NW

25th St NW

26th St NW

27th St NW

28th St NW

29th St NW

30th St NW

31st St NW

32nd St NW

33rd St NW

34th St NW

35th St NW

36th St NW

37th St NW

38th St NW

39th St NW

40th St NW

41st St NW

42nd St NW

43rd St NW

44th St NW

45th St NW

46th St NW

47th St NW

48th St NW

49th St NW

50th St NW

51st St NW

52nd St NW

53rd St NW

54th St NW

55th St NW

56th St NW

57th St NW

58th St NW

59th St NW

60th St NW

61st St NW

62nd St NW

63rd St NW

64th St NW

65th St NW

66th St NW

67th St NW

68th St NW

69th St NW

70th St NW

71st St NW

72nd St NW

73rd St NW

74th St NW

75th St NW

76th St NW

77th St NW

78th St NW

79th St NW

80th St NW

81st St NW

82nd St NW

83rd St NW

84th St NW

85th St NW

86th St NW

87th St NW

88th St NW

89th St NW

90th St NW

91st St NW

92nd St NW

93rd St NW

94th St NW

95th St NW

96th St NW

97th St NW

98th St NW

99th St NW

100th St NW

101st St NW

102nd St NW

103rd St NW

104th St NW

105th St NW

106th St NW

107th St NW

108th St NW

109th St NW

110th St NW

111th St NW

112th St NW

113th St NW

114th St NW

115th St NW

116th St NW

117th St NW

118th St NW

119th St NW

120th St NW

121st St NW

122nd St NW

123rd St NW

124th St NW

125th St NW

126th St NW

127th St NW

128th St NW

129th St NW

130th St NW

131st St NW

132nd St NW

133rd St NW

134th St NW

135th St NW

136th St NW

137th St NW

138th St NW

139th St NW

140th St NW

141st St NW

142nd St NW

143rd St NW

144th St NW

145th St NW

146th St NW

147th St NW

148th St NW

149th St NW

150th St NW

151st St NW

152nd St NW

153rd St NW

154th St NW

155th St NW

156th St NW

157th St NW

158th St NW

159th St NW

160th St NW

161st St NW

162nd St NW

163rd St NW

164th St NW

165th St NW

166th St NW

167th St NW

168th St NW

169th St NW

170th St NW

171st St NW

172nd St NW

173rd St NW

174th St NW

175th St NW

176th St NW

177th St NW

178th St NW

179th St NW

180th St NW

181st St NW

182nd St NW

183rd St NW

184th St NW

185th St NW

186th St NW

187th St NW

188th St NW

189th St NW

190th St NW

191st St NW

192nd St NW

193rd St NW

194th St NW

195th St NW

196th St NW

197th St NW

198th St NW

199th St NW

200th St NW

201st St NW

202nd St NW

203rd St NW

204th St NW

205th St NW

206th St NW

207th St NW

208th St NW

209th St NW

210th St NW

211th St NW

212th St NW

213th St NW

214th St NW

215th St NW

216th St NW

217th St NW

218th St NW

219th St NW

220th St NW

221st St NW

222nd St NW

223rd St NW

224th St NW

225th St NW

226th St NW

227th St NW

228th St NW

229th St NW

230th St NW

231st St NW

232nd St NW

233rd St NW

234th St NW

235th St NW

236th St NW

237th St NW

238th St NW

239th St NW

240th St NW

241st St NW

242nd St NW

243rd St NW

244th St NW

245th St NW

246th St NW

247th St NW

248th St NW

249th St NW

250th St NW

251st St NW

252nd St NW

253rd St NW

254th St NW

255th St NW

256th St NW

257th St NW

258th St NW

259th St NW

260th St NW

261st St NW

262nd St NW

263rd St NW

264th St NW

265th St NW

266th St NW

267th St NW

268th St NW

269th St NW

270th St NW

271st St NW

272nd St NW

273rd St NW

274th St NW

275th St NW

276th St NW

277th St NW

278th St NW

279th St NW

280th St NW

281st St NW

282nd St NW

283rd St NW

284th St NW

285th St NW

286th St NW

287th St NW

288th St NW

289th St NW

290th St NW

291st St NW

292nd St NW

293rd St NW

294th St NW

295th St NW

296th St NW

297th St NW

298th St NW

299th St NW

300th St NW

301st St NW

302nd St NW

303rd St NW

304th St NW

305th St NW

306th St NW

307th St NW

308th St NW

309th St NW

310th St NW

311th St NW

312th St NW

313th St NW

314th St NW

315th St NW

316th St NW

317th St NW

318th St NW

319th St NW

320th St NW

321st St NW

322nd St NW

323rd St NW

324th St NW

325th St NW

326th St NW

327th St NW

INDEX	
SHEET NO.	DESCRIPTION
1	TITLE
2-4	ESTIMATED QUANTITIES & DETAILS
5	MAST ARM SIGNS (SYS A & C)
6-8	SYSTEM A
9	INTERCONNECT SYSTEM A to B
10-12	SYSTEM B
13-15	SYSTEM C
16	INTERCONNECT SYSTEM C to D
17-18	UTILITIES

THIS PLAN CONTAINS 18 SHEETS.

28-125

Sheet No. 1 of 18 Sheets

<u>A.H. 77</u> <u>HWY 8</u>	<u>C.S.A.H. 19</u> <u>COUNTY RD D</u>
.500	16,900
.400	20,300
DENSITY	HIGH DENSITY
ARTERIAL	ARTERIAL
4	4
0	0
30	35

S.A.P. No. 147-020-27 S.A.P. No. 160-242-02
S.A.P. No. 147-121-02 S.A.P. No. 161-110-02
S.A.P. No. 62-612-11
S.A.P. No. 62-619-22

* STANDARD PLATES APPLICABLE TO THIS PROJECT

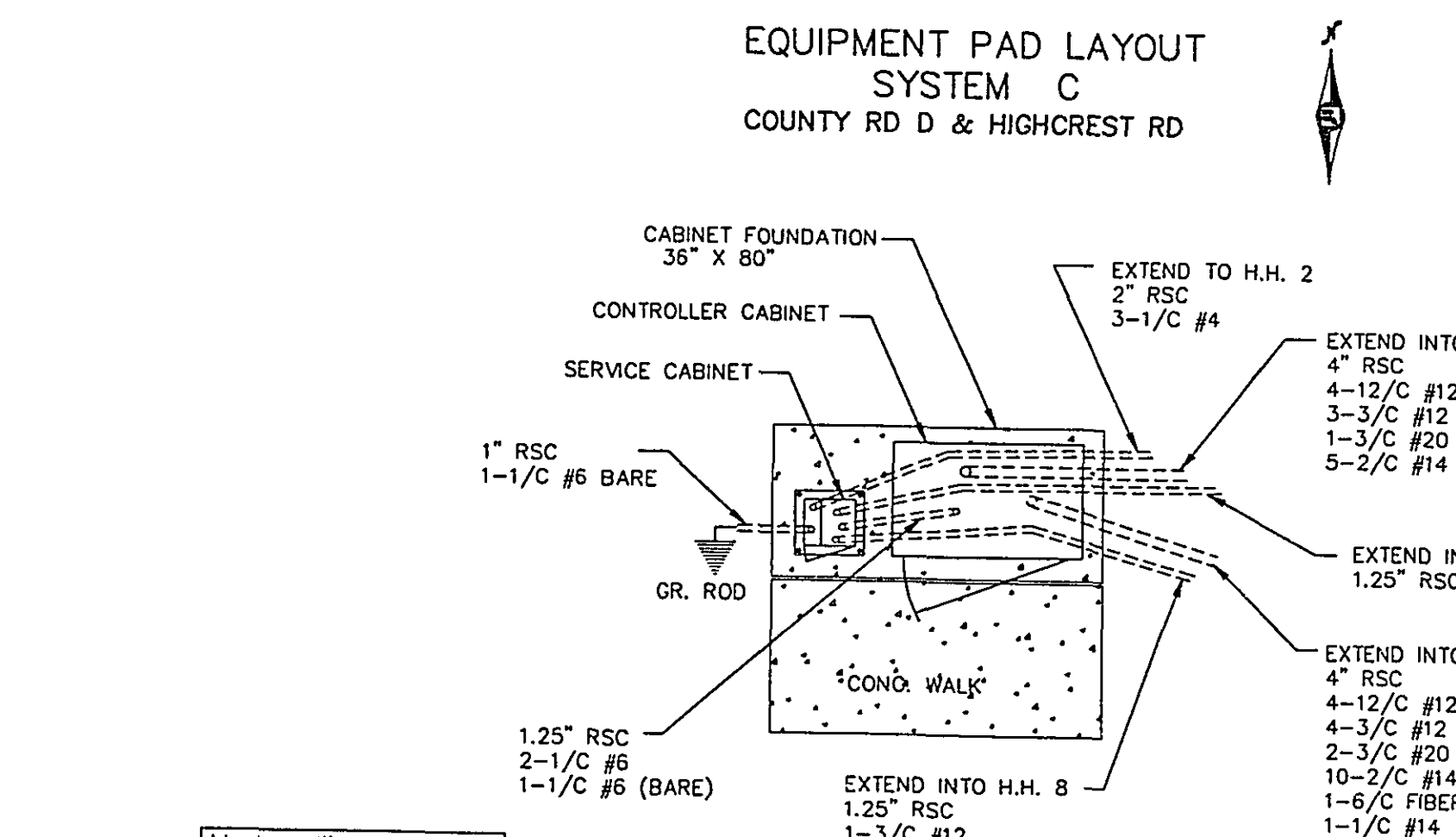
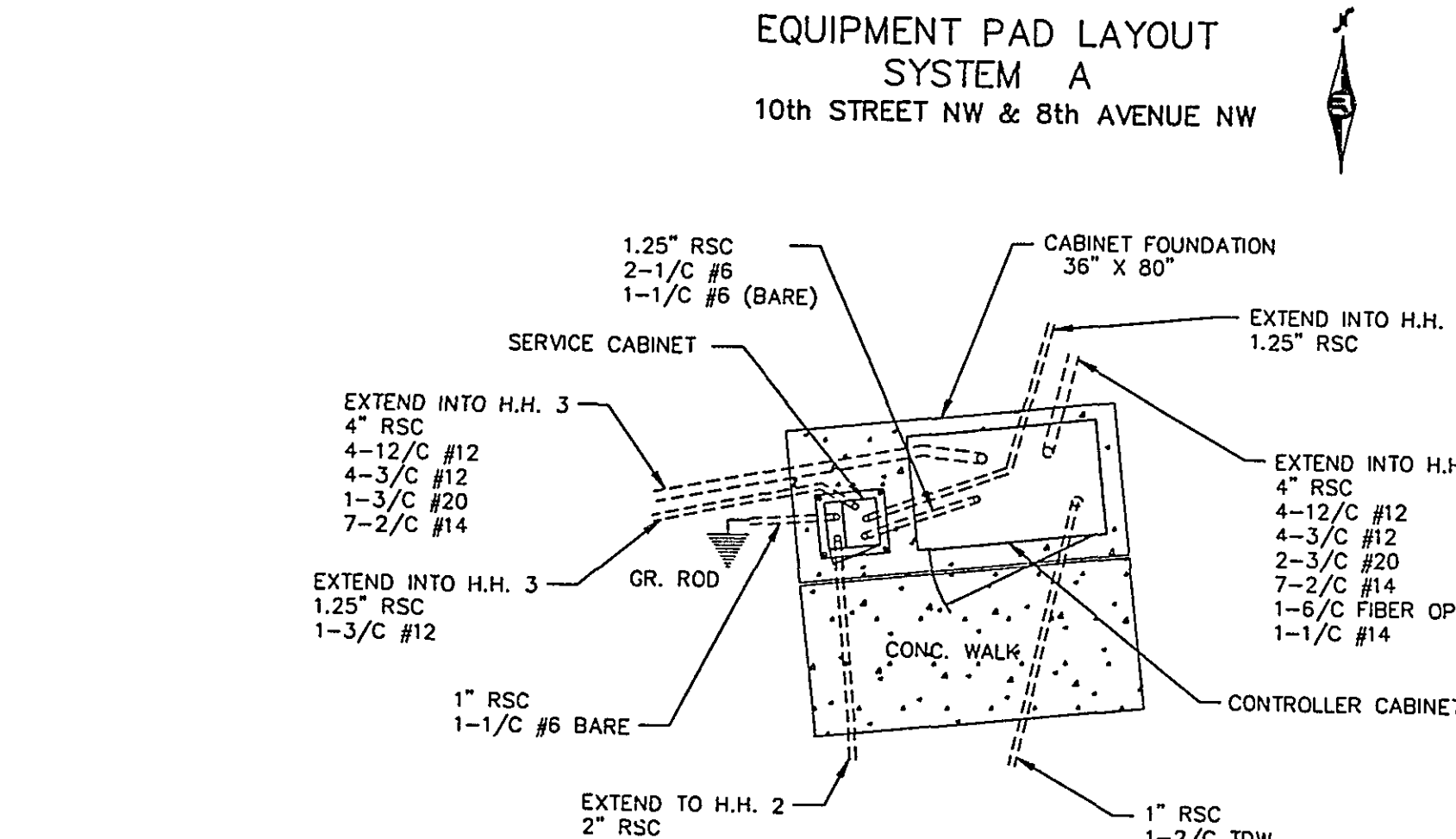
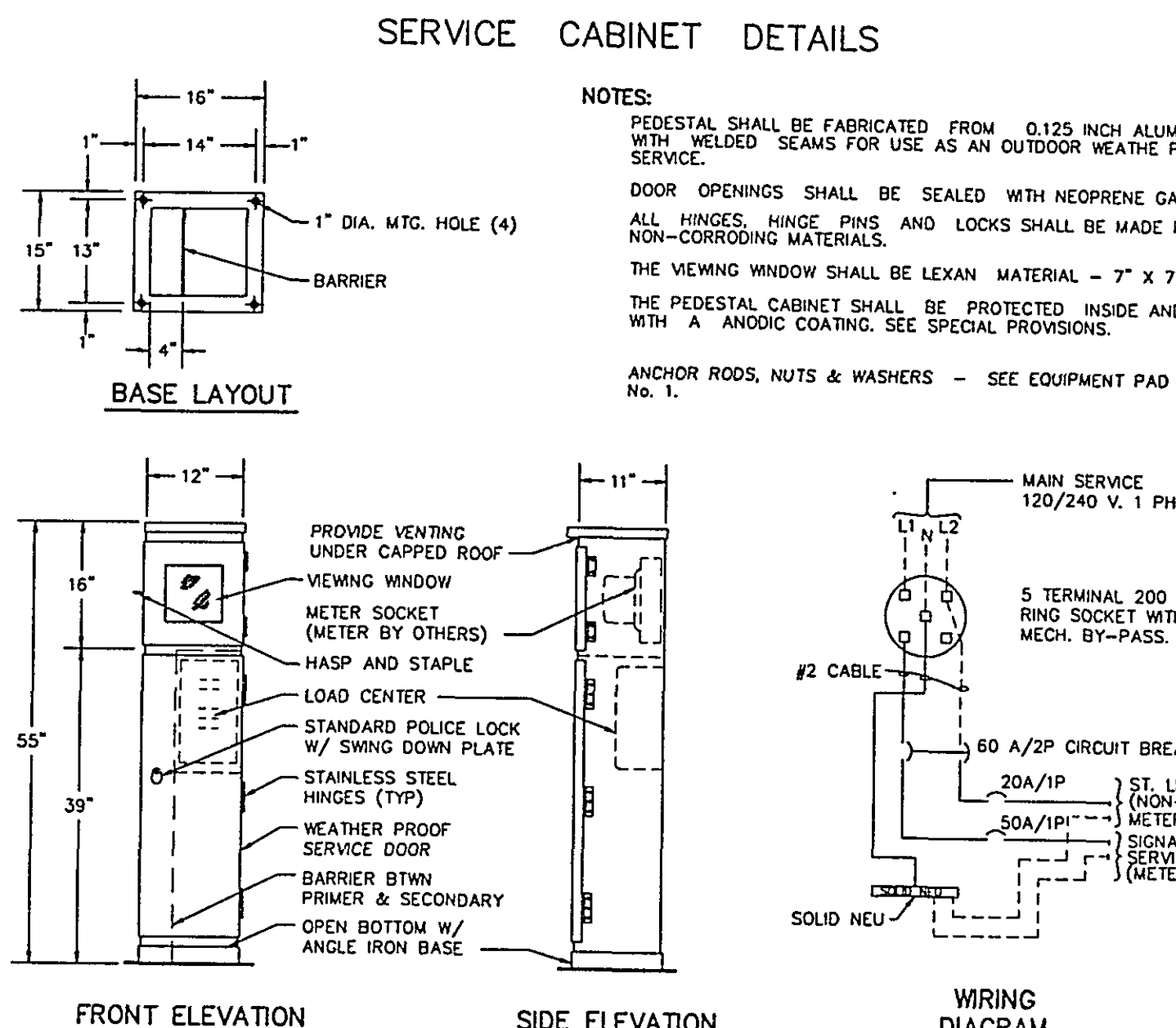
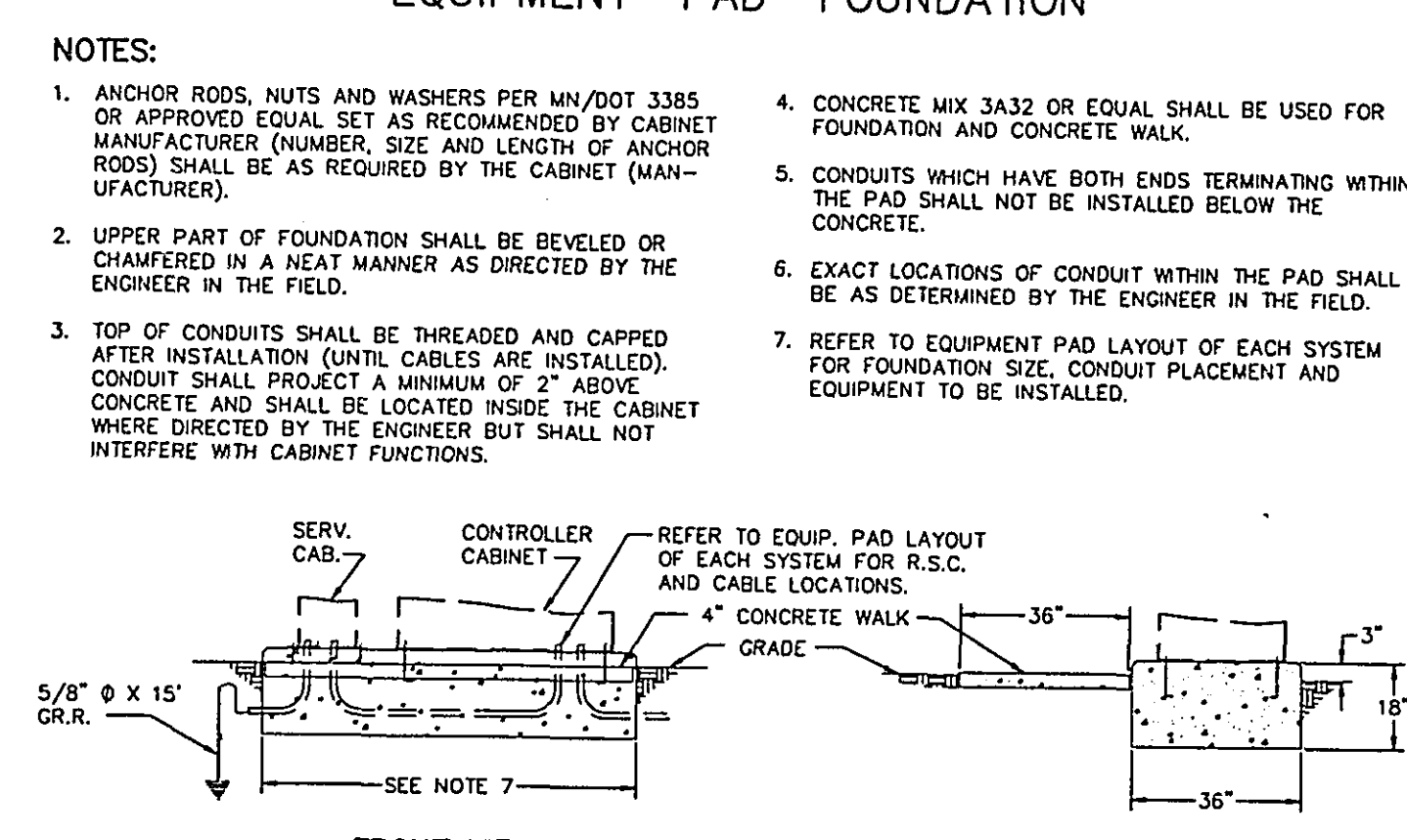
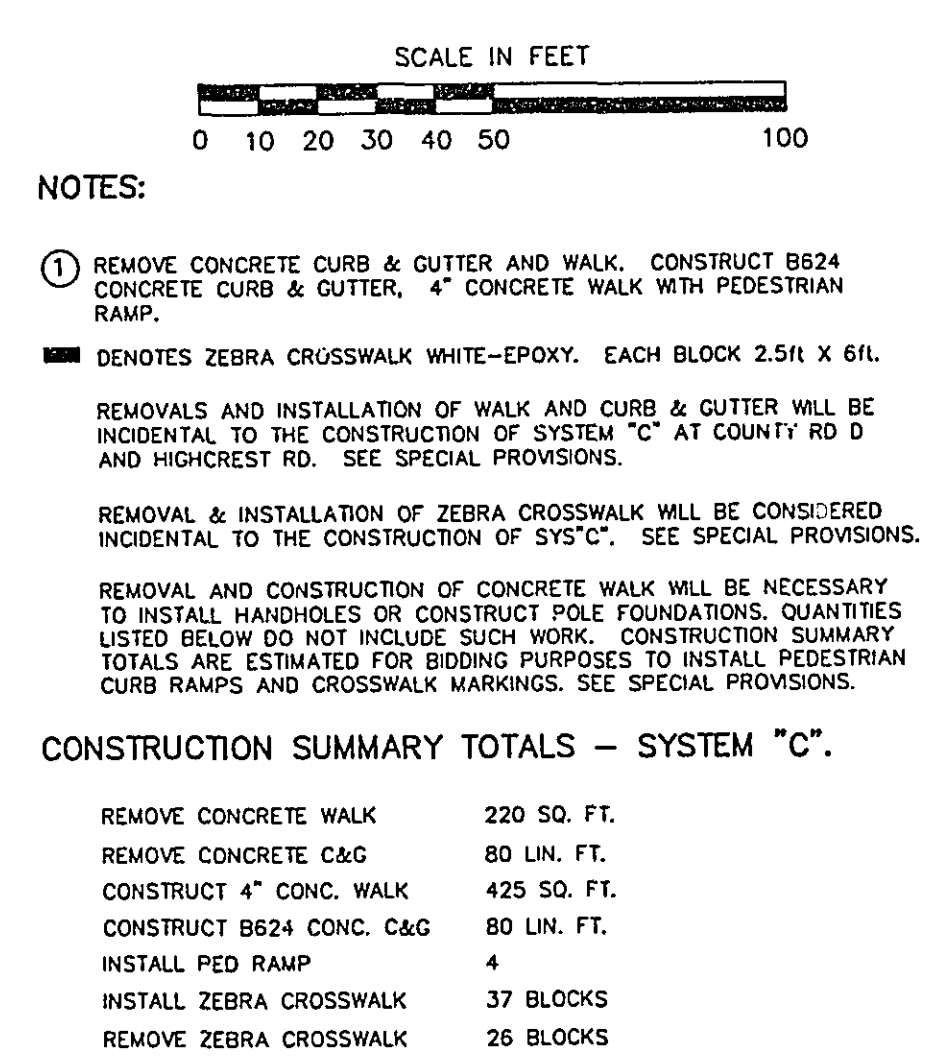
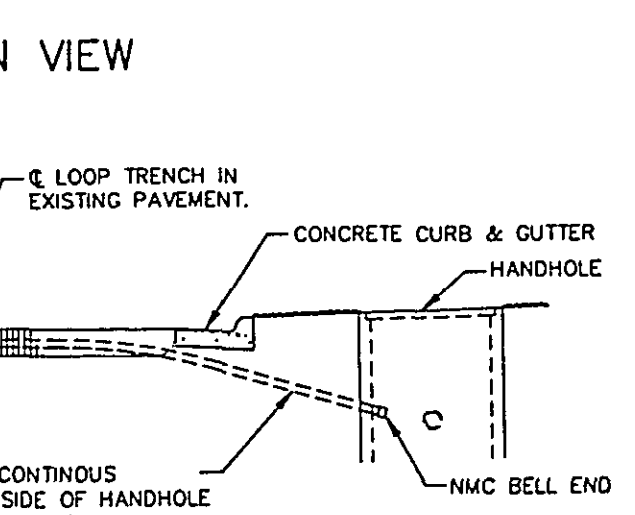
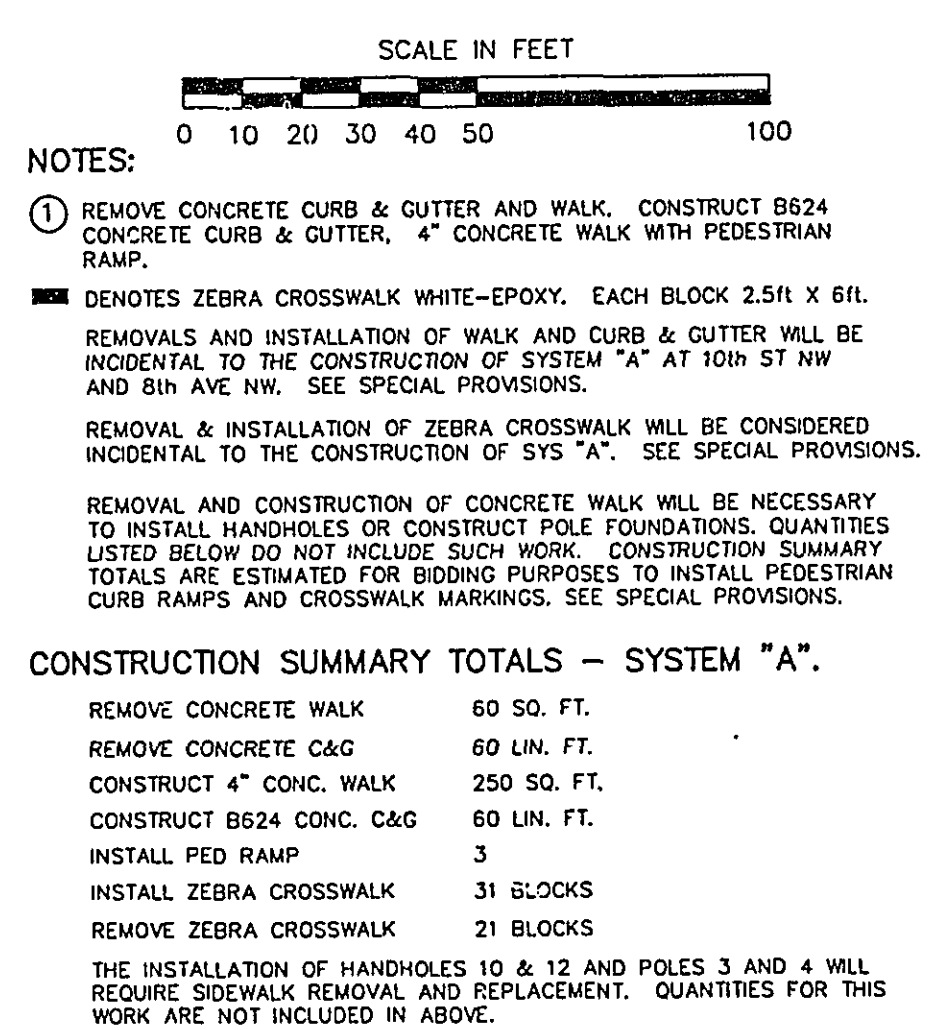
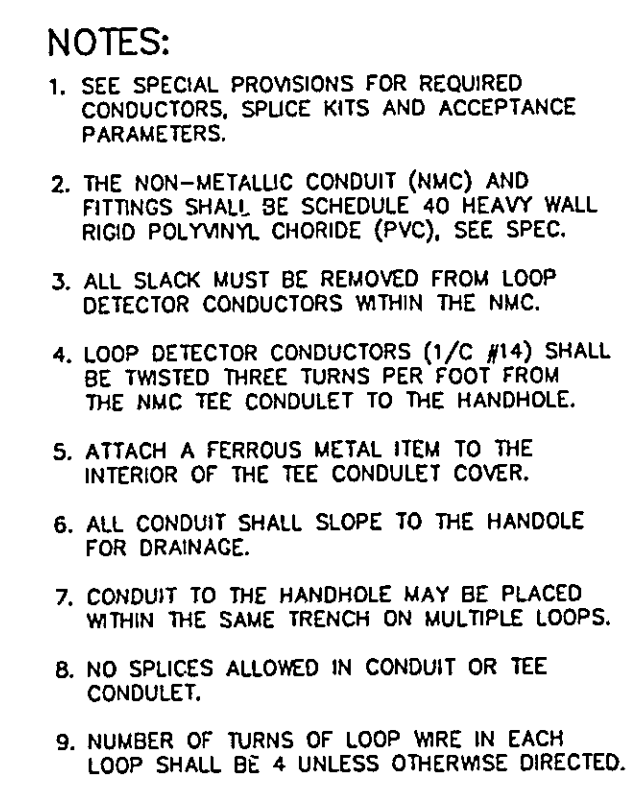


I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Daniel F. Sohn

Date 9/23/99 Reg. No. 20452

S.A.P. No. 147-020-27 S.A.P. No. 160-242-02
S.A.P. No. 147-121-02 S.A.P. No. 161-110-02
S.A.P. No. 62-612-11
S.A.P. No. 62-619-22



S.A.P. No. 147-020-27 S.A.P. No. 160-242-02
S.A.P. No. 147-121-02 S.A.P. No. 161-110-02
S.A.P. No. 62-612-11
S.A.P. No. 62-619-22

S.A.P. No. 147-020-27	S.A.P. No. 160-242-02	DETAILS <i>28-175</i>
S.A.P. No. 147-121-02	S.A.P. No. 161-110-02	
S.A.P. No. 62-612-11		
S.A.P. No. 62-625-24		Sheet No. 3 of 18 Sheets

8th Ave NW

D-1 & D-2
90" X 18", 3.0 R. 1.0 B
LINE 1 = 75.91" : 8"-6" "E" MOD.

County D

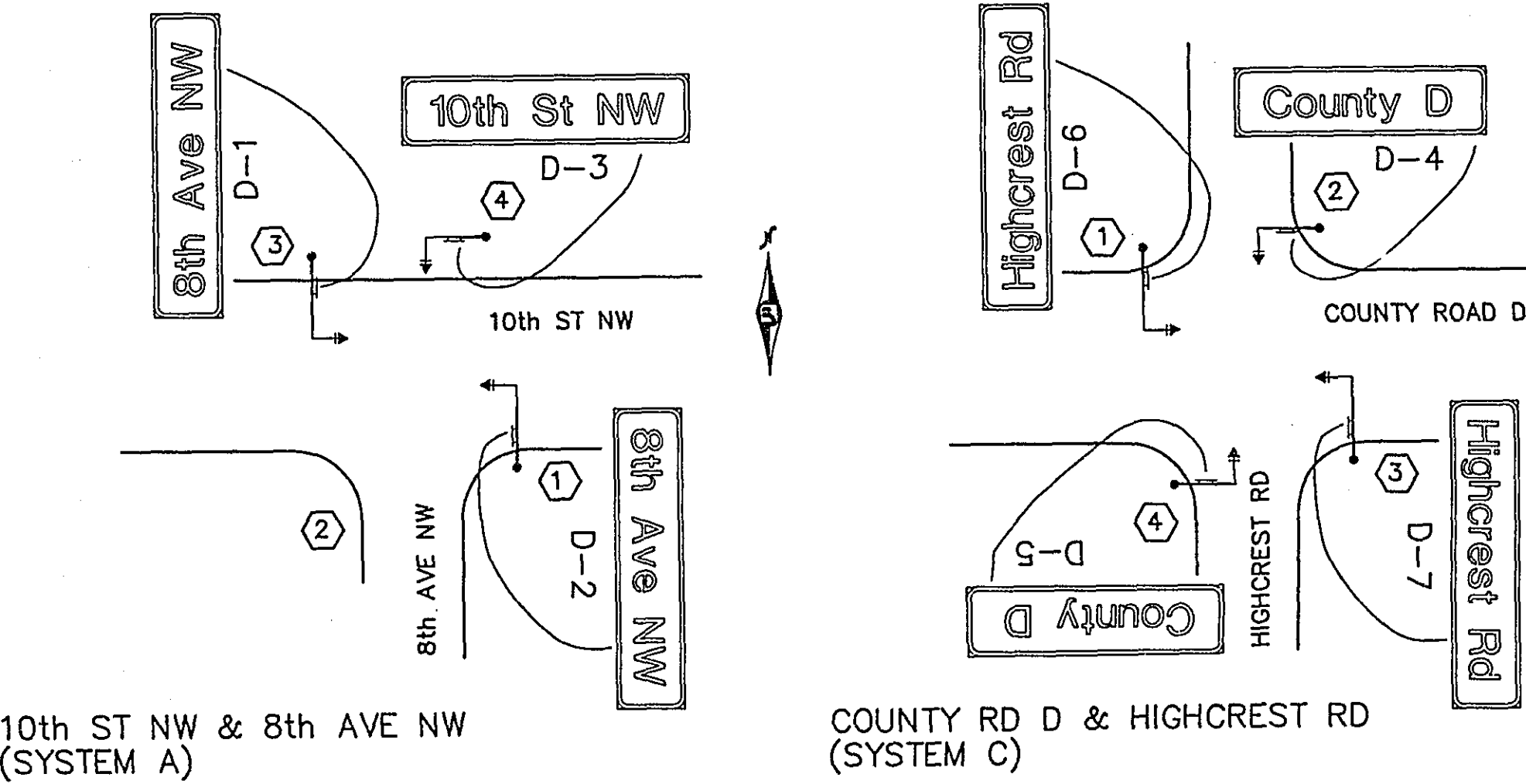
D-4 & D-5
72" X 18", 3.0 R. 1.0 B
LINE 1 = 58.35" : 8"-6" "E" MOD.

10th St NW

D-3
84" X 18", 3.0 R. 1.0 B
LINE 1 = 71.38" : 8"-6" "E" MOD.

Highcrest Rd

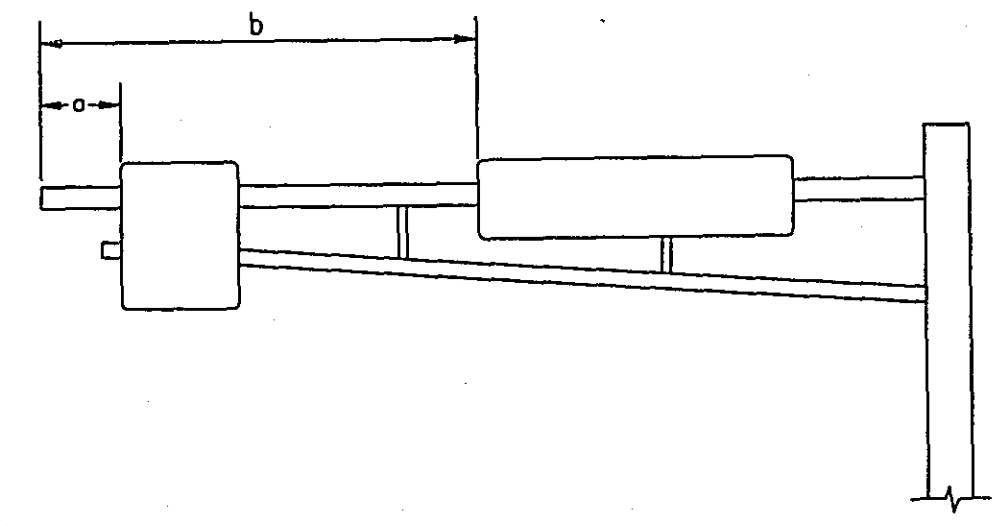
D-6 & D-7
96" X 18", 3.0 R. 1.0 B
LINE 1 = 81.20" : 8"-6" "E" MOD.



TYPE "D" SIGNS - SIGNALS									
SIGN PANEL	SIZE	QUANTITY REQUIRED	BRACKETS PER SIGN	BRACKET SPACING	SQUARE FT. PER SIGN	a	b	MAST ARM POLE NUMBER	
D-1	90" x 18"	1	2	54"	11.25		8'	(A)(X)	
D-2	90" x 18"	1	2	54"	11.25		8'	(A)(X)	
D-3	84" x 18"	1	2	54"	10.5		8'	(A)(X)	
D-4	72" x 18"	1	2	42"	9.0		7'	(C)(X)	
D-5	72" x 18"	1	2	42"	9.0		7'	(C)(X)	
D-6	96" x 18"	1	2	54"	12.0		8'	(C)(X)	
D-7	96" x 18"	1	2	54"	12.0		8'	(C)(X)	

TOTAL 75.0 SQ. FT.

(A) - SYSTEM A
(C) - SYSTEM C



MAST ARM SIGN DIMENSIONING DETAIL

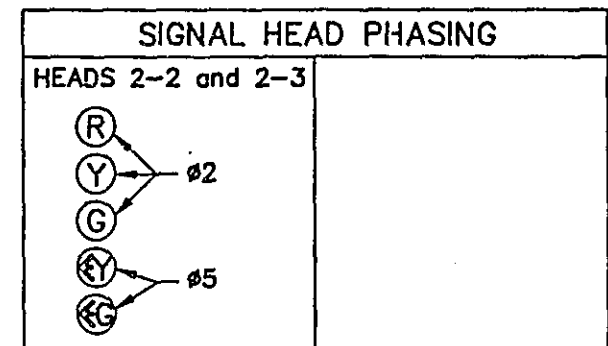
NOTES:

- COLOR - WHITE LEGEND AND BORDER ON GREEN BACKGROUND. FULLY REFLECTORIZED WITH PRISMATIC LENS REFLECTIVE SHEETING.
- CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- BOARDERS SHALL BE 1".
- SEE STANDARD SIGN MANUAL FOR ARROW DETAILS.
- FOR STRUCTURAL DETAILS, TYPE "D" SIGNS SEE STANDARD SIGNS MANUAL, PAGE 105.
- FOR TYPE "D" STRINGER AND PANEL - JOINT DETAIL, SEE STANDARD SIGNS MANUAL, PAGE 105.
- LETTERING STYLE SHALL BE HIGHWAY GOTHIC CONFORMING TO M/DOT STANDARDS.

S.A.P. No. 147-020-27 S.A.P. No. 160-242-02
S.A.P. No. 147-121-02 S.A.P. No. 161-110-02
S.A.P. No. 62-612-11

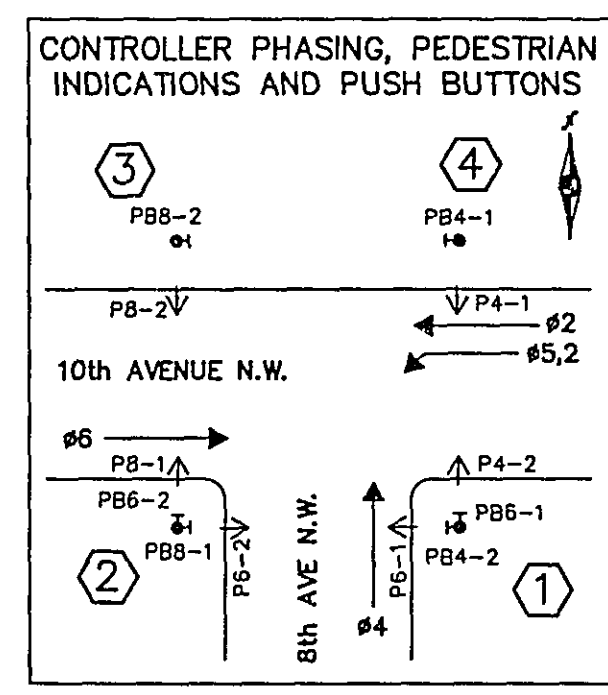
MAST ARM SIGNS (TYPE D)
SYSTEMS A & C
28-175
Sheet No. 5 of 18 Sheets

SIGNAL INDICATION CHART									
FACE	PHASE	R	Y	G	LED	LED	LED	LED	LED
D2-1	2								
D2-2	2								
D4-1	4								
D4-2	4								
D4-3	4								
D4-4	4								
D5-1	5								
D5-2	5								
D6-1	6								
D6-2	6								
D3	3								
D4	4								



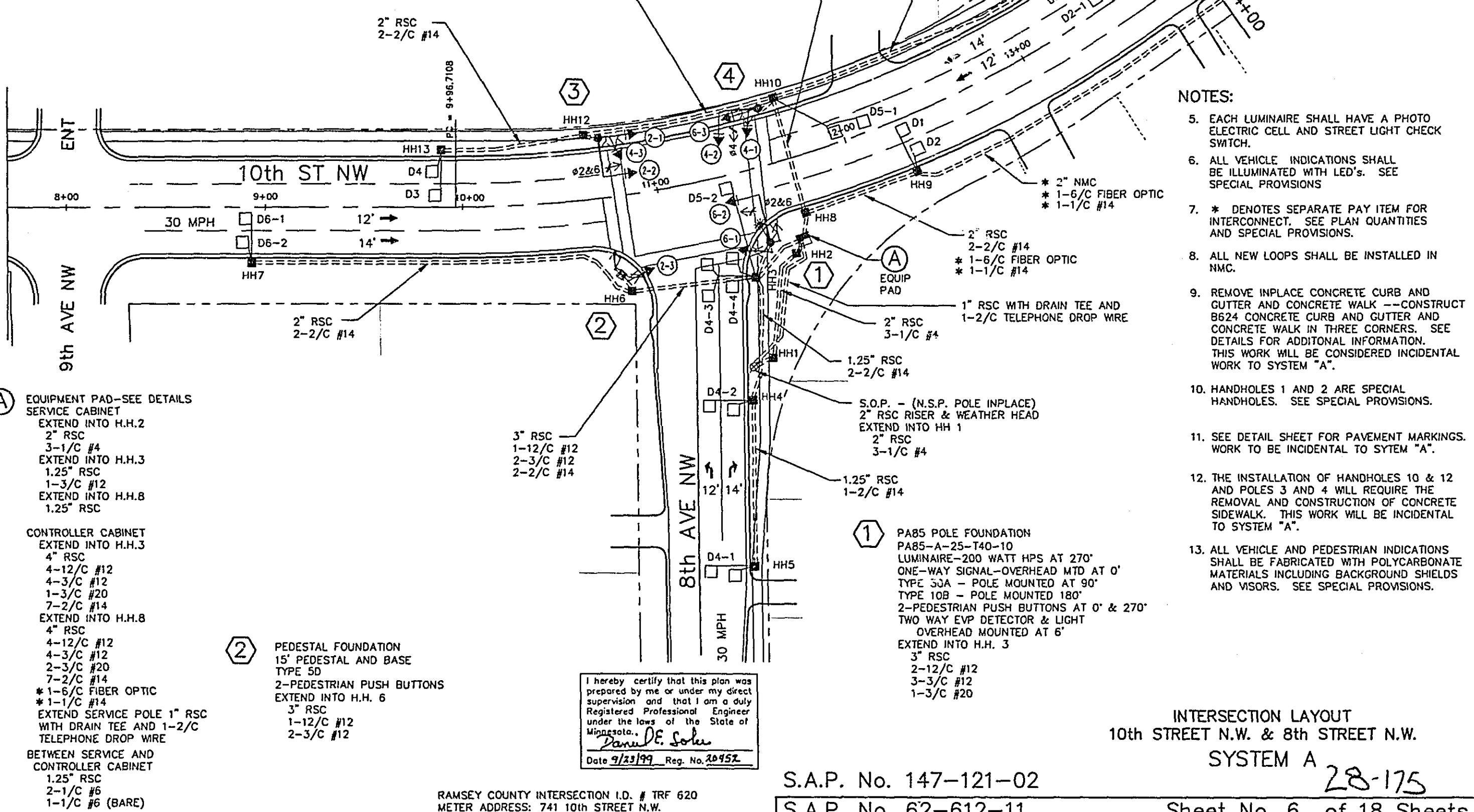
SIGNING
FAI OVERHEAD TYPE D SIGNS, SEE DETAILS. (SEPARATE PAY ITEM)
FAI OVERHEAD TYPE R10-12 (36" X 48") SIGN ON MAST ARM POLE 3.
FAI PEDESTRIAN PUSH BUTTON SIGNS TYPE R10-10 (24" X 12") WITH SYMBOL MESSAGE.

SIGNAL SYSTEM OPERATION
THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
PHASE 5 IS PROTECTIVE/PERMISSIVE LEFT TURN.
PHASES 4 AND 5 ARE NON-LOCK DETECTION.
PHASES 2 AND 6 ARE LOCK DETECTION.
PHASES 2 AND 6 ARE ON VEHICLE RECALL.



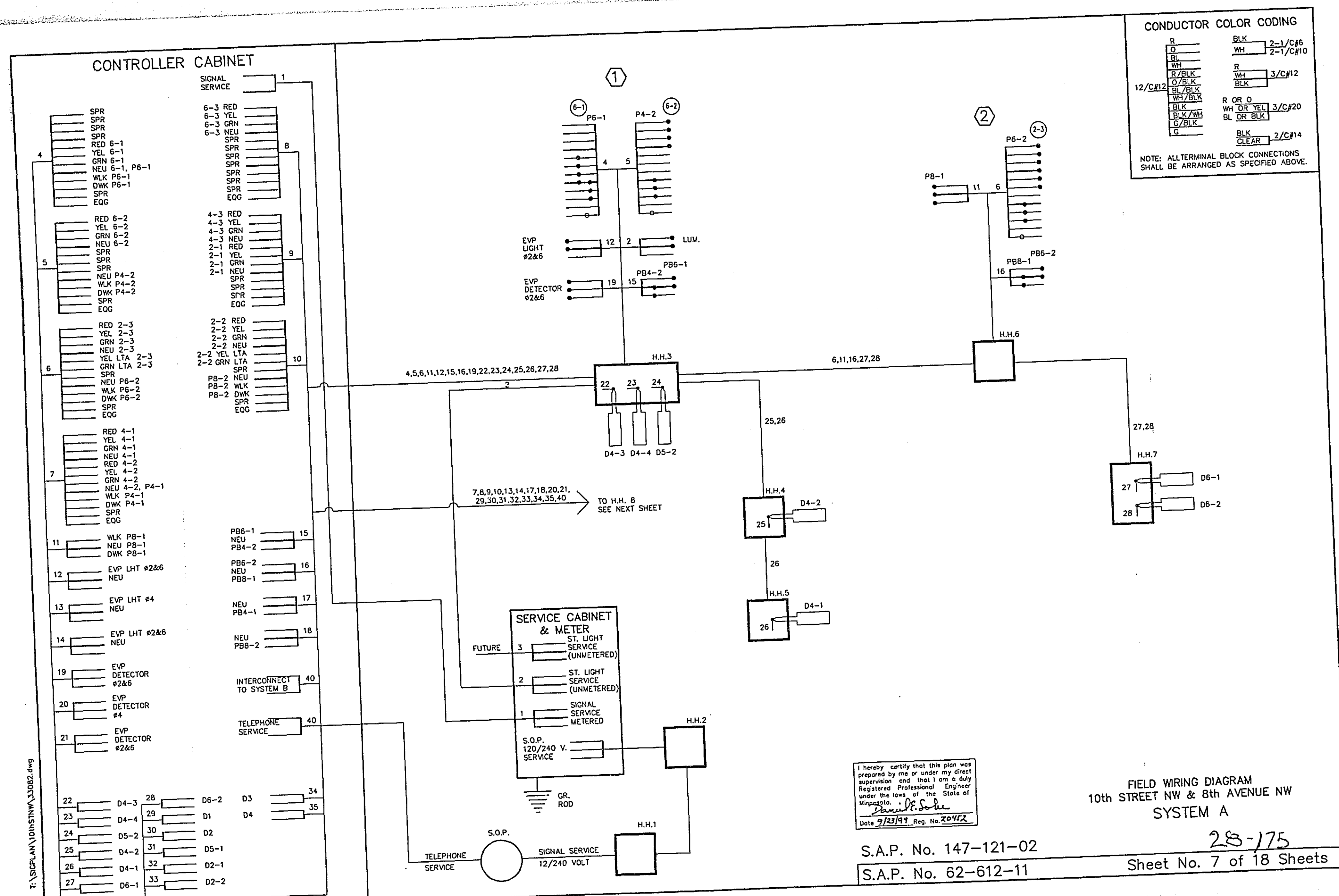
VEHICLE DETECTION									
NO.	SIZE	FUNCTION	LOCATION						
D2-1	6'x6'	C&E	180'						
D2-2	6'x6'	C&E	180'						
D4-1	6'x6'	E	155'						
D4-2	6'x6'	E	155'						
D4-3	6'x6'	C&E	155'						
D4-4	6'x6'	C&E (TD)	0' & 15'						
D5-1	6'x6'	C (TD)	30' & 45'						
D5-2	6'x6'	E	180'						
D6-1	6'x6'	C&E	180'						
D6-2	6'x6'	C&E	180'						
D1	6'x6'	COUNT	SEE PL-11						
D2	6'x6'	COUNT	SEE PL-11						
D3	6'x6'	COUNT	SEE PL-11						
D4	6'x6'	COUNT	SEE PL-11						

C&E = CALL & EXTEND
C = CALL ONLY
E = EXTEND ONLY
(TD) = TIME DELAYED



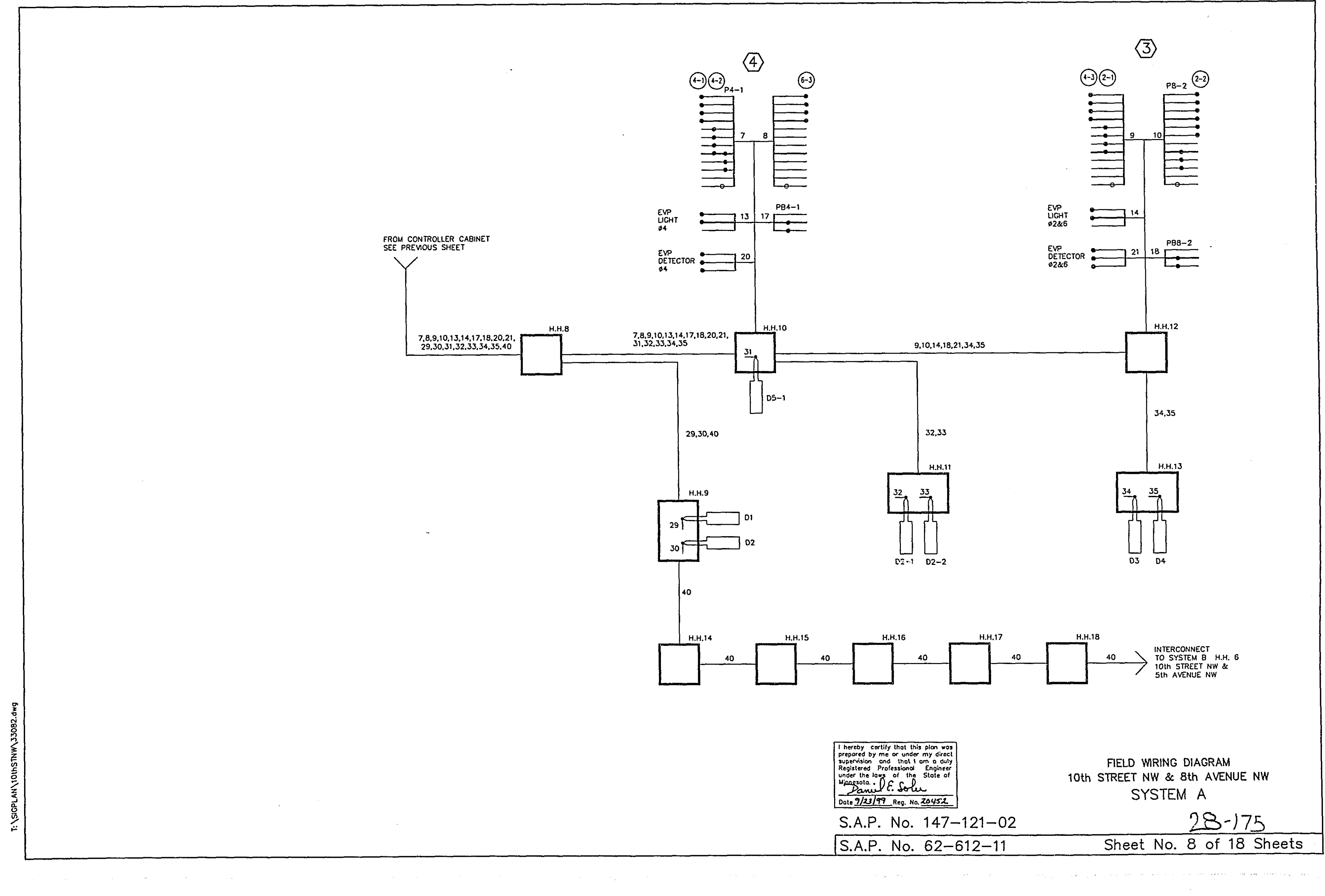
S.A.P. No. 147-121-02
S.A.P. No. 62-612-11

INTERSECTION LAYOUT
10th STREET N.W. & 8th STREET N.W.
SYSTEM A
28-175
Sheet No. 6 of 18 Sheets



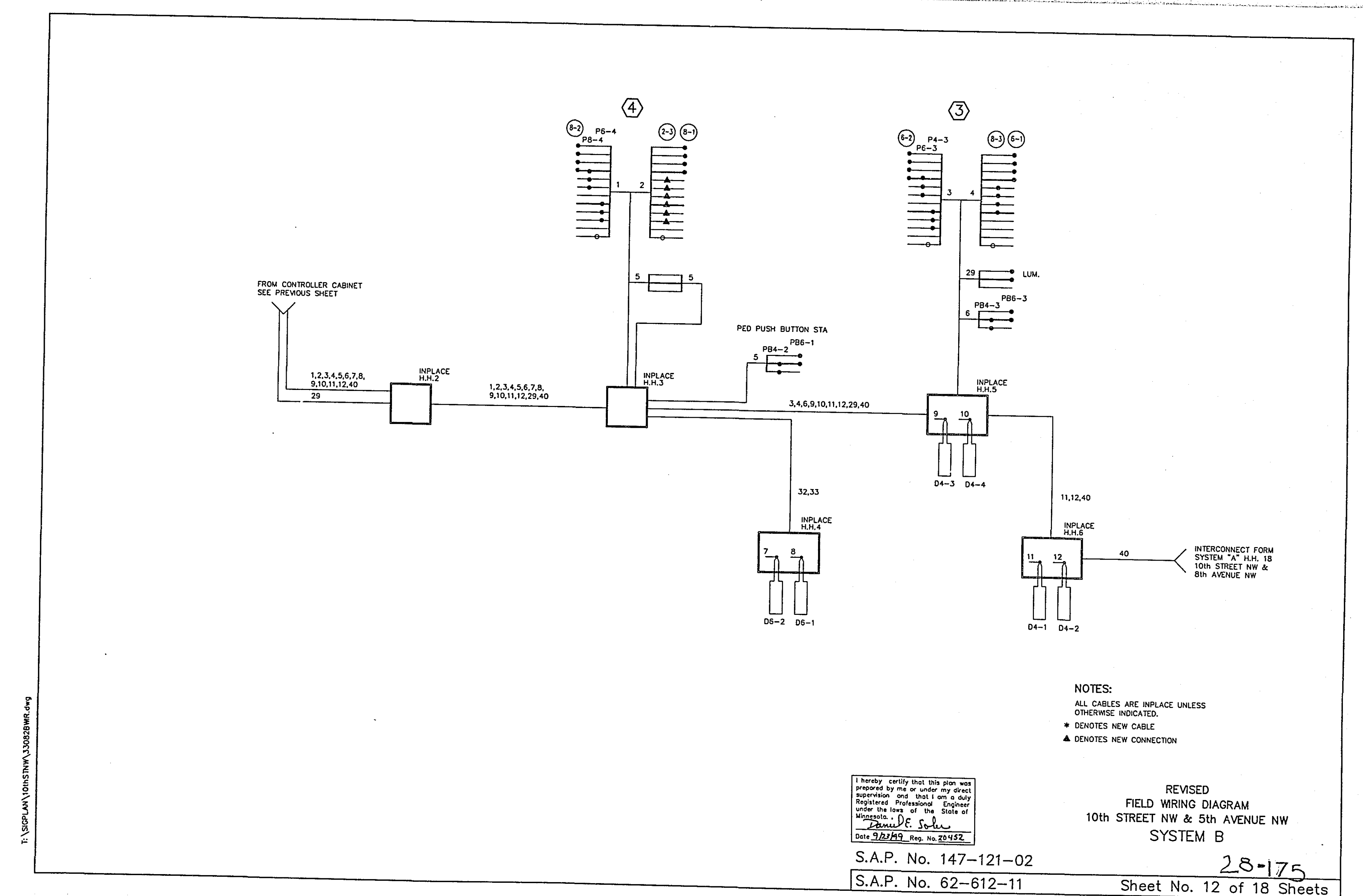
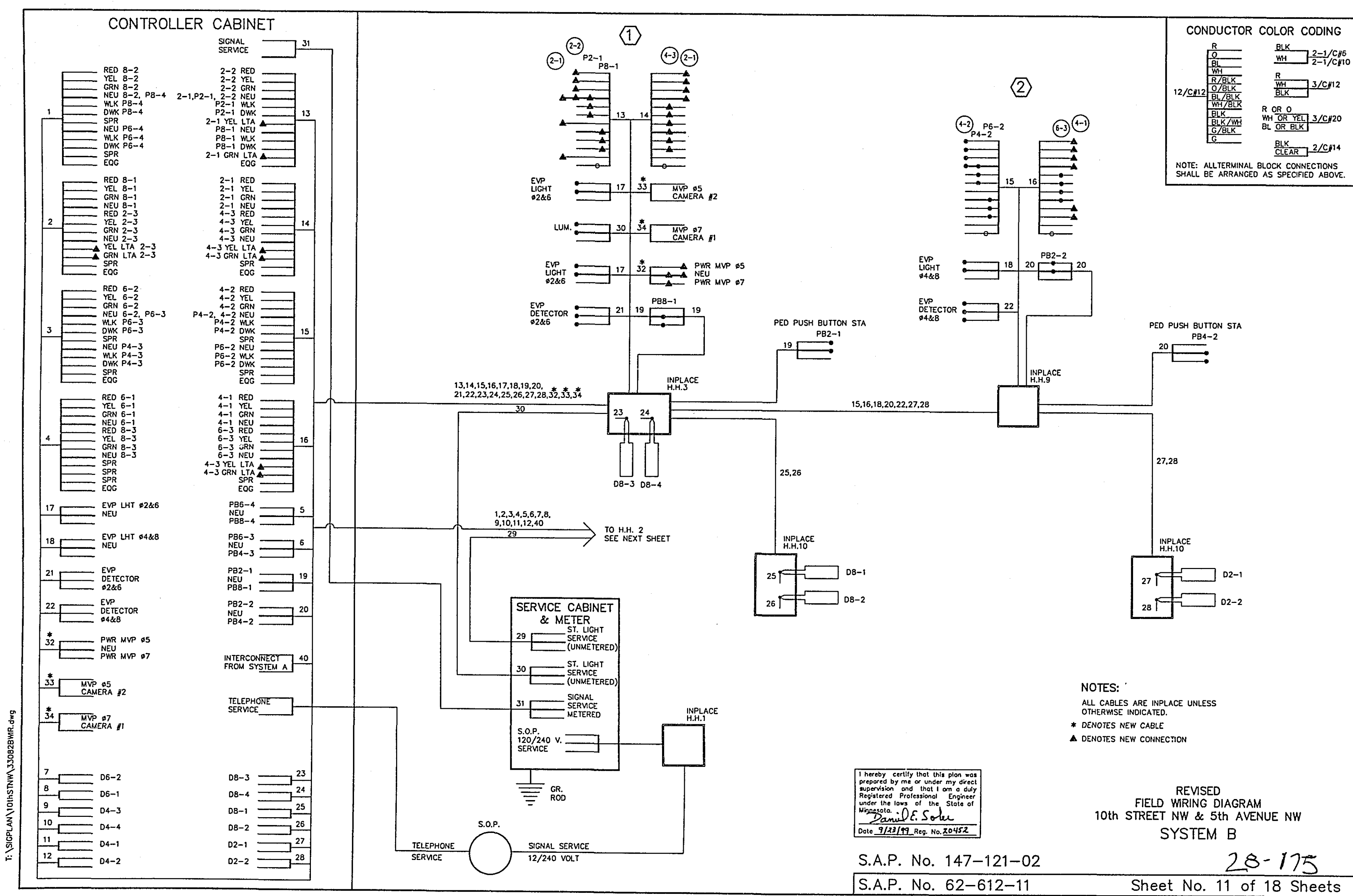
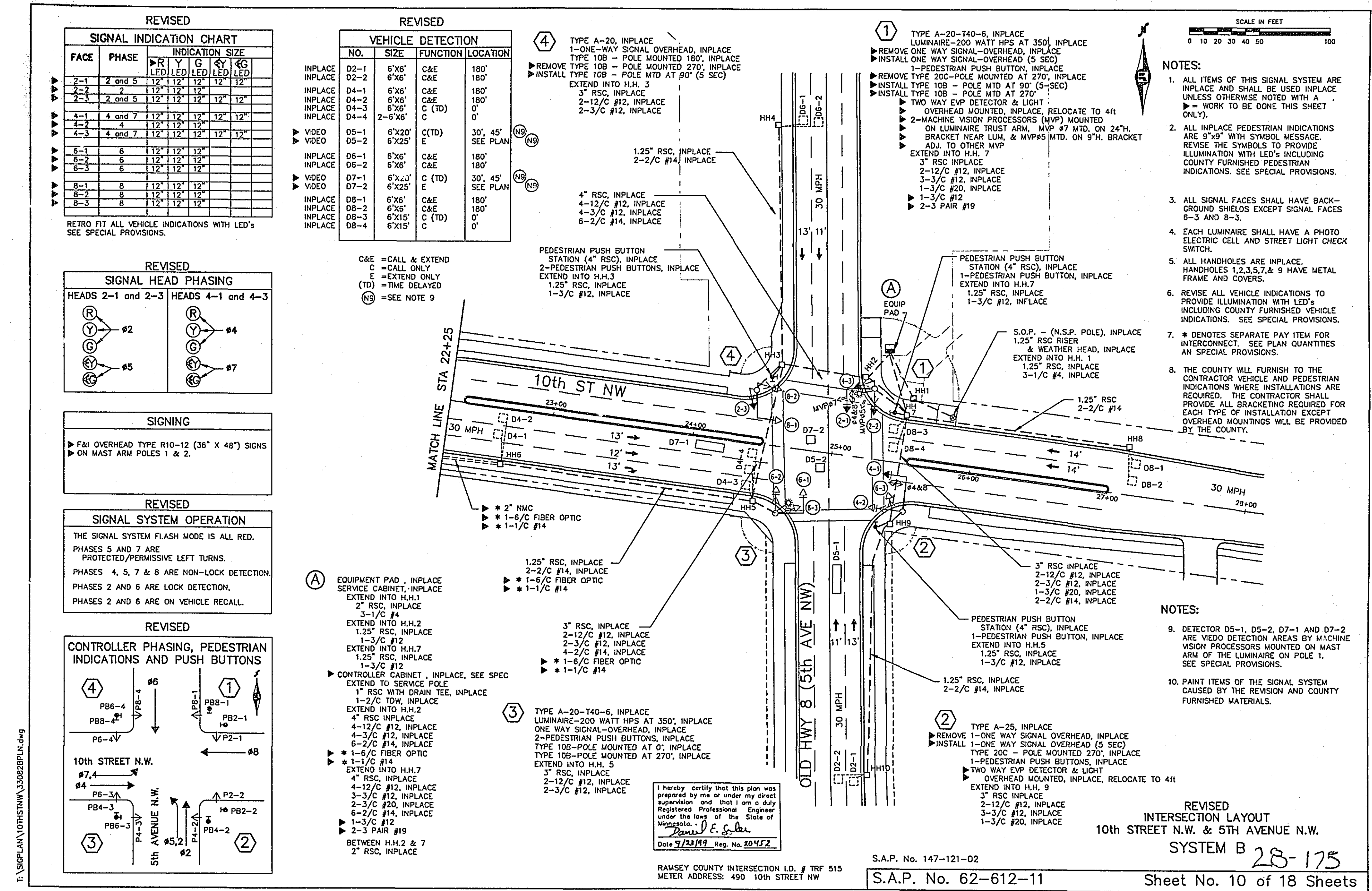
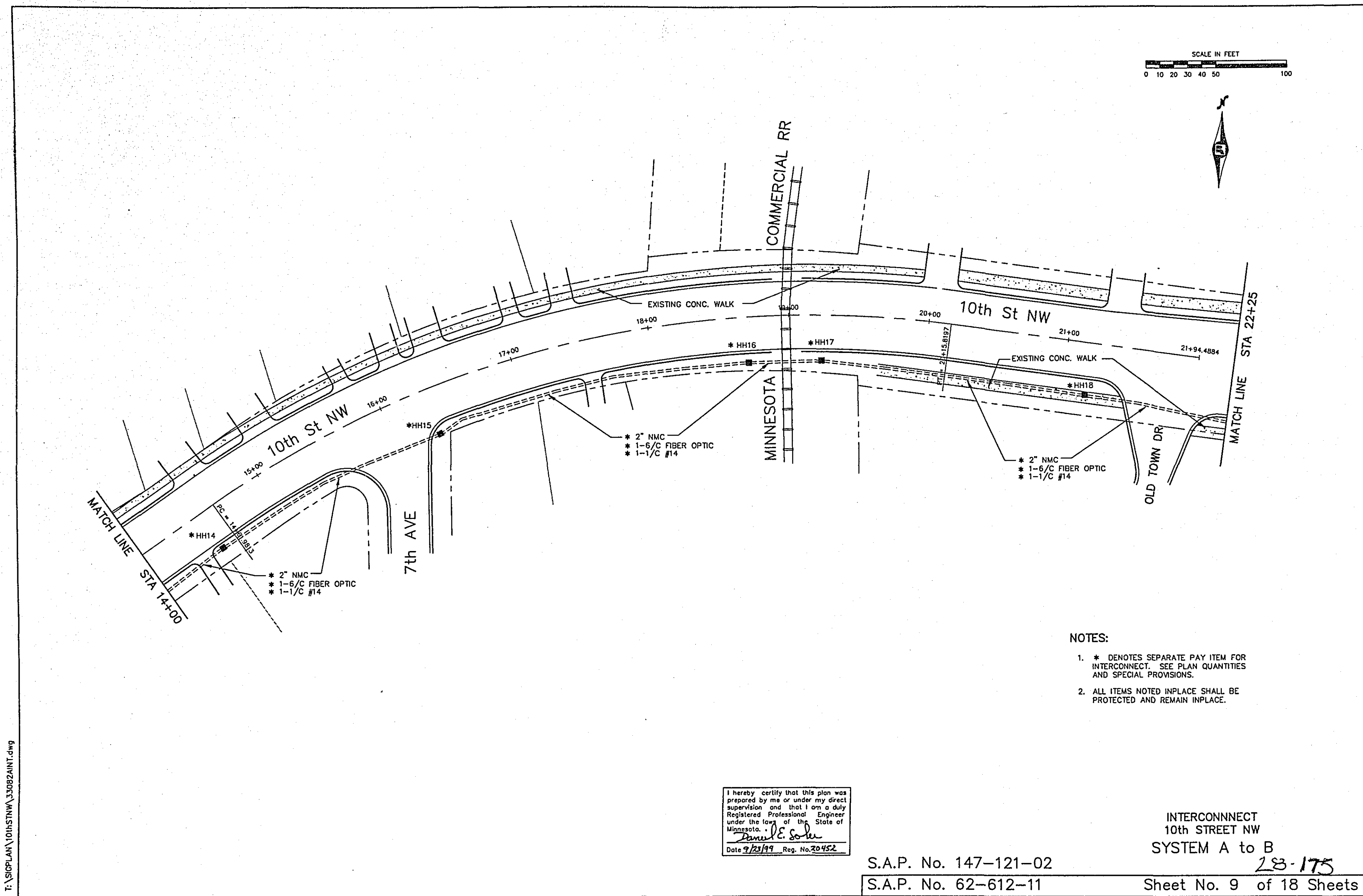
S.A.P. No. 147-121-02
S.A.P. No. 62-612-11

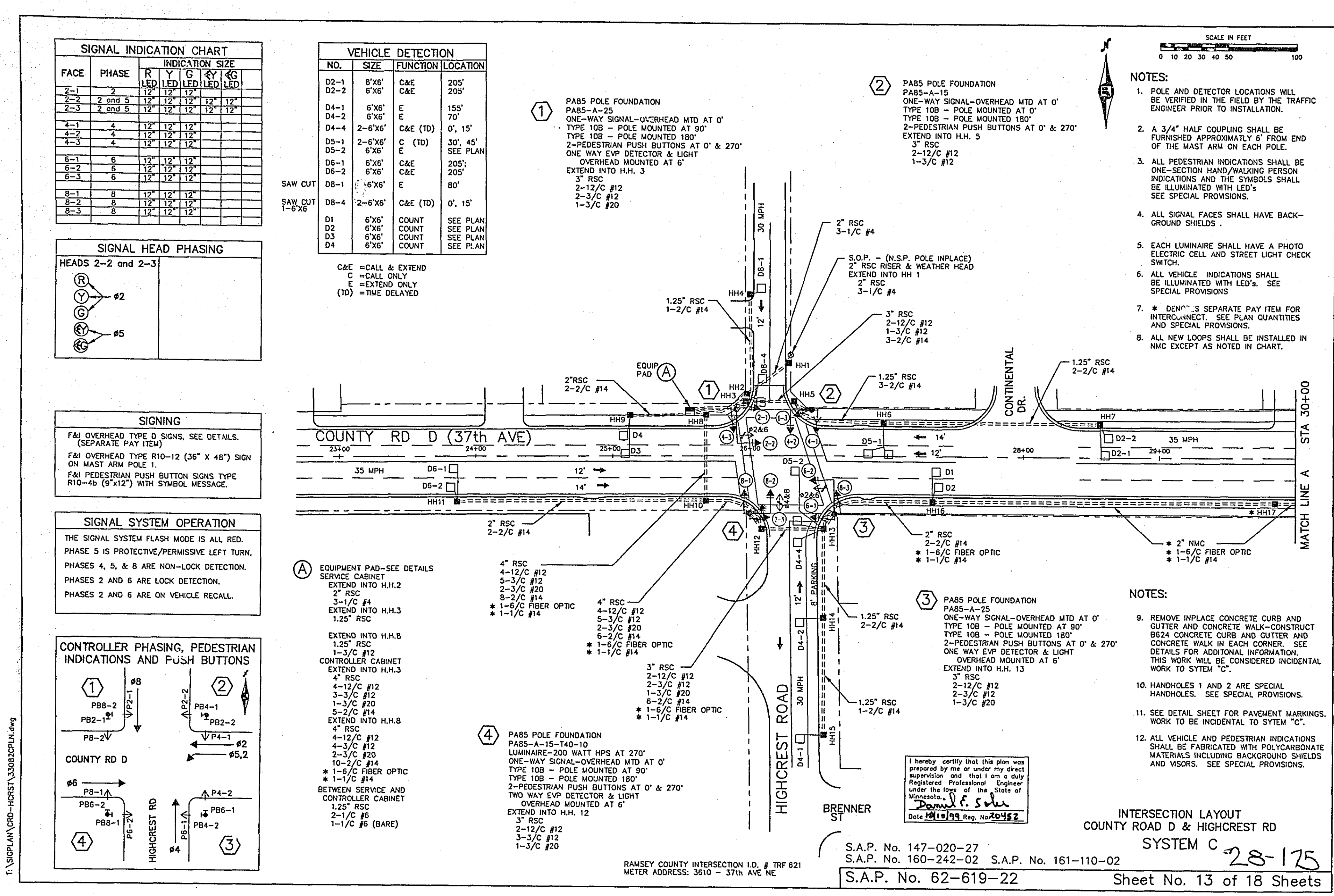
FIELD WIRING DIAGRAM
10th STREET NW & 8th AVENUE NW
SYSTEM A
28-175
Sheet No. 7 of 18 Sheets

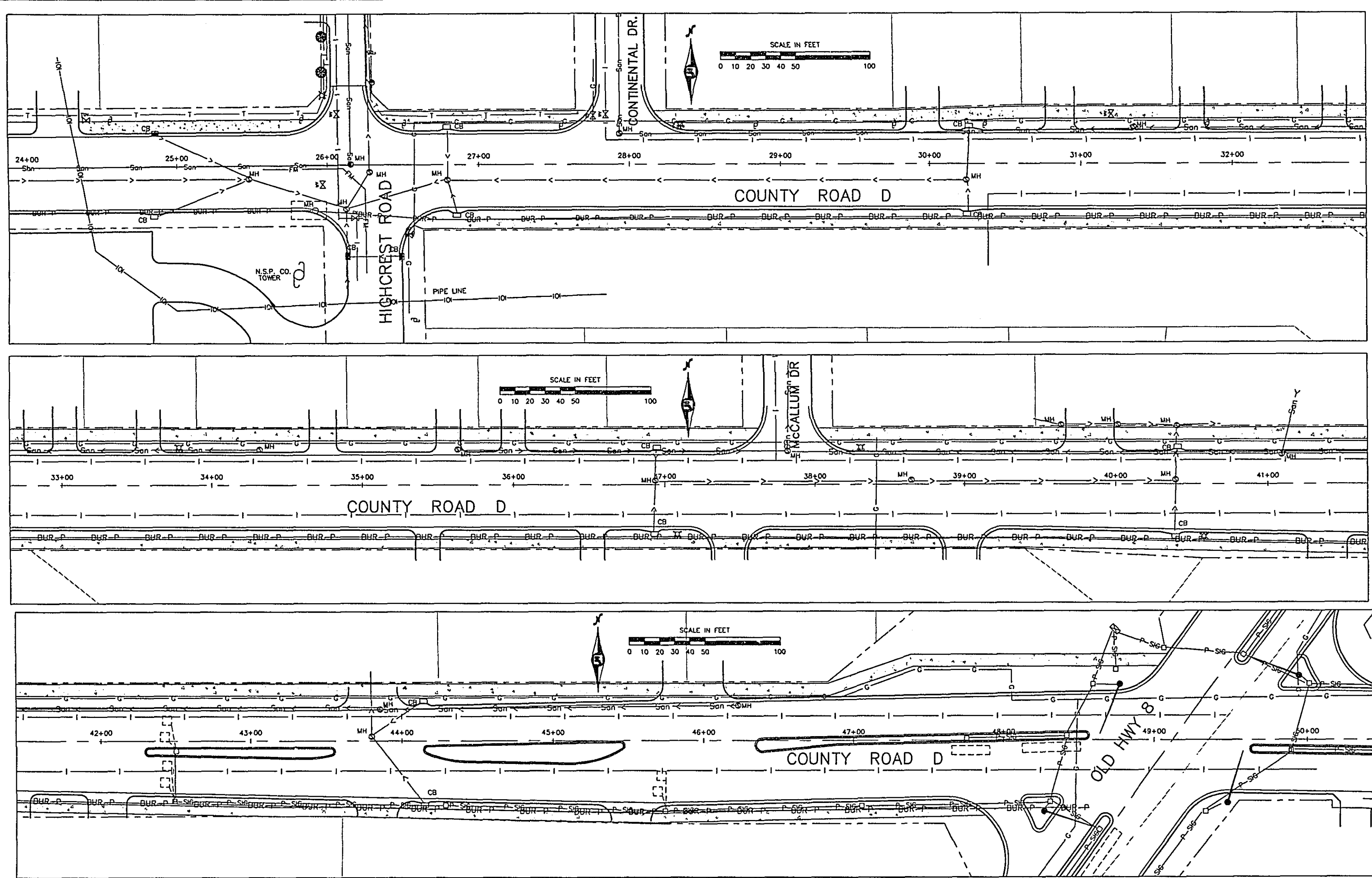


S.A.P. No. 147-121-02
S.A.P. No. 62-612-11

FIELD WIRING DIAGRAM
10th STREET NW & 8th AVENUE NW
SYSTEM A
28-175
Sheet No. 8 of 18 Sheets

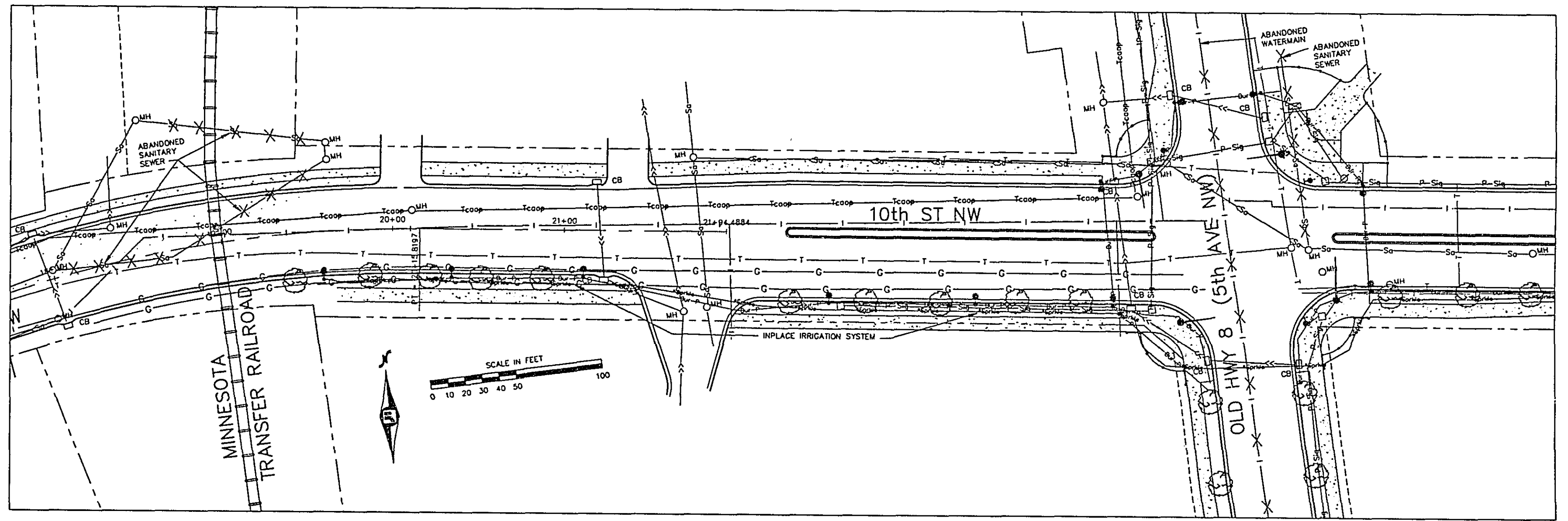
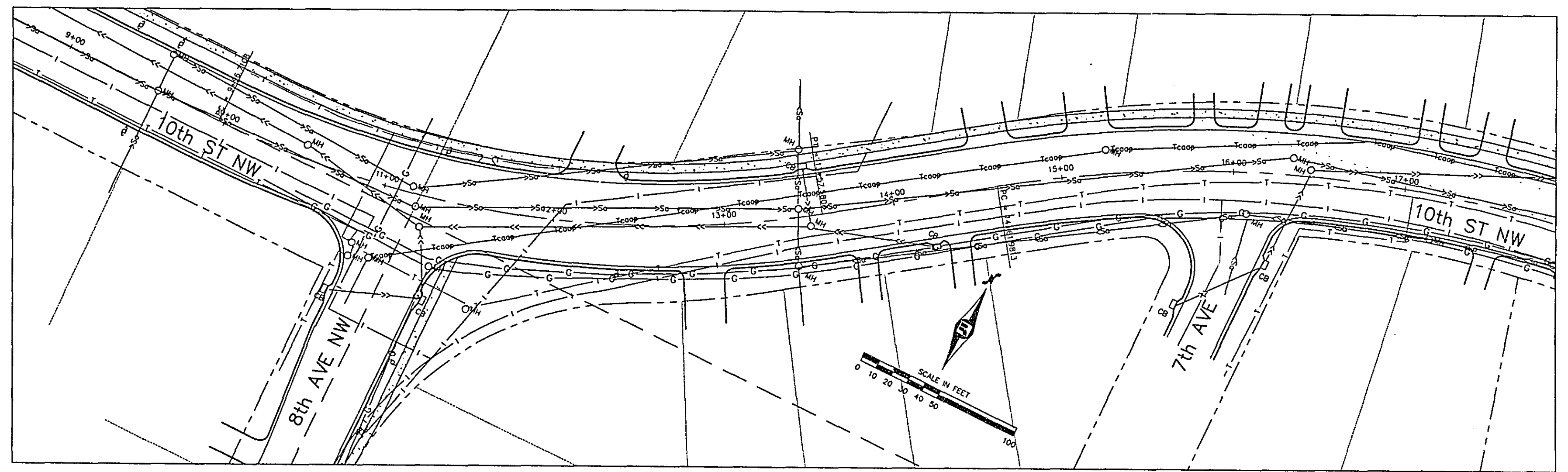






28-175 UTILITIES
COUNTY ROAD D
FROM HIGHCREST RD TO OLD HWY 8

S.A.P. No. 62-619-22 Sheet No. 17 of 18 Sheets



28-175 UTILITIES
10th STREET NW
FROM 8th AVE TO OLD HWY 8

S.A.P. No. 147-121-02
S.A.P. No. 62-612-11

Sheet No. 18 of 18 Sheets

T:\SICPLAN\101012101\33082411