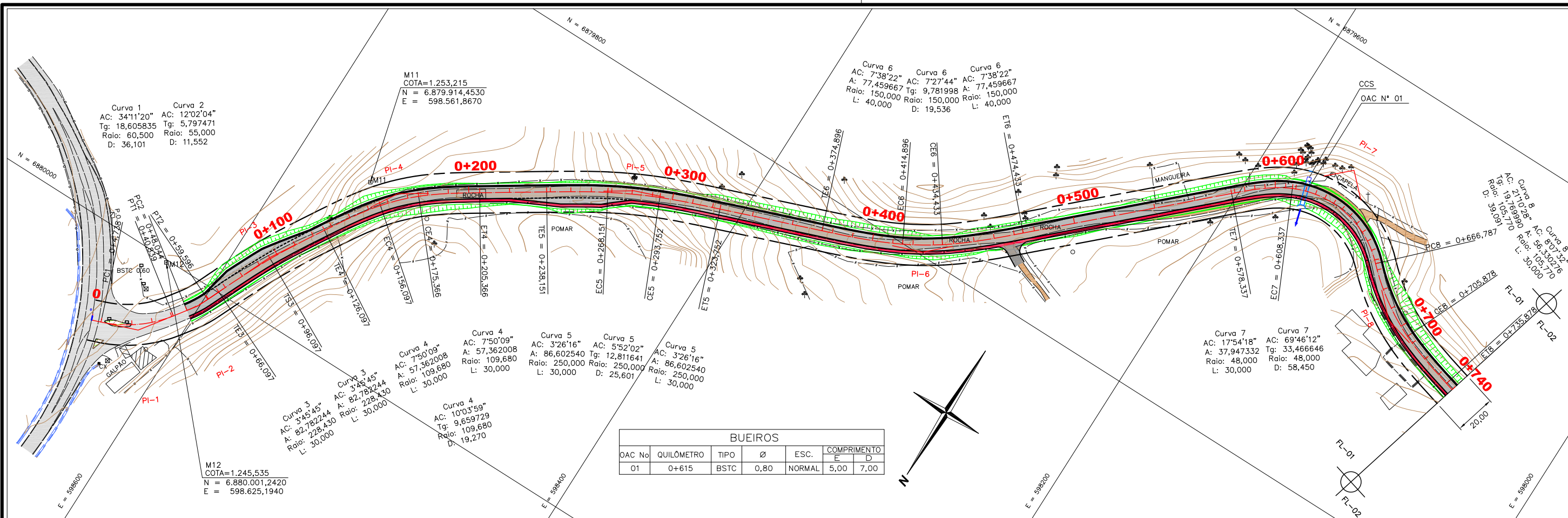
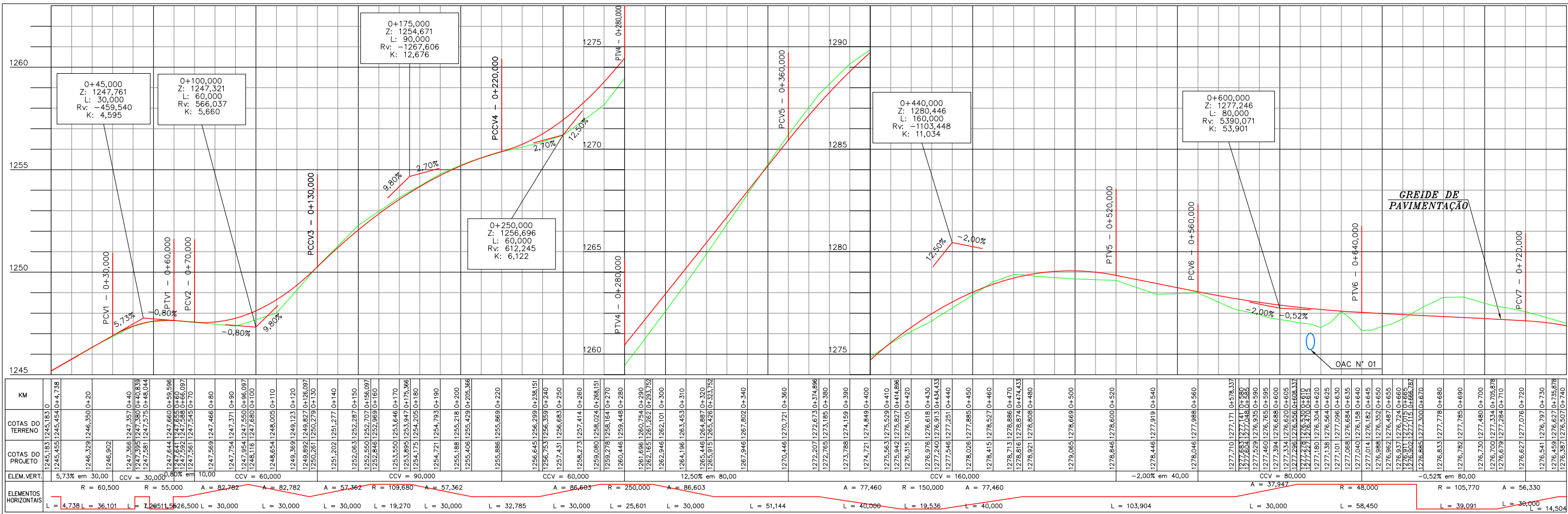


PROJETO GEOMÉTRICO

Linha Geral



BUEIROS					
OAC No	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO
01	0+615	BSTC	0,80	NORMAL	5,00 7,00



CONVENÇÕES

- CURVAS DE NÍVEL
- ÁRVORE
- ARAUCÁRIA
- COQUEIRO
- POSTE CONCRETO CIRCULAR
- POSTE DE MADEIRA
- POSTE CONCRETO DUPLO T
- POSTE CONCRETO RETANGULAR
- HIDRANTE
- TELEFONE PÚBLICO
- MARCOS DE APOIO
- PLACAS DE SINALIZAÇÃO
- EDIF. MADEIRA
- EDIF. ALVENARIA
- PTO. ÔNIBUS EXIST.
- LIMITE DE VEGETAÇÃO
- CERCA
- ESTRADA/ACESSO EXIST.
- MURO EXISTENTE
- BUEIRO PROLONGADO
- BUEIRO PROJETADO
- PONTE EXISTENTE
- TERRENO NATURAL
- AÇUDE
- BANHADO
- BUEIRO EXISTENTE
- CALÇA DA EXISTENTE
- CANTEIRO EXISTENTE
- CERCA DE TELA
- DIVISAS
- RODOVIA EXISTENTE
- CALÇA DA EXISTENTE
- CANTEIRO EXISTENTE
- GREIDE
- OFFSET-CORTE/ATERRO
- FAIXAS DE ROL. PROJ.
- ACOSTAMENTO
- CICLOVIA
- CANTEIRO
- CALÇA DA

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA

Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO GEOMÉTRICO - (km 0+000 a km 0+740)

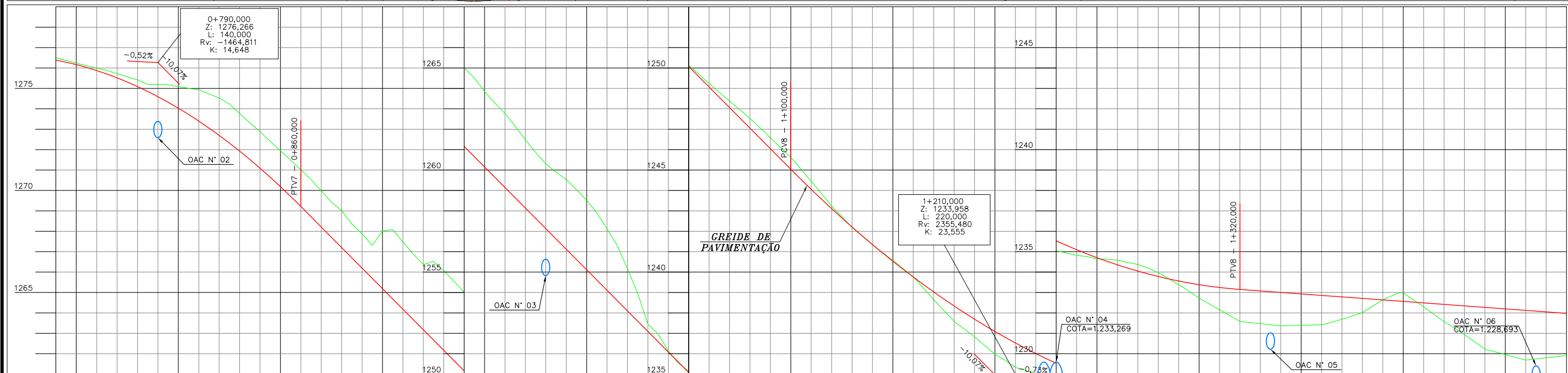
FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CODIGO PROJETO: 377_19

ESCALA: H=1:2000 V=1:200

DATA: SETEMBRO / 2021

FOLHA: 01

[illegible]

CURVAS DE NÍVEL ÁRVORE ARAUCÁRIA COQUEIRO POSTE CONCRETO CIRCULAR POSTE DE MADEIRA POSTE CONCRETO DUPLO T	POSTE CONCRETO RETANGULAR HIDRANTE TELEFONE PÚBLICO MARCOS DE APOIO PLACAS DE SINALIZAÇÃO EDIF. MADEIRA EDIF. ALVENARIA	CONVENÇÕES PTO. ÔNIBUS EXIST. LIMITE DE VEGETAÇÃO CERCA ESTRADA/ACESSO EXIST. MURO EXISTENTE RIO/CÓRREGO/SANGA VALE	AÇUDE BANHADO BUEIRO EXISTENTE BUEIRO PROLONGADO BUEIRO PROJETADO PONTE EXISTENTE TERRENO NATURAL	CERCA DE TELA DIVISA RODOVIA EXISTENTE CALÇADA EXISTENTE CANTEIRO EXISTENTE	GREIDE OFFSET-CORTE/ATERRO FAIXAS DE ROL. PROJ. ACOSTAMENTO CICLOVIA CANTEIRO CALÇADA
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ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

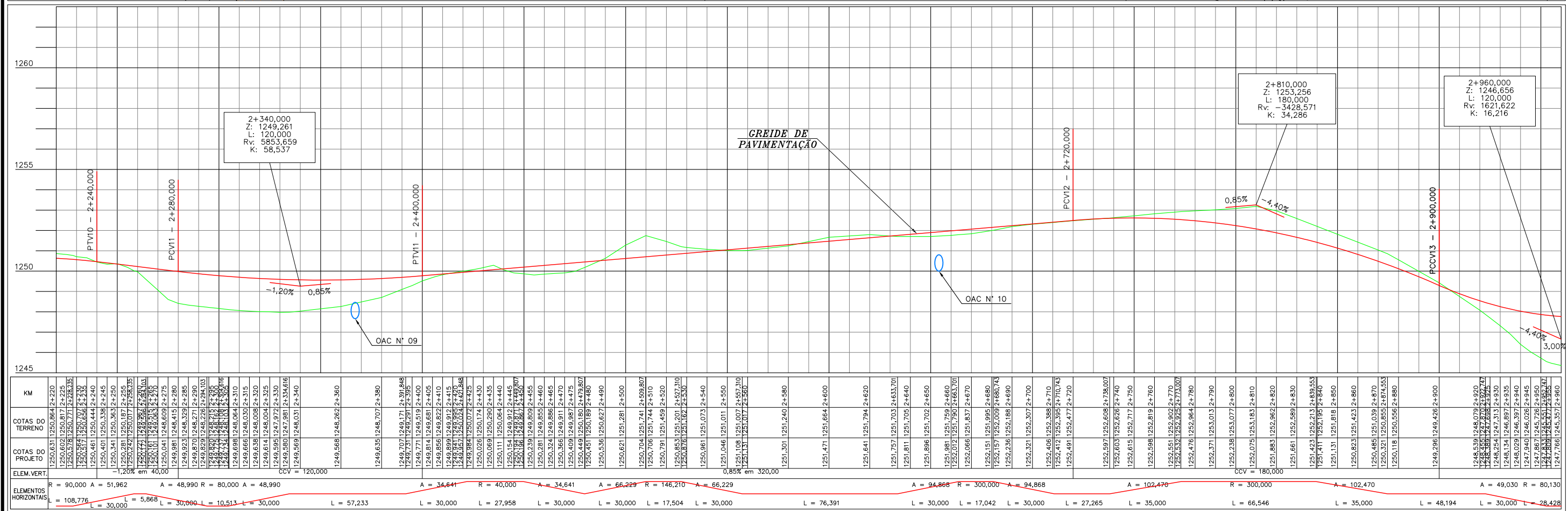
PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

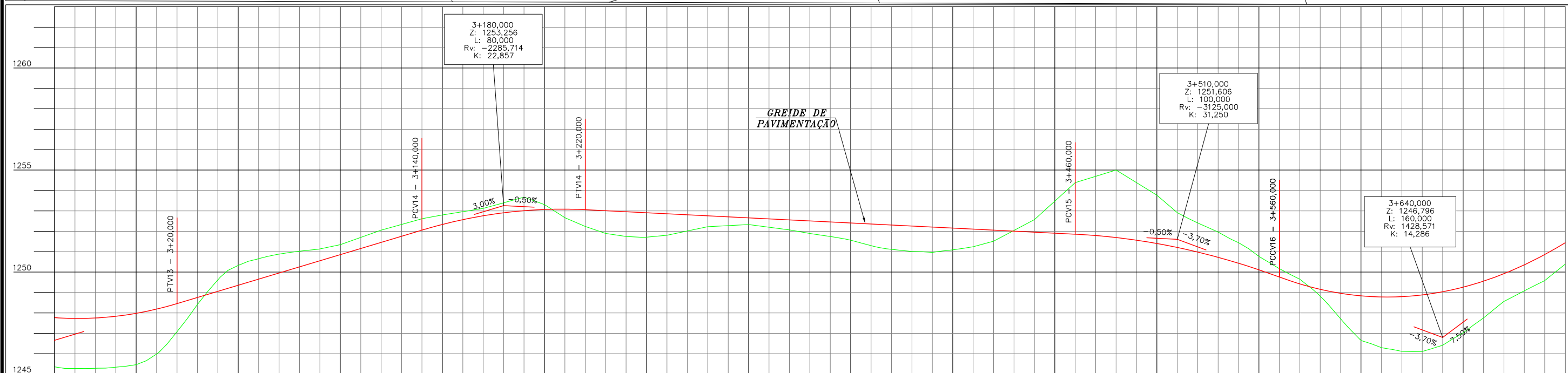
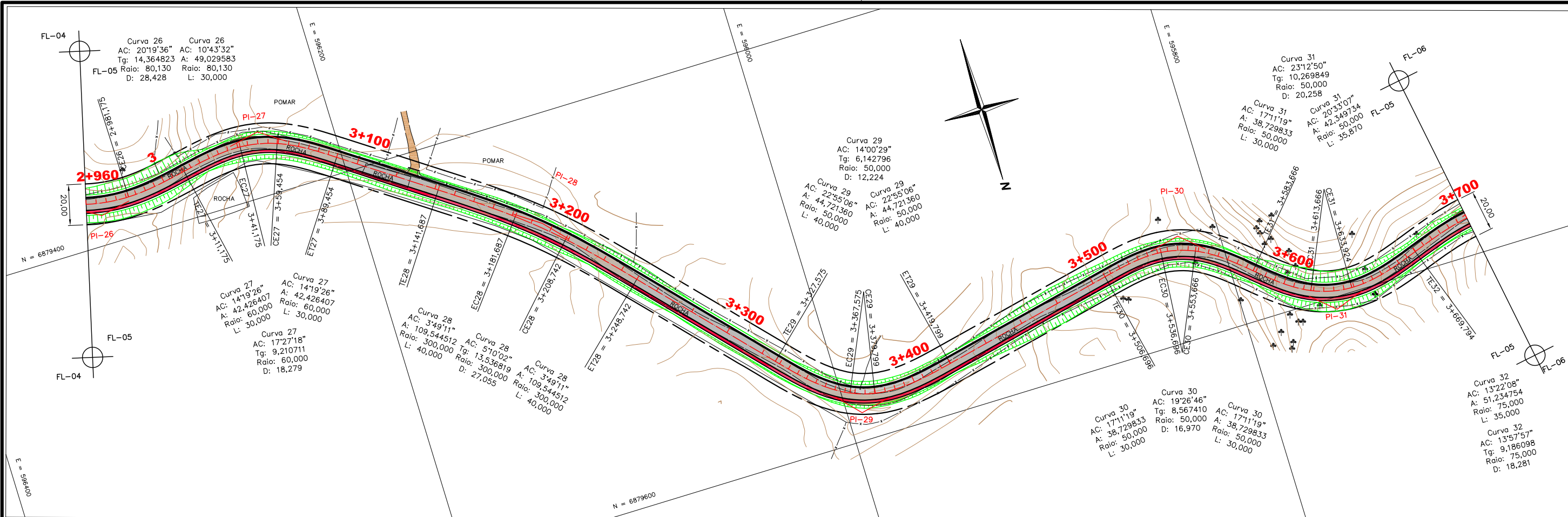
PROJETO GEOMÉTRICO - (km 0+740 a km 1+480)

FASE DO PROJETO: IMPRESSÃO DEFINITIVA

20060 PROJETO:	377_19	ESCALA:	H=1:2000 V=1:200	DATA:	SETEMBRO / 2021	FOLHA:	02
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CURVAS DE NÍVEL ÁRVORE ARAUCÁRIA COQUEIRO POSTE CONCRETO CIRCULAR POSTE DE MADEIRA POSTE CONCRETO DUPLO T		POSTE CONCRETO RETANGULAR HIDRANTE TELEFONE PÚBLICO MARCOS DE APOIO PLACAS DE SINALIZAÇÃO EDIF. MADEIRA EDIF. ALVENARIA		CONVENÇÕES PTO. ÔNIBUS EXIST. LIMITE DE VEGETAÇÃO CERCA ESTRADA/ACESSO EXIST. MURO EXISTENTE RIO/CÓRREGO/SANGA VALA		AÇUDE BANHADO BUEIRO EXISTENTE BUEIRO PROLONGADO BUEIRO PROJETADO PONTE EXISTENTE TERRENO NATURAL		CERCA DE TELA DIVISAS RODOVIA EXISTENTE CALÇADA EXISTENTE CANTEIRO EXISTENTE		GREIDE OFFSET-CORTE/ATERRO FAIXAS DE ROL. PROJ. ACOSTAMENTO CICLOVIA CANTEIRO CALÇADA		ESCALAS GRÁFICAS HORIZONTAL VERTICAL 		DESENVOLVIDO POR: ENGMETRIA Projetos e Licenciamentos		 PREFEITURA MUNICIPAL DE SÃO JOAQUIM RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO		FASE DO PROJETO: IMPRESSÃO DEFINITIVA	
CÓDIGO PROJETO: 377_19		ESCALA: H=1:2000 V=1:200		DATA: SETEMBRO / 2021		FOLHA: 04													



ELEM. VERT.		ELEMENTOS HORIZONTAIS		COTAS DO PRO.FUNO.		COTAS DO TERRENO		KM												
R = 80,130	A = 49,030	A = 42,426	R = 60,000	A = 42,426	A = 109,545	R = 300,000	A = 109,545	A = 44,721	R = 50,000	A = 44,721	A = 38,730	R = 50,000	A = 38,730	A = 38,730	R = 50,000	A = 42,350	A = 51,235			
L = 28,428	L = 30,000	L = 30,000	L = 18,279	L = 30,000	L = 52,233	L = 40,000	L = 27,055	L = 40,000	L = 78,833	L = 40,000	L = 12,224	L = 40,000	L = 86,897	L = 30,000	L = 16,970	L = 30,000	L = 30,000	L = 20,258	L = 35,870	L = 35,000

CURVAS DE NIVEL

ÁRVORE

ARAUCÁRIA

COQUEIRO

POSTE CONCRETO CIRCULAR

POSTE DE MADEIRA

POSTE CONCRETO DUPLA T

POSTE CONCRETO RETANGULAR

HIDRANTE

TELEFONE PÚBLICO

MARCOS DE APOIO

PLACAS DE SINALIZAÇÃO

EDIF. MADEIRA

EDIF. ALVENARIA

PTO. ÔNIBUS EXIST.

LIMITE DE VEGETAÇÃO

CERCA

ESTRADA/ACESSO EXIST.

MURO EXISTENTE

RIO/CÓRREGO/SANGA

VALA

AÇUDE

BANHADO

BUEIRO EXISTENTE

BUEIRO PROLONGADO

BUEIRO PROJETADO

PONTE EXISTENTE

TERRENO NATURAL

CERCA DE TELA

DIVISAS

RODOVIA EXISTENTE

CALÇADA EXISTENTE

CANTEIRO EXISTENTE

CANTEIRO

CALÇADA

GREIDE

OFFSET-CORTE/ATERRO

FAIXAS DE ROL. PROJ.

ACOSTAMENTO

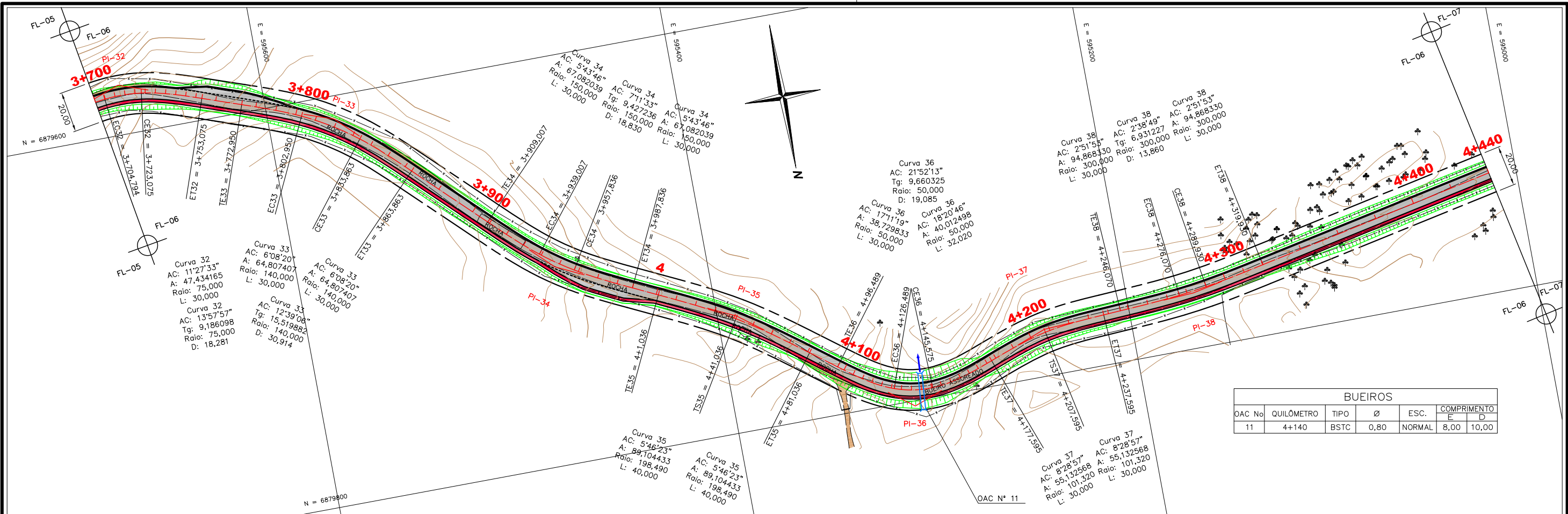
CICLOVIA

CANTEIRO

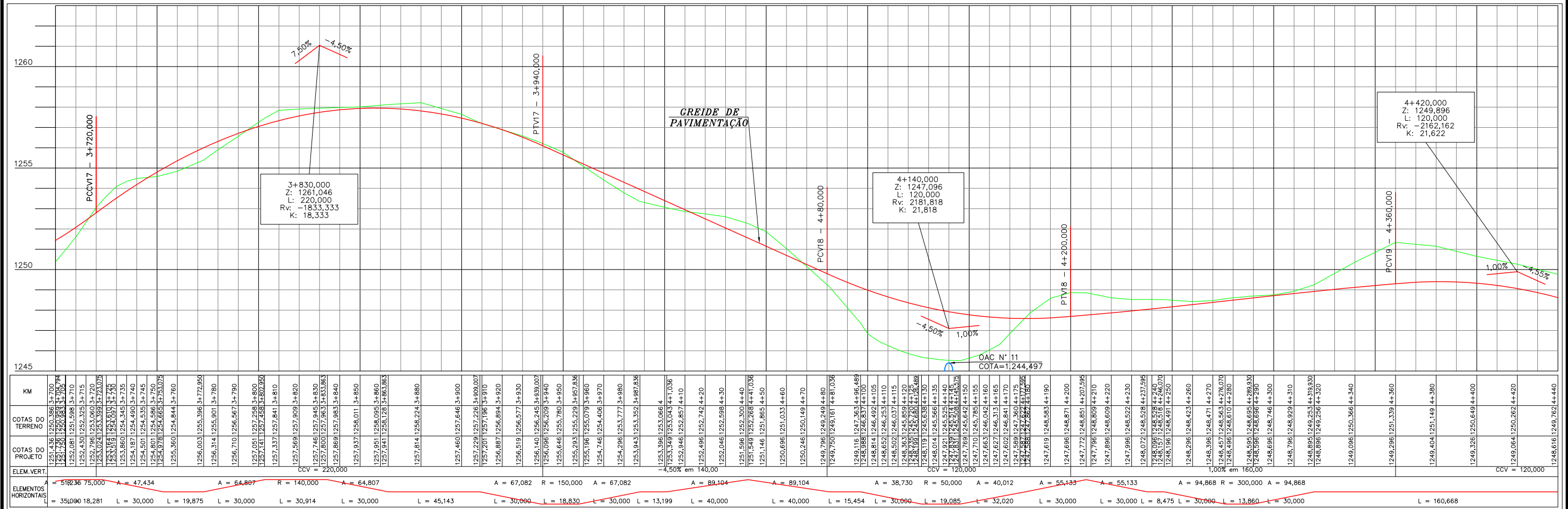
CALÇADA

DESENVOLVIDO POR:
 ENGMETRIA
Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM
RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO
PROJETO GEOMÉTRICO - (km 2+960 a km 3+700)
FASE DO PROJETO:
IMPRESSÃO DEFINITIVA
CÓDIGO PROJETO: 377_19 ESCALA: H=1:2000 V=1:200 DATA: SETEMBRO / 2021 FOLHA: 05



BUEIROS					
OAC No	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO E D
11	4+140	BSTC	0,80	NORMAL	8,00 10,00



CURVAS DE NÍVEL

ÁRVORE

ARAUCÁRIA

COQUEIRO

POSTE CONCRETO CIRCULAR

POSTE DE MADEIRA

POSTE CONCRETO DUPLO T

POSTE CONCRETO RETANGULAR

HIDRANTE

TELEFONE PÚBLICO

MARCOS DE APOIO

PLACAS DE SINALIZAÇÃO

EDIF. MADEIRA

EDIF. ALVENARIA

PTO. ÔNIBUS EXIST.

LIMITE DE VEGETAÇÃO

CERCA

ESTRADA/ACESSO EXIST.

MURO EXISTENTE

RIO/CÓRREGO/SANGA

VALA

ÁQUED

BANHADO

BUEIRO EXISTENTE

BUEIRO PROLONGADO

BUEIRO PROJETADO

PONTE EXISTENTE

TERRENO NATURAL

CERCA DE TELA

DIVISAS

RODOVIA EXISTENTE

CALÇADA EXISTENTE

CANTEIRO EXISTENTE

GREIDE

OFFSET-CORTE/ATERRO

FAIXAS DE ROL. PROJ.

ACOSTAMENTO

CICLOVIA

CANTEIRO

CALÇADA

ESCALAS GRÁFICAS

HORIZONTAL
0 10 20 30 40 50m

VERTICAL
0 1 2 3 4 5m

DESENVOLVIDO POR:

Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM
RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

PROJETO GEOMÉTRICO - (km 3+700 a km 4+440)

FASE DO PROJETO:
IMPRESSÃO DEFINITIVA

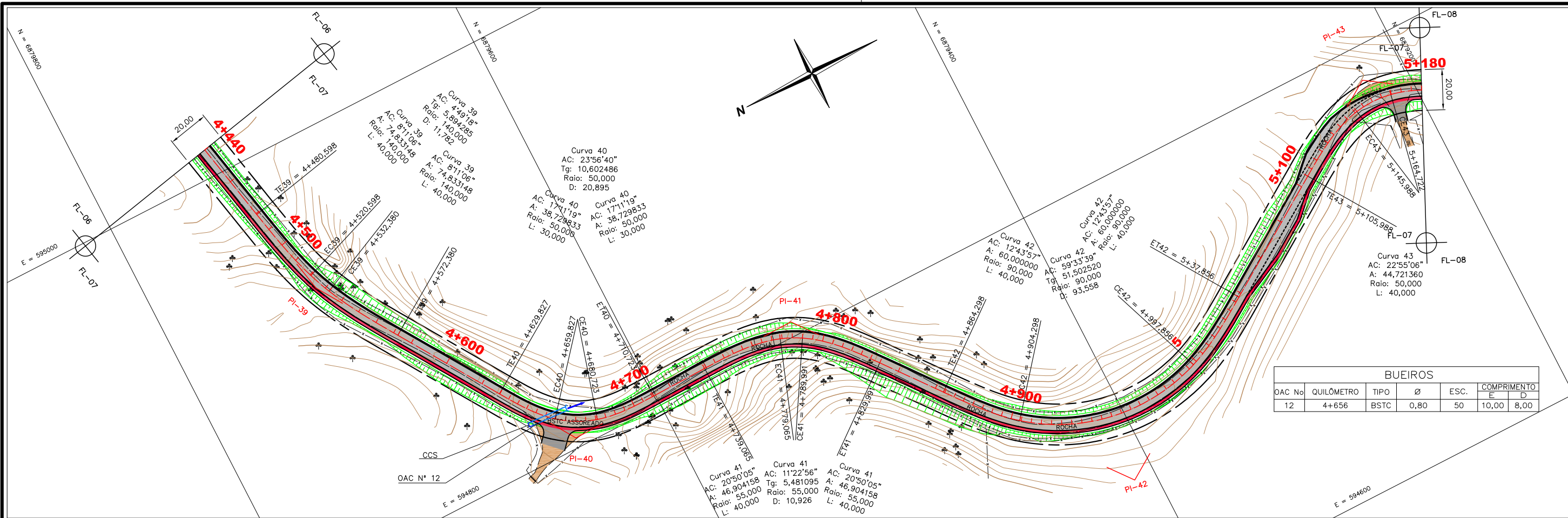
CONDIÇÃO PROJETO: 377_19

ESCALA: H=1:2000
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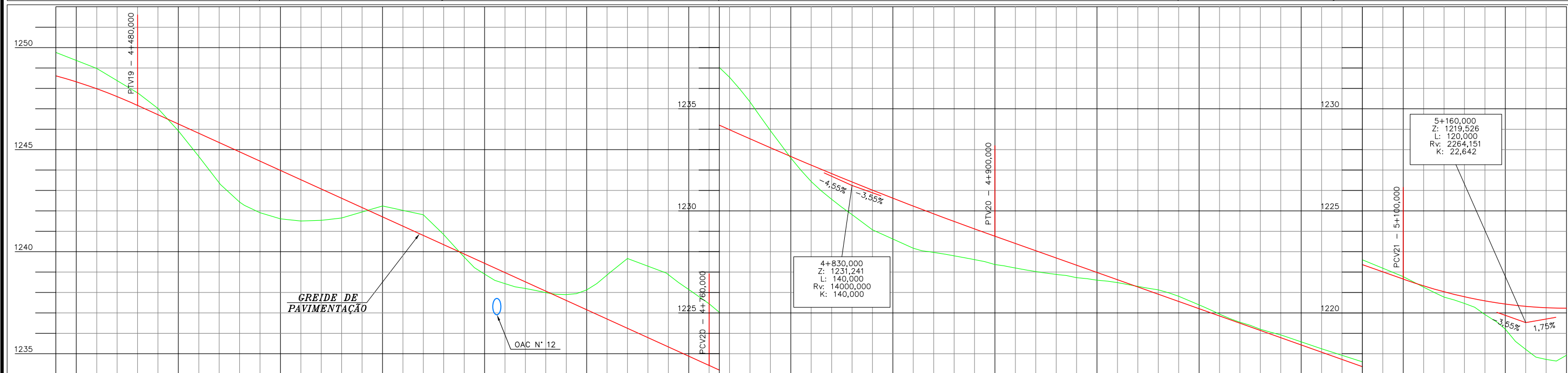
DATA: SETEMBRO / 2021

FOLHA: 06

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BUEIROS					
OAC No	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO
12	4+656	BSTC	0,80	50	10,00



KM		1248,616 1249,762 4+440		1247,984 1248,981 4+460		1247,166 1247,780 4+480		1247,131 1247,743 4+480,988		1246,711 1247,020 4+490		1246,256 1245,921 4+500		1245,801 1244,666 4+510		1245,346 1243,731 4+520		1245,313 1243,295 4+520,988		1244,891 1242,431 4+530		1244,753 122,267 4+532,382		1244,436 1241,908 4+540		1243,981 1241,611 4+550		1243,528 1241,504 4+560		1243,077 1241,535 4+570		1242,563 1241,581 4+572,382		1242,616 1241,650 4+580		1241,706 1242,240 4+600		1240,796 1241,806 4+620		1240,340 1240,835 4+630,877		1240,141 1240,835 4+630		1240,114 1240,284 4+635		1239,886 1235,731 4+640		1239,659 1235,216 4+645		1239,424 1234,000 4+650		1239,224 1238,593 4+655		1239,024 1238,333 4+660		1238,749 1238,277 4+665		1238,524 1238,195 4+670		1238,294 1238,000 4+675		1238,064 1237,924 4+680		1237,839 1237,911 4+685		1237,611 1237,895 4+690		1237,384 1237,944 4+695		1237,158 1238,125 4+700		1236,929 1238,436 4+705		1236,698 1238,318 4+710		1236,466 1238,318 4+710,723		1236,246 1238,664 4+720		1235,979 1238,950 4+729,065		1235,701 1238,950 4+740		1235,423 1238,459 4+745		1234,881 1238,147 4+750		1234,654 1237,800 4+755		1234,426 1237,447 4+760		1234,198 1237,026 4+765		1233,975 1236,547 4+770		1233,751 1235,966 4+775		1233,527 1235,459 4+779,065		1233,303 1235,333 4+780		1233,079 1235,216 4+785		1232,855 1235,093 4+790		1232,632 1234,974 4+795		1232,408 1234,854 4+800		1232,184 1234,729 4+805		1231,960 1234,604 4+810		1231,736 1234,479 4+815		1231,512 1234,354 4+820		1231,288 1234,229 4+825		1231,064 1234,104 4+830		1230,840 1233,979 4+835		1230,616 1233,854 4+840		1230,392 1233,729 4+845		1230,168 1233,604 4+850		1229,944 1233,479 4+855		1229,720 1233,354 4+860		1229,496 1233,229 4+865		1229,272 1233,104 4+870		1229,048 1232,979 4+875		1228,824 1232,854 4+880		1228,600 1232,729 4+885		1228,376 1232,604 4+890		1228,152 1232,479 4+895		1227,928 1232,354 4+900		1227,704 1232,229 4+905		1227,480 1232,104 4+910		1227,256 1231,979 4+915		1227,032 1231,854 4+920		1226,808 1231,729 4+925		1226,584 1231,604 4+930		1226,360 1231,479 4+935		1226,136 1231,354 4+940		1225,912 1231,229 4+945		1225,688 1231,104 4+950		1225,464 1230,979 4+955		1225,240 1230,854 4+960		1225,016 1230,729 4+965		1224,792 1230,604 4+970		1224,568 1230,479 4+975		1224,344 1230,354 4+980		1224,120 1230,229 4+985		1223,896 1230,104 4+990		1223,672 1229,979 4+995		1223,448 1229,854 4+1000		1223,224 1229,729 4+1005		1223,000 1229,604 4+1010		1222,776 1229,479 4+1015		1222,552 1229,354 4+1020		1222,328 1229,229 4+1025		1222,104 1229,104 4+1030		1221,880 1228,979 4+1035		1221,656 1228,854 4+1040		1221,432 1228,729 4+1045		1221,208 1228,604 4+1050		1220,984 1228,479 4+1055		1220,760 1228,354 4+1060		1220,536 1228,229 4+1065		1220,312 1228,104 4+1070		1220,088 1227,979 4+1075		1219,864 1227,854 4+1080		1219,640 1227,729 4+1085		1219,416 1227,604 4+1090		1219,192 1227,479 4+1095		1218,968 1227,354 4+1100		1218,744 1227,229 4+1105		1218,520 1227,104 4+1110		1218,296 1226,979 4+1115		1218,072 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4+1500		1200,824 1217,229 4+1505		1200,600 1217,104 4+1510		1200,376 1216,979 4+1515		1200,152 1216,854 4+1520		1199,928 1216,729 4+1525		1199,704 1216,604 4+1530		1199,480 1216,479 4+1535		1199,256 1216,354 4+1540		1199,032 1216,229 4+1545		1198,808 1216,104 4+1550		1198,584 1215,979 4+1555		1198,360 1215,854 4+1560		1198,136 1215,729 4+1565		1197,912 1215,604 4+1570		1197,688 1215,479 4+1575		1197,464 1215,354 4+1580		1197,240 1215,229 4+1585		1197,016 1215,104 4+1590		1196,792 1214,979 4+1595		1196,568 1214,854 4+1600		1196,344 1214,729 4+1605		1196,120 1214,604 4+1610		1195,896 1214,479 4+1615		1195,672 1214,354 4+1620		1195,448 1214,229 4+1625		1195,224 1214,104 4+1630		1195,000 1213,979 4+1635		1194,776 1213,854 4+1640		1194,552 1213,729 4+1645		1194,328 1213,604 4+1650		1194,104 1213,479 4+1655		1193,880 1213,354 4+1660		1193,656 1213,229 4+1665		1193,432 1213,104 4+1670		1193,208 1212,979 4+1675		1192,984 1212,854 4+1680		1192,760 1212,729 4+1685		1192,536 1212,604 4+1690		1192,312 1212,479 4+1695		1192,088 1212,354 4+1700		1191,864 1212,229 4+1705		1191,640 1212,104 4+1710		1191,416 1211,979 4+1715		1191,192 1211,854 4+1720		1190,968 1211,729 4+1725		1190,744 1211,604 4+1730		1190,520 1211,479 4+1735		1190,296 1211,354 4+1740		1190,072 1211,229 4+1745		1189,848 1211,104 4+1750		1189,624 1210,979 4+1755		1189,400 1210,854 4+1760		1189,176 1210,729 4+1765		1188,952 1210,604 4+1770		1188,728 1210,479 4+1775		1188,504 1210,354 4+1780		1188,280 1210,229 4+1785		1188,056 1210,104 4+1790		1187,832 1209,979 4+1795		1187,608 1209,854 4+1800		1187,384 1209,729 4+1805		1187,160 1209,604 4+1810		1186,936 1209,479 4+1815		1186,712 1209,354 4+1820		1186,488 1209,229 4+1825		1186,264 1209,104 4+1830		1186,040 1208,979 4+1835		1185,816 1208,854 4+1840		1185,592 1208,729 4+1845		1185,368 1208,604 4+1850		1185,144 1208,479 4+1855		1184,920 1208,354 4+1860		1184,696 1208,229 4+1865		1184,472 1208,104 4+1870		1184,248 1207,979 4+1875		1184,024 1207,854 4+1880		1183,800 1207,729 4+1885		1183,576 1207,604 4+1890		1183,352 1207,479 4+1895		1183,128 1207,354 4+1900		1182,904 1207,229 4+1905		1182,680 1207,104 4+1910		1182,456 1206,979 4+1915		1182,232 1206,854 4+1920		1182,008 1206,729 4+1925		1181,784 1206,604 4+1930		1181,560 1206,479 4+1935		1181,336 1206,354 4+1940		1181,112 1206,229 4+1945		1180,888 1206,104 4+1950		1180,664 1205,979 4+1955		1180,440 1205,854 4+1960		1180,216 1205,729 4+1965		1179,992 1205,604 4+1970		1179,768 1205,479 4+1975		1179,544 1205,354 4+1980		1179,320 1205,229 4+1985		1179,096 1205,104 4+1990		1178,872 1204,979 4+1995		1178,648 1204,854 4+2000		1178,424 1204,729 4+2005		1178,200 1204,604 4+2010		1177,976 1204,479 4+2015		1177,752 1204,354 4+2020		1177,528 1204,229 4+2025		1177,304 1204,104 4+2030		1177,080 1203,979 4+2035		1176,856 1203,854 4+2040		1176,632 1203,729 4+2045		1176,408 1203,604 4+2050		1176,184 1203,479 4+2055		1175,960 1203,354 4+2060		1175,736 1203,229 4+2065		1175,512 1203,104 4+2070		1175,288 1202,979 4+2075		1175,064 1202,854 4+2080		1174,840 1202,729 4+2085		1174,616 1202,604 4+2090		1174,392 1202,479 4+2095		1174,168 1202,354 4+2100		1173,944 1202,229 4+2105		1173,720 1202,104 4+2110		1173,496 1201,979 4+2115		1173,272 1201,854 4+2120		1173,048 1201,729 4+2125		1172,824 1201,604 4+2130		1172,600 1201,479 4+2135		1172,376 1201,354 4+2140		1172,152 1201,229 4+2145		1171,928 1201,104 4+2150		1171,704 1200,979 4+2155		1171,480 1200,854 4+2160		1171,256 1200,729 4+2165		1171,032 1200,604 4+2170		1170,808 1200,479 4+2175		1170,584 1200,354 4+2180		1170,360 1200,229 4+2185		1170,136 1200,104 4+2190		1169,912 1199,979 4+2195		1169,688 1199,854 4+2200		1169,464 1199,729 4+2205		1169,240 1199,604 4+2210		1169,016 1199,479 4+2215		1168,792 1199,354 4+2220		1168,568 1199,229 4+2225		1168,344 1199,104 4+2230		1168,120 1198,979 4+2235		1167,896 1198,854 4+2240		1167,672 1198,729 4+2245		1167,448 1198,604 4+2250		1167,224 1198,479 4+2255		1167,000 1198,354 4+2260		1166,776 1198,229 4+2265		1166,552 1198,104 4+2270		1166,328 1197,979 4+2275		1166,104 1197,854 4+2280		1165,880 1197,729 4+2285		1165,656 1197,604 4+2290		1165,432 1197,479 4+2295		1165,208 1197,354 4+2300		1164,984 1197,229 4+2305		1164,760 1197,104 4+2310		1164,536 1196,979 4+2315		1164,312 1196,854 4+2320		1164,088 1196,729 4+2325		1163,864 1196,604 4+2330		1163,640 1196,479 4+2335		1163,416 1196,354 4+2340		1163,192 1196,229 4+2345		1162,968 1196,104 4+2350		1162,744 1195,979 4+2355		1162,520 1195,854 4+2360		1162,296 1195,729 4+2365		1162,072 1195,604 4+2370		1161,848 1195,479 4+2375		1161,624 1195,354 4+2380		1161,400 1195,229 4+2385		1161,176 1195,104 4+2390		1160,952 1194,979 4+2395		1160,728 1194,854 4+2400		1160,504 1194,729 4+2405		1160,280 1194,604 4+2410		1160,056 1194,479 4+2415		1159,832 1194,354 4+2420		1159,608 1194,229 4+2425		1159,384 1194,104 4+2430		1159,160 1193,979 4+2435		1158,936 1193,854 4+2440		1158,712 1193,729 4+2445		1158,488 1193,604 4+2450		1158,264 1193,479 4+2455		1158,040 1193,354 4+2460		1157,816 1193,229 4+2465		1157,592 1193,104 4+2470		1157,368 119	
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ÁRVORE

COQUEIRO

POSTE DE MADEIRA

HIDRANTE

MARCOS DE APOIO

EDIF. MADEIRA

PTO. ÔNIBUS EXIST.

CERCA

MURO EXISTENTE

VALA

BANHADO

BUEIRO PROLONGADO

PONTE EXISTENTE

DIVISAS

FAIXAS DE ROL. PROJ.

CANTEIRO EXISTENTE

OFFSET-CORTE/ATERRO

CICLOVIA

CALÇADA

ESCALAS GRÁFICAS

HORIZONTAL

0 10 20 30 40 50m

VERTICAL

0 1 2 3 4 5m

DESENVOLVIDO POR:

Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO GEOMÉTRICO - (km 4+440 a km 5+180)

FASE DO PROJETO: IMPRESSÃO DEFINITIVA

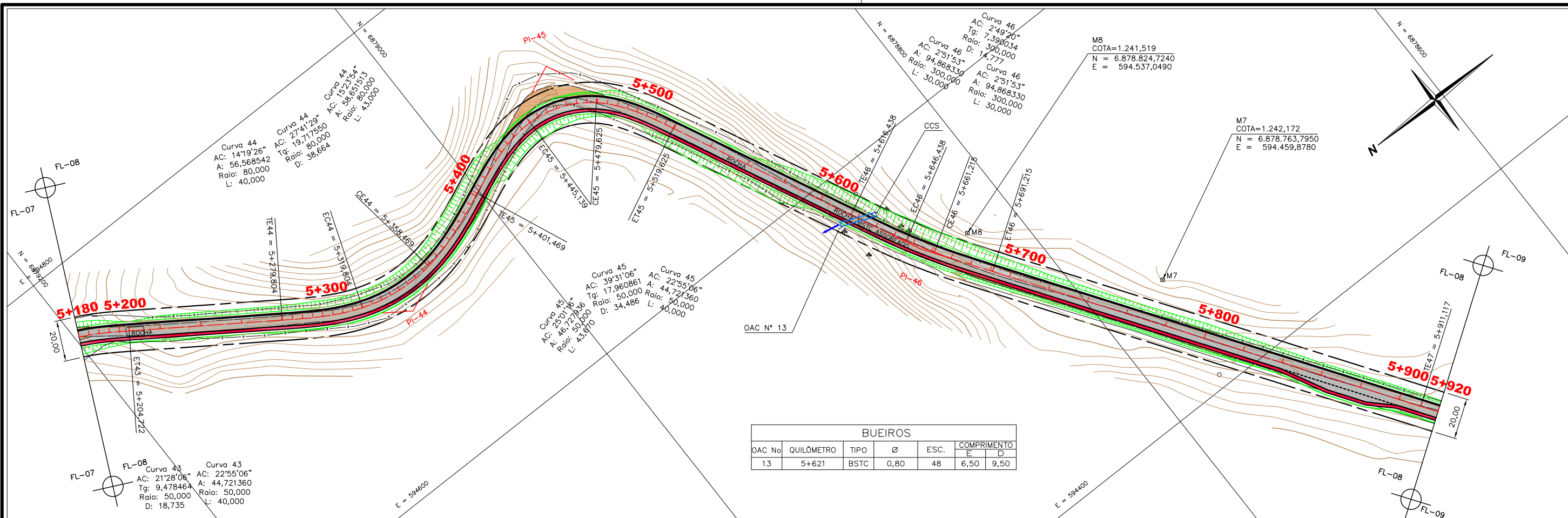
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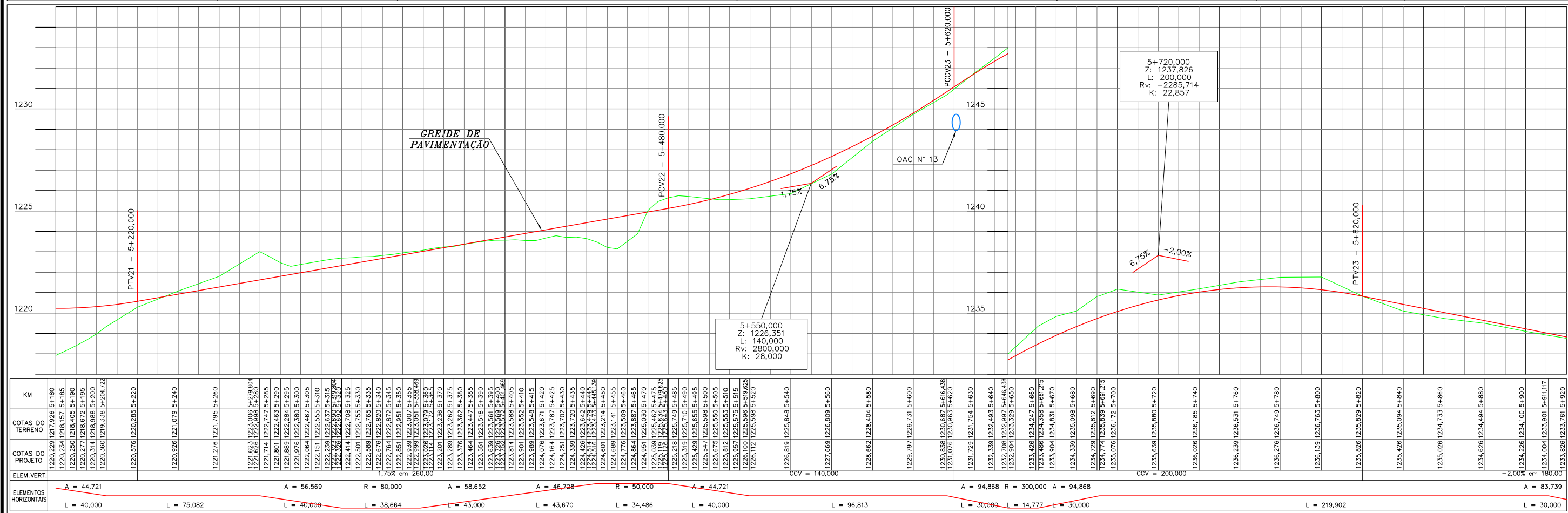
DATA: SETEMBRO / 2021

FOLHA: 07

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BUEIROS						
OAC Nº	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO	
13	5+621	BSTC	0,80	48	6,50	9,50



CONVENÇÕES

- CURVAS DE NÍVEL
- ÁRVORE
- ARAUCÁRIA
- COQUEIRO
- POSTE CONCRETO CIRCULAR
- POSTE DE MADEIRA
- POSTE CONCRETO DUPLO T
- POSTE CONCRETO RETANGULAR
- HIDRANTE
- TELEFONE PÚBLICO
- MARCOS DE APOIO
- PLACAS DE SINALIZAÇÃO
- EDIF. MADEIRA
- EDIF. ALVENARIA
- PTO. ÔNIBUS EXIST.
- LIMITE DE VEGETAÇÃO
- CERCA
- ESTRADA/ACESSO EXIST.
- MURO EXISTENTE
- RIO/CÓRREGO/SANGA
- VALA
- ÁGUE
- BANHADO
- BUEIRO EXISTENTE
- BUEIRO PROLONGADO
- BUEIRO PROJETADO
- PONTE EXISTENTE
- TERRENO NATURAL
- CERCA DE TELA
- DIVISAS
- RODOVIA EXISTENTE
- CAIÇADA EXISTENTE
- CANTEIRO EXISTENTE
- GREIDE
- OFFSET-CORTE/ATERRO
- FAIXAS DE ROL. PROJ.
- ACOSTAMENTO
- CICLOVIA
- CANTEIRO
- CAIÇADA

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA

Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO GEOMÉTRICO - (km 5+180 a km 5+920)

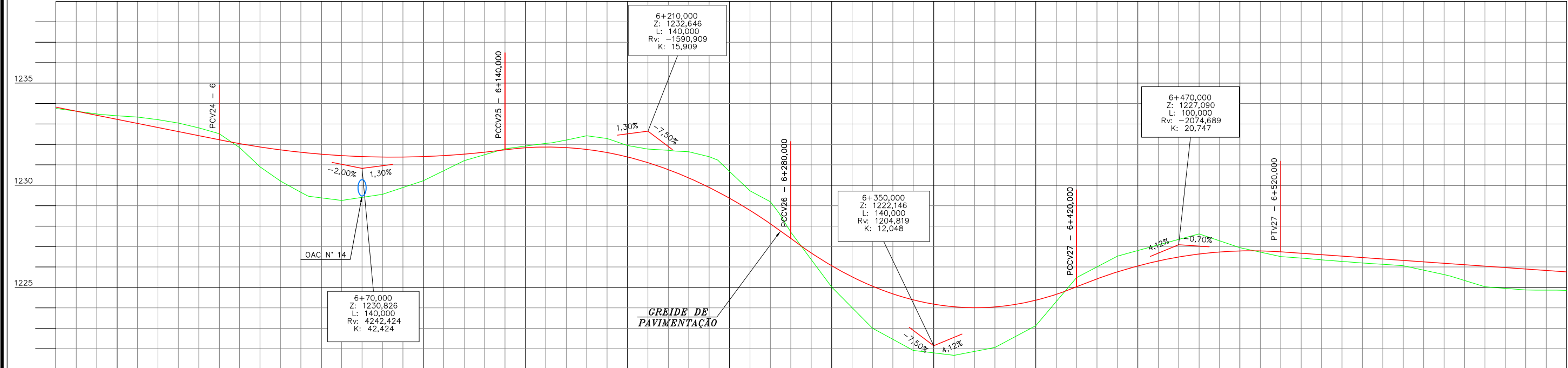
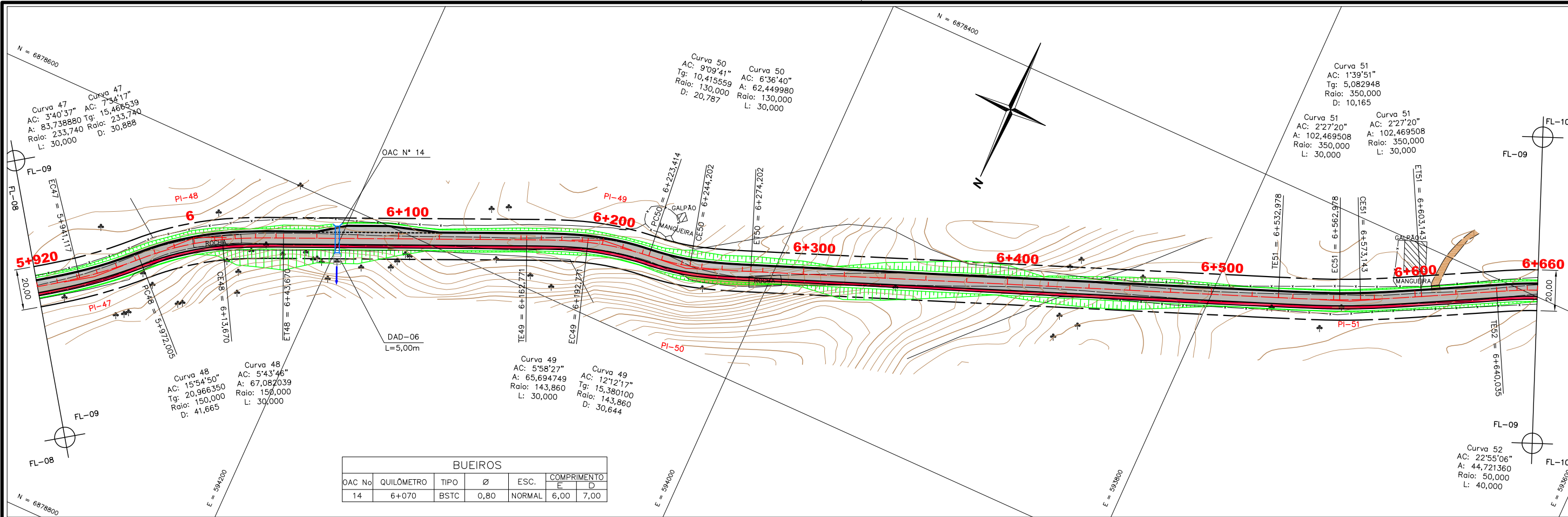
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CÓDIGO PROJETO: 377_19

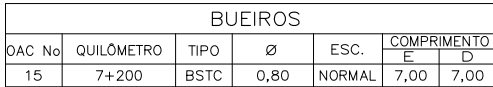
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DATA: SETEMBRO / 2021

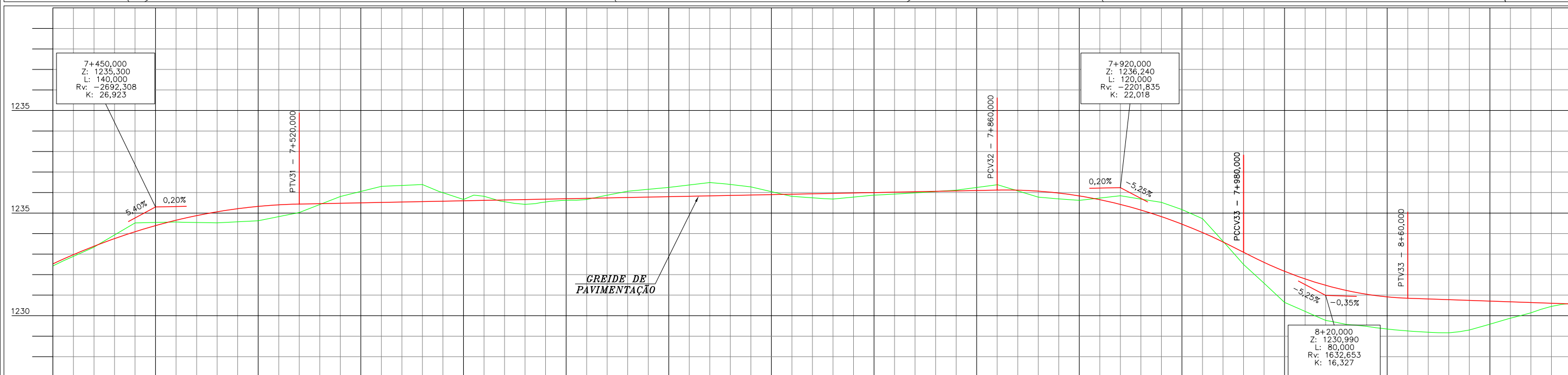
FOLHA: 08



KM	5+920	5+930	5+940	5+950	5+960	5+970	5+980	5+990	6+000	6+010	6+020	6+030	6+040	6+050	6+060	6+070	6+080	6+090	6+100	6+110	6+120	6+130	6+140	6+150	6+160	6+170	6+180	6+190	6+200	6+210	6+220	6+230	6+240	6+250	6+260	6+270	6+280	6+290	6+300	6+310	6+320	6+330	6+340	6+350	6+360	6+370	6+380	6+390	6+400	6+410	6+420	6+430	6+440	6+450	6+460	6+470	6+480	6+490	6+500	6+510	6+520	6+530	6+540	6+550	6+560	6+570	6+580	6+590	6+600	6+610	6+620	6+630	6+640	6+650	6+660																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
COTAS DO TERRENO	1233,761	1233,625	1233,491	1233,357	1233,223	1233,089	1232,955	1232,821	1232,687	1232,553	1232,419	1232,285	1232,151	1232,017	1231,883	1231,749	1231,615	1231,481	1231,347	1231,213	1231,079	1230,945	1230,811	1230,677	1230,543	1230,409	1230,275	1230,141	1230,007	1229,873	1229,739	1229,605	1229,471	1229,337	1229,203	1229,069	1228,935	1228,801	1228,667	1228,533	1228,399	1228,265	1228,131	1227,997	1227,863	1227,729	1227,595	1227,461	1227,327	1227,193	1227,059	1226,925	1226,791	1226,657	1226,523	1226,389	1226,255	1226,121	1225,987	1225,853	1225,719	1225,585	1225,451	1225,317	1225,183	1225,049	1224,915	1224,781	1224,647	1224,513	1224,379	1224,245	1224,111	1223,977	1223,843	1223,709	1223,575	1223,441	1223,307	1223,173	1223,039	1222,905	1222,771	1222,637	1222,503	1222,369	1222,235	1222,101	1221,967	1221,833	1221,699	1221,565	1221,431	1221,297	1221,163	1221,029	1220,895	1220,761	1220,627	1220,493	1220,359	1220,225	1220,091	1219,957	1219,823	1219,689	1219,555	1219,421	1219,287	1219,153	1219,019	1218,885	1218,751	1218,617	1218,483	1218,349	1218,215	1218,081	1217,947	1217,813	1217,679	1217,545	1217,411	1217,277	1217,143	1217,009	1216,875	1216,741	1216,607	1216,473	1216,339	1216,205	1216,071	1215,937	1215,803	1215,669	1215,535	1215,401	1215,267	1215,133	1214,999	1214,865	1214,731	1214,597	1214,463	1214,329	1214,195	1214,061	1213,927	1213,793	1213,659	1213,525	1213,391	1213,257	1213,123	1212,989	1212,855	1212,721	1212,587	1212,453	1212,319	1212,185	1212,051	1211,917	1211,783	1211,649	1211,515	1211,381	1211,247	1211,113	1210,979	1210,845	1210,711	1210,577	1210,443	1210,309	1210,175	1210,041	1209,907	1209,773	1209,639	1209,505	1209,371	1209,237	1209,103	1208,969	1208,835	1208,701	1208,567	1208,433	1208,299	1208,165	1208,031	1207,897	1207,763	1207,629	1207,495	1207,361	1207,227	1207,093	1206,959	1206,825	1206,691	1206,557	1206,423	1206,289	1206,155	1206,021	1205,887	1205,753	1205,619	1205,485	1205,351	1205,217	1205,083	1204,949	1204,815	1204,681	1204,547	1204,413	1204,279	1204,145	1204,011	1203,877	1203,743	1203,609	1203,475	1203,341	1203,207	1203,073	1202,939	1202,805	1202,671	1202,537	1202,403	1202,269	1202,135	1201,001	1200,867	1200,733	1200,599	1200,465	1200,331	1200,197	1200,063	1199,929	1199,795	1199,661	1199,527	1199,393	1199,259	1199,125	1198,991	1198,857	1198,723	1198,589	1198,455	1198,321	1198,187	1198,053	1197,919	1197,785	1197,651	1197,517	1197,383	1197,249	1197,115	1196,981	1196,847	1196,713	1196,579	1196,445	1196,311	1196,177	1196,043	1195,909	1195,775	1195,641	1195,507	1195,373	1195,239	1195,105	1194,971	1194,837	1194,703	1194,569	1194,435	1194,301	1194,167	1194,033	1193,899	1193,765	1193,631	1193,497	1193,363	1193,229	1193,095	1192,961	1192,827	1192,693	1192,559	1192,425	1192,291	1192,157	1192,023	1191,889	1191,755	1191,621	1191,487	1191,353	1191,219	1191,085	1190,951	1190,817	1190,683	1190,549	1190,415	1190,281	1190,147	1190,013	1189,879	1189,745	1189,611	1189,477	1189,343	1189,209	1189,075	1188,941	1188,807	1188,673	1188,539	1188,405	1188,271	1188,137	1188,003	1187,869	1187,735	1187,601	1187,467	1187,333	1187,199	1187,065	1186,931	1186,797	1186,663	1186,529	1186,395	1186,261	1186,127	1185,993	1185,859	1185,725	1185,591	1185,457	1185,323	1185,189	1185,055	1184,921	1184,787	1184,653	1184,519	1184,385	1184,251	1184,117	1183,983	1183,849	1183,715	1183,581	1183,447	1183,313	1183,179	1183,045	1182,911	1182,777	1182,643	1182,509	1182,375	1182,241	1182,107	1181,973	1181,839	1181,705	1181,571	1181,437	1181,303	1181,169	1181,035	1180,901	1180,767	1180,633	1180,499	1180,365	1180,231	1180,097	1179,963	1179,829	1179,695	1179,561	1179,427	1179,293	1179,159	1179,025	1178,891	1178,757	1178,623	1178,489	1178,355	1178,221	1178,087	1177,953	1177,819	1177,685	1177,551	1177,417	1177,283	1177,149	1177,015	1176,881	1176,747	1176,613	1176,479	1176,345	1176,211	1176,077	1175,943	1175,809	1175,675	1175,541	1175,407	1175,273	1175,139	1175,005	1174,871	1174,737	1174,603	1174,469	1174,335	1174,201	1174,067	1173,933	1173,799	1173,665	1173,531	1173,397	1173,263	1173,129	1172,995	1172,861	1172,727	1172,593	1172,459	1172,325	1172,191	1172,057	1171,923	1171,789	1171,655	1171,521	1171,387	1171,253	1171,119	1170,985	1170,851	1170,717	1170,583	1170,449	1170,315	1170,181	1170,047	1169,913	1169,779	1169,645	1169,511	1169,377	1169,243	1169,109	1168,975	1168,841	1168,707	1168,573	1168,439	1168,305	1168,171	1168,037	1167,903	1167,769	1167,635	1167,501	1167,367	1167,233	1167,099	1166,965	1166,831	1166,697	1166,563	1166,429	1166,295	1166,161	1166,027	1165,893	1165,759	1165,625	1165,491	1165,357	1165,223	1165,089	1164,955	1164,821	1164,687	1164,553	1164,419	1164,285	1164,151	1164,017	1163,883	1163,749	1163,615	1163,481	1163,347	1163,213	1163,079	1162,945	1162,811	1162,677	1162,543	1162,409	1162,275	1162,141	1162,007	1161,873	1161,739	1161,605	1161,471	1161,337	1161,203	1161,069	1160,935	1160,801	1160,667	1160,533	1160,399	1160,265	1160,131	1160,000	1159,866	1159,732	1159,598	1159,464	1159,330	1159,196	1159,062	1158,928	1158,794	1158,660	1158,526	1158,392	1158,258	1158,124	1157,990	1157,856	1157,722	1157,588	1157,454	1157,320	1157,186	1157,052	1156,918	1156,784	1156,650	1156,516	1156,382	1156,248	1156,114	1155,980	1155,846	1155,712	1155,578	1155,444	1155,310	1155,176	1155,042	1154,908	1154,774	1154,640	1154,506	1154,372	1154,238	1154,104	1153,970	1153,836	1153,702	1153,568	1153,434	1153,300	1153,166	1153,032	1152,898	1152,764	1152,630	1152,496	1152,362	1152,228	1152,094	1151,960	1151,826	1151,692	1151,558	1151,424	1151,290	1151,156	1151,022	1150,888	1150,754	1150,620	1150,486	1150,352	1150,218	1150,084	1149,950	1149,816	1149,682	1149,548	1149,414	1149,280	1149,146	1149,012	1148,878	1148,744	1148,610	1148,476	1148,342	1148,208	1148,074	1147,940	1147,806	1147,672	1147,538	1147,404	1147,270	1147,136	1147,002	1146,868	1146,734	1146,600	1146,466	1146,332	1146,198	1146,064	1145,930	1145,796	1145,662	1145,528	1145,394	1145,260	1145,126	1144,992	1144,858	1144,724	1144,590	1144,456	1144,322	1144,188	1144,054	1143,920	1143,786	1143,652	1143,518	1143,384	1143,250	1143,116	1142,982	1142,848	1142,714	1142,580	1142,446	1142,312	1142,178	1142,044	1141,910	1141,776	1141,642	1141,508	1141,374	1141,240	1141,106	1140,972	1140,838	1140,704	1140,570	1140,436	1140,302	1140,168	1140,034	1139,900	1139,766	1139,632	1139,498	1139,364	1139,230	1139,096	1138,962	1138,828	1138,694	1138,560	1138,426	1138,292	1138,158	1138,024	1137,890	1137,756	1137,622	1137,488	1137,354	1137,220	1137,086	1136,952	1136,818	1136,684	1136,550	1136,416	1136,282	1136,148	1136,014	1135,880	1135,746	1135,612	1135,478	1135,344	1135,210	1135,076	1134,942	1134,808	1134,674	1134,540	1134,406	1134,272	1134,138	1134,004	1133,870	1133,736	1133,602	1133,468	1133,334	1133,200	1133,066	1132,932	1132,798	1132,664	1132,530	1132,396	1132,262	1132,128	1131,994	1131,860	1131,726	1131,592	1131,458	1131,324	1131,190	1131,056	1130,922	1130,788	1130,654	1130,520	1130,386	1130,252	1130,118	1130,000	1129,866	1129,732	1129,598	1129,464	1129,330	1129,196	1129,062	1128,928	1128,794	1128,660	1128,526	1128,392	1128,258	1128,124	1127,990	1127,856	1127,722	1127,588	1127,454	1127,320	1127,186	1127,052	1126,918	1126,784	1126,650	1126,516	1126,382	1126,248	1126,114	1125,980	1125,846	1125,712	1125,578	1125,444	1125,310	1125,176	1125,042	1124,908	1124,774	1124,640	1124,506	1124,372	1124,238	1124,104	1123,970	1123,836	1123,702	1123,568	1123,434	1123,300	1123,166	1123,032	1122,898	1122,764	1122,630	1122



CURVAS DE NÍVEL ÁRVORE ARAUCÁRIA COQUEIRO POSTE CONCRETO CIRCULAR POSTE DE MADEIRA POSTE CONCRETO DUPLO T	POSTE CONCRETO RETANGULAR HIDRANTE TELEFONE PÚBLICO MARCOS DE APOIO PLACAS DE SINALIZAÇÃO EDIF. MADEIRA EDIF. ALVENARIA	CONVENÇÕES PTO. ÔNIBUS EXIST. LIMITE DE VEGETAÇÃO CERCA ESTRADA/ACESSO EXIST. MURO EXISTENTE RIO/CÓRREGO/SANGA VALA	AÇUDE BANhado BUEIRO EXISTENTE BUEIRO PROLONGADO BUEIRO PROJETADO PONTE EXISTENTE TERRENO NATURAL	CERCA DE TELA DIMISAS RODOVIA EXISTENTE CALÇADA EXISTENTE CANTEIRO EXISTENTE	GREIDE OFFSET-CORTE/ATERRO FAIXAS DE ROL. PROJ. ACOSTAMENTO CICLOVIA CANTEIRO CALÇADA	ESCALAS GRÁFICAS HORIZONTAL VERTICAL 	DESENVOLVIDO POR: ENGMETRIA Projetos e Licenciamentos	 PREFEITURA MUNICIPAL DE SÃO JOAQUIM RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO	FASE DO PROJETO: IMPRESSÃO DEFINITIVA PROJETO GEOMÉTRICO - (km 6+660 a km 7+400)	CÓDIGO PROJETO: 377_19 ESCALA: H=1:2000 V=1:200 DATA: SETEMBRO / 2021 FOLHA: 10
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COTAS DO PROJETO	COTAS DO TERRENO	KM
1232,26	1232,42	7405,044
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1232,30	1232,46	
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ELEM. VERT.		CCV = 140,000										0,20% em 340,00										CCV = 120,000										CCV = 80,000									
ELEMENTOS HORIZONTAIS		A = 189,737 R = 900,000 L = 40,000	A = 189,737 L = 17,503 L = 40,000		A = 38,730 R = 50,000 L = 30,000	A = 38,730 R = 19,875 L = 30,000	A = 38,730 R = 30,000 L = 60,151		A = 116,190 R = 450,000 L = 30,000	A = 116,190 R = 17,332 L = 30,000	A = 116,190 R = 30,000 L = 54,352		A = 122,474 R = 500,000 L = 30,000	A = 122,474 R = 8,337 L = 10,944	A = 122,474 R = 30,000 L = 30,000	A = 94,868 R = 300,000 L = 8,446	A = 94,868 R = 30,000 L = 30,000	A = 94,868 R = 7,748 L = 30,000	A = 38,730 R = 50,000 L = 16,017	A = 38,730 R = 30,000 L = 30,000	A = 38,730 R = 16,017 L = 30,000	A = 54,772 R = 160,000 L = 30,000	A = 54,772 R = 8,439 L = 30,000																		

CONVENÇÕES

	CURVAS DE NÍVEL		POSTE CONCRETO RETANGULAR		PTO. ÔNIBUS EXIST.		AÇUDE		CERCA DE TELA		GREIDE
	ÁRVORE		HIDRANTE		LÍMITE DE VEGETAÇÃO		BANHADO		DIVISAS		OFFSET-CORTE/ATERRO
	ARAUCÁRIA		TELEFONE PÚBLICO		CERCA		BUEIRO EXISTENTE		RODOVIA EXISTENTE		FAIXAS DE ROL. PROJ.
	COQUEIRO		MARCOS DE APOIO		ESTRADA/ACESSO EXIST.		BUEIRO PROLONGADO		CALÇADA EXISTENTE		ACOSTAMENTO
	POSTE CONCRETO CIRCULAR		PLACAS DE SINALIZAÇÃO		MURO EXISTENTE		BUEIRO PROJETADO		CICLOVIA		CANLEIRO
	POSTE DE MADEIRA		EDIF. MADEIRA		RIO/CÓRREGO/SANGA		PONTE EXISTENTE		CANLEIRO		CALÇADA
	POSTE CONCRETO DUPLO T		EDIF. ALVENARIA		VALE		TERRENO NATURAL				

ESCALAS GRÁFICAS

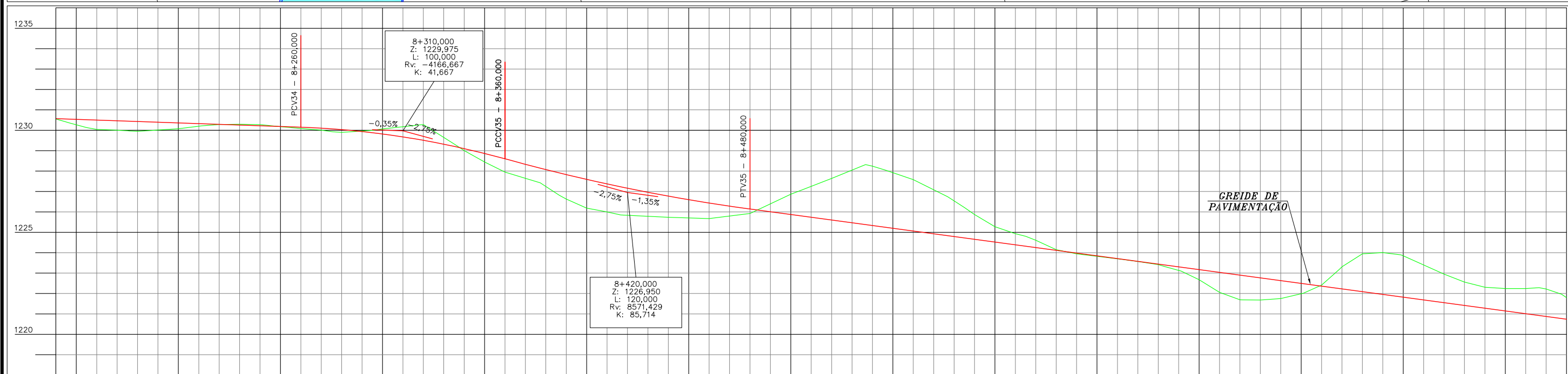
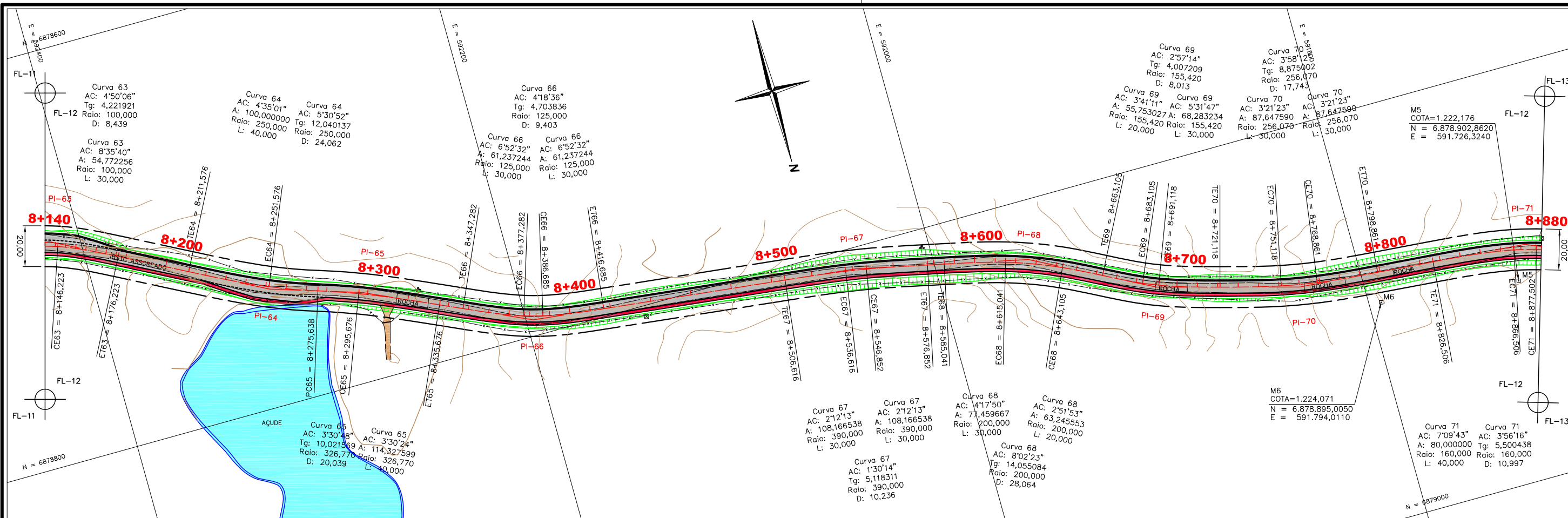
HORIZONTAL

VERTICAL

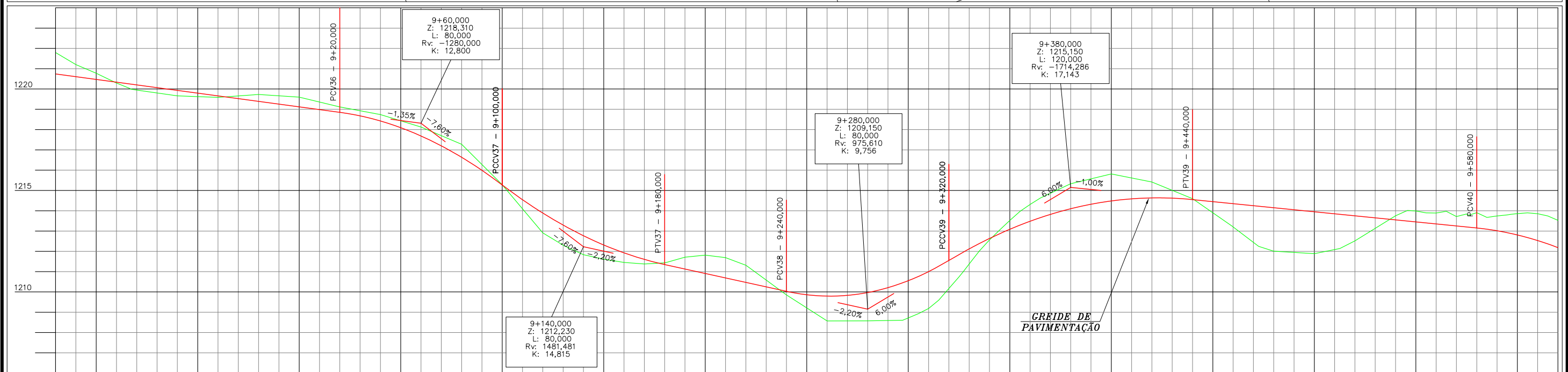
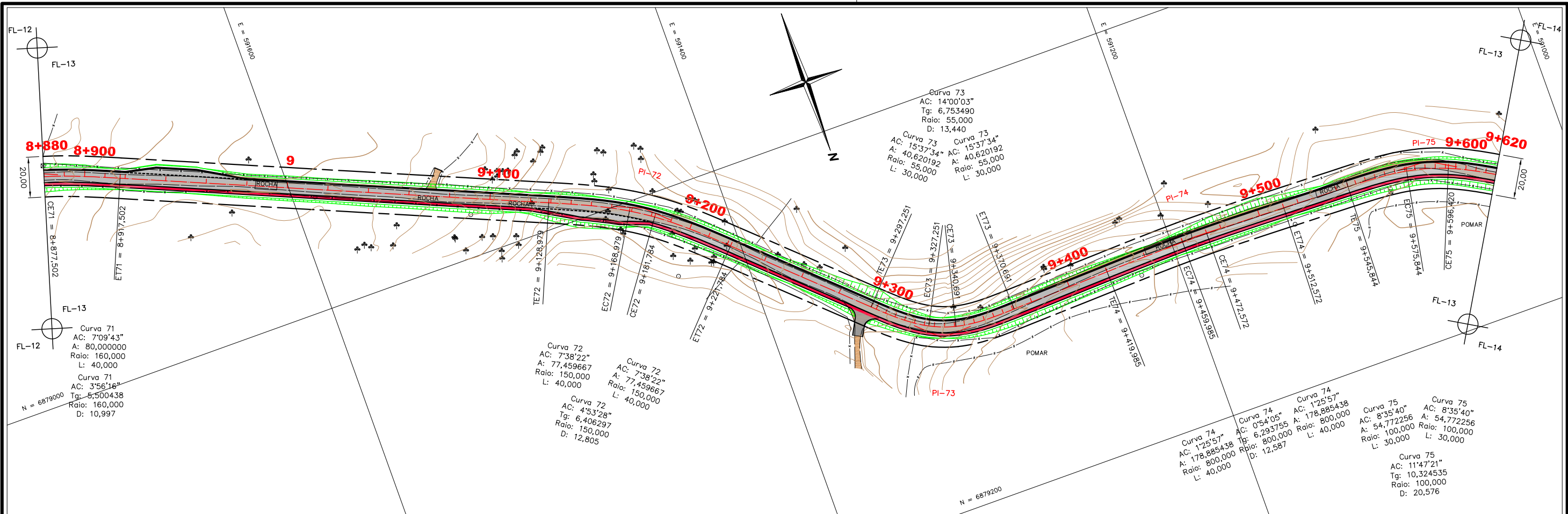
DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO			
PROJETO GEOMÉTRICO - (km 7+400 a km 8+140)			FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CÓDIGO PROJETO: 377_19	ESCALA: H=1:2000 v=1:200	DATA: SETEMBRO / 2021	FOLHA: 11



ELEM.VERT.	1230,570		1230,553		1230,538		1230,523		1230,508		1230,493		1230,478		1230,463		1230,448		1230,433		1230,418		1230,403		1230,388		1230,373		1230,358		1230,343		1230,328		1230,313		1230,298		1230,283		1230,268		1230,253		1230,238		1230,223		1230,208		1230,193		1230,178		1230,163		1230,148		1230,133		1230,118		1230,103		1230,088		1230,073		1230,058		1230,043		1230,028		1230,013		1229,998		1229,983		1229,968		1229,953		1229,938		1229,923		1229,908		1229,893		1229,878		1229,863		1229,848		1229,833		1229,818		1229,803		1229,788		1229,773		1229,758		1229,743		1229,728		1229,713		1229,698		1229,683		1229,668		1229,653		1229,638		1229,623		1229,608		1229,593		1229,578		1229,563		1229,548		1229,533		1229,518		1229,503		1229,488		1229,473		1229,458		1229,443		1229,428		1229,413		1229,398		1229,383		1229,368		1229,353		1229,338		1229,323		1229,308		1229,293		1229,278		1229,263		1229,248		1229,233		1229,218		1229,203		1229,188		1229,173		1229,158		1229,143		1229,128		1229,113		1229,098		1229,083		1229,068		1229,053		1229,038		1229,023		1229,008		1228,993		1228,978		1228,963		1228,948		1228,933		1228,918		1228,903		1228,888		1228,873		1228,858		1228,843		1228,828		1228,813		1228,798		1228,783		1228,768		1228,753		1228,738		1228,723		1228,708		1228,693		1228,678		1228,663		1228,648		1228,633		1228,618		1228,603		1228,588		1228,573		1228,558		1228,543		1228,528		1228,513		1228,498		1228,483		1228,468		1228,453		1228,438		1228,423		1228,408		1228,393		1228,378		1228,363		1228,348		1228,333		1228,318		1228,303		1228,288		1228,273		1228,258		1228,243		1228,228		1228,213		1228,198		1228,183		1228,168		1228,153		1228,138		1228,123		1228,108		1228,093		1228,078		1228,063		1228,048		1228,033		1228,018		1227,998		1227,978		1227,958		1227,938		1227,918		1227,898		1227,878		1227,858		1227,838		1227,818		1227,798		1227,778		1227,758		1227,738		1227,718		1227,698		1227,678		1227,658		1227,638		1227,618		1227,598		1227,578		1227,558		1227,538		1227,518		1227,498		1227,478		1227,458		1227,438		1227,418		1227,398		1227,378		1227,358		1227,338		1227,318		1227,298		1227,278		1227,258		1227,238		1227,218		1227,198		1227,178		1227,158		1227,138		1227,118		1227,098		1227,078		1227,058		1227,038		1227,018		1226,998		1226,978		1226,958		1226,938		1226,918		1226,898		1226,878		1226,858		1226,838		1226,818		1226,798		1226,778		1226,758		1226,738		1226,718		1226,698		1226,678		1226,658		1226,638		1226,618		1226,598		1226,578		1226,558		1226,538		1226,518		1226,498		1226,478		1226,458		1226,438		1226,418		1226,398		1226,378		1226,358		1226,338		1226,318		1226,298		1226,278		1226,258		1226,238		1226,218		1226,198		1226,178		1226,158		1226,138		1226,118		1226,098		1226,078		1226,058		1226,038		1226,018		1225,998		1225,978		1225,958		1225,938		1225,918		1225,898		1225,878		1225,858		1225,838		1225,818		1225,798		1225,778		1225,758		1225,738		1225,718		1225,698		1225,678		1225,658		1225,638		1225,618		1225,598		1225,578		1225,558		1225,538		1225,518		1225,498		1225,478		1225,458		1225,438		1225,418		1225,398		1225,378		1225,358		1225,338		1225,318		1225,298		1225,278		1225,258		1225,238		1225,218		1225,198		1225,178		1225,158		1225,138		1225,118		1225,098		1225,078		1225,058		1225,038		1225,018		1224,998		1224,978		1224,958		1224,938		1224,918		1224,898		1224,878		1224,858		1224,838		1224,818		1224,798		1224,778		1224,758		1224,738		1224,718		1224,698		1224,678		1224,658		1224,638		1224,618		1224,598		1224,578		1224,558		1224,538		1224,518		1224,498		1224,478		1224,458		1224,438		1224,418		1224,398		1224,378		1224,358		1224,338		1224,318		1224,298		1224,278		1224,258		1224,238		1224,218		1224,198		1224,178		1224,158		1224,138		1224,118		1224,098		1224,078		1224,058		1224,038		1224,018		1223,998		1223,978		1223,958		1223,938		1223,918		1223,898		1223,878		1223,858		1223,838		1223,818		1223,798		1223,778		1223,758		1223,738		1223,718		1223,698		1223,678		1223,658		1223,638		1223,618		1223,598		1223,578		1223,558		1223,538		1223,518		1223,498		1223,478		1223,458		1223,438		1223,418		1223,398		1223,378		1223,358		1223,338		1223,318		1223,298		1223,278		1223,258		1223,238		1223,218		1223,198		1223,178		1223,158		1223,138		1223,118		1223,098		1223,078		1223,058		1223,038		1223,018		1222,998		1222,978		1222,958		1222,938		1222,918		1222,898		1222,878		1222,858		1222,838		1222,818		1222,798		1222,778		1222,758		1222,738		1222,718		1222,698		1222,678		1222,658		1222,638		1222,618		1222,598		1222,578		1222,558		1222,538		1222,518		1222,498		1222,478		1222,458		1222,438		1222,418		1222,398		1222,378		1222,358		1222,338		1222,318		1222,298		1222,278		1222,258		1222,238		1222,218		1222,198		1222,178		1222,158		1222,138		1222,118		1222,098		1222,078		1222,058		1222,038		1222,018		1221,998		1221,978		1221,958		1221,938		1221,918		1221,898		1221,878		1221,858		1221,838		1221,818		1221,798		1221,778		1221,758		1221,738		1221,718		1221,698		1221,678		1221,658		1221,638		1221,618		1221,598		1221,578		1221,558		1221,538		1221,518		1221,498		1221,478		1221,458	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ELEM. VERT.	ELEMENTOS HORIZONTAIS	KM																																																																																																																																																																																																																																									
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A = 80,000	L = 40,000	1220,740	1221,798	8+880	1220,605	1221,201	8+890	1220,470	1220,776	8+900	1220,335	1220,293	8+910	1220,234	1219,986	8+920	1220,200	1219,938	8+930	1219,930	1219,662	8+940	1219,660	1219,587	8+960	1219,390	1219,732	8+980	1219,120	1219,601	9	1218,850	1219,117	9+20	1218,424	1218,739	9+40	1217,685	1218,126	9+60	1217,354	1217,274	9+80	1215,270	1215,282	9+100	1213,885	1212,910	9+120	1213,351	1212,363	9+180	1212,358	1212,301	9+190	1212,270	1211,836	9+140	1212,314	1211,613	9+150	1211,925	1211,453	9+160	1211,653	1211,384	9+168	1211,604	1211,378	9+170	1211,550	1211,435	9+180	1211,311	1211,481	9+187	1211,310	1211,711	9+190	1210,910	1211,815	9+200	1210,690	1211,693	9+210	1210,470	1211,315	9+220	1210,431	1211,186	9+221	1210,030	1209,855	9+240	1209,795	1208,570	9+260	1209,970	1208,575	9+280	1210,553	1208,721	9+300	1210,765	1208,929	9+305	1210,001	1209,186	9+310	1211,263	1209,595	9+315	1210,744	120,916	9+325	1211,843	1210,744	9+325	1212,384	1212,018	9+335	1212,573	1214,626	9+340	1212,668	1213,069	9+345	1213,088	1213,524	9+350	1213,293	1213,967	9+355	1213,483	1214,313	9+360	1213,659	1214,424	9+365	1213,821	1215,072	9+370	1213,979	1215,722	9+375	1214,150	1216,397	9+380	1214,301	1216,71	9+385	1214,483	1215,815	9+400	1214,633	1215,416	9+419	1214,633	1215,416	9+420	1214,550	1214,596	9+440	1214,550	1213,203	9+459	1214,550	1213,204	9+460	1214,224	1212,245	9+472	1214,224	1212,245	9+480	1214,950	1211,884	9+500	1213,824	1212,140	9+512	1213,750	1212,515	9+520	1213,550	1213,751	9+540	1213,492	1214,014	9+546	1213,400	1213,968	9+550	1213,400	1213,888	9+555	1213,350	1213,887	9+560	1213,350	1213,973	9+565	1213,250	1213,714	9+570	1213,250	1213,714	9+575	1213,150	1213,597	9+580	1213,095	1213,671	9+585	1212,993	1213,742	9+590	1212,880	1213,775	9+595	1212,769	1213,888	9+600	1212,659	1213,888	9+605	1212,551	1213,853	9+610	1212,466	1213,746	9+615	1212,183	1213,526	9+620
		CCV = 80,000																														CCV = 80,000																														CCV = 120,000																														CCV = 120,000																																																																																																																																															
A = 80,000		L = 211,477		A = 77,460		R = 150,000		A = 77,460		A = 40,620		R = 55,000		A = 40,620		A = 178,885		R = 800,000		A = 178,885		A = 54,772		R = 100,000		A = 54,772		L = 40,000		L = 12,587		L = 40,000		L = 33,272		L = 30,000		L = 20,576		L = 30,000																																																																																																																																																																																																			
L = 40,000		L = 40,000		L = 12,805		L = 40,000		L = 75,467		L = 30,060		L = 13,440		L = 30,000		L = 49,294		L = 40,000		L = 12,587		L = 40,000		L = 33,272		L = 30,000		L = 20,576		L = 30,000																																																																																																																																																																																																													

CONVENÇÕES

- CURVAS DE NÍVEL
- ÁRVORE
- ARAUCÁRIA
- COQUEIRO
- POSTE CONCRETO CIRCULAR
- POSTE DE MADEIRA
- POSTE CONCRETO DUPLO T
- POSTE CONCRETO RETANGULAR
- HIDRANTE
- TELEFONE PÚBLICO
- MARCOS DE APOIO
- PLACAS DE SINALIZAÇÃO
- EDIF. MADEIRA
- EDIF. ALVENARIA
- PTO. ÔNIBUS EXIST.
- LIMITE DE VEGETAÇÃO
- CERCA
- ESTRADA/ACESSO EXIST.
- MURO EXISTENTE
- RIO/CÓRREGO/SANGA
- VALA
- AÇUDE
- BANHADO
- BUEIRO EXISTENTE
- BUEIRO PROLONGADO
- BUEIRO PROJETADO
- PONTE EXISTENTE
- TERRENO NATURAL
- CERCA DE TELA
- DIVISAS
- RODOVIA EXISTENTE
- CAIÇADA EXISTENTE
- CANTEIRO EXISTENTE
- GREIDE
- OFFSET-CORTE/ATERRO
- FAIXAS DE ROL. PROJ.
- ACOSTAMENTO
- CICLOVIA
- CANTEIRO
- CAIÇADA

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO GEOMÉTRICO - (km 8+880 a km 9+620)

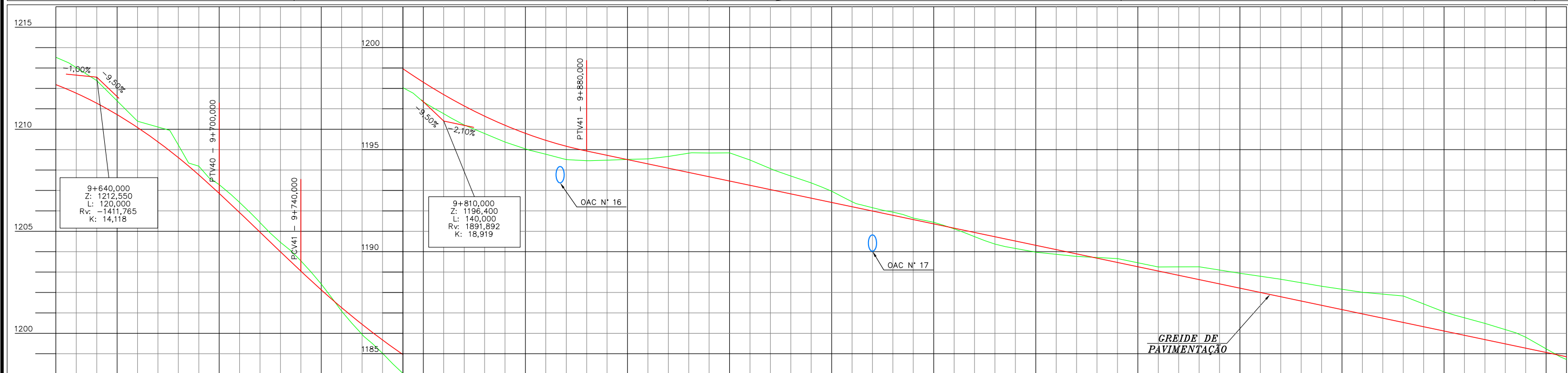
FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 377_19

ESCALA: H=1:2000 V=1:200

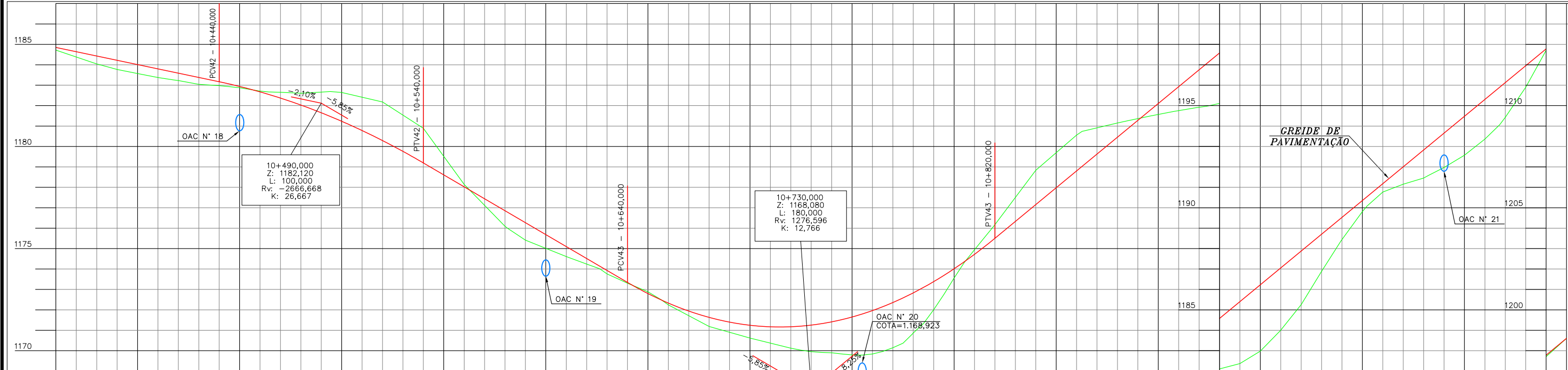
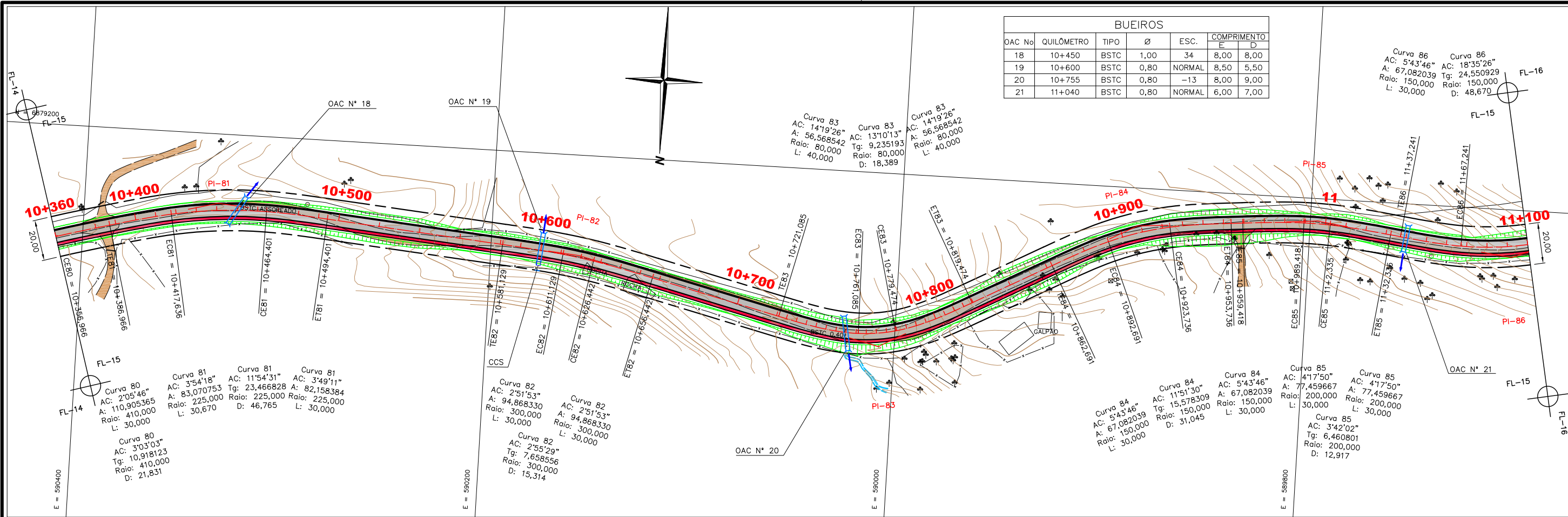
DATA: SETEMBRO / 2021

FOLHA: 13



ELEM.VERT.		CCV = 120,000		120,083 1210,391 9+660		1208,942 1209,942 9+675,790		1208,698 1209,229 9+680		1208,195 1208,344 9+685		1207,763 1207,819 9+690		1206,856 1207,286 9+700		1206,378 1206,532 9+707,790		1205,900 1206,413 9+710		1205,425 1205,938 9+715		1204,947 1204,957 9+725		1204,460 1204,467 9+730		1203,973 1203,982 9+735		1203,486 1203,522 9+740		1202,999 1203,035 9+745		1202,512 1202,541 9+750		1202,026 1202,055 9+755		1201,540 1201,569 9+760		1201,054 1201,083 9+765		1200,568 1200,597 9+770		1200,081 1200,110 9+775		1199,595 1199,624 9+780		1199,108 1199,137 9+785		1198,622 1198,651 9+790		1198,136 1198,165 9+795		1197,650 1197,679 9+800		1197,164 1197,193 9+805		1196,678 1196,707 9+810		1196,192 1196,221 9+815		1195,706 1195,735 9+820		1195,220 1195,249 9+825		1194,734 1194,763 9+830		1194,248 1194,277 9+835		1193,762 1193,791 9+840		1193,276 1193,305 9+845		1192,790 1192,819 9+850		1192,304 1192,333 9+855		1191,818 1191,847 9+860		1191,332 1191,361 9+865		1190,846 1190,875 9+870		1190,360 1190,389 9+875		1189,874 1189,903 9+880		1189,388 1189,417 9+885		1188,902 1188,931 9+890		1188,416 1188,445 9+895		1187,930 1187,959 9+900		1187,444 1187,473 9+905		1186,958 1186,987 9+910		1186,472 1186,501 9+915		1185,986 1186,015 9+920		1185,500 1185,529 9+925		1185,014 1185,043 9+930		1184,528 1184,557 9+935		1184,042 1184,071 9+940		1183,556 1183,585 9+945		1183,070 1183,100 9+950		1182,584 1182,613 9+955		1182,098 1182,127 9+960		1181,612 1181,641 9+965		1181,126 1181,155 9+970		1180,640 1180,669 9+975		1180,154 1180,183 9+980		1179,668 1179,697 9+985		1179,182 1179,211 9+990		1178,696 1178,725 9+995		1178,210 1178,239 9+1000		1177,724 1177,753 9+1005		1177,238 1177,267 9+1010		1176,752 1176,781 9+1015		1176,266 1176,295 9+1020		1175,780 1175,809 9+1025		1175,294 1175,323 9+1030		1174,808 1174,837 9+1035		1174,322 1174,351 9+1040		1173,836 1173,865 9+1045		1173,350 1173,379 9+1050		1172,864 1172,893 9+1055		1172,378 1172,407 9+1060		1171,892 1171,921 9+1065		1171,406 1171,435 9+1070		1170,920 1170,949 9+1075		1170,434 1170,463 9+1080		1169,948 1169,977 9+1085		1169,462 1169,491 9+1090		1168,976 1169,005 9+1095		1168,490 1168,519 9+1100		1167,999 1168,028 9+1105		1167,513 1167,542 9+1110		1167,027 1167,056 9+1115		1166,541 1166,570 9+1120		1166,055 1166,084 9+1125		1165,569 1165,598 9+1130		1165,083 1165,112 9+1135		1164,597 1164,626 9+1140		1164,111 1164,140 9+1145		1163,625 1163,654 9+1150		1163,139 1163,168 9+1155		1162,653 1162,682 9+1160		1162,167 1162,196 9+1165		1161,681 1161,710 9+1170		1161,195 1161,224 9+1175		1160,709 1160,738 9+1180		1160,223 1160,252 9+1185		1159,737 1159,766 9+1190		1159,251 1159,280 9+1195		1158,765 1158,794 9+1200		1158,279 1158,308 9+1205		1157,793 1157,822 9+1210		1157,307 1157,336 9+1215		1156,821 1156,850 9+1220		1156,335 1156,364 9+1225		1155,849 1155,878 9+1230		1155,363 1155,392 9+1235		1154,877 1154,906 9+1240		1154,391 1154,420 9+1245		1153,905 1153,934 9+1250		1153,419 1153,448 9+1255		1152,933 1152,962 9+1260		1152,447 1152,476 9+1265		1151,961 1151,990 9+1270		1151,475 1151,504 9+1275		1150,989 1151,018 9+1280		1150,503 1150,532 9+1285		1149,999 1150,028 9+1290		1149,513 1149,542 9+1295		1149,027 1149,056 9+1300		1148,541 1148,570 9+1305		1148,055 1148,084 9+1310		1147,569 1147,598 9+1315		1147,083 1147,112 9+1320		1146,597 1146,626 9+1325		1146,111 1146,140 9+1330		1145,625 1145,654 9+1335		1145,139 1145,168 9+1340		1144,653 1144,682 9+1345		1144,167 1144,196 9+1350		1143,681 1143,710 9+1355		1143,195 1143,224 9+1360		1142,709 1142,738 9+1365		1142,223 1142,252 9+1370		1141,737 1141,766 9+1375		1141,251 1141,280 9+1380		1140,765 1140,794 9+1385		1140,279 1140,308 9+1390		1139,793 1139,822 9+1395		1139,307 1139,336 9+1400		1138,821 1138,850 9+1405		1138,335 1138,364 9+1410		1137,849 1137,878 9+1415		1137,363 1137,392 9+1420		1136,877 1136,906 9+1425		1136,391 1136,420 9+1430		1135,905 1135,934 9+1435		1135,419 1135,448 9+1440		1134,933 1134,962 9+1445		1134,447 1134,476 9+1450		1133,961 1133,990 9+1455		1133,475 1133,504 9+1460		1132,989 1133,018 9+1465		1132,503 1132,532 9+1470		1132,017 1132,046 9+1475		1131,531 1131,560 9+1480		1131,045 1131,074 9+1485		1130,559 1130,588 9+1490		1130,073 1130,102 9+1495		1129,587 1129,616 9+1500		1129,101 1129,130 9+1505		1128,615 1128,644 9+1510		1128,129 1128,158 9+1515		1127,643 1127,672 9+1520		1127,157 1127,186 9+1525		1126,671 1126,700 9+1530		1126,185 1126,214 9+1535		1125,699 1125,728 9+1540		1125,213 1125,242 9+1545		1124,727 1124,756 9+1550		1124,241 1124,270 9+1555		1123,755 1123,784 9+1560		1123,269 1123,298 9+1565		1122,783 1122,812 9+1570		1122,297 1122,326 9+1575		1121,811 1121,840 9+1580		1121,325 1121,354 9+1585		1120,839 1120,868 9+1590		1120,353 1120,382 9+1595		1119,867 1119,896 9+1600		1119,381 1119,410 9+1605		1118,895 1118,924 9+1610		1118,409 1188,438 9+1615		1117,923 1117,952 9+1620		1117,437 1117,466 9+1625		1116,951 1116,980 9+1630		1116,465 1116,494 9+1635		1115,979 1116,008 9+1640		1115,493 1115,522 9+1645		1115,007 1115,036 9+1650		1114,521 1114,550 9+1655		1114,035 1114,064 9+1660		1113,549 1113,578 9+1665		1113,063 1113,092 9+1670		1112,577 1112,606 9+1675		1112,091 1112,120 9+1680		1111,605 1111,634 9+1685		1111,119 1111,148 9+1690		1110,633 1110,662 9+1695		1110,147 1110,176 9+1700		1109,661 1109,690 9+1705		1109,175 1109,204 9+1710		1108,689 1108,718 9+1715		1108,203 1108,232 9+1720		1107,717 1107,746 9+1725		1107,231 1107,260 9+1730		1106,745 1106,774 9+1735		1106,259 1106,288 9+1740		1105,773 1105,802 9+1745		1105,287 1105,316 9+1750		1104,801 1104,830 9+1755		1104,315 1104,344 9+1760		1103,829 1103,858 9+1765		1103,343 1103,372 9+1770		1102,857 1102,886 9+1775		1102,371 1102,400 9+1780		1101,885 1101,914 9+1785		1101,399 1101,428 9+1790		1100,913 1100,942 9+1795		1100,427 1100,456 9+1800		1100,000 1100,000 9+1805		1099,500 1099,500 9+1810		1099,000 1099,000 9+1815		1098,500 1098,500 9+1820		1098,000 1098,000 9+1825		1097,500 1097,500 9+1830		1097,000 1097,000 9+1835		1096,500 1096,500 9+1840		1096,000 1096,000 9+1845		1095,500 1095,500 9+1850		1095,000 1095,000 9+1855		1094,500 1094,500 9+1860		1094,000 1094,000 9+1865		1093,500 1093,500 9+1870		1093,000 1093,000 9+1875		1092,500 1092,500 9+1880		1092,000 1092,000 9+1885		1091,500 1091,500 9+1890		1091,000 1091,000 9+1895		1090,500 1090,500 9+1900		1090,000 1090,000 9+1905		1089,500 1089,500 9+1910		1089,000 1089,000 9+1915		1088,500 1088,500 9+1920		1088,000 1088,000 9+1925		1087,500 1087,500 9+1930		1087,000 1087,000 9+1935		1086,500 1086,500 9+1940		1086,000 1086,000 9+1945		1085,500 1085,500 9+1950		1085,000 1085,000 9+1955		1084,500 1084,500 9+1960		1084,000 1084,000 9+1965		1083,500 1083,500 9+1970		1083,000 1083,000 9+1975		1082,500 1082,500 9+1980		1082,000 1082,000 9+1985		1081,500 1081,500 9+1990		1081,000 1081,000 9+1995		1080,500 1080,500 9+2000		1080,000 1080,000 9+2005		1079,500 1079,500 9+2010		1079,000 1079,000 9+2015		1078,500 1078,500 9+2020		1078,000 1078,000 9+2025		1077,500 1077,500 9+2030		1077,000 1077,000 9+2035		1076,500 1076,500 9+2040		1076,000 1076,000 9+2045		1075,500 1075,500 9+2050		1075,000 1075,000 9+2055		1074,500 1074,500 9+2060		1074,000 1074,000 9+2065		1073,500 1073,500 9+2070		1073,000 1073,000 9+2075		1072,500 1072,500 9+2080		1072,000 1072,000 9+2085		1071,500 1071,500 9+2090		1071,000 1071,000 9+2095		1070,500 1070,500 9+2100		1070,000 1070,000 9+2105		1069,500 1069,500 9+2110		1069,000 1069,000 9+2115		1068,500 1068,500 9+2120		1068,000 1068,000 9+2125		1067,500 1067,500 9+2130		1067,000 1067,000 9+2135		1066,500 1066,500 9+2140		1066,000 1066,000 9+2145		1065,500 1065,500 9+2150		1065,000 1065,000 9+2155		1064,500 1064,500 9+2160		1064,000 1064,000 9+2165		1063,500 1063,500 9+2170		1063,000 1063,000 9+2175		1062,500 1062,500 9+2180		1062,000 1062,000 9+2185		1061,500 1061,500 9+2190		1061,000 1061,000 9+2195		1060,500 1060,500 9+2200		1060,000 1060,000 9+2205		1059,500 1059,500 9+2210		1059,000 1059,000 9+2215		1058,500 1058,500 9+2220		1058,000 1058,000 9+2225		1057,500 1057,500 9+2230		1057,000 1057,000 9+2235		1056,500 1056,500 9+2240		1056,000 1056,000 9+2245		1055,500 1055,500 9+2250		1055,000 1055,000 9+2255		1054,500 1054,500 9+2260		1054,000 1054,000 9+2265		1053,500 1053,500 9+2270		1053,000 1053,000 9+2275		1052,500 1052,500 9+2280		1052,000 1052,000 9+2285		1051,500 1051,500 9+2290		1051,000 1051,000 9+2295		1050,500 1050,500 9+2300		1050,000 1050,000 9+2305		1049,500 1049,500 9+2310		1049,000 1049,000 9+2315		1048,500 1048,500 9+2320		1048,000 1048,000 9+2325		1047,500 1047,500 9+2330		1047,000 1047,000 9+2335		1046,500 1046,500 9+2340		1046,000 1046,000 9+2345		1045,500 1045,500 9+2350		1045,000 1045,000 9+2355		1044,500 1044,500 9+2360		1044,000 1044,000 9+2365		1043,500 1043,500 9+2370		1043,000 1043,000 9+2375		1042,500 1042,500 9+2380		1042,000 1042,000 9+2385		1041,500 1041,500 9+2390		1041,000 1041,000 9+2395		1040,500 1040,500 9+2400		1040,000 1040,000 9+2405		1039,500 1039,500 9+2410		1039,000 1039,000 9+2415		1038,500 1038,500 9+2420		1038,000 1038,000 9+2425		1037,500 1037,500 9+2430		1037,000 1037,000 9+2435		1036,500 1036,500 9+2440		1036,000 1036,000 9+2445		1035,500 1035,500 9+2450		1035,000 1035,000 9+2455		1034,500 1034,500 9+2460		1034,000 1034,000 9+2465		1033,500 1033,500 9+2470		1033,000 1033,000 9+2475		1032,500 1032,500 9+2480		1032,000 1032,000 9+2485		1031,500 1031,500 9+2490		1031,000 1031,000 9+2495		1030,500 1030,500 9+2500		1030,000 1030,000 9+2505		1029,500 1029,500 9+2510		1029,000 1029,000 9+2515		1028,500 1028,500 9+2520		1028,000 1028,000 9+2525		1027,500 1027,500 9+2530		1027,000 1027,000 9+2535		1026,500 1026,500 9+2540		1026,000 1026,000 9+2545		1025,500 1025,500 9+2550		1025,000 1025,000 9+2555		1024,500 1024,500 9+2560		1024,000 1024,000 9+2565		1023,500 1023,500 9+2570		1023,000 1023,000 9+2575		1022,500 1022,500 9+2580		1022,000 1022,000 9+2585		1021,500 1021,500 9+2590		1021,000 1021,000 9+2595		1020,500 1020,500 9+2600		1020,000 1020,000 9+2605		1019,500 1019,500 9+2610		1019,000 1019,000	
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CURVAS DE NÍVEL ÁRVORE ARALUCÁRIA COQUEIRO POSTE CONCRETO CIRCULAR POSTE DE MADEIRA POSTE CONCRETO DUPLO T	POSTE CONCRETO RETANGULAR HIDRANTE TELEFONE PÚBLICO MARCOS DE APOIO PLACAS DE SINALIZAÇÃO EDIF. MADEIRA EDIF. ALVENARIA	CONVENÇÕES PTO. ÔNIBUS EXIST. LIMITE DE VEGETAÇÃO CERCA ESTRADA/ACESSO EXIST. MURO EXISTENTE RIO/CÓRREGO/SANGA VALE	AÇUDE BANHADO BUEIRO EXISTENTE BUEIRO PROLONGADO BUEIRO PROJETADO PONTE EXISTENTE TERRENO NATURAL	CERCA DE TELA DIVISA RODOVIA EXISTENTE CALÇADA EXISTENTE CANTEIRO EXISTENTE	GREIDE OFFSET-CORTE/ATERRO FAIXAS DE ROL. PROJ. ACOSTAMENTO CICLOVIA CANTEIRO CALÇADA
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KM	10+360	10+380	10+400	10+410	10+420	10+430	10+440	10+450	10+460	10+470	10+480	10+490	10+500	10+520	10+540	10+560	10+580	10+600	10+620	10+630	10+640	10+660	10+680	10+700	10+720	10+740	10+760	10+780	10+800	10+820	10+840	10+860	10+880	10+900	10+920	10+940	10+960	10+980	11+000	11+020	11+040	11+060	11+080	11+100			
COTAS DO TERRENO	1184,850	1184,044	1183,573	1183,378	1183,227	1183,042	1182,981	1182,877	1182,711	1182,654	1182,607	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	
COTAS DO PROJETO	1184,850	1184,044	1183,573	1183,378	1183,227	1183,042	1182,981	1182,877	1182,711	1182,654	1182,607	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611	1182,611
ELEM. VERT.	CCV = 100,000																																														
ELEMENTOS HORIZONTAIS	A = 110,905 L = 30,000 A = 83,071 L = 30,670 R = 225,000 L = 46,765 A = 82,158 L = 30,000 L = 86,728 A = 94,868 L = 30,000 R = 300,000 A = 94,868 L = 30,000 L = 15,314 A = 30,000 L = 40,000 R = 80,000 L = 18,389 A = 56,569 L = 40,000 A = 56,569 L = 40,000 A = 67,082 L = 30,000 R = 150,000 L = 31,045 A = 67,082 L = 30,000 R = 150,000 L = 3,682 A = 67,082 L = 30,000 R = 200,000 L = 12,917 A = 77,460 L = 30,000 R = 200,000 L = 4,906 A = 67,082 L = 30,000 R = 150,000 L = 48,670																																														

CONVENÇÕES

CURVAS DE NÍVEL

ÁRVORE

ARAUCÁRIA

COQUEIRO

POSTE CONCRETO CIRCULAR

POSTE DE MADEIRA

POSTE CONCRETO DUPLO T

POSTE CONCRETO RETANGULAR

HIDRANTE

TELEFONE PÚBLICO

MARCOS DE APOIO

PLACAS DE SINALIZAÇÃO

EDIF. MADEIRA

EDIF. ALVENARIA

PTO. ÔNIBUS EXIST.

LIMITE DE VEGETAÇÃO

CERCA

ESTRADA/ACESSO EXIST.

MURO EXISTENTE

RIO/CÓRREGO/SANGA

VALA

ÁQUIDE

BANHADO

BUEIRO EXISTENTE

BUEIRO PROLONGADO

BUEIRO PROJETADO

PONTE EXISTENTE

TERRENO NATURAL

CERCA DE TELA

DIVISAS

RODOVIA EXISTENTE

CAÇADA EXISTENTE

CANTEIRO EXISTENTE

CAÇADA

GREIDE

OFFSET-CORTE/ATERRO

FAIXAS DE ROL. PROJ.

ACOSTAMENTO

CICLOVIA

CANTEIRO

CAÇADA

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA

Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

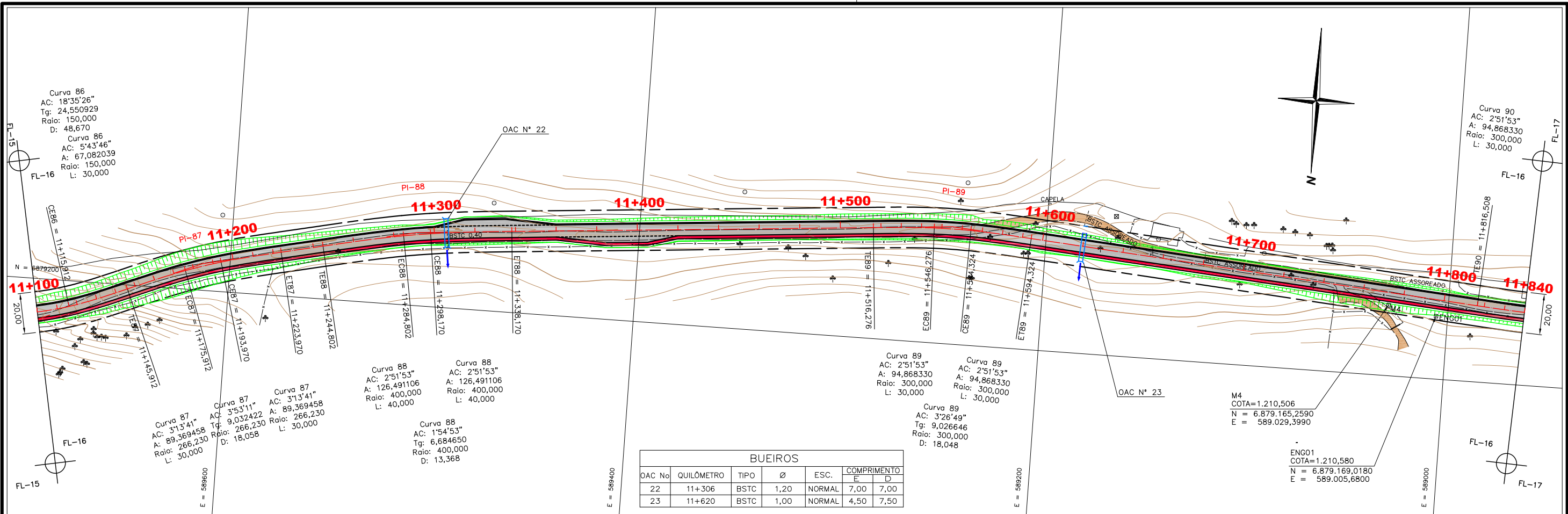
RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

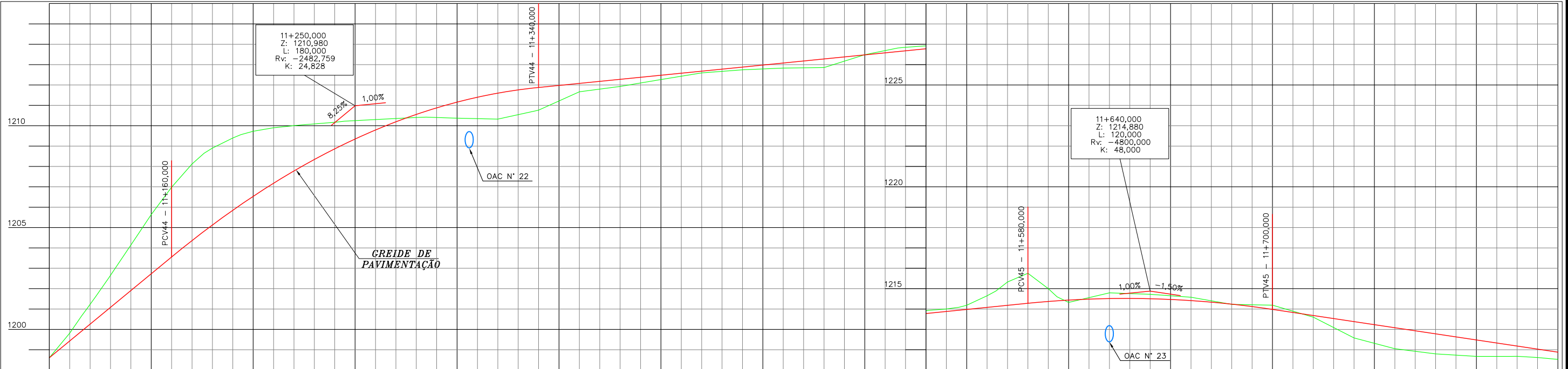
PROJETO GEOMÉTRICO - (km 10+360 a km 11+100)

FASE DO PROJETO: IMPRESSÃO DEFINITIVA

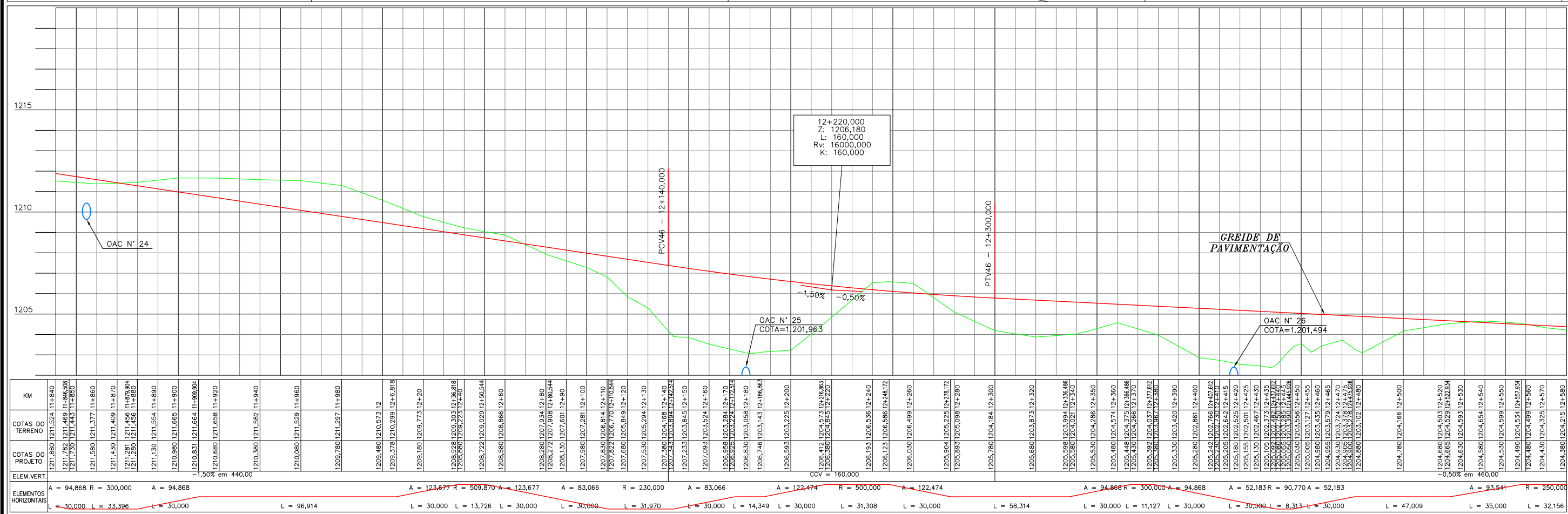
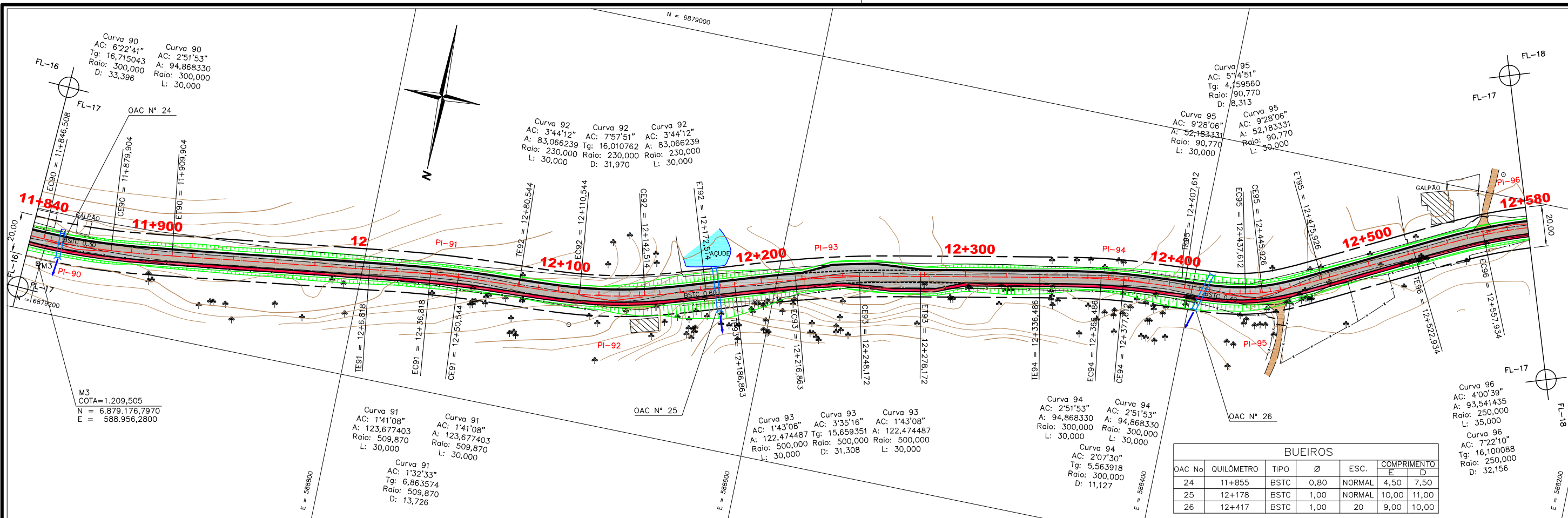
CÓDIGO PROJETO: 377_19 ESCALA: H=1:2000 V=1:200 DATA: SETEMBRO / 2021 FOLHA: 15



BUEIROS						
OAC No	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO	
					E	D
22	11+306	BSTC	1,20	NORMAL	7,00	7,00
23	11+620	BSTC	1,00	NORMAL	4,50	7,50



KM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
COTAS DO TERRENO	1196,606	1198,606	1199,811	1200,671	1201,512	1202,255	1202,656	1202,998	1203,555	1204,142	1204,371	1204,610	1204,861	1205,124	1205,399	1205,684	1205,979	1206,284	1206,599	1206,924	1207,259	1207,604	1207,959	1208,324	1208,699	1209,084	1209,479	1209,884	1210,299	1210,724	1211,159	1211,604	1212,059	1212,524	1212,999	1213,484	1213,979	1214,484	1214,999	1215,524	1216,059	1216,604	1217,159	1217,724	1218,299	1218,884	1219,479	1220,084	1220,699	1221,324	1221,959	1222,604	1223,259	1223,924	1224,599	1225,284	1225,979	1226,684	1227,399	1228,124	1228,859	1229,604	1230,359	1231,124	1231,899	1232,684	1233,479	1234,284	1235,099	1235,924	1236,759	1237,604	1238,459	1239,324	1240,199	1241,084	1241,979	1242,884	1243,799	1244,724	1245,659	1246,604	1247,559	1248,524	1249,499	1250,484	1251,479	1252,484	1253,499	1254,524	1255,559	1256,604	1257,659	1258,724	1259,799	1260,884	1261,979	1263,084	1264,199	1265,324	1266,459	1267,604	1268,759	1269,924	1271,099	1272,284	1273,479	1274,684	1275,899	1277,124	1278,359	1279,604	1280,859	1282,124	1283,399	1284,684	1285,979	1287,284	1288,604	1289,939	1291,284	1292,639	1294,004	1295,379	1296,764	1298,159	1299,564	1300,979	1302,404	1303,839	1305,284	1306,739	1308,204	1309,679	1311,164	1312,659	1314,164	1315,679	1317,204	1318,739	1320,284	1321,839	1323,404	1324,979	1326,564	1328,159	1329,764	1331,379	1332,999	1334,624	1336,259	1337,904	1339,559	1341,224	1342,899	1344,584	1346,279	1347,984	1349,704	1351,439	1353,184	1354,939	1356,704	1358,479	1360,264	1362,059	1363,864	1365,679	1367,504	1369,339	1371,184	1373,039	1374,904	1376,779	1378,664	1380,559	1382,464	1384,379	1386,304	1388,239	1390,184	1392,139	1394,104	1396,079	1398,064	1400,059	1402,064	1404,079	1406,104	1408,139	1410,184	1412,239	1414,304	1416,379	1418,464	1420,559	1422,664	1424,779	1426,904	1429,039	1431,184	1433,339	1435,504	1437,679	1439,864	1442,059	1444,264	1446,479	1448,704	1450,939	1453,184	1455,439	1457,699	1460,004	1462,319	1464,644	1466,979	1469,324	1471,679	1474,044	1476,419	1478,804	1481,199	1483,604	1486,019	1488,444	1490,879	1493,324	1495,779	1498,244	1500,719	1503,204	1505,699	1508,204	1510,719	1513,244	1515,779	1518,324	1520,879	1523,444	1526,019	1528,604	1531,199	1533,804	1536,419	1539,044	1541,679	1544,324	1546,979	1549,644	1552,319	1555,004	1557,699	1560,404	1563,119	1565,844	1568,579	1571,324	1574,079	1576,844	1579,619	1582,404	1585,199	1588,004	1590,819	1593,644	1596,479	1599,324	1602,179	1605,044	1607,919	1610,804	1613,699	1616,604	1619,519	1622,444	1625,379	1628,324	1631,279	1634,244	1637,219	1640,204	1643,199	1646,204	1649,219	1652,244	1655,279	1658,324	1661,379	1664,444	1667,519	1670,604	1673,699	1676,804	1679,919	1683,044	1686,179	1689,324	1692,479	1695,644	1698,819	1702,004	1705,199	1708,404	1711,619	1714,844	1718,079	1721,324	1724,579	1727,844	1731,119	1734,404	1737,699	1741,004	1744,319	1747,644	1750,979	1754,324	1757,679	1761,044	1764,419	1767,804	1771,199	1774,604	1778,019	1781,444	1784,879	1788,324	1791,779	1795,244	1798,719	1802,204	1805,699	1809,204	1812,719	1816,244	1819,779	1823,324	1826,879	1830,444	1834,019	1837,604	1841,199	1844,804	1848,419	1852,044	1855,679	1859,324	1862,979	1866,644	1870,319	1874,004	1877,699	1881,404	1885,119	1888,844	1892,579	1896,324	1900,079	1903,844	1907,619	1911,404	1915,199	1919,004	1922,819	1926,644	1930,479	1934,324	1938,179	1942,044	1945,919	1949,804	1953,699	1957,604	1961,519	1965,444	1969,379	1973,324	1977,279	1981,244	1985,219	1989,204	1993,199	1997,204	2001,219	2005,244	2009,279	2013,324	2017,379	2021,444	2025,519	2029,604	2033,699	2037,804	2041,919	2046,044	2050,179	2054,324	2058,479	2062,644	2066,819	2071,004	2075,199	2079,404	2083,619	2087,844	2092,079	2096,324	2100,579	2104,844	2109,119	2113,404	2117,699	2122,004	2126,319	2130,644	2134,979	2139,324	2143,679	2148,044	2152,419	2156,804	2161,199	2165,604	2170,019	2174,444	2178,879	2183,324	2187,779	2192,244	2196,719	2201,204	2205,699	2210,204	2214,719	2219,244	2223,779	2228,324	2232,879	2237,444	2242,019	2246,604	2251,199	2255,804	2260,419	2265,044	2269,679	2274,324	2278,979	2283,644	2288,319	2293,004	2297,699	2302,404	2307,119	2311,844	2316,579	2321,324	2326,079	2330,844	2335,619	2340,404	2345,199	2350,004	2354,819	2359,644	2364,479	2369,324	2374,179	2379,044	2383,919	2388,804	2393,699	2398,604	2403,519	2408,444	2413,379	2418,324	2423,279	2428,244	2433,219	2438,204	2443,199	2448,204	2453,219	2458,244	2463,279	2468,324	2473,379	2478,444	2483,519	2488,604	2493,699	2498,804	2503,919	2509,044	2514,179	2519,324	2524,479	2529,644	2534,819	2539,979	2545,144	2550,319	2555,504	2560,699	2565,904	2571,119	2576,344	2581,579	2586,824	2592,079	2597,344	2602,619	2607,904	2613,199	2618,504	2623,819	2629,144	2634,479	2639,824	2645,179	2650,544	2655,919	2661,304	2666,699	2672,104	2677,519	2682,944	2688,379	2693,824	2699,279	2704,744	2710,219	2715,704	2721,199	2726,704	2732,219	2737,744	2743,279	2748,824	2754,379	2759,944	2765,519	2771,104	2776,699	2782,304	2787,919	2793,544	2799,179	2804,824	2810,479	2816,144	2821,819	2827,5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CONVENÇÕES

- CURVAS DE NÍVEL
- ÁRVORE
- ARAUCÁRIA
- COQUEIRO
- POSTE CONCRETO CIRCULAR
- POSTE DE MADEIRA
- POSTE CONCRETO DUPLO T
- POSTE CONCRETO RETANGULAR
- HIDRANTE
- TELEFONE PÚBLICO
- MARCOS DE APOIO
- PLACAS DE SINALIZAÇÃO
- EDIF. MADEIRA
- EDIF. ALVENARIA
- PTO. ÔNIBUS EXIST.
- LIMITE DE VEGETAÇÃO
- CERCA
- ESTRADA/ACESSO EXIST.
- MURO EXISTENTE
- RIO/CÓRREGO/SANGA
- VALA
- ÁQUIDE
- BANHADO
- BUEIRO EXISTENTE
- BUEIRO PROLONGADO
- BUEIRO PROJETADO
- PONTE EXISTENTE
- TERRENO NATURAL
- CERCA DE TELA
- DIVISAS
- RODOVIA EXISTENTE
- CAÇADA EXISTENTE
- CANTEIRO EXISTENTE
- GREIDE
- OFFSET-CORTE/ATERRO
- FAIXAS DE ROL. PROJ.
- ACOSTAMENTO
- CICLOVIA
- CANTEIRO
- CAÇADA

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO GEOMÉTRICO - (km 11+840 a km 12+580)

FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 377_19

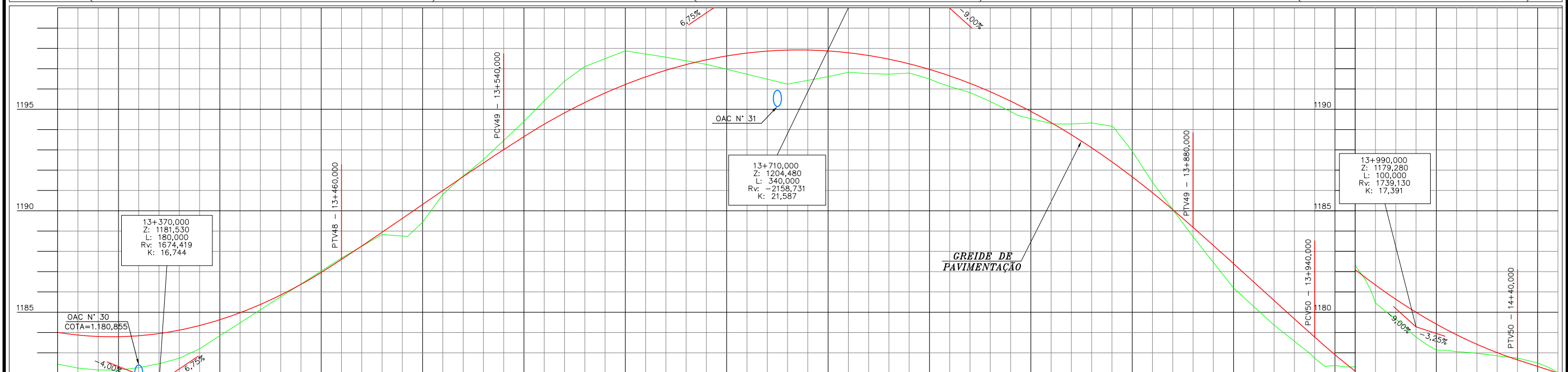
ESCALA: H=1:2000 V=1:200




























DATA: SETEMBRO / 2021











FOLHA: 17

[illegible]

CONVENÇÕES				ESCALAS GRÁFICAS		DESENVOLVIDO POR:	
CURVAS DE NÍVEL ÁRVORE ARAUCÁRIA COQUEIRO POSTE CONCRETO CIRCULAR POSTE DE MADEIRA POSTE CONCRETO DUPLO T	POSTE CONCRETO RETANGULAR HIDRANTE TELEFONE PÚBLICO MARCOS DE APOIO PLACAS DE SINALIZAÇÃO EDIF. MADEIRA EDIF. ALVENARIA	PTO. ÔNIBUS EXIST. LIMITE DE VEGETAÇÃO CERCA ESTRADA/ACESSO EXIST. MURO EXISTENTE RIO/CÓRREGO/SANGA VALA	AÇUÊ BANHADO BUEIRO EXISTENTE BUEIRO PROLONGADO BUEIRO PROJETADO PONTE EXISTENTE TERRENO NATURAL	CERCA DE TELA DIVISAS RODOVIA EXISTENTE CALÇADA EXISTENTE CANTEIRO EXISTENTE	GREIDE OFFSET-CORTE/ATERRO FAIXAS DE ROL. PROJ. ACOSTAMENTO CICLOVIA CANTEIRO CALÇADA		<p>DESENVOLVIDO POR:</p> <p>ENGMETRIA Projetos e Licenciamentos</p>
				<p>HORIZONTAL</p> <p>VERTICAL</p>	<p>0 10 20 30 40 50m</p> <p>0 1 2 3 4 5m</p>		
				<p>0 10 20 30 40 50m</p> <p>0 1 2 3 4 5m</p>		<p>0 10 20 30 40 50m</p> <p>0 1 2 3 4 5m</p>	


[illegible]

 CURVAS DE NÍVEL  ÁRVORE  ARAUCÁRIA  COQUEIRO  POSTE CONCRETO CIRCULAR  POSTE DE MADEIRA  POSTE CONCRETO DUPLO T	 POSTE CONCRETO RETANGULAR  HIDRANTE  TELEFONE PÚBLICO  MARCOS DE APOIO  PLACAS DE SINALIZAÇÃO  EDIF. MADEIRA  EDIF. ALVENARIA	CONVENÇÕES  P.O. PTO. ÔNIBUS EXIST.  LIMITE DE VEGETAÇÃO  CERCA  ESTRADA/ACESSO EXIST.  MURO EXISTENTE  RIO/CÓRREGO/SANGA  VALA	 AÇUDE  BANHADO  BUEIRO EXISTENTE  BUEIRO PROLONGADO  BUEIRO PROJETADO  PONTE EXISTENTE  TERRENO NATURAL
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 CERCA DE TELA  DIVISAS  RODOVIA EXISTENTE  CALÇADA EXISTENTE  CANTEIRO EXISTENTE	 GREIDE  OFFSET-CORTE/ATERRO  FAIXAS DE ROL. PROJ.  ACOSTAMENTO  CICLOVIA  CANTEIRO  CALÇADA
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ESCALAS GRÁFICAS


HORIZONTAL



VERTICAL



DESENVOLVIDO POR:

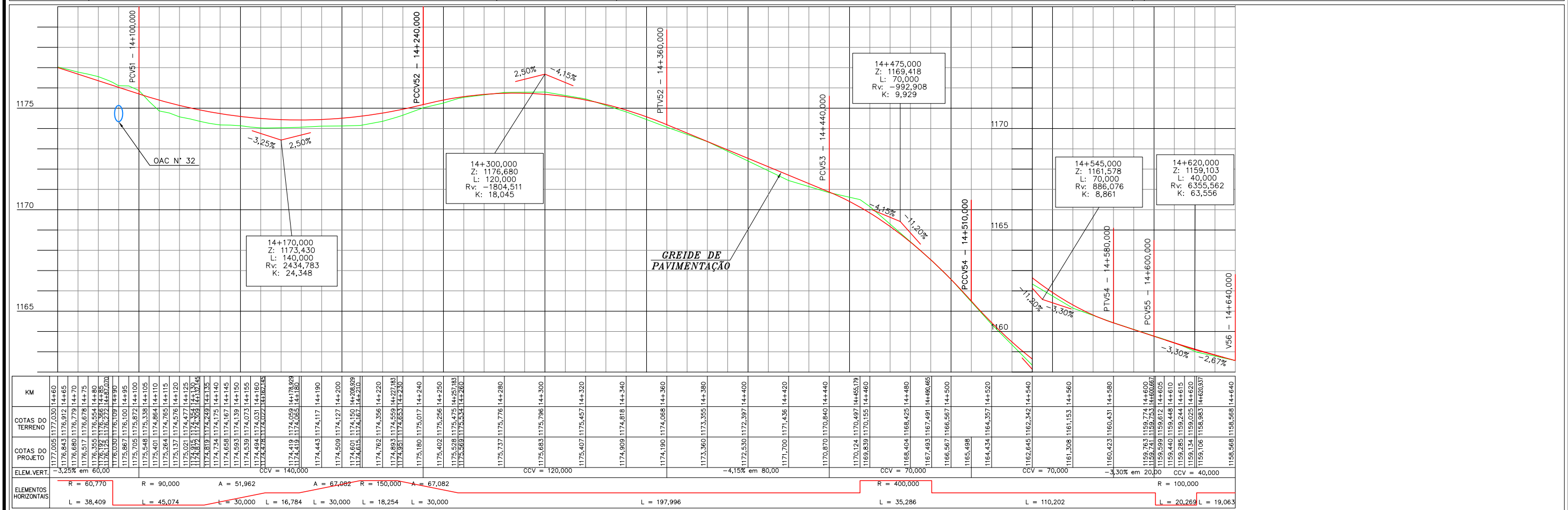


ENGMETRIA
Projetos e Licenciamentos

PROJETO GEOMÉTRICO - (km 13+320 a km 14+060)

FASE DO PROJETO:
IMPRESSÃO DEFINITIVA

Código Projeto: 377_19	Escala: H=1:2000 V=1:200	Data: SETEMBRO / 2021	Folha: 19
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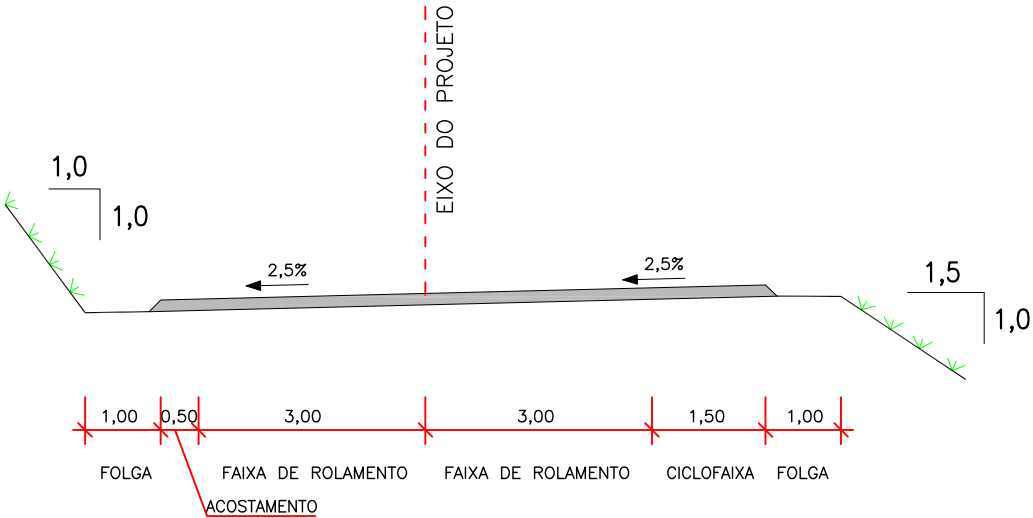


<p>CONVENÇÕES</p> <table border="0"> <tr> <td> CURVAS DE NÍVEL ÁRVORE ARAUCÁRIA COQUEIRO POSTE CONCRETO CIRCULAR POSTE DE MADEIRA POSTE CONCRETO DUPLO T </td> <td> POSTE CONCRETO RETANGULAR BANHANTE TELEFONE PÚBLICO MARCOS DE APOIO PLACAS DE SINALIZAÇÃO EDIF. MADEIRA EDIF. ALVENARIA </td> <td> <p>P.O.</p> PTO. ÔNIBUS EXIST. LIMITE DE VEGETAÇÃO CERCA ESTRADA/ACESSO EXIST. MURO EXISTENTE RIO/CÓRREGO/SANGA VALE </td> <td> AÇUDE BANHADO BUEIRO EXISTENTE BUEIRO PROLONGADO BUEIRO PROJETADO PONTE EXISTENTE TERRENO NATURAL </td> <td> CERCA DE TELA DIVISÕES RODOVIA EXISTENTE CALÇADA EXISTENTE CANTEIRO EXISTENTE </td> <td> GREIDE OFFSET-CORTE/ATERRO FAIXAS DE ROL. PROJ. ACOSTAMENTO CICLOVIA CANTEIRO CALÇADA </td> </tr> </table>										CURVAS DE NÍVEL ÁRVORE ARAUCÁRIA COQUEIRO POSTE CONCRETO CIRCULAR POSTE DE MADEIRA POSTE CONCRETO DUPLO T	POSTE CONCRETO RETANGULAR BANHANTE TELEFONE PÚBLICO MARCOS DE APOIO PLACAS DE SINALIZAÇÃO EDIF. MADEIRA EDIF. ALVENARIA	<p>P.O.</p> PTO. ÔNIBUS EXIST. LIMITE DE VEGETAÇÃO CERCA ESTRADA/ACESSO EXIST. MURO EXISTENTE RIO/CÓRREGO/SANGA VALE	AÇUDE BANHADO BUEIRO EXISTENTE BUEIRO PROLONGADO BUEIRO PROJETADO PONTE EXISTENTE TERRENO NATURAL	CERCA DE TELA DIVISÕES RODOVIA EXISTENTE CALÇADA EXISTENTE CANTEIRO EXISTENTE	GREIDE OFFSET-CORTE/ATERRO FAIXAS DE ROL. PROJ. ACOSTAMENTO CICLOVIA CANTEIRO CALÇADA	<p>ESCALAS GRÁFICAS</p> <p>HORIZONTAL: 0 10 20 30 40 50m</p> <p>VERTICAL: 0 1 2 3 4 5m</p>		<p>DESENVOLVIDO POR:</p> <p>ENGMETRIA Projetos e Licenciamentos</p>		<p>PREFEITURA MUNICIPAL DE SÃO JOAQUIM</p> <p>RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO</p> <p>PROJETO GEOMÉTRICO - (km 14+060 a km 14+640)</p> <p>FASE DO PROJETO: IMPRESSÃO DEFINITIVA</p> <p>CODIGO PROJETO: 377_19 ESCALA: H=1:2000 V=1:200 DATA: SETEMBRO / 2021 FOLHA: 20</p>	
CURVAS DE NÍVEL ÁRVORE ARAUCÁRIA COQUEIRO POSTE CONCRETO CIRCULAR POSTE DE MADEIRA POSTE CONCRETO DUPLO T	POSTE CONCRETO RETANGULAR BANHANTE TELEFONE PÚBLICO MARCOS DE APOIO PLACAS DE SINALIZAÇÃO EDIF. MADEIRA EDIF. ALVENARIA	<p>P.O.</p> PTO. ÔNIBUS EXIST. LIMITE DE VEGETAÇÃO CERCA ESTRADA/ACESSO EXIST. MURO EXISTENTE RIO/CÓRREGO/SANGA VALE	AÇUDE BANHADO BUEIRO EXISTENTE BUEIRO PROLONGADO BUEIRO PROJETADO PONTE EXISTENTE TERRENO NATURAL	CERCA DE TELA DIVISÕES RODOVIA EXISTENTE CALÇADA EXISTENTE CANTEIRO EXISTENTE	GREIDE OFFSET-CORTE/ATERRO FAIXAS DE ROL. PROJ. ACOSTAMENTO CICLOVIA CANTEIRO CALÇADA																

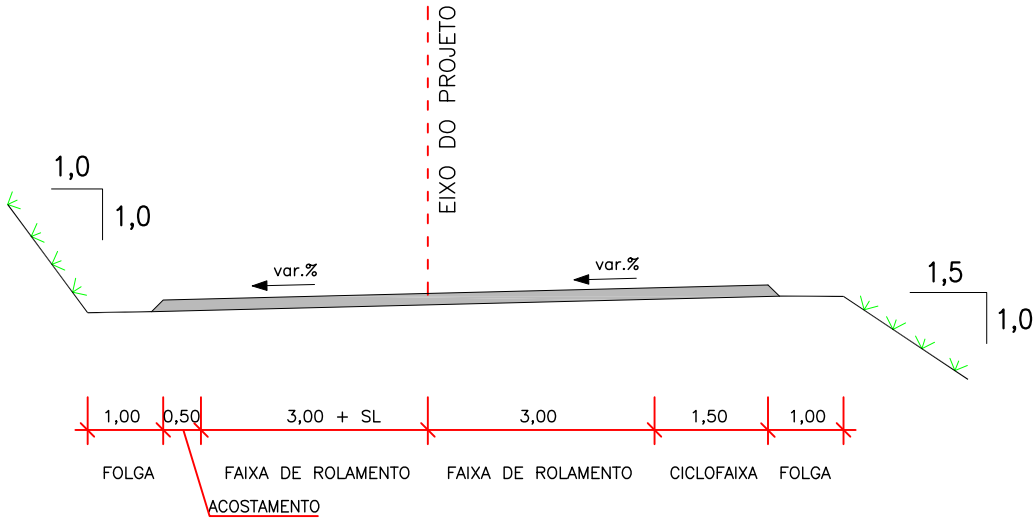
SEÇÕES DO GEOMÉTRICO

TRECHO

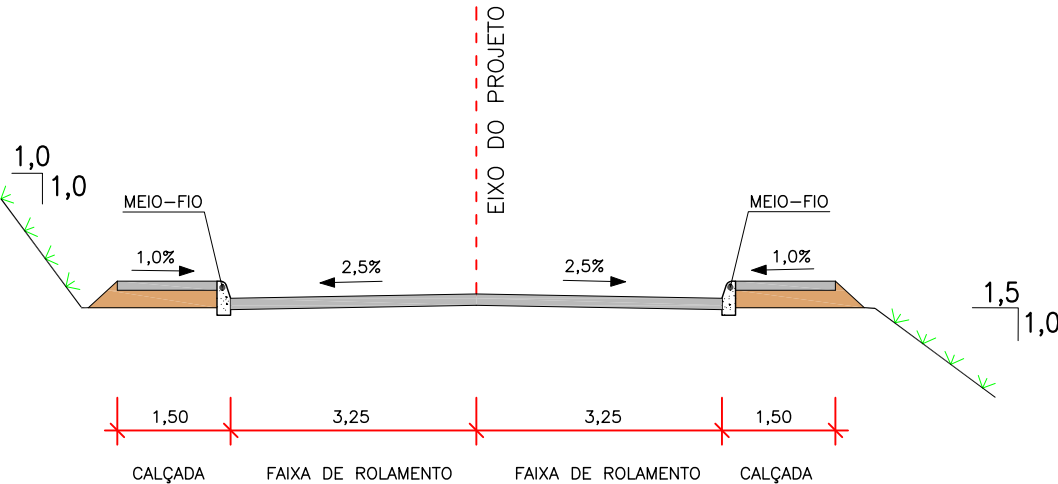
EM TANGENTE



EM CURVA



TRAVESSIA URBANA



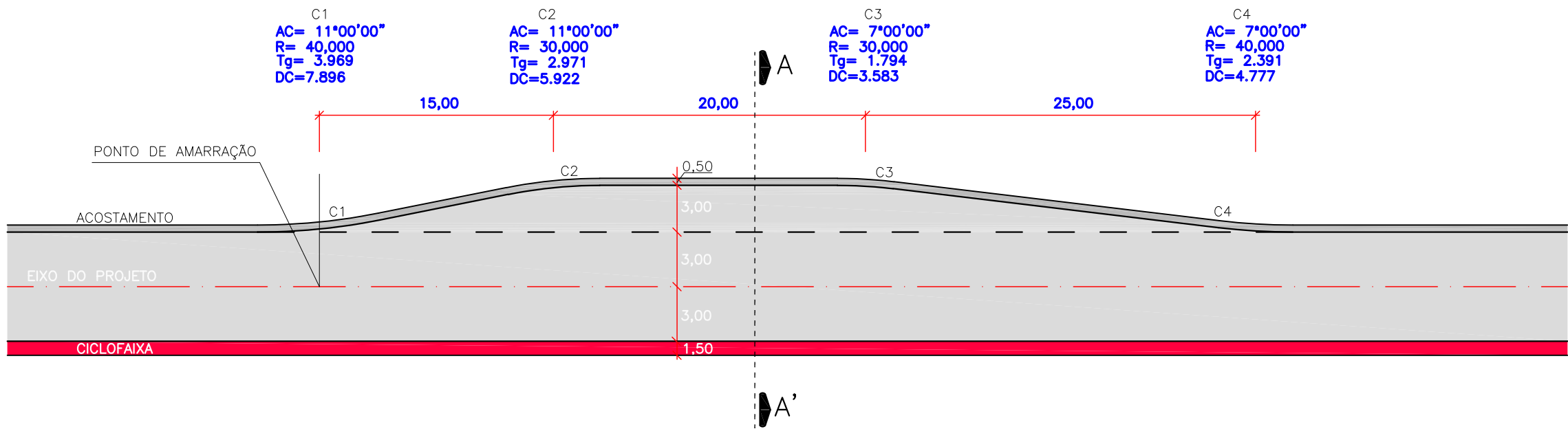
OBS.: MEDIDAS EM METRO

DESENVOLVIDO POR:

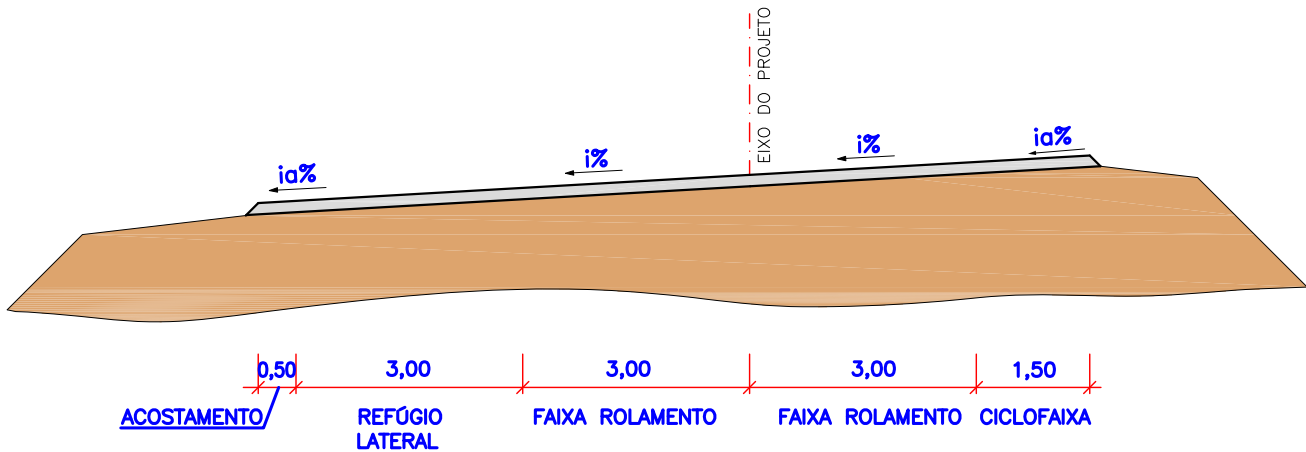


PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
RODOVIA : RODOVIA MUNICIPAL			
TRECHO : SC-114 - BENTINHO			
SEÇÕES DO GEOMÉTRICO			FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CÓDIGO PROJETO:	ESCALA:	DATA:	FOLHA:
377_19	H=1:100 V=1:50	SETEMBRO / 2021	01

REFÚGIO LATERAL



CORTE A-A'



OBSERVAÇÃO:

- ia = declividade do acostamento
- i = declividade da pista
- Medidas em Metros

LOCALIZAÇÃO DOS REFÚGIOS

km (LE)	km (LD)
0+120	0+220
1+340	1+360
2+590	2+590
3+800	3+940
5+160	5+040
6+120	5+840
7+160	7+200
8+180	8+220
8+980	9+120
10+160	10+160
11+360	11+360
12+280	12+240
13+420	13+420
14+260	14+260

DESENVOLVIDO POR:



PREFEITURA MUNICIPAL DE SÃO JOAQUIM
RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

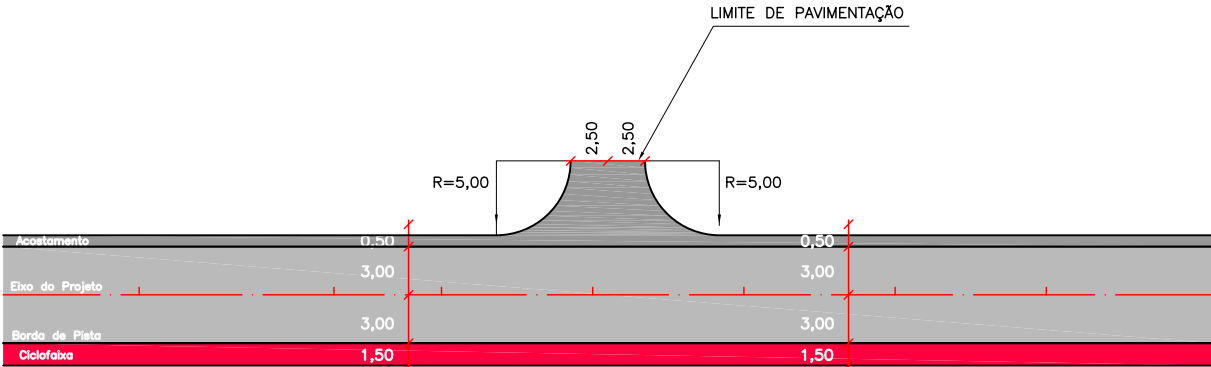
REFÚGIO LATERAL

FASE DO PROJETO:
IMPRESSÃO DEFINITIVA

CODIGO PROJETO: 377_19 ESCALA: S / ESCALA DATA: SETEMBRO / 2021 FOLHA: 01

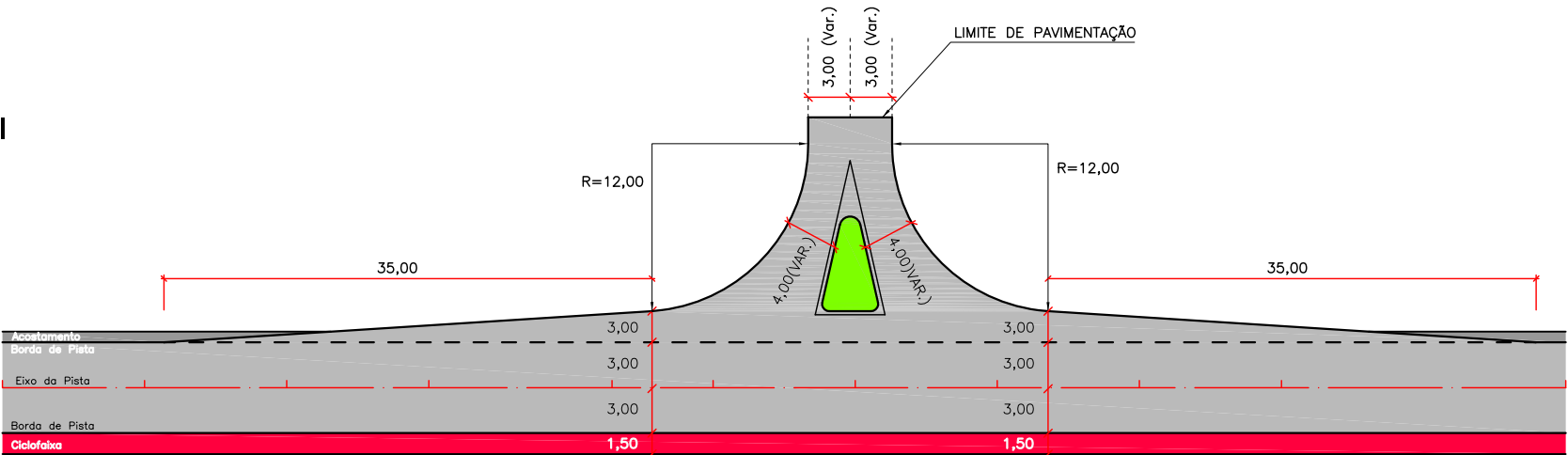
ACESSOS TIPO

ACESSO TIPO I



ACESSO TIPO I	
km (LE)	km (LD)
6+690	0+465
--	2+050
--	2+140
--	4+660
--	5+170
--	9+290
--	12+640
--	14+630

ACESSO TIPO III



ACESSO TIPO III	
km (LE)	km (LD)
14+100	14+100

OBS: MEDIDAS EM METROS.



DESENVOLVIDO POR:



PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

ACESSOS TIPO

FASE DO PROJETO:
IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 377_19

ESCALA: S / ESCALA

DATA: SETEMBRO / 2021

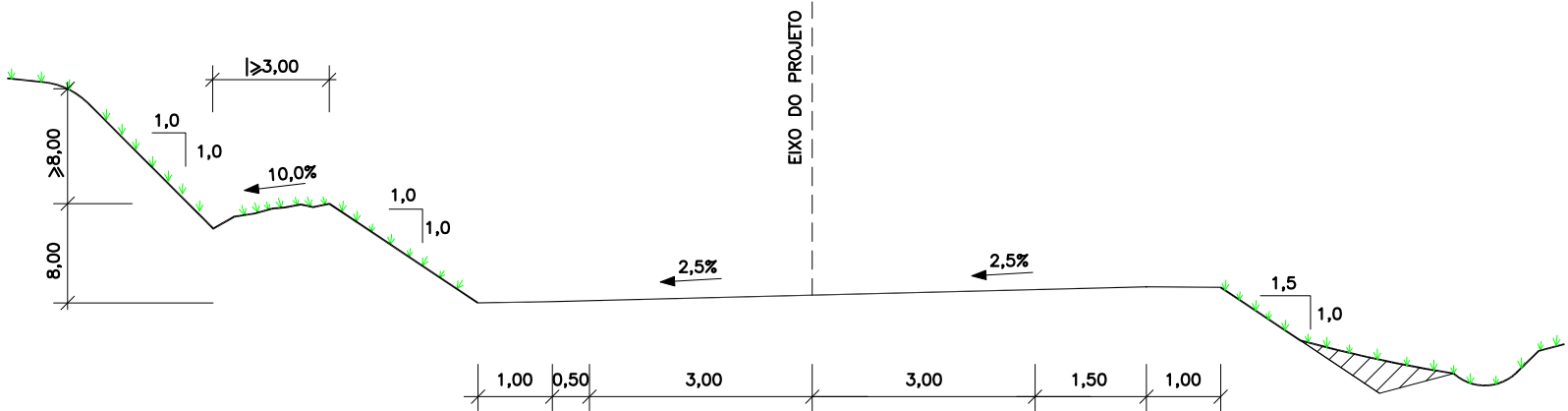
FOLHA: 01

PROJETO DE TERRAPLENAGEM

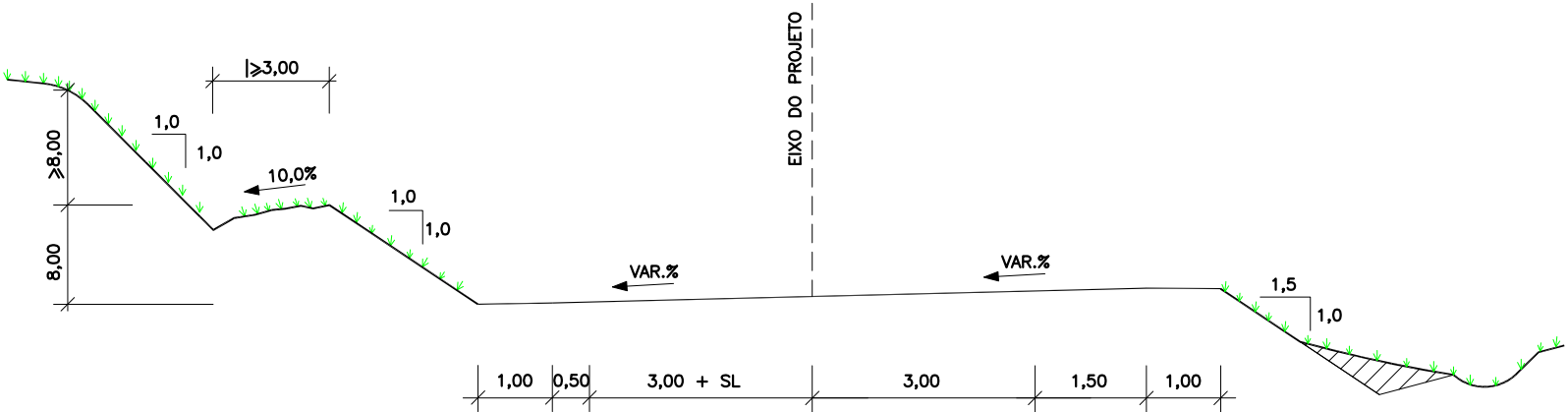
Seções Transversais

SEÇÕES DE TERRAPLENAGEM

EM TANGENTE



EM CURVA



OBS.:
MEDIDAS EM METRO
i = DECLIVIDADE DA PISTA
SL= SUPERLARGURA

OBS: PARA INCLINAÇÃO TRANSVERSAL
OBSERVAR VOLUME 3C-NOTAS DE SERVIÇO



				PREFEITURA MUNICIPAL DE SÃO JOAQUIM					
RODOVIA : RODOVIA MUNICIPAL				TRECHO : SC-114 - BENTINHO					
CÓDIGO PROJETO: 377_19				ESCALA: 1:100		DATA: SETEMBRO / 2021		FOLHA: 01	
SEÇÕES DE TERRAPLENAGEM								FASE DO PROJETO: IMPRESSÃO DEFINITIVA	

Resumo de Terraplenagem

RESUMO DO MOVIMENTO DOS MATERIAIS

CLASSIFICAÇÃO	ORIGEM	DESTINO			
	Cortes	Corpo de Aterro	Camada Final	Bota-Fora	TOTAL
1ª Categoria	34.383	-	3.957	30.426	34.383
2ª Categoria	11.058	-	1.801	9.257	11.058
3ª Categoria	61.164	32.961	25.998	2.205	61.164
TOTAL (m³)	106.605	32.961	31.756	41.888	106.605

QUANTIDADES ADICIONAIS	
Compactação de aterros a 100% proctor normal	- m³
Compactação de aterros a 100% proctor intermediário	4.429 m³
Construção de corpo de aterro com material de 3ª categoria	32.961 m³
Compactação de camada final de aterro em rocha	25.998 m³
Espalhamento de bota-fora	41.888 m³

Distribuição de Volumes

O R I G E M							D E S T I N O						
DESIGNAÇÃO	LOCALIZAÇÃO		VOLUMES ESCAVADOS (m³)				LOCALIZAÇÃO		VOLUMES (m³)				DMT (km)
	km	CENTRO DE MASSA	TOTAL	1A	2A	3A	km	CENTRO DE MASSA	DESIGNAÇÃO	1ª	2ª	3ª	
C1	0,000 a 0,645	0,323	1.937	969	194	775	0,205 a 0,360	0,283	CA 2			231	0,040
							0,480 a 0,665	0,573	CA 4			241	0,250
							0,048 a 0,140	0,094	CF 1		68	303	0,229
									BF	969	126		5,000
C2	0,655 a 1,195	0,925	11.927	5.964	1.193	4.771	1,130 a 1,245	1,188	CA 6			191	0,263
							1,280 a 1,520	1,400	CA 7			1.654	0,475
							0,205 a 0,360	0,283	CF 2			347	0,643
							0,410 a 0,460	0,435	CF 3			117	0,490
							0,480 a 0,665	0,573	CF 4			362	0,353
							0,775 a 0,815	0,795	CF 5			162	0,130
							1,130 a 1,245	1,188	CF 6			287	0,263
							1,280 a 1,520	1,400	CF 7			929	0,475
							1,610 a 1,695	1,653	CF 8			257	0,728
									BF	5.964	1.193	465	5,000
C3	1,225 a 1,320	1,273	281	112	84	84	1,280 a 1,520	1,400	CA 7			84	0,128
									BF	112	84		5,000
C4	1,370 a 1,420	1,395	172	103	17	52	1,280 a 1,520	1,400	CA 7			52	0,005
									BF	103	17		5,000
C5	1,500 a 1,640	1,570	1.256	754	126	377	1,280 a 1,520	1,400	CA 7			377	0,170
									BF	754	126		5,000
C6	1,660 a 2,030	1,845	3.455	0	0	3.455	1,610 a 1,695	1,653	CA 8			172	0,193
							1,860 a 2,100	1,980	CA 9			450	0,135
							2,230 a 2,490	2,360	CA 10			2.326	0,515
							1,860 a 2,100	1,980	CF 9			450	0,135
							2,230 a 2,490	2,360	CF 10			58	0,515

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QUADRO DE DISTRIBUIÇÃO DE VOLUMES

O R I G E M							D E S T I N O						
DESIGNAÇÃO	LOCALIZAÇÃO		VOLUMES ESCAVADOS (m³)				LOCALIZAÇÃO		VOLUMES (m³)				DMT (km)
	km	CENTRO DE MASSA	TOTAL	1A	2A	3A	km	CENTRO DE MASSA	DESIGNAÇÃO	1ª	2ª	3ª	
C7	2,060 a 2,334	2,197	2.794	1.397	559	838	2,230 a 2,490	2,360	CF 10			582	0,163
									BF	1.397	559	256	5,000
C8	2,360 a 2,450	2,405	197	79	39	79			BF	79	39	79	5,000
C9	2,475 a 2,930	2,703	2.632	0	0	2.632	2,900 a 3,035	2,968	CA 12			2.058	0,265
							2,540 a 2,690	2,615	CF 11			121	0,087
									BF			453	5,000
C10	3,020 a 3,230	3,125	1.732	0	0	1.732	3,200 a 3,440	3,320	CA 13			1.087	0,195
							2,900 a 3,035	2,968	CF 12			515	0,158
									BF			130	5,000
C11	3,280 a 3,350	3,315	8	8	0	0			BF	8			5,000
C12	3,420 a 3,590	3,505	3.648	1.824	730	1.094	3,575 a 3,715	3,645	CA 14			1.094	0,140
									BF	1.824	730		5,000
C13	3,670 a 4,096	3,883	1.802	0	0	1.802	3,575 a 3,715	3,645	CA 14			1.000	0,238
							3,200 a 3,440	3,320	CF 13			272	0,563
							3,575 a 3,715	3,645	CF 14			523	0,238
									BF			7	5,000
C14	4,170 a 4,520	4,345	4.664	0	0	4.664	3,745 a 3,800	3,773	CA 15			1.602	0,573
							4,490 a 4,600	4,545	CA 18			1.401	0,200
							3,745 a 3,800	3,773	CF 15			217	0,573
							3,950 a 4,010	3,980	CF 16			77	0,365
							4,070 a 4,177	4,124	CF 17			400	0,222
							4,490 a 4,600	4,545	CF 18			350	0,200
									BF			616	5,000
C15	4,560 a 4,655	4,608	913	548	91	274	4,635 a 4,675	4,655	CF 19			74	0,047
									BF	548	91	200	5,000

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QUADRO DE DISTRIBUIÇÃO DE VOLUMES

O R I G E M							D E S T I N O						
DESIGNAÇÃO	LOCALIZAÇÃO		VOLUMES ESCAVADOS (m³)				LOCALIZAÇÃO		VOLUMES (m³)				DMT (km)
	km	CENTRO DE MASSA	TOTAL	1A	2A	3A	km	CENTRO DE MASSA	DESIGNAÇÃO	1ª	2ª	3ª	
C16	4,670 a 4,805	4,738	3.771	0	0	3.771	4,795 a 4,995	4,895	CA 20			1.673	0,158
							4,795 a 4,995	4,895	CF 20			717	0,158
							5,080 a 5,305	5,193	CF 21			410	0,455
							5,410 a 5,630	5,520	CF 22			350	0,783
							6,000 a 6,140	6,070	CF 23			621	1,333
C17	4,865 a 5,130	4,998	1.495	897	150	449	5,080 a 5,305	5,193	CA 21			449	0,195
									BF	897	150		5,000
C18	5,204 a 5,430	5,317	1.822	1.093	182	547	5,080 a 5,305	5,193	CA 21			508	0,125
							5,410 a 5,630	5,520	CF 22			39	0,203
									BF	1.093	182		5,000
C19	5,450 a 5,515	5,483	192	154	19	19	5,410 a 5,630	5,520	CF 22			19	0,037
									BF	154	19		5,000
C20	5,560 a 6,030	5,795	4.280	2.568	428	1.284	5,410 a 5,630	5,520	CA 22			951	0,275
							6,000 a 6,140	6,070	CA 23			333	0,275
									BF	2.568	428		5,000
C21	6,100 a 6,320	6,210	1.953	1.172	195	586	6,000 a 6,140	6,070	CA 23			456	0,140
							6,280 a 6,420	6,350	CA 24			130	0,140
							7,120 a 7,260	7,190	CF 27	1.108			0,980
									BF	64	195		5,000
C22	6,380 a 6,520	6,450	1.572	943	157	472	6,280 a 6,420	6,350	CA 24			472	0,100
									BF	943	157		5,000
C23	6,560 a 6,620	6,590	11	11	0	0			BF	11			5,000
C24	6,660 a 6,695	6,678	31	31	0	0			BF	31			5,000

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QUADRO DE DISTRIBUIÇÃO DE VOLUMES

O R I G E M							D E S T I N O						
DESIGNAÇÃO	LOCALIZAÇÃO		VOLUMES ESCAVADOS (m³)				LOCALIZAÇÃO		VOLUMES (m³)				DMT (km)
	km	CENTRO DE MASSA	TOTAL	1A	2A	3A	km	CENTRO DE MASSA	DESIGNAÇÃO	1ª	2ª	3ª	
C25	6,725 a 7,140	6,933	2.895	1.737	290	869	6,280 a 6,420	6,350	CA 24			869	0,583
							7,970 a 8,130	8,050	CF 32	1.092			1,118
							7,860 a 7,920	7,890	CF 31	68			0,958
							7,740 a 7,800	7,770	CF 30	49			0,838
							7,620 a 7,650	7,635	CF 29	17			0,703
							7,300 a 7,540	7,420	CF 28	339			0,488
									BF	172	290		5,000
C26	7,230 a 7,990	7,610	3.595	0	0	3.595	6,280 a 6,420	6,350	CA 24			633	1,260
							6,000 a 6,140	6,070	CA 23			951	1,540
							6,000 a 6,140	6,070	CF 23			125	1,540
							6,280 a 6,420	6,350	CF 24			526	1,260
							6,500 a 6,800	6,650	CF 25			214	0,960
							6,835 a 6,920	6,878	CF 26			270	0,733
							7,120 a 7,260	7,190	CF 27			852	0,420
							7,300 a 7,540	7,420	CF 28			24	0,190
C27	8,091 a 8,165	8,128	89	89	0	0	7,970 a 8,130	8,050	CF 32	89			0,078
C28	8,180 a 8,400	8,290	611	367	122	122	6,500 a 6,800	6,650	CA 25			122	1,640
							8,146 a 8,300	8,223	CF 33	167	122		0,067
							7,970 a 8,130	8,050	CF 32	200			0,240

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QUADRO DE DISTRIBUIÇÃO DE VOLUMES

O R I G E M							D E S T I N O						
DESIGNAÇÃO	LOCALIZAÇÃO		VOLUMES ESCAVADOS (m³)				LOCALIZAÇÃO		VOLUMES (m³)				DMT (km)
	km	CENTRO DE MASSA	TOTAL	1A	2A	3A	km	CENTRO DE MASSA	DESIGNAÇÃO	1ª	2ª	3ª	
C29	8,460 a 8,710	8,585	3.829	0	1.149	2.680	6,500 a 6,800	6,650	CA 25			733	1,935
							6,835 a 6,920	6,878	CA 26			68	1,708
							7,120 a 7,260	7,190	CA 27			568	1,395
							7,300 a 7,540	7,420	CA 28			65	1,165
							7,970 a 8,130	8,050	CA 32			708	0,535
							8,340 a 8,500	8,420	CA 34			203	0,165
							8,690 a 8,760	8,725	CA 35			94	0,140
							9,220 a 9,345	9,283	CF 38			241	0,698
							8,690 a 8,760	8,725	CF 35		487		0,140
							8,340 a 8,500	8,420	CF 34		662		0,165
C30	8,740 a 9,120	8,930	3.968	2.381	397	1.190	9,220 a 9,345	9,283	CA 38			489	0,353
							9,440 a 9,540	9,490	CA 39			484	0,560
							9,220 a 9,345	9,283	CF 38			217	0,353
							9,100 a 9,180	9,140	CF 37	248	397		0,210
							8,910 a 8,960	8,935	CF 36	62			0,005
							8,340 a 8,500	8,420	CF 34	392			0,510
									BF	1.679			5,000
C31	9,160 a 9,260	9,210	649	389	65	195	9,440 a 9,540	9,490	CF 39			66	0,280
							9,220 a 9,345	9,283	CF 38	126	65	129	0,072
									BF	263			5,000
C32	9,335 a 9,460	9,398	1.508	905	151	452	9,750 a 9,890	9,820	CA 40			115	0,422
							9,440 a 9,540	9,490	CF 39			337	0,092
									BF	905	151		5,000

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QUADRO DE DISTRIBUIÇÃO DE VOLUMES

O R I G E M							D E S T I N O						
DESIGNAÇÃO	LOCALIZAÇÃO		VOLUMES ESCAVADOS (m³)				LOCALIZAÇÃO		VOLUMES (m³)				DMT (km)
	km	CENTRO DE MASSA	TOTAL	1A	2A	3A	km	CENTRO DE MASSA	DESIGNAÇÃO	1ª	2ª	3ª	
C33	9,512 a 10,720	10,116	11.918	2.384	1.192	8.343	10,560 a 10,810	10,685	CA 43			80	0,569
							12,060 a 12,530	12,295	CF 47			3.151	2,179
							11,590 a 11,890	11,740	CF 46			1.061	1,624
							11,260 a 11,400	11,330	CF 45			332	1,214
							10,880 a 11,100	10,990	CF 44			1.603	0,874
							10,560 a 10,810	10,685	CF 43			1.174	0,569
							10,340 a 10,460	10,400	CF 42			74	0,284
							10,065 a 10,140	10,103	CF 41			85	0,014
							9,750 a 9,890	9,820	CF 40			460	0,296
							9,440 a 9,540	9,490	CF 39			323	0,626
									BF	2.384	1.192		5,000
C34	10,800 a 10,900	10,850	1.406	0	703	703	10,560 a 10,810	10,685	CA 43			703	0,165
									BF		703		5,000
C35	10,990 a 11,030	11,010	21	21	0	0			BF	21			5,000
C36	11,070 a 11,740	11,405	7.815	782	782	6.252	10,880 a 11,100	10,990	CA 44			1.603	0,415
							11,260 a 11,400	11,330	CA 45			83	0,075
							11,590 a 11,890	11,740	CA 46			265	0,335
							13,620 a 13,810	13,715	CF 51			64	2,310
							13,220 a 13,520	13,370	CF 50			1.840	1,965
							12,895 a 13,080	12,988	CF 49			954	1,583
							12,570 a 12,620	12,595	CF 48			15	1,190
							12,060 a 12,530	12,295	CF 47			1.428	0,890
									BF	782	782		5,000
C37	11,800 a 12,130	11,965	2.478	1.239	743	496	12,060 a 12,530	12,295	CF 47			496	0,330
									BF	1.239	743		5,000
C38	12,220 a 12,300	12,260	267	0	0	267	12,060 a 12,530	12,295	CA 47			267	0,035

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QUADRO DE DISTRIBUIÇÃO DE VOLUMES

O R I G E M							D E S T I N O						
DESIGNAÇÃO	LOCALIZAÇÃO		VOLUMES ESCAVADOS (m³)				LOCALIZAÇÃO		VOLUMES (m³)				DMT (km)
	km	CENTRO DE MASSA	TOTAL	1A	2A	3A	km	CENTRO DE MASSA	DESIGNAÇÃO	1ª	2ª	3ª	
C39	12,480 a 13,240	12,860	5.854	1.171	585	4.098	12,060 a 12,530	12,295	CA 47			3.116	0,035
							12,895 a 13,080	12,988	CA 49			239	0,727
							13,860 a 14,035	13,948	CF 52			337	1,688
							13,620 a 13,810	13,715	CF 51			406	1,455
									BF	1.171	585		5,000
C40	13,380 a 14,640	14,010	7.157	4.294	716	2.147	13,220 a 13,520	13,370	CA 50			1.227	0,640
							13,620 a 13,810	13,715	CA 51			118	0,295
							13,860 a 14,035	13,948	CA 52			168	0,063
							14,320 a 14,440	14,380	CF 54			16	0,370
							14,085 a 14,250	14,168	CF 53			283	0,157
							13,860 a 14,035	13,948	CF 52			336	0,063
									BF	4.294	716		5,000

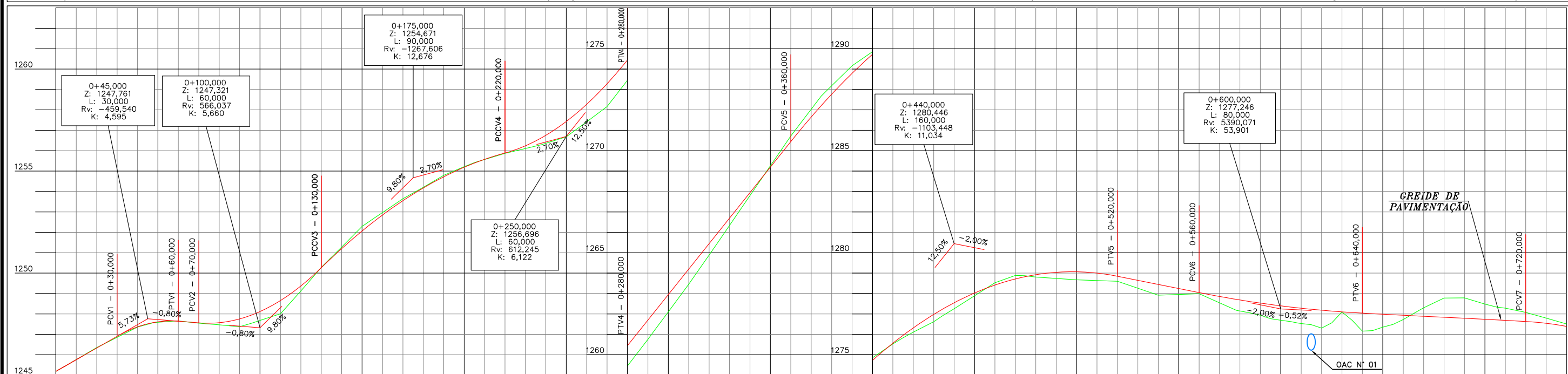
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QUADRO DE DISTRIBUIÇÃO DE VOLUMES

PROJETO DE DRENAGEM E OBRAS DE ARTE CORRENTES

Linha Geral



ELEM.VERT.		COTAS DO TERRENO		COTAS DO PROJETO		KM	
		1245,183	1245,183	0			
		1245,455	1245,454	0+4,28			
		1246,329	1246,350	0+20			
		1246,902					
		1247,366	1247,357	0+40			
		1247,353	1247,380	0+40,839			
		1247,581	1247,575	0+48,044			
		1247,644	1247,660	0+59,596			
		1247,592	1247,588	0+66,097			
		1247,561	1247,543	0+70			
		1247,569	1247,466	0+80			
		1247,754	1247,371	0+90			
		1247,954	1247,550	0+96,097			
		1248,116	1247,680	0+100			
		1248,564	1248,005	0+110			
		1249,369	1249,123	0+120			
		1249,892	1249,827	0+126,097			
		1250,261	1250,278	0+130			
		1251,202	1251,277	0+140			
		1252,063	1252,287	0+150			
		1252,500	1252,707	0+160,097			
		1252,694	1252,969	0+160			
		1253,550	1253,646	0+170			
		1253,895	1253,947	0+175,366			
		1254,175	1254,205	0+180			
		1254,721	1254,793	0+190			
		1255,188	1255,218	0+200			
		1255,408	1255,429	0+205,366			
		1255,886	1255,869	0+220			
		1256,645	1256,289	0+238,151			
		1256,753	1256,359	0+240			
		1257,331	1256,683	0+250			
		1258,273	1257,414	0+260			
		1259,080	1258,024	0+268,151			
		1259,278	1259,164	0+270			
		1259,446	1259,448	0+280			
		1261,696	1260,754	0+290			
		1262,165	1261,282	0+293,762			
		1262,946	1262,101	0+300			
		1262,946	1263,453	0+310			
		1265,915	1264,827	0+320			
		1265,416	1265,426	0+323,762			
		1267,946	1267,802	0+340			
		1270,446	1270,721	0+360			
		1272,207	1272,673	0+374,886			
		1272,765	1273,185	0+390			
		1273,788	1274,159	0+390			
		1274,721	1274,849	0+400			
		1275,563	1275,529	0+410			
		1275,942	1275,827	0+414,886			
		1276,315	1276,105	0+420			
		1276,976	1276,618	0+430			
		1276,940	1276,913	0+434,433			
		1277,546	1277,251	0+440			
		1278,028	1277,885	0+450			
		1278,415	1278,527	0+460			
		1278,713	1278,886	0+470			
		1278,816	1278,874	0+474,433			
		1278,921	1278,808	0+480			
		1279,065	1278,688	0+500			
		1277,334	1276,688	0+500			
		1277,334	1276,620	0+505			
		1277,296	1276,556	0+508,337			
		1277,296	1276,315	0+510			
		1276,912	1276,724	0+510			
		1276,912	1276,724	0+510			
		1276,912	1276,724	0+510			
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		1276,912	1276,724	0+510			
		1276,912	1276,724	0+510			
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		1276,912	1276,724	0+510			
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		1276,912	1276,724	0+510			
		1276,912	1276,724	0+510			
		1276,912	1276,724	0+510			
		1276,912	1276,724	0+510			

	— RIO/CÓRREGO/SANGA		— BUEIRO PROJETADO		— SAÍDA DE DRENO		— CAIXA DE LIGAÇÃO E PASSAGEM — CLP/BLS
	— AÇUDE		— BUEIROS Ø 0,40/0,60		— DRENO TIPO — IX		— CAIXA COLETOIRA DE SARJETA — CCS
	— BANHADO		— VALETAS DE PROTEÇÃO		— DRENO EM ROCHA — DLR		— CAIXA COLETOIRA DE SARJETA ESPECIAL — CCSE
	— VALA EXISTENTE		— SARJETAS		— DRENO TRANSVERSAL RASO — DTR		— CAIXA COLETOIRA DE TALVEGUE — CCT
	— BUEIRO EXISTENTE		— MEIO-FIO		— VALA DE ESCOAMENTO — VL		— DISSIPADORES DE ENERGIA — DEB
	— SUBSTITUIR BUEIRO		— DESCIDAS D'ÁGUA		— RÁPIDOS — DAR		

HORIZONTAL 0 10 20 30 40 50m

VERTICAL 0 1 2 3 4 5m


ENGMETRIA
 Projetos e Licenciamentos

RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 0+000 a km 0+740)

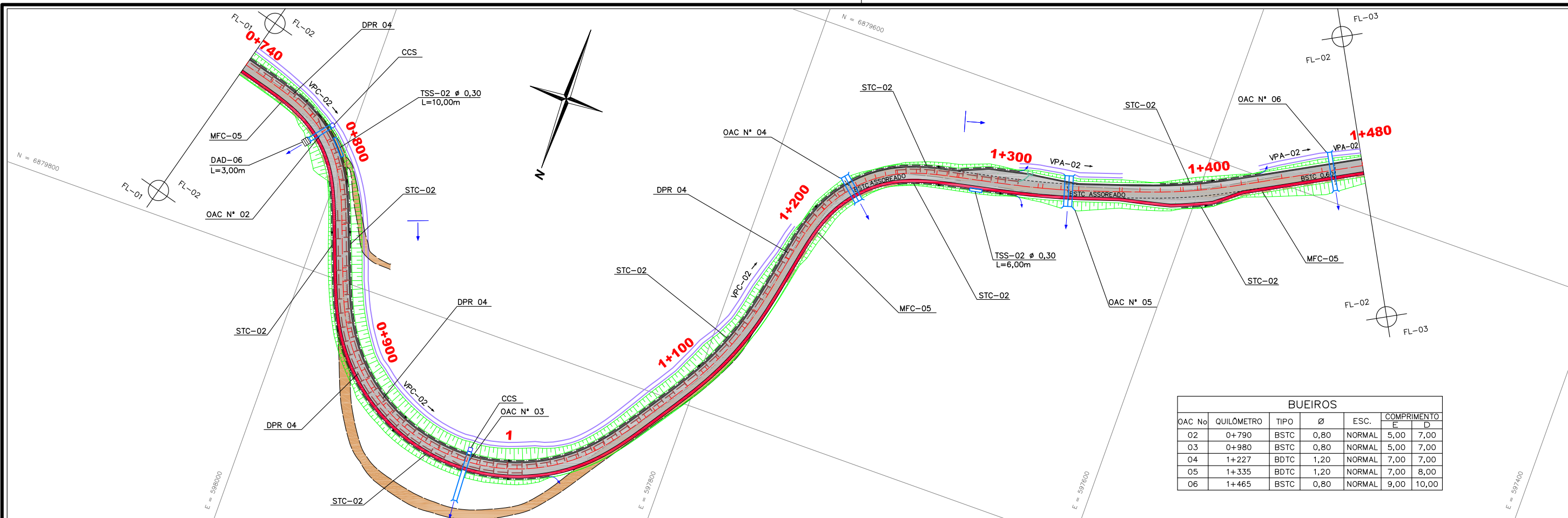
BASE DO PROJETO:
IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO:

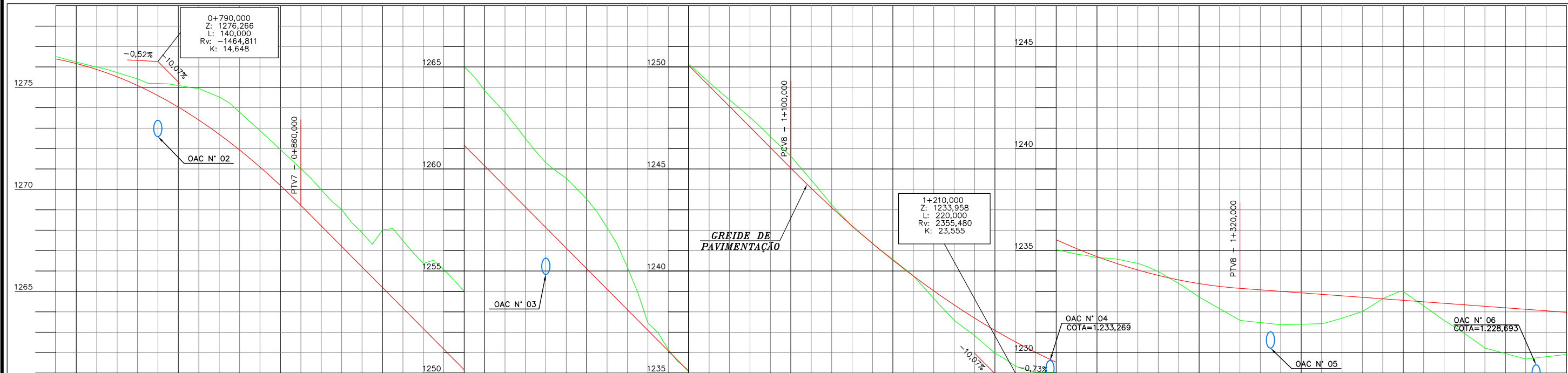
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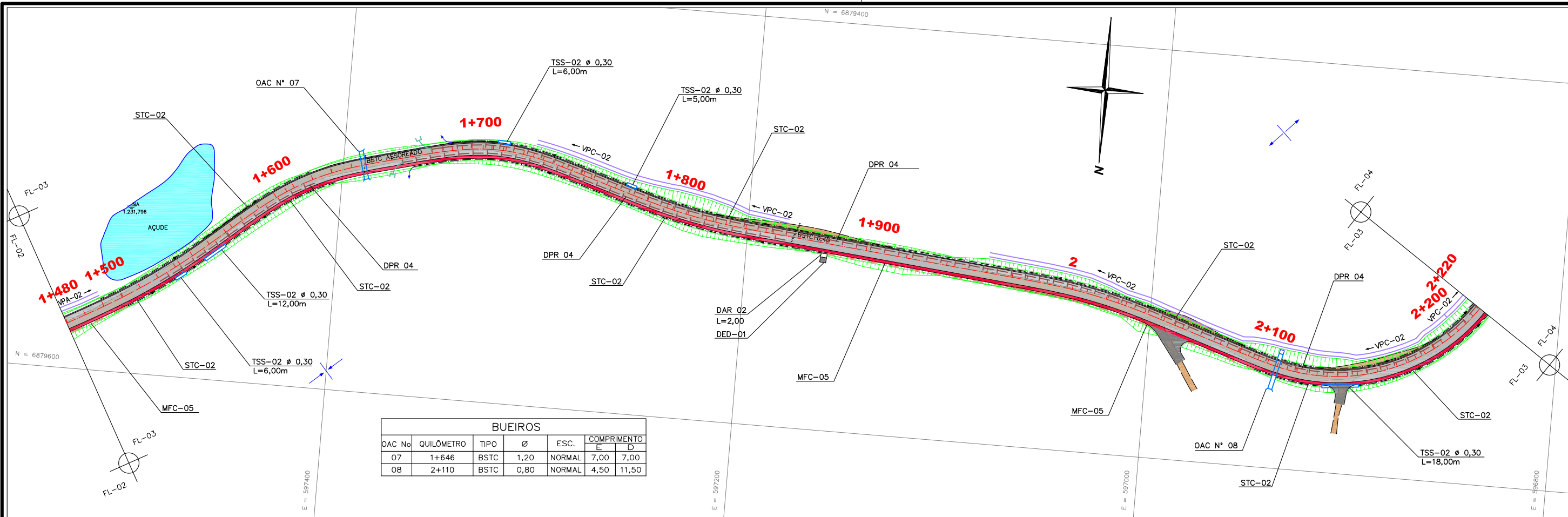
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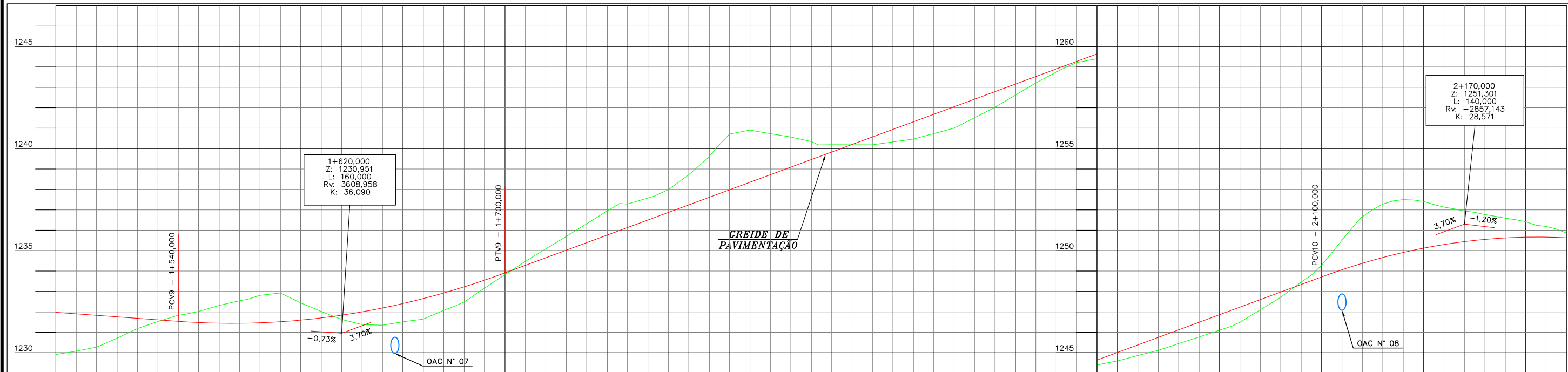
BUEIROS						
OAC No	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO	
02	0+790	BSTC	0,80	NORMAL	5,00	7,00
03	0+980	BSTC	0,80	NORMAL	5,00	7,00
04	1+227	BDTC	1,20	NORMAL	7,00	7,00
05	1+335	BDTC	1,20	NORMAL	7,00	8,00
06	1+465	BSTC	0,80	NORMAL	9,00	10,00



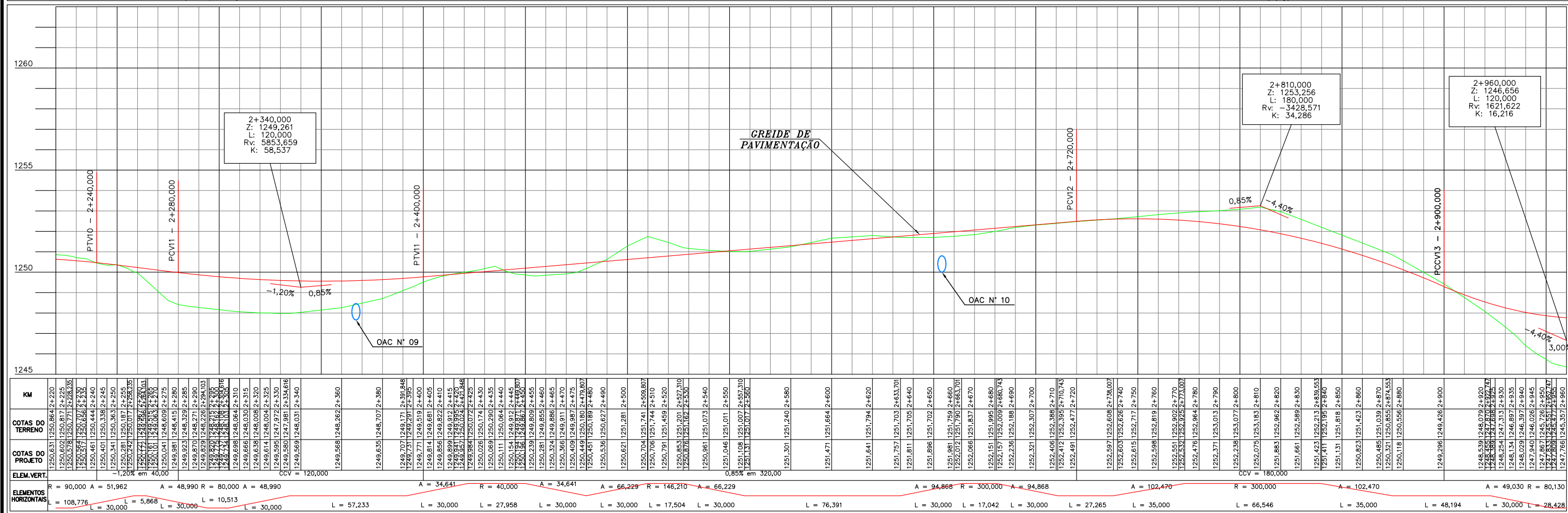
ELEM. VERT.		COTAS DO PROJETO		COTAS DO TERRENO		KM	
CCV = 140,000		1269,387 1276,507 0+740		1276,155 1276,227 0+750,383		1276,028 1276,114 0+755	
CCV = 140,000		1268,711 1270,537 0+860		1268,207 1269,981 0+870		1267,704 1269,425 0+875	
CCV = 140,000		1268,207 1269,981 0+870		1267,704 1269,425 0+875		1267,200 1269,006 0+880	
CCV = 140,000		1267,704 1269,425 0+875		1267,200 1269,006 0+880		1266,696 1268,361 0+885	
CCV = 140,000		1267,200 1269,006 0+880		1266,696 1268,361 0+885		1266,185 1268,007 0+900	
CCV = 140,000		1266,696 1268,361 0+885		1266,185 1268,007 0+900		1265,682 1267,407 0+905	
CCV = 140,000		1266,185 1268,007 0+900		1265,682 1267,407 0+905		1265,178 1267,482 0+910	
CCV = 140,000		1265,682 1267,407 0+905		1265,178 1267,482 0+910		1264,674 1266,892 0+915	
CCV = 140,000		1265,178 1267,482 0+910		1264,674 1266,892 0+915		1264,171 1266,370 0+920	
CCV = 140,000		1264,674 1266,892 0+915		1264,171 1266,370 0+920		1263,667 1266,528 0+925	
CCV = 140,000		1264,171 1266,370 0+920		1263,667 1266,528 0+925		1263,163 1266,070 0+930	
CCV = 140,000		1263,667 1266,528 0+925		1263,163 1266,070 0+930		1262,660 1265,551 0+935	
CCV = 140,000		1263,163 1266,070 0+930		1262,660 1265,551 0+935		1262,156 1265,008 0+940	
CCV = 140,000		1262,660 1265,551 0+935		1262,156 1265,008 0+940		1261,652 1264,505 0+945	
CCV = 140,000		1262,156 1265,008 0+940		1261,652 1264,505 0+945		1261,149 1263,853 0+950	
CCV = 140,000		1261,652 1264,505 0+945		1261,149 1263,853 0+950		1260,645 1263,289 0+955	
CCV = 140,000		1261,149 1263,853 0+950		1260,645 1263,289 0+955		1260,141 1262,767 0+960	
CCV = 140,000		1260,645 1263,289 0+955		1260,141 1262,767 0+960		1259,638 1262,143 0+965	
CCV = 140,000		1260,141 1262,767 0+960		1259,638 1262,143 0+965		1259,134 1261,466 0+970	
CCV = 140,000		1259,638 1262,143 0+965		1259,134 1261,466 0+970		1258,630 1260,870 0+975	
CCV = 140,000		1259,134 1261,466 0+970		1258,630 1260,870 0+975		1258,126 1260,280 0+980	
CCV = 140,000		1258,630 1260,870 0+975		1258,126 1260,280 0+980		1257,623 1259,901 0+985	
CCV = 140,000		1258,126 1260,280 0+980		1257,623 1259,901 0+985		1257,119 1259,538 0+990	
CCV = 140,000		1257,623 1259,901 0+985		1257,119 1259,538 0+990		1256,616 1259,037 0+995	
CCV = 140,000		1257,119 1259,538 0+990		1256,616 1259,037 0+995		1256,112 1258,521 1	
CCV = 140,000		1256,616 1259,037 0+995		1256,112 1258,521 1		1255,608 1257,904 1+5	
CCV = 140,000		1256,112 1258,521 1		1255,608 1257,904 1+5		1255,105 1257,117 1+10	
CCV = 140,000		1255,608 1257,904 1+5		1255,105 1257,117 1+10		1254,601 1256,306 1+15	
CCV = 140,000		1255,105 1257,117 1+10		1254,601 1256,306 1+15		1254,097 1255,166 1+20	
CCV = 140,000		1254,601 1256,306 1+15		1254,097 1255,166 1+20		1253,594 1253,959 1+25	
CCV = 140,000		1254,097 1255,166 1+20		1253,594 1253,959 1+25		1253,090 1252,444 1+30	
CCV = 140,000		1253,594 1253,959 1+25		1253,090 1252,444 1+30		1252,586 1251,968 1+35	
CCV = 140,000		1253,090 1252,444 1+30		1252,586 1251,968 1+35		1252,083 1251,138 1+40	
CCV = 140,000		1252,586 1251,968 1+35		1252,083 1251,138 1+40		1251,580 1250,582 1+44,508	
CCV = 140,000		1252,083 1251,138 1+40		1251,580 1250,582 1+44,508		1251,076 1250,076 1+45	
CCV = 140,000		1251,580 1250,582 1+44,508		1251,076 1250,076 1+45		1250,572 1249,700 1+55	
CCV = 140,000		1251,076 1250,076 1+45		1250,572 1249,700 1+55		1249,068 1249,232 1+60	
CCV = 140,000		1249,068 1249,232 1+60		1249,068 1249,232 1+60		1248,564 1248,808 1+65	
CCV = 140,000		1249,068 1249,232 1+60		1248,564 1248,808 1+65		1248,061 1248,387 1+70	
CCV = 140,000		1248,564 1248,808 1+65		1248,061 1248,387 1+70		1247,557 1247,999 1+74,508	
CCV = 140,000		1248,061 1248,387 1+70		1247,557 1247,999 1+74,508		1247,053 1247,525 1+80	
CCV = 140,000		1247,557 1247,999 1+74,508		1247,053 1247,525 1+80		1246,549 1247,284 1+82,672	
CCV = 140,000		1247,053 1247,525 1+80		1246,549 1247,284 1+82,672		1246,046 1246,975 1+90	
CCV = 140,000		1246,549 1247,284 1+82,672		1246,046 1246,975 1+90		1245,039 1245,622 1+100	
CCV = 140,000		1246,046 1246,975 1+90		1245,039 1245,622 1+100		1244,053 1244,453 1+110	
CCV = 140,000		1245,039 1245,622 1+100		1244,053 1244,453 1+110		1243,076 1243,154 1+120	
CCV = 140,000		1244,053 1244,453 1+110		1243,076 1243,154 1+120		1242,109 1243,239 1+120	
CCV = 140,000		1243,076 1243,154 1+120		1242,109 1243,239 1+120		1241,150 1241,138 1+130	
CCV = 140,000		1242,109 1243,239 1+120		1241,150 1241,138 1+130		1240,208 1242,191 1+130	
CCV = 140,000		1241,150 1241,138 1+130		1240,208 1242,191 1+130		1239,269 1239,769 1+160	
CCV = 140,000		1240,208 1242,191 1+130		1239,269 1239,769 1+160		1238,339 1237,587 1+180	
CCV = 140,000		1239,269 1239,769 1+160		1238,339 1237,587 1+180		1237,409 1237,587 1+180	
CCV = 140,000		1238,339 1237,587 1+180		1237,409 1237,587 1+180		1236,479 1236,555 1+170	
CCV = 140,000		1237,409 1237,587 1+180		1236,479 1236,555 1+170		1235,549 1235,621 1+160	
CCV = 140,000		1236,479 1236,555 1+170		1235,549 1235,621 1+160		1234,619 1234,689 1+160	
CCV = 140,000		1235,549 1235,621 1+160		1234,619 1234,689 1+160		1233,689 1233,761 1+150	
CCV = 140,000		1234,619 1234,689 1+160		1233,689 1233,761 1+150		1232,759 1232,831 1+140	
CCV = 140,000		1233,689 1233,761 1+150		1232,759 1232,831 1+140		1231,829 1231,901 1+130	
CCV = 140,000		1232,759 1232,831 1+140		1231,829 1231,901 1+130		1230,899 1230,971 1+120	
CCV = 140,000		1231,829 1231,901 1+130		1230,899 1230,971 1+120		1229,969 1229,971 1+110	
CCV = 140,000		1230,899 1230,971 1+120		1229,969 1229,971 1+110		1229,039 1229,041 1+100	
CCV = 140,000		1229,969 1229,971 1+110		1229,039 1229,041 1+100		1228,109 1228,111 1+90	
CCV = 140,000		1229,039 1229,041 1+100		1228,109 1228,111 1+90		1227,179 1227,181 1+80	
CCV = 140,000		1228,109 1228,111 1+90		1227,179 1227,181 1+80		1226,249 1226,251 1+70	
CCV = 140,000		1227,179 1227,181 1+80		1226,249 1226,251 1+70		1225,319 1225,321 1+60	
CCV = 140,000		1226,249 1226,251 1+70		1225,319 1225,321 1+60		1224,389 1224,391 1+50	
CCV = 140,000		1225,319 1225,321 1+60		1224,389 1224,391 1+50		1223,459 1223,461 1+40	
CCV = 140,000		1224,389 1224,391 1+50		1223,459 1223,461 1+40		1222,529 1222,531 1+30	
CCV = 140,000		1223,459 1223,461 1+40		1222,529 1222,531 1+30		1221,599 1221,601 1+20	
CCV = 140,000		1222,529 1222,531 1+30		1221,599 1221,601 1+20		1220,669 1220,671 1+10	
CCV = 140,000		1221,599 1221,601 1+20		1220,669 1220,671 1+10		1219,739 1219,741 1+00	
CCV = 140,000		1220,669 1220,671 1+10		1219,739 1219,741 1+00		1218,809 1218,811 1+00	
CCV = 140,000		1219,739 1219,741 1+00		1218,809 1218,811 1+00		1217,879 1217,881 1+00	
CCV = 140,000		1218,809 1218,811 1+00		1217,879 1217,881 1+00		1216,949 1216,951 1+00	
CCV = 140,000		1217,879 1217,881 1+00		1216,949 1216,951 1+00		1216,019 1216,021 1+00	
CCV = 140,000		1216,949 1216,951 1+00		1216,019 1216,021 1+00		1215,089 1215,091 1+00	
CCV = 140,000		1215,089 1215,091 1+00		1215,089 1215,091 1+00		1214,159 1214,161 1+00	
CCV = 140,000		1214,159 1214,161 1+00		1214,159 1214,161 1+00		1213,229 1213,231 1+00	
CCV = 140,000		1213,229 1213,231 1+00		1213,229 1213,231 1+00		1212,299 1212,301 1+00	
CCV = 140,000		1212,299 1212,301 1+00		1212,299 1212,301 1+00		1211,369 1211,371 1+00	
CCV = 140,000		1211,369 1211,371 1+00		1211,369 1211,371 1+00		1210,439 1210,441 1+00	
CCV = 140,000		1210,439 1210,441 1+00		1210,439 1210,441 1+00		1209,509 1209,511 1+00	
CCV = 140,000		1209,509 1209,511 1+00		1209,509 1209,511 1+00		1208,579 1208,581 1+00	
CCV = 140,000		1208,579 1208,581 1+00		1208,579 1208,581 1+00		1207,649 1207,651 1+00	
CCV = 140,000		1207,649 1207,651 1+00		1207,649 1207,651 1+00		1206,719 1206,721 1+00	
CCV = 140,000		1206,719 1206,721 1+00		1206,719 1206,721 1+00		1205,789 1205,791 1+00	
CCV = 140,000		1205,789 1205,791 1+00		1205,789 1205,791 1+00		1204,859 1204,861 1+00	
CCV = 140,000		1204,859 1204,861 1+00		1204,859 1204,861 1+00		1203,929 1203,931 1+00	
CCV = 140,000		1203,929 1203,931 1+00		1203,929 1203,931 1+00		1202,999 1202,100 1+00	
CCV = 140,000		1202,999 1202,100 1+00		1202,999 1202,100 1+00		1202,069 1202,071 1+00	
CCV = 140,000		1202,069 1202,071 1+00		1202,069 1202,071 1+00		1201,139 1201,141 1+00	
CCV = 140,000		1201,139 1201,141 1+00		1201,139 1201,141 1+00		1200,209 1200,211 1+00	
CCV = 140,000		1200,209 1200,211 1+00		1200,209 1200,211 1+00		1199,279 1199,281 1+00	
CCV = 140,000		1199,279 1199,281 1+00		1199,279 1199,281 1+00		1198,349 1198,351 1+00	
CCV = 140,000		1198,349 1198,351 1+00		1198,349 1198,351 1+00		1197,419 1197,421 1+00	
CCV = 140,000		1197,419 1197,421 1+00		1197,419 1197,421 1+00		1196,489 1196,491 1+00	
CCV = 140,000		1196,489 1196,491 1+00		1196,489 1196,491 1+00		1195,559 1195,561 1+00	
CCV = 140,000		1195,559 1195,561 1+00		1195,559 1195,561 1+00		1194,629 1194,631 1+00	
CCV = 140,000		1194,629 1194,631 1+00		1194,629 1194,631 1+00		1193,699 1193,701 1+00	
CCV = 140,000		1193,699 1193,701 1+00		1193,699 1193,701 1+00		1192,769 1192,771 1+00	
CCV = 140,000		1192,769 1192,771 1+00		1192,769 1192,771 1+00		1191,839 1191,841 1+00	
CCV = 140,000		1191,839 1191,841 1+00		1191,839 1191,841 1+00		1190,909 1190,911 1+00	
CCV = 140,000		1190,909 1190,911 1+00		1190,909 1190,911 1+00		1189,979 1189,981 1+00	
CCV = 140,000		1189,979 1189,981 1+00		1189,979 1189,981 1+00		1189,049 1189,051 1+00	
CCV = 140,000		1189,049 1189,051 1+00		1189,049 1189,051 1+00		1188,119 1188,121 1+00	
CCV = 140,000		1188,119 1188,121 1+00		1188,119 1188,121 1+00		1187,189 1187,191 1+00	
CCV = 140,000		1187,189 1187,191 1+00		1187,189 1187,191 1+00		1186,259 1186,261 1+00	
CCV = 140,000		1186,259 1186,261					


























BUEIROS						
OAC No	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO	
					E	D
07	1+646	BSTC	1,20	NORMAL	7,00	7,00
08	2+110	BSTC	0,80	NORMAL	4,50	11,50



ELEM.VERT.		COTAS DO PROJETO		COTAS DO TERRENO		KM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
L	1231,978	1229,913	1+480	1231,975	1229,921	1+480,443	1231,904	1230,078	1+490	1231,831	1230,276	1+500	1231,758	1230,712	1+510	1231,755	1230,733	1+500,443	1231,684	1231,184	1+520	1231,611	1231,530	1+530	1231,538	1231,839	1+540	1231,520	1231,366	1+520,330	1231,478	1232,024	1+550	1231,446	1232,316	1+560	1231,442	1232,543	1+570	1231,448	1232,617	1+573,870	1231,466	1232,809	1+580	1231,517	1232,926	1+590	1231,596	1232,435	1+600	1231,656	1232,195	1+605,870	1231,703	1232,017	1+610	1231,838	1231,630	1+620	1231,996	1231,379	1+629,799	1232,000	1231,381	1+630	1232,190	1231,346	1+640	1232,407	1231,515	1+650	1232,647	1231,843	1+659,799	1232,653	1231,852	1+660	1232,905	1232,046	1+669,273	1233,025	1232,064	1+675	1233,226	1232,483	1+680	1233,387	1232,824	1+685	1233,555	1233,162	1+690	1233,729	1233,097	1+695	1233,911	1233,827	1+700	1234,096	1234,154	1+705	1234,281	1234,174	1+710	1234,466	1234,184	1+715	1234,651	1235,050	1+720	1234,836	1235,398	1+725	1235,021	1235,693	1+730	1235,206	1236,003	1+735	1235,391	1236,323	1+740	1235,576	1236,629	1+745	1235,761	1236,937	1+750	1235,946	1237,243	1+755	1236,131	1237,550	1+760	1236,316	1237,857	1+765	1236,501	1238,164	1+770	1236,686	1238,471	1+775	1236,871	1238,778	1+780	1237,056	1239,085	1+785	1237,241	1239,392	1+790	1237,426	1239,699	1+795	1237,611	1239,999	1+800	1237,796	1240,306	1+805	1237,981	1240,613	1+810	1238,166	1240,920	1+815	1238,351	1241,227	1+820	1238,536	1241,534	1+825	1238,721	1241,841	1+830	1238,906	1242,148	1+835	1239,091	1242,455	1+840	1239,276	1242,762	1+845	1239,461	1243,069	1+850	1239,646	1243,376	1+855	1239,831	1243,683	1+860	1240,016	1243,990	1+865	1240,201	1244,297	1+870	1240,386	1244,604	1+875	1240,571	1244,911	1+880	1240,756	1245,218	1+885	1240,941	1245,525	1+890	1241,126	1245,832	1+895	1241,311	1246,139	1+900	1241,496	1246,446	1+905	1241,681	1246,753	1+910	1241,866	1247,060	1+915	1242,051	1247,367	1+920	1242,236	1247,674	1+925	1242,421	1247,981	1+930	1242,606	1248,288	1+935	1242,791	1248,595	1+940	1242,976	1248,902	1+945	1243,161	1249,209	1+950	1243,346	1249,516	1+955	1243,531	1249,823	1+960	1243,716	1250,130	1+965	1243,901	1250,437	1+970	1244,086	1250,744	1+975	1244,271	1251,051	1+980	1244,456	1251,358	1+985	1244,641	1251,665	1+990	1244,826	1251,972	2+000	1245,011	1252,279	2+005	1245,196	1252,586	2+010	1245,381	1252,893	2+015	1245,566	1253,200	2+020	1245,751	1253,507	2+025	1245,936	1253,814	2+030	1246,121	1254,121	2+035	1246,306	1254,428	2+040	1246,491	1254,735	2+045	1246,676	1255,042	2+050	1246,861	1255,349	2+055	1247,046	1255,656	2+060	1247,231	1255,963	2+065	1247,416	1256,270	2+070	1247,601	1256,577	2+075	1247,786	1256,884	2+080	1247,971	1257,191	2+085	1248,156	1257,500	2+090	1248,341	1257,807	2+095	1248,526	1258,114	2+100	1248,711	1258,421	2+105	1248,896	1258,728	2+110	1249,081	1259,035	2+115	1249,266	1259,342	2+120	1249,451	1259,650	2+125	1249,636	1259,957	2+130	1249,821	1260,264	2+135	1249,995	1260,571	2+140	1250,170	1260,878	2+145	1250,345	1261,185	2+150	1250,520	1261,492	2+155	1250,695	1261,800	2+160	1250,870	1262,107	2+165	1251,045	1262,414	2+170	1251,220	1262,721	2+175	1251,395	1263,028	2+180	1251,570	1263,335	2+185	1251,745	1263,642	2+190	1251,920	1263,950	2+195	1252,095	1264,257	2+200	1252,270	1264,564	2+205	1252,445	1264,871	2+210	1252,620	1265,178	2+215	1252,795	1265,485	2+220	1252,970	1265,792	2+225	1253,145	1266,100	2+230	1253,320	1266,407	2+235	1253,495	1266,714	2+240	1253,670	1267,021	2+245	1253,845	1267,328	2+250	1254,020	1267,635	2+255	1254,195	1267,942	2+260	1254,370	1268,250	2+265	1254,545	1268,557	2+270	1254,720	1268,864	2+275	1254,895	1269,171	2+280	1255,070	1269,478	2+285	1255,245	1269,785	2+290	1255,420	1270,092	2+295	1255,595	1270,400	2+300	1255,770	1270,707	2+305	1255,945	1271,014	2+310	1256,120	1271,321	2+315	1256,295	1271,628	2+320	1256,470	1271,935	2+325	1256,645	1272,242	2+330	1256,820	1272,550	2+335	1256,995	1272,857	2+340	1257,170	1273,164	2+345	1257,345	1273,471	2+350	1257,520	1273,778	2+355	1257,695	1274,085	2+360	1257,870	1274,392	2+365	1258,045	1274,700	2+370	1258,220	1275,007	2+375	1258,395	1275,314	2+380	1258,570	1275,621	2+385	1258,745	1275,928	2+390	1258,920	1276,235	2+395	1259,095	1276,542	2+400	1259,270	1276,850	2+405	1259,445	1277,157	2+410	1259,620	1277,464	2+415	1259,795	1277,771	2+420	1259,970	1278,078	2+425	1260,145	1278,385	2+430	1260,320	1278,692	2+435	1260,495	1279,000	2+440	1260,670	1279,307	2+445	1260,845	1279,614	2+450	1261,020	1279,921	2+455	1261,195	1280,228	2+460	1261,370	1280,535	2+465	1261,545	1280,842	2+470	1261,720	1281,150	2+475	1261,895	1281,457	2+480	1262,070	1281,764	2+485	1262,245	1282,071	2+490	1262,420	1282,378	2+495	1262,595	1282,685	2+500	1262,770	1282,992	2+505	1262,945	1283,300	2+510	1263,120	1283,607	2+515	1263,295	1283,914	2+520	1263,470	1284,221	2+525	1263,645	1284,528	2+530	1263,820	1284,835	2+535	1263,995	1285,142	2+540	1264,170	1285,450	2+545	1264,345	1285,757	2+550	1264,520	1286,064	2+555	1264,695	1286,371	2+560	1264,870	1286,678	2+565	1265,045	1286,985	2+570	1265,220	1287,292	2+575	1265,395	1287,600	2+580	1265,570	1287,907	2+585	1265,745	1288,214	2+590	1265,920	1288,521	2+595	1266,095	1288,828	2+600	1266,270	1289,135	2+605	1266,445	1289,442	2+610	1266,620	1289,750	2+615	1266,795	1290,057	2+620	1266,970	1290,364	2+625	1267,145	1290,671	2+630	1267,320	1290,978	2+635	1267,495	1291,285	2+640	1267,670	1291,592	2+645	1267,845	1291,900	2+650	1268,020	1292,207	2+655	1268,195	1292,514	2+660	1268,370	1292,821	2+665	1268,545	1293,128	2+670	1268,720	1293,435	2+675	1268,895	1293,742	2+680	1269,070	1294,050	2+685	1269,245	1294,357	2+690	1269,420	1294,664	2+695	1269,595	1294,971	2+700	1269,770	1295,278	2+705	1269,945	1295,585	2+710	1270,120	1295,892	2+715	1270,295	1296,200	2+720	1270,470	1296,507	2+725	1270,645	1296,814	2+730	1270,820	1297,121	2+735	1270,995	1297,428	2+740	1271,170	1297,735	2+745	1271,345	1298,042	2+750	1271,520	1298,350	2+755	1271,695	1298,657	2+760	1271,870	1298,964	2+765	1272,045	1299,271	2+770	1272,220	1299,578	2+775	1272,395	1299,885	2+780	1272,570	1300,192	2+785	1272,745	1300,500	2+790	1272,920	1300,807	2+795	1273,095	1301,114	2+800	1273,270	1301,421	2+805	1273,445	1301,728	2+810	1273,620	1302,035	2+815	1273,795	1302,342	2+820	1273,970	1302,650	2+825	1274,145	1302,957	2+830	1274,320	1303,264	2+835	1274,495	1303,571	2+840	1274,670	1303,878	2+845	1274,845	1304,185	2+850	1275,020	1304,492	2+855	1275,195	1304,800	2+860	1275,370	1305,107	2+865	1275,545	1305,414	2+870	1275,720	1305,721	2+875	1275,895	1306,028	2+880	1276,070	1306,335	2+885	1276,245	1306,642	2+890	1276,420	1306,950	2+895	1276,595	1307,257	2+900	1276,770	1307,564	2+905	1276,945	1307,871	2+910	1277,120	1308,178	2+915	1277,295	1308,485	2+920	1277,470	1308,792	2+925	1277,645	1309,100	2+930	1277,820	1309,407	2+935	1277,995	1309,714	2+940	1278,170	1310,021	2+945	1278,345	1310,328	2+950	1278,520	1310,635	2+955	1278,695	1310,942	2+960	1278,870	1311,250	2+965	1279,045	1311,557	2+970	1279,220	1311,864	2+975	1279,395	1312,171	2+980	1279,570	1312,478	2+985	1279,745	1312,785	2+990	1279,920	1313,092	2+995	1280,095	1313,400	3+000	1280,270	1313,707	3+005	1280,445	1314,014	3+010	1280,620	1314,321	3+015	1280,795	1314,628	3+020	1280,970	1314,935	3+025	1281,145	1315,242	3+030	1281,320	1315,550	3+035	1281,495	1315,857	3+040	1281,670	1316,164	3+045	1281,845	1316,471	3+050	1282,020	1316,778	3+055	1282,195	1317,085	3+060	1282,370	1317,392	3+065	1282,545	1317,700	3+070	1282,720	1318,007	3+075	1282,895	1318,314	3+080	1283,070	1318,621	3+085	1283,245	1318,928	3+090	1283,420	1319,235	3+095	1283,595	1319,542	3+100	1283,770	1319,850	3+105	1283,945	1320,157	3+110	1284,120	1320,464	3+115	1284,295	1320,771	3+120	1284,470	1321,078	3+125	1284,645	1321,385	3+130	1284,820	1321,692	3+135	1284,995	1322,000	3+140	1285,170	1322,307	3+145	1285,345	1322,614	3+150	1285,520	1322,921	3+155	1285,695	1323,228	3+160	1285,870	1323,535	3+165	1286,045	1323,842	3+170	1286,220	1324,150	3+175	1286,395	1324,457	3+180	1286,570	1324,764	3+185	1286,745	1325,071	3+190	1286,920	1325,378	3+195	1287,095	1325,685	3+200	1287,270	1325,992	3



- C O N V E N Ç Õ E S**

	– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS
	– AÇUDE		– BUEIROS Ø 0,40/0,60		– DRENO TIPO – IX		– CAIXA COLETORA DE SARJETA – CCS
	– BANHADO		– VALETAS DE PROTEÇÃO		– DRENO EM ROCHA – DLR		– CAIXA COLETORA DE SARJETA ESPECIAL – CCSE
	– VALA EXISTENTE		– SARJETAS		– DRENO TRANSVERSAL RASO – DTR		– CAIXA COLETORA DE TALVEGUE – CCT
	– BUEIRO EXISTENTE		– MEIO-FIO		– VALA DE ESCOAMENTO – VL		– DISSIPADORES DE ENERGIA – DEB
	– SUBSTITUIR BUEIRO		– DESCIDAS D'ÁGUA		– RÁPIDOS – DAR		

HORIZONTAL 0 10 20 30 40 50m

VERTICAL 0 1 2 3 4 5m


ENGMETRIA
 Projetos e Licenciamentos

RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 2+220 a km 2+960)

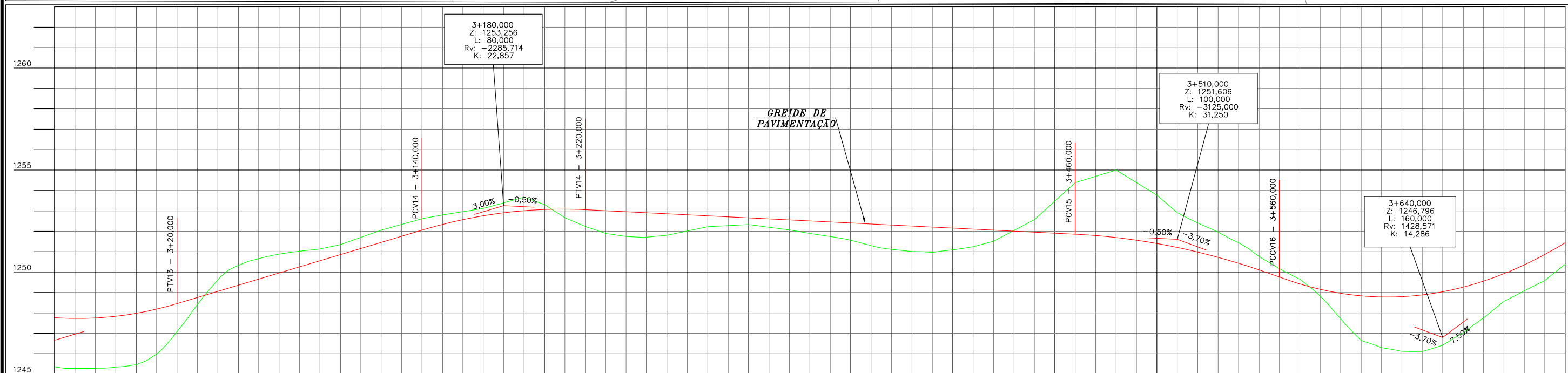
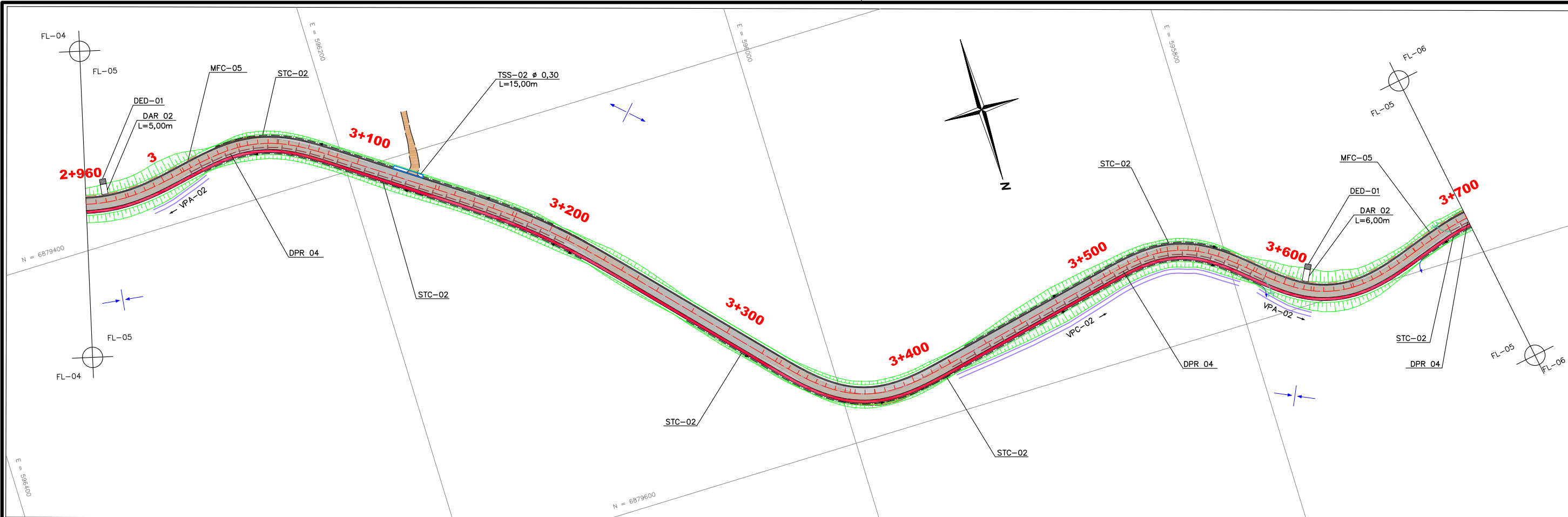
FASE DO PROJETO:
IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO:

ESCALA: H=

DATA: SETEMBRO / 2023

FOLHA: 04 04



KM	COTAS DO TERRENO	COTAS DO PROJETO	ELEM. VERT.	ELEMENTOS HORIZONTAIS
2+960	1247,766	1245,357	2+960	R = 80,130 A = 49,030
2+970	1247,739	1245,282	2+965	A = 42,426 R = 60,000
2+980	1247,727	1245,279	2+970	A = 109,545 R = 300,000
2+990	1247,730	1245,276	2+975	A = 109,545 R = 300,000
2+995	1247,731	1245,275	2+980	A = 44,721 R = 50,000
2+996	1247,731	1245,275	2+980	A = 44,721 R = 50,000
2+997	1247,731	1245,275	2+980	A = 38,730 R = 50,000
2+998	1247,731	1245,275	2+980	A = 38,730 R = 50,000
2+999	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+000	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+001	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+002	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+003	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+004	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+005	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+006	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+007	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+008	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+009	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+010	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+011	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+012	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+013	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+014	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+015	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+016	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+017	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+018	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+019	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+020	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+021	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+022	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+023	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+024	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+025	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+026	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+027	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+028	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+029	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+030	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+031	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+032	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+033	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+034	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+035	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+036	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+037	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+038	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+039	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+040	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+041	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+042	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+043	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+044	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+045	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+046	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+047	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+048	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+049	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+050	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+051	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+052	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+053	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+054	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+055	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+056	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+057	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+058	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+059	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+060	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+061	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+062	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+063	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+064	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+065	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+066	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+067	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+068	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+069	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+070	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+071	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+072	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+073	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+074	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+075	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+076	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+077	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+078	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+079	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+080	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+081	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+082	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+083	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+084	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+085	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+086	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+087	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+088	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+089	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+090	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+091	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+092	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+093	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+094	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+095	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+096	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+097	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+098	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+099	1247,731	1245,275	2+980	A = 38,730 R = 50,000
3+100	1247,731	1245,275	2+980	A = 38,730 R = 50,000

CONVENÇÕES

- RIO/CÓRREGO/SANGA
- AÇUDE
- BANHADO
- VALA EXISTENTE
- BUEIRO EXISTENTE
- SUBSTITUIR BUEIRO
- BUEIRO PROJETADO
- BUEIROS Ø 0,40/0,60
- VALETAS DE PROTEÇÃO
- SARJETAS
- MEIO-FIO
- DESCIDAS D'ÁGUA
- SAÍDA DE DRENO
- DRENO TIPO - IX
- DRENO EM ROCHA - DLR
- DRENO TRANSVERSAL RASO - DTR
- VALA DE ESCOAMENTO - VL
- RÁPIDOS - DAR
- CAIXA DE LIGAÇÃO E PASSAGEM - CLP/BLS
- CAIXA COLETORA DE SARJETA - CCS
- CAIXA COLETORA DE SARJETA ESPECIAL - CCSE
- CAIXA COLETORA DE TALVEGUE - CCT
- DISSIPADORES DE ENERGIA - DEB

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA

Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 2+960 a km 3+700)

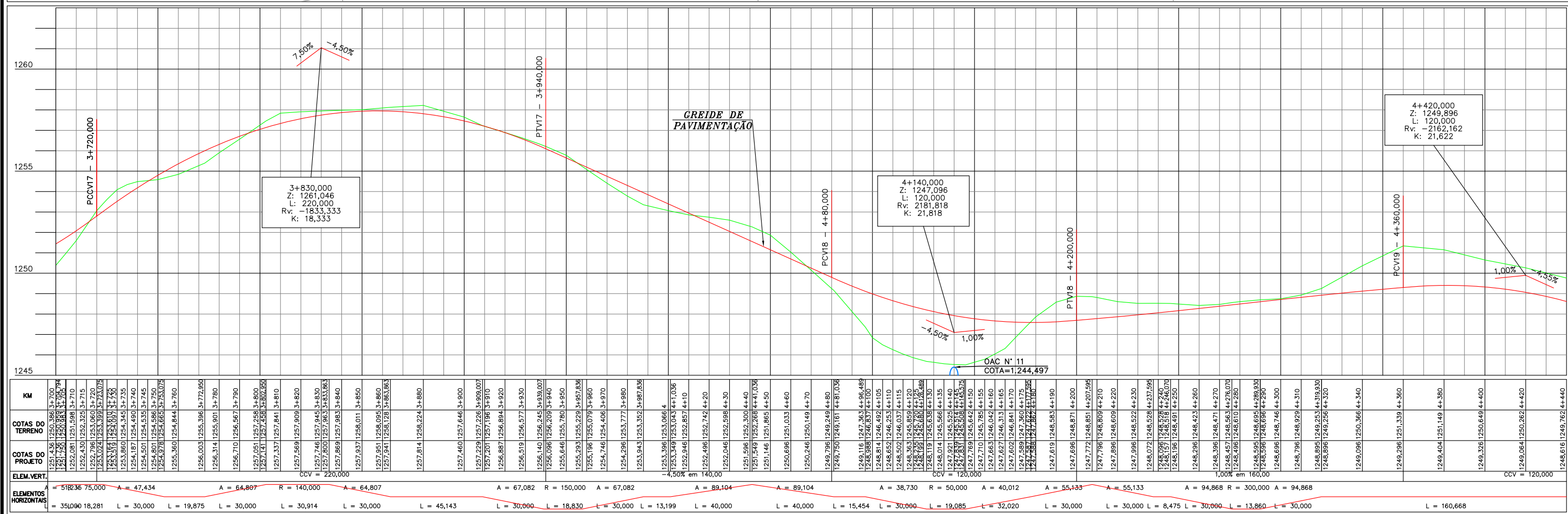
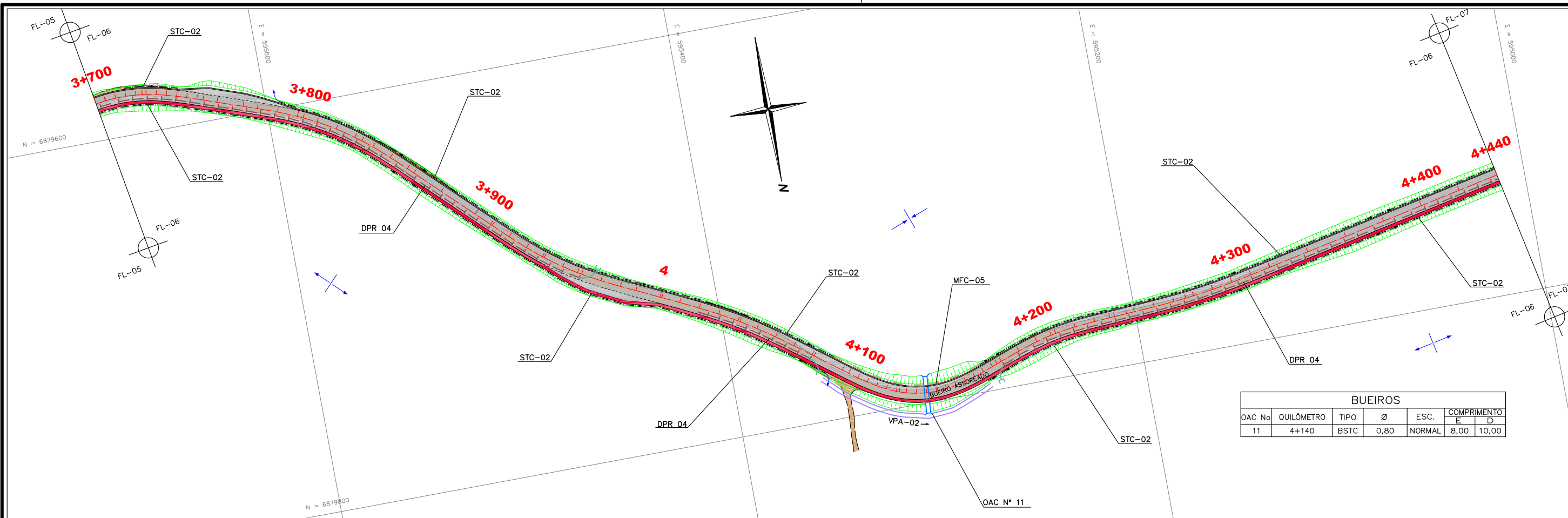
FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 377_19

ESCALA: H=1:2000 V=1:200

DATA: SETEMBRO / 2021

FOLHA: 05



CONVENÇÕES

- RIO/CÓRREGO/SANGA
- AÇUDE
- BANHADO
- VALA EXISTENTE
- BUEIRO EXISTENTE
- SUBSTITUIR BUEIRO
- BUEIRO PROJETADO
- BUEIROS Ø 0,40/0,60
- VALETAS DE PROTEÇÃO
- SARJETAS
- MEIO-FIO
- DESCIDAS D'ÁGUA
- SAÍDA DE DRENO
- DRENO TIPO - IX
- DRENO EM ROCHA - DLR
- DRENO TRANSVERSAL RASO - DTR
- VALA DE ESCOAMENTO - VL
- RÁPIDOS - DAR
- CAIXA DE LIGAÇÃO E PASSAGEM - CLP/BLS
- CAIXA COLETOIRA DE SARJETA - CCS
- CAIXA COLETOIRA DE SARJETA ESPECIAL - CCSE
- CAIXA COLETOIRA DE TALVEGUE - CCT
- DISSIPADORES DE ENERGIA - DEB

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

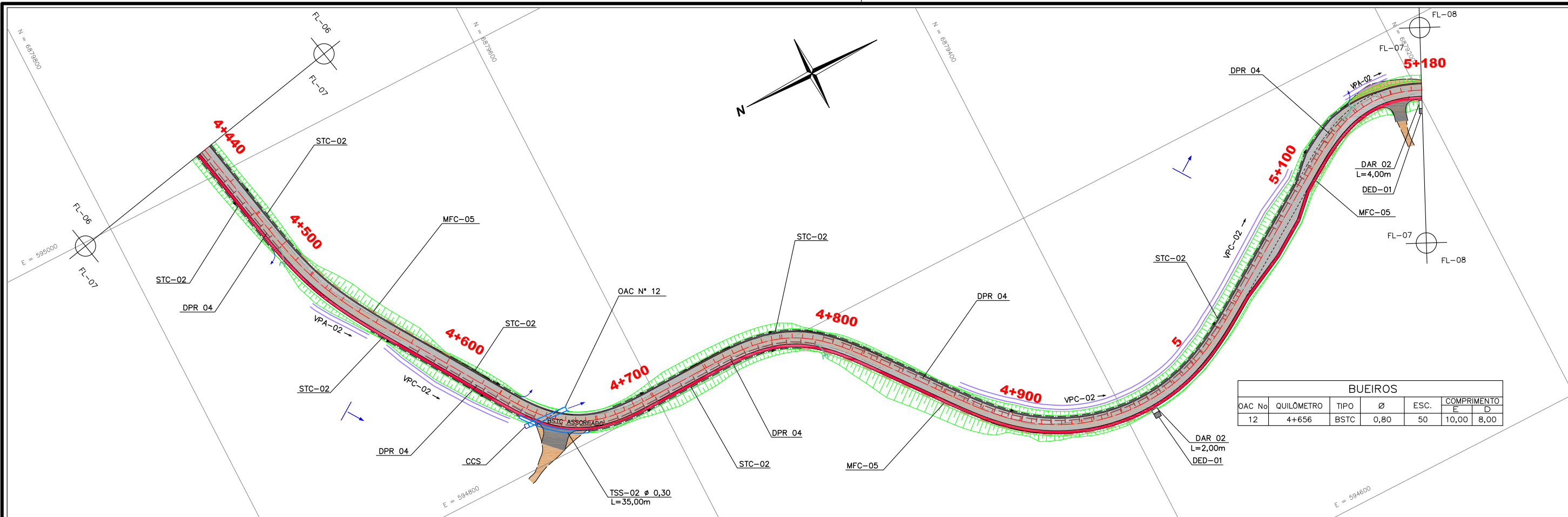
RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

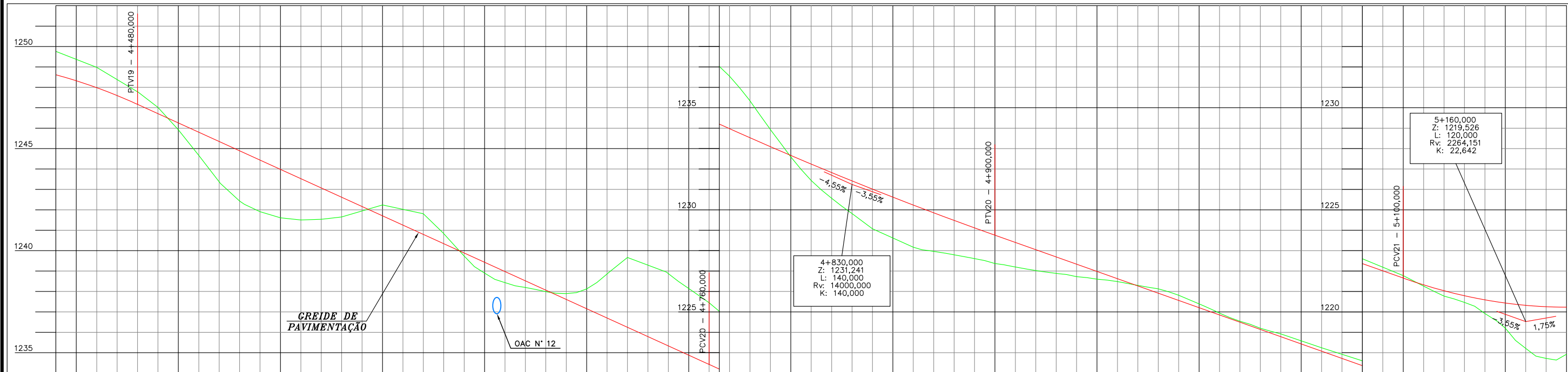
PROJETO DE DRENAGEM - (km 3+700 a km 4+440)

FASE DO PROJETO: IMPRESSÃO DEFINITIVA

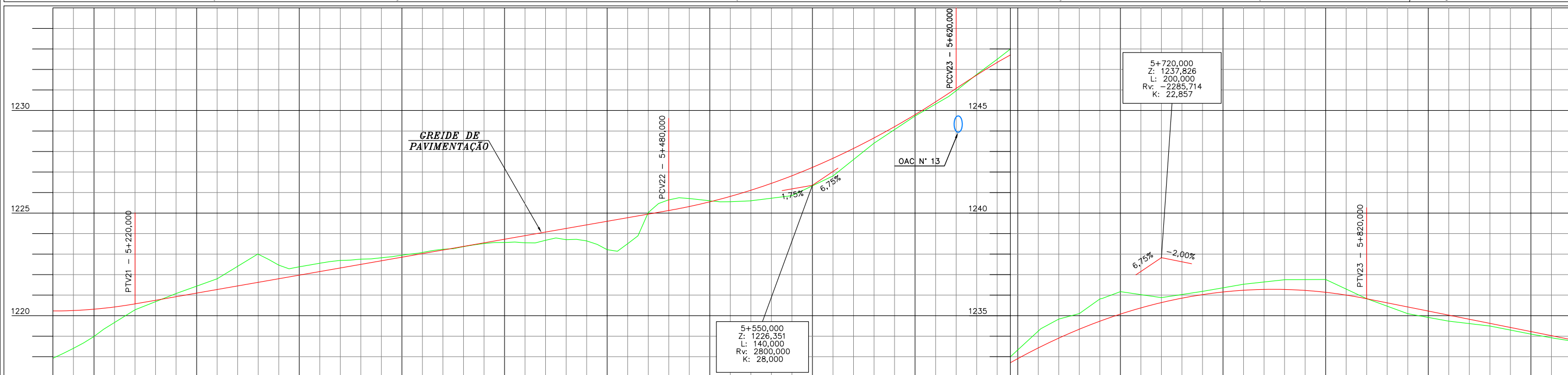
CÓDIGO PROJETO: 377_19 ESCALA: H=1:2000 V=1:200 DATA: SETEMBRO / 2021 FOLHA: 06


























BUEIROS						
OAC No	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO	
12	4+656	BSTC	0,80	50	10,00	8,00



KM		COTAS DO TERRENO		COTAS DO PROJETO		ELEM.VERT.		ELEMENTOS HORIZONTAIS			
1248,616 1249,762 4+440		1247,984 1248,981 4+460		1247,166 1247,780 4+480 1247,139 1247,743 4+480,988 1247,139 1247,743 4+480,988		1246,711 1247,020 4+490 1246,256 1245,921 4+500 1245,801 1244,666 4+510 1245,346 1243,371 4+520 1245,346 1243,371 4+520 1244,891 1242,431 4+530 1244,776 1242,267 4+532,382 1244,436 1241,908 4+540 1243,981 1241,610 4+550 1243,526 1241,504 4+560 1243,071 1241,535 4+570 1242,616 1241,650 4+580		1241,706 1242,240 4+600 -4,55% em 280,00 1240,796 1241,806 4+620 1240,341 1240,855 4+630,877 1240,341 1240,855 4+630,877 1240,141 1240,284 4+635 1239,886 1235,731 4+640 1239,659 1235,216 4+645 1239,431 1235,000 4+650 1239,204 1235,593 4+655 1238,977 1235,336 4+660,877 1238,749 1235,277 4+665 1238,521 1238,195 4+670 1238,294 1238,101 4+675 1238,066 1237,974 4+680,723 1237,839 1237,911 4+685 1237,611 1237,895 4+690 1237,384 1237,944 4+695 1237,156 1238,125 4+700 1236,929 1238,436 4+705 1236,701 1238,318 4+710 1236,474 1238,318 4+710,723 1236,246 1238,664 4+720 1235,379 1238,950 4+729,065 1235,108 1238,535 4+740 1235,108 1238,489 4+745 1234,881 1238,147 4+750 1234,654 1237,800 4+755 1234,426 1237,447 4+760 1234,198 1237,092 4+765 1233,975 1236,547 4+770 1233,751 1235,966 4+775 1233,527 1235,459 4+779,065 1233,301 1235,335 4+780 1233,074 1235,216 4+785 1232,847 1235,097 4+790 1232,620 1234,978 4+795 1232,393 1234,859 4+800 1232,166 1234,739 4+805 1231,939 1234,619 4+810 1231,712 1234,499 4+815 1231,485 1234,379 4+820 CCV 1231,258 1234,258 4+825 1231,031 1229,814 4+838,980 1231,015 1229,070 4+840 1230,233 1228,171 4+860 1230,069 1228,000 4+864,298 1229,843 1227,875 4+870 1229,616 1227,886 4+875 1229,480 1227,804 4+880 1229,249 1227,698 4+885 1229,115 1227,610 4+890 1228,981 1226,729 4+900 1228,756 1227,368 4+905 1228,531 1227,368 4+910,298 1228,304 1227,196 4+915 1228,077 1227,196 4+920 1228,224 1227,021 4+925 1228,046 1227,021 4+930 1227,869 1226,953 4+935 1227,691 1226,884 4+940 1227,514 1226,834 4+935 1227,336 1226,779 4+945 1227,159 1226,679 4+950 1226,981 1226,603 4+955 1226,804 1226,534 4+960 1226,626 1226,466 4+965 1226,448 1226,398 4+970 1226,271 1226,297 4+970 1226,094 1226,211 4+975 1225,916 1226,130 4+980 1225,739 1225,987 4+985 1225,561 1225,814 4+990 1225,384 1225,611 4+995 1225,207 1225,438 5+000 CCV 1225,030 1225,181 5+005 1224,851 1224,724 5+010 1224,674 1224,724 5+015 1224,496 1224,541 5+020 1224,319 1224,541 5+025 1224,141 1224,198 5+030 1223,964 1224,052 5+035 1223,787 1223,972 5+040 1223,610 1223,972 5+045 1223,433 1223,905 5+050 1223,256 1223,837 5+055 1223,079 1223,770 5+060 1222,902 1223,702 5+065 1222,725 1223,634 5+070 1222,548 1223,566 5+075 1222,371 1223,498 5+080 1222,194 1223,430 5+085 1222,017 1223,362 5+090 1219,840 1221,776 5+100 1221,661 1221,661 5+105 1221,484 1221,661 5+110 1221,307 1221,661 5+115 1221,130 1221,661 5+120 1220,953 1220,772 5+125 1220,776 1220,772 5+130 1220,599 1220,772 5+135 1220,422 1220,772 5+140 1220,245 1220,772 5+145 1220,068 1220,772 5+150 1219,891 1220,772 5+155 1219,714 1220,772 5+160 1219,537 1220,772 5+165 1219,360 1220,772 5+170 1219,183 1220,772 5+175 1219,006 1220,772 5+180 1218,829 1220,772 5+185 1218,652 1220,772 5+190 1218,475 1220,772 5+195 1218,298 1220,772 5+200 1218,121 1220,772 5+205 1217,944 1220,772 5+210 1217,767 1220,772 5+215 1217,590 1220,772 5+220 1217,413 1220,772 5+225 1217,236 1220,772 5+230 1217,059 1220,772 5+235 1216,882 1220,772 5+240 1216,705 1220,772 5+245 1216,528 1220,772 5+250 1216,351 1220,772 5+255 1216,174 1220,772 5+260 1215,997 1220,772 5+265 1215,820 1220,772 5+270 1215,643 1220,772 5+275 1215,466 1220,772 5+280 1215,289 1220,772 5+285 1215,112 1220,772 5+290 1214,935 1220,772 5+295 1214,758 1220,772 5+300 1214,581 1220,772 5+305 1214,404 1220,772 5+310 1214,227 1220,772 5+315 1214,050 1220,772 5+320 1213,873 1220,772 5+325 1213,696 1220,772 5+330 1213,519 1220,772 5+335 1213,342 1220,772 5+340 1213,165 1220,772 5+345 1212,988 1220,772 5+350 1212,811 1220,772 5+355 1212,634 1220,772 5+360 1212,457 1220,772 5+365 1212,280 1220,772 5+370 1212,103 1220,772 5+375 1211,926 1220,772 5+380 1211,749 1220,772 5+385 1211,572 1220,772 5+390 1211,395 1220,772 5+395 1211,218 1220,772 5+400 1211,041 1220,772 5+405 1210,864 1220,772 5+410 1210,687 1220,772 5+415 1210,510 1220,772 5+420 1210,333 1220,772 5+425 1210,156 1220,772 5+430 1209,979 1220,772 5+435 1209,802 1220,772 5+440 1209,625 1220,772 5+445 1209,448 1220,772 5+450 1209,271 1220,772 5+455 1209,094 1220,772 5+460 1208,917 1220,772 5+465 1208,740 1220,772 5+470 1208,563 1220,772 5+475 1208,386 1220,772 5+480 1208,209 1220,772 5+485 1208,032 1220,772 5+490 1207,855 1220,772 5+495 1207,678 1220,772 5+500 1207,501 1220,772 5+505 1207,324 1220,772 5+510 1207,147 1220,772 5+515 1206,970 1220,772 5+520 1206,793 1220,772 5+525 1206,616 1220,772 5+530 1206,439 1220,772 5+535 1206,262 1220,772 5+540 1206,085 1220,772 5+545 1205,908 1220,772 5+550 1205,731 1220,772 5+555 1205,554 1220,772 5+560 1205,377 1220,772 5+565 1205,200 1220,772 5+570 1205,023 1220,772 5+575 1204,846 1220,772 5+580 1204,669 1220,772 5+585 1204,492 1220,772 5+590 1204,315 1220,772 5+595 1204,138 1220,772 5+600 1203,961 1220,772 5+605 1203,784 1220,772 5+610 1203,607 1220,772 5+615 1203,430 1220,772 5+620 1203,253 1220,772 5+625 1203,076 1220,772 5+630 1222,366 1222,602 5+80		1240,796 1241,806 4+620 1240,341 1240,855 4+630,877 1240,341 1240,855 4+630,877 1240,141 1240,284 4+635 1239,886 1235,731 4+640 1239,659 1235,216 4+645 1239,431 1235,000 4+650 1239,204 1235,593 4+655 1238,977 1235,336 4+660,877 1238,749 1235,277 4+665 1238,521 1238,195 4+670 1238,294 1238,101 4+675 1238,066 1237,974 4+680,723 1237,839 1237,911 4+685 1237,611 1237,895 4+690 1237,384 1237,944 4+695 1237,156 1238,125 4+700 1236,929 1238,436 4+705 1236,701 1238,318 4+710 1236,474 1238,318 4+710,723 1236,246 1238,664 4+720 1235,379 1238,950 4+729,065 1235,108 1238,535 4+740 1235,108 1238,489 4+745 1234,881 1238,147 4+750 1234,654 1237,800 4+755 1234,426 1237,447 4+760 1234,198 1237,092 4+765 1233,975 1236,547 4+770 1233,751 1235,966 4+775 1233,527 1235,459 4+779,065 1233,301 1235,335 4+780 1233,074 1235,216 4+785 1232,847 1235,097 4+790 1232,620 1234,978 4+795 1232,393 1234,859 4+800 1232,166 1234,739 4+805 1231,939 1234,619 4+810 1231,712 1234,499 4+815 1231,485 1234,379 4+820 CCV 1231,258 1234,258 4+825 1231,031 1229,814 4+838,980 1231,015 1229,070 4+840 1230,233 1228,171 4+860 1230,069 1228,000 4+864,298 1229,843 1227,875 4+870 1229,616 1227,886 4+875 1229,480 1227,804 4+880 1229,249 1227,698 4+885 1229,115 1227,610 4+890 1228,981 1226,729 4+900 1228,756 1227,368 4+905 1228,531 1227,368 4+910,298 1228,304 1227,196 4+915 1228,077 1227,196 4+920 1228,224 1227,021 4+925 1228,046 1227,021 4+930 1227,869 1226,953 4+935 1227,691 1226,884 4+940 1227,514 1226,834 4+935 1227,336 1226,779 4+945 1227,159 1226,679 4+950 1226,981 1226,603 4+955 1226,804 1226,534 4+960 1226,626 1226,466 4+965 1226,448 1226,398 4+970 1226,271 1226,297 4+970 1226,094 1226,211 4+975 1225,916 1226,130 4+980 1225,739 1225,987 4+985 1225,561 1225,814 4+990 1225,384 1225,611 4+995 1225,207 1225,438 5+000 CCV 1225,030 1225,181 5+005 1224,851 1224,724 5+010 1224,674 1224,724 5+015 1224,496 1224,541 5+020 1224,319 1224,541 5+025 1224,141 1224,198 5+030 1223,964 1224,052 5+035 1223,787 1223,972 5+040 1223,610 1223,972 5+045 1223,433 1223,905 5+050 1223,256 1223,837 5+055 1223,079 1223,770 5+060 1222,902 1223,702 5+065 1222,725 1223,634 5+070 1222,548 1223,566 5+075 1222,371 1223,498 5+080 1222,194 1223,430 5+085 1222,017 1223,362 5+090 1221,840 1221,776 5+095 1221,661 1221,661 5+100 1221,484 1221,661 5+105 1221,307 1221,661 5+110 1221,130 1221,661 5+115 1220,953 1220,772 5+120 1220,776 1220,772 5+125 1220,599 1220,772 5+130 1220,422 1220,772 5+135 1220,245 1220,772 5+140 1220,068 1220,772 5+145 1219,891 1220,772 5+150 1219,714 1220,772 5+155 1219,537 1220,772 5+160 1219,360 1220,772 5+165 1219,183 1220,772 5+170 1218,906 1220,772 5+175 1218,729 1220,772 5+180 1218,552 1220,772 5+185 1218,375 1220,772 5+190 1218,198 1220,772 5+195 1218,021 1220,772 5+200 1217,844 1220,772 5+205 1217,667 1220,772 5+210 1217,490 1220,772 5+215 1217,313 1220,772 5+220 1217,136 1220,772 5+225 1216,959 1220,772 5+230 1216,782 1220,772 5+235 1216,605 1220,772 5+240 1216,428 1220,772 5+245 1216,251 1220,772 5+250 1216,074 1220,772 5+255 1215,897 1220,772 5+260 1215,720 1220,772 5+265 1215,543 1220,772 5+270 1215,366 1220,772 5+275 1215,189 1220,772 5+280 1215,012 1220,772 5+285 1214,835 1220,772 5+290 1214,658 1220,772 5+295 1214,481 1220,772 5+300 1214,304 1220,772 5+305 1214,127 1220,772 5+310 1213,950 1220,772 5+315 1213,773 1220,772 5+320 1213,596 1220,772 5+325 1213,419 1220,772 5+330 1213,242 1220,772 5+335 1213,065 1220,772 5+340 1212,888 1220,772 5+345 1212,711 1220,772 5+350 1212,534 1220,772 5+355 1212,357 1220,772 5+360 1212,180 1220,772 5+365 1211,903 1220,772 5+370 1211,726 1220,772 5+375 1211,549 1220,772 5+380 1211,372 1220,772 5+385 1211,195 1220,772 5+390 1211,018 1220,772 5+395 1210,841 1220,772 5+400 1210,664 1220,772 5+405 1210,487 1220,772 5+410 1210,310 1220,772 5+415 1210,133 1220,772 5+420 1209,956 1220,772 5+425 1209,779 1220,772 5+430 1209,602 1220,772 5+435 1209,425 1220,772 5+440 1209,248 1220,772 5+445 1209,071 1220,772 5+450 1208,894 1220,772 5+455 1208,717 1220,772 5+460 1208,540 1220,772 5+465 1208,363 1220,772 5+470 1208,186 1220,772 5+475 1208,009 1220,772 5+480 1207,832 1220,772 5+485 1207,655 1220,772 5+490 1207,478 1220,772 5+495 1207,301 1220,772 5+500 1207,124 1220,772 5+505 1206,947 1220,772 5+510 1206,770 1220,772 5+515 1206,593 1220,772 5+520 1206,416 1220,772 5+525 1206,239 1220,772 5+530 1206,062 1220,772 5+535 1205,885 1220,772 5+540 1205,708 1220,772 5+545 1205,531 1220,772 5+550 1205,354 1220,772 5+555 1205,177 1220,772 5+560 1204,900 1220,772 5+565 1204,723 1220,772 5+570 1204,546 1220,772 5+575 1204,369 1220,772 5+580 1204,192 1220,772 5+585 1204,015 1220,772 5+590 1203,838 1220,772 5+595 1203,661 1220,772 5+600 1203,484 1220,772 5+605 1203,307 1220,772 5+610 1203,130 1220,772 5+615 1202,953 1220,772 5+620 1202,776 1220,772 5+625 1202,599 1220,772 5+630 1202,422 1220,772 5+635 1202,245 1220,772 5+640 1202,068 1220,772 5+645 1201,891 1220,772 5+650 1201,714 1220,772 5+655 1201,537 1220,772 5+660 1201,360 1220,772 5+665 1201,183 1220,772 5+670 1201,006 1220,772 5+675 1200,829 1220,772 5+680 1200,652 1220,772 5+685 1200,475 1220,772 5+690 1200,298 1220,772 5+695 1200,121 1220,772 5+700 1199,944 1220,772 5+705 1199,767 1220,772 5+710 1199,590 1220,772 5+715 1199,413 1220,772 5+720 1199,236 1220,772 5+725 1199,059 1220,772 5+730 1198,882 1220,772 5+735 1198,705 1220,772 5+740 1198,528 1220,772 5+745 1198,351 1220,772 5+750 1198,174 1220,772 5+755 1197,997 1220,772 5+760 1197,820 1220,772 5+765 1197,643 1220,772 5+770 1197,466 1220,772 5+775 1197,289 1220,772 5+780 1197,112 1220,772 5+785 1196,935 1220,772 5+790 1196,758 1220,772 5+795 1196,581 1220,772 5+800 1196,404 1220,772 5+805 1196,227 1220,772 5+810 1196,050 1220,772 5+815 1195,873 1220,772 5+820 1195,696 1220,772 5+825 1195,519 1220,772 5+830 1195,342 1220,772 5+835 1195,165 1220,772 5+840 1194,988 1220,772 5+845 1194,811 1220,772 5+850 1194,634 1220,772 5+855 1194,457 1220,772 5+860 1194,280 1220,772 5+865 1194,103 1220,772 5+870 1193,926 1220,772 5+875 1193,749 1220,772 5+880 1193,572 1220,772 5+885 1193,395 1220,772 5+890 1193,218 1220,772 5+895 1193,041	

[illegible]

C O N V E N Ç Õ E S

	– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS
	– AÇUDE		– BUEIROS ø 0,40/0,60		– DRENO TIPO – IX		– CAIXA COLETOIRA DE SARJETA – ECL
	– BANHADO		– VALETAS DE PROTEÇÃO		– DRENO EM ROCHA – DLR		– CAIXA COLETOIRA DE SARJETA ESPECIAL – CCSE
	– VALA EXISTENTE		– SARJETAS		– DRENO TRANSVERSAL RASO – DTR		– CAIXA COLETOIRA DE TALVEGUE – CCT
	– BUEIRO EXISTENTE		– MEIO-FIO		– VALA DE ESCOAMENTO – VL		– DISSIPADORES DE ENERGIA – DEB
	– SUBSTITUIR BUEIRO		– DESCIDAS D'ÁGUA		– RÁPIDOS – DAR		

ESCALAS GRÁFICAS

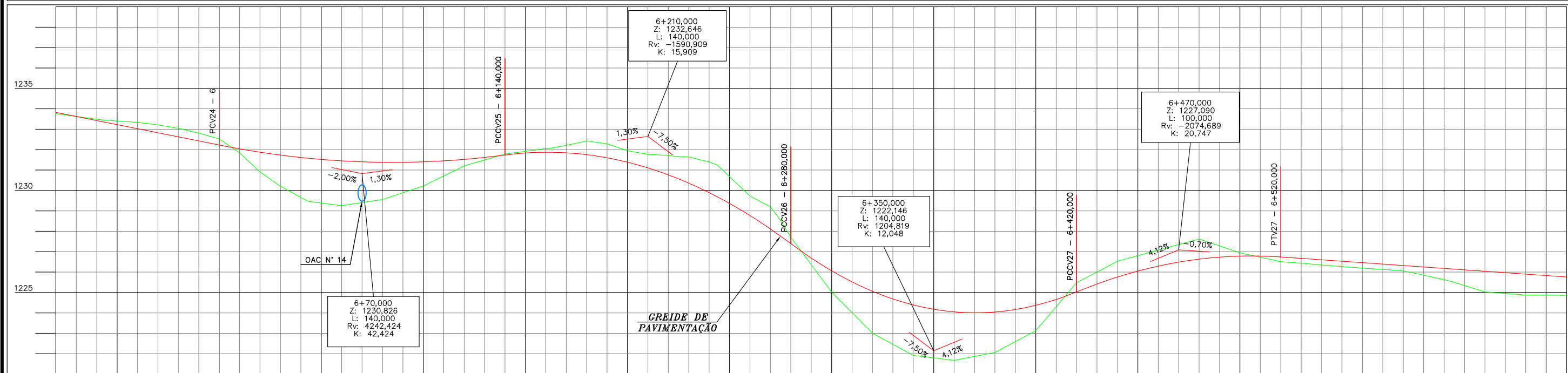
HORIZONTAL 0 10 20 30 40 50m

VERTICAL 0 1 2 3 4 5m
























DESENVOLVIDO POR:

 **ENGMETRIA**
Projetos e Licenciamentos

	PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
	RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO			
PROJETO DE DRENAGEM - (km 5+180 a km 5+920)				FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CODIGO PROJETO:	377 19	ESCALA:	H=1:2000 V=1:5000	DATA:
				S/21FEBR/2021
				FOLHA:
				08



ELEM.VERT.		A = 83,739		R = 233,740		R = 150,000		A = 67,082		A = 65,695		R = 143,860		R = 130,000		A = 62,450		CCV = 140,000		CCV = 140,000		CCV = 100,000		A = 102,470R = 350,000A = 102,470		A = 44,72																																																																																																																																																																																																																																																																											
ELEMENTOS HORIZONTAIS		L = 30,000		L = 30,888		L = 41,665		L = 30,000		L = 119,101		L = 30,000		L = 30,644		L = 20,787		L = 30,000		L = 258,776		L = 30,060		L = 10,165		L = 30,000		L = 36,892		L = 40,000																																																																																																																																																																																																																																																																							
KM		1233,826		1233,761		5+920		1233,626		1233,625		6+930		1233,428		1233,491		5+940		1233,404		1233,475		5+941,117		1233,228		1233,401		5+950		1233,026		1233,337		5+960		1232,826		1233,212		5+970		1232,785		1233,178		5+972,005		1232,626		1233,044		5+980		1232,428		1232,807		5+990		1232,226		1232,526		6		1232,038		1231,843		6+10		1231,975		1231,499		6+13,670		1231,873		1230,903		6+20		1231,732		1230,206		6+30		1231,615		1229,654		6+40		1231,527		1228,462		6+43,670		1231,450		1229,255		6+60		CCV = 140,000		1231,756		1231,784		6+140		1231,580		1229,557		6+80		1231,405		1230,222		6+100		1231,523		1231,203		6+120		CCV = 140,000		1229,893		1231,397		6+240		1229,678		1231,234		6+244,202		1229,363		1230,672		6+250		1228,770		1229,726		6+260		1228,115		1229,194		6+270		1227,920		1228,642		6+274,202		1227,396		1227,706		6+280		1226,062		1225,021		6+300		1225,060		1223,003		6+320		1224,390		1221,916		6+340		CCV = 140,000		1224,052		1221,674		6+360		1223,758		1226,529		6+440		1226,292		1227,080		6+460		CCV = 100,000		1226,634		1227,617		6+480		1226,784		1226,944		6+500		1226,439		1226,175		6+52,978		1226,368		1226,109		6+573,143		1226,320		1226,059		6+580		1226,180		1225,629		6+600		1226,150		1225,354		6+603,150		1226,040		1225,032		6+620		0,70% em 180,00		1225,900		1224,876		6+640,035		1225,865		1224,866		6+645		1225,830		1224,866		6+650		1225,760		1224,862		6+660	

	– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS
	– AÇUDE		– BUEIROS Ø 0,40/0,60		– DRENO TIPO – IX		– CAIXA COLETORA DE SARJETA – CCS
	– BANHADO		– VALETAS DE PROTEÇÃO		– DRENO EM ROCHA – DLR		– CAIXA COLETORA DE DRENO ESPECIAL – CCSE
	– VALA EXISTENTE		– SARJETAS		– DRENO TRANSVERSAL RASO – DTR		– CAIXA COLETORA DE TALVEGUE – CCT
	– BUEIRO EXISTENTE		– MEIO-FIO		– VALA DE ESCOAMENTO – VL		– DISSIPADORES DE ENERGIA – DEB
	– SUBSTITUIR BUEIRO		– DESCIDAS D'ÁGUA		– RÁPIDOS – DAR		

HORIZONTAL 0 10 20 30 40 50m

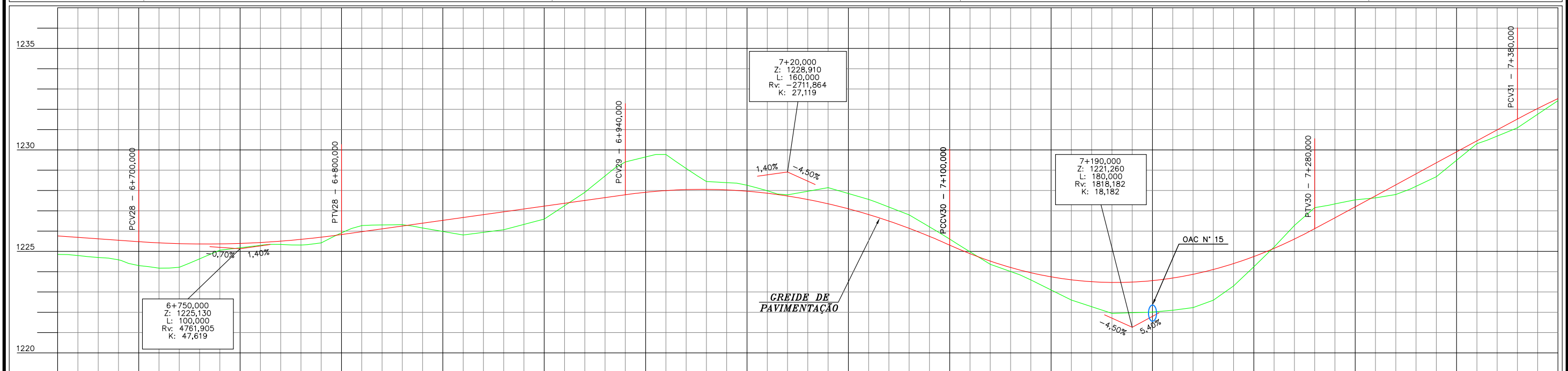
VERTICAL 0 1 2 3 4 5m


ENGMETRIA
 Projetos e Licenciamentos
























RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 5+920 a km 6+660)

CODIGO PROJETO:	377 10	ESCALA:	H=1:2000 1:500	DATA:	SETEMBRO / 2021	FOLHA:	09
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[illegible]

C O N V E N Ç Õ E S

	— RIO/CÓRREGO/SANGA		— BUEIRO PROJETADO		— SAÍDA DE DRENO		— CAIXA DE LIGAÇÃO E PASSAGEM — CLP/BLS
	— AÇUDE		— BUEIROS Ø 0,40/0,60		— DRENO TIPO — IX		— CAIXA COLETORA DE SARJETA — CCS
	— BANHADO		— VALETAS DE PROTEÇÃO		— DRENO EM ROCHA — DLR		— CAIXA COLETORA DE SARJETA ESPECIAL — CCSE
	— VALA EXISTENTE		— SARJETAS		— DRENO TRANSVERSAL RASO — DTR		— CAIXA COLETORA DE TALVEGUE — CCT
	— BUEIRO EXISTENTE		— MEIO-FIO		— VALA DE ESCOAMENTO — VL		— DISSIPADORES DE ENERGIA — DEB
	— SUBSTITUIR BUEIRO		— DESCIDAS D'ÁGUA		— RÁPIDOS — DAR		


ESCALAS GRÁFICAS

HORIZONTAL



0 10 20 30 40 50m

VERTICAL

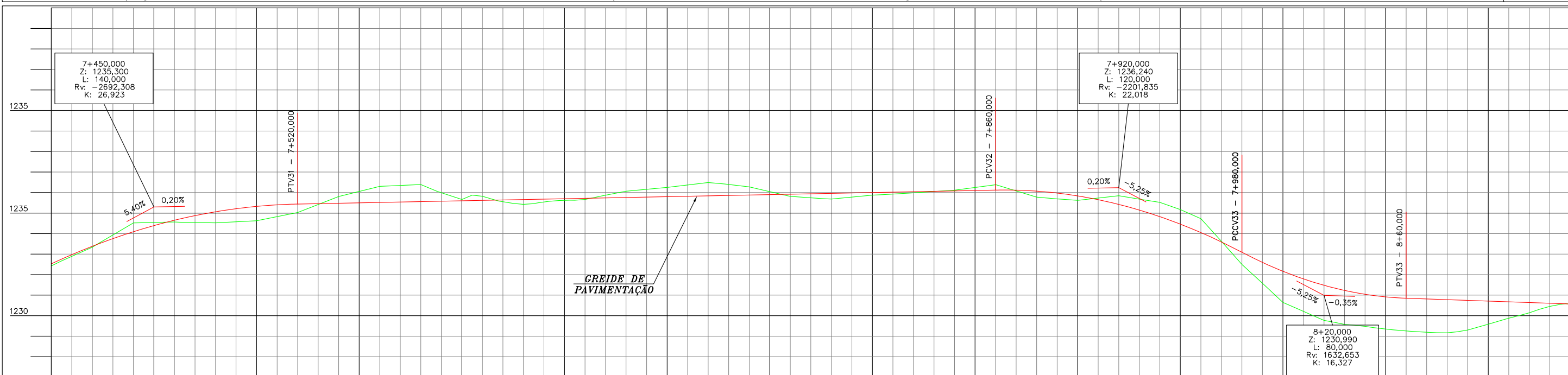


0 1 2 3 4 5m

















DESENVOLVIDO POR:

 **ENGMETRIA**
Projetos e Licenciamentos

	PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
	RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO			
PROJETO DE DRENAGEM - (km 6+660 a km 7+400)				FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CÓDIGO PROJETO: 377_19	ESCALA: H=1:2000 V=1:200	DATA: SETEMBRO / 2021	FOLHA: 10	

[illegible]

ELEM.VERT.	CCV = 140,000										0,20% em 340,00										CCV = 120,000										CCV = 80,000																																																	
A = 189,737	A = 189,737										A = 38,730 R = 50,000 A = 38,730										A = 116,190 R = 450,000 A = 116,190										A = 122,474 R = 500,000 A = 122,474										A = 94,868 R = 300,000 A = 94,868										A = 38,730 R = 50,000										A = 38,730										A = 54,772 R = 100,000									
R = 900,000	R = 17,503										L = 125,595										L = 60,151										L = 54,352										L = 30,000 L = 10,944 L = 30,000 L = 8,337 L = 30,000 L = 8,446 L = 30,000 L = 7,748 L = 30,000 L = 16,017 L = 30,000 L = 16,441 L = 30,000 L = 8,439																																							
L = 40,000	L = 40,000										L = 30,000 L = 19,875 L = 30,000										L = 30,000 L = 17,332 L = 30,000										L = 30,000 L = 10,944 L = 30,000 L = 8,337 L = 30,000 L = 8,446 L = 30,000 L = 7,748 L = 30,000 L = 16,017 L = 30,000 L = 16,441 L = 30,000 L = 8,439																																																	

	– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS
	– AÇUDE		– BUEIROS Ø 0,40/0,60		– DRENO TIPO – IX		– CAIXA COLETORA DE SARJETA – CCS
	– BANHADO		– VALETAS DE PROTEÇÃO		– DRENO EM ROCHA – DLR		– CAIXA COLETORA DE SARJETA ESPECIAL – CCSE
	– VALA EXISTENTE		– SARJETAS		– DRENO TRANSVERSAL RASO – DTR		– CAIXA COLETORA DE TALVEGUE – CCT
	– BUEIRO EXISTENTE		– MEIO-FIO		– VALA DE ESCOAMENTO – VL		– DISSIPADORES DE ENERGIA – DEB
	– SUBSTITUIR BUEIRO		– DESCIDAS D'ÁGUA		– RÁPIDOS – DAR		

HORIZONTAL 0 10 20 30 40 50m

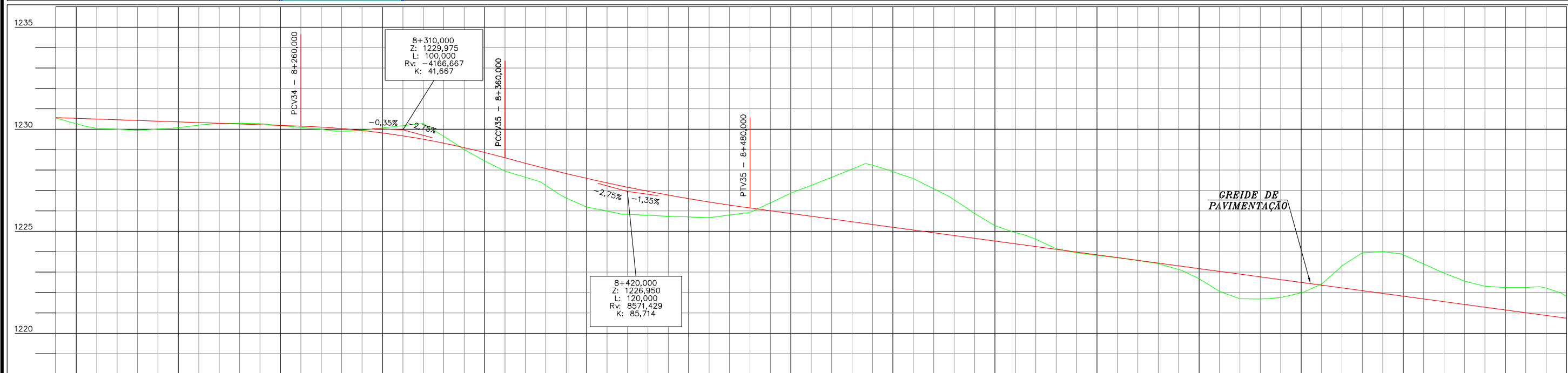
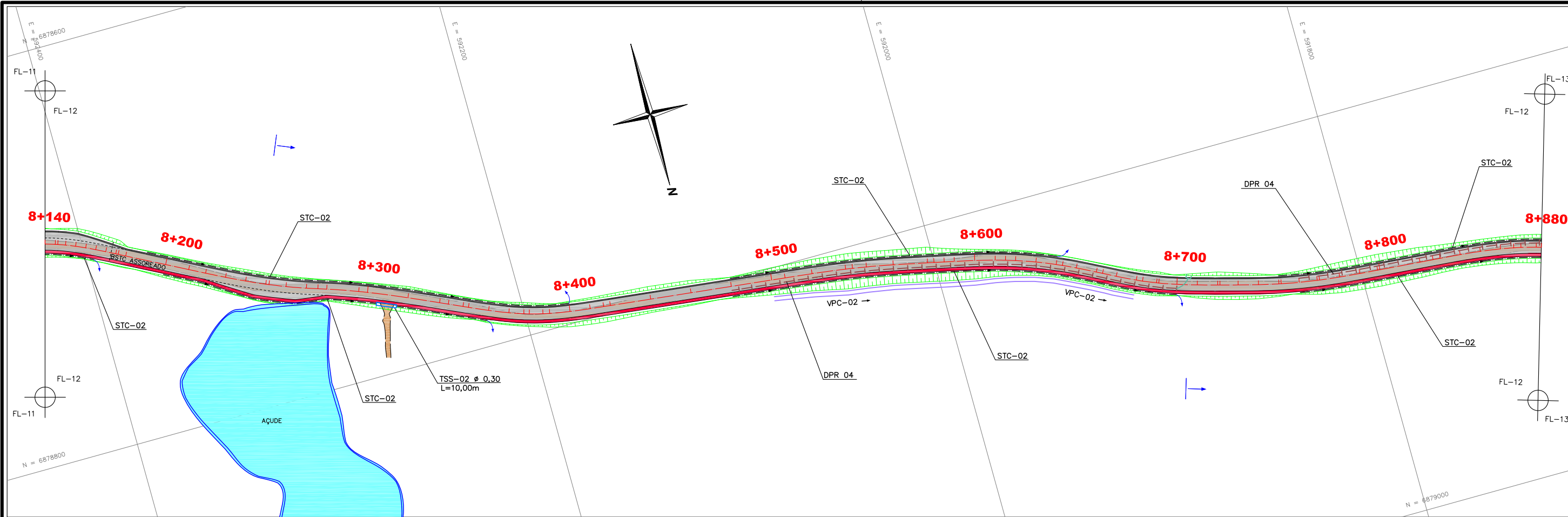
VERTICAL 0 1 2 3 4 5m


ENGMETRIA
 Projetos e Licenciamentos

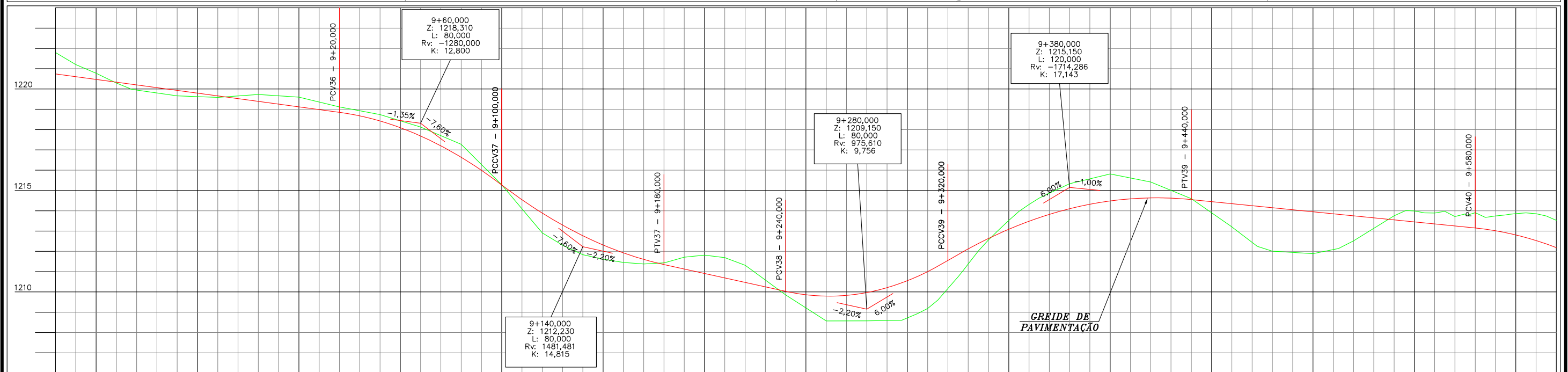
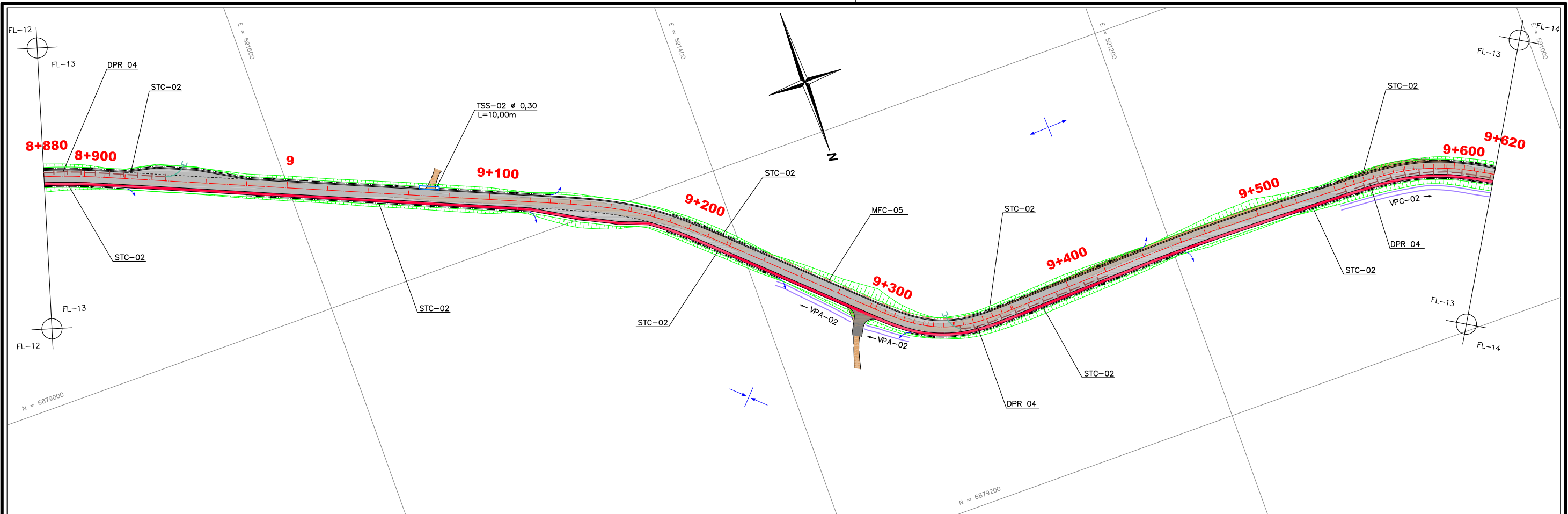
RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 7+400 a km 8+140)

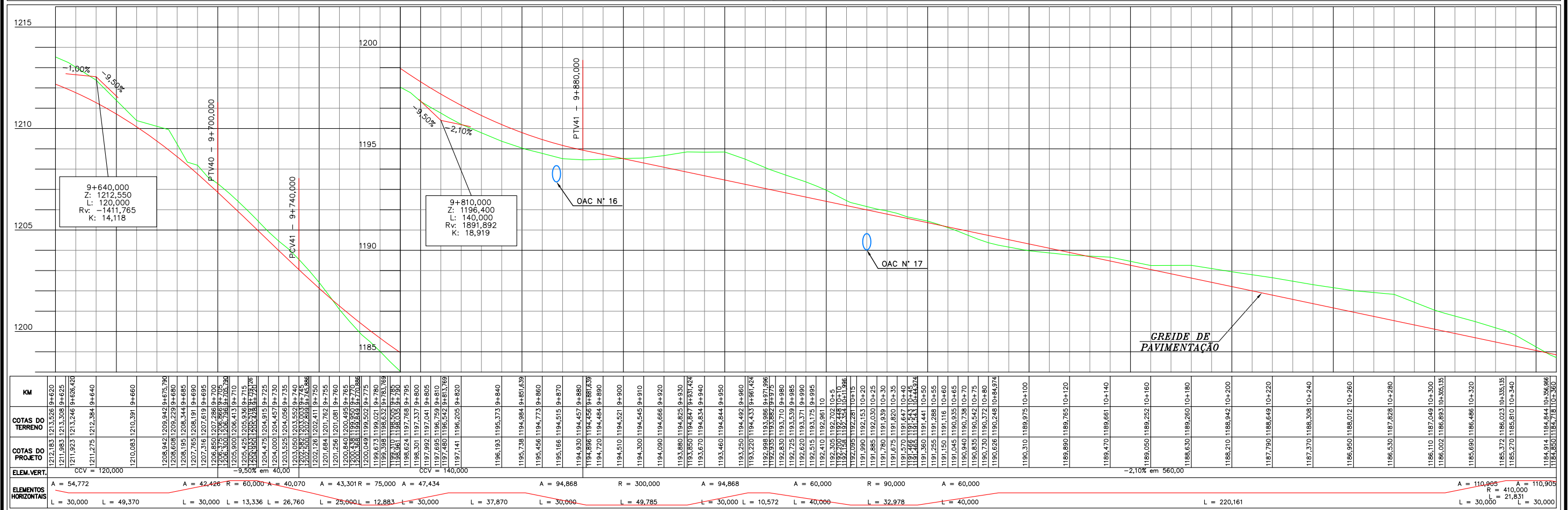
CÓDIGO PROJETO:	377 10	ESCALA:	H=1:2000 V=1:200	DATA:	SETEMBRO / 2021	FOLHA:	11
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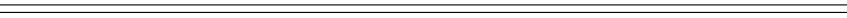











































































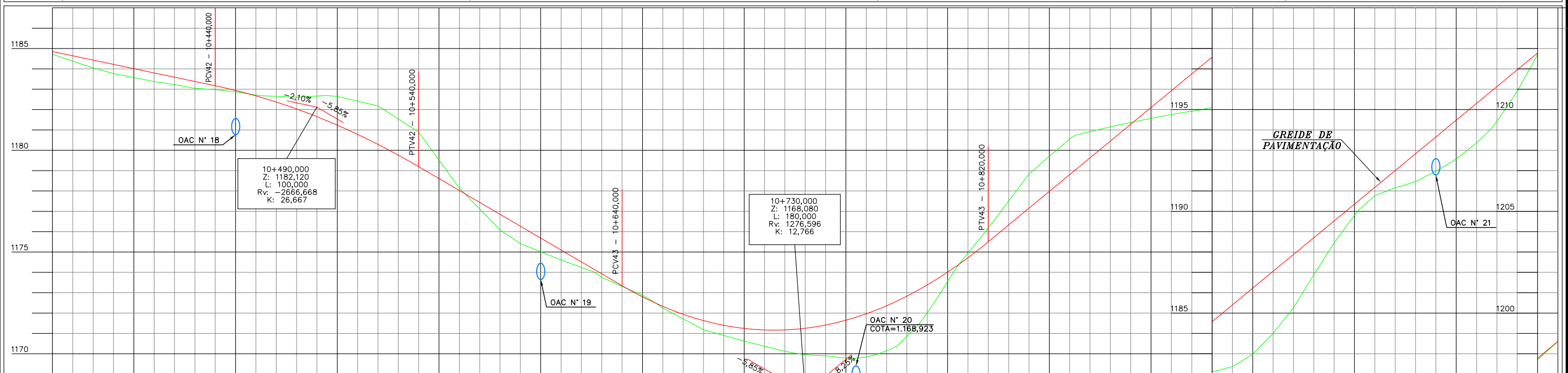
ELEM.VERT.		COTAS DO PROJETO		COTAS DO TERRENO		KM	
1230,570		1230,553		1230,536		8+140	
1230,536		1230,519		1230,502		8+145	
1230,519		1230,502		1230,485		8+150	
1230,485		1230,468		1230,451		8+155	
1230,468		1230,451		1230,434		8+160	
1230,451		1230,434		1230,417		8+165	
1230,434		1230,417		1230,400		8+170	
1230,417		1230,400		1230,383		8+175	
1230,400		1230,383		1230,366		8+180	
1230,383		1230,366		1230,349		8+185	
1230,366		1230,349		1230,332		8+190	
1230,349		1230,332		1230,315		8+195	
1230,332		1230,315		1230,298		8+200	
1230,315		1230,298		1230,281		8+205	
1230,298		1230,281		1230,264		8+210	
1230,281		1230,264		1230,247		8+215	
1230,264		1230,247		1230,230		8+220	
1230,247		1230,230		1230,213		8+225	
1230,230		1230,213		1230,196		8+230	
1230,213		1230,196		1230,179		8+235	
1230,196		1230,179		1230,162		8+240	
1230,179		1230,162		1230,145		8+245	
1230,162		1230,145		1230,128		8+250	
1230,145		1230,128		1230,111		8+255	
1230,128		1230,111		1230,094		8+260	
1230,111		1230,094		1230,077		8+265	
1230,094		1230,077		1230,060		8+270	
1230,077		1230,060		1230,043		8+275	
1230,060		1230,043		1230,026		8+280	
1230,043		1230,026		1230,009		8+285	
1230,026		1230,009		1229,992		8+290	
1230,009		1229,992		1229,975		8+295	
1229,992		1229,975		1229,958		8+300	
1229,975		1229,958		1229,941		8+305	
1229,958		1229,941		1229,924		8+310	
1229,941		1229,924		1229,907		8+315	
1229,924		1229,907		1229,890		8+320	
1229,907		1229,890		1229,873		8+325	
1229,890		1229,873		1229,856		8+330	
1229,873		1229,856		1229,839		8+335	
1229,856		1229,839		1229,822		8+340	
1229,839		1229,822		1229,805		8+345	
1229,822		1229,805		1229,788		8+350	
1229,805		1229,788		1229,771		8+355	
1229,788		1229,771		1229,754		8+360	
1229,771		1229,754		1229,737		8+365	
1229,754		1229,737		1229,720		8+370	
1229,737		1229,720		1229,703		8+375	
1229,720		1229,703		1229,686		8+380	
1229,703		1229,686		1229,669		8+385	
1229,686		1229,669		1229,652		8+390	
1229,669		1229,652		1229,635		8+395	
1229,652		1229,635		1229,618		8+400	
1229,635		1229,618		1229,601		8+405	
1229,618		1229,601		1228,584		8+410	
1229,601		1228,584		1228,567		8+415	
1228,584		1228,567		1228,550		8+420	
1228,567		1228,550		1228,533		8+425	
1228,550		1228,533		1228,516		8+430	
1228,533		1228,516		1228,499		8+435	
1228,516		1228,499		1228,482		8+440	
1228,499		1228,482		1228,465		8+445	
1228,482		1228,465		1228,448		8+450	
1228,465		1228,448		1228,431		8+455	
1228,448		1228,431		1228,414		8+460	
1228,431		1228,414		1228,397		8+465	
1228,414		1228,397		1228,380		8+470	
1228,397		1228,380		1228,363		8+475	
1228,380		1228,363		1228,346		8+480	
1228,363		1228,346		1228,329		8+485	
1228,346		1228,329		1228,312		8+490	
1228,329		1228,312		1228,295		8+495	
1228,312		1228,295		1228,278		8+500	
1228,295		1228,278		1228,261		8+505	
1228,278		1228,261		1228,244		8+510	
1228,261		1228,244		1228,227		8+515	
1228,244		1228,227		1228,210		8+520	
1228,227		1228,210		1228,193		8+525	
1228,210		1228,193		1228,176		8+530	
1228,193		1228,176		1228,159		8+535	
1228,176		1228,159		1228,142		8+540	
1228,159		1228,142		1228,125		8+545	
1228,142		1228,125		1228,108		8+550	
1228,125		1228,108		1228,091		8+555	
1228,108		1228,091		1228,074		8+560	
1228,091		1228,074		1228,057		8+565	
1228,074		1228,057		1228,040		8+570	
1228,057		1228,040		1228,023		8+575	
1228,040		1228,023		1227,906		8+580	
1228,023		1227,906		1227,889		8+585	
1227,906		1227,889		1227,872		8+590	
1227,889		1227,872		1227,855		8+595	
1227,872		1227,855		1227,838		8+600	
1227,855		1227,838		1227,821		8+605	
1227,838		1227,821		1227,804		8+610	
1227,821		1227,804		1227,787		8+615	
1227,804		1227,787		1227,770		8+620	
1227,787		1227,770		1227,753		8+625	
1227,770		1227,753		1227,736		8+630	
1227,753		1227,736		1227,719		8+635	
1227,736		1227,719		1227,702		8+640	
1227,719		1227,702		1227,685		8+645	
1227,702		1227,685		1227,668		8+650	
1227,685		1227,668		1227,651		8+655	
1227,668		1227,651		1227,634		8+660	
1227,651		1227,634		1227,617		8+665	
1227,634		1227,617		1227,600		8+670	
1227,617		1227,600		1227,583		8+675	
1227,600		1227,583		1227,566		8+680	
1227,583		1227,566		1227,549		8+685	
1227,566		1227,549		1227,532		8+690	
1227,549		1227,532		1227,515		8+695	
1227,532		1227,515		1227,498		8+700	
1227,515		1227,498		1227,481		8+705	
1227,498		1227,481		1227,464		8+710	
1227,481		1227,464		1227,447		8+715	
1227,464		1227,447		1227,430		8+720	
1227,447		1227,430		1227,413		8+725	
1227,430		1227,413		1227,396		8+730	
1227,413		1227,396		1227,379		8+735	
1227,396		1227,379		1227,362		8+740	
1227,379		1227,362		1227,345		8+745	
1227,362		1227,345		1227,328		8+750	
1227,345		1227,328		1227,311		8+755	
1227,328		1227,311		1227,294		8+760	
1227,311		1227,294		1227,277		8+765	
1227,294		1227,277		1227,260		8+770	
1227,277		1227,260		1227,243		8+775	
1227,260		1227,243		1227,226		8+780	
1227,243		1227,226		1227,209		8+785	
1227,226		1227,209		1227,192		8+790	
1227,209		1227,192		1227,175		8+795	
1227,192		1227,175		1227,158		8+800	
1227,175		1227,158		1227,141		8+805	
1227,158		1227,141		1227,124		8+810	
1227,141		1227,124		1227,107		8+815	
1227,124		1227,107		1227,090		8+820	
1227,107		1227,090		1227,073		8+825	
1227,090		1227,073		1227,056		8+830	
1227,073		1227,056		1227,039		8+835	
1227,056		1227,039		1227,022		8+840	
1227,039		1227,022		1226,905		8+845	
1227,022		1226,905		1226,888		8+850	
1226,905		1226,888		1226,871		8+855	
1226,888		1226,871		1226,854		8+860	
1226,871		1226,854		1226,837		8+865	
1226,854		1226,837		1226,820		8+870	
1226,837		1226,820		1226,803		8+875	
1226,820		1226,803		1226,786		8+880	
1226,803		1226,786		1226,769		8+885	
1226,786		1226,769		1226,752		8+890	
1226,769		1226,752		1226,735		8+895	
1226,752		1226,735		1226,718		8+900	
1226,735		1226,718		1226,701		8+905	
1226,718		1226,701		1226,684		8+910	
1226,701		1226,684		1226,667		8+915	
1226,684		1226,667		1226,650		8+920	
1226,667		1226,650		1226,633		8+925	
1226,650		1226,633		1226,616		8+930	
1226,633		1226,616		1226,599		8+935	
1226,616		1226,599		1226,582		8+940	
1226,599		1226,582		1226,565		8+945	
1226,582		1226,565		1226,548		8+950	
1226,565		1226,548		1226,531		8+955	
1226,548		1226,531		1226,514		8+960	
1226,531		1226,514		1226,497		8+965	
1226,514		1226,497		1226,480		8+970	
1226,497		1226,480		1226,463		8+975	
1226,480		1226,463		1226,446		8+980	
1226,463		1226,446		1226,429		8+985	
1226,446		1226,429		1226,412		8+990	
1226,429		1226,412		1226,395		8+995	
1226,412		1226,395		1226,378		9+000	
1226,395		1226,378		1226,361		9+005	
1226,378		1226,361		1226,344		9+010	
1226,361		1226,344		1226,327		9+015	
1226,344		1226,327		1226,310		9+020	
1226,327		1226,310		1226,293		9+025	
1226,310		1226,293		1226,276		9+030	
1226,293		1226,276					



ELEM.VERT.		ELEM.HORIZONTAIS	
A = 80,000		A = 77,460 R = 150,000 A = 77,460	
L = 40,000		L = 40,000 L = 12,805 L = 40,000	
L = 211,477		L = 75,467	
		L = 30,060 L = 13,440 L = 30,000	
		L = 49,294	
		L = 40,000	
		L = 12,587	
		L = 40,000	
		L = 33,272	
		L = 30,000	
		L = 20,576	
		L = 30,000	


























		<p align="center">CONVENÇÕES</p> <table border="0"> <tr> <td></td> <td>– RIO/CÓRREGO/SANGA</td> <td></td> <td>– BUEIRO PROJETADO</td> <td></td> <td>– SAÍDA DE DRENO</td> <td></td> <td>– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS</td> </tr> <tr> <td></td> <td>– AÇUDE</td> <td></td> <td>– BUEIROS Ø 0,40/0,60</td> <td></td> <td>– DRENO TIPO – IX</td> <td></td> <td>– CAIXA COLETORA DE SARJETA – CCS</td> </tr> <tr> <td></td> <td>– BANHADO</td> <td></td> <td>– VALETAS DE PROTEÇÃO</td> <td></td> <td>– DRENO EM ROCHA – DLR</td> <td></td> <td>– CAIXA COLETORA DE SARJETA ESPECIAL – CCSE</td> </tr> <tr> <td></td> <td>– VALA EXISTENTE</td> <td></td> <td>– SARJETAS</td> <td></td> <td>– DRENO TRANSVERSAL RASO – DTR</td> <td></td> <td>– CAIXA COLETORA DE TALVEGUE – CCT</td> </tr> <tr> <td></td> <td>– BUEIRO EXISTENTE</td> <td></td> <td>– MEIO-FIO</td> <td></td> <td>– VALA DE ESCOAMENTO – VL</td> <td></td> <td>– DISSIPADORES DE ENERGIA – DEB</td> </tr> <tr> <td></td> <td>– SUBSTITUIR BUEIRO</td> <td></td> <td>– DESCIDAS D'ÁGUA</td> <td></td> <td>– RÁPIDOS – DAR</td> <td></td> <td></td> </tr> </table>			– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS		– AÇUDE		– BUEIROS Ø 0,40/0,60		– DRENO TIPO – IX		– CAIXA COLETORA DE SARJETA – CCS		– BANHADO		– VALETAS DE PROTEÇÃO		– DRENO EM ROCHA – DLR		– CAIXA COLETORA DE SARJETA ESPECIAL – CCSE		– VALA EXISTENTE		– SARJETAS		– DRENO TRANSVERSAL RASO – DTR		– CAIXA COLETORA DE TALVEGUE – CCT		– BUEIRO EXISTENTE		– MEIO-FIO		– VALA DE ESCOAMENTO – VL		– DISSIPADORES DE ENERGIA – DEB		– SUBSTITUIR BUEIRO		– DESCIDAS D'ÁGUA		– RÁPIDOS – DAR			<p align="center">ESCALAS GRÁFICAS</p> <p>HORIZONTAL </p> <p>VERTICAL </p>		<p align="center">DESENVOLVIDO POR:</p> <p align="center">  ENGOMETRIA Projetos e Licenciamentos </p>		<p align="center">  PREFEITURA MUNICIPAL DE SÃO JOAQUIM RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO </p>	
	– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS																																																		
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<p align="center">PROJETO DE DRENAGEM - (km 9+620 a km 10+360)</p>						<p align="center">FASE DO PROJETO: IMPRESSÃO DEFINITIVA</p>																																																			
CÓDIGO PROJETO: 377_19		ESCALA: H=1:2000 V=1:200		DATA: SETEMBRO / 2021		FOLHA: 14																																																			





ELEM. VERT.	COTAS DO PROJETO		COTAS DO TERRENO		KM
	A	R	A	R	
ELEMENTOS HORIZONTAIS	A = 110,905	R = 225,000	A = 82,158	R = 164,316	L = 30,000
	L = 30,000	L = 30,670	L = 46,765	L = 30,000	
ELEM. VERT.	CCV = 100,000		CCV = 100,000		L = 86,728
	L = 30,000	L = 15,314	L = 30,000	L = 30,000	
ELEM. VERT.	A = 94,868 R = 300,000 A = 94,868		A = 56,569 R = 80,000 A = 56,569		L = 64,642
	L = 40,000	L = 18,389	L = 40,000	L = 40,000	
ELEM. VERT.	A = 67,082 R = 150,000 A = 67,082		A = 77,460 R = 200,000 A = 77,460		L = 48,670
	L = 30,000	L = 31,045	L = 30,000	L = 30,000	

C O N V E N Ç Õ E S

	– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS
	– AÇUDE		– BUEIROS Ø 0,40/0,60		– DRENO TIPO – IX		– CAIXA COLETORA DE SARJETA – CCS
	– BANHADO		– VALETAS DE PROTEÇÃO		– DRENO EM ROCHA – DLR		– CAIXA COLETORA DE SARJETA ESPECIAL – CCSE
	– VALA EXISTENTE		– SARJETAS		– DRENO TRANSVERSAL RASO – DTR		– CAIXA COLETORA DE TALVEGUE – CCT
	– BUEIRO EXISTENTE		– MEIO-FIO		– VALA DE ESCOAMENTO – VL		– DISSIPADORES DE ENERGIA – DEB
	– SUBSTITUIR BUEIRO		– DESCIDAS D'ÁGUA		– RÁPIDOS – DAR		

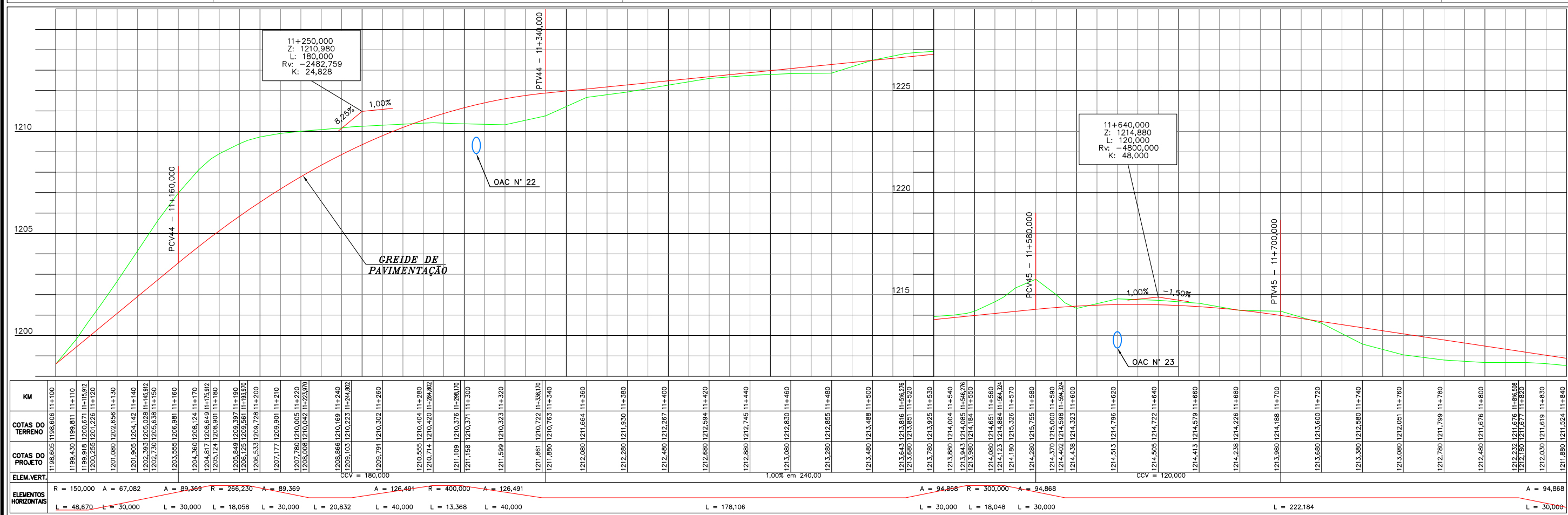
ESCALAS GRÁFICAS

HORIZONTAL	
VERTICAL	
























DESENVOLVIDO POR:

 **ENGMETRIA**
Projetos e Licenciamentos

	PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
	RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO			
PROJETO DE DRENAGEM - (km 10+360 a km 11+100)				FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CODIGO PROJETO:	377_19	ESCALA: H=1:2000 V=1:200	DATA: SETEMBRO / 2021	FOLHA: 15



- C O N V E N Ç Õ E S**

	– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS
	– AÇUDE		– BUEIROS Ø 0,40/0,60		– DRENO TIPO – IX		– CAIXA COLETORA DE SARJETA – CCS
	– BANHADO		– VALETAS DE PROTEÇÃO		– DRENO EM ROCHA – DLR		– CAIXA COLETORA DE SARJETA ESPECIAL – CCSE
	– VALA EXISTENTE		– SARJETAS		– DRENO TRANSVERSAL RASO – DTR		– CAIXA COLETORA DE TALVEGUE – CCT
	– BUEIRO EXISTENTE		– MEIO-FIO		– VALA DE ESCOAMENTO – VL		– DISSIPADORES DE ENERGIA – DEB
	– SUBSTITUIR BUEIRO		– DESCIDAS D'ÁGUA		– RÁPIDOS – DAR		

HORIZONTAL 0 10 20 30 40 50m

VERTICAL 0 1 2 3 4 5m



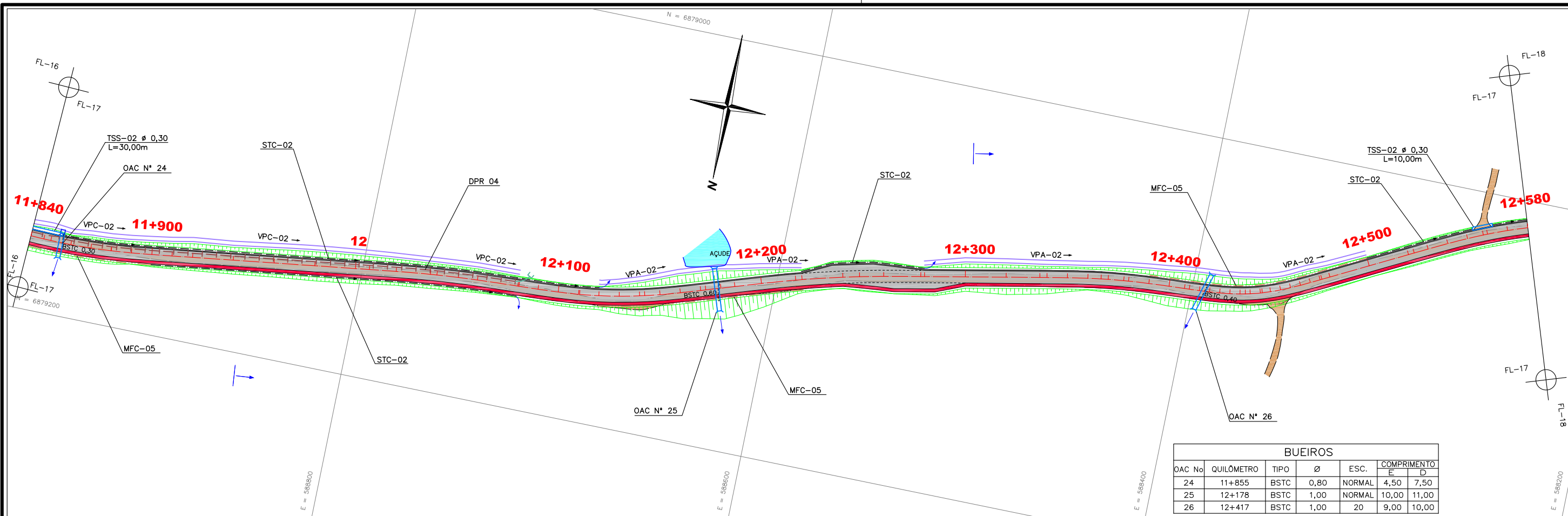
ENGMETRIA
Projetos e Licenciamentos



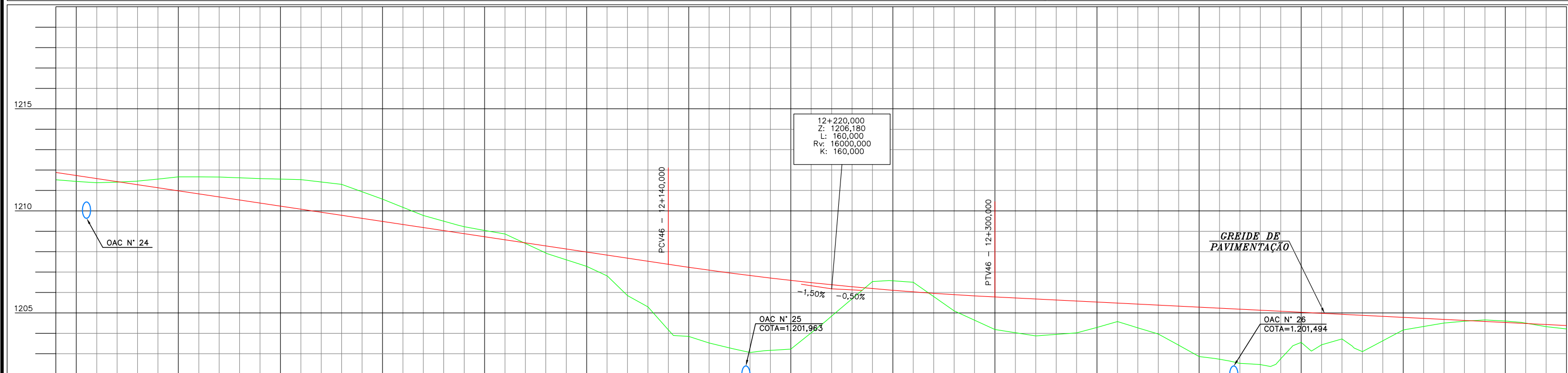
PREFEITURA MUNICIPAL DE SÃO JOAQUIM	
RODOVIA	: RODOVIA MUNICIPAL
TRECHO	: SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 11+100 a km 11+840)	FASE DO PROJETO: IMPRESSÃO DEFINITIVA
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CÓDIGO PROJETO:	377 10	ESCALA:	H=1:2000 1:1.000	DATA:	SETEMBRO / 2021	FOLHA:	16
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BUEIROS						
OAC Nº	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO	
24	11+855	BSTC	0,80	NORMAL	4,50	7,50
25	12+178	BSTC	1,00	NORMAL	10,00	11,00
26	12+417	BSTC	1,00	20	9,00	10,00



KM	COTAS DO TERRENO	COTAS DO PROJETO	ELEM. VERT.	ELEMENTOS HORIZONTAIS
11+840	1211,860	1211,524		
11+850	1211,752	1211,469		
11+860	1211,730	1211,443		
11+870	1211,580	1211,377		
11+880	1211,430	1211,409		
11+890	1211,281	1211,456		
11+900	1211,280	1211,456		
11+910	1211,130	1211,564		
11+920	1210,990	1211,665		
11+930	1210,831	1211,664		
11+940	1210,680	1211,658		
11+950	1210,530	1211,582		
11+960	1210,380	1211,529		
11+970	1209,780	1211,297		
11+980	1209,480	1210,573		
11+990	1209,378	1210,299		
12+000	1209,180	1209,773		
12+010	1208,938	1209,303		
12+020	1208,880	1209,223		
12+030	1208,722	1209,029		
12+040	1208,580	1208,866		
12+050	1208,280	1207,934		
12+060	1208,272	1207,908		
12+070	1208,130	1207,601		
12+080	1207,980	1207,281		
12+090	1207,830	1206,814		
12+100	1207,822	1206,770		
12+110	1207,680	1205,849		
12+120	1207,530	1205,284		
12+130	1207,380	1204,168		
12+140	1207,313	1203,584		
12+150	1207,233	1203,845		
12+160	1207,093	1203,524		
12+170	1206,958	1203,284		
12+180	1206,830	1203,058		
12+190	1206,746	1203,143		
12+200	1206,593	1203,225		
12+210	1206,412	1204,573		
12+220	1206,380	1204,845		
12+230	1206,193	1206,536		
12+240	1206,123	1206,586		
12+250	1206,030	1206,499		
12+260	1205,904	1205,225		
12+270	1205,883	1205,098		
12+280	1205,780	1204,184		
12+290	1205,680	1203,873		
12+300	1205,588	1203,994		
12+310	1205,580	1204,021		
12+320	1205,530	1204,286		
12+330	1205,480	1204,574		
12+340	1205,448	1204,375		
12+350	1205,430	1204,266		
12+360	1205,392	1204,037		
12+370	1205,380	1203,967		
12+380	1205,330	1203,420		
12+390	1205,280	1202,861		
12+400	1205,242	1202,768		
12+410	1205,205	1202,642		
12+420	1205,155	1202,501		
12+430	1205,130	1202,467		
12+440	1205,080	1202,371		
12+450	1205,030	1202,356		
12+460	1205,005	1203,127		
12+470	1204,980	1203,435		
12+480	1204,955	1203,579		
12+490	1204,930	1203,724		
12+500	1204,905	1203,878		
12+510	1204,880	1204,033		
12+520	1204,850	1204,188		
12+530	1204,820	1204,343		
12+540	1204,790	1204,498		
12+550	1204,760	1204,653		
12+560	1204,730	1204,808		
12+570	1204,700	1204,963		
12+580	1204,670	1205,118		

CONVENÇÕES

- RIO/CÓRREGO/SANGA
- AÇUDE
- BANHADO
- VALA EXISTENTE
- BUEIRO EXISTENTE
- SUBSTITUIR BUEIRO
- BUEIRO PROJETADO
- BUEIROS Ø 0,40/0,60
- VALETAS DE PROTEÇÃO
- DRENO TIPO - IX
- DRENO EM ROCHA - DLR
- DRENO TRANSVERSAL RASO - DTR
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- CAIXA COLETORA DE TALVEGUE - CCT
- DISSIPADORES DE ENERGIA - DEB

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 11+840 a km 12+580)

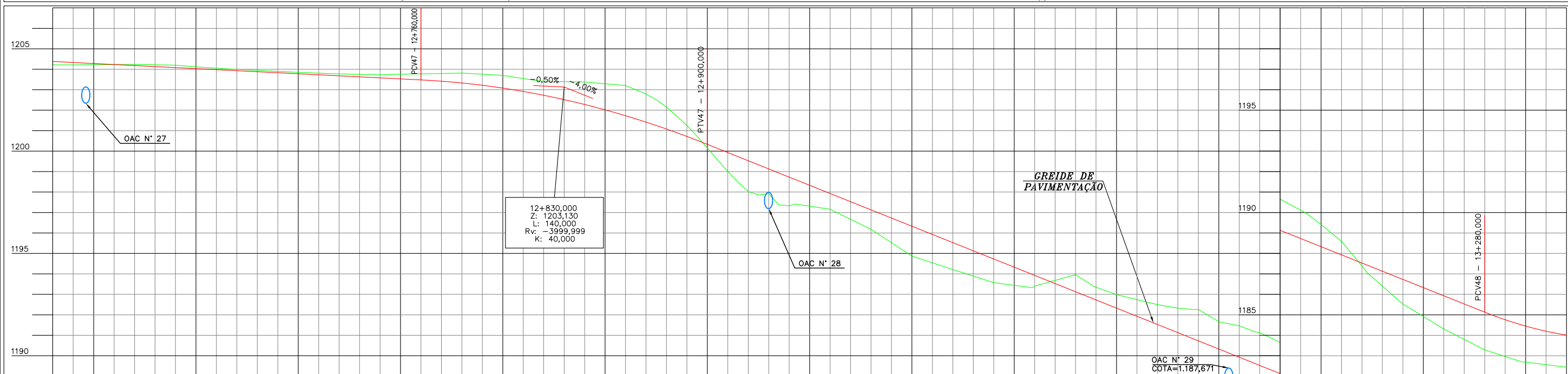
FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 377_19

ESCALA: H=1:2000 V=1:200
























DATA: SETEMBRO / 2021

FOLHA: 17



ELEM. VERT.		COTAS DO PROJETO		COTAS DO TERRENO		KM	
		1204,380	1204,215	1204,380	1204,215	12-580	
		1204,330	1204,212	1204,330	1204,212	12-580	
		1204,380	1204,224	1204,380	1204,224	12-590,080	
		1204,380	1204,212	1204,380	1204,212	12-600	
		1204,330	1204,235	1204,330	1204,235	12-610	
		1204,480	1204,231	1204,480	1204,231	12-620	
		1204,555	1204,229	1204,555	1204,229	12-625,090	
		1204,080	1204,199	1204,080	1204,199	12-640	
		1204,006	1204,078	1204,006	1204,078	12-654,748	
		1203,980	1204,046	1203,980	1204,046	12-660	
		1203,980	1203,947	1203,980	1203,947	12-680	
		1203,956	1203,921	1203,956	1203,921	12-684,748	
		1203,902	1203,867	1203,902	1203,867	12-685,565	
		1203,780	1203,847	1203,780	1203,847	12-700	
		1203,680	1203,777	1203,680	1203,777	12-720	
		1203,652	1203,760	1203,652	1203,760	12-725,565	
		1203,580	1203,734	1203,580	1203,734	12-740	
		1203,502	1203,770	1203,502	1203,770	12-755,565	
		1203,480	1203,775	1203,480	1203,775	12-760	
		1203,330	1203,814	1203,330	1203,814	12-780	
		1203,240	1203,771	1203,240	1203,771	12-788,209	
		1203,080	1203,700	1203,080	1203,700	12-800	
		1202,785	1203,423	1202,785	1203,423	12-818,209	
		1202,730	1203,419	1202,730	1203,419	12-820	
		1202,260	1203,379	1202,260	1203,379	12-840	
		1201,730	1203,205	1201,730	1203,205	12-860	
		1201,447	1202,834	1201,447	1202,834	12-868,076	
		1201,418	1202,784	1201,418	1202,784	12-870	
		1201,252	1202,514	1201,252	1202,514	12-875	
		1201,080	1202,156	1201,080	1202,156	12-880	
		1200,902	1201,708	1200,902	1201,708	12-885	
		1200,718	1201,256	1200,718	1201,256	12-895	
		1200,527	1200,722	1200,527	1200,722	12-910	
		1200,330	1200,259	1200,330	1200,259	12-916,076	
		1200,150	1199,835	1200,150	1199,835	12-930	
		1199,930	1199,000	1199,930	1199,000	12-910	
		1199,608	1198,693	1199,608	1198,693	12-918,088	
		1199,330	1198,374	1199,330	1198,374	12-930	
		1199,030	1197,912	1199,030	1197,912	12-930	
		1198,730	1197,371	1198,730	1197,371	12-935	
		1198,430	1197,329	1198,430	1197,329	12-940	
		1198,008	1197,412	1198,008	1197,412	12-940,068	
		1197,930	1197,159	1197,930	1197,159	12-960	
		1197,130	1196,179	1197,130	1196,179	12-980	
		1196,330	1194,870	1196,330	1194,870	13	
		1195,530	1194,212	1195,530	1194,212	13+20	
		1194,730	1193,574	1194,730	1193,574	13+40	
		1193,930	1193,404	1193,930	1193,404	13+60	
		1193,330	1192,988	1193,330	1192,988	13+100,392	
		1192,730	1192,264	1192,730	1192,264	13+140	
		1192,330	1192,654	1192,330	1192,654	13+180	
		1191,930	1192,497	1191,930	1192,497	13+200	
		1191,530	1192,322	1191,530	1192,322	13+240	
		1191,130	1192,147	1191,130	1192,147	13+280	
		1190,730	1191,972	1190,730	1191,972	13+320	
		1190,330	1191,797	1190,330	1191,797	13+360	
		1189,930	1191,622	1189,930	1191,622	13+400	
		1189,530	1191,447	1189,530	1191,447	13+440	
		1189,130	1191,272	1189,130	1191,272	13+480	
		1188,730	1191,097	1188,730	1191,097	13+520	
		1188,330	1190,922	1188,330	1190,922	13+560	
		1187,930	1190,747	1187,930	1190,747	13+600	
		1187,530	1190,572	1187,530	1190,572	13+640	
		1187,130	1190,397	1187,130	1190,397	13+680	
		1186,730	1190,222	1186,730	1190,222	13+720	
		1186,330	1190,047	1186,330	1190,047	13+760	
		1185,930	1189,872	1185,930	1189,872	13+800	
		1185,530	1189,697	1185,530	1189,697	13+840	
		1185,130	1189,522	1185,130	1189,522	13+880	
		1184,730	1189,347	1184,730	1189,347	13+920	
		1184,330	1189,172	1184,330	1189,172	13+960	
		1183,930	1188,997	1183,930	1188,997	14+000	
		1183,530	1188,822	1183,530	1188,822	14+040	
		1183,130	1188,647	1183,130	1188,647	14+080	
		1182,730	1188,472	1182,730	1188,472	14+120	
		1182,330	1188,297	1182,330	1188,297	14+160	
		1181,930	1188,122	1181,930	1188,122	14+200	
		1181,530	1187,947	1181,530	1187,947	14+240	
		1181,130	1187,772	1181,130	1187,772	14+280	
		1180,730	1187,597	1180,730	1187,597	14+320	
		1180,330	1187,422	1180,330	1187,422	14+360	
		1179,930	1187,247	1179,930	1187,247	14+400	
		1179,530	1187,072	1179,530	1187,072	14+440	
		1179,130	1186,897	1179,130	1186,897	14+480	
		1178,730	1186,722	1178,730	1186,722	14+520	
		1178,330	1186,547	1178,330	1186,547	14+560	
		1177,930	1186,372	1177,930	1186,372	14+600	
		1177,530	1186,197	1177,530	1186,197	14+640	
		1177,130	1186,022	1177,130	1186,022	14+680	
		1176,730	1185,847	1176,730	1185,847	14+720	
		1176,330	1185,672	1176,330	1185,672	14+760	
		1175,930	1185,497	1175,930	1185,497	14+800	
		1175,530	1185,322	1175,530	1185,322	14+840	
		1175,130	1185,147	1175,130	1185,147	14+880	
		1174,730	1184,972	1174,730	1184,972	14+920	
		1174,330	1184,797	1174,330	1184,797	14+960	
		1173,930	1184,622	1173,930	1184,622	15+000	
		1173,530	1184,447	1173,530	1184,447	15+040	
		1173,130	1184,272	1173,130	1184,272	15+080	
		1172,730	1184,097	1172,730	1184,097	15+120	
		1172,330	1183,922	1172,330	1183,922	15+160	
		1171,930	1183,747	1171,930	1183,747	15+200	
		1171,530	1183,572	1171,530	1183,572	15+240	
		1171,130	1183,397	1171,130	1183,397	15+280	
		1170,730	1183,222	1170,730	1183,222	15+320	
		1170,330	1183,047	1170,330	1183,047	15+360	
		1169,930	1182,872	1169,930	1182,872	15+400	
		1169,530	1182,697	1169,530	1182,697	15+440	
		1169,130	1182,522	1169,130	1182,522	15+480	
		1168,730	1182,347	1168,730	1182,347	15+520	
		1168,330	1182,172	1168,330	1182,172	15+560	
		1167,930	1181,997	1167,930	1181,997	15+600	
		1167,530	1181,822	1167,530	1181,822	15+640	
		1167,130	1181,647	1167,130	1181,647	15+680	
		1166,730	1181,472	1166,730	1181,472	15+720	
		1166,330	1181,297	1166,330	1181,297	15+760	
		1165,930	1181,122	1165,930	1181,122	15+800	
		1165,530	1180,947	1165,530	1180,947	15+840	
		1165,130	1180,772	1165,130	1180,772	15+880	
		1164,730	1180,597	1164,730	1180,597	15+920	
		1164,330	1180,422	1164,330	1180,422	15+960	
		1163,930	1180,247	1163,930	1180,247	16+000	
		1163,530	1180,072	1163,530	1180,072	16+040	
		1163,130	1179,897	1163,130	1179,897	16+080	
		1162,730	1179,722	1162,730	1179,722	16+120	
		1162,330	1179,547	1162,330	1179,547	16+160	
		1161,930	1179,372	1161,930	1179,372	16+200	
		1161,530	1179,197	1161,530	1179,197	16+240	
		1161,130	1179,022	1161,130	1179,022	16+280	
		1160,730	1178,847	1160,730	1178,847	16+320	
		1160,330	1178,672	1160,330	1178,672	16+360	
		1159,930	1178,497	1159,930	1178,497	16+400	
		1159,530	1178,322	1159,530	1178,322	16+440	
		1159,130	1178,147	1159,130	1178,147	16+480	
		1158,730	1177,972	1158,730	1177,972	16+520	
		1158,330	1177,797	1158,330	1177,797	16+560	
		1157,930	1177,622	1157,930	1177,622	16+600	
		1157,530	1177,447	1157,530	1177,447	16+640	
		1157,130	1177,272	1157,130	1177,272	16+680	
		1156,730	1177,097	1156,730	1177,097	16+720	
		1156,330	1176,922	1156,330	1176,922	16+760	
		1155,930	1176,747	1155,930	1176,747	16+800	
		1155,530	1176,572	1155,530	1176,572	16+840	
		1155,130	1176,397	1155,130	1176,397	16+880	
		1154,730	1176,222	1154,730	1176,222	16+920	
		1154,330	1176,047	1154,330	1176,047	16+960	
		1153,930	1175,872	1153,930	1175,872	17+000	
		1153,530	1175,697	1153,530	1175,697	17+040	
		1153,130	1175,522	1153,130	1175,522	17+080	
		1152,730	1175,347	1152,730	1175,347	17+120	
		1152,330	1175,172	1152,330	1175,172	17+160	
		1151,930	1174,997	1151,930	1174,997	17+200	
		1151,530	1174,822	1151,530	1174,822	17+240	
		1151,130	1174,647	1151,130	1174,647	17+280	
		1150,730	1174,472	1150,730	1174,472	17+320	
		1150,330	1174,297				

CONVENÇÕES

	– RIO/CÓRREGO/SANGA		– BUEIRO PROJETADO		– SAÍDA DE DRENO		– CAIXA DE LIGAÇÃO E PASSAGEM – CLP/BLS
	– AÇUDE		– BUEIROS Ø 0,40/0,60		– DRENO TIPO – IX		– CAIXA COLETORA DE SARJETA – CCS
	– BANHADO		– VALETAS DE PROTEÇÃO		– DRENO EM ROCHA – DLR		– CAIXA COLETORA DE SARJETA ESPECIAL – CCSE
	– VALA EXISTENTE		– SARJETAS		– DRENO TRANSVERSAL RASO – DTR		– CAIXA COLETORA DE TALVEGUE – CCT
	– BUEIRO EXISTENTE		– MEIO-FIO		– VALA DE ESCOAMENTO – VL		– DISSIPADORES DE ENERGIA – DEB
	– SUBSTITUIR BUEIRO		– DESCIDAS D'ÁGUA		– RÁPIDOS – DAR		

ESCALAS GRÁFICAS

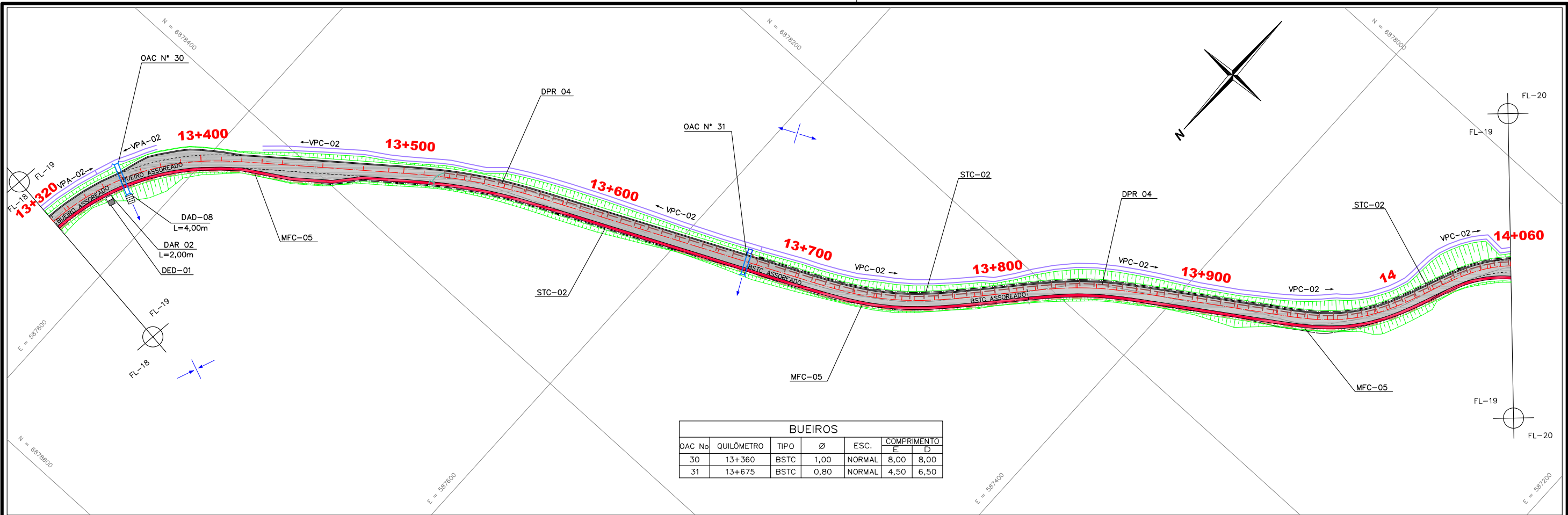
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VERTICAL 0 1 2 3 4 5m

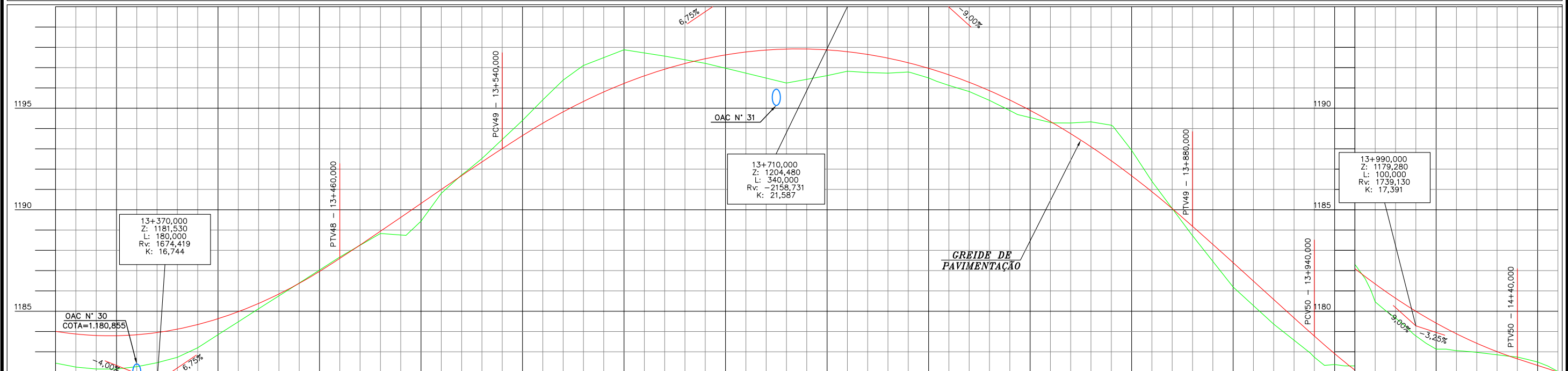
DESENVOLVIDO POR:

 **ENGMETRIA**
Projetos e Licenciamentos

	PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
	RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO			
PROJETO DE DRENAGEM - (km 12+580 a km 13+320)				FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CODIGO PROJETO:	377_19	ESCALA:	H=1:2000 V=1:200	DATA:
			SETEMBRO / 2021	FOLHA:
				18



BUEIROS						
OAC Nº	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO	
30	13+360	BSTC	1,00	NORMAL	8,00	8,00
31	13+675	BSTC	0,80	NORMAL	4,50	6,50



KM	COTAS DO TERRENO	COTAS DO PROJETO	ELEM. VERT.	ELEMENTOS HORIZONTAIS
13+320	1184,008	1182,440	CCV = 180,000	A = 60,000 R = 120,000 L = 71,840
13+340	1183,805	1182,153		A = 60,000 R = 120,000 L = 30,000
13+360	1183,841	1182,266		A = 60,000 R = 120,000 L = 30,000
13+380	1184,116	1182,320		A = 60,000 R = 120,000 L = 30,000
13+400	1184,343	1183,199		A = 60,000 R = 120,000 L = 30,000
13+420	1185,383	1185,122		A = 60,000 R = 120,000 L = 30,000
13+440	1186,374	1186,387		A = 60,000 R = 120,000 L = 30,000
13+460	1187,605	1187,671		A = 60,000 R = 120,000 L = 30,000
13+480	1188,955	1188,831		A = 60,000 R = 120,000 L = 30,000
13+500	1189,805	1188,736		A = 60,000 R = 120,000 L = 30,000
13+520	1191,655	1191,719		A = 60,000 R = 120,000 L = 30,000
13+540	1193,005	1193,462		A = 60,000 R = 120,000 L = 30,000
13+560	1194,262	1195,414		A = 60,000 R = 120,000 L = 30,000
13+580	1195,334	1197,106		A = 60,000 R = 120,000 L = 30,000
13+600	1196,221	1197,879		A = 60,000 R = 120,000 L = 30,000
13+620	1196,923	1197,568		A = 60,000 R = 120,000 L = 30,000
13+640	1197,439	1197,210		A = 60,000 R = 120,000 L = 30,000
13+660	1197,770	1196,730		A = 60,000 R = 120,000 L = 30,000
13+680	1197,915	1196,240		A = 60,000 R = 120,000 L = 30,000
13+700	1197,876	1196,606		A = 60,000 R = 120,000 L = 30,000
13+720	1197,651	1196,758		A = 60,000 R = 120,000 L = 30,000
13+740	1197,240	1196,786		A = 60,000 R = 120,000 L = 30,000
13+760	1196,645	1196,122		A = 60,000 R = 120,000 L = 30,000
13+780	1195,277	1195,823		A = 60,000 R = 120,000 L = 30,000
13+800	1195,864	1195,386		A = 60,000 R = 120,000 L = 30,000
13+820	1195,404	1194,886		A = 60,000 R = 120,000 L = 30,000
13+840	1194,297	1194,277		A = 60,000 R = 120,000 L = 30,000
13+860	1193,746	1194,275		A = 60,000 R = 120,000 L = 30,000
13+880	1193,101	1194,327		A = 60,000 R = 120,000 L = 30,000
13+900	1192,409	1194,164		A = 60,000 R = 120,000 L = 30,000
13+920	1191,678	1192,941		A = 60,000 R = 120,000 L = 30,000
13+940	1191,672	1192,928		A = 60,000 R = 120,000 L = 30,000
13+960	1190,887	1191,403		A = 60,000 R = 120,000 L = 30,000
13+980	1190,057	1190,063		A = 60,000 R = 120,000 L = 30,000
14+000	1189,188	1188,733		A = 60,000 R = 120,000 L = 30,000
14+020	1188,180	1188,721		A = 60,000 R = 120,000 L = 30,000
14+040	1187,380	1186,194		A = 60,000 R = 120,000 L = 30,000
14+060	1185,580	1184,364		A = 60,000 R = 120,000 L = 30,000
14+080	1183,988	1182,948		A = 60,000 R = 120,000 L = 30,000
14+100	1183,337	1182,331		A = 60,000 R = 120,000 L = 30,000
14+120	1182,909	1182,375		A = 60,000 R = 120,000 L = 30,000
14+140	1182,485	1182,305		A = 60,000 R = 120,000 L = 30,000
14+160	1182,095	1182,306		A = 60,000 R = 120,000 L = 30,000
14+180	1181,700	1181,671		A = 60,000 R = 120,000 L = 30,000
14+200	1181,338	1181,671		A = 60,000 R = 120,000 L = 30,000
14+220	1180,982	1180,036		A = 60,000 R = 120,000 L = 30,000
14+240	1180,640	1179,663		A = 60,000 R = 120,000 L = 30,000
14+260	1180,312	1179,248		A = 60,000 R = 120,000 L = 30,000
14+280	1179,999	1178,793		A = 60,000 R = 120,000 L = 30,000
14+300	1179,655	1177,792		A = 60,000 R = 120,000 L = 30,000
14+320	1177,825	1177,743		A = 60,000 R = 120,000 L = 30,000
14+340	1177,483	1177,625		A = 60,000 R = 120,000 L = 30,000
14+360	1177,139	1177,532		A = 60,000 R = 120,000 L = 30,000
14+380	1176,795	1177,481		A = 60,000 R = 120,000 L = 30,000
14+400	1176,451	1177,431		A = 60,000 R = 120,000 L = 30,000
14+420	1176,107	1177,381		A = 60,000 R = 120,000 L = 30,000
14+440	1175,763	1177,331		A = 60,000 R = 120,000 L = 30,000
14+460	1175,419	1177,281		A = 60,000 R = 120,000 L = 30,000
14+480	1175,075	1177,231		A = 60,000 R = 120,000 L = 30,000
14+500	1174,731	1177,181		A = 60,000 R = 120,000 L = 30,000
14+520	1174,387	1177,131		A = 60,000 R = 120,000 L = 30,000
14+540	1174,043	1177,081		A = 60,000 R = 120,000 L = 30,000
14+560	1173,699	1177,031		A = 60,000 R = 120,000 L = 30,000
14+580	1173,355	1176,981		A = 60,000 R = 120,000 L = 30,000
14+600	1173,011	1176,931		A = 60,000 R = 120,000 L = 30,000

CONVENÇÕES

— RIO/CÓRREGO/SANGA

— BUEIRO PROJETADO

— BUEIROS Ø 0,40/0,60

— VALETAS DE PROTEÇÃO

— SARJETAS

— BUEIRO EXISTENTE

— SUBSTITUIR BUEIRO

— SAÍDA DE DRENO

— DRENO TIPO - IX

— DRENO EM ROCHA - DLR

— DRENO TRANSVERSAL RASO - DTR

— VALA DE ESCOAMENTO - VL

— RÁPIDOS - DAR

— CAIXA DE LIGAÇÃO E PASSAGEM - CLP/BLS

— CAIXA COLETORA DE SARJETA - CCS

— CAIXA COLETORA DE SARJETA ESPECIAL - CCSE

— CAIXA COLETORA DE TALVEQUE - CCT

— DISSIPADORES DE ENERGIA - DEB

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA

Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 13+320 a km 14+060)

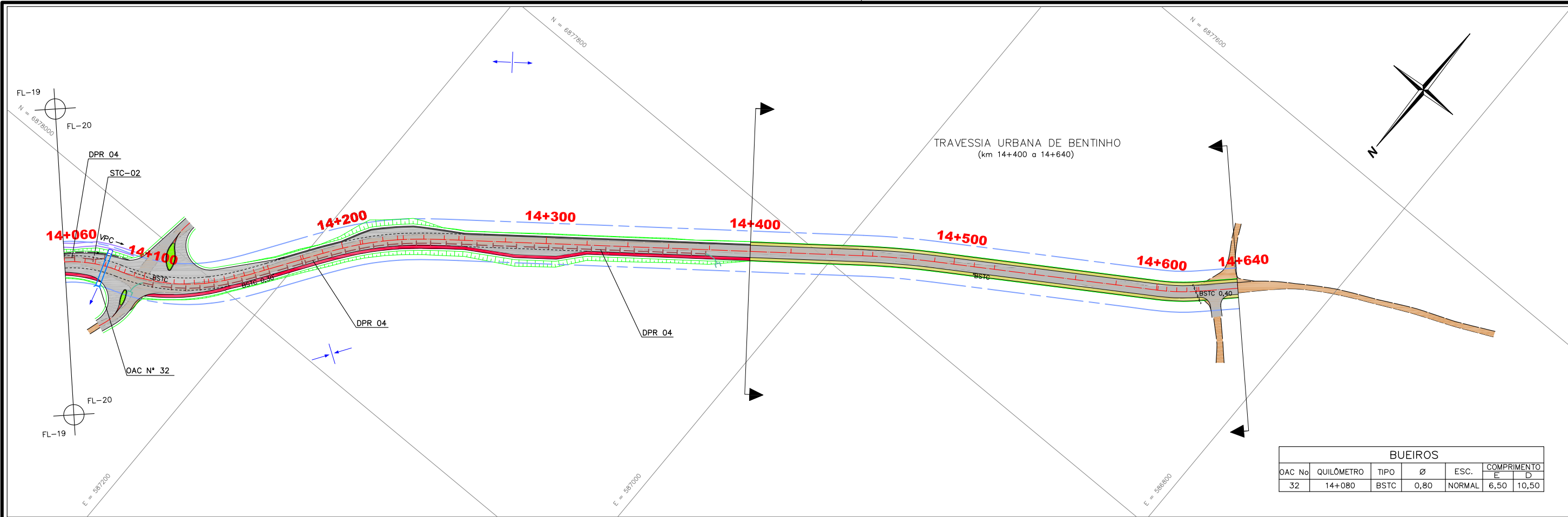
FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 377_19

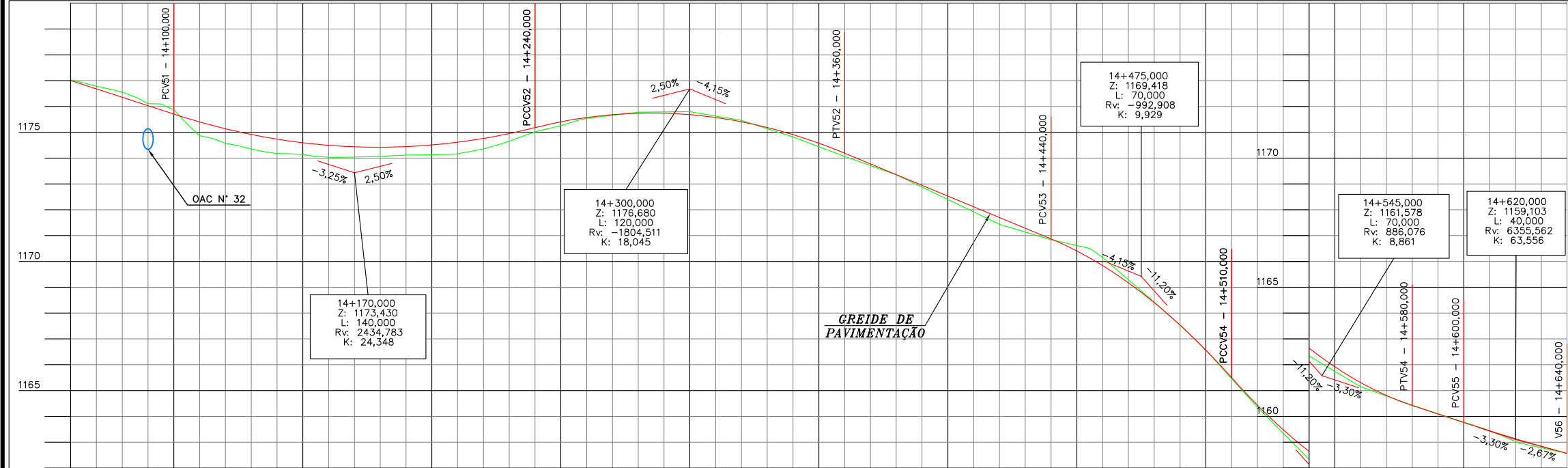
ESCALA: H=1:2000 V=1:200

DATA: SETEMBRO / 2021

FOLHA: 19



BUEIROS						
OAC No	QUILÔMETRO	TIPO	Ø	ESC.	COMPRIMENTO	
					E	D
32	14+080	BSTC	0,80	NORMAL	6,50	10,50



KM		1177,005	1177,030	1176,843	1176,912	1176,680	1176,779	1176,517	1176,554	1176,355	1176,564	1176,480	1176,192	1176,355	1176,275	1176,030	1176,070	1176,030	1176,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1175,070	1175,030	1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CONVENÇÕES

- RIO/CÓRREGO/SANGA
- AÇUDE
- BANHADO
- VALA EXISTENTE
- BUEIRO EXISTENTE
- SUBSTITUIR BUEIRO
- BUEIRO PROJETADO
- BUEIROS Ø 0,40/0,60
- VALETAS DE PROTEÇÃO
- SARJETAS
- MEIO-FIO
- DESCIDAS D'ÁGUA
- SAÍDA DE DRENO
- DRENO TIPO - IX
- DRENO EM ROCHA - DLR
- DRENO TRANSVERSAL RASO - DTR
- VALA DE ESCOAMENTO - VL
- RÁPIDOS - DAR
- CAIXA DE LIGAÇÃO E PASSAGEM - CLP/BLS
- CAIXA COLETORA DE SARJETA - CCS
- CAIXA COLETORA DE SARJETA ESPECIAL - CCSE
- CAIXA COLETORA DE TALVEGUE - CCT
- DISSIPADORES DE ENERGIA - DEB

ESCALAS GRÁFICAS

HORIZONTAL: 0 10 20 30 40 50m

VERTICAL: 0 1 2 3 4 5m

DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

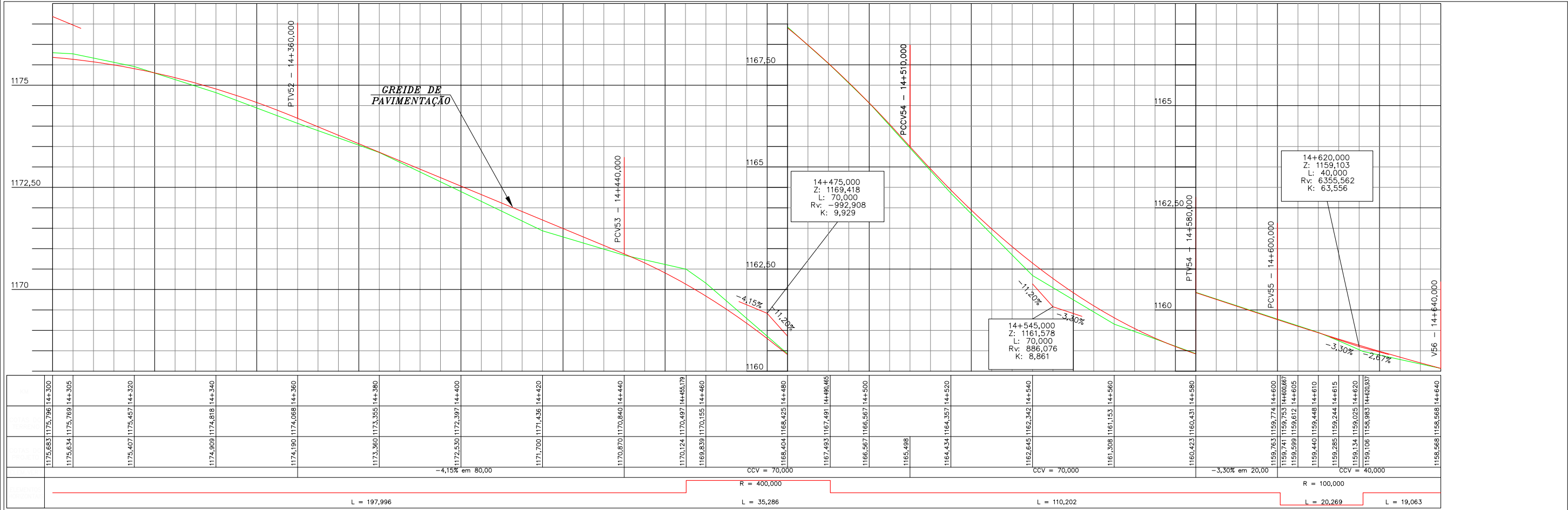
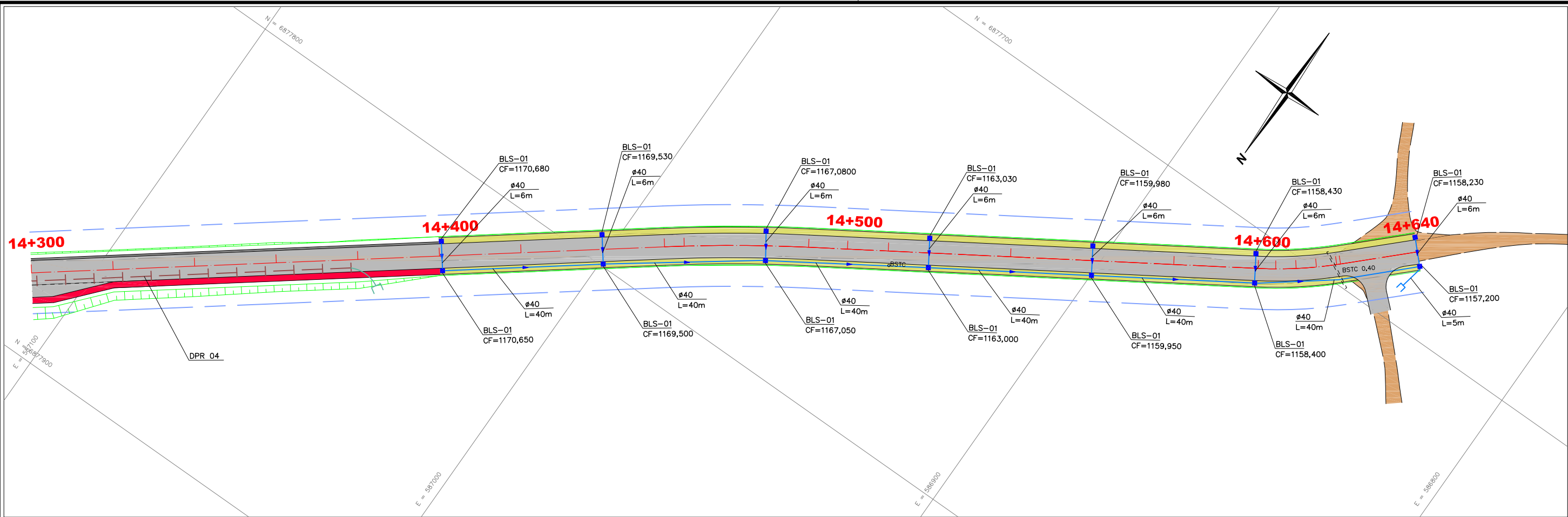
TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM - (km 14+060 a km 14+640)

FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 377_19 ESCALA: H=1:2000 V=1:200 DATA: SETEMBRO / 2021 FOLHA: 20

TRAVESSIA URBANA DE BENTINHO



— RIO/CÓRREGO/SANGA

— AÇUDE

— BANHADO

— VALA EXISTENTE

— BUEIRO EXISTENTE

— SUBSTITUIR BUEIRO

— BUEIRO PROJETADO

— BUEIROS ø 0,40/0,60

— VALETAS DE PROTEÇÃO

— SARJETAS

— MEIO-FIO

— DESCIDAS D'ÁGUA

— SAÍDA DE DRENO

— DRENO TIPO - IX

— DRENO EM ROCHA - DLR

— DRENO TRANSVERSAL RASO - DTR

— VALA DE ESCOAMENTO - VL

— RÁPIDOS - DAR

— CAIXA DE LIGAÇÃO E PASSAGEM - CLP/BLS

— CAIXA COLETORA DE SARJETA - CCS

— CAIXA COLETORA DE SARJETA ESPECIAL - CCSE

— CAIXA COLETORA DE TALVEGUE - CCT

— DISSIPADORES DE ENERGIA - DEB

ESCALAS GRÁFICAS

HORIZONTAL: 0 5 10 15 20 25m

VERTICAL: 0 0,5 1 1,5 2 2,5m

DESENVOLVIDO POR:

ENGMETRIA

Projetos e Licenciamentos

PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

PROJETO DE DRENAGEM

(TRAVESSIA URBANA DE BENTINHO)

FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CODIGO PROJETO: 377_19

ESCALA: H=1:1000 V=1:100

DATA: SETEMBRO / 2021

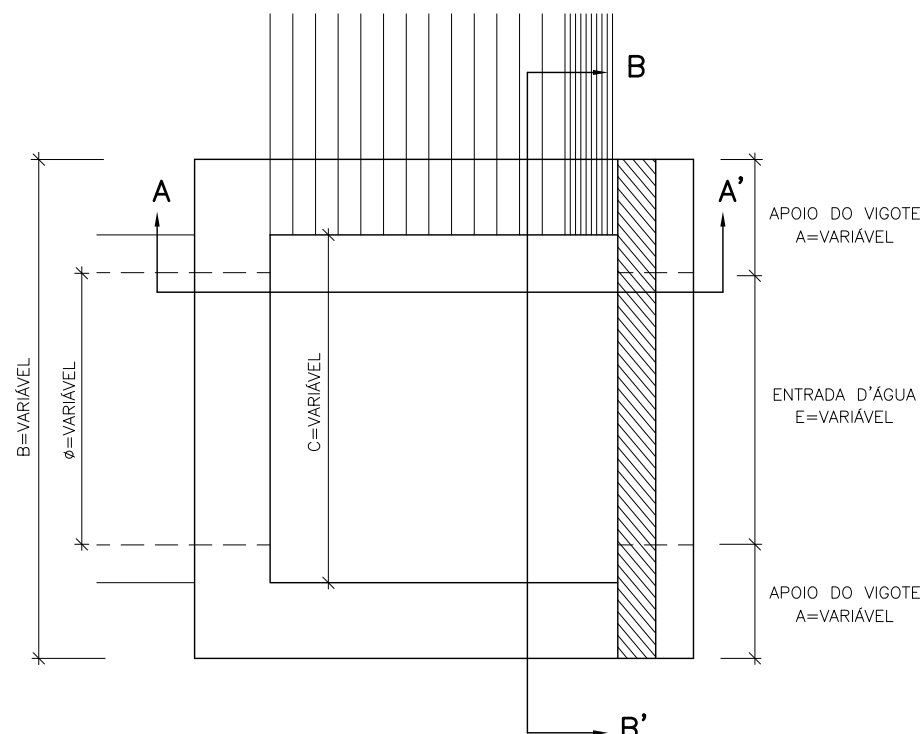
FOLHA: 01

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Detalhes Tipo

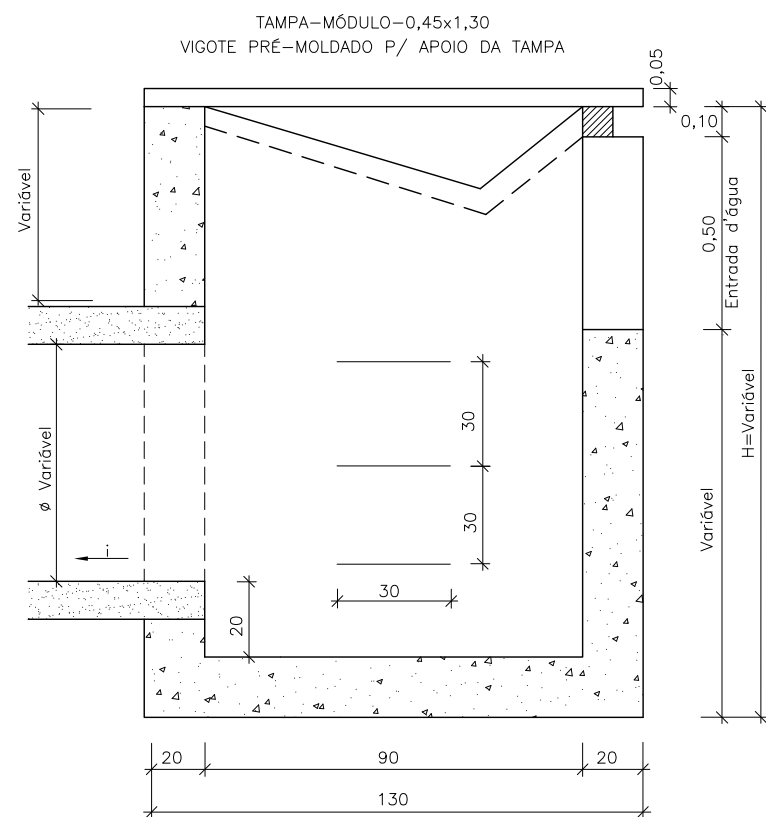
CAIXA COLETORA DE SARJETA - CCS

SARJETA



TIPO	ESCONSIDADE (GRAUS)	0°	10°	20°	30°	40°
C.C.1	0,80	1,00	OS VALORES PODERÃO SER CALCULADOS PELA FÓRMULA: $C = \frac{C'}{\cos E}$ C' = VALOR DE C P/ E=0° E = ESCONSIDADE EM GRAUS			
C.C.2	1,00	1,30				
C.C.3	1,20	1,50				

CORTE A-A'



DEMAIS DIMENSÕES

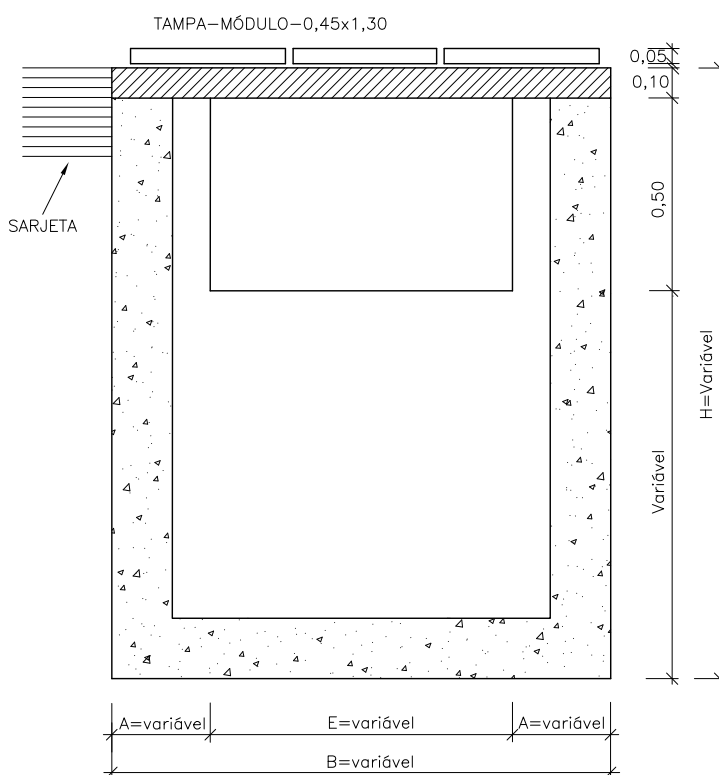
TIPO	Ø BUEIRO (m)	A	E	B
C.C.1	0,80	0,30	0,80	1,40
C.C.2	1,00	0,35	1,00	1,70
C.C.3	1,20	0,35	1,20	1,90

OBS: OS VALORES APRESENTADOS CORRESPONDEM AOS BUEIROS COM E=0° PARA OS DEMAIS CASOS AS DIMENSÕES DEVERÃO SER ADAPTADAS

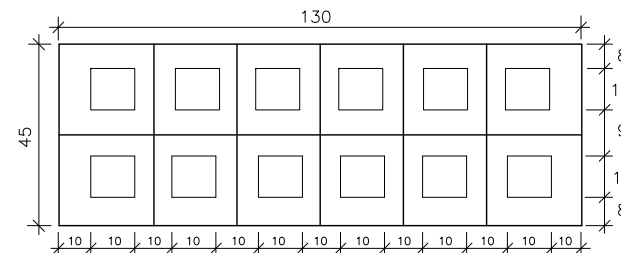
CONSUMO DE MATERIAL - CAIXA

ALTURA	MATERIAL TIPO	CONCRETO CICLÓPICO Fck = 110 kg / cm ² (m ³)	FORMAS (m ²)
H = 2,00	C.C.1	1,730	15,095
	C.C.2	1,913	16,134
	C.C.3	1,992	16,482
H = 2,50	C.C.1	2,172	19,560
	C.C.2	2,415	21,334
	C.C.3	2,534	22,082
H = 3,00	C.C.1	2,650	24,160
	C.C.2	2,953	26,534
	C.C.3	3,112	27,682
H = 3,50	C.C.1	3,092	28,760
	C.C.2	3,475	31,734
	C.C.3	3,694	33,282

CORTE B-B'



TAMPA DE CONCRETO - MÓDULO PRÉ-MOLDADO

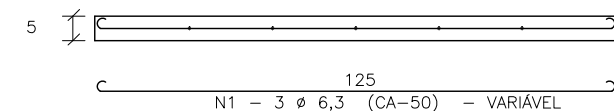


NÚMERO DE MÓDULOS POR CAIXA COLETORA

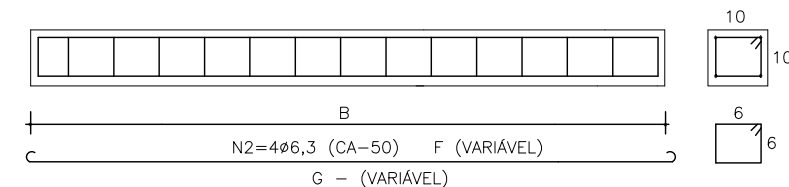
ESCONSIDADE (GRAUS)	0°	10°	20°	30°	40°
TIPO					
C.C.1	3	VARIA EM FUNÇÃO DO PARÂMETRO C CALCULADO PELA FÓRMULA $M = \frac{C + 0,40}{\cos E} \times 45$ M - NÚMERO DE MÓDULOS C - VALOR DE C PARA O E - ESCONSIDADE EM GRAUS 0,40 - PAREDES DA CAIXA 0,45 - LARGURA DO MÓDULO			
C.C.2	3				
C.C.3	4				

QUADRO DE QUANTIDADES DA TAMPA POR MÓDULO

MATERIAL	CONCRETO (m ³) Fck=150kg/cm ²	FERRO 3,4mm CA-60 (kg)	6,3mm CA-50 (kg)	FORMA (m ²)
QUANTIDADE	0,023	0,249	1,05	0,8845



VIGOTE PRÉ MOLDADO



N1=14Ø3,4 (CA-60) - 32

VALORES DE B

ESCONSIDADE (GRAUS)	0°	10°	20°	30°	40°
TIPO					
C.C.1	1,40	OS VALORES PODERÃO SER CALCULADOS PELA FÓRMULA $D = \frac{D'}{\cos E}$ D'-COMP. DO VIGOTE PARA E=0° E=ESCONSIDADE EM GRAUS			
C.C.2	1,70				
C.C.3	1,90				

VALORES DE F e G (ferro)

TIPO	F (m)	G (m)
C.C.1	1,35	1,50
C.C.2	1,65	1,80
C.C.3	1,85	2,00

QUADRO DE QUANTIDADES DO VIGOTE

ESCONSIDADE (GRAUS)	CONCRETO (m ³) Fck=150kg/cm ²	FERRO 3,4mm CA-60 (kg)	6,3mm CA-50 (kg)	FORMA (m ²)
TIPO				
C.C.1	0,014	0,341	1,50	0,440
C.C.2	0,017	0,409	1,80	0,530
C.C.3	0,019	0,455	2,00	0,590

OBS - OS VALORES APRESENTADOS DEVERÃO SER UTILIZADOS QUANDO O BUEIRO TIVER E=0°. PARA OS DEMAIS CASOS AS QUANTIDADES DEVERÃO SER ADAPTADAS

DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

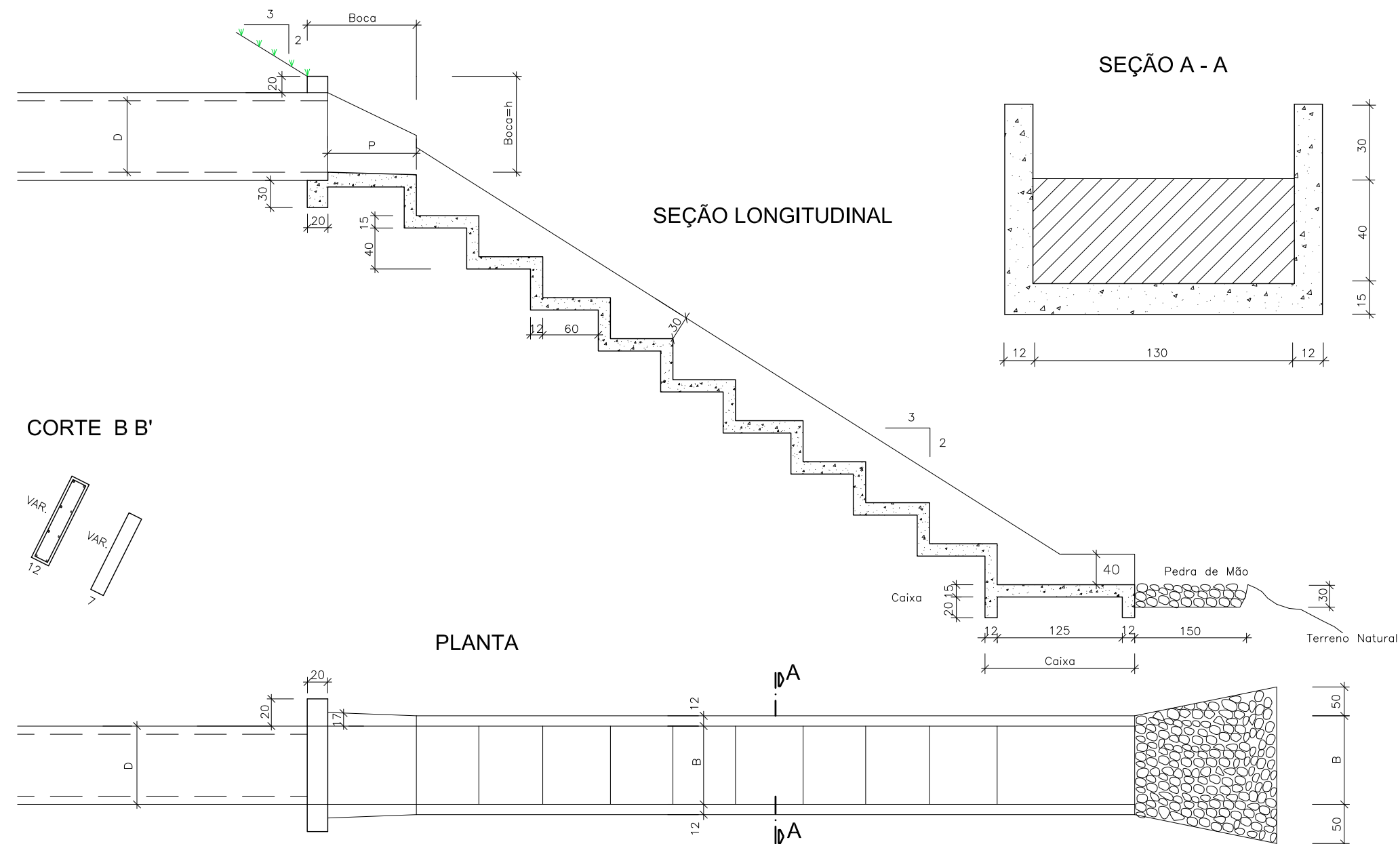
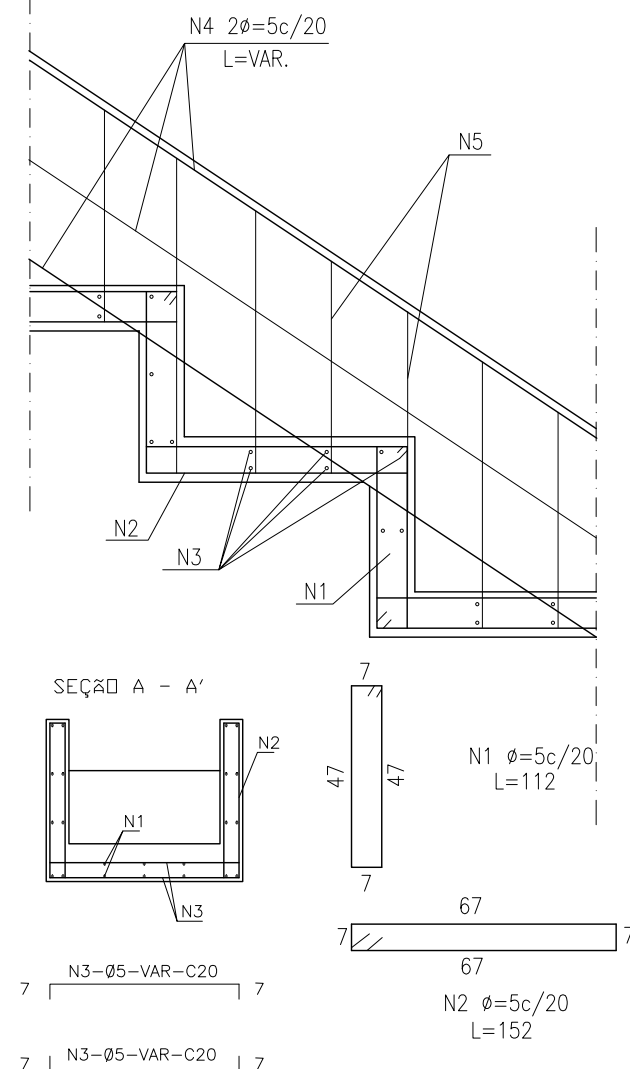


PREFEITURA MUNICIPAL DE SÃO JOAQUIM
RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

CAIXA COLETORA DE SARJETA - CCS				FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CODIGO PROJETO:	239_19	ESCALA:	S / ESCALA	DATA:
				SETEMBRO / 2021
				FOLHA:
				01

DESCIDA D'ÁGUA EM DEGRAUS PARA ATERRO - DAD

DETALHAMENTO - ARMAÇÃO



DIMENSÕES E CONSUMOS MÉDIOS																
TIPO	DIMENSÕES			QUANTIDADES							DETALHAMENTO - ARMAÇÃO					
	D	B	P	CONCRETO (m³) fck=110 kg/cm²			FORMA (m²)			ENROCAMENTO DE PEDRA ARRUMADA (m³)	N1 (kg/m)	N2 (kg/m)	N3 (kg/m)	N4 (kg/m)	N5 (kg/m)	PESO TOTAL (kg/m)
				BOCA	CAIXA	P/ML NA VERTICAL	BOCA	CAIXA	P/ML NA VERTICAL							
D.D.1	1X0.80	0.90	1.05	0.776	0.478	0.595	7.884	3.325	2.580	0.684	5,170	0,930	4,320	0,960	0,580	11,960
D.D.2	1X1.00	1.10	1.41	1.118	0.535	0.664	10.892	3.405	2.780	0.774	3,231	4,385	4,456	1,280	1,251	14,600
D.D.3	1X1.20	1.30	1.74	1.539	0.591	0.733	12.610	3.485	2.980	0.864	3,976	5,397	5,361	1,920	1,384	18,030

DESENVOLVIDO POR:



PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO

DESCIDA EM DEGRAUS - DAD

FASE DO PROJETO:
IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO:	230.10	ESCALA:	S/ESCALA	DATA:	SETEMBRO / 2021	FOLHA:	01
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BUEIRO TUBULAR DE Ø 80 - ARMADURA DUPLA

BERÇOS

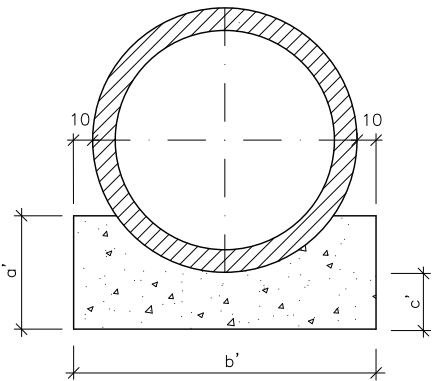
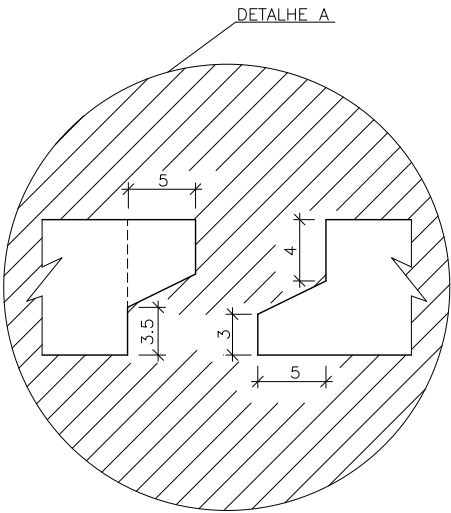
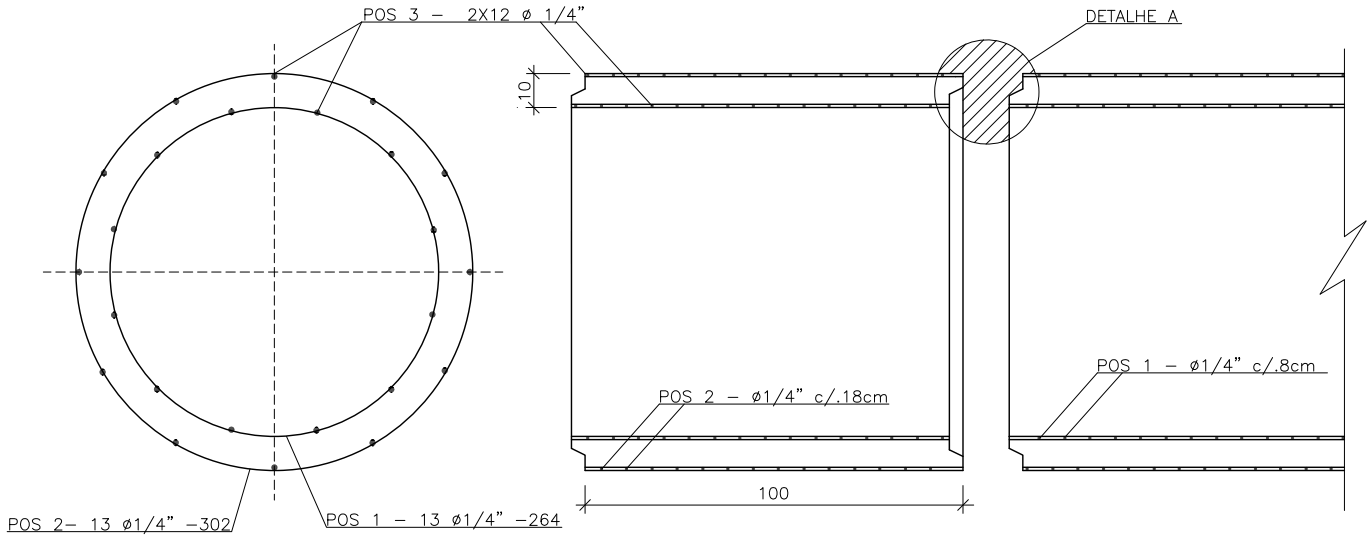


TABELA			
BUEIRO	a'	b'	c'
BSTC	45	120	20

CONCRETO CICLÓPICO
70% CONCRETO fck= 150 kg/cm²
30% PEDRA DE MÃO



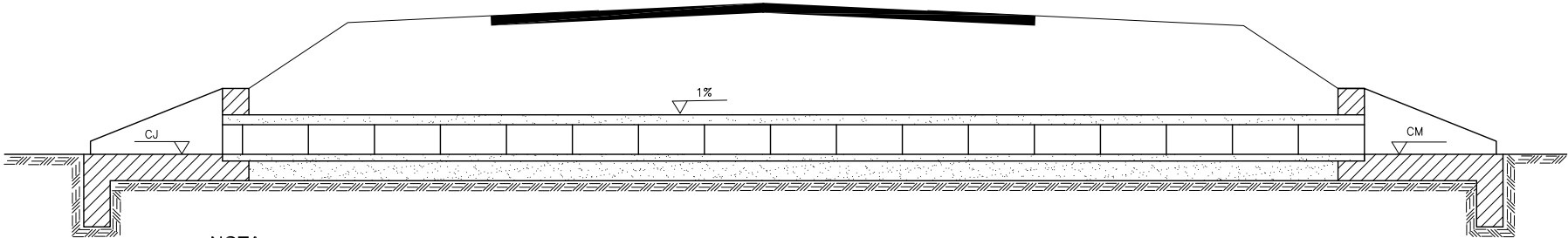
TUBO

DIAM. INT. cm	ESPES. cm	ARMADURA						CONS. DE MAT.		VOL. DO TUBO m³	PESO DO TUBO kg
		ARMAÇÃO	ANÉIS				DISTRIBUIÇÃO	AÇO Ø1/4"kg	CIMENTO kg		
			ØEXT.	Nº	ØINT.	Nº					
80	10	POS 1-2 1Ø1/4"C/8cm	96	13	84	13	POS 3 2X12Ø1/4"	25,5	105	0,28	670

CONCRETO

fck = 150 kg/cm²
AÇO - CA - 24

SEÇÃO TRANSVERSAL



NOTA:
NOS LOCAIS ONDE O SOLO DE FUNDAÇÃO APRESENTA BAIXA RESISTÊNCIA, SUBSTITUIR A CAMADA POR MATERIAIS INDICADOS NAS ESPECIFICAÇÕES.

DESENVOLVIDO POR:



PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
RODOVIA : RODOVIA MUNICIPAL			
TRECHO : SC-114 - BENTINHO			
BUEIRO SIMPLES Ø 80			FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CODIGO PROJETO: 239_19	ESCALA: S / ESCALA	DATA: SETEMBRO / 2021	FOLHA: 01

BUEIRO TUBULAR DE Ø 100 - ARMADURA DUPLA

BERÇO COM ENROCAMENTO E LAJE

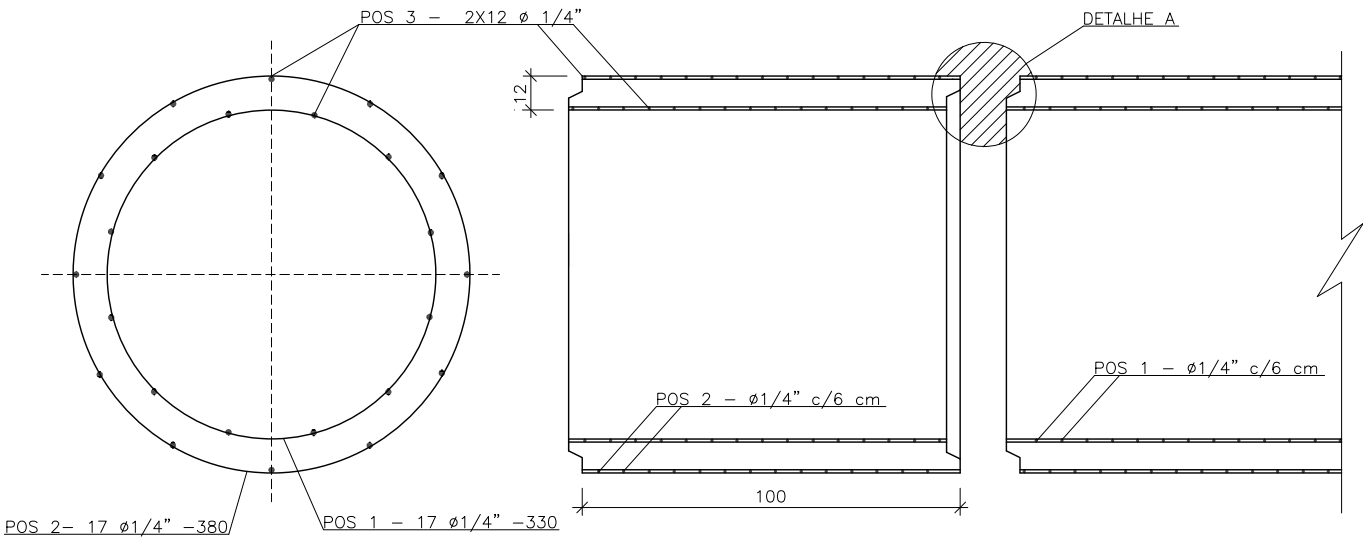
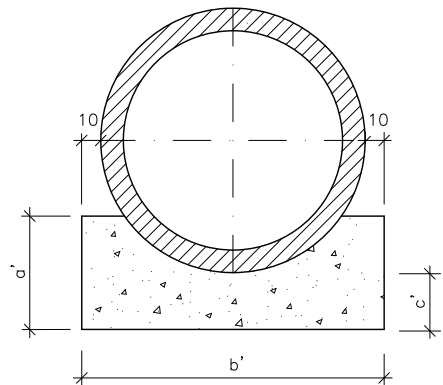
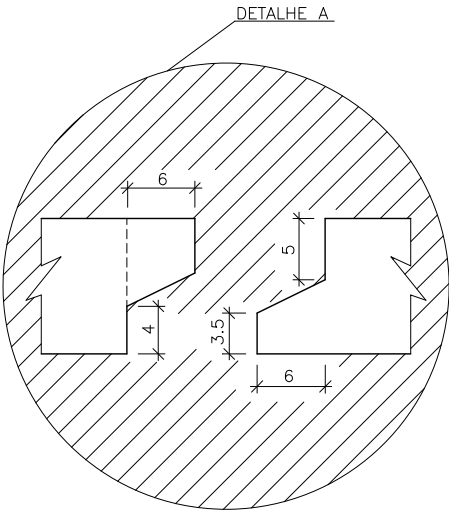


TABELA			
BUEIRO	a'	b'	c'
BSTC	56	144	25

CONCRETO CICLÓPICO
70% CONCRETO fck= 150 kg/cm²
30% PEDRAS DE MÃO

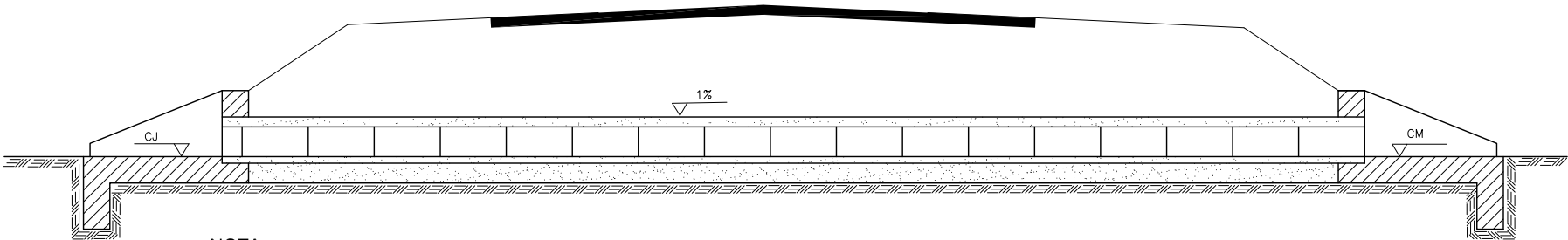
TUBO

DIAM. INT. cm	ESPES. cm	ARMADURA				CONS. DE MAT.		VOL. DO TUBO m³	PESO DO TUBO kg		
		ARMAÇÃO	ANÉIS		DISTRIBUIÇÃO	AÇO Ø1/4"kg	CIMENTO kg				
			ØEXT.	N°						ØINT.	N°
100	12	POS 1-2 1Ø1/4"C/6cm	120	17	104	17	POS 3 2X12Ø1/4"	38	157	0,42	1000



CONCRETO
fck = 150 kg/cm²
AÇO - CA - 24

SEÇÃO TRANSVERSAL



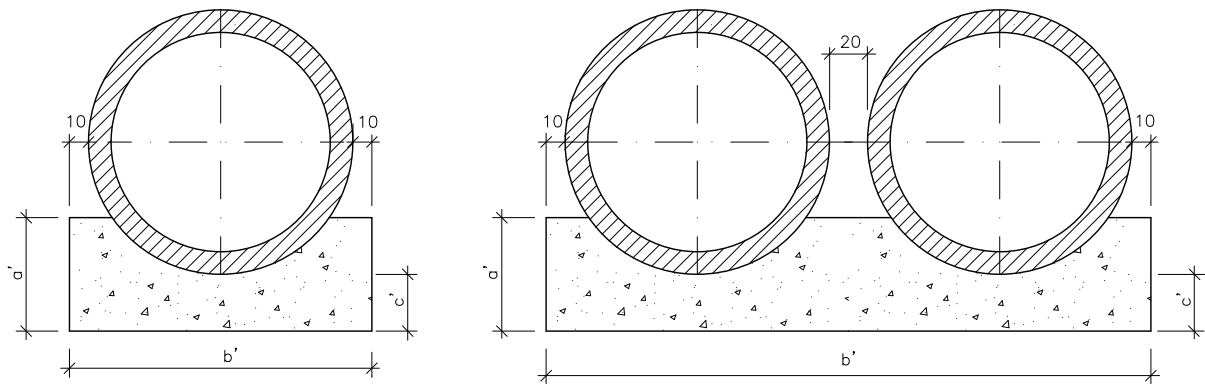
NOTA:
NOS LOCAIS ONDE O SOLO DE FUNDAÇÃO APRESENTA BAIXA RESISTÊNCIA, SUBSTITUIR A CAMADA POR MATERIAIS INDICADOS NAS ESPECIFICAÇÕES.

DESENVOLVIDO POR:



PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
RODOVIA : RODOVIA MUNICIPAL			
TRECHO : SC-114 - BENTINHO			
BUEIRO COM ENROCAMENTO E LAJE BSTC Ø 100			FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CODIGO PROJETO: 239_19	ESCALA: S / ESCALA	DATA: SETEMBRO / 2021	FOLHA: 01

BERÇOS



BUEIRO TUBULAR DE Ø 120 - ARMADURA DUPLA

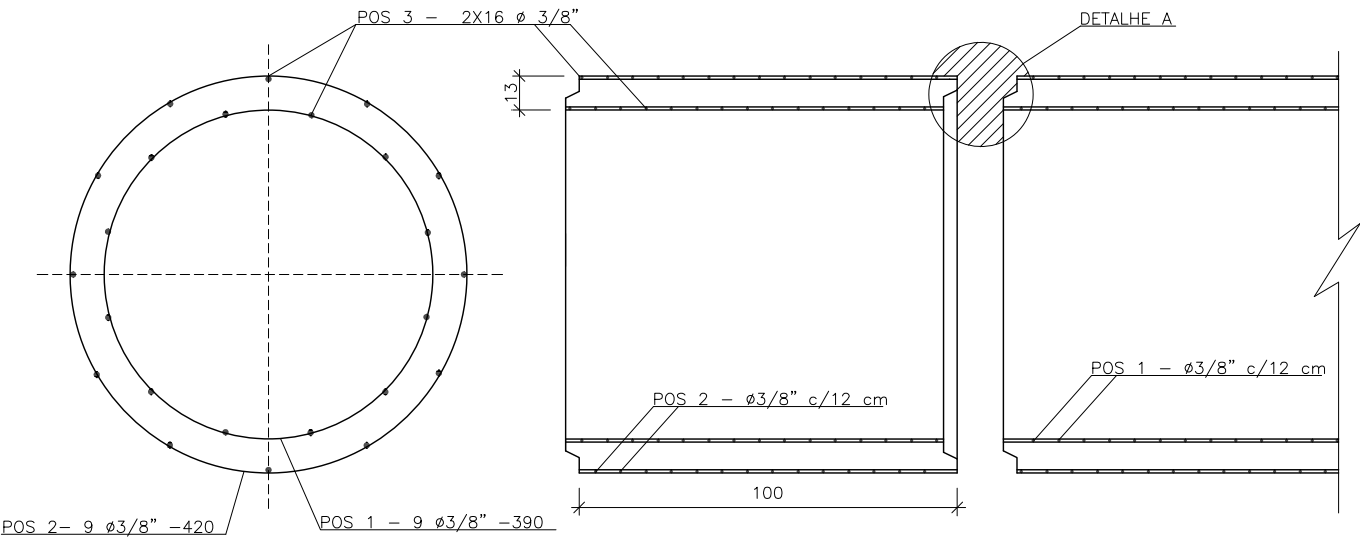
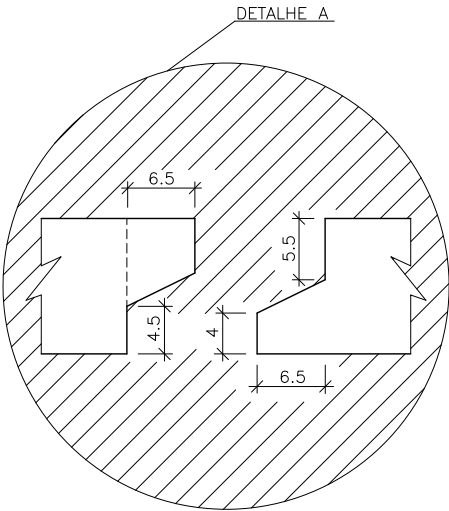


TABELA			
BUEIRO	a'	b'	c'
BDTC	67	332	30
BSTC	67	166	30

CONCRETO CICLÓPICO

70% CONCRETO fck= 150 kg/cm²
30% PEDRA DE MÃO



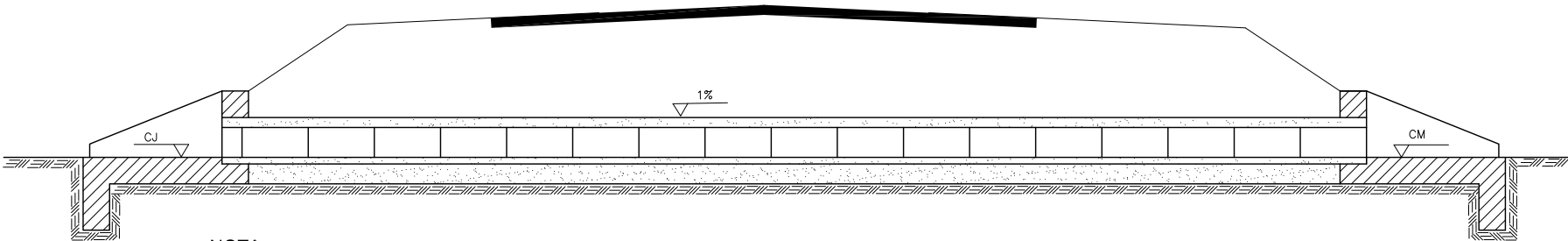
TUBO

DIAM. INT. cm	ESPES. cm	ARMADURA						CONS. DE MAT.		VOL. DO TUBO m³	PESO DO TUBO kg
		ARMAÇÃO	ANÉIS				DISTRIBUIÇÃO	AÇO Ø3/8"kg	CIMENTO kg		
			ØEXT.	N°	ØINT.	N°					
120	13	POS 1-2 1Ø3/8"C/12cm	142	9	124	9	POS 3 2X16Ø3/8"	59	203	0,54	1300

CONCRETO

fck = 150 kg/cm²
AÇO - CA - 24

SEÇÃO TRANSVERSAL

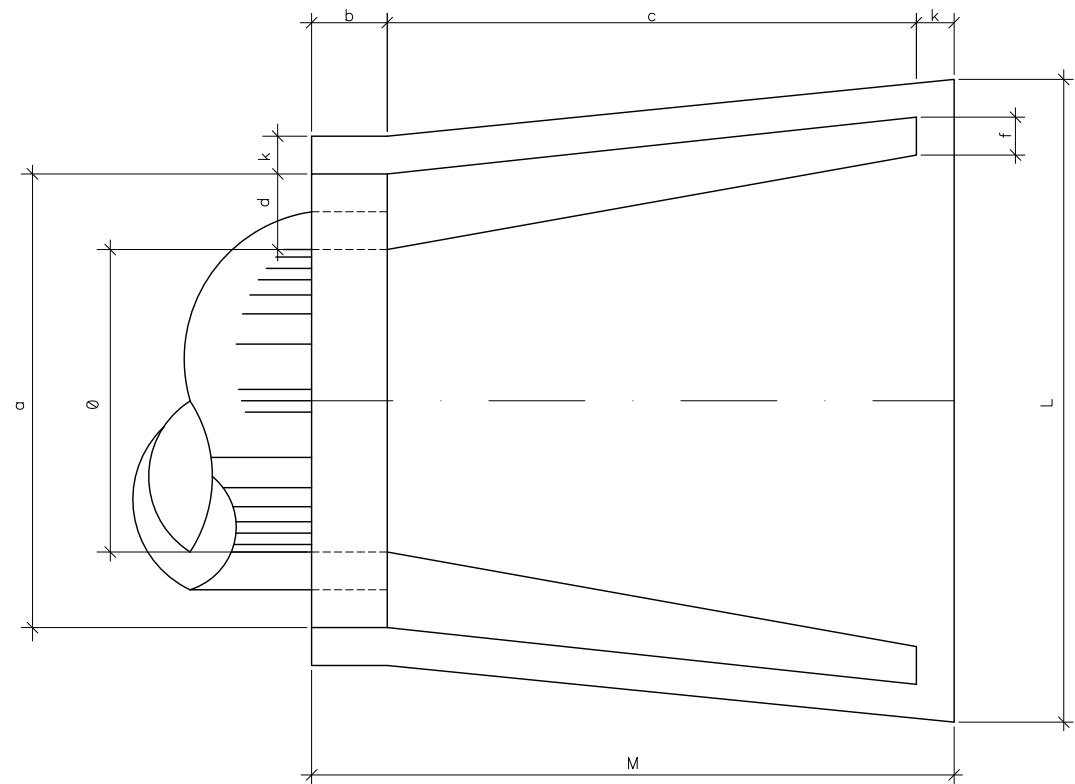


NOTA:
NOS LOCAIS ONDE O SOLO DE FUNDAÇÃO APRESENTA BAIXA RESISTÊNCIA, SUBSTITUIR A CAMADA POR MATERIAIS INDICADOS NAS ESPECIFICAÇÕES.

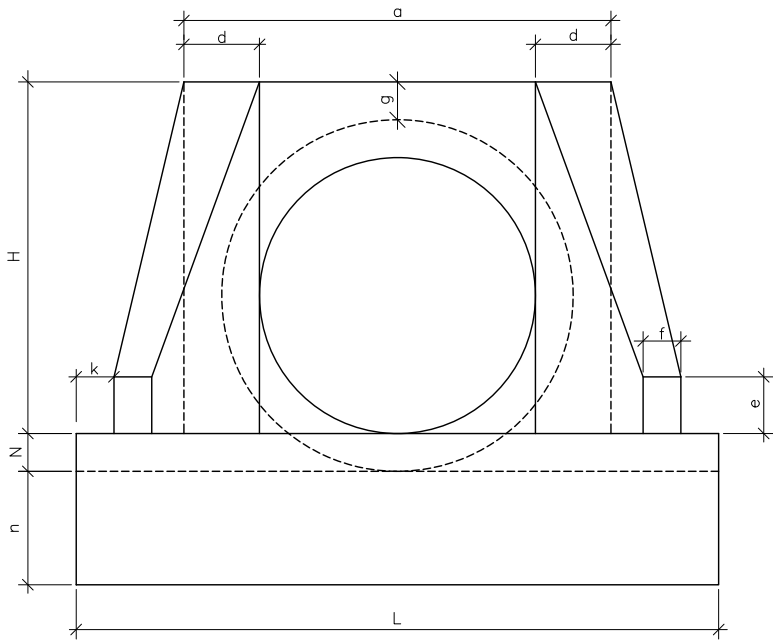
DESENVOLVIDO POR:



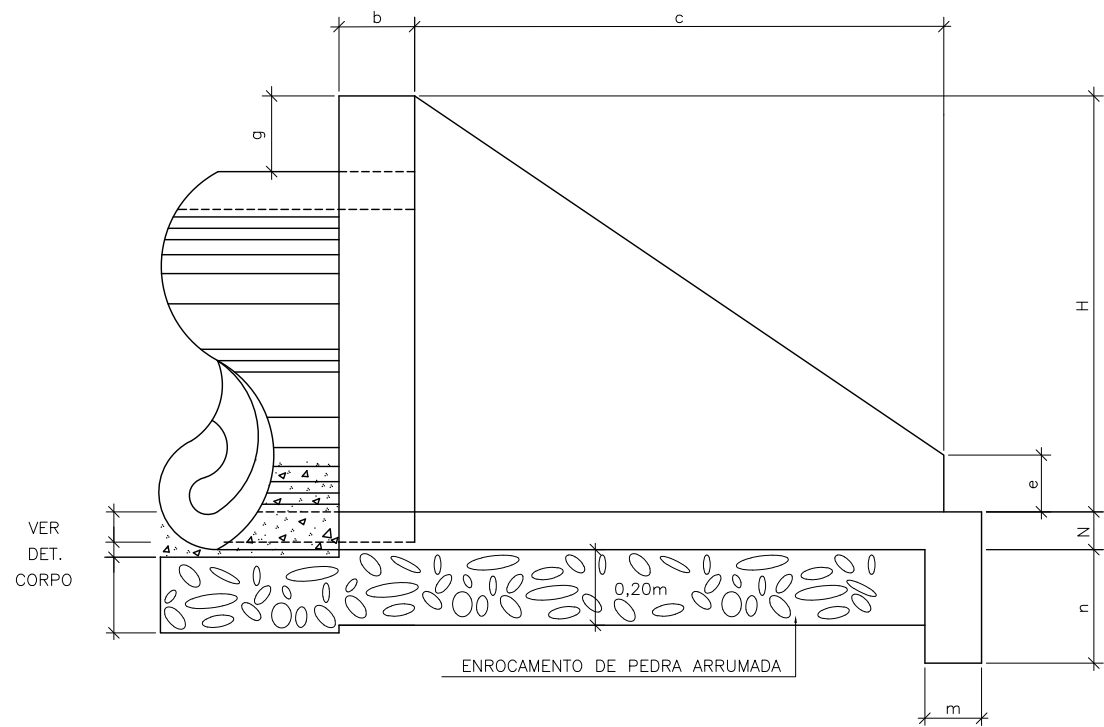
PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
RODOVIA : RODOVIA MUNICIPAL			
TRECHO : SC-114 - BENTINHO			
BUEIROS SIMPLES E DUPLOS Ø 120			FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CODIGO PROJETO: 239_19	ESCALA: S / ESCALA	DATA: SETEMBRO / 2021	FOLHA: 01



PLANTA



VISTA FRONTAL



VISTA LATERAL

TABELA															CONSUMO DE MATERIAL		
TIPO	a	b	c	d	e	f	g	k	m	n	H	L	M	N	Concreto m³	Forma m²	Enroc. m³
BST/ø 0,60	1,00	0,20	1,10	0,20	0,15	0,10	0,20	0,10	0,15	0,30	0,88	1,60	1,40	0,10	0,559	4,270	0,338
BST/ø 0,80	1,20	0,20	1,40	0,20	0,15	0,10	0,20	0,10	0,15	0,30	1,10	1,70	1,70	0,10	0,813	4,880	0,440
BST/ø 1,00	1,40	0,20	1,71	0,20	0,20	0,15	0,20	0,10	0,15	0,30	1,32	2,20	2,01	0,10	1,225	6,960	0,686
BST/ø 1,20	1,60	0,20	1,87	0,20	0,25	0,15	0,20	0,10	0,15	0,30	1,63	2,46	2,17	0,10	1,393	9,520	0,836
BST/ø 1,50	2,10	0,20	2,30	0,30	0,30	0,20	0,20	0,10	0,15	0,30	1,85	3,00	2,60	0,10	2,580	14,320	1,325
BST/ø 2,00	2,80	0,20	2,90	0,40	0,40	0,30	0,20	0,10	0,15	0,30	2,35	4,60	3,20	0,10	4,684	23,640	2,280

OBS.:
1 - O CONSUMO DE MATERIAIS SE REFERE A UMA BOCA.
2 - UTILIZAR CONCRETO fck=110 kg/cm²





PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

BOCA DE BUEIRO SIMPLES TUBULAR NORMAL

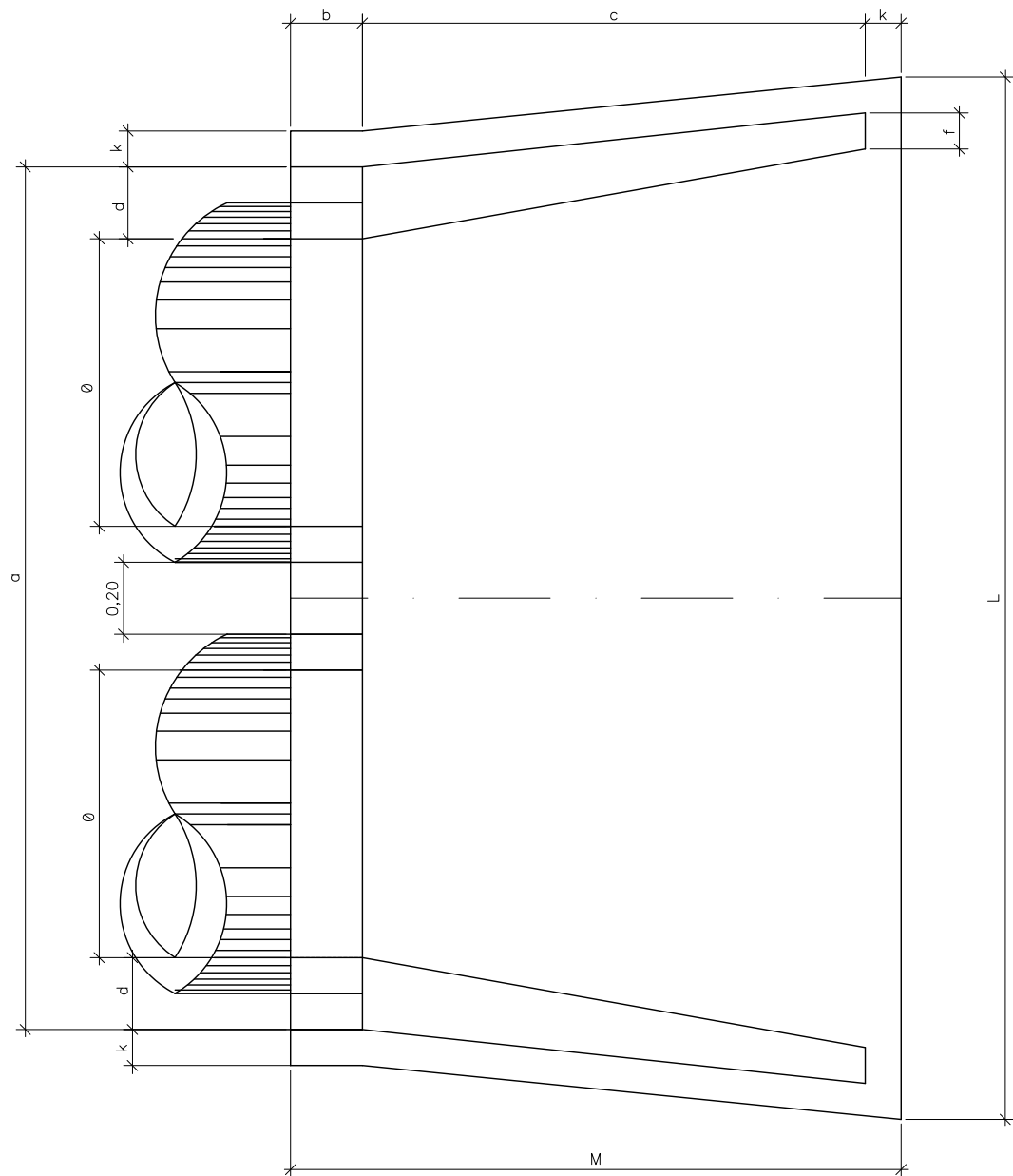
FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 239_19

ESCALA: S / ESCALA

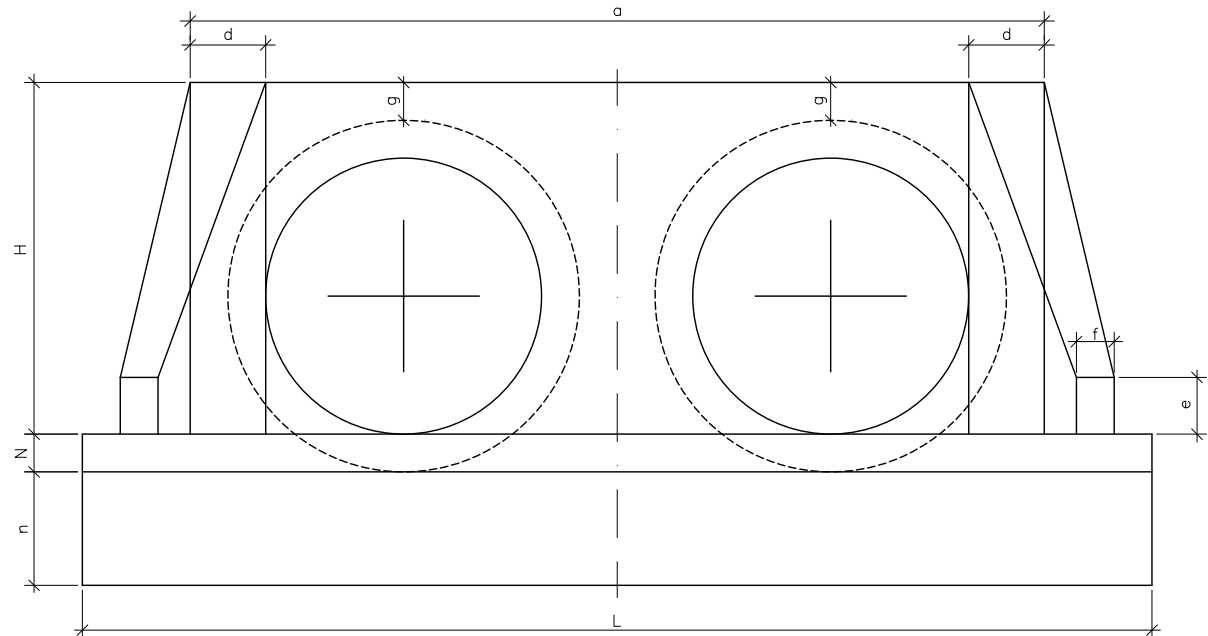
DATA: SETEMBRO / 2021

FOLHA: 01



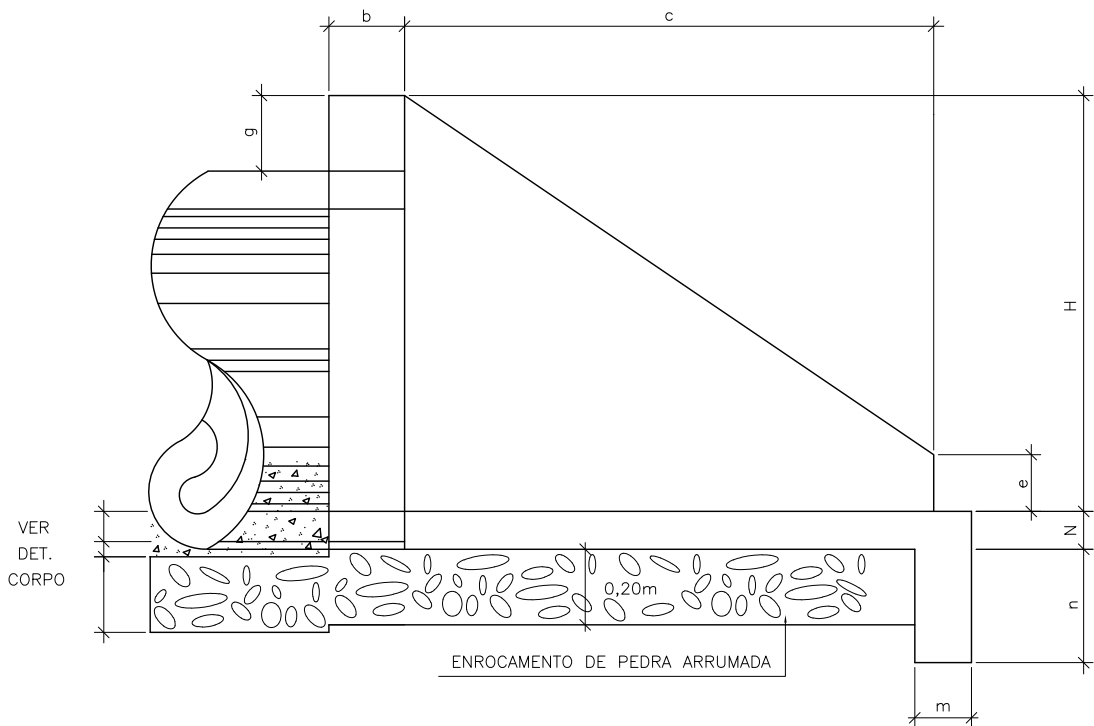
PLANTA

- OBS.:
- 1 - O CONSUMO DE MATERIAIS SE REFERE A UMA BOCA.
 - 2 - UTILIZAR CONCRETO $f_{ck}=110 \text{ kg/cm}^2$.



VISTA FRONTAL

TABELA															CONSUMO DE MATERIAL		
POSIÇÃO TIPO	a	b	c	d	e	f	g	k	m	n	H	L	M	N	Concreto m³	Forma m²	Enroc. m³
BDT Ø 0,60	2,12	0,20	1,10	0,20	0,15	0,10	0,20	0,10	0,15	0,30	0,88	2,72	1,40	0,10	0,908	5,960	0,655
BDT Ø 0,80	2,60	0,20	1,40	0,20	0,15	0,10	0,20	0,10	0,15	0,30	1,10	3,10	1,70	0,10	1,160	7,090	0,944
BDT Ø 1,00	3,08	0,20	1,71	0,20	0,20	0,15	0,20	0,10	0,15	0,30	1,32	3,88	2,01	0,10	1,674	13,060	1,368
BDT Ø 1,20	3,52	0,20	1,87	0,20	0,25	0,15	0,20	0,10	0,15	0,30	1,63	4,38	2,17	0,10	2,162	19,460	1,677
BDT Ø 1,50	4,40	0,20	2,30	0,30	0,30	0,20	0,20	0,10	0,15	0,30	1,85	5,30	2,60	0,10	3,365	25,400	2,475
BDT Ø 2,00	5,60	0,20	2,90	0,40	0,40	0,30	0,20	0,10	0,15	0,30	2,35	7,40	3,20	0,10	6,075	30,620	3,968



VISTA LATERAL

DESENVOLVIDO POR:





PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

BOCA DE BUEIRO DUPLO TUBULAR NORMAL

FASE DO PROJETO: IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 239_19

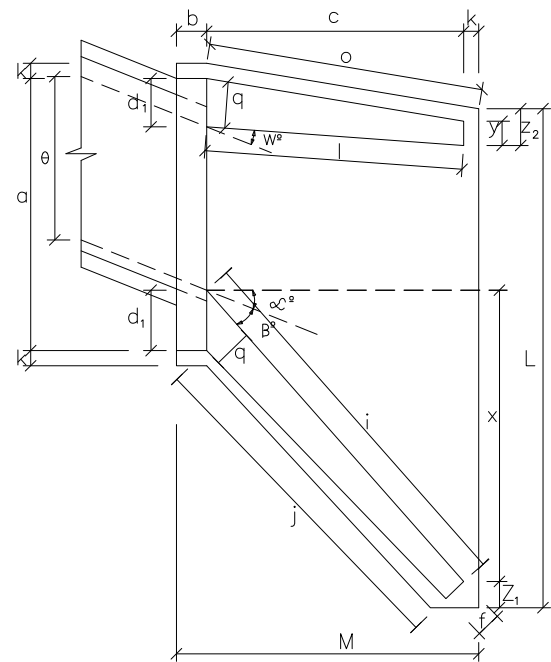
ESCALA: S / ESCALA

DATA: SETEMBRO / 2021

FOLHA: 01

BOCA DE BUEIRO SIMPLES ESCONSOS

PLANTA ESCONSO



FORMULAS PARA CÁLCULO DAS DIMENSÕES BUEIROS ESCONSOS			
$i = \frac{c}{\cos(\alpha + B)}$	$j = i - \{d1.\text{sen}(\alpha + B)\}$	$\theta = l \pm \{d^2.\text{sen}(\alpha - 15^\circ)\}$	$\alpha^\circ > 15 (+)$ $\alpha^\circ < 15 (-)$
$x = c.\text{tg}(\alpha + B)$	$y = c.\text{tg}(15^\circ \alpha)$	$l = \frac{c}{\cos(\alpha - 15^\circ)}$	
$L_s = x + y + \phi + z_1 + z_2$	$L_b = x + y + 2\phi + z_1 + z_2 + 2v + 0,20$	$L_t = x + v + 3\phi + z_1 + z_2 + 4v + 0,40$	
$Z_1 = (K + f)x \cos(\alpha^\circ + B^\circ)$	$Z_2 = (K + f)x \cos(\alpha^\circ - 15^\circ)$		
$d_1 = \frac{q}{\text{sen}(90 - (\alpha^\circ + B^\circ))}$	$d_2 = \frac{q}{\cos(\alpha - 15^\circ)}$		

V = ESPESSURA DO TUBO

DESENVOLVIDO POR:





PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

BOCA DE BUEIRO SIMPLES ESCONSOS

FASE DO PROJETO:
IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 239_19

ESCALA: S / ESCALA

DATA: SETEMBRO / 2021

FOLHA: 01

CÓDIGO	ESCONSIDADE - α			TABELA DE DIMENSÕES																								CONSUMO DE MATERIAL PARA UMA UNIDADE			
	w ²	α ²	B ²																									a	b	c	d ₁
BUEIRO SIMPLES TUBULAR Ø=60																															
72380	15°	15°	30°	1,08	0,20	1,10	0,28	0,20	0,15	0,10	0,20	0,88	1,55	1,35	0,10	1,10	0,15	0,30	1,10	0,10	0,20	1,10	0,00	0,14	0,20	2,04	1,40	0,666	5,378	0,415	
72390	15°	20°	30°	1,11	0,20	1,10	0,31	0,20	0,15	0,10	0,20	0,88	1,71	1,47	0,10	1,10	0,15	0,30	1,11	0,10	0,20	1,31	-0,09	0,12	0,19	2,13	1,40	0,713	5,452	0,430	
72400	15°	30°	25°	1,14	0,20	1,10	0,34	0,20	0,15	0,10	0,20	0,88	1,91	1,63	0,10	1,14	0,15	0,30	1,19	0,10	0,20	1,57	-0,29	0,11	0,19	2,18	1,40	0,770	5,925	0,440	
BUEIRO SIMPLES TUBULAR Ø=80																															
72480	15°	15°	30°	1,40	0,20	1,40	0,35	0,25	0,15	0,10	0,20	1,10	1,97	1,72	0,10	1,40	0,15	0,30	1,40	0,10	0,25	1,40	0,00	0,14	0,20	2,54	1,70	1,076	7,583	0,642	
72490	15°	20°	30°	1,43	0,20	1,40	0,38	0,25	0,15	0,10	0,20	1,10	2,17	1,87	0,10	1,40	0,15	0,30	1,42	0,10	0,25	1,66	-0,12	0,12	0,19	2,65	1,70	1,154	7,925	0,663	
72500	15°	30°	25°	1,48	0,20	1,40	0,43	0,25	0,15	0,10	0,20	1,10	2,44	2,08	0,10	1,44	0,15	0,30	1,50	0,10	0,25	1,99	-0,37	0,11	0,19	2,72	1,70	1,275	8,406	0,682	
BUEIRO SIMPLES TUBULAR Ø=100																															
72630	15°	15°	30°	1,72	0,20	1,71	0,42	0,30	0,20	0,15	0,20	1,32	2,41	2,11	0,10	1,71	0,15	0,30	1,71	0,10	0,30	1,71	0,00	0,17	0,25	3,13	2,01	1,714	10,481	0,939	
72640	15°	20°	30°	1,76	0,20	1,71	0,46	0,30	0,20	0,15	0,20	1,32	2,66	2,30	0,10	1,71	0,15	0,30	1,73	0,10	0,30	2,03	-0,14	0,16	0,24	3,29	2,01	1,856	10,996	0,976	
72650	15°	30°	25°	1,83	0,20	1,71	0,52	0,31	0,20	0,15	0,20	1,32	2,98	2,55	0,10	1,77	0,15	0,30	1,85	0,10	0,30	2,44	-0,45	0,14	0,24	3,37	2,01	2,077	11,715	1,004	
BUEIRO SIMPLES TUBULAR Ø=120																															
72780	15°	15°	30°	2,04	0,20	1,87	0,49	0,35	0,25	0,15	0,20	1,63	2,64	2,29	0,10	1,87	0,15	0,30	1,87	0,10	0,35	1,87	0,00	0,17	0,25	3,49	2,17	2,392	13,826	1,157	
72790	15°	20°	30°	2,09	0,20	1,87	0,54	0,35	0,25	0,15	0,20	1,63	2,90	2,48	0,10	1,87	0,15	0,30	1,90	0,10	0,35	2,22	-0,16	0,16	0,24	3,66	2,17	2,638	14,427	1,202	
72800	15°	30°	25°	2,17	0,20	1,87	0,61	0,36	0,25	0,15	0,20	1,63	3,26	2,76	0,10	1,93	0,15	0,30	2,02	0,10	0,35	2,67	-0,50	0,14	0,24	3,75	2,17	2,973	15,392	1,236	
BUEIRO SIMPLES TUBULAR Ø=150																															
72910	15°	15°	30°	2,46	0,20	2,30	0,56	0,40	0,30	0,20	0,20	1,85	3,25	2,85	0,10	2,30	0,15	0,30	2,30	0,10	0,40	2,30	0,00	0,21	0,30	4,31	2,60	3,676	18,227	1,707	
72920	15°	20°	30°	2,52	0,20	2,30	0,62	0,40	0,30	0,20	0,20	1,85	3,57	3,09	0,10	2,30	0,15	0,30	2,33	0,10	0,40	2,74	-0,20	0,19	0,29	4,52	2,60	4,017	19,119	1,774	
72930	15°	30°	25°	2,60	0,20	2,30	0,69	0,41	0,30	0,20	0,20	1,85	4,00	3,43	0,10	2,38	0,15	0,30	2,48	0,10	0,40	3,28	-0,61	0,17	0,28	4,62	2,60	4,461	20,412	1,818	
BUEIRO SIMPLES TUBULAR Ø=200																															
72960	15°	15°	30°	3,08	0,20	2,90	0,63	0,45	0,40	0,30	0,20	2,35	4,10	3,65	0,10	2,90	0,15	0,30	2,90	0,10	0,45	2,90	0,00	0,28	0,40	5,58	3,20	6,405	27,187	2,702	
72970	15°	20°	30°	3,15	0,20	2,90	0,70	0,45	0,40	0,30	0,20	2,35	4,51	3,97	0,10	2,91	0,15	0,30	2,94	0,10	0,45	3,45	-0,25	0,25	0,39	5,84	3,20	7,029	28,606	2,803	
72980	15°	30°	25°	3,24	0,20	2,90	0,78	0,46	0,40	0,30	0,20	2,35	5,05	4,41	0,10	3,00	0,15	0,30	3,12	0,10	0,45	4,14	-0,77	0,22		5,97	3,20	7,907	30,627	2,870	

DESENVOLVIDO POR:



ENGMETRIA
Projetos e Licenciamentos



PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

BOCAS DE BUEIROS SIMPLES - NORMAIS E ESCONSOS

DIMENSÕES E CONSUMO DE MATERIAIS - CONCRETO fck 11 MPa

FASE DO PROJETO:
IMPRESSÃO DEFINITIVA

CÓDIGO PROJETO: 239_19

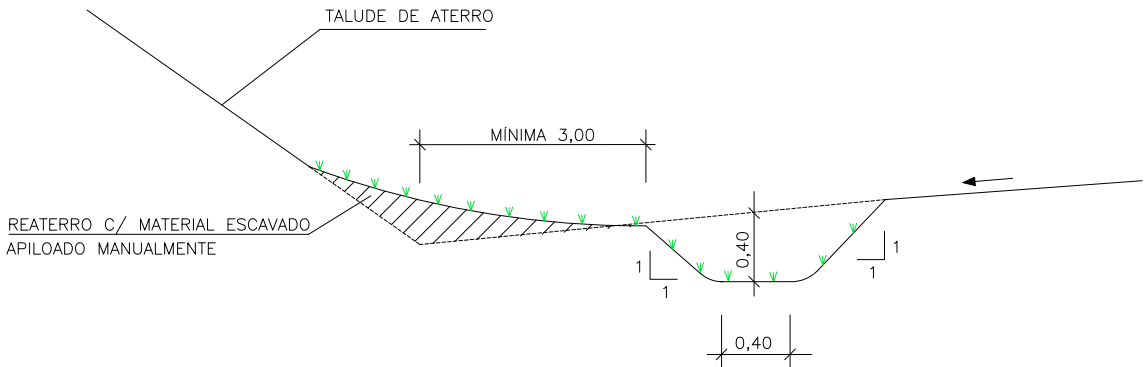
ESCALA: S / ESCALA

DATA: SETEMBRO / 2021

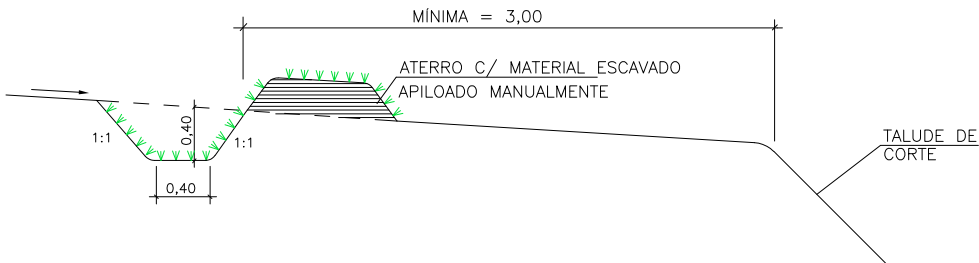
FOLHA: 01

DISPOSITIVOS DE DRENAGEM

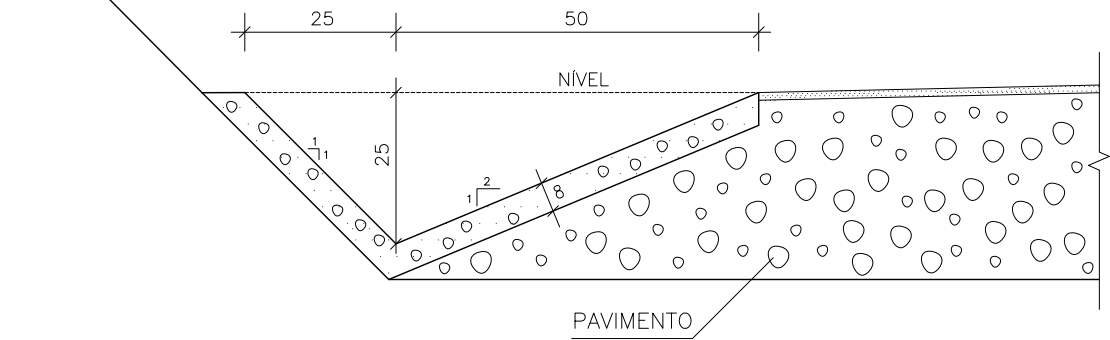
VALETAS DE PÉ DE ATERRO (VPA)



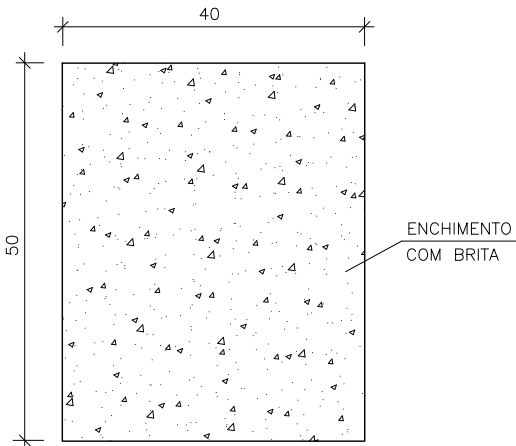
VALETAS DE COROAMENTO (VPC)



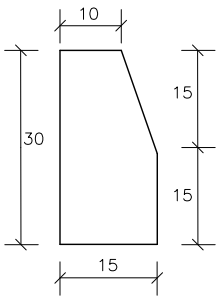
SARJETA DE TERRACEAMENTO E SARJETA TRIANGULAR PARA CORTE EM SOLO - TIPO I



DRENO - TIPO IX



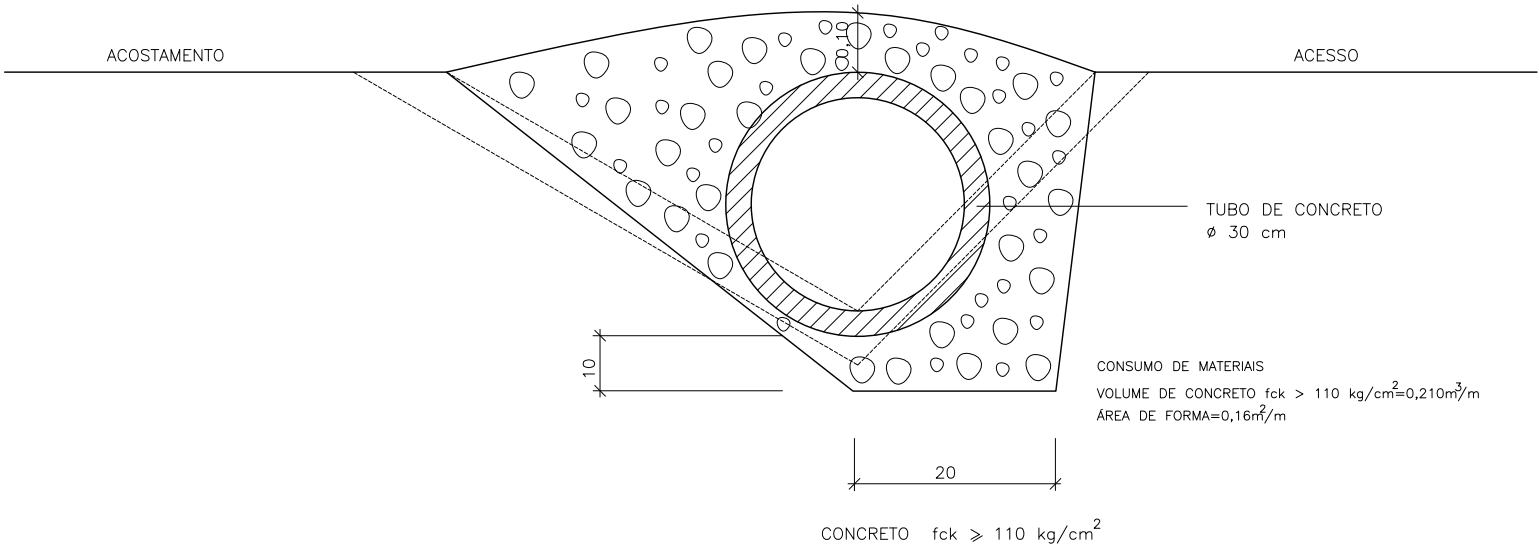
MEIO-FIO DE CONCRETO



DISCRIMINAÇÃO	CONSUMOS MÉDIOS	
ESCAVAÇÃO	0,20	m ³ /m
ENCHIMENTO BRITA	0,20	m ³ /m

CONSUMOS MÉDIOS		
MATERIAL	CONCRETO fck ≥ 11 MPa	FORMAS
BANQUETA	0,051 m ³ /m	0,34 m ² /m
MEIO-FIO	0,42 m ³ /m	0,45 m ² /m

TRAVESSIA SOBRE SARJETA EM ACESSO SECUNDÁRIO



DESENVOLVIDO POR:
ENGMETRIA
Projetos e Licenciamentos

 PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO			
DISPOSITIVOS DE DRENAGEM			FASE DO PROJETO: IMPRESSÃO DEFINITIVA
CÓDIGO PROJETO: 239_19	ESCALA: S / ESCALA	DATA: SETEMBRO / 2021	FOLHA: 01

Notas de Serviço

SARJETAS									
Quilômetro		Lado	Comprimento (m)	Tipo	Descida d'água (m)	Tipo	Saída	Corte/Aterro	Observação
Inicial	Final								
00 + 000	00 + 220	D	220,00	STC-02					
00 + 130	00 + 220	E	90,00	STC-02					
00 + 250	01 + 310	E	1060,00	STC-02					
00 + 320	00 + 410	D	90,00	STC-02					
00 + 450	00 + 480	D	30,00	STC-02					
00 + 665	00 + 720	D	55,00	STC-02					
00 + 815	01 + 020	D	205,00	STC-02					
01 + 250	01 + 310	D	60,00	STC-02					
01 + 380	01 + 430	E	50,00	STC-02					
01 + 390	01 + 410	D	20,00	STC-02					
01 + 500	01 + 620	E	120,00	STC-02					
01 + 510	01 + 630	D	120,00	STC-02					
01 + 670	01 + 880	D	210,00	STC-02					
01 + 690	02 + 460	E	770,00	STC-02					
02 + 100	02 + 225	D	125,00	STC-02					
02 + 390	02 + 445	D	55,00	STC-02					
02 + 480	02 + 925	D	445,00	STC-02					
02 + 490	02 + 540	E	50,00	STC-02					
02 + 580	02 + 930	E	350,00	STC-02					
03 + 020	03 + 220	D	200,00	STC-02					
03 + 030	03 + 200	E	170,00	STC-02					
03 + 280	03 + 560	D	280,00	STC-02					

SARJETAS									
Quilômetro		Lado	Comprimento (m)	Tipo	Descida d'água (m)	Tipo	Saída	Corte/Aterro	Observação
Inicial	Final								
03 + 430	03 + 570	E	140,00	STC-02					
03 + 670	04 + 090	D	420,00	STC-02					
03 + 715	03 + 740	E	25,00	STC-02					
03 + 790	04 + 090	E	300,00	STC-02					
04 + 170	04 + 500	D	330,00	STC-02					
04 + 170	04 + 510	E	340,00	STC-02					
04 + 560	04 + 790	D	230,00	STC-02					
04 + 600	04 + 640	E	40,00	STC-02					
04 + 690	05 + 145	E	455,00	STC-02					
05 + 200	06 + 320	E	1120,00	STC-02					
05 + 650	05 + 840	D	190,00	STC-02					
06 + 120	06 + 280	D	160,00	STC-02					
06 + 400	06 + 500	D	100,00	STC-02					
06 + 410	06 + 510	E	100,00	STC-02					
06 + 665	06 + 695	D	30,00	STC-02					
06 + 730	06 + 790	D	60,00	STC-02					
06 + 785	06 + 995	E	210,00	STC-02					
06 + 900	06 + 995	D	95,00	STC-02					
07 + 010	07 + 135	D	125,00	STC-02					
07 + 020	07 + 160	E	140,00	STC-02					
07 + 240	08 + 000	D	760,00	STC-02					
07 + 250	07 + 320	E	70,00	STC-02					
07 + 380	07 + 610	E	230,00	STC-02					

DESENVOLVIDO POR:

ENGMETRIA
Projetos e Licenciamentos

 PREFEITURA MUNICIPAL DE SÃO JOAQUIM			
RODOVIA : RODOVIA MUNICIPAL		TRECHO : SC-114 - BENTINHO	
NOTA DE SERVIÇO DE DRENAGEM			FASE DO PROJETO: Impressão Definitiva
CODIGO-PROJETO: 377_19	ESCALA:	DATA: SETEMBRO/2021	FOLHA:

[illegible]

ENGMETRIA
Projetos e Licenciamentos

	PREFEITURA MUNICIPAL DE SÃO JOAQUIM		
	RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO		
NOTA DE SERVIÇO DE DRENAGEM			FASE DO PROJETO Impressão Definitiva
CODIGO-PROJETO	377_19	ESCALA:	DATA: SETEMBRO/2021 FOLHA:

	DESENVOLVIDO POR:			PREFEITURA MUNICIPAL DE SÃO JOAQUIM	
	RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO			RODOVIA : RODOVIA MUNICIPAL TRECHO : SC-114 - BENTINHO	
NOTA DE SERVIÇO DE DRENAGEM				FASE DO PROJETO: Impressão Definitiva	
CÓDIGO PROJETO: 377_19		ESCALA:		DATA: SETEMBRO/2021	
FOLHA:		FOLHA:			

[illegible]

TRECHO : SC-114 - BENTINHO

FASE DO PROJETO
Impressão Definitiva

FOLIA

DRENOS RASOS

Quilômetro		Lado	Comprimento (m)	Estaca Saída	Tipo	Saída lado	Observações
Inicial	Final						
00 + 060	00 + 230	D	170,00	00 + 075	DPR-04	E	
00 + 260	01 + 227	E	967,00	00 + 260	DPR-04	E	
				00 + 615	DPR-04	E	BUEIRO
				00 + 790	DPR-04	E	BUEIRO
				00 + 980	DPR-04	E	BUEIRO
				01 + 227	DPR-04	E	BUEIRO
00 + 830	01 + 010	D	180,00	01 + 010	DPR-04	D	
01 + 250	01 + 310	E	60,00	01 + 227	DPR-04	E	BUEIRO
				01 + 310	DPR-04	E	
01 + 530	01 + 620	D	90,00	01 + 630	DPR-04	D	
01 + 670	01 + 860	D	190,00	01 + 670	DPR-04	D	
01 + 680	02 + 400	E	720,00	01 + 680	DPR-04	E	
				02 + 110	DPR-04	E	BUEIRO
				02 + 367	DPR-04	E	BUEIRO
02 + 740	02 + 930	D	190,00	02 + 930	DPR-04	D	
03 + 015	03 + 210	D	195,00	03 + 015	DPR-04	D	
03 + 420	03 + 590	D	170,00	03 + 590	DPR-04	D	
03 + 690	03 + 960	D	270,00	03 + 690	DPR-04	E	
				03 + 960	DPR-04	E	
04 + 020	04 + 080	D	60,00	04 + 080	DPR-04	D	
04 + 180	04 + 500	D	320,00	04 + 180	DPR-04	E	
				04 + 500	DPR-04	D	
04 + 580	04 + 800	D	220,00	04 + 800	DPR-04	D	
04 800	05 140	E	340,00	05 140	DPR-04	D	

DRENOS RASOS

Quilômetro		Lado	Comprimento (m)	Estaca Saída	Tipo	Saída lado	Observações
Inicial	Final						
				05 + 621	DPR-04	E	BUEIRO
				06 + 030	DPR-04	D	
06 + 160	06 + 320	E	160,00	06 + 320	DPR-04	E	
06 + 400	06 + 500	D	100,00	06 + 400	DPR-04	E	
06 + 780	06 + 980	E	200,00	06 + 780	DPR-04	E	
07 + 240	07 + 460	D	220,00	7 + 240	DPR-04	E	
07 + 900	07 + 980	D	80,00	7 + 980	DPR-04	E	
08 + 480	08 + 700	D	220,00	8 + 700	DPR-04	E	
08 + 760	08 + 940	E	180,00	8 + 940	DPR-04	E	
09 + 340	09 + 420	D	80,00	9 + 340	DPR-04	E	
09 + 540	10 + 360	D	820,00	9 + 867	DPR-04	D	BUEIRO
				10 + 020	DPR-04	D	BUEIRO
				10 + 360	DPR-04	E	
10 + 450	10 + 710	D	260,00	10 + 600	DPR-04	D	BUEIRO
				10 + 710	DPR-04	D	
10 + 800	10 + 900	E	100,00	10 + 800	DPR-04	E	
11 + 070	11 + 290	E	220,00	11 + 070	DPR-04	E	
11 + 100	11 + 260	D	160,00	11 + 100	DPR-04	D	
11 + 360	12 + 080	E	720,00	11 + 360	DPR-04	D	
				11 + 620	DPR-04	E	BUEIRO
				11 + 855	DPR-04	E	BUEIRO
				12 + 080	DPR-04	D	
12 + 700	13 + 220	E	520,00	12 + 930	DPR-04	E	BUEIRO
				13 + 155	DPR-04	E	BUEIRO

DESENVOLVIDO POR:



PREFEITURA MUNICIPAL DE SÃO JOAQUIM

RODOVIA : RODOVIA MUNICIPAL

TRECHO : SC-114 - BENTINHO

NOTA DE SERVIÇO DE DRENAGEM

FASE DO PROJETO:
Impressão Definitiva

CÓDIGO PROJETO: 377_19

ESCALA:


DATA: SETEMBRO/2021


FOLHA:

TRANSPOSIÇÃO DE SEGMENTOS DE SARJETAS							
Quilômetro		Lado	Dimensão	Comprimento (m)	Estaca Saída	Tipo	Observações
Inicial	Final						
00 + 465	+	D	0,30	17,00		TSS-02	
00 + 645	+	E	0,30	15,00		TSS-02	
00 + 800	+	E	0,30	10,00		TSS-02	
01 + 290	+	D	0,30	6,00		TSS-02	
01 + 540	+	D	0,30	6,00		TSS-02	
01 + 560	+	D	0,30	12,00		TSS-02	
01 + 715	+	E	0,30	6,00		TSS-02	
01 + 780	+	E	0,30	5,00		TSS-02	
02 + 140	+	D	0,30	18,00		TSS-02	
02 + 520	+	E	0,30	18,00		TSS-02	
02 + 830	+	E	0,30	6,00		TSS-02	
03 + 125	+	E	0,30	15,00		TSS-02	
04 + 660	+	D	0,30	35,00		TSS-02	
06 + 210	+	E	0,30	6,00		TSS-02	
08 + 310	+	D	0,30	10,00		TSS-02	
09 + 070	+	E	0,30	10,00		TSS-02	
10 + 385	+	D	0,30	15,00		TSS-02	
10 + 385	+	E	0,30	15,00		TSS-02	
10 + 820	+	D	0,30	7,00		TSS-02	
11 + 840	+	E	0,30	30,00		TSS-02	
12 + 560	+	E	0,30	10,00		TSS-02	
12 + 775	+	D	0,30	10,00		TSS-02	

[illegible]

OBRA Nº	Estaca	TIPO	DIMENSÃO (m)	ARMA-DURA	ALTURA DE ATERRO	COMPRIMENTO/ PROLONGAMENTO (m)			LADO DE MONTANTE	I%	ESCON-SIDADE (°)	VELO-CIDADE (m/s)	COTAS (m) *		VOLUME (m³)								BOCA / CAIXA		OBSERVAÇÕES
						LE	LD	TOTAL					LE	LD	Escavação Material 1ª (m³)	Escavação Material 2ª (m³)	Escavação Material 3ª (m³)	Solos moles(m³)	Enrocamen to(m³)	Escavação manual(m³)	Reaterro(m³)	Descida d'água (m)	LE	LD	
1	0+615	BSTC	0,80	PA-2	0,80	5,00	7,00	12,00	ESQUERDO	0,60	0	1,74	1.275,260	1.275,188		45,000					54,00	-	CAIXA	BOCA	
2	0+790	BSTC	0,80	PA-2	0,80	5,00	7,00	12,00	ESQUERDO	0,50	0	1,59	1.272,615	1.272,555		75,000					45,00	DAD 06=3m	CAIXA	BOCA	DESCIDA D'ÁGUA DE ATERRO. LADO DIREITO
3	0+980	BSTC	0,80	PA-2	1,00	5,00	20,00	25,00	ESQUERDO	0,50	0	1,59	1.254,893	1.254,768		225,000					150,000	-	CAIXA	BOCA	
4	1+227	BDTC	1,20	PA-2	0,80	7,00	7,00	14,00	ESQUERDO	0,50	0	2,09	1.233,304	1.233,234		125,000					52,000	-	BOCA	BOCA	
5	1+335	BDTC	1,20	PA-2	1,20	7,00	8,00	15,00	ESQUERDO	0,60	0	2,28	1.230,265	1.230,175		90,000					109,000	-	BOCA	BOCA	
6	1+465	BSTC	0,80	PA-2	0,80	9,00	10,00	19,00	ESQUERDO	0,50	0	1,59	1.228,740	1.228,645		56,000					75,000	-	BOCA	BOCA	
7	1+646	BSTC	1,20	PA-2	0,75	7,00	7,00	14,00	ESQUERDO	0,60	0	2,28	1.230,003	1.229,919			65,000				70,000	-	BOCA	BOCA	
8	2+110	BSTC	0,80	PA-2	0,75	4,50	11,50	16,00	ESQUERDO	0,50	0	1,59	1.247,120	1.247,040			76,000				58,000	-	CAIXA	BOCA	
9	2+367	BSTC	0,80	PA-2	0,70	10,00	11,00	21,00	ESQUERDO	0,50	50	1,59	1.247,714	1.247,609		30,000					80,000	DAD 06=5m	BOCA	BOCA	DESCIDA D'ÁGUA DE ATERRO. LADO DIREITO
10	2+654	BSTC	0,80	PA-2	0,90	6,00	7,00	13,00	ESQUERDO	0,50	0	1,59	1.250,034	1.249,969		60,000					55,000	-	BOCA	BOCA	
11	4+140	BSTC	0,80	PA-2	2,20	8,00	10,00	18,00	DIRETO	0,50	0	1,59	1.244,452	1.244,542			37,000				68,000	-	BOCA	BOCA	
12	4+656	BSTC	0,80	PA-2	1,00	10,00	8,00	18,00	DIRETO	0,50	50	1,59	1.236,864	1.236,954			90,000				65,000	-	BOCA	CAIXA	
13	5+621	BSTC	0,80	PA-2	1,00	6,50	9,50	16,00	ESQUERDO	0,50	48	1,59	1.228,976	1.228,896		85,000					62,000	-	CAIXA	BOCA	
14	6+070	BSTC	0,80	PA-2	0,70	6,00	7,00	13,00	ESQUERDO	0,50	0	1,59	1.229,506	1.229,441		5,000					52,000	DAD 06=5m	BOCA	BOCA	DESCIDA D'ÁGUA DE ATERRO. LADO DIREITO
15	7+200	BSTC	0,80	PA-2	0,80	7,00	7,00	14,00	DIRETO	0,50	0	1,59	1.221,524	1.221,594			20,000				50,000	-	BOCA	BOCA	
16	9+867	BSTC	0,80	PA-2	0,70	6,50	5,50	12,00	DIRETO	0,50	0	1,59	1.193,341	1.193,401			45,000				44,000	-	BOCA	CAIXA	
17	10+020	BSTC	0,80	PA-2	0,75	7,50	5,50	13,00	DIRETO	0,60	0	1,74	1.189,982	1.190,060			85,000				49,000	-	BOCA	CAIXA	
18	10+450	BSTC	1,00	PA-2	0,80	8,00	8,00	16,00	DIRETO	0,70	34	2,19	1.180,693	1.180,803			140,000				63,000	-	BOCA	BOCA	
19	10+600	BSTC	0,80	PA-2	0,80	8,50	5,50	14,00	DIRETO	0,50	0	1,59	1.173,612	1.173,682		65,000					53,000	-	BOCA	CAIXA	
20	10+755	BSTC	0,80	PA-2	1,60	8,00	9,00	17,00	ESQUERDO	0,80	-13	2,01	1.168,991	1.168,855			34,000				67,000	-	BOCA	BOCA	
21	11+040	BSTC	0,80	PA-2	0,65	6,00	7,00	13,00	ESQUERDO	0,60	0	1,74	1.191,825	1.191,747			34,000				50,000	-	BOCA	BOCA	
22	11+306	BSTC	1,20	PA-2	0,80	7,00	7,00	14,00	ESQUERDO	0,50	0	2,1	1.208,933	1.208,863			75,000				65,000	-	BOCA	BOCA	

DESENVOLVIDO POR:
 **ENGMETRIA**
Projetos e Licenciamentos



PREFEITURA MUNICIPAL DE SÃO JOAQUIM
RODOVIA : RODOVIA MUNICIPAL
TRECHO : SC-114 - BENTINHO
NOTA DE SERVIÇO DE OAC
FABR DO PROJETO: Impressão Definitiva
CONDIÇÃO: 377_19 | ESCALA: | DATA: SETEMBRO/2025 | FOLHA: |