INDEX OF SHEETS

(SEE SHEET 2)

RECORD PLANS	
CONTRACTOR:	KINGSBURY COMPANIES.- WAITSFIELD, VT
RESIDENT ENGINEER:	DAVID F. HALE
CONSTRUCTION BEGAN:	AUGUST 12, 2010
CONSTRUCTION COMPLETE:	AUGUST 11, 2011
RECORD PLANS BY:	D. HALE & JENNA HYDE

I HEREBY CERTIFY THAT ALL THE CONSTUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY David F. Hale RESIDENT ENGINEER

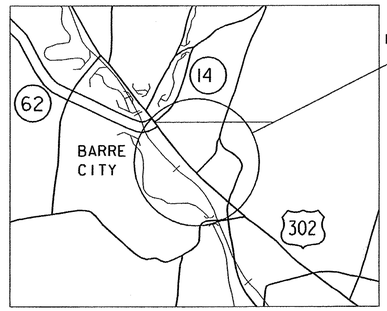
DATE 9/5/13

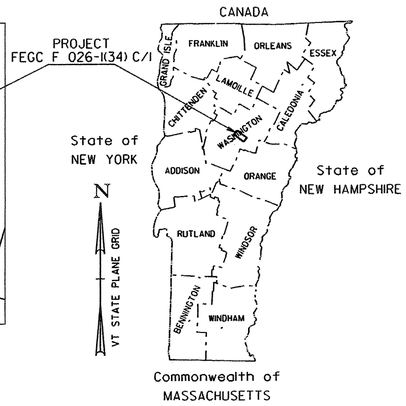
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT

CITY OF BARRE
COUNTY OF WASHINGTON
U.S. RTE. 302 (MINOR ARTERIAL)



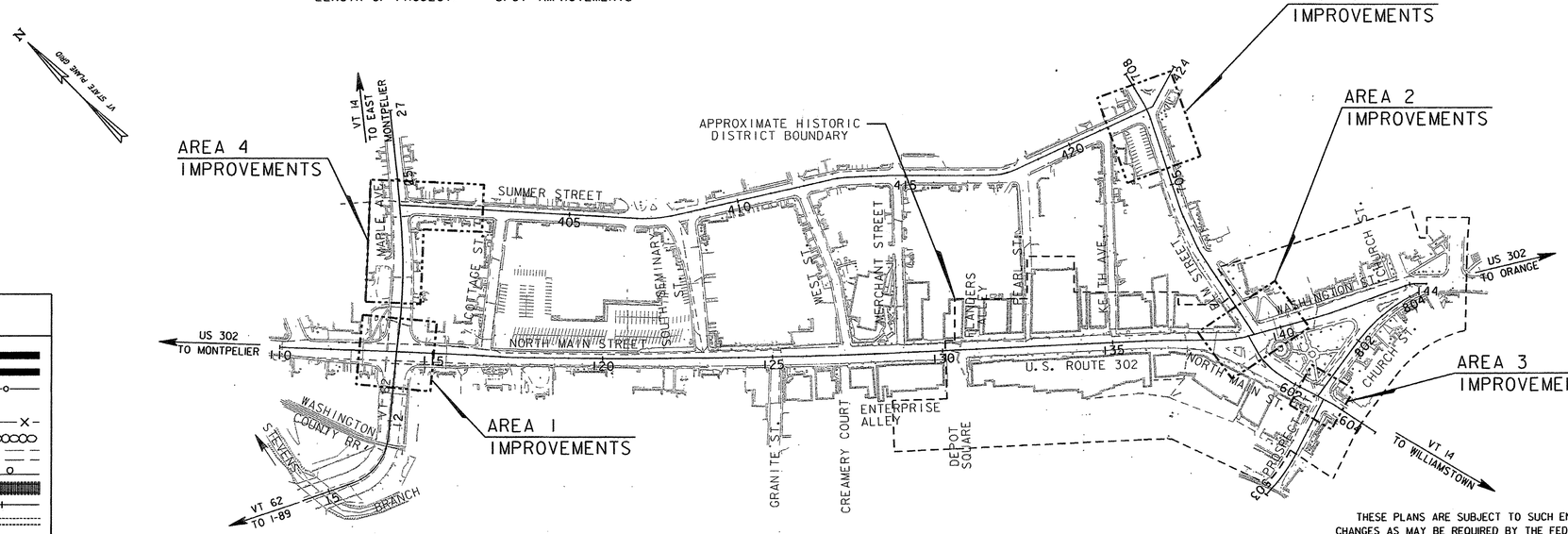


TRAFFIC DATA

2011 - AADT 18,200
2031 - AADT 20,000
2031 - ADTT 2700
2031 - DHV 1500
2031 - D% 54
2031 - T% 7.0

2031 - 20 YEARS ESAL's 10,913,000
2051 - 40 YEARS ESAL's 26,848,000

SUPERPAVE BITUMINOUS CONCRETE PAVEMENT MIXTURE DESIGN CRITERIA	
DESIGN LANE/DESIGN LIFE ESALS	5,893,000
DESIGN NUMBER OF GYRATIONS	80
PERFORMANCE GRADE ASPHALT BINDER	SEE SECTION 490 GENERAL SPECIAL PROVISIONS



CONVENTIONAL SYMBOLS

COUNTY LINE	COUNTY LINE
TOWN LINE	TOWN LINE
LIMITS OF ACCESS	
POINT OF ACCESS	X
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	SR SR SR
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : VSE, INC.
SURVEYED DATE : 1990, 2004

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

VHB Vanasse Hangen Brustlin, Inc.

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

STATE OF VERMONT CHRISTOPHER M. SPRY NO. 7871 CHRISTOPHER M. SPRY LICENSED PROFESSIONAL ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Hfreark DATE 4/22/10

PROJECT MANAGER : KEN UPMAL, P.E.

PROJECT NAME : BARRE CITY
PROJECT NUMBER : FEGC F 026-I(34) C/I

SHEET 1 OF 95 SHEETS

INDEX OF SHEETS

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10	ITEM DETAIL SHEET
11-23	RIGHT-OF-WAY PLANS
24	ALIGNMENT POINTS
25-28	ALIGNMENT AND CURB LAYOUT PLANS
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48-52	TRAFFIC SIGNAL PLAN 1
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73-75	NORTH MAIN STREET CROSS SECTIONS
76-80	MAPLE AVENUE CROSS SECTIONS
81-84	NORTH MAIN TO PROSPECT STREET CROSS SECTIONS
85	PROSPECT STREET CROSS SECTIONS
86-89	ELM STREET CROSS SECTIONS
90-91	CHURCH STREET CROSS SECTIONS
92-95	SUMMER STREET CROSS SECTIONS

GENERAL NOTES

1. TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.
2. THE PROPOSED PAVEMENT OVERLAYS AND PAVEMENT WIDENINGS SHALL MATCH THE EXISTING ROADWAY CROSS SLOPES, UNLESS OTHERWISE SPECIFIED.
3. PROPOSED DRIVE APRONS SHALL INCLUDE 1½" COLD PLANED PAVEMENT MATCH.
4. SIDEWALK RAMP DETECTABLE WARNING SURFACES SHALL BE TRUNCATED DOME DETECTABLE WARNING PLATES MANUFACTURED BY NEENAH FOUNDRY OR ANOTHER EQUAL CAST IRON PRODUCT FROM THE AGENCY'S APPROVED PRODUCTS LIST.
5. SAWCUT OF EXISTING PAVEMENT SHALL BE INCIDENTAL TO COMMON EXCAVATION.

STANDARD SHEETS

C-2A	PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH SIDEWALK ADJACENT TO CURB	10-14-05
C-2B	PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH SIDEWALK AND GREEN STRIP	10-14-05
C-3A	SIDEWALK RAMPS	03-10-08
C-3B	SIDEWALK RAMPS AND MEDIAN ISLANDS	03-10-08
C-10	CURBING	02-11-08
D-6	REINFORCED CONCRETE DROP INLET W/GRATE (DITCHES)	06-01-94
D-8	REINFORCED CONCRETE DROP INLET W/ PRECAST COVER & GRATE (BOTTOM SECTION), SEE SHEETS D-9,10,11 FOR TOP SECTION	01-03-00
D-9	REINFORCED CONCRETE DROP INLET TOPS, VERTICAL CURB & THROAT ADAPTER	06-01-94
D-11	STEEL GRATE,CAST IRON GRATE TYPE A,CAST IRON COVER	06-01-94
D-13	CONCRETE CATCH BASIN W/ CAST IRON GRATE CONCRETE MANHOLE W/ CAST IRON GRATE	01-03-00
D-15	PRECAST REINFORCED CONCRETE CB W/ CAST IRON GRATE PRECAST REINFORCED CONCRETE MH W/ CAST IRON COVER CAST IRON GRATE W/FRAME, TYPE D, CAST IRON GRATE W/FRAME, TYPE E	06-01-94
D-16	PRECAST CURB DI, GRATE, RCP ENDSECTION, ETC. CAST IRON GRATE, TYPE B CAST IRON GRATE, TYPE C UNDERDRAIN RISER REINFORCED CONCRETE PIPE END SECTION ENERGY DISSIPATOR FOR CULVERT	06-01-94
E-100	CONSTRUCTION APPROACH SIGNS	01-02-04
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	01-02-04
E-101	CONSTRUCTION SIGN DETAILS	05-30-03
E-102	CONSTRUCTION SIGN DETAILS	06-30-03
E-102A	CONSTRUCTION SIGN DETAILS	05-01-04
E-106	TRAFFIC CONTROL-MISCELLANEOUS DETAILS	03-01-04
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-03
E-107A	BREAKAWAY BARRICADE DETAILS	06-08-09
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	06-08-09
E-108A	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS FOR PAVING	06-08-09
E-119	UTILITY WORK ZONE	03-01-04
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-95
E-123	GUIDE SIGN PLACEMENT-MISCELLANEOUS DETAILS	03-16-04
E-136A	U.S. ROUTE MARKER SIGN DETAILS	08-08-95
E-136B	STATE ROUTE MARKER SIGN DETAILS	08-08-95
E-143	REGULATORY SIGN DETAILS	06-15-04
E-144	REGULATORY SIGN DETAILS	03-29-99
E-145A	REGULATORY SIGN DETAILS - LANE USE CONTROL SIGNS	12-23-94
E-150	WARNING SIGN DETAILS	05-01-04
E-151	WARNING SIGN DETAILS	05-01-04
E-152	WARNING SIGN DETAILS	05-01-04
E-153	WARNING SIGN DETAILS	05-01-04
E-153B	WARNING SIGN DETAILS	05-30-03
E-164	SQUARE STEEL SIGN POST	06-08-09
E-170	TRAFFIC CONTROL SIGNALS PEDESTAL POST MOUNTED	11-04-99
E-171A	TRAFFIC CONTROL SIGNALS GENERAL NOTES & DETAILS	08-09-95
E-171B	TRAFFIC CONTROL SIGNALS MISCELLANEOUS DETAILS	08-09-95
E-171C	TRAFFIC CONTROL SIGNALS CANTILEVER MOUNTING DETAILS	08-09-95
E-173	PULL BOXES AND JUNCTION BOXES	08-09-95
E-175	POWER DROP STANCHIONS	06-08-09
E-180A	STREET LIGHTING DETAILS	08-09-95
E-180B	STREET LIGHTING DETAILS	08-09-95
E-191	PAVEMENT MARKING DETAILS	02-01-99
E-192	PAVEMENT MARKING DETAILS	10-12-00
E-193	PAVEMENT MARKING DETAILS	08-18-95
F-4	CHAIN LINK FENCE, TYPE II DRIVE GATE FOR CHAIN LINK FENCE, TYPE II WALK GATE FOR CHAIN LINK FENCE, TYPE II	06-01-94
G-1	STEEL BEAM GUARDRAIL (50 MPH & OVER)	01-03-00

CONVENTIONAL SYMBOLS

- TOWN LINE
- LIMITS OF ACCESS
- FENCE LINE
- STONE WALL
- TRAVELED WAY
- GUARDRAIL
- SURVEY LINE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- EXISTING TREES
- EXIST. STREET LIGHT
- PROP. ORNAMENTAL STREET LIGHT
- PROP. SIGNAL STREET LIGHT
- PROP. SIGNAL POLE W/LUMINAIRE
- FIRE CALL BOX (FB)
- CONTROL OF ACCESS
- PROPERTY LINE
- R.O.W. TAKING LINE
- SLOPE RIGHTS (SR)
- EXISTING TREE TO BE REMOVED (R)
- EXISTING MAST ARM
- PROPOSED MAST ARM
- PROPOSED PEDESTAL POLE
- PROPOSED CONTROL CABINET (CC)
- PROPOSED CONDUIT
- PROPOSED CONDUIT & SLEEVE
- PROPOSED PULL BOX (PB)
- PROPOSED FIRE HYDRANT
- PROPOSED WATER LINE (PW)
- PROPOSED SEWER LINE (PS)
- PROPOSED BORING LOCATION

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_IND.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
INDEX OF SHEETS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 2 OF 95

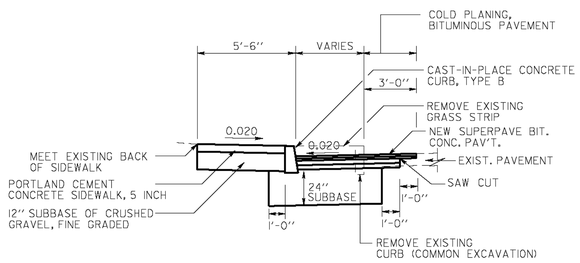
VHB Vanasse Hangen Brustlin, Inc.

MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	¾"
SUBBASE	1"
SAND	1"

** NOTE
THE PERFORMANCE-GRADED (PG) ASPHALT BINDER SHALL BE EITHER PG 70-28, OR IN ACCORDANCE WITH SECTION 490 OF THE GENERAL SPECIAL PROVISIONS.

TYPICAL SECTIONS

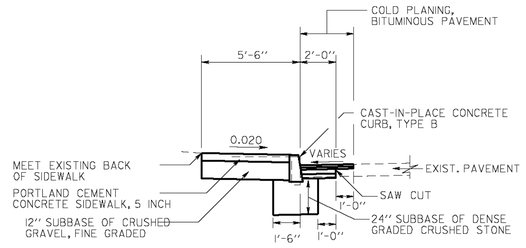
1½" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS (PG 70-28)**
1½" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS (PG 70-28)**
3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IIS (PG 70-28)**
3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IIS (PG 70-28)**
24" SUBBASE OF DENSE GRADED CRUSHED STONE



1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
24" SUBBASE OF DENSE GRADED CRUSHED STONE

ROADWAY WIDENING (MAPLE AVENUE & SUMMER STREET)

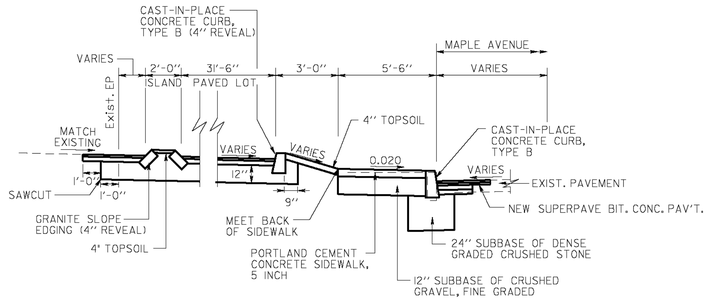
N.T.S.
STA. 23+42 RT - 400+43 RT
STA. 400+53 - 400+83 RT
STA. 24+91 RT - 401+01 LT
STA. 402I6 - 402+22 LT



1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
24" SUBBASE OF DENSE GRADED CRUSHED STONE

CURB & SIDEWALK RECONSTRUCTION (MAPLE AVENUE & SUMMER STREET)

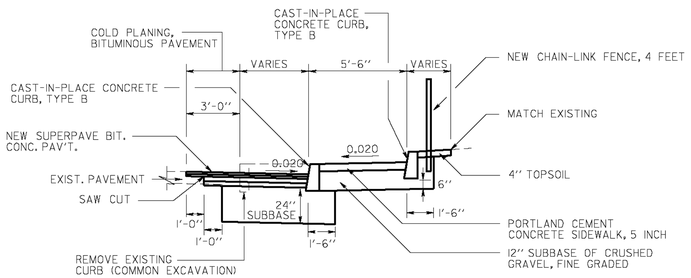
N.T.S.
STA. 23+75 - 24+92 LT
STA. 42I+94 LT - 707+63 LT



PARKING LOT PAVEMENT
1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
12" SUBBASE OF DENSE GRADED CRUSHED STONE

PROPOSED MAPLE AVENUE PARKING LOT

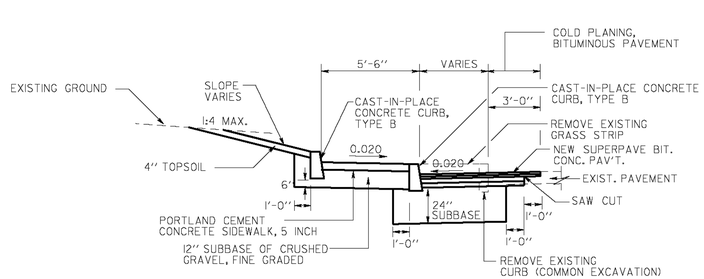
N.T.S.
STA. 2I+5I - 22+45 LT



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1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
24" SUBBASE OF DENSE GRADED CRUSHED STONE

ROADWAY WIDENING (SUMMER STREET)

N.T.S.
STA 400+43-400+53 RT



1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
24" SUBBASE OF DENSE GRADED CRUSHED STONE

ROADWAY WIDENING (SUMMER STREET)

N.T.S.
STA 40I+0I-402+I6 LT

VHB Vanasse Hangen Brustlin, Inc.

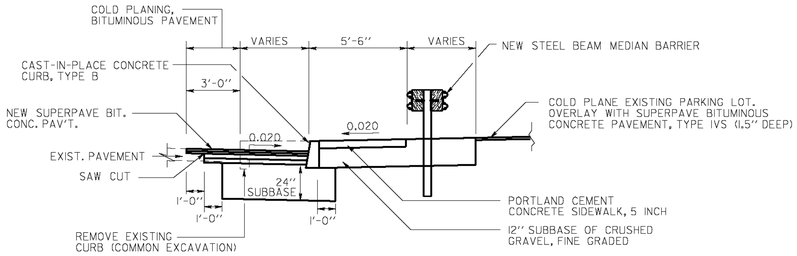
PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-I(34) C/I
FILE NAME: z09B240_TYP.dgn	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
TYPICAL SECTIONS	SHEET 3 OF 95

MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	¾"
SUBBASE	1"
SAND	1"

** NOTE
THE PERFORMANCE-GRADED (PG) ASPHALT BINDER SHALL BE EITHER PG 70-28, OR IN ACCORDANCE WITH SECTION 490 OF THE GENERAL SPECIAL PROVISIONS.

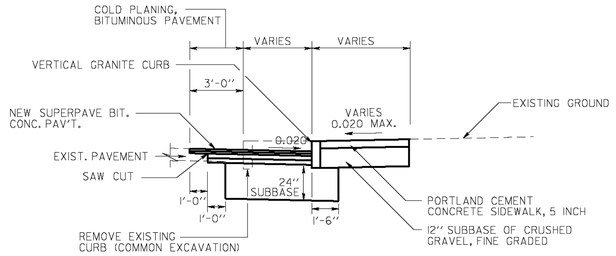
TYPICAL SECTIONS

1½" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS (PG 70-28)**
1½" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS (PG 70-28)**
3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IIS (PG 70-28)**
3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IIS (PG 70-28)**
24" SUBBASE OF DENSE GRADED CRUSHED STONE



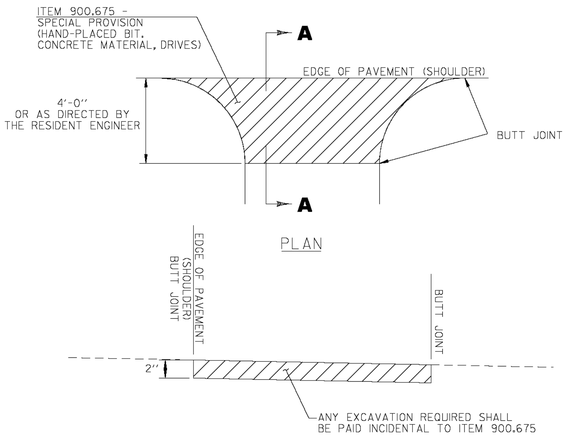
1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
24" SUBBASE OF DENSE GRADED CRUSHED STONE

ROADWAY WIDENING (ELM & SUUMER STREET.)
N.T.S.
STA. 421+55 RT - 706+22, LT



1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
1½" SUPERPAVE BIT. CONC. PAV'T TYPE IVS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
3" SUPERPAVE BIT. CONC. PAV'T TYPE IIS
24" SUBBASE OF DENSE GRADED CRUSHED STONE

ROADWAY WIDENING (AREAS 2 & 5 IMPROVEMENTS)
N.T.S.



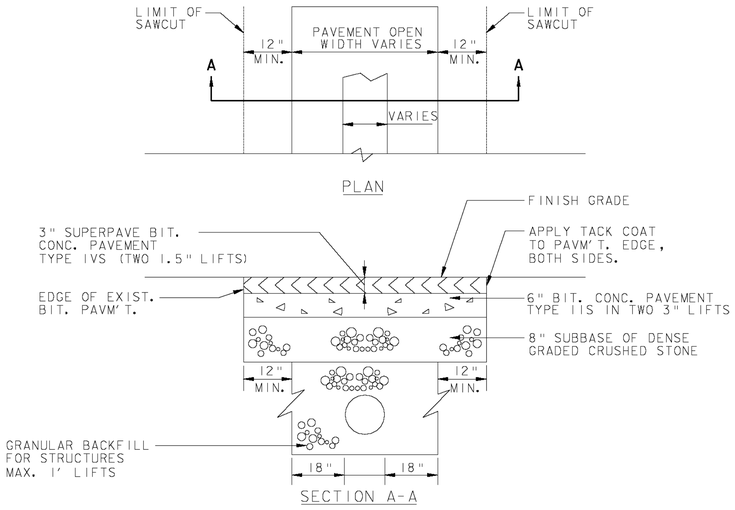
SECTION A-A

HANDWORK DETAILS FOR PAVED DRIVES

STATION	POSITION	QUANTITY (SY)
SL 24+39	LT	21.4
SL 400+78	LT	38.1
SL 401+19	RT	6.7
SL 422+11	LT	6.2

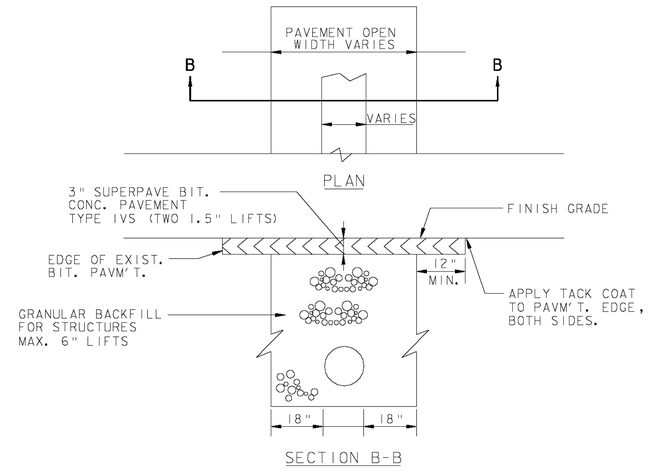
PROJECT NAME:	BARRE CITY
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DESIGNED BY: DMP / MDS	CHECKED BY:
TYPICAL SECTIONS	SHEET 4 OF 95

VHB Vanasse Hangen Brustlin, Inc.



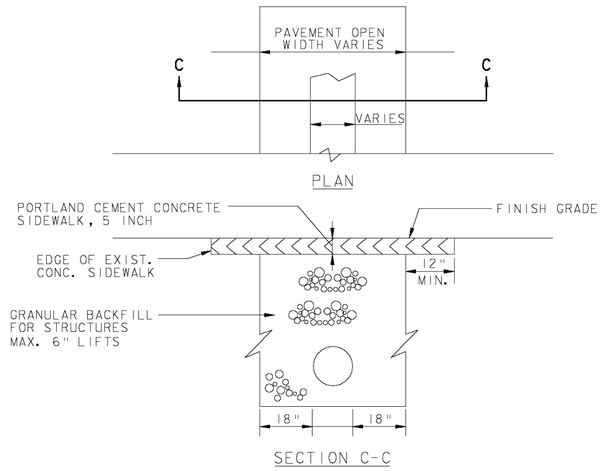
PERMANENT PAVEMENT PATCH AT UTILITY TRENCH

1. SAW CUT SHALL BE USED FOR INITIAL PAVEMENT CUT. (INCIDENTAL TO COMMON EXCAVATION)
2. REMOVE EXISTING PAVEMENT WITHIN TRENCH LIMITS PLUS 8" OF GRANULAR MATERIAL. COMPACT SUB-BASE TO 95% MAXIMUM DRY DENSITY.



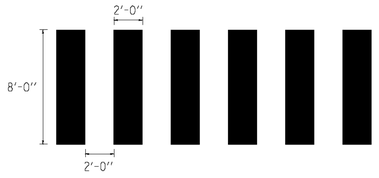
TEMPORARY PAVEMENT PATCH AT UTILITY TRENCH

1. SAW CUT SHALL BE USED FOR INITIAL PAVEMENT CUT. (INCIDENTAL TO TRENCH EXCAVATION)
2. ALL UNSUITABLE MATERIAL INCLUDING EXCAVATED ASPHALT SHALL BE REMOVED AND DISPOSED OFF SITE (PAID AS COMMON EXCAVATION).



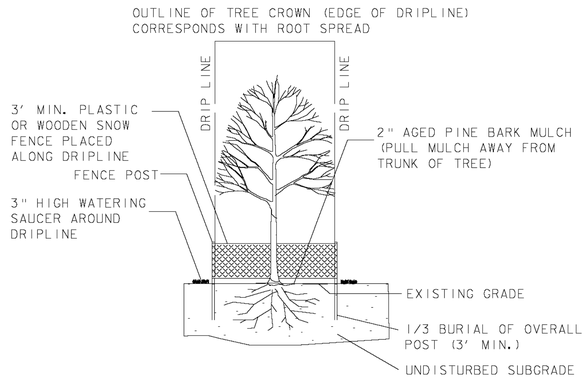
SIDEWALK PATCH AT UTILITY TRENCH

1. SAW CUT SHALL BE USED FOR INITIAL PAVEMENT CUT. (INCIDENTAL TO TRENCH EXCAVATION)
2. ALL UNSUITABLE MATERIAL INCLUDING EXCAVATED ASPHALT SHALL BE REMOVED AND DISPOSED OFF SITE (PAID AS COMMON EXCAVATION).



BLOCK STYLE CROSSWALK MARKING DETAIL

SEE SIGNS AND PAVEMENT MARKING PLANS FOR LOCATIONS



TREE PROTECTION

STA. 138+57, RT.
SCALE: N.T.S.

SEEDING FORMULA
URBAN AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
42.5	34.0	CREEPING RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.00	80.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULA OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z09B240Z_DET.dgn	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
CONSTRUCTION DETAILS	SHEET 5 OF 95

STATE OF VERMONT AGENCY
OF TRANSPORTATION

QUANTITY SUMMARY SHEET #1

SUMMARY OF ESTIMATED QUANTITIES

FULL C.E. ITEMS	EROSION CONTROL	LANDSCAPING	ROADWAY	GRAND TOTAL	UNIT	DESCRIPTION	ITEM NUMBER	ROUNDING
			1200	1200	CY	COMMON EXCAVATION	203.15	55.7
			340	340	CY	TRENCH EXCAVATION OF EARTH	204.20	7.0
			40	40	CY	TRENCH EXCAVATION OF ROCK	204.21	EST
			1	1	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-
			175	175	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	5.0
			1340	1340	SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	5.8
			235	235	CY	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.26	2.6
			615	615	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	4.2
			7	7	CWT	EMULSIFIED ASPHALT	404.65	0.8
			1	1	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-
			565	565	TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	490.30	3.7
			1	1	LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	-
			1	1	LU	MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	490.32	-
			230	230	LF	18" CPEP(SL)	601.2615	3.0
			11	11	EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18	-
			2	2	EACH	PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER	604.21	-
			10	10	EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS OR MANHOLES	604.40	-
			5	5	EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412	-
			3	3	EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS II	604.415	-
			4	4	EACH	CAST IRON COVER WITH FRAME	604.55	-
			300	300	MGAL	DUST CONTROL WITH WATER	609.10	1.7
			0.3	0.3	TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	0.04
			110	110	LF	GRANITE SLOPE EDGING	616.20	1.9
			380	380	LF	VERTICAL GRANITE CURB	616.21	4.4
			870	870	LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28	3.2
			55	55	LF	REMOVING AND RESETTING CURB	616.40	2.2
			655	655	SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	5.9
			13	13	SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH	618.11	0.9
			16	16	TON	BITUMINOUS CONCRETE SIDEWALK	618.15	0.9
			215	215	SF	DETECTABLE WARNING SURFACE	618.30	5.3
			105	105	LF	CHAIN-LINK FENCE, 4 FEET	620.11	3.0
			4	4	LF	GATE FOR CHAIN-LINK FENCE, 4 FEET	620.15	-
			7	7	EACH	BRACING ASSEMBLY FOR CHAIN-LINK FENCE, 4 FEET	620.20	-
			150	150	LF	REMOVAL OF EXISTING FENCE	620.55	4.0
			135	135	LF	STEEL BEAM MEDIAN BARRIER	621.35	2.0
			90	90	LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	3.0
			100	100	LF	TEMPORARY TRAFFIC BARRIER	621.90	EST
			100	100	LF	REMOVE AND RESET TEMPORARY TRAFFIC BARRIER	621.95	EST
			10	10	LF	DUCTILE IRON PIPE, CEMENT-LINED (8")	629.24	-
			1	1	EACH	HYDRANT	629.28	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
		AREA 2
22.9	TON	ROADWAY RECONSTRUCTION TYPE IVS
37.0	TON	ROADWAY RECONSTRUCTION TYPE IIS
		AREA 3
15.9	TON	ROADWAY RECONSTRUCTION TYPE IVS
21.9	TON	ROADWAY RECONSTRUCTION TYPE IIS
		AREA 4
66.0	TON	ROADWAY RECONSTRUCTION TYPE IVS
108.1	TON	ROADWAY RECONSTRUCTION TYPE IIS
32.4	TON	PARKING LOT RESURFACING TYPE IVS
64.7	TON	PARKING LOT RESURFACING TYPE IIS
		AREA 5
22.7	TON	ROADWAY RECONSTRUCTION TYPE IVS
38.1	TON	ROADWAY RECONSTRUCTION TYPE IIS
76.0	TON	PARKING LOT RESURFACING TYPE IVS
34.4	TON	UTILITY TRENCH TYPE IVS
21.2	TON	UTILITY TRENCH TYPE IIS
561.3	**TON**	**ROUNDING**
3.7	TON	ROUNDING
565	**TON**	**TOTAL**

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: **BARRE CITY**
PROJECT NUMBER: **FEGC F 026-1(34) C/1**

FILE NAME: **z85b010_Quantity_Summary.xls**
PROJECT MANAGER: **G. BAKOS**
DESIGNED BY: **D. PECK / M. SUENNEN**
QUANTITY SHEET #1

PLOT DATE: **4/5/2010**
DRAWN BY: **D. PECK**
CHECKED BY:
SHEET: **6** OF **95**

STATE OF VERMONT AGENCY
OF TRANSPORTATION

QUANTITY SUMMARY SHEET #2

SUMMARY OF ESTIMATED QUANTITIES

FULL C.E. ITEMS	EROSION CONTROL	LANDSCAPING	ROADWAY	GRAND TOTAL	UNIT	DESCRIPTION	ITEM NUMBER	ROUNDING
			1	1	EACH	REMOVE HYDRANT	629.30	-
			200	200	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST
			1200	1200	HR	FLAGGERS	630.15	EST
1				1	LS	FIELD OFFICE, ENGINEERS	631.10	-
1				1	LS	TESTING EQUIPMENT - CONCRETE	631.16	-
1				1	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	-
2000				2000	DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-
			1	1	LS	MOBILIZATION / DEMOBILIZATION	635.11	-
			1	1	LS	TRAFFIC CONTROL	641.10	-
			1	1	LS	PUBLIC RELATIONS OFFICER	641.12	-
			4	4	EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-
			1680	1680	LF	4 INCH WHITE LINE	646.20	3.0
			2160	2160	LF	4 INCH YELLOW LINE	646.21	1.0
			40	40	LF	8 INCH WHITE LINE	646.22	2.0
			40	40	LF	8 INCH YELLOW LINE	646.23	4.0
			345	345	LF	24 INCH STOP BAR	646.26	4.0
			60	60	EACH	LETTER OR SYMBOL	646.30	-
			515	515	LF	CROSSWALK MARKING	646.31	6.0
			110	110	EACH	LINE STRIPING TARGETS	646.76	5.0
			1000	1000	LF	PAINTED CURB	646.81	31.0
			1150	1150	SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85	10.5
	150			150	SY	GEOTEXTILE FOR SILT FENCE	649.51	EST
	5			5	LB	SEED	651.15	0.4
	29			29	LB	FERTILIZER	651.18	0.3
	0.15			0.15	TON	AGRICULTURAL LIMESTONE	651.20	0.04
	0.15			0.15	TON	HAY MULCH	651.25	0.04
			31	31	CY	TOPSOIL	651.35	0.1
	14			14	EACH	INLET PROTECTION DEVICE, TYPE I	653.40	-
		1		1	LS	TREE PROTECTION	656.85	-
			270	270	SF	TRAFFIC SIGNS, TYPE A	675.20	0.4
			84	84	SF	TRAFFIC SIGNS, TYPE B	675.21	-
			450	450	LF	SQUARE TUBE SIGN POSTS AND ANCHOR	675.341	-
			45	45	EACH	REMOVING SIGNS	675.50	-
			1	1	EACH	TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (NO MAIN & VT ROUTE 62)	678.15	-
			1	1	EACH	TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (NO MAIN & WASHINGTON)	678.15	-
			1	1	EACH	TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (SO MAIN & PROSPECT)	678.15	-
			1	1	EACH	TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (MAPLE & SUMMER)	678.15	-
			1	1	EACH	TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (ELM & SUMMER)	678.15	-
			230	230	LF	ELECTRICAL CONDUIT (3") (PVC)	678.21	9.0
			75	75	LF	WIRED CONDUIT (2") (PVC)	678.23	1.0
			675	675	LF	WIRED CONDUIT (3") (PVC)	678.23	22.0

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: **BARRE CITY**
PROJECT NUMBER: **FEGC F 026-1(34) C/1**

FILE NAME: **z85b010_Quantity_Summary.xls**
PROJECT MANAGER: **G. BAKOS**
DESIGNED BY: **D. PECK / M. SUENNEN**
QUANTITY SHEET #2

PLOT DATE: **4/5/2010**
DRAWN BY: **D. PECK**
CHECKED BY:
SHEET: **7** OF **95**

STATE OF VERMONT AGENCY
OF TRANSPORTATION

QUANTITY SUMMARY SHEET #3

SUMMARY OF ESTIMATED QUANTITIES

FULL C.E. ITEMS	EROSION CONTROL	LANDSCAPING	ROADWAY	GRAND TOTAL	UNIT	DESCRIPTION	ITEM NUMBER	ROUNDING
			295	295	LF	WIRED CONDUIT (4") (PVC)	678.23	15.0
			260	260	LF	ELECTRICAL WIRING	678.24	-
			5	5	EACH	PULL BOX, STANDARD	678.25	-
			315	315	LF	ELECTRICAL CONDUIT SLEEVE (8") (PVC)	678.30	10.0
			1	1	LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-
			30	30	CY	SPECIAL PROVISION (UNCLASSIFIED EXCAVATION OF CONTAMINATED SOILS)	900.608	EST
			1	1	EACH	SPECIAL PROVISION (REMOVE AND RESET SIGN FOUNDATION)	900.620	-
			1	1	EACH	SPECIAL PROVISION (REMOVE EXISTING OVERHEAD SIGN ASSEMBLY, CANTILEVER)	900.620	-
			4	4	EACH	SPECIAL PROVISION (REMOVAL OF EXISTING TRAFFIC CONTROL SIGNAL SYSTEM)	900.620	-
			75	75	SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675	2.6

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

Vanasse Hangen Brustlin, Inc.

PROJECT NAME: **BARRE CITY**
PROJECT NUMBER: **FEGC F 026-1(34) C/1**

FILE NAME: **z85b010_Quantity_Summary.xls**
PROJECT MANAGER: **G. BAKOS**
DESIGNED BY: **D. PECK / M. SUENNEN**
QUANTITY SHEET #3

PLOT DATE: **4/5/2010**
DRAWN BY: **D. PECK**
CHECKED BY:
SHEET: **8** OF **95**

"RECORD"

DRAINAGE SUMMARY SHEET - BARRE CITY FEGC F 026-1 (34) C/1

#	LOCATION		TYPE			0070 CPEP		0080 Precast	0075 Precast	Depth	Grate	0010 Trench Exc. 204.20	0015 Trench Exc. 204.21	0025 GBFS	0040 301.35	0090 Rehab	0095 Rehab	0100 CI	REMARKS	Reference	
	Sta	Sta.	Position	Inlet	Outlet	Dia	Length	MH	RCDI		Type	Earth	Rock	204.30	SB-DG	Class I	Class II	Cover w/Frame			
						IN	LF	EA	EA							EA	EA				
1	135+65.	138+21.	LT	DI	DI				0	-	-	0		0					New RCDI over Existing 10" RCP - **Eliminated**	Bk 2, Pg 10	1
2	138+83.	138+65.	LT	DI	DI	18	0		0	-	-	0		0					New 18" CPEP(SL) W/RCDI - **Eliminated**	Bk 2, Pg 14	2
3	700+49.	700+40.	RT-RT	DI	DI	18	9		1	4.5	D	11.1		8.3					New 18" CPEP(SL) W/RCDI - Outlet in Existing DI @ 700+40RT	Bk 2, Pg 18	3
4	400+60.	400+29.	LT	DI	DI	18	26		1	5.9	D	29.5		22.2					New 18" CPEP(SL) W/RCDI	Bk 2, Pg 22	4
			re-lay due to conflicts				26					29.5		22.2							
5	400+60.	400+30.	RT	DI	MH	18	31		1	5.7	D	19.2		14.8					New 18" CPEP(SL) W/RCDI	Bk 2, Pg 26	5
6	24+88.	400+29.	RT-LT	DI	DI	18	38		1	6.8	D	41.0		31.2					New 18" CPEP(SL) W/RCDI	Bk 2, Pg 30	6
			re-lay due to conflicts				38					41.0		31.2							
7	400+29.	400+16.	LT	DI	MH	18	23		1	5.9	D	20.0		15.3					New 18" CPEP(SL) W/RCDI	Bk 2, Pg 34	7
			re-lay due to conflicts				23					20.0		15.3							
8	400+16.		LT	MH				0		-	MH	3.7	1.8	0.5	3.6				Remove Exist DI. Install DMH w/CI Cover. Connect to Exist Stub Pipe	Bk 2, Pg 38	8
9	400+30.		RT	MH		18	0	1		4.4	MH	13.1	2.1	5.6	1.4				Remove Exist DI. Install DMH w/CI Cover. Connect to Exist 18" RCP	Bk 2, Pg 42	9
10	706+82.	706+77.	LT	DI	MH	18	19		1	7.8	D	36.2	0.9	21.5			1	1	New 18" CPEP(SL) W/RCDI. Connect to Exist DMH.	Bk 2, Pg 46	10
11	602+33.	602+46.	LT	DI	MH	18	11		1	6.9	D	18.1		12.5					New 18" CPEP(SL) W/RCDI. Connect to Exist Drainage Structure	Bk 2, Pg 50	11
12	602+46.		LT	MH							MH	0.0				1		1	Remove Grate & Frame. Install New CI Frame & Cover	Bk 2, Pg 54	12
13	800+50.	800+35.	LT	DI	MH	18	16		1	6.5	D	24.3		13.5	6.5				New 18" CPEP(SL) W/RCDI	Bk 2, Pg 58	13
14	800+35.		LT		MH		13				MH	28.8	2.9	13.0	6.5		1	0	Remove Grate & Frame. Install New CI Frame & Cover	Bk 2, Pg 62	14
	800+35		RT														1		Rehab Existing DI		
15	700+50.	138+83.	LT	DI	DI	18	0		0	6.0	-	0.0		0.0					New 18" CPEP(SL) W/RCDI - **Eliminated**	Bk 2, Pg 66	15
R1	138+76.	138+65.	LT	Structure Retained								0.0							Remove 6 LF Exist 10" RCP. Remove Exist DMH	Bk 2, Pg 70	R1
R2	700+63.	138+76.	LT									0.0							Remove 34 LF Exist 8" VCT. ~~Remove Exist DI~~ RETAINED	Bk 2, Pg 74	R2
R3	700+40.		RT														1	0	Remove DI Frame & Grate. Install new Cast Iron Frame & Cover.	Bk 2, Pg 78	R3
																			REHABILITATED		
R4	706+55.		LT									14.3	1.1	7.7	4.7			0	Remove DI Frame & Grate. Install new Cast Iron Frame & Cover	Bk 2, Pg 82	R4
	TOTALS						273 LF	1 EA	8 EA	60.4 CY		349.8 CY	8.8 CY	234.8	22.7	1 EA	4 EA	2 EA			

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL SHEET

CURB

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	REMARKS
VERTICAL GRANITE CURB				
~~138+61~~	~~138+86~~	~~32.1~~		
139+71	139+86	14.5		
~~139+36~~	~~SL 700+36~~	~~31.9~~		
SL 500+26	SL 500+49		29.6	
SL 500+27	SL 500+49	29.3		
SL 500+53	SL 500+60		7.0	
SL 500+54	SL 500+61	7.0		
SL 600+64	SL 600+83		26.1	
SL 602+33	SL 602+53	20.1		
SL 602+38	SL 602+51		12.8	
SL 602+57	SL 800+34	20.4		
SL 603+27	SL 800+35	31.4		
SL 603+31	SL 603+41		10.5	
SL 603+31	SL 603+38	6.9		
SL 700+42	SL 700+83		42.1	
SL 700+46	SL 700+65	19		
SL 800+38	SL 800+64	27.1		
SL 800+39	SL 800+47		7.8	
TOTALS		**239.7**	**135.9**	
GRANITE SLOPE EDGING				
SL 21+63	SL 22+19	108.1		LOT
TOTALS		**108.1**		
CAST-IN-PLACE CONCRETE CURB, TYPE B				
SL 21+65	SL 22+21	55.4		
SL 21+51	SL 22+21	72		LOT
SL 22+21	SL 22+38	48.4		LOT
SL 23+42	SL 23+88		55.8	
SL 24+37	SL 24+79		54.2	
SL 23+76	SL 24+37	53.4		
SL 24+49	SL 24+80	31.2		
SL 24+84	SL 24+91		7	
SL 24+85	SL 24+92	7		
SL 400+43	SL 400+53		12.7	BACK CURB
SL 400+53	SL 400+67	15.6		
SL 400+53	SL 401+13		61.6	
SL 400+88	SL 402+17	129.2		
SL 401+01	SL 401+40	39.5		BACK CURB
SL 401+25	SL 401+30		5	
SL 401+43	SL 401+66	22.8		BACK CURB
SL 401+69	SL 402+17	47.3		BACK CURB
SL 421+56	SL 422+02		47.9	
SL 421+94	SL 422+01	7		
SL 706+22	SL 706+91	74.9		
SL 707+48	SL 707+63	18.9		
TOTALS		**622.6**	**244.2**	
REMOVING AND RESETTING CURB				
~~139+50~~	~~139+66~~		~~18.7~~	
~~139+71~~	~~139+77~~		~~6.4~~	
~~SL 800+28~~	~~SL 800+45~~		~~27.7~~	
602+20	602+27	7.3		
TOTALS		7.3	~~52.8~~	

SIDEWALK

BEGIN STATION	END STATION	POSITION LEFT SY	POSITION RIGHT SY	REMARKS
PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH				
139+50	139+77		15.7	
139+86	SL 700+83	66.7		
SL 500+42	SL 500+60		7.9	RAMP
SL 602+44	SL 602+61		8.2	RAMP
SL 602+33	SL 800+64	77.2		
SL 603+41	SL 500+60		36.9	
SL 603+38	SL 800+47	42.1		
SL 700+37	SL 700+52	7.8		RAMP
SL 21+53	SL 22+38	42.3		
SL 23+42	SL 401+30		75.6	
SL 23+76	24+37	35.1		
SL 24+49	SL 24+92	24.4		
SL 24+91	SL 402+22		121.2	
SL 421+56	SL 706+22		68.3	
SL 421+94	SL 707+63	19.7		
TOTALS		**315.3**	**333.8**	
~~PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH~~				
~~SL 24+37~~	~~SL 24+49~~	~~12.1~~		
TOTALS		**~~12.1~~**		

BEGIN STATION	END STATION	POSITION LEFT TON	POSITION RIGHT TON	REMARKS
BITUMINOUS CONCRETE SIDEWALK				
138+61	SL 700+65	4.9		
SL 600+49	SL 600+54		0.3	
SL 600+64	SL 600+87		3.8	
SL 602+38	SL 500+60		5.6	
SL 400+98	SL 401+01	0.3		PRIVATE
SL 401+40	SL 401+43	0.2		PRIVATE
TOTALS		**5.4**	**9.7**	

FENCING / GUARDRAIL

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	END TREATMENT BEGIN EA	END TREATMENT END EA
CHAIN-LINK FENCE, 4 FEET					
SL 23+44	SL 23+49		5		
SL 23+53	SL 401+12		97		
TOTALS			**102**		
REMOVAL OF EXISTING FENCE					
SL 23+43	SL 401+27		146		
TOTALS			**146**		
STEEL BEAM MEDIAN BARRIER					
SL 412+60	SL 421+97		37		
SL 705+88	SL 706+84	96			
TOTALS		**96**	**37**		
REMOVAL AND DISPOSAL OF GUARDRAIL					
SL 705+90	SL 706+77	87			
TOTALS		**87**			

UNDERDRAIN

BEGIN STATION	END STATION	TYPE	POSITION	DIA. IN	LENGTH FT	TRENCH EARTH CF	TRENCH ROCK CF	GRAN BKFILL CF	FB EA	MKR PST EA

PROJECT NAME: **BARRE CITY**
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FILE NAME: **09b240_ItemDetailSheet.xls**
PROJECT LEADER: **G. BAKOS**
DESIGNED BY: **D. PECK**
ITEM DETAIL SHEET

PLOT DATE: **4/5/2010**
DRAWN BY: **G. BAKOS**
CHECKED BY: **D. PECK**
SHEET **10** OF **95**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
2	PEARSON, KENNETH M. & BARBARA J.	24,25	MAPLE AVE. 24+78.99 RT.	SUMMER ST. 400+66.56 LT.	390.4 SF					WD		BARRE CITY			
	TRUSTEES OF PEARSON LIVING TRUST		MAPLE AVE. 24+80.51 RT.				WALK	(T)							3' CONCRETE
			SUMMER ST. 400+64.96 LT.				WALK	(T)							3' CONCRETE
			SUMMER ST. 400+78.00 LT.				DRIVE	(T)							19' PAVED
			SUMMER ST. 400+66.56 LT.	SUMMER ST. 400+88.43 LT.			INSTALL & MAINT.	(P)							SIDEWALK
3	THOMPSON, ROBERT F. & BRENDA J.	24,25	MAPLE AVE. 23+70.86 RT.	SUMMER ST. 400+81.84 RT.	159.8 SF					WD		BARRE CITY			
			MAPLE AVE. 23+66.51 RT.	SUMMER ST. 400+79.12 RT.			SLOPE	(T)	114 SF						
			MAPLE AVE. 23+70.86 RT.	SUMMER ST. 400+88.38 RT.			INSTALL	(T)							CHAIN LINK FENCE
			MAPLE AVE. 23+15.00 RT.	MAPLE AVE. 23+70.86 RT.											FENCE, EXCEPT & RESERVE
5	VENMAR, MARIANNE S. - TRUSTEE OF THE	24	MAPLE AVE. 24+79.48 LT.				WALK	(T)		COND	02/11/10	BARRE CITY	257	638-	4' CONCRETE
	MARIANNE S. VENMAR REVOCABLE FAMILY		MAPLE AVE. 24+38.68 LT.	MAPLE AVE. 24+72.46 LT.			INSTALL & MAINT.	(P)						643	PED POLE & UNDERGROUND POWER
	LIVING TRUST u/t/a JUNE 2, 2006														EQUIPMENT
			MAPLE AVE. 24+42.30 LT.				DRIVE	(T)							12' PAVED
			MAPLE AVE. 24+36.44 LT.	MAPLE AVE. 24+92.00 LT.			INSTALL & MAINT.	(P)							SIDEWALK
6	WATKINS, THOMAS V. III &	24	MAPLE AVE. 23+75.29 LT.	MAPLE AVE. 23+85.83 LT.			INSTALL & MAINT.	(P)	70 SF						SIGNAL EQUIPMENT & STRAIN POLE
	CROWLEY-WATKINS, JOANNE		MAPLE AVE. 24+02.02 LT.				WALK	(T)							5' CONCRETE
			MAPLE AVE. 24+22.93 LT.				WALK	(T)							5' CONCRETE
			MAPLE AVE. 23+76.18 LT.	MAPLE AVE. 24+36.24 LT.			INSTALL & MAINT.	(P)							SIDEWALK
7	MOORE, W. GLENN & HERSCHEL, LUCILLE J.	24	SUMMER ST. 400+88.43 LT.	SUMMER ST. 401+28.24 LT.			SLOPE	(T)	246 SF	WD	01/13/10	BARRE CITY	257	244-245	
			SUMMER ST. 400+88.43 LT.	SUMMER ST. 401+28.24 LT.			INSTALL & MAINT.	(P)							CURB
			SUMMER ST. 401+00.00 LT.				WALK	(T)							3' CONCRETE
			SUMMER ST. 400+91.00 LT.				INSTALL & MAINT.	(P)							SIGN
8	KEATON, WILLIAM H. & MARIE Z.	24	SUMMER ST. 401+28.24 LT.	SUMMER ST. 402+15.76 LT.			SLOPE	(T)	258 SF	WD	12/14/09	BARRE CITY	256	723-724	
			SUMMER ST. 401+41.65 LT.				WALK	(T)							3' CONCRETE
			SUMMER ST. 401+67.70 LT.				WALK	(T)							3' CONCRETE
			SUMMER ST. 401+28.24 LT.	SUMMER ST. 402+15.76 LT.			INSTALL & MAINT.	(P)							CURB CONCRETE
			SUMMER ST. 401+86.15 LT.				INSTALL & MAINT.	(P)							SIGN
9	NORWAY BARRE REAL ESTATE, LLC	23,24	112+02.82 LT.	113+10.95 LT.			D & C	(T)							SEWER, WATER & DRAINAGE IF APPLICABLE
			MAPLE AVE. 21+60.83 LT.	MAPLE AVE. 22+44.62 LT.			SLOPE	(T)	251 SF						
62	IB PROPERTY HOLDINGS, LLC	29	138+67.29 LT.	138+78.88 LT.	42 SF±										
			137+34.47 LT.	138+67.29 LT.			INSTALL & MAINT.	(P)							UNDERGROUND UTILITIES & PULL BOX
			137+23.02 LT.	138+78.88 LT.			D & C	(T)							SEWER, WATER & DRAINAGE IF APPLICABLE
			137+23.02 LT.	138+78.88 LT.			WALK	(T)							SIDEWALK

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	21, 24	PARCEL NO. 83 VENMAR, RICHARD S. - TRUSTEE OF THE	11/05/09
		RICHARD S. VENMAR REVOCABLE FAMILY TRUST - ADDED	
		NEW PARCEL, ONLY ONE RIGHT NEEDED. MAPLE AVE.	
		25+93.00 LT. INSTALL & MAINT. (P) SIGN.	
		MADE BY: MT PER C.O. 9574	
		APPROVED BY: HP	
2	21, 24	PARCEL NO. 5 VENMAR, MARIANNE S. - DELETE MAPLE	11/05/09
		AVENUE 25+93.00 LT. INSTALL & MAINT. (P) SIGN AND	
		CHANGE NAME FROM VENMAR, MARIANNE S. TO	
		VENMAR, MARIANNE S. - TRUSTEE OF THE MARIANNE S.	
		VENMAR REVOCABLE FAMILY LIVING TRUST u/t/a	
		JUNE 9, 2008 PER C.O. 9575	
		MADE BY: MT APPROVED BY: HP	
3	22, 32	PARCEL NO. 73 DRURY, MARIE L. - CORRECT INSTALL (P)	12/07/09
		TO READ INSTALL & MAINT. (P) ON DETAIL SHEET AND	
		LAYOUT SHEET.	
		MADE BY: MT PER C.O. 9579	
		APPROVED BY: HP	
4	1,22,33	PARCEL NO. 84 BARRE HOUSING AUTHORITY. CREATE NEW	12/14/09
		PARCEL #84. PROPOSED SIGN AT STA. 604+61.64 LT	
		WAS MOVED SOUTHERLY ONTO BARRE HOUSING AUTHORITY	
		PROPERTY. ADD INSTALL AND MAINTAIN (P) FOR SIGN AT STA.	
		605+95 LT. ELIMATE PARCEL #76 FROM PROJECT. CHANGE	
		ENDING STATION OF PROJECT. PER C.O. 9581	
		MADE BY: MR APPROVED BY: HP	
		CONTRACT PLANS IN PDF FORMAT TO VHB	04/14/10

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF)

D&C	-DISCONNECT & CONNECT
EC	-EROSION CONTROL
(P)	-PERMANENT
(T)	-TEMPORARY
DR.	-DRAINAGE RIGHT
DIT.	-DITCHING RIGHT
CH.	-CHANNEL RIGHT
DRIVE	-DRIVE RIGHT
CUL.	-CULVERT RIGHT
C&T	-CLEARING & TRIMMING RIGHT
SR	-SLOPE RIGHT
UE	-UTILITY EASEMENT

APPROVED HARRY PETROVS DATE: 09-10-09
CHIEF, PLANS & TITLES

PLOT DATE 04/13/10

PROJECT NAME: **BARRE CITY**
PROJECT NUMBER: **FEGC F 026-1(34) C/1**

FILE NAME: **Contract 1 DetailSheet.xls** PLOT DATE:
PROJECT LEADER: **G. BAKOS** DRAWN BY: **MT**
DESIGNED BY: **D. PECK** CHECKED BY: **FM**
ROW SHEET 21 OF 33 SHEET **11** OF **95**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
67	UNITED STATES OF AMERICA	29	S. MAIN ST. 603+15.55 RT.				INSTALL & MAINT.	(P)							STRAIN POLE & APPURTENANCES
	POSTAL SERVICE		S. MAIN ST. 603+37.14 RT.				INSTALL & MAINT.	(P)							PED. POLE
			S. MAIN ST. 603+19.88± RT.				REMOVE & RESET	(T)							SIGN - PERSONAL
			S. MAIN ST. 603+14.26 RT.	S. MAIN ST. 603+41.26 RT.			INSTALL & MAINT.	(P)							UNDERGROUND POWER
			PROSP. ST. 500+60.68 LT.	S. MAIN ST. 603+41.26 RT.			INSTALL & MAINT.	(P)							SIDEWALK
			PROSP. ST. 500+60.68 LT.	S. MAIN ST. 603+41.26 RT.			SLOPE	(T)	251 SF						
68	N and M INVESTMENTS, LLC	30	PROSP. ST. 502+75.00 LT.	PROSP. ST. 502+79.99 LT.			INSTALL	(T)							SIGNALIZATION EQUIPMENT FOR DETOUR
69	UNIVERSALIST CHURCH,	29,33	S. MAIN ST. 603+07.76 LT.	S. MAIN ST. 603+37.55 LT.	208 SF±										
	THE FIRST CHURCH IN BARRE		S. MAIN ST. 603+11.88 LT.	S. MAIN ST. 603+29.11 LT.			INSTALL & MAINT.	(P)							PED POLE (2) & UNDERGROUND POWER
			S. MAIN ST. 604+00.00 LT.				INSTALL & MAINT.	(P)							SIGN
			S. MAIN ST. 603+53.40 LT.				INSTALL & MAINT.	(P)							SIGN
71	ALDRICH PUBLIC LIBRARY	29	ELM ST. 701+83.25 RT.	139+88.42 RT.	1074 SF±					WD					
			139+44.00 LT.				WALK	(T)							6' CONCRETE
			ELM ST. 701+83.25 RT.	139+53.45 LT			SLOPE	(T)	206 SF						
72	TELEPHONE OPERATING COMPANY	31,32	ELM ST. 706+21.84 LT.	SUMMER ST. 421+59.89 RT.	854 SF±					COND	02/11/10	BARRE CITY	257	638-643	
	OF VERMONT, LLC - LESSOR		SUMMER ST. 421+59.89 RT.	ELM ST. 705+54.63 LT.			INSTALL	(T)							LINE STRIPING FOR PARKING LOT
	CITY OF BARRE - LESSEE		ELM ST. 706+17.91 LT.	SUMMER ST. 421.80.16 RT.			SLOPE	(T)	55 SF±						
			SUMMER ST. 421+59.89 RT.	ELM ST. 705+54.63 LT.			REMOVE	(T)							EXISTING LINE STRIPING
			SUMMER ST. 421+72.10 RT.				REMOVE	(T)							VEHICULAR ACCESS
			ELM ST. 705+88.53 LT.	ELM ST. 706+21.84 LT.			INSTALL & MAINT.	(P)							GUARDRAIL
73	DRURY, MARIE L.	32	SUMMER ST. 421+93.71 LT.	SUMMER ST. 422+06.83 LT.			SLOPE	(T)	47 SF±	WDOE	01/27/10	BARRE CITY	257	439-440	
			SUMMER ST. 422+12.11 LT.				DRIVE	(T)							9' PAVED
			SUMMER ST. 421+93.71 LT.	ELM ST. 707+80.07 LT.			INSTALL & MAINT.	(P)							SIDEWALK & RAILING
			SUMMER ST. 422+00.00 LT.				INSTALL & MAINT.	(P)							PED. POLE & UNDERGROUND WIRE
			ELM ST. 707+80.07 LT.				INSTALL & MAINT.	(P)							SIGN
76	DELETED														FORMERLY FIREHOUSE AT BARRE, LLC
77	RONSON, TODD S.& MARY E.	26	SUMMER ST. 403+24.47 RT.				INSTALL & MAINT.	(P)							SIGN
78	MONTE, DANIEL T.	27	SUMMER ST. 412+94.14 RT.				INSTALL & MAINT.	(P)		QC	12/22/09	BARRE CITY	256	933-934	SIGN
79	GREEN MOUNTAIN POWER CORPORATION		112+02.82 LT.	S. MAIN ST. 604+61.64 LT.											UTILITY
80	TELEPHONE OPERATING CO. OF VT.,LLC		112+02.82 LT.	S. MAIN ST. 604+61.64 LT.											UTILITY
81	BARRE, CITY OF,(WATER,SEWER)		112+02.82 LT.	S. MAIN ST. 604+61.64 LT.											UTILITY
82	CHARTER ONE COMMUNICATIONS		112+02.82 LT.	S. MAIN ST. 604+61.64 LT.											UTILITY
83	VENMAR, RICHARD S. - TRUSTEE OF THE	24	MAPLE AVE. 25+93.00 LT.				INSTALL & MAINT.	(P)							SIGN
	RICHARD S. VENMAR REVOCABLE FAMILY														
	LIVING TRUST														
84	BARRE HOUSING AUTHORTY	33	S. MAIN ST. 605+95 LT.				INSTALL & MAINT.	(P)		WD	02/08/10	BARRE CITY	257	565-566	SIGN

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P/L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF)

D&C	-DISCONNECT & CONNECT
EC	-EROSION CONTROL
(P)	-PERMANENT
(T)	-TEMPORARY
DR.	-DRAINAGE RIGHT
DIT.	-DITCHING RIGHT
CH.	-CHANNEL RIGHT
DRIVE	-DRIVE RIGHT
CUL.	-CULVERT RIGHT
C&T	-CLEARING & TRIMMING RIGHT
SR	-SLOPE RIGHT
UE	-UTILITY EASEMENT

APPROVED: HARRY PETROVS DATE: 09-10-09
CHIEF, PLANS & TITLES

PLOT DATE 04/13/10

PROJECT NAME: **BARRE CITY**
PROJECT NUMBER: **FEGC F 026-1(34) C/1**

FILE NAME: **Contract 1 DetailSheet.xls**
PROJECT LEADER: **G. BAKOS**
DESIGNED BY: **D. PECK**
ROW SHEET 22 OF 33

PLOT DATE:
DRAWN BY: **MT**
CHECKED BY: **FM**
SHEET **12** OF **95**

BEGIN ROW PROJECT CONTRACT I
FEGC F026-1(34)
STA. 112+02.82
31.84' LT.

VT. STATE PLANE GRID

TO R.O.W. LAYOUT 2

MALONE, PATRICK M.
BUILDING
LOT
GRAVEL
GRAVEL DRIVE
ELEC METER
DISCONNECT & CONNECT (T)
POLE
W.V. #4839
PAVED LOT
Exist. R.O.W.
W.V. #4840
UTIL POLE
TRAF SIGN
18" ACCGMP
15" RCP
U.S. ROUTE 302
S.S. MH
24" S
M.H.
110+50
111+00
112+00
113+00
114+00
115+00
116+00
W.V. #225
W.V./HYDGATE
24" RCP
GRASS
12" SPRUCE
SHRUB'S
6" POPLAR
6" WHTBRCH
PAVED DRIVE
VENT
D DRIVE
3766

NORWAY BARRE REAL ESTATE, LLC
393-395 No. Main St.
9
PAVED DRIVE
DRINKING FOUNTAIN
STONE BENCH
CITY OF BARRE
DENTE PARK
STATUE
BENCH STONE
3" CHERRY
SHRUB
LIGHT
CEM. WALK
STONE SIGN
STONE BENCH
TRAFFIC SIGNAL
TRAF SIGN
DETECTION ZONE
DETECTION ZONE
21+00
MAPLE AVENUE
18" RCP
W.V. #4844
BERM
OVERHEAD SIGN
SIGN POLE
PAVED LOT
W.V. #4838
PAVED LOT
Z'S NORTHERN PROPERTIES
379 No. Main St.
14
SR(T)
INSTALL & MAINT.(P)
DISCONNECT & CONNECT (T)
Exist. R.O.W.
POLE
UTIL POLE
3
V3 R3
JCT. BOX
24" RCP
DETECTION ZONE
DETECTION ZONE
DETECTION ZONE
DETECTION ZONE
DETECTION ZONE
NORTH MAIN STREET
W.V.
SIGN
OVERHEAD
S.S. MH
24" S
15+00
116+00
W.V. #5172
PAVED DRIVE
MON. WELL
TIMBERLAKE ASSOCIATES
377 No. Main St.
15
CONC. PAD
6" CVC
DRIVE(T)
DISCONNECT & CONNECT (T)
DRIVE(T)
INSTALL & MAINT.(P)
INSTALL(T)
2" ACCGMP
116+78.00
68.78' LT.
4A
116+77.32
49.56' LT.
92.56'
N17°W
38.80'
UTIL
(578.35)
116+74.50
21.81' LT.
V2 R2
V4 R4
(ABANDONED 24")
24" RCP
TRAF SIGN
LAMPPOST
SIGN POLE
WATER VALV
SAVE
MON. WELL
DRIVE(T)
SR(T)
DISCONNECT & CONNECT (T)
18B
MACDUFF, PAUL D. & BETTY LOU – LESSOR
CHAMPLAIN OIL COMPANY INC.– LESSEE
16
360 No. Main St.
PAVED LOT
VT. PROPERTIES – LESSOR
CHAMPLAIN OIL – LESSEE

DRIVE(T)
WALK(T)
DISCONNECT & CONNECT (T)
DRIVE(T)
WALK(T)
12
SR(T)
DISCONNECT & CONNECT (T)
WALK(T)
11
SIMONDS, EDWARD C.
372-8 No.Main St.
10
386 No.Main St.
CAMPOS REALTY, LLC.
HORACE LANE (SHARED DRIVE)
PAVED DRIVE
CEM. WALK
3"
8" SPRUCE
MAPLE
TRAFFIC SIGNAL
TRAFFIC SIGNS
30" MAPLE
SIGN POLE
OVERHEAD SIGN
RT. 62
42" MAPLE
4" CLF
LAMPPOST
MON. WELL
Exist. R.O.W.
SR(T)
DRIVE(T)
LAMPPOST
SR(T)
DISCONNECT & CONNECT (T)
13
PATEL, PARESH ET AL
362 No. Main St.

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

ROW LAYOUT 1

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/I
FILE NAME: 09B240BDR CP	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
GENERAL PLAN	SHEET 13 OF 95

VT. STATE PLANE GRID N

TO R.O.W. LAYOUT 1

NORWAY BARRE REAL ESTATE, LLC (9)
6-8 Corti St.

NF R & G. PROPERTIES (6)

WATKINS, THOMAS V. III & CROWLEY – WATKINS, JOANNE
18 Maple Ave.

VENMAR, MARIANNE S. TRUSTEE OF THE MARIANNE S. VENMAR REVOCABLE FAMILY LIVING TRUST (5)
DTD- JUNE 9, 2008

VENMAR, RICHARD S. – TRUSTEE OF THE RICHARD S. VENMAR REVOCABLE FAMILY LIVING TRUST (83)

PEARSON LIVING TRUST (2)
21 Maple Ave.

THOMPSON, ROBERT F. & BRENDA J. (3)
118 Summer St.

HERSCHEL, LUCILLE J. & MOORE, W. GLENN (7)
117 Summer St.

KEATON, WILLIAM H. & MARIE Z. (8)
114-115 Summer St.

MAPLE AVENUE

SUMMER STREET

SHORT STREET

SUMMER ST. ONLY

SHORT ST.

EXCEPT & RESERVE

SEE INSET "A" FOR PARCEL #2 & #3 DETAIL

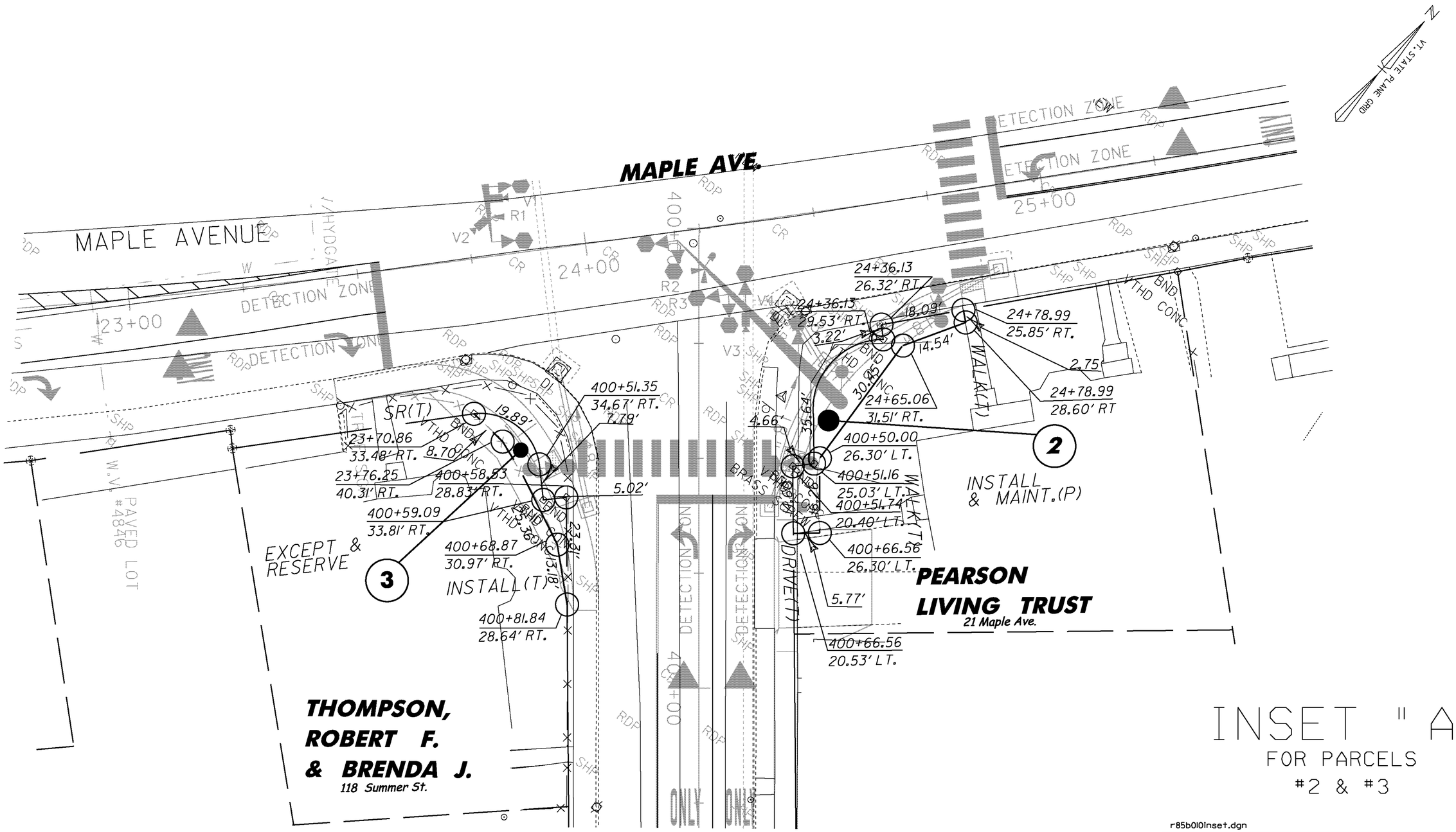
TO R.O.W. LAYOUT 3

20 0 20 40
FEET

ROW LAYOUT 2

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: 09B240BDR CP	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
GENERAL PLAN	SHEET 14 OF 95

VHB Vanasse Hangen Brustlin, Inc.



INSET "A"

FOR PARCELS #2 & #3

r85b010inset.dgn

PROJECT NAME:	BARRE CITY - NORTH MAIN ST.
PROJECT NUMBER:	F EGC-F 026-1(34) C/1

FILE NAME: z85b010bdr cp	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY:
	SHEET 15 OF 95

N

VT. STATE PLANE GRID

TO R.O.W. LAYOUT 2

403+00

404+00

405+00

406+00

407+00

SUMMER ST.

1ST

TO R.O.W. LAYOUT 4

INSTALL & MAINT.(P)

77

RONSON, TODD S. & MARY E.

104-108 Summer St.

ST.

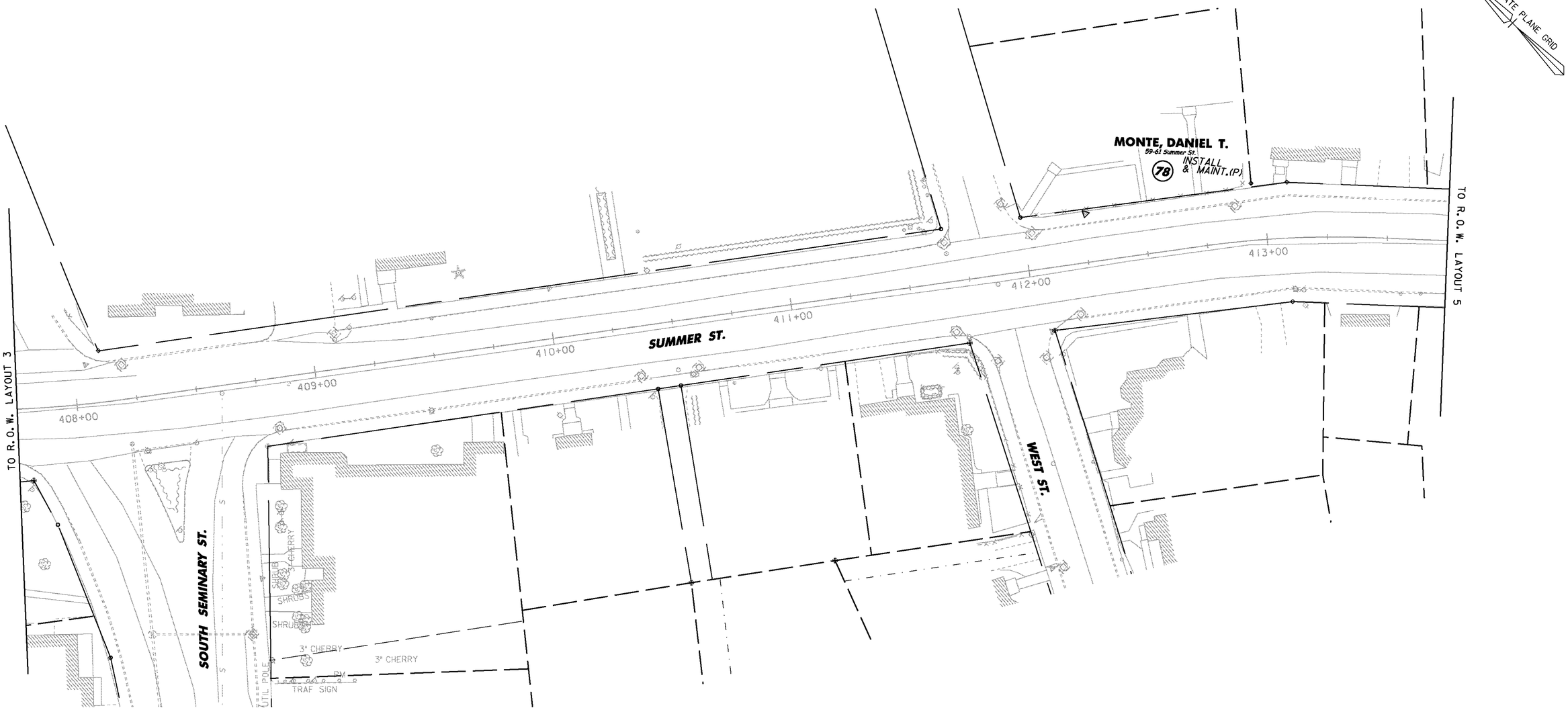
20 0 20 40

FEET

VHB Vanasse Hangen Brustlin, Inc.

ROW LAYOUT 3

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: 09B240BDR CP	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
GENERAL PLAN	SHEET 16 OF 95

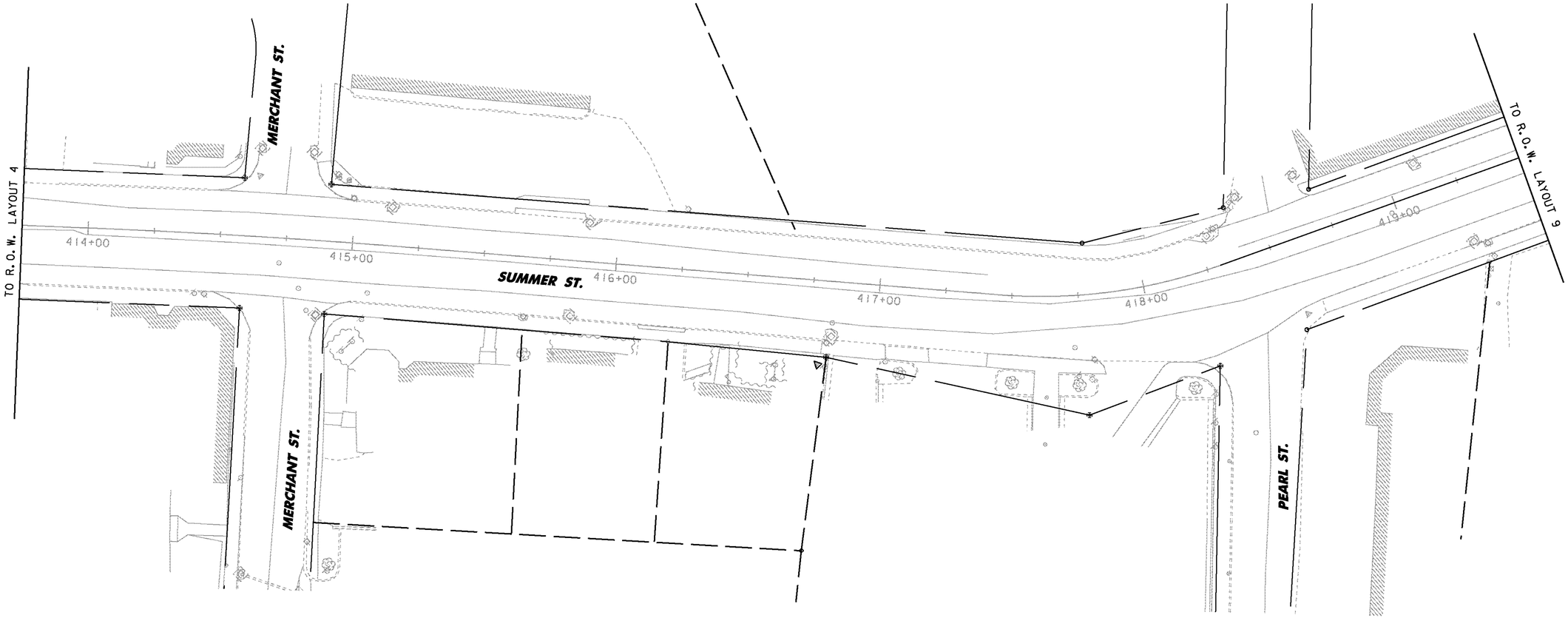


ROW LAYOUT 4

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY	
PROJECT NUMBER: FEGC F 026-1(34) C/1	
FILE NAME: 09B240BDR CP	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
GENERAL PLAN	SHEET 17 OF 95



20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

ROW LAYOUT 5

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: 09B240BDR CP
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
GENERAL PLAN

PLOT DATE: 13-APR-2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 18 OF 95

VT. STATE PLANE GRID

TO R.O.W. LAYOUT 8

TO R.O.W. LAYOUT 10

ELM ST.

Exist. R.O.W.

ALDRICH PUBLIC LIBRARY
6 Washington St.
71

701+83.25
27.64' RT.

139+88.42
35.00' LT.

139+35.54
61.84' LT.

139+61.38
45.46' LT.

SLOPE(T)
WALK(T)

4.91'
30.97'
30.63'
29.09'

701+83.25
22.78' RT.

56.71'
55.70'

139+32.77
32.65' LT.

WASHINGTON ST.

138+75.17
38.22' LT.

138+78.88
30.68' LT.

138+67.29
29.37' LT.

IB PROPERTY HOLDINGS ,LLC
47-59 No. Main St.
62

DISCONNECT & CONNECT (T)

INSTALL &MAINT.(P)

WALK(T)

Exist. R.O.W.

WILSON, COPPING - CROWTHER

81-85 NORTH MAIN ST. LLC
81-85 No. Main St.
60

ORMSBY FAMILY TRUST U/A
71-77 No. Main St.
61

55

WALK(T) WALK(T)

INSTALL &MAINT.(P)

DRIVE(T)

DRIVE(T)

137+00

138+00

139+00

140+00

141+00

NORTH MAIN ST.

BARRE HOUSING AUTHORITY
84

END ROW PROJECT
CONTRACT 1
FEGC-F 026-1(34)
50. MAIN ST. 605+95
LT. (21.49')

801+00

802+00

803+00

804+00

805+00

UNIVERSALIST CHURCH, THE FIRST CHURCH IN BARRE
19 Church St.
69

603+11.42
41.68' LT.

603+12.09
41.60' LT.

603+12.59
31.48' LT.

603+18.29
42.57' LT.

603+37.55
19.50' LT

2.02'

603+37.55
17.49' LT.

603+07.76
19.06' LT.

INSTALL & MAINT. (P)-2

INSTALL & MAINT. (P)

SOUTH MAIN ST.

INSTALL & MAINT. (P)-(4)

REMOVE & RESET (T)

67

US POST OFFICE
3 So. Main St.

SR(T)

605+95

CITY OF BARRE

PROSPECT ST.

TO R.O.W. LAYOUT 7

DISCONNECT & CONNECT (T)
63

LACROSS, EDWARD H. & YVONNE M.

WALK(T)
INSTALL & MAINT.(P)
DISCONNECT & CONNECT (T)
64

McCARTHY, MARK N. & McCARTHY, TODD G.
46-54 No. Main St.

WALK(T)
INSTALL (T)
TD BANK
26-40 No. Main St.
65

WALK(T)
ABG CORP.
14-22 No. Main St.
66

CITY OF BARRE

WALK(T)
INSTALL & MAINT.(P)
GRANITE CITY HOLDING CO.INC.
84-88 No. Main St.
DISCONNECT & CONNECT (T)
59

CITY OF BARRE

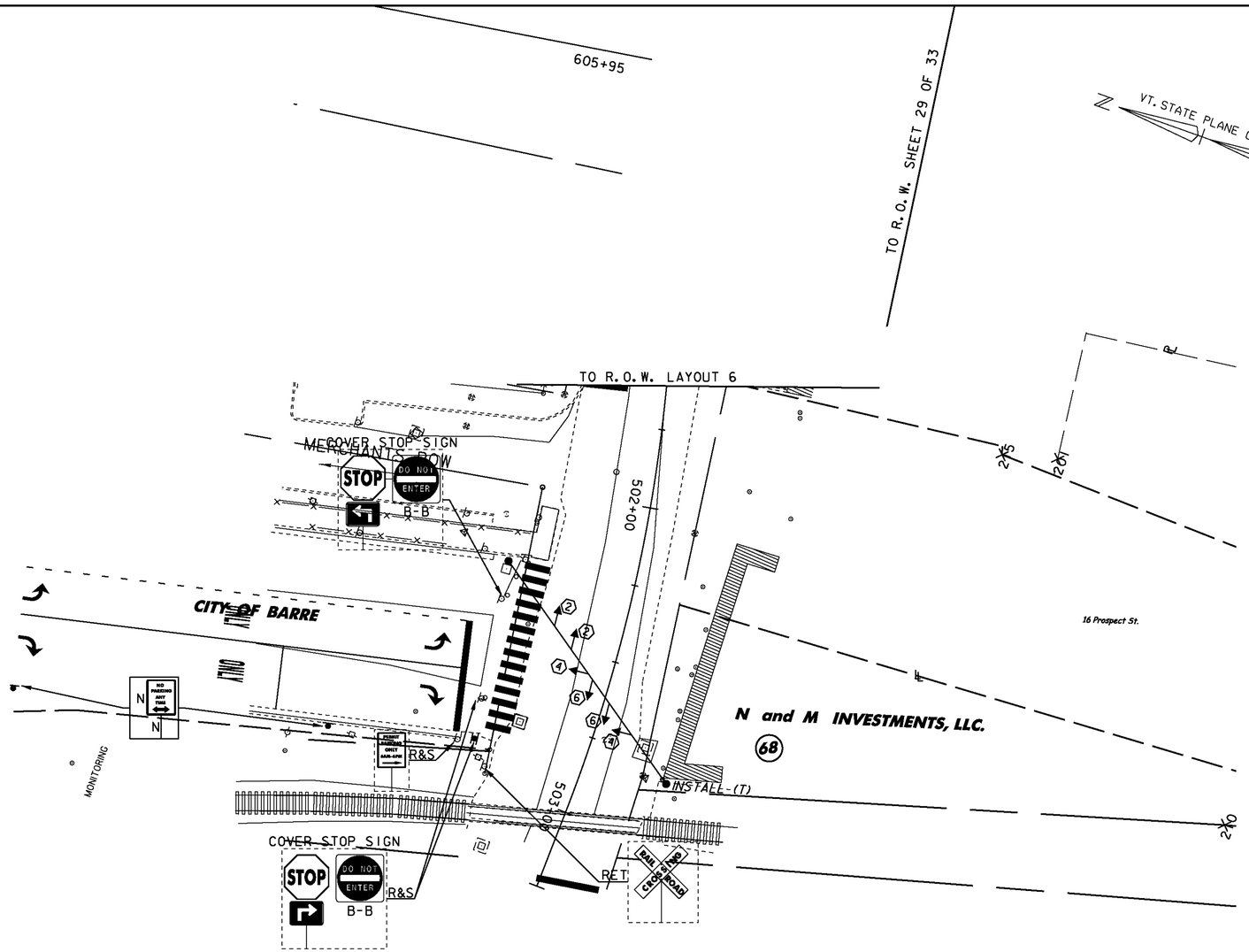
THURSTON, M. & S.
58

ROW LAYOUT 6

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

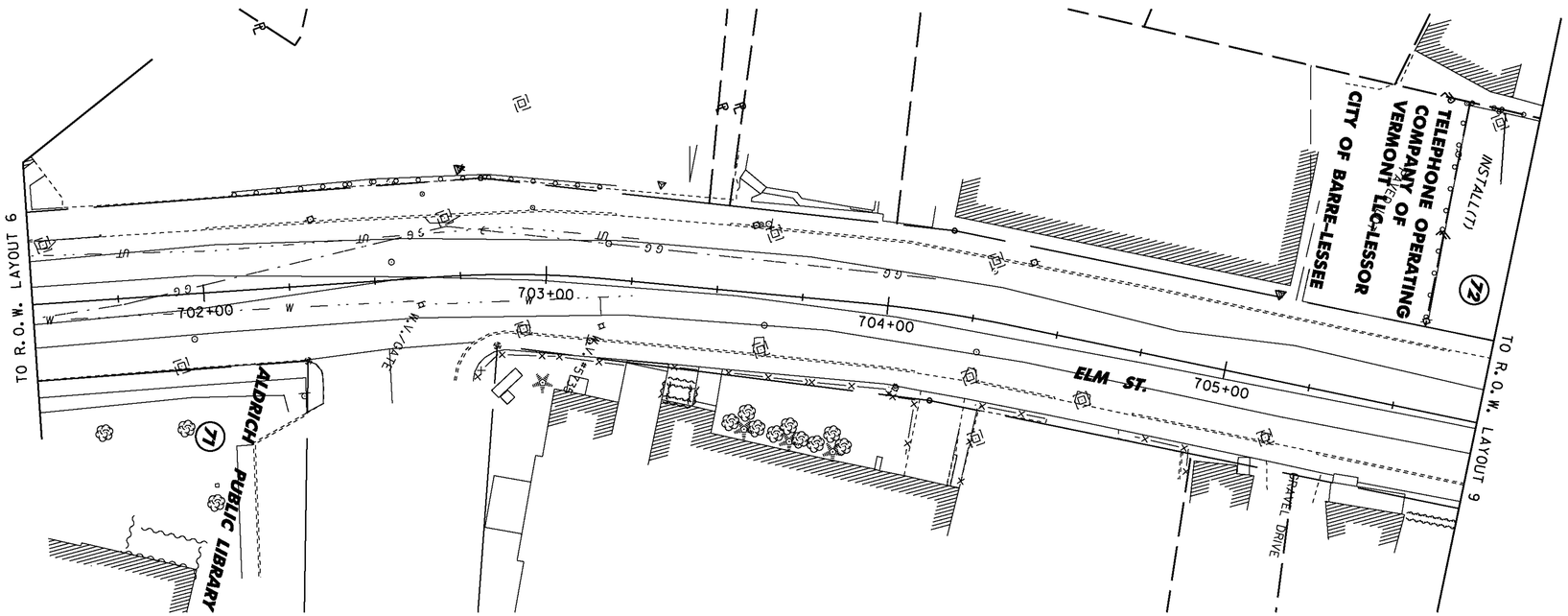
PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/I
FILE NAME: 09B240BDR CP	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
GENERAL PLAN	SHEET 19 OF 95



ROW LAYOUT 7

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: 09B240BDR CP	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
GENERAL PLAN	SHEET 20 OF 95

VHB Vanasse Hangen Brustlin, Inc.



20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

ROW LAYOUT 8

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: 09B240BDR CP	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
GENERAL PLAN	SHEET 21 OF 95

N

VT. STATE PLANE GRID

TO R. O. W. LAYOUT 5

420+00

421+00

SUMMER ST.

DETECTION ZONE

DETECTION ZONE

PAVED LOT

DRURY, MARIE L.
1 Summer St.
73

CONCRETE SIDEWALK

INSTALL & MAINT. (P)
SLOPE(T) DRIVE(T)
INSTALL & MAINT.(P)

708+50

708+00

WELLINGTON HOUSE

CITY OF BARRE

424+00

423+00

DETECTION ZONE

421+59.89
31.17' RT.

2.15'

421+59.89
33.32' RT.

41.54'

20.38'

REMOVE(T)

19.37'

421+80.16
34.31' RT.

706+74.68
24.87' LT.

706+95.03
47.04' LT.

SAWCUT

706+85.17
48.21' LT.

SAWCUT

INSTALL(T)

25.55'

25.87'

702+29.00
21.83' LT.

706+37.81
27.00' LT.

RELOCATE UTILITY POLES (BY OTHERS)

27.50'

5.97'

INSTALL & MAINT.(P)

REMOVE(T)

706+21.84
27.10' LT.

706+21.84
25.13' LT.

4.97'

TELEPHONE OPERATING COMPANY OF VERMONT LLC-LESSOR
72
50-58 Elm St.
CITY OF BARRE-LESSEE

CONCRETE SIDEWALK

706+00 ELM ST.

DETECTION ZONE

DETECTION ZONE

CONCRETE SIDEWALK

CITY OF BARRE

GRAVEL DRIVE

TO R. O. W. LAYOUT 8

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

ROW LAYOUT 9

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: 09B240BDR CP	PLOT DATE: 13-APR-2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
GENERAL PLAN	SHEET 22 OF 95

MATCH A-A

BARRE HOUSING AUTHORITY
END ROW PROJECT
CONTRACT I
F EGC-F 026-1(34)
SO. MAIN ST. 605+95
LT. (21.49')

84

INSTALL & MAINT. (P)

605+95

TO R.O.W. LAYOUT 6

ONLY

5 STORY - BRICK WASHINGTON APTS.

BITUMINOUS PAVED DRIVE

MULTIPLE STORIES FIRST BAPTIST CHURCH

STONE URN

BIT. PAVED

3 STORY - WOOD 30 WASHINGTON ST.

FUEL VENT

WOOD SIGN

CHERRY 10"

CURVED DITCH

IRON POST

W.V. #522

8" SPRUCE

SHRUB

W.M.H.

70' ELM

6" SPRUCE

15" STUMP

10" SPRUCE

ELEC POLE

48" STUMP

12" D

TRAF SIGNS

SIGNS

PM

142.00

W.V. #582

12" FUEL VENT

3" CHERRY

3" SPRUCE

10" MAPLE

3" CHERRY

SHRUBS

2 STORY - BRICK ASSOCIATION INC. BARRE GRANITE

W.V. #115

143.00

TRAF SIGN

GRASS

W.V. #266

144.00

TRAF SIGN

S.S. MH

3" HEMLOCK'S

2 STORY - STONE EPISCOPAL CHURCH

PAVED DRAIN

GRASS

W.V.

3 CHERRY

3 STORY - WOOD 30 WASHINGTON ST.

FLOODLIGHTS

CHERRY 10"

IRON POST

W.V. #527

8" CEM. CONC.

TRAF SIGN

PAVED DRIVE

UTIL. POLE

ROW LAYOUT 10

TO R.O.W. LAYOUT 6

CHURCH ST. 802+00

803+00

ST. LIGHT

YIELD SIGN

MULTIPLE STORIES CHURCH - BRICK BARRE CONGREGATIONAL

GRANIT URN

SIGN STONE

SHRUBS

10" MAPLE

12" MAPLE

15" D

TRAF SIGN

TO R.O.W. LAYOUT 6

US POST OFFICE 67
3 So. Main St.

CONCRETE SIDEWALK

SOUTH MAIN ST.

INSTALL & MAINT. (P)

UNIVERSALIST CHURCH, THE FIRST CHURCH IN BARRE
19 Church St.
69

PAVED LOT

PAVED DRIVE

N/F
FIREHOUSE AT BARRE, LLC
8 So. Main St.

604+75

PAVED DRIVE

MATCH A-A

20 0 20 40
FEET

N
VT STATE PLANE GRID

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/I

FILE NAME: 09B240BDR CP
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
GENERAL PLAN

PLOT DATE: 13-APR-2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 23 OF 95

ROAD	POINT	STATION	NORTHING	EASTING
NORTH MAIN STREET & WASHINGTON STREET	POB	110+50.00	620785.40	497634.95
	PI	113+59.75	620543.00	497827.78
	PI	116+22.97	620336.28	497990.73
	PI	117+35.33	620246.86	498058.77
	PI	120+57.47	620000.13	498265.89
	PI	121+94.91	619896.94	498356.66
	PC	122+63.61	619845.05	498401.69
	PI	125+89.05	619599.26	498615.00
	PT	129+14.39	619362.52	498838.30
	PC	135+78.40	618879.50	499293.92
	PI	136+21.61	618848.07	499323.57
	PT	136+64.81	618815.38	499351.84
	PC	138+11.21	618704.64	499447.60
	PI	138+57.11	618669.92	499477.62
	PT	139+02.49	618644.12	499515.59
	PC	141+01.97	618531.98	499680.56
	PI	141+43.34	618508.72	499714.78
	PT	141+84.67	618488.37	499750.80
	PC	143+90.66	618387.05	499930.14
	PI	144+04.81	618380.08	499942.47
	PT	144+18.68	618369.31	499951.66
	POE	144+50.00	618345.48	499971.98
MAPLE AVENUE	POB	20+00.00	620516.45	497848.71
	PC	20+66.34	620553.44	497903.78
	PI	22+13.82	620635.68	498026.19
	PT	23+60.35	620740.19	498130.25
	PC	23+97.77	620766.70	498156.65
	PI	24+78.54	620823.94	498213.65
	PT	25.59.30	620882.99	498268.76
	POE	27+00.00	620985.85	498364.76
ROUTE 62	POB	10+00.00	620516.12	497848.97
	PC	12+48.84	620373.36	497645.14
	PI	13+47.59	620316.71	497564.26
	PT	14+24.69	620366.08	497478.74
	POE	15+80.27	620443.86	497343.99

ROAD	POINT	STATION	NORTHING	EASTING
NORTH MAIN & SOUTH MAIN STREET	POB	600+00.00	618644.70	499514.73
	PC	600+46.71	618600.64	499499.23
	PI	600+84.94	618564.58	499486.54
	PCC	601+22.26	618526.37	499488.04
	PI	601+61.72	618486.95	499489.60
	PT	602+00.92	618448.58	499498.82
	PI	603+28.00	618325.03	499528.54
	POE	604+75.00	618179.34	499548.14
PROSPECT STREET	POB	500+00.00	618357.86	499520.64
	PC	501+67.16	618318.83	499358.10
	PI	502+33.85	618303.26	499293.26
	PT	502+99.76	618305.23	499226.59
	POE	503+25.00	618305.98	499201.36
ELM STREET & WELLINGTON STREET	POB	700+00.00	618634.53	499529.70
	PC	702+69.00	618894.19	499599.94
	PI	702+93.34	618917.69	499606.29
	PT	703+17.57	618939.85	499616.35
	PC	703+91.88	619007.51	499647.06
	PI	704+14.34	619027.97	499656.34
	PT	704+36.75	619047.25	499667.86
	PC	706+91.20	619265.72	499798.30
	PI	707+26.83	619296.32	499816.57
	PT	707+62.14	619330.34	499827.16
	POE	708+50.00	619414.23	499853.27
CHURCH STREET	POB	800+00.00	618376.74	499516.10
	PC	801+82.08	618389.67	499697.72
	PI	803+05.50	618398.43	499820.83
	PT	804+24.08	618348.90	499933.88
	POE	804+25.00	618348.53	499934.72

ROAD	POINT	STATION	NORTHING	EASTING
SUMMER STREET & ELM STREET	POB	400+00.00	620785.97	498175.74
	PC	406+95.72	620234.13	498599.40
	PI	407+58.30	620184.49	498637.51
	PT	408+20.07	620147.14	498687.71
	PC	412+71.73	619877.52	499050.06
	PI	413+08.10	619855.80	499079.24
	PT	413+44.28	619829.17	499104.03
	PC	414+00.62	619787.94	499142.42
	PI	414+60.71	619743.96	499183.36
	PT	415+20.78	619698.38	499222.51
	PC	417+45.11	619528.20	499368.68
	PI	417+88.32	619495.43	499396.83
	PT	418+30.22	619477.19	499436.00
	PI	422+68.96	619292.05	499833.77
	POE	424+00.00	619319.28	499961.95

LEGEND

POB	POINT OF BEGINNING ALIGNMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PCC	POINT OF COMPOIUND CURVATURE
PRC	POINT OF REVERSE CURVATURE
POE	POINT OF END ALIGNMENT

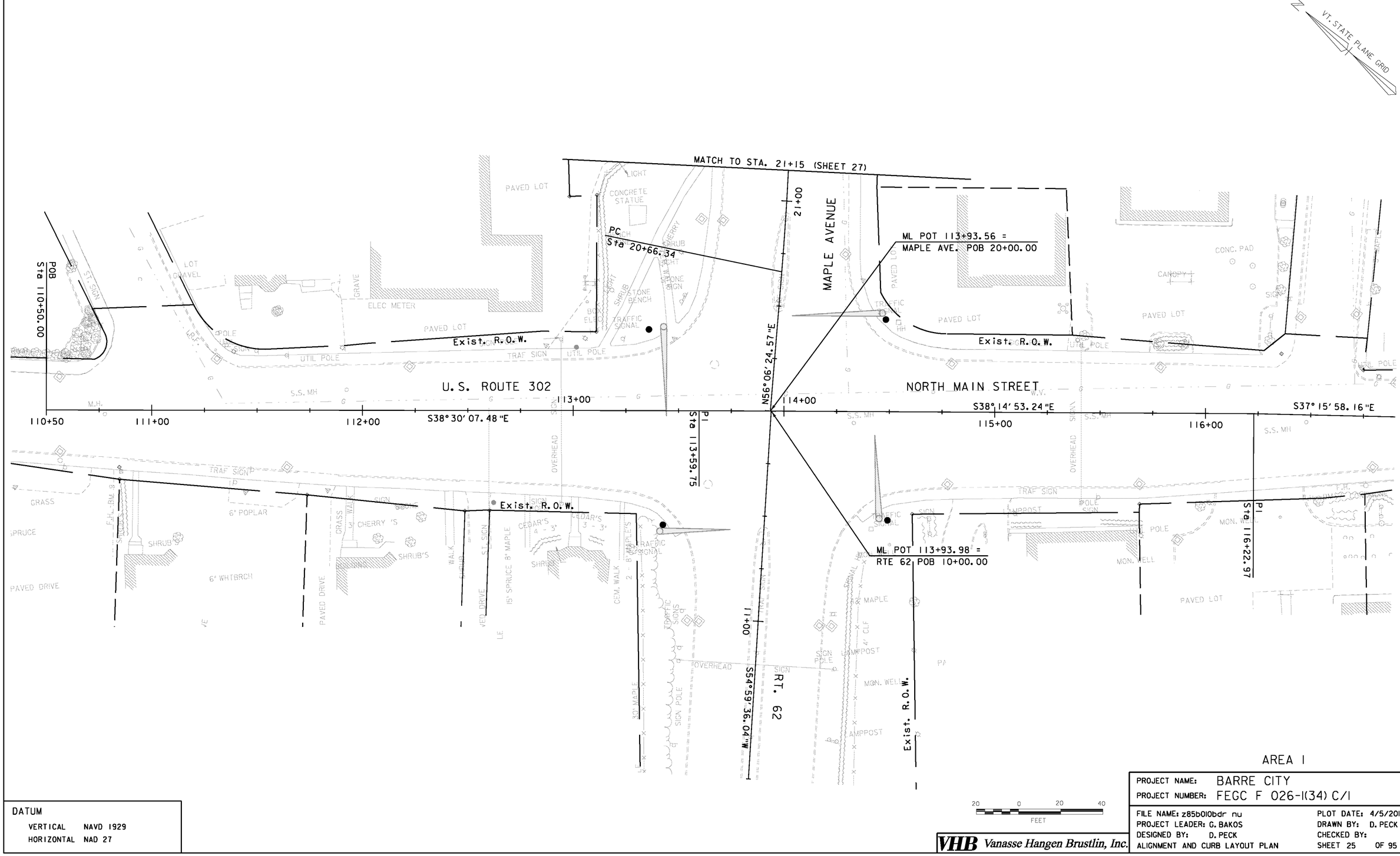
DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_ALIPT.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
ALIGNMENT POINTS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:



AREA 1

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z85b010bdr nu	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY:
ALIGNMENT AND CURB LAYOUT PLAN	SHEET 25 OF 95

CONSTRUCT SIDEWALK RAMP TYPE 6
STA 139+58 - 139+78 LT
STA 139+60 - 139+77 RT
SL STA 500+42 - 500+61 LT
SL STA 603+14 - 603+38 RT
SL STA 603+20 - 603+38 LT
SL STA 700+30 - 700+49 RT
SL STA 800+29 - 800+47 RT

CONSTRUCT SIDEWALK RAMP TYPE 5
STA 500+42 - 500+60 RT
STA 602+44 - 602+61 RT
STA 602+46 - 602+63 LT
STA 700+37 - 700+52 LT
STA 800+27 - 800+44 LT

VT. STATE PLANE GRID

ELM STREET
WASHINGTON ST.
ML POT 139+19.56 = ELM ST. POB 700+00.00
S55° 47' 44.45"E
140+00
20' R
100' R
Exist. R.O.W.
ML POC 139+01.46 = N. MAIN SOUTH POB 600+00.00
CURVE DATA #3
D = 16°22'13"
R = 350.00'
T = 45.90'
L = 91.28'
E = 3.00'
BANK = NC
ELIMINATED
15' R
PC Sta 138+11.11
PT Sta 139+02.49
139+00
S19°23'16.24"W
PC Sta 600+46.74
60' R
PCC (CURVES NS1/NS2) Sta 601+22.26
PT Sta 602+00.92
CURVE DATA #2
D = 2°51'53"
R = 2000.00'
T = 43.21'
L = 86.41'
E = 0.47'
BANK = NC
PI (CURVE #2) Sta 136+21.61
NORTH MAIN STREET
S40°51'07.90"E
138+00
137+00
136+00
PT Sta 136+64.81
PI (CURVE #3) Sta 138+51.11
REMOVE EXIST. SIDEWALK & RAMPS. LOAM & SEED
REMOVE EXIST. SIDEWALK RAMP
601+00
NORTH MAIN ST.
PI Sta 600+82.94
PI Sta 601+61.12
602+00
602+22
S13°31'26.51"E
603+00
CHURCH ST.
ONE WAY
N85°55'46.75"E
801+00
N. MAIN SOUTH POT 602+74.81 = CHURCH POB 800+00.00
N. MAIN SOUTH POT 602+94.23 = PROSPECT POB 500+00.00
PROSPECT ST.
S76°29'53.25"W
501+00
PI Sta 603+28.00
Exist. R.O.W.
AREAS 2 & 3

CURVE DATA #NS1
D = 28°38'52" (1)
R = 200.00' (1)
T = 66.17' (1)
L = 75.55' (1)
E = 10.66'
BANK = NC

CURVE DATA #NS2
D = 14°19'26" (2)
R = 400.00' (2)
T = 92.20' (2)
L = 78.66' (2)
BANK = NC

VERTICAL GRANITE CURB
1 ~~STA 138+61 - 138+86 LT~~ DELETED
2 STA 139+~~73~~ - 139+~~86~~81 LT CHANGED TO CONCRETE
3 STA 139+66 LT - SL STA 700+36 RT
4 ~~SL STA 700+46 - 700+65 LT~~
5 SL STA 700+42 - 700+~~83~~87 RT
6 SL STA 600+64 - 600+83 RT CHANGED TO CONCRETE
7 SL STA 602+~~33~~22 - 602+53 LT
8 SL STA 602+57 LT - SL STA 800+34 LT
9 SL STA 602+38 - 602+51 RT
10 SL STA 603+31 - 603+41 RT
11 SL STA 603+31 - 603+38 LT
12 SL STA 603+27 LT - SL STA 800+35 RT
13 SL STA 800+38 - 800+~~64~~72 LT
14 SL STA 800+39 - 800+47 RT
15 SL STA 500+26 - 500+49 RT
16 SL STA 500+27 - 500+49 LT
17 SL STA 500+53 - 500+60 RT
18 SL STA 500+54 - 500+61 LT

REMOVING AND RESETTING CURB
~~STA 139+50 - 139+66 RT~~
~~STA 139+71 - 139+77 RT~~
SL STA 800+28 - 800+45 RT (BACK CURB) CHANGED TO CONCRETE

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA 139+50~~+69~~ 139+~~77~~73 RT
STA 139+86 LT - SL STA 700+~~83~~87 RT
SL STA 500+42 - 500+60 RT
SL STA 602+44 - 602+61 RT
SL STA 602+~~33~~22 LT - SL STA 800+~~64~~72 LT
SL STA 603+41 RT - SL STA 500+60 LT
SL STA 603+38 LT - SL STA 800+47 RT
SL ~~STA 700+37 - 700+52~~ LT

BITUMINOUS CONCRETE SIDEWALK
STA ~~138+61 LT - SL STA 700+65~~ LT
SL 600+49 - 600+54 RT
SL STA 600+64 - 600+87 RT
SL STA 602+38 RT - SL STA 500+60 RT

SPECIAL PROVISION (REMOVE & RESET SIGN FOUNDATION)
SL STA 603+20 RT

DETECTABLE WARNING SURFACE
STA 139+68 LT
STA 139+69 RT
SL STA 500+51 LT
SL STA 500+51 RT
SL STA 602+53 RT
SL STA 602+55 LT
SL STA 603+26 RT
SL STA 603+28 LT
SL STA 700+39 RT
~~SL STA 700+44 LT~~
SL STA 800+36 LT
SL STA 800+37 RT

COLD PLANING, BITUMINOUS PAVEMENT
STA 138+60 LT - SL STA 700+65 LT
STA 139+48 - 139+77 RT
STA 139+86 LT - SL STA 700+83 RT
SL STA 602+32 LT - SL STA 800+64 LT
SL STA 602+38 RT - SL STA 500+50 RT
SL STA 603+38 LT - SL STA 800+47 RT
SL STA 603+41 RT - SL STA 500+60 LT

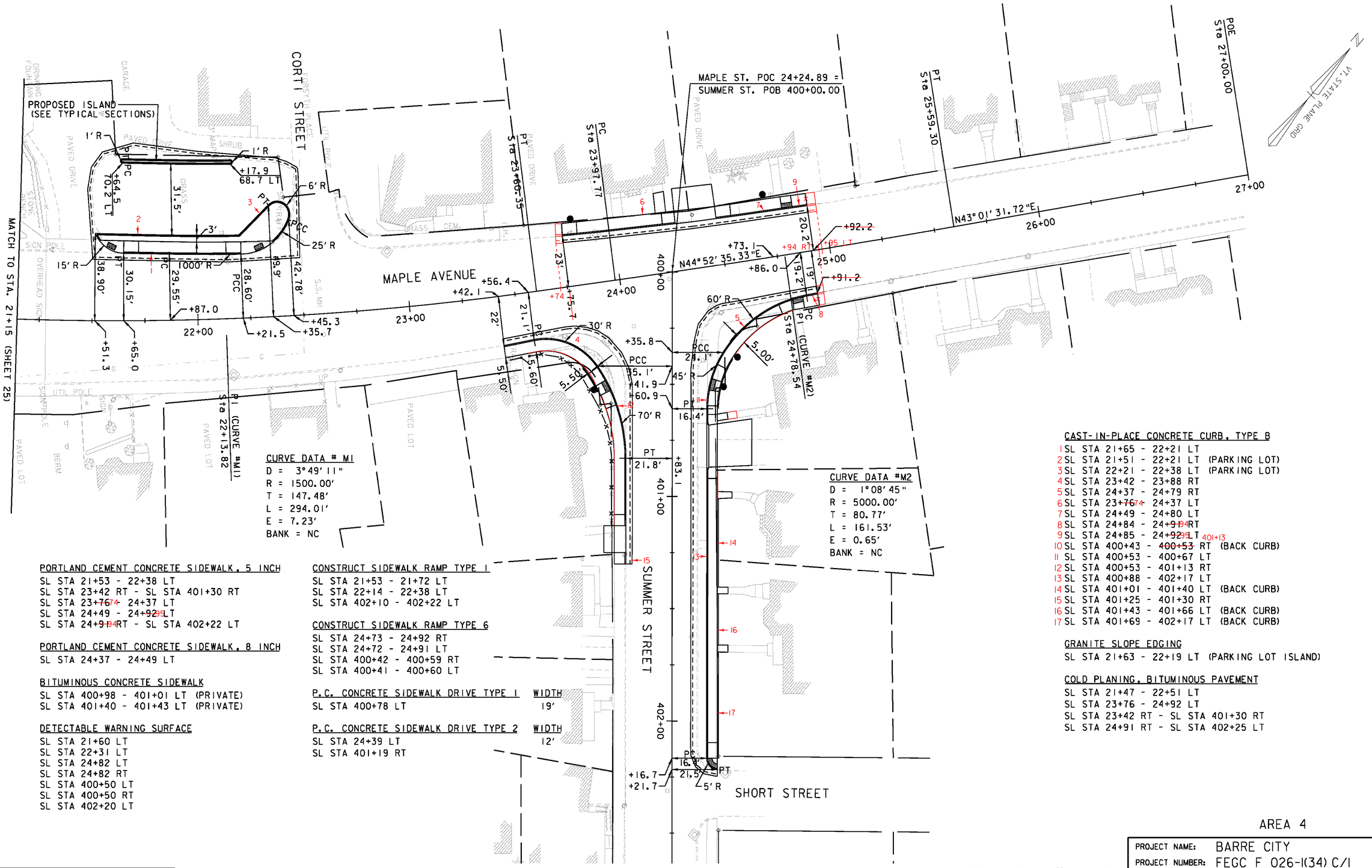
DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z85b010bdr nu
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
ALIGNMENT AND CURB LAYOUT PLAN
PLOT DATE: 4/5/2010
DRAWN BY: D. PECK
CHECKED BY:
SHEET 26 OF 95



CURVE DATA # M1
D = 3°49'11"
R = 1500.00'
T = 147.48'
L = 294.01'
E = 7.23'
BANK = NC

CURVE DATA #M2
D = 1°08'45"
R = 5000.00'
T = 80.77'
L = 161.53'
E = 0.65'
BANK = NC

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
SL STA 21+53 - 22+38 LT
SL STA 23+42 RT - SL STA 401+30 RT
SL STA 23+~~76~~74 - 24+37 LT
SL STA 24+49 - 24+~~92~~95 LT
SL STA 24+~~91~~94 RT - SL STA 402+22 LT

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
SL STA 24+37 - 24+49 LT

BITUMINOUS CONCRETE SIDEWALK
SL STA 400+98 - 401+01 LT (PRIVATE)
SL STA 401+40 - 401+43 LT (PRIVATE)

DETECTABLE WARNING SURFACE
SL STA 21+60 LT
SL STA 22+31 LT
SL STA 24+82 LT
SL STA 24+82 RT
SL STA 400+50 LT
SL STA 400+50 RT
SL STA 402+20 LT

CONSTRUCT SIDEWALK RAMP TYPE 1
SL STA 21+53 - 21+72 LT
SL STA 22+14 - 22+38 LT
SL STA 402+10 - 402+22 LT

CONSTRUCT SIDEWALK RAMP TYPE 6
SL STA 24+73 - 24+92 RT
SL STA 24+72 - 24+91 LT
SL STA 400+42 - 400+59 RT
SL STA 400+41 - 400+60 LT

P.C. CONCRETE SIDEWALK DRIVE TYPE 1	WIDTH
SL STA 400+78 LT	19'

P.C. CONCRETE SIDEWALK DRIVE TYPE 2	WIDTH
SL STA 24+39 LT	12'
SL STA 401+19 RT	

CAST-IN-PLACE CONCRETE CURB, TYPE B
1 SL STA 21+65 - 22+21 LT
2 SL STA 21+51 - 22+21 LT (PARKING LOT)
3 SL STA 22+21 - 22+38 LT (PARKING LOT)
4 SL STA 23+42 - 23+88 RT
5 SL STA 24+37 - 24+79 RT
6 SL STA 23+~~76~~74 - 24+37 LT
7 SL STA 24+49 - 24+80 LT
8 SL STA 24+84 - 24+~~91~~94 RT
9 SL STA 24+85 - 24+~~92~~95 LT
10 SL STA 400+43 - ~~400+53~~ RT (BACK CURB)
11 SL STA 400+53 - 400+67 LT
12 SL STA 400+53 - 401+13 RT
13 SL STA 400+88 - 402+17 LT
14 SL STA 401+01 - 401+40 LT (BACK CURB)
15 SL STA 401+25 - 401+30 RT
16 SL STA 401+43 - 401+66 LT (BACK CURB)
17 SL STA 401+69 - 402+17 LT (BACK CURB)

GRANITE SLOPE EDGING
SL STA 21+63 - 22+19 LT (PARKING LOT ISLAND)

COLD PLANING, BITUMINOUS PAVEMENT
SL STA 21+47 - 22+51 LT
SL STA 23+76 - 24+92 LT
SL STA 23+42 RT - SL STA 401+30 RT
SL STA 24+91 RT - SL STA 402+25 LT

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

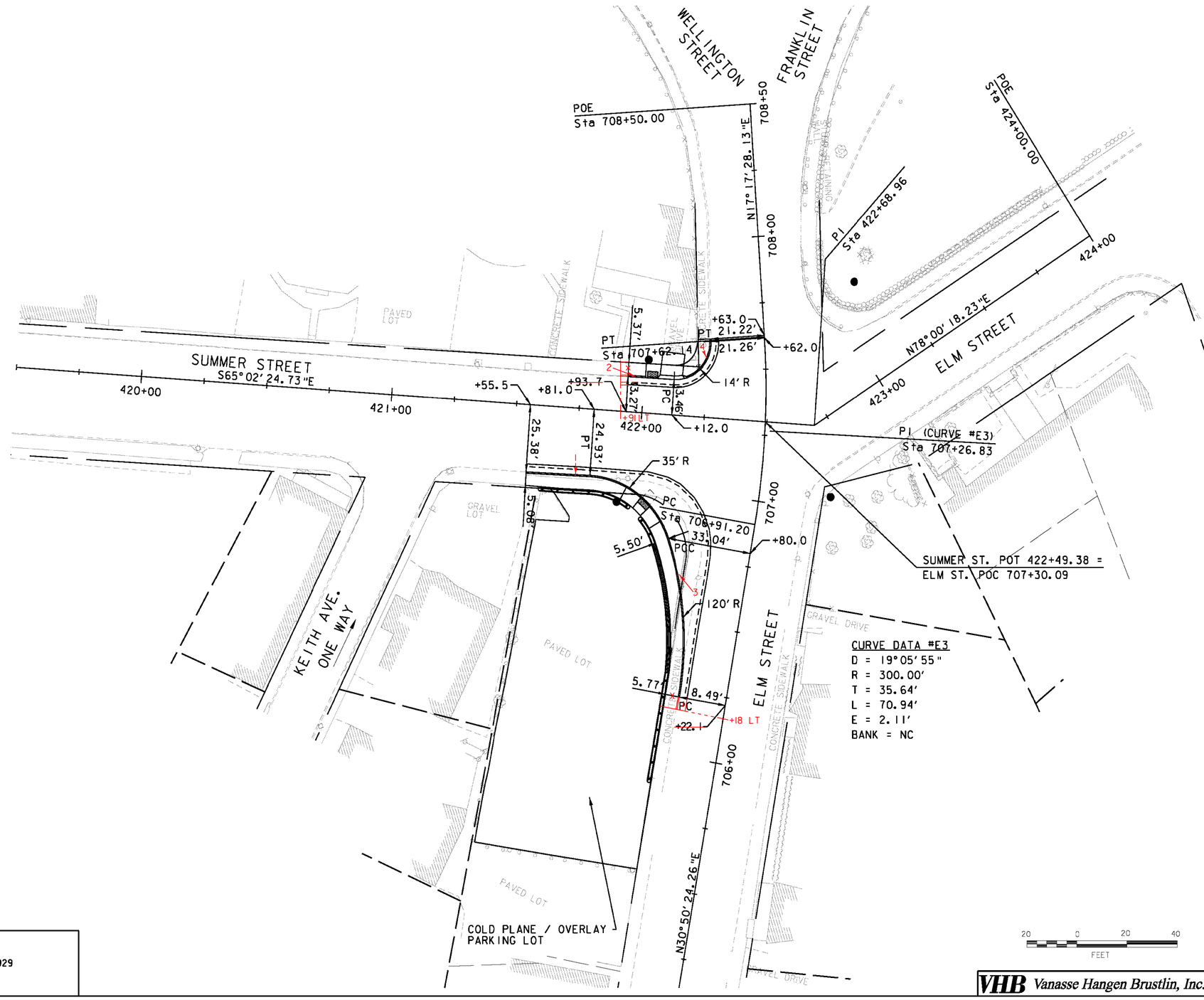
AREA 4

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-I(34) C/I

FILE NAME: z85b010bdr nu
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
ALIGNMENT AND CURB LAYOUT PLAN

PLOT DATE: 4/5/2010
DRAWN BY: D. PECK
CHECKED BY:
SHEET 27 OF 95

VHB Vanasse Hangen Brustlin, Inc.



COLD PLANING, BITUMINOUS PAVEMENT
SL STA 421+56 RT - SL STA 706+22 LT
SL STA 421+94 LT - SL STA 706+63 LT
~~SL STA 705+75 - 706+94 LT (PARKING LOT)~~

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
SL STA 421+56 RT - SL STA 706+~~22~~18 LT
SL STA 421+~~94~~91 LT - SL STA 707+63 LT

DETECTABLE WARNING SURFACE
SL STA 422+04 RT
SL STA 422+03 LT

CAST-IN-PLACE CONCRETE CURB, TYPE B
1 SL STA 421+56 - 422+02 RT
2 SL STA 421+~~94~~91 - 422+01 LT
3 SL STA 706+~~22~~18 - 706+91 LT
4 SL STA 707+48 - 707+63 LT

CONSTRUCT SIDEWALK RAMP TYPE 6
SL STA 421+94 - 422+07 LT
SL STA 421+94 - 422+10 RT

P.C. CONCRETE SIDEWALK DRIVE TYPE 1	WIDTH
SL STA 422+11 LT	9'

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

AREA 5

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z85b010bdr nu
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
ALIGNMENT AND CURB LAYOUT PLAN
PLOT DATE: 4/5/2010
DRAWN BY: D. PECK
CHECKED BY:
SHEET 28 OF 95

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-301
SHEET 1 of 1
DATE STARTED: 6/01/09
DATE COMPLETED: 6/01/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 113+35.90
OFFSET: -45.00
VTSPG NAD83: N 620624.70 ft E 1638383.56 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 593.61 ft
GROUNDWATER DEPTH: 10.5 ft 6/01/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SlSa, brn, Moist, Rec. = 1.4 ft	8	24.2	1.3	52.2	46.5
		A-4, SaSl, gry, MTW, Rec. = 1.5 ft	2	46.3	0.0	38.6	61.4
		A-4, Sl with Little Organics (11.9%), gry, MTW, Rec. = 1.8 ft	1	68.2	0.2	16.0	83.8
10		A-4, SaSl, gry, MTW, Rec. = 1.7 ft	4	34.9	2.5	38.8	58.7
		A-1-b, SaGr, gry, Wet, Rec. = 0.8 ft	12	24.0	41.4	39.8	18.8
15		A-1-b, GrSa, gry, Wet, Rec. = 0.9 ft	10	26.1	21.3	64.2	14.5
		A-2-4, Sa, brn, Wet, Rec. = 1.4 ft	1	31.6	3.0	78.8	18.2
20		A-2-4, SlSa, brn, Wet, Rec. = 1.2 ft	1	33.9	3.7	70.7	25.6
		A-2-4, SlSa, brn, Wet, Rec. = 1.2 ft	3	27.1	1.2	73.8	25.2
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34) GPJ VT ADT.GDT 8/19/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-302
SHEET 1 of 1
DATE STARTED: 6/01/09
DATE COMPLETED: 6/01/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 113+42.40
OFFSET: 57.00
VTSPG NAD83: N 620555.26 ft E 1638310.77 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 592.84 ft
GROUNDWATER DEPTH: 5.0 ft 6/01/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SlSa, brn, Moist, Rec. = 1.2 ft	3	17.1	3.8	60.3	35.9
		A-2-4, Sa, brn, Wet, Rec. = 1.8 ft	3	26.9	0.2	88.8	11.0
		A-2-4, Sa, brn, Wet, Rec. = 1.2 ft	5	24.8	9.3	79.6	11.1
10		A-1-b, SaGr, blk, Wet, Rec. = 0.9 ft	11	19.8	44.1	40.7	15.2
		A-1-b, GrSa, blk, Wet, Rec. = 0.8 ft	7	24.8	33.6	47.7	18.8
15		A-2-4, Sa with pieces of Wood, blk, Wet, Rec. = 1.4 ft	1	35.0	13.0	67.3	19.7
		A-2-4, SlSa, blk, Wet, Rec. = 1.7 ft	7	30.0	1.3	75.5	23.2
20		A-2-4, Sa, blk, Wet, Rec. = 1.1 ft	16	25.0	13.7	69.2	17.1
		A-2-4, Sa, blk, Wet, Rec. = 1.5 ft	14	19.5	18.9	64.3	16.8
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34) GPJ VT ADT.GDT 8/19/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-304
SHEET 1 of 1
DATE STARTED: 6/03/09
DATE COMPLETED: 6/03/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 114+55.50
OFFSET: 47.50
VTSPG NAD83: N 620475.76 ft E 1638382.96 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 594.14 ft
GROUNDWATER DEPTH: 13.2 ft 6/03/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SaSl, brn, Moist, Rec. = 1.5 ft	3	21.3	0.4	42.6	57.0
		A-2-4, SlSa, brn, Moist, Rec. = 1.3 ft	4	17.2	0.1	75.1	24.8
		A-2-4, Sa, brn, Wet, Rec. = 1.6 ft	2	28.3	0.0	83.5	16.5
10		A-2-4, Sa, blk-brn, Wet, Rec. = 1.3 ft	3	30.1	1.4	84.4	14.2
		A-1-b, GrSa, blk, Wet, Rec. = 1.1 ft	37	18.2	41.8	48.5	9.7
15		A-1-b, GrSa, brn, Wet, Rec. = 2.0 ft	25	12.8	40.3	48.9	10.8
		Visual Classification, SaGr, brn, Wet, Rec. = 0.9 ft, Sample had oxidized staining with a slight odor of possible septic.	19				
20		A-4, SaSl, gry, Wet, Rec. = 1.0 ft	3	26.8	0.1	28.2	71.7
		A-4, Sl, gry, Wet, Rec. = 1.0 ft	7	29.4	0.3	16.6	83.1
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34) GPJ VT ADT.GDT 8/19/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-305
SHEET 1 of 1
DATE STARTED: 6/08/09
DATE COMPLETED: 6/08/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 23+80.30
OFFSET: -26.90
VTSPG NAD83: N 620810.69 ft E 1638669.32 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 595.74 ft
GROUNDWATER DEPTH: 10.2 ft 6/08/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, SlSa, brn, Moist, Rec. = 0.7 ft	22	12.0	19.6	59.0	21.4
		A-4, SaSl, blk, MTW, Rec. = 1.7 ft	3	41.9	0.1	44.7	55.2
		A-2-4, SlSa, blk, MTW, Rec. = 2.0 ft	1	36.4	0.0	67.8	32.2
10		A-2-4, SlSa with Trace of Organics (5.3%), blk, Wet, Rec. = 2.0 ft	1	60.5	0.2	66.3	33.6
		A-2-4, SlGrSa, blk, Wet, Rec. = 0.5 ft	4	38.1	23.0	56.9	20.1
15		A-2-4, GrSlSa, blk, Wet, Rec. = 1.1 ft	WH	34.0	22.8	41.9	35.3
		A-2-4, SlSa, brn, Wet, Rec. = 0.3 ft	4	40.0	0.1	79.8	20.1
20		A-2-4, Sa, brn, Wet, Rec. = 2.0 ft	7	28.3	7.2	78.3	14.5
		A-2-4, Sa, brn, Wet, Rec. = 2.0 ft	17	29.3	3.7	80.6	15.7
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34) GPJ VT ADT.GDT 8/19/09

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/I

FILE NAME: z09B240_ALIPT.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
BORING LOGS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 29 OF 95

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-306
SHEET 1 of 1
DATE STARTED: 6/02/09
DATE COMPLETED: 6/02/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 24+45.10
OFFSET: 34.50
VTSPG NAD83: N 620810.24 ft E 1638752.33 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 596.19 ft
GROUNDWATER DEPTH: 8.1 ft 6/02/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft	9	6.9	38.5	44.6	16.9
		A-4, SiSa, blk, Moist, Rec. = 1.6 ft	3	44.4	8.7	47.4	43.9
		A-4, SiSa, blk, MTW, Rec. = 1.3 ft	4	25.9	2.4	52.7	44.9
10		A-2-4, SiSa, blk, Wet, Rec. = 1.0 ft	3	33.8	0.8	65.7	33.5
		A-2-4, GrSa, blk, Wet, Rec. = 1.1 ft	8	26.3	25.8	59.6	14.6
		A-2-4, SiSa, blk, Wet, Rec. = 1.4 ft	3	34.7	11.4	59.9	32.6
15		A-2-4, SiSa, blk, Wet, Rec. = 0.4 ft	1	69.7	4.8	70.6	24.6
20		A-1-b, Sa, brn, Wet, Rec. = 2.0 ft	38	16.4	19.6	71.3	9.1
		A-2-4, Sa, brn, Wet, Rec. = 1.8 ft	25	20.3	19.6	61.8	18.4
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34) CP_VT ACT DOT 8/18/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-307
SHEET 1 of 1
DATE STARTED: 6/04/09
DATE COMPLETED: 6/04/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 138+72.80
OFFSET: 36.50
VTSPG NAD83: N 618667.78 ft E 1640006.91 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 608.47 ft
GROUNDWATER DEPTH: 13.2 ft 6/04/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SaSi, blk, Moist, Rec. = 1.5 ft	18	13.2	15.7	39.3	45.0
		A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft	20	6.3	41.5	43.6	14.9
		A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft, Broken Granite pieces were within sample.	21	5.4	42.5	44.7	12.8
10		A-4, Si, gry, MTW, Rec. = 1.1 ft	10	24.6	1.2	9.9	88.9
		A-4, Si, brn, MTW, Rec. = 1.0 ft	11	27.4	2.6	10.0	87.4
		A-4, Si, brn, Wet, Rec. = 1.1 ft	13	25.7	3.7	15.2	81.1
15		A-4, SiSa, brn, Wet, Rec. = 1.7 ft	15	22.4	6.0	51.6	42.4
20		A-1-b, GrSa, brn, Wet, Rec. = 2.0 ft	29	12.6	37.2	52.5	10.3
		A-2-4, Sa, brn, Wet, Rec. = 2.0 ft	36	16.5	15.4	65.5	19.1
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34) CP_VT ACT DOT 8/18/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-308
SHEET 1 of 1
DATE STARTED: 6/09/09
DATE COMPLETED: 6/09/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 139+47.70
OFFSET: -35.00
VTSPG NAD83: N 618698.75 ft E 1640115.79 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 608.4 ft
GROUNDWATER DEPTH: 16.5 ft 6/09/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-1-b, SlGrSa, blk, Moist, Rec. = 1.1 ft	10	9.7	30.8	49.0	20.2
		A-1-b, GrSa, blk, Moist, Rec. = 1.0 ft	9	10.7	32.1	51.5	16.4
		A-4, Si, brn, MTW, Rec. = 1.2 ft	8	31.1	0.5	5.5	94.0
10		A-4, Si, brn, MTW, Rec. = 1.4 ft	7	29.8	1.6	6.8	91.6
		A-4, Si, gry, MTW, Rec. = 1.4 ft	5	31.7	3.3	7.5	89.2
		A-4, Si, gry, MTW, Rec. = 1.6 ft	6	29.3	6.6	6.4	87.0
15		A-4, Si, gry, MTW, Rec. = 1.2 ft	6	30.7	3.7	5.2	91.1
20		A-4, Si, gry, MTW, Rec. = 1.4 ft	8	28.4	0.0	10.0	90.0
		A-2-4, Sa, gry, Wet, Rec. = 2.0 ft	4	19.3	3.5	79.7	16.8
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34) CP_VT ACT DOT 8/18/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-309
SHEET 1 of 1
DATE STARTED: 6/16/09
DATE COMPLETED: 6/16/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 600+79.10
OFFSET: 55.60
VTSPG NAD83: N 618611.91 ft E 1639982.14 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 605.82 ft
GROUNDWATER DEPTH: 12.9 ft 6/16/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, SiSa, blk, Moist, Rec. = 1.4 ft	6	14.9	4.5	66.3	29.2
		A-4, GrSiSa, blk, Moist, Rec. = 1.1 ft	23	13.5	21.4	41.3	37.3
		Visual Classification, GrSa, blk, Moist, Rec. = 0.4 ft, Insufficient sample for testing.	26				
10		A-1-b, GrSa, blk, Moist, Rec. = 0.9 ft	12	7.5	39.3	45.4	15.3
		A-1-b, GrSa, blk, MTW, Rec. = 1.1 ft	5	16.2	23.0	60.3	16.7
		A-1-b, GrSa, blk, Wet, Rec. = 1.6 ft	11	20.3	20.8	64.6	14.6
15		A-1-b, GrSa, blk, Wet, Rec. = 1.3 ft	20	17.2	39.0	53.0	8.0
20		A-1-b, GrSa, blk, Wet, Rec. = 1.4 ft	44	19.1	32.3	55.0	12.7
		A-1-b, GrSa, blk, Wet, Rec. = 1.8 ft	28	14.6	38.3	49.3	12.4
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

DRILLER'S NOTES:
1. Duplex drilling 11.0 ft to 17.0 ft.

LOG OF BORING BARRE CITY FEGC F 026-1(34) CP_VT ACT DOT 8/18/09

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/I

FILE NAME: z09B240_ALIPT.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
BORING LOGS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 30 OF 95

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-310
SHEET 1 of 1
DATE STARTED: 6/10/09
DATE COMPLETED: 6/10/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 602+62.00
OFFSET: -40.00
VTSPG NAD83: N 618438.13 ft E 1640086.47 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 608.78 ft
GROUNDWATER DEPTH: 16.2 ft 6/10/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG W/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		A-1-b, SlGrSa, blk, Moist, Rec. = 1.1 ft	17	13.4	25.3	49.9	24.8
5		A-1-b, GrSa, blk, Moist, Rec. = 1.2 ft	18	9.8	32.5	48.5	19.0
		A-1-b, SlGrSa, blk, Moist, Rec. = 1.1 ft	15	6.9	39.3	39.7	21.0
10		A-1-b, SlSaGr, blk, Moist, Rec. = 1.0 ft	19	7.1	48.6	31.3	20.1
		A-1-a, SaGr, blk, Moist, Rec. = 1.3 ft	71	5.4	55.4	31.1	13.5
		A-1-b, SaGr, blk, MTW, Rec. = 1.2 ft	14	7.7	49.0	36.1	14.9
15		A-1-a, SaGr, blk, Wet, Rec. = 0.6 ft	11	15.0	59.9	28.0	12.1
20		A-1-b, Sa, brn, Wet, Rec. = 1.0 ft	46	21.2	17.7	66.8	15.5
		Hole stopped @ 22.0 ft					

DRILLER'S NOTES:
1. Could not penetrate further.

LOG OF BORING BARRE CITY FEGC F 026-1(34) C/I VT 4OT.GDT 8/19/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-311
SHEET 1 of 1
DATE STARTED: 6/10/09
DATE COMPLETED: 6/10/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 603+37.20
OFFSET: 29.50
VTSPG NAD83: N 618345.62 ft E 1640038.95 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 609.99 ft
GROUNDWATER DEPTH: 16.5 ft 6/10/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG W/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		Field Note:, No Recovery. Appears to be sand	15				
5		A-2-4, SlSa, Dk/brn, Moist, Rec. = 1.4 ft	4	17.7	6.5	66.9	26.6
		A-2-4, SlSa, Dk/brn, Moist, Rec. = 1.5 ft	4	12.9	0.7	65.8	33.5
10		A-4, SaSl, brn, Moist, Rec. = 1.6 ft	6	21.6	0.0	49.3	50.7
		A-3, Sa, brn, Moist, Rec. = 1.5 ft	6	10.2	0.7	89.9	9.4
15		A-2-4, SlGrSa, blk, MTW, Rec. = 1.2 ft	4	18.9	25.1	53.7	21.2
		A-1-b, SlGrSa, blk, MTW, Rec. = 1.2 ft	16	11.9	34.5	44.7	20.8
20		A-1-b, SlGrSa, brn, Wet, Rec. = 1.6 ft	20	18.9	39.7	39.8	20.5
		A-1-b, GrSa, brn, Wet, Rec. = 1.7 ft	22	16.9	37.8	46.4	15.8
25		Hole stopped @ 25.0 ft					

LOG OF BORING BARRE CITY FEGC F 026-1(34) C/I VT 4OT.GDT 8/19/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-322
SHEET 1 of 1
DATE STARTED: 7/02/09
DATE COMPLETED: 7/02/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 423+05.00
OFFSET: -37.00
VTSPG NAD83: N 619357.72 ft E 1640396.98 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 613.57 ft
GROUNDWATER DEPTH: 11.9 ft 7/02/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG W/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		A-2-4, GrSlSa, brn, Moist, Rec. = 0.9 ft	4	21.4	30.5	37.0	32.5
5		A-4, SaSl, brn, Moist, Rec. = 1.0 ft	2	24.2	14.0	35.8	50.2
		A-4, SaSl, brn, Moist, Rec. = 0.4 ft	2	22.1	12.6	31.6	55.8
10		Visual Classification, GrSlSa, brn, MTW, Rec. = 0.1 ft, Insufficient sample for testing.	6	19.4			
		A-1-b, GrSa, brn, Wet, Rec. = 0.8 ft	39	14.4	38.9	44.1	17.0
		A-2-4, SlGrSa, brn, Wet, Rec. = 0.7 ft	39	19.7	31.1	43.4	25.5
15		A-1-b, GrSa, brn, Wet, Rec. = 1.5 ft	18	18.3	26.6	56.2	17.2
20		A-4, SaGrSl, brn, MTW, Rec. = 1.3 ft	66	15.4	32.0	30.7	37.3
		Hole stopped @ 21.5 ft					

DRILLER'S NOTES:
1. Drilled to ledge or boulder.

LOG OF BORING BARRE CITY FEGC F 026-1(34) C/I VT 4OT.GDT 8/19/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-323
SHEET 1 of 1
DATE STARTED: 7/01/09
DATE COMPLETED: 7/01/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 707+00.00
OFFSET: 28.00
VTSPG NAD83: N 619301.54 ft E 1640360.83 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 609.72 ft
GROUNDWATER DEPTH: 8.8 ft 7/01/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG W/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		A-4, SaSl, brn, Moist, Rec. = 1.6 ft	5	18.3	6.6	43.1	50.3
5		A-2-4, SlSa, brn, Moist, Rec. = 1.6 ft	5	13.8	9.1	59.7	31.2
		A-2-4, SlSa, brn, Moist, Rec. = 1.0 ft	19	13.5	17.7	51.7	30.6
10		A-2-4, SlSa, brn, MTW, Rec. = 1.3 ft	6	26.9	10.4	67.3	22.3
		A-2-4, SlSa, brn, Wet, Rec. = 0.7 ft	14	26.9	5.6	74.1	20.3
		A-3, Sa, brn, Wet, Rec. = 1.5 ft	9	27.4	0.1	91.5	8.4
15		A-3, Sa, brn, Wet, Rec. = 2.0 ft	4	27.5	0.0	93.4	6.6
20		A-4, SlSa, brn, Wet, Rec. = 0.9 ft	35	36.9	0.5	60.4	39.1
		A-2-4, SlGrSa, brn, Wet, Rec. = 0.7 ft	R	24.4	26.4	49.9	23.7
25		Hole stopped @ 23.7 ft					

DRILLER'S NOTES:
1. Drilled to ledge or boulder.

LOG OF BORING BARRE CITY FEGC F 026-1(34) C/I VT 4OT.GDT 8/19/09

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-324
SHEET 1 of 1
DATE STARTED: 6/30/09
DATE COMPLETED: 6/30/09

PROJECT NAME: BARRE CITY
SITE NAME: US-302
STATION: 421+97.00
OFFSET: 40.00
VTSPG NAD83: N 619328.22 ft E 1640298.96 ft

PROJECT NUMBER: FEGC F 026-1(34)
SITE NUMBER:
GROUND ELEVATION: 607.78 ft
GROUNDWATER DEPTH: 4.0 ft 6/30/09
PROJECT PIN NUMBER: 85B010

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG W/AUTO HAMMER
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)		
			RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)		
2.5		A-2-4, GrSlSa, brn, Moist, Rec. = 1.4 ft	2	13.6	22.9	45.6	31.5		
5.0		A-1-b, SlGrSa, brn, Moist, Rec. = 1.2 ft	9	9.8	37.5	41.2	21.3		
7.5		A-1-b, SlGrSa, brn, Moist, Rec. = 1.1 ft	9	11.7	36.1	42.1	21.8		
		A-1-b, GrSa, brn, Wet, Rec. = 1.0 ft	13	22.9	39.0	41.9	19.1		
10.0		A-2-4, SlSa, brn, Wet, Rec. = 0.4 ft	R	30.5	14.0	62.3	23.7		
12.5		Top of Bedrock @ 11.8 ft Meta-Limestone, (Geologist's determination), BXDC, 11.8 ft - 14.8 ft						10	
								10	
15.0								10	
		Hole stopped @ 14.8 ft							
17.5									

LOG OF BORING BARRE CITY FEGC F 026-1(34) C/I VT 4OT.GDT 8/19/09

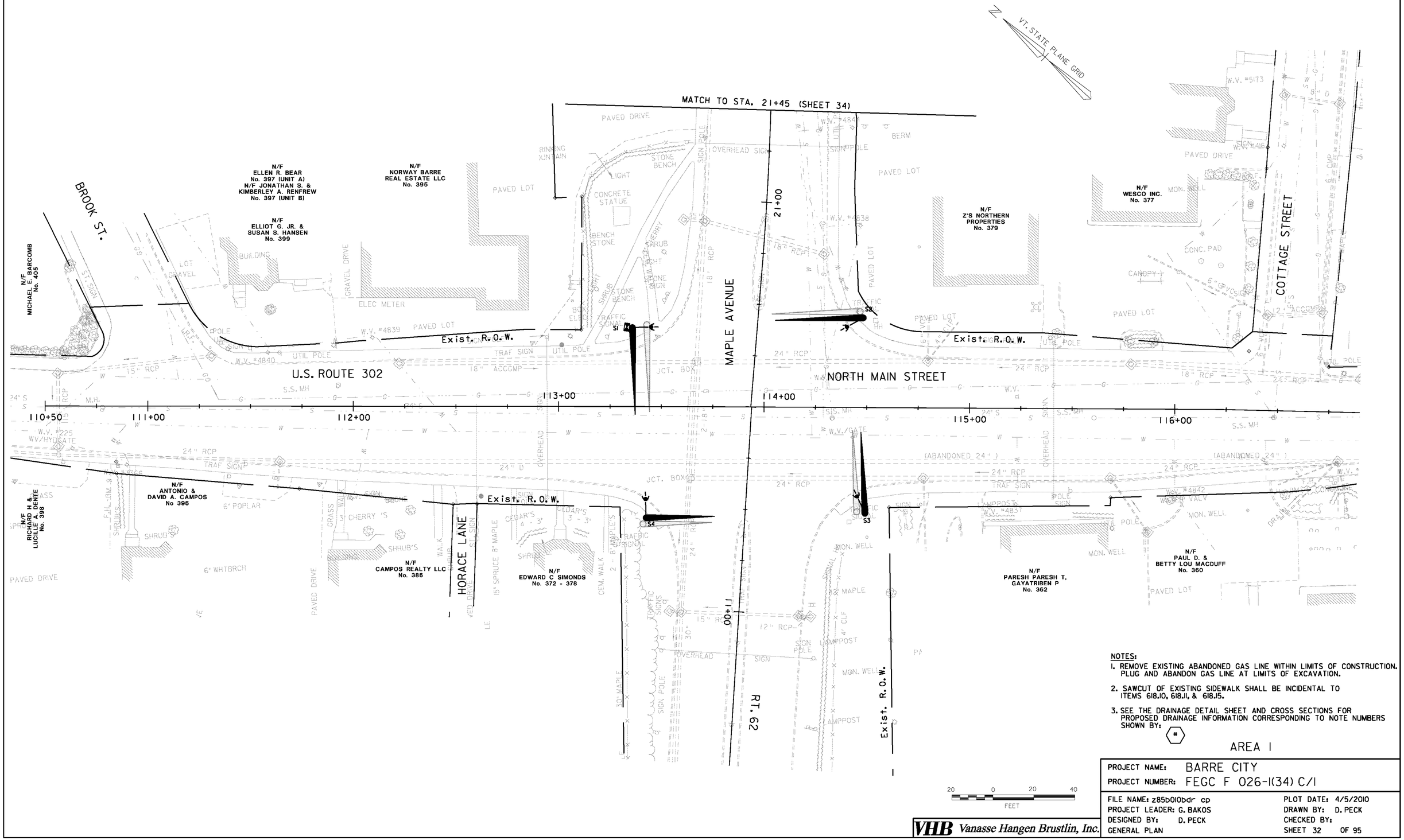
DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/I

FILE NAME: z09B240_ALIPT.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
BORING LOGS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 31 OF 95



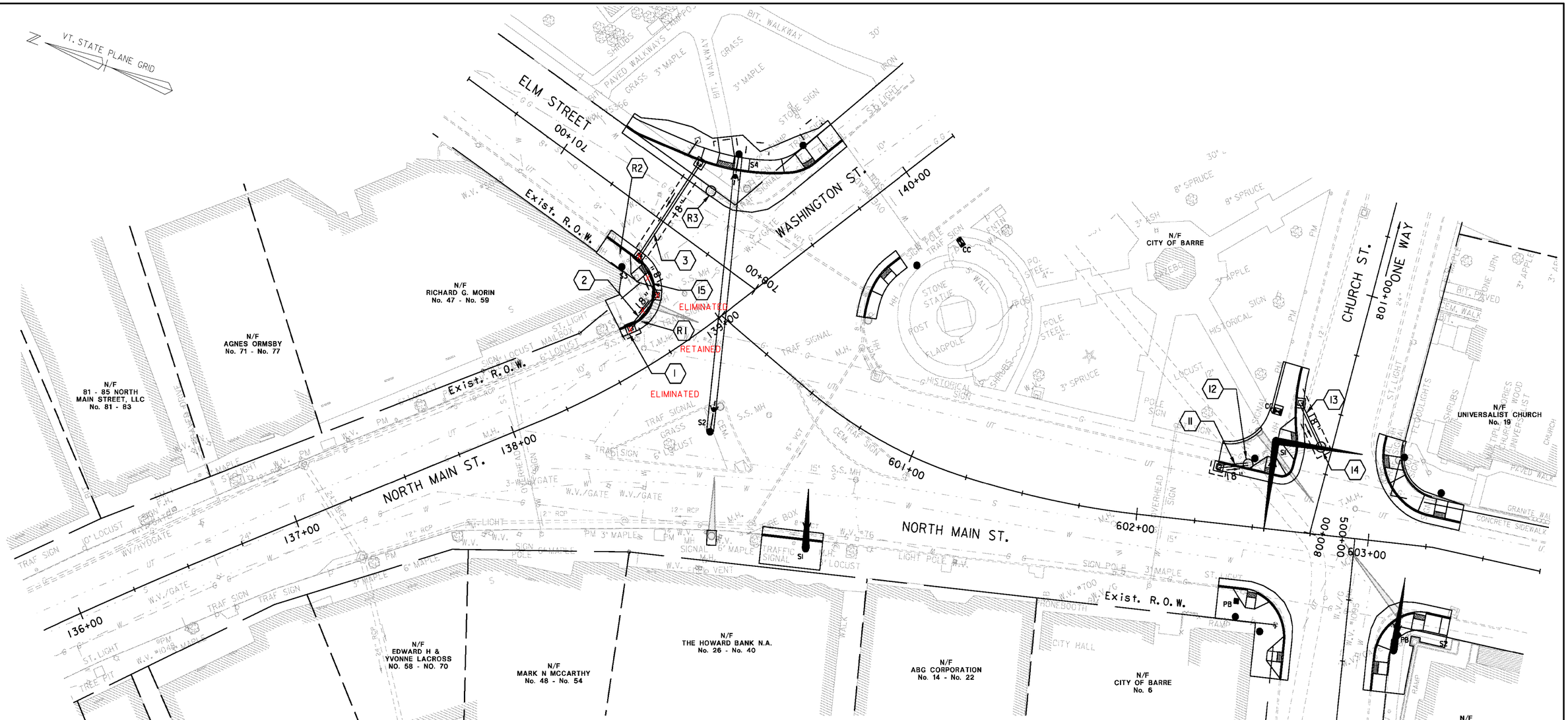
NOTES:

1. REMOVE EXISTING ABANDONED GAS LINE WITHIN LIMITS OF CONSTRUCTION. PLUG AND ABANDON GAS LINE AT LIMITS OF EXCAVATION.
2. SAWCUT OF EXISTING SIDEWALK SHALL BE INCIDENTAL TO ITEMS 618.10, 618.11, & 618.15.
3. SEE THE DRAINAGE DETAIL SHEET AND CROSS SECTIONS FOR PROPOSED DRAINAGE INFORMATION CORRESPONDING TO NOTE NUMBERS SHOWN BY: (#)

AREA 1

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY	
PROJECT NUMBER: FEGC F 026-1(34) C/1	
FILE NAME: z85b010bdr cp	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY:
GENERAL PLAN	SHEET 32 OF 95



AREAS 2 & 3

CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES
STA 139+58 RT
SL STA 700+38 RT
SL STA 602+46 LT
SL STA 800+30 RT
SL STA 800+35 LT

REHAB, DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I
SL STA 700+38 RT
SL STA 602+46 LT
SL STA 800+35 LT

REHAB, DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS II
SL STA 602+46 LT
SL STA 800+35 LT

HYDRANT
SL STA 700+55, 36' RT

DUCTILE IRON PIPE, CEMENT-LINED (8'')
SL STA 700+55 RT

REMOVE HYDRANT
SL STA 700+55, 28' RT

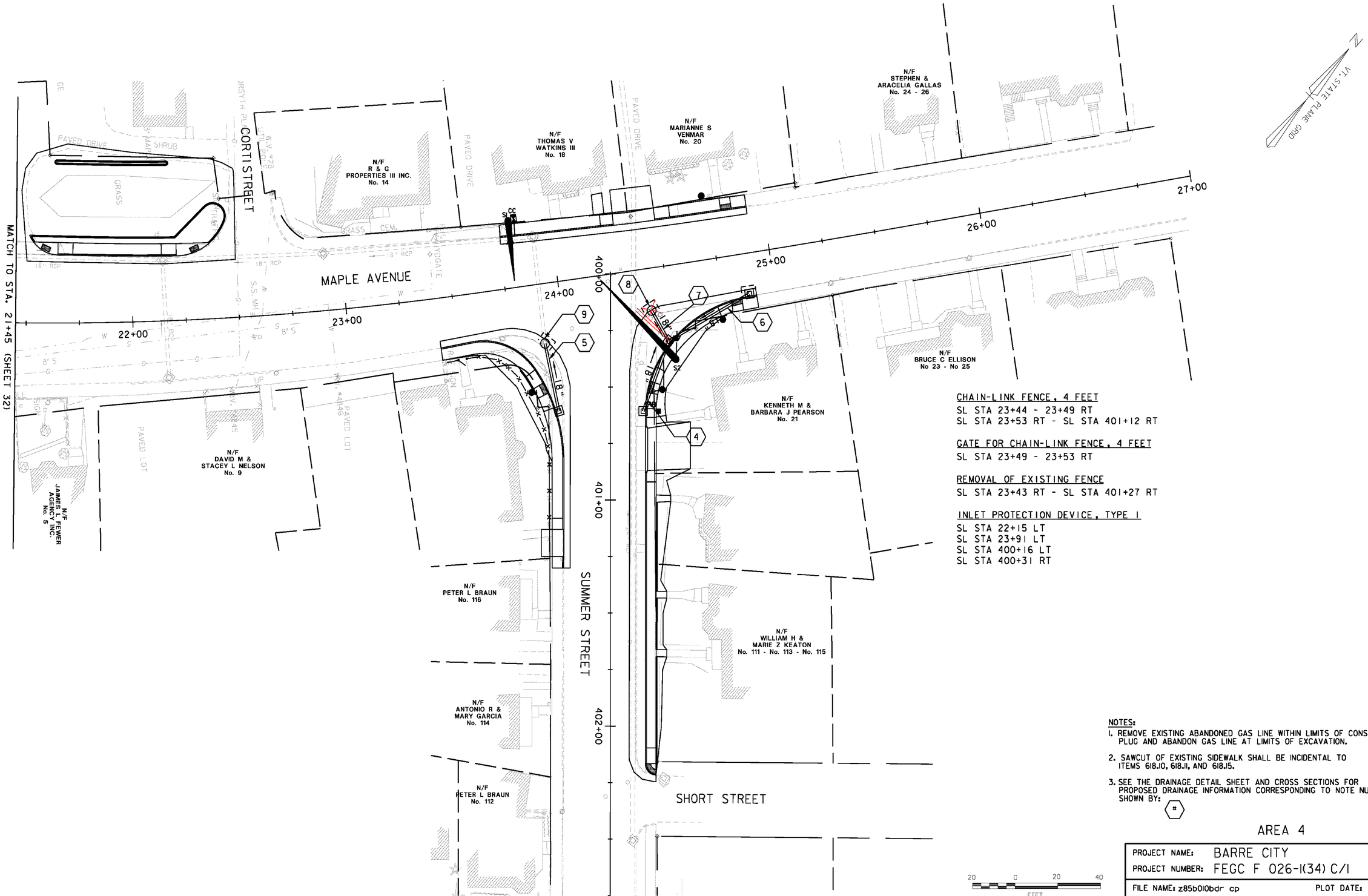
INLET PROTECTION DEVICE, TYPE I
STA 139+58 RT
SL STA 600+70 LT
SL STA 602+46 LT
SL STA 602+76 LT
SL STA 603+04 LT
SL STA 603+42 RT
SL STA 700+38 RT
SL STA 700+63 LT

NOTES:
1. REMOVE EXISTING ABANDONED GAS LINE WITHIN LIMITS OF CONSTRUCTION. PLUG AND ABANDON GAS LINE AT LIMITS OF EXCAVATION.
2. SAWCUT OF EXISTING SIDEWALK SHALL BE INCIDENTAL TO ITEM 618.10, 618.11, AND 618.15.
3. SEE THE DRAINAGE DETAIL SHEET AND CROSS SECTIONS FOR PROPOSED DRAINAGE INFORMATION CORRESPONDING TO NOTE NUMBERS SHOWN BY: (#)

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/I
FILE NAME: z85b0101bdr cp	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY:
GENERAL PLAN	SHEET 33 OF 95



CHAIN-LINK FENCE, 4 FEET
SL STA 23+44 - 23+49 RT
SL STA 23+53 RT - SL STA 401+12 RT

GATE FOR CHAIN-LINK FENCE, 4 FEET
SL STA 23+49 - 23+53 RT

REMOVAL OF EXISTING FENCE
SL STA 23+43 RT - SL STA 401+27 RT

INLET PROTECTION DEVICE, TYPE I
SL STA 22+15 LT
SL STA 23+91 LT
SL STA 400+16 LT
SL STA 400+31 RT

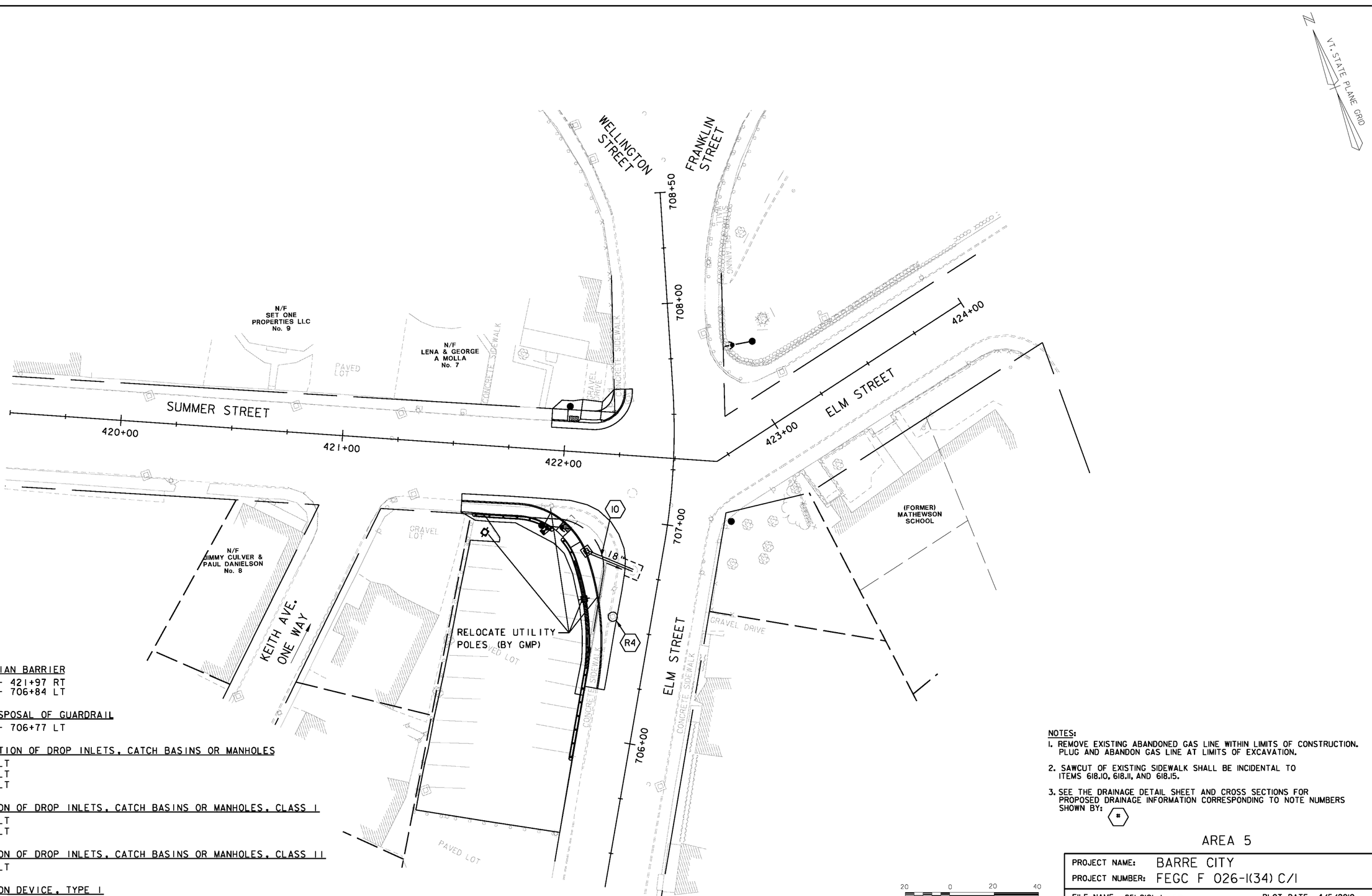
NOTES:
1. REMOVE EXISTING ABANDONED GAS LINE WITHIN LIMITS OF CONSTRUCTION. PLUG AND ABANDON GAS LINE AT LIMITS OF EXCAVATION.
2. SAWCUT OF EXISTING SIDEWALK SHALL BE INCIDENTAL TO ITEMS 618.10, 618.11, AND 618.15.
3. SEE THE DRAINAGE DETAIL SHEET AND CROSS SECTIONS FOR PROPOSED DRAINAGE INFORMATION CORRESPONDING TO NOTE NUMBERS SHOWN BY: ⬡

20 0 20 40
FEET

AREA 4

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY	
PROJECT NUMBER: FEGC F 026-1(34) C/1	
FILE NAME: z85b0100bdr cp	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY:
GENERAL PLAN	SHEET 34 OF 95



STEEL BEAM MEDIAN BARRIER
SL STA 421+60 - 421+97 RT
SL STA 705+88 - 706+84 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
SL STA 705+90 - 706+77 LT

CHANGING ELEVATION OF DROP INLETS, CATCH BASINS OR MANHOLES
SL STA 706+55 LT
SL STA 706+77 LT
SL STA 707+58 LT

REHAB. ELEVATION OF DROP INLETS, CATCH BASINS OR MANHOLES, CLASS I
SL STA 706+55 LT
SL STA 706+77 LT

REHAB. ELEVATION OF DROP INLETS, CATCH BASINS OR MANHOLES, CLASS II
SL STA 706+77 LT

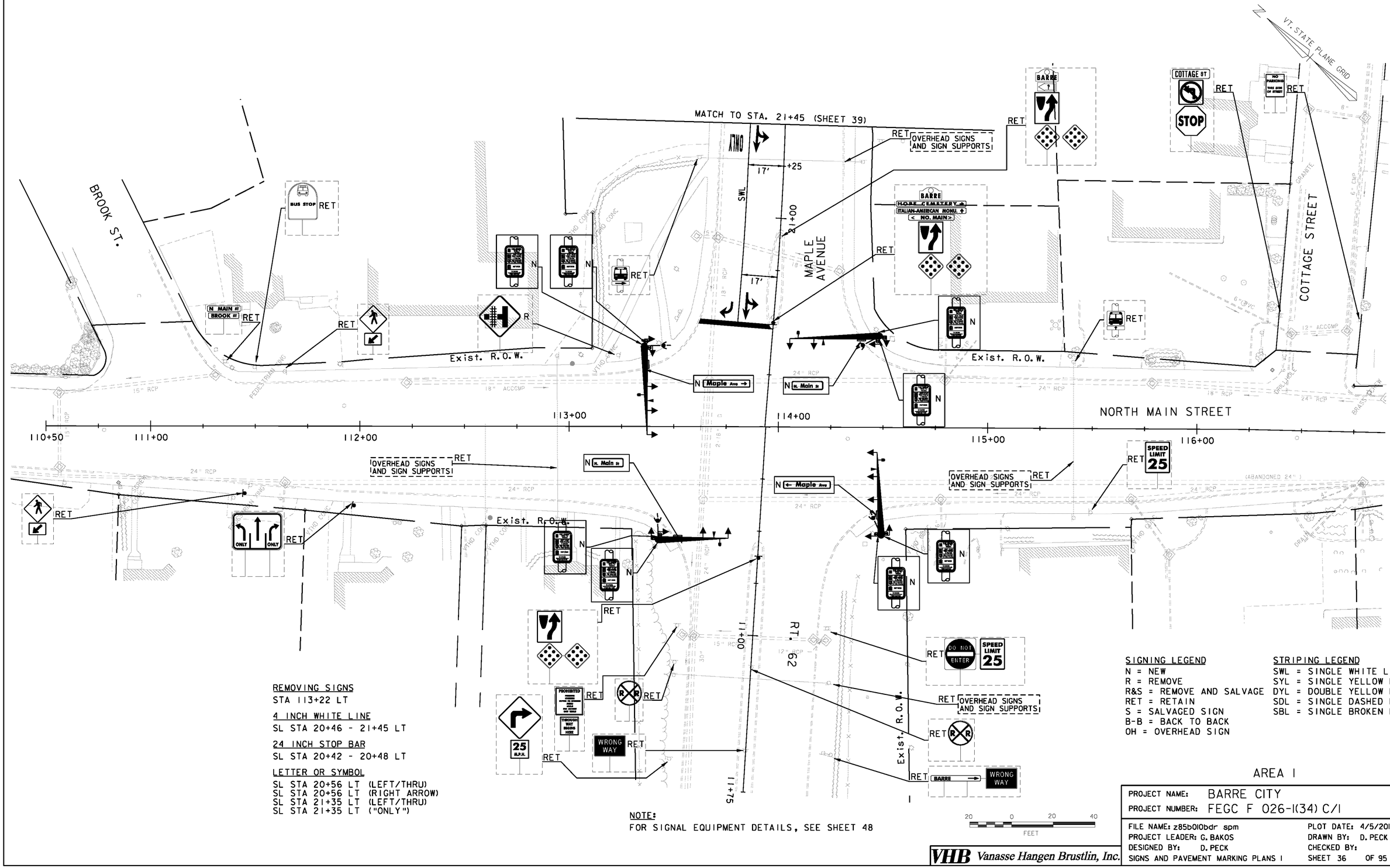
INLET PROTECTION DEVICE, TYPE I
SL STA 706+55 LT
SL STA 707+58 LT

NOTES:
1. REMOVE EXISTING ABANDONED GAS LINE WITHIN LIMITS OF CONSTRUCTION. PLUG AND ABANDON GAS LINE AT LIMITS OF EXCAVATION.
2. SAWCUT OF EXISTING SIDEWALK SHALL BE INCIDENTAL TO ITEMS 618.10, 618.11, AND 618.15.
3. SEE THE DRAINAGE DETAIL SHEET AND CROSS SECTIONS FOR PROPOSED DRAINAGE INFORMATION CORRESPONDING TO NOTE NUMBERS SHOWN BY: (#)

AREA 5

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z85b010bdr cp	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY:
GENERAL PLAN	SHEET 35 OF 95



REMOVING SIGNS
STA 113+22 LT

4 INCH WHITE LINE
SL STA 20+46 - 21+45 LT

24 INCH STOP BAR
SL STA 20+42 - 20+48 LT

LETTER OR SYMBOL
SL STA 20+56 LT (LEFT/THRU)
SL STA 20+56 LT (RIGHT ARROW)
SL STA 21+35 LT (LEFT/THRU)
SL STA 21+35 LT ("ONLY")

NOTE:
FOR SIGNAL EQUIPMENT DETAILS, SEE SHEET 48

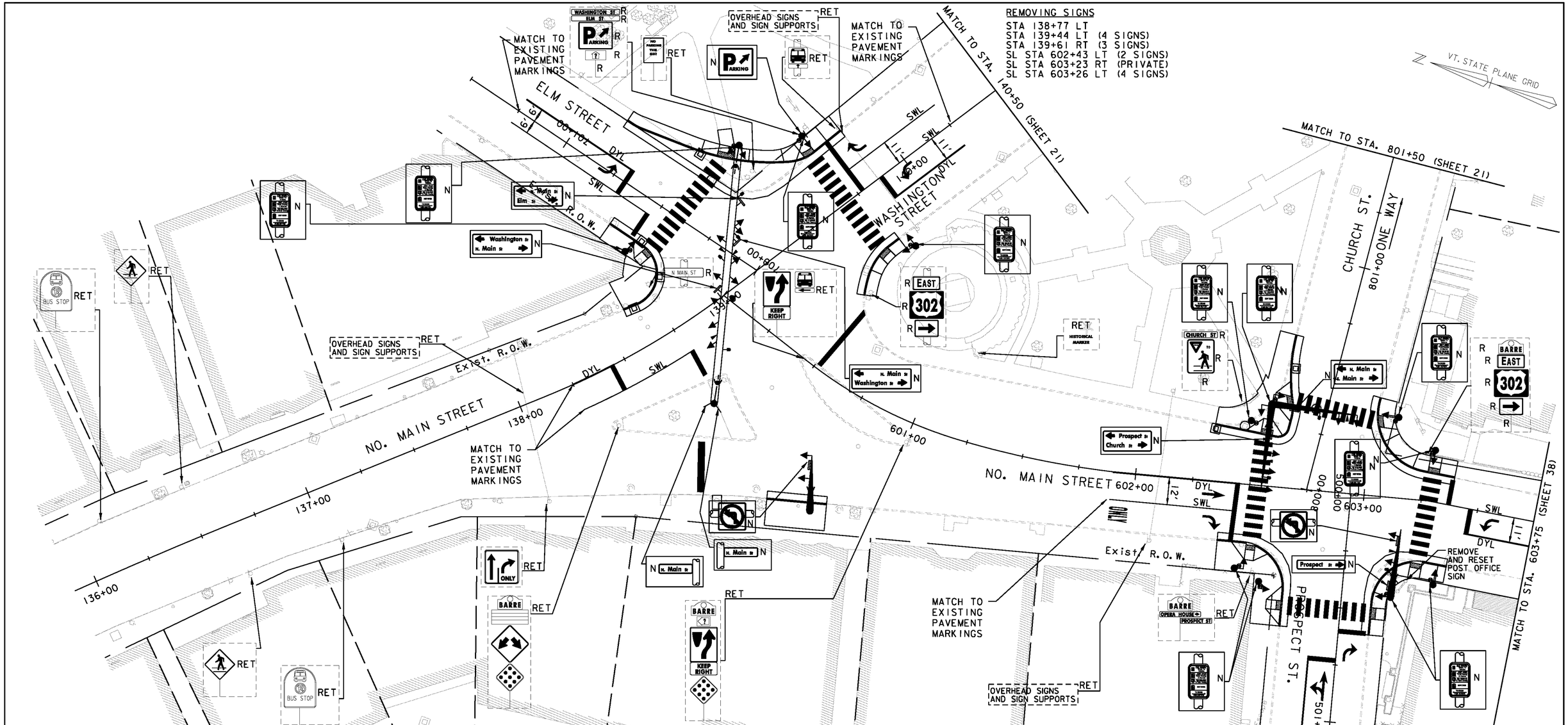
SIGNING LEGEND
N = NEW
R = REMOVE
R&S = REMOVE AND SALVAGE
RET = RETAIN
S = SALVAGED SIGN
B-B = BACK TO BACK
OH = OVERHEAD SIGN

STRIPING LEGEND
SWL = SINGLE WHITE LINE
SYL = SINGLE YELLOW LINE
DYL = DOUBLE YELLOW LINE
SDL = SINGLE DASHED LINE
SBL = SINGLE BROKEN LINE

AREA 1

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z85b010bdr spm	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY:
SIGNS AND PAVEMENT MARKING PLANS 1	SHEET 36 OF 95

VHB Vanasse Hangen Brustlin, Inc.



4 INCH WHITE LINE

STA 138+25 - 138+80 RT
STA 139+77 - 140+25 CL
STA 139+77 - 140+25 LT
SL STA 500+59 - 501+58 CL
SL STA 601+90 - 602+45 RT
SL STA 603+36 - 603+75 CL
SL STA 700+53 - 701+25 LT

4 INCH YELLOW LINE

STA 138+25 - 138+44 CL (DOUBLE)
STA 139+87 - 140+25 RT (DOUBLE)
SL STA 500+72 - 501+58 RT (DOUBLE)
SL STA 601+90 - 602+45 CL (DOUBLE)
SL STA 603+46 - 603+75 RT (DOUBLE)
SL STA 700+68 - 701+25 RT (DOUBLE)

24 INCH STOP BAR

STA 138+44 RT
SL STA 138+41 - 138+54 RT
STA 139+77 LT
STA 139+87 RT
SL STA 500+60 RT
SL STA 500+73 LT
SL STA 602+45 - 602+46 RT
SL STA 603+37 LT
SL STA 603+47 RT
SL STA 700+53 LT
SL STA 700+69 LT-RT

CROSSWALK MARKING

STA 139+69 LT-RT
SL STA 500+51 LT-RT
SL STA 602+53 - 602+54 RT-LT
SL STA 603+26 - 603+29 RT-LT
SL STA 700+35 - 700+47 RT-LT
SL STA 800+36 - 800+37 LT-RT

LETTER OR SYMBOL

STA 139+83 LT (RIGHT ARROW)
STA 139+92 RT (LEFT ARROW)
STA 500+65 LT (RIGHT ARROW)
SL STA 500+78 RT (LEFT/THRU)
SL STA 501+05 LT ("ONLY")
SL STA 501+45 LT (RIGHT ARROW)
SL STA 501+45 RT (LEFT/THRU)
SL STA 601+94 RT ("ONLY")
SL STA 602+35 RT (THRU ARROW)
SL STA 602+39 RT (RIGHT ARROW)
SL STA 603+52 RT (LEFT ARROW)
SL STA 700+78 CL (LEFT ARROW)

REMOVAL OF EXISTING PAVEMENT MARKINGS

STA 138+79 LT-RT (CROSSWALK)
STA 139+43 - 139+48 LT-RT (CROSSWALK)
SL STA 600+48 - 600+66 RT (CROSSWALK)
SL STA 500+33 LT-RT (CROSSWALK)
SL STA 603+38 - 603+46 RT (DYL)
SL STA 603+96 RT ("ONLY")

SIGNING LEGEND

N = NEW
R = REMOVE
R&S = REMOVE AND SALVAGE
RET = RETAIN
S = SALVAGED SIGN
B-B = BACK TO BACK
OH = OVERHEAD SIGN

STRIPING LEGEND

SWL = SINGLE WHITE LINE
SYL = SINGLE YELLOW LINE
DYL = DOUBLE YELLOW LINE
SDL = SINGLE DASHED LINE
SBL = SINGLE BROKEN LINE

NOTE:
FOR SIGNAL EQUIPMENT DETAILS, SEE SHEETS 53 & 58

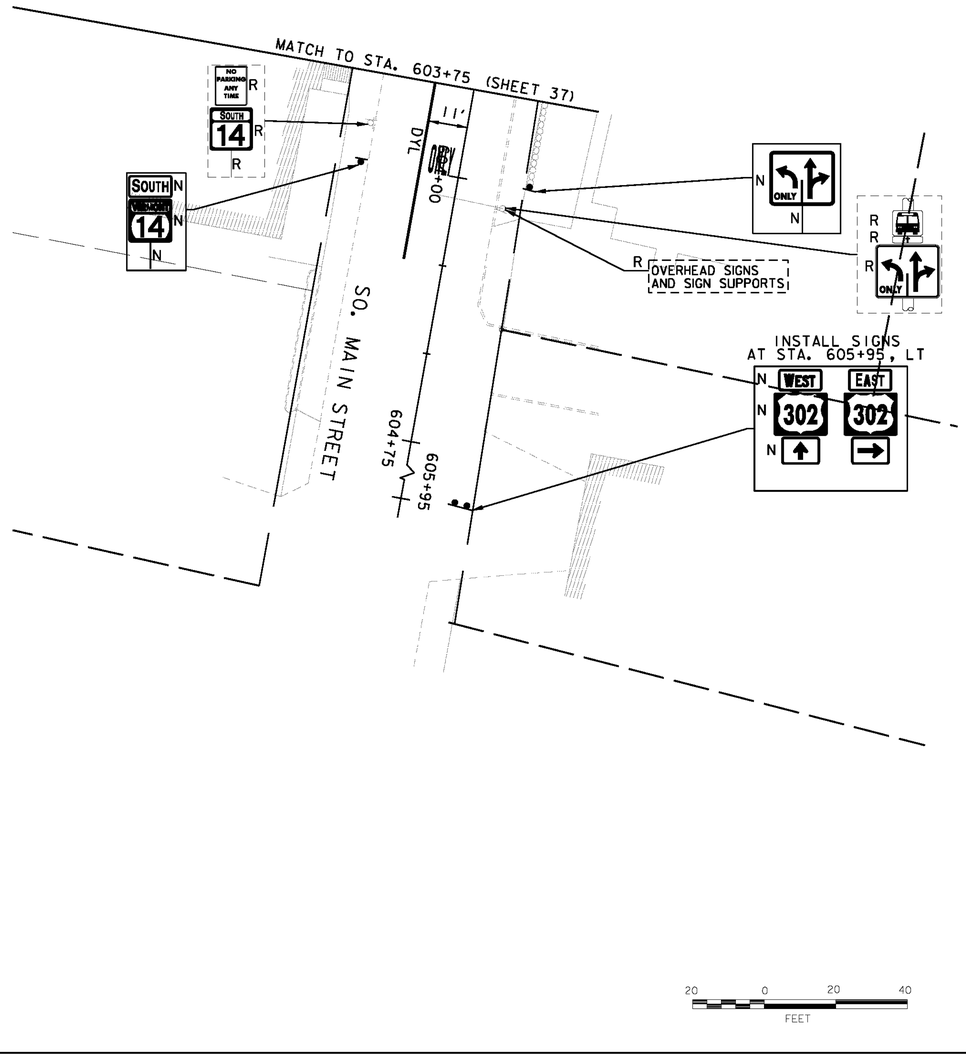
20 0 20 40
FEET

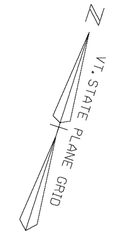
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z85b010bdr spm
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
SIGNS AND PAVEMENT MARKING PLANS 2

PLOT DATE: 4/5/2010
DRAWN BY: D. PECK
CHECKED BY:
SHEET 37 OF 95





4 INCH WHITE LINE
SL STA 603+75 - 604+00 CL

4 INCH YELLOW LINE
SL STA 603+75 - 604+25 RT (DOUBLE)

LETTER OR SYMBOL
SL STA 603+96 RT ("ONLY")

REMOVING SIGNS
SL STA 603+89 RT (2 SIGNS)
SL STA 604+06 LT (5 SIGNS)

SPECIAL PROVISION (REMOVE EXISTING OVERHEAD SIGN ASSEMBLY, CANTILEVER)
SL STA 604+06 LT

SIGNING LEGEND
N = NEW
R = REMOVE
R&S = REMOVE AND SALVAGE
RET = RETAIN
S = SALVAGED SIGN
B-B = BACK TO BACK
OH = OVERHEAD SIGN

STRIPING LEGEND
SWL = SINGLE WHITE LINE
SYL = SINGLE YELLOW LINE
DYL = DOUBLE YELLOW LINE
SDL = SINGLE DASHED LINE
SBL = SINGLE BROKEN LINE

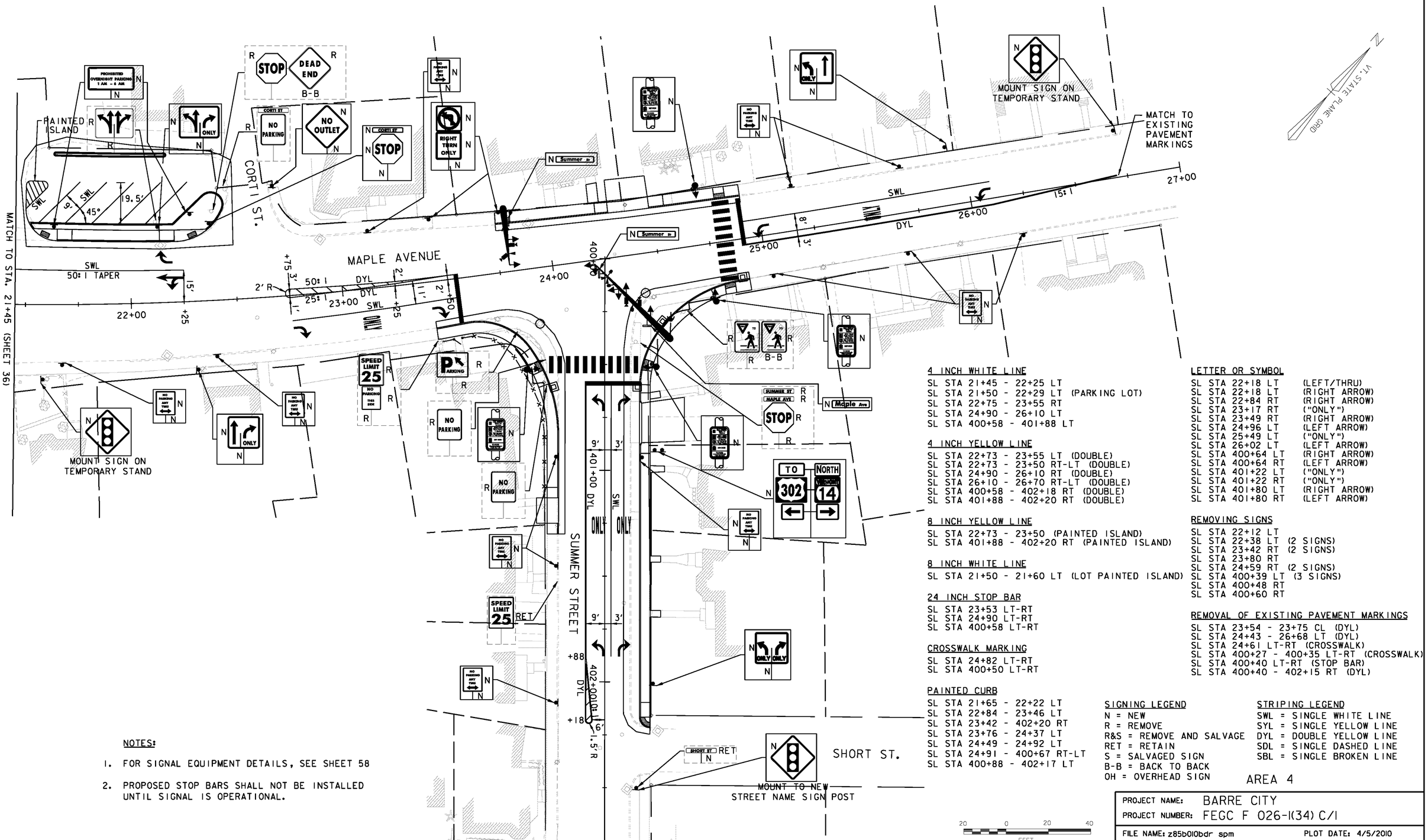
AREA 3

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z85b010bdr spm
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
SIGNS AND PAVEMENT MARKING PLANS 3

PLOT DATE: 4/5/2010
DRAWN BY: D. PECK
CHECKED BY:
SHEET 38 OF 95

VHB Vanasse Hangen Brustlin, Inc.



NOTES:

1. FOR SIGNAL EQUIPMENT DETAILS, SEE SHEET 58
2. PROPOSED STOP BARS SHALL NOT BE INSTALLED UNTIL SIGNAL IS OPERATIONAL.

4 INCH WHITE LINE
SL STA 21+45 - 22+25 LT
SL STA 21+50 - 22+29 LT (PARKING LOT)
SL STA 22+75 - 23+55 RT
SL STA 24+90 - 26+10 LT
SL STA 400+58 - 401+88 LT

4 INCH YELLOW LINE
SL STA 22+73 - 23+55 LT (DOUBLE)
SL STA 22+73 - 23+50 RT-LT (DOUBLE)
SL STA 24+90 - 26+10 RT (DOUBLE)
SL STA 26+10 - 26+70 RT-LT (DOUBLE)
SL STA 400+58 - 402+18 RT (DOUBLE)
SL STA 401+88 - 402+20 RT (DOUBLE)

8 INCH YELLOW LINE
SL STA 22+73 - 23+50 (PAINTED ISLAND)
SL STA 401+88 - 402+20 RT (PAINTED ISLAND)

8 INCH WHITE LINE
SL STA 21+50 - 21+60 LT (LOT PAINTED ISLAND)

24 INCH STOP BAR
SL STA 23+53 LT-RT
SL STA 24+90 LT-RT
SL STA 400+58 LT-RT

CROSSWALK MARKING
SL STA 24+82 LT-RT
SL STA 400+50 LT-RT

PAINTED CURB
SL STA 21+65 - 22+22 LT
SL STA 22+84 - 23+46 LT
SL STA 23+42 - 402+20 RT
SL STA 23+76 - 24+37 LT
SL STA 24+49 - 24+92 LT
SL STA 24+91 - 400+67 RT-LT
SL STA 400+88 - 402+17 LT

LETTER OR SYMBOL
SL STA 22+18 LT (LEFT/THRU)
SL STA 22+18 LT (RIGHT ARROW)
SL STA 22+84 RT (RIGHT ARROW)
SL STA 23+17 RT ("ONLY")
SL STA 23+49 RT (RIGHT ARROW)
SL STA 24+96 LT (LEFT ARROW)
SL STA 25+49 LT ("ONLY")
SL STA 26+02 LT (LEFT ARROW)
SL STA 400+64 LT (RIGHT ARROW)
SL STA 400+64 RT (LEFT ARROW)
SL STA 401+22 LT ("ONLY")
SL STA 401+22 RT ("ONLY")
SL STA 401+80 LT (RIGHT ARROW)
SL STA 401+80 RT (LEFT ARROW)

REMOVING SIGNS
SL STA 22+12 LT
SL STA 22+38 LT (2 SIGNS)
SL STA 23+42 RT (2 SIGNS)
SL STA 23+80 RT
SL STA 24+59 RT (2 SIGNS)
SL STA 400+39 LT (3 SIGNS)
SL STA 400+48 RT
SL STA 400+60 RT

REMOVAL OF EXISTING PAVEMENT MARKINGS
SL STA 23+54 - 23+75 CL (DYL)
SL STA 24+43 - 26+68 LT (DYL)
SL STA 24+61 LT-RT (CROSSWALK)
SL STA 400+27 - 400+35 LT-RT (CROSSWALK)
SL STA 400+40 LT-RT (STOP BAR)
SL STA 400+40 - 402+15 RT (DYL)

SIGNING LEGEND
N = NEW
R = REMOVE
R&S = REMOVE AND SALVAGE
RET = RETAIN
S = SALVAGED SIGN
B-B = BACK TO BACK
OH = OVERHEAD SIGN

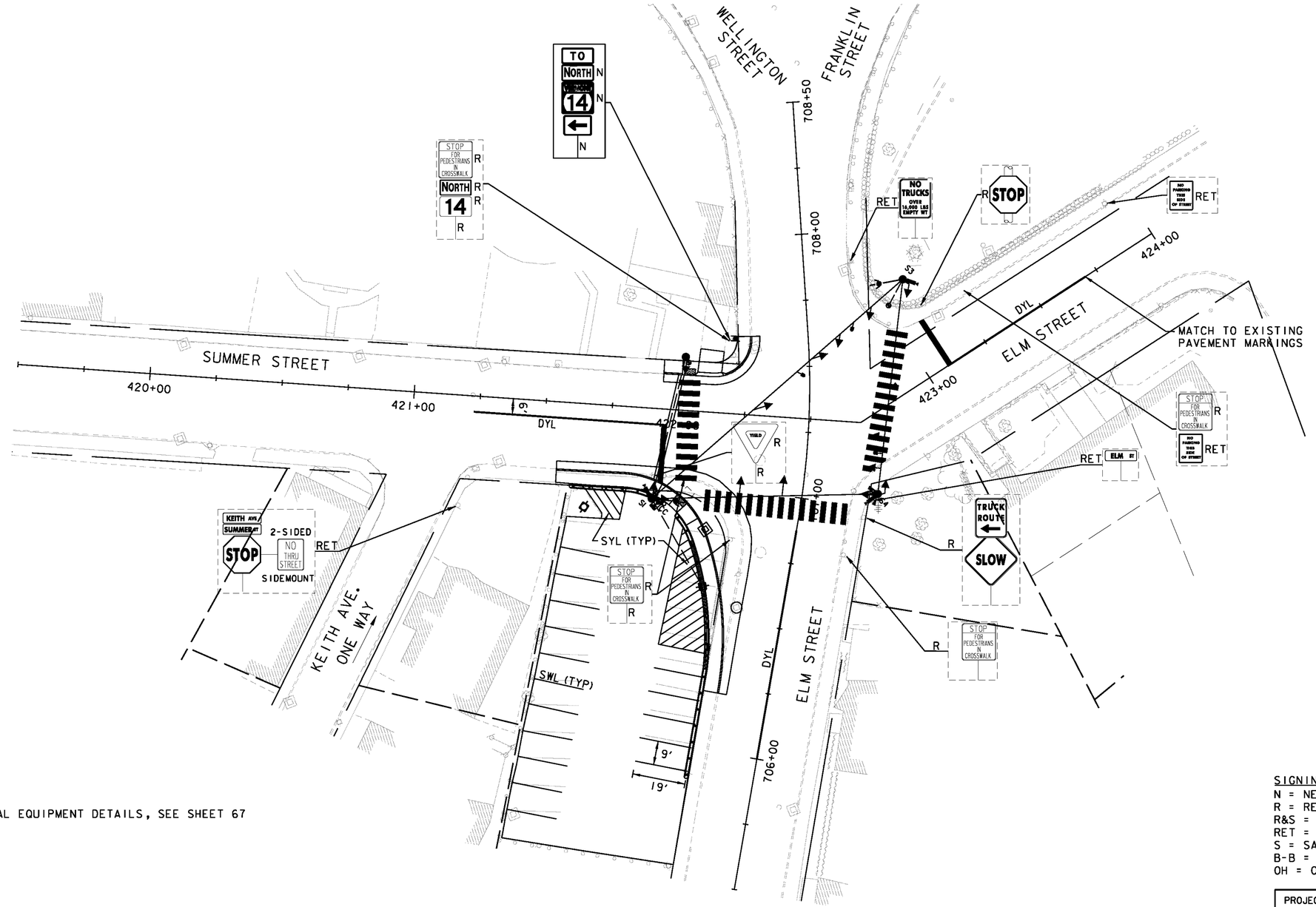
STRIPING LEGEND
SWL = SINGLE WHITE LINE
SYL = SINGLE YELLOW LINE
DYL = DOUBLE YELLOW LINE
SDL = SINGLE DASHED LINE
SBL = SINGLE BROKEN LINE

AREA 4

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z85b010bdr spm	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: D. PECK
DESIGNED BY: D. PECK	CHECKED BY:
SIGNS AND PAVEMENT MARKING PLANS 4	SHEET 39 OF 95



NOTE:
FOR SIGNAL EQUIPMENT DETAILS, SEE SHEET 67

4 INCH WHITE LINE
SL STA 705+75 - 706+68 LT (LOT STRIPING)

4 INCH YELLOW LINE
SL STA 421+25 - 421+96 RT (DOUBLE)
SL STA 423+08 - 423+70 CL (DOUBLE)
SL STA 706+00 - 706+85 CL (DOUBLE)
SL STA 705+60 - 706+92 LT (LOT NO PARKING)

24 INCH STOP BAR
SL STA 421+95 RT
SL STA 423+09 LT

CROSSWALK MARKING
SL STA 422+03 - 422+05 LT-RT
SL STA 422+64 - 422+99 RT-LT
SL STA 706+93 - 706+97 LT-RT

PAINTED CURB
SL STA 421+30 - 705+86 RT-LT
SL STA 421+22 - 422+16 LT

REMOVING SIGNS
SL STA 421+92 RT
SL STA 422+04 RT
SL STA 422+20 LT (3 SIGNS)
SL STA 423+12 LT
SL STA 706+80 LT
SL STA 706+80 RT
SL STA 706+95 RT

SIGNING LEGEND
N = NEW
R = REMOVE
R&S = REMOVE AND SALVAGE
RET = RETAIN
S = SALVAGED SIGN
B-B = BACK TO BACK
OH = OVERHEAD SIGN

STRIPING LEGEND
SWL = SINGLE WHITE LINE
SYL = SINGLE YELLOW LINE
DYL = DOUBLE YELLOW LINE
SDL = SINGLE DASHED LINE
SBL = SINGLE BROKEN LINE

AREA 5

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z85b010bdr spm
PROJECT LEADER: G. BAKOS
DESIGNED BY: D. PECK
SIGNS AND PAVEMENT MARKING PLANS 5
PLOT DATE: 4/5/2010
DRAWN BY: D. PECK
CHECKED BY:
SHEET 40 OF 95

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 1

MILE MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (IN)	HEIGHT (IN)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL LB/FT 1.12	2.0	3.0	SQUARE STEEL (IN) 1.75	2.0	2.5 LB/FT 1.88	2.42	3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) 3.0	4.0	4.0 MOD LB/FT 1.3	1.7	1.7	TUBULAR STEEL Ø (IN) FOUND-ATION	3.0	3.5	4.0	5.0 LB/FT 7.6	9.0	10.8	14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
OPTION ITEMS																																									
NO. MAIN STREET																																										
113+34, LT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
113+34, LT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eL * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
113+36, LT	Maple Ave →	1	78	18	9.75																																		MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
113+57, RT	N. Main St	1	66	18	8.25																																		MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
114+42, LT	N. Main St	1	66	18	8.25																																		MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
114+49, RT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
114+49, RT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eL * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
114+50, LT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
114+50, LT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eL * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
VT ROUTE 62																																										
10+39, LT	← Maple Ave	1	78	18	9.75																																		MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
10+63, RT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
10+63, RT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eL * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
NO. MAIN STREET																																										
138+73, RT	N. Main St	1	30	12	2.50																																		STANDARD STREET NAME SIGN MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS D3-1		E-123
138+73, RT	N. Main St	1	30	12	2.50																																		STANDARD STREET NAME SIGN MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS D3-1		E-123
138+68, LT		1	9	15	*																																		MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
139+02, LT	← Washington St N. Main St →	1	84	36		21.00																																	MOUNT ON PROPOSED TRAFFIC SIGNAL STRUCTURE OVERHEAD STREET NAME SIGN SHS D3-1		E-123
												FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB												
TOTALS					SF 41.00	SF 21.00	EA.	SF				FT			FT			LB			EA.	LB				EA.	EA.	LB												

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

AVERAGE POST LENGTH = 15 FT

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z09B240_TSSS.dgn	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
TRAFFIC SIGN SUMMARY SHEET 1	SHEET 41 OF 95

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 2

MILE MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (IN)	HEIGHT (IN)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL LB/FT 1.12	2.0	3.0	SQUARE STEEL (IN) LB/FT 1.75 1.88	2.0 2.42	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) LB/FT 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (IN) FOUNDATION	LB/FT 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
OPTION ITEMS																																			
NO. MAIN STREET																																			
139+22, LT	← N. Main St Washington St →	1	84	36		21.00																											MOUNT ON PROPOSED TRAFFIC SIGNAL STRUCTURE OVERHEAD STREET NAME SIGN SHS D3-1		E-123
139+32, LT	← N. Main St Elm St →	1	84	36		21.00																											MOUNT ON PROPOSED TRAFFIC SIGNAL STRUCTURE OVERHEAD STREET NAME SIGN SHS D3-1		E-123
139+43, LT		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eL • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
139+69, LT	PARKING	1	30	24	5.00																												SHS D4-1		
		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC PEDESTAL POLE SHS R10-3eR • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
139+82, RT		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eL • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
PROSPECT STREET																																			
500+43, LT		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eL • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
500+43, LT	Prospect St →	1	96	15	12.00																												MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
500+43, LT		1	36	36	9.00																												MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM SHS R3-2		E-143
SO. MAIN STREET																																			
600+72, RT		1	36	36	9.00																												MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM SHS R3-2		E-143
602+47, LT		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC PEDESTAL POLE SHS R10-3eL • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
602+47, RT		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
602+56, LT	← Prospect St Church St →	1	72	36	18.00																												MOUNT ON PROPOSED TRAFFIC SIGNAL STRUCTURE OVERHEAD STREET NAME SIGN SHS D3-1		E-123
602+56, LT		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
602+58, RT		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
602+65, LT	← N. Main St S. Main St →	1	84	36		21.00																											MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
603+12, LT		1	9	15	•																												MOUNT ON PROPOSED TRAFFIC PEDESTAL POLE SHS R10-3eL • PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
												FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 53.00	SF 63.00	EA.	SF				FT			FT					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

AVERAGE POST LENGTH = 15 FT

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSSS.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGN SUMMARY SHEET 2

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 42 OF 95

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 3

MILE MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (IN)	HEIGHT (IN)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL LB/FT 1.12	2.0	3.0	SQUARE STEEL (IN) LB/FT 1.75 1.88	2.0 2.42	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) LB/FT 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (IN) FOUNDATION	LB/FT 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
OPTION ITEMS																																			
SO. MAIN STREET																																			
603+37, RT		1	9	15	*																												MOUNT ON PROPOSED TRAFFIC PEDESTAL POLE SHS R10-3eL * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
603+29, LT		1	9	15	*																												MOUNT ON PROPOSED TRAFFIC PEDESTAL POLE SHS R10-3eR * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
604+00, LT	ONLY	1	36	30	7.50						2					X																VR-922 (MODIFIED)		E-145A
604+00, RT	SOUTH 14	1 1	24 24	12 24	2.00 4.00						1					X																SHS M3-3 SHS M1-5 (VT)		E-136B
605+95, LT	WEST 302	1 1 1	24 30 21	12 24 15	2.00 5.00 2.19						1					X																SHS M3-4 SHS M1-4 SHS M6-3	#2 MOUNT ON 1 #2 FRAME	E-136A
605+95, LT	EAST 302	1 1 1	24 30 21	12 24 15	2.00 5.00 2.19						1					X																SHS M3-2 SHS M1-4 SHS M6-1	MOUNT ON 1 #2 FRAME	E-136A
ELM STREET																																			
700+37, RT		1	9	15	*																												MOUNT ON PROPOSED TRAFFIC SIGNAL POLE SHS R10-3eR * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
MAPLE AVENUE																																			
21+57, RT		1	36	36	9.00																												BLACK ON ORANGE SHS W3-3 MOUNT ON TEMPORARY STAND		E-152
21+64, LT	PROHIBITED OVERNIGHT PARKING 1 AM - 6 AM	1	30	24	5.00						1					X																VR-032		E-144
21+65, RT	NO PARKING ANY TIME	1	12	18	1.50						1					X																SHS R7-1		E-143
22+31, LT	PROHIBITED OVERNIGHT PARKING 1 AM - 6 AM	1	30	24	5.00						1					X																VR-032		E-144
22+31, RT	ONLY	1	30	30	6.25						1					X																VR-921		E-145A
22+13, LT	ONLY	1	36	30	7.50						2					X																VR-922		E-145A
												FT	FT	FT	FT	FT 165	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 66.13	SF	EA.	SF				FT			FT 165					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

AVERAGE POST LENGTH = 15 FT

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSSS.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGN SUMMARY SHEET 3

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 43 OF 95

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 4

MILE MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (IN)	HEIGHT (IN)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL LB/FT 1.12	2.0	3.0	SQUARE STEEL (IN) LB/FT 1.75 1.88	2.0 2.42	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) LB/FT 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (IN) FOUNDATION	LB/FT 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
OPTION ITEMS																																			
MAPLE AVENUE																																			
22+38, LT	CORTI ST STOP	1	30	9	1.88						1					X																	STANDARD STREET NAME SIGN SHS D3-1 SHS R1-1		E-123 E-143
22+40, RT	NO PARKING ANY TIME	1	12	18	1.50						1					X																	SHS R7-1		E-143
22+68, LT	NO OUTLET	1	30	30	6.25						1					X																	SHS W14-2		
23+15, LT	NO PARKING ANY TIME	1	12	18	1.50						1					X																	SHS R7-1		E-143
23+80, LT	Summer St	1	72	18	9.00																												MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
24+24, RT	Summer St	1	72	18	9.00																												MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
24+42, RT	Maple Ave	1	60	18	7.50																												MOUNT ON PROPOSED TRAFFIC SIGNAL MAST ARM OVERHEAD STREET NAME SIGN SHS D3-1		E-123
24+72, LT		1	9	15	*																												SHS R10-3eL MOUNT ON PROPOSED TRAFFIC SIGNAL POLE * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
24+74, RT		1	9	15	*																												SHS R10-3eR MOUNT ON PROPOSED TRAFFIC SIGNAL POLE * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
25+00, RT	NO PARKING ANY TIME	1	12	18	1.50						1					X																	SHS R7-1		E-143
25+15, LT	NO PARKING ANY TIME	1	12	18	1.50						1					X																	SHS R7-1		E-143
25+70 RT	NO PARKING ANY TIME	1	12	18	1.50						1					X																	SHS R7-1		E-143
25+70 LT	NO PARKING ANY TIME	1	12	18	1.50						1					X																	SHS R7-1		E-143
25+93, LT	ONLY	1	30	30	6.25						1					X																	VR-921 (MODIFIED)		E-145A
26+22 RT	NO PARKING ANY TIME	1	12	18	1.50						1					X																	SHS R7-1		E-143
26+74, LT		1	36	36	9.00																												MOUNT ON TEMPORARY STAND SHS W3-3		E-152
												FT	FT	FT	FT 150	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 68.38	SF	EA.	SF				FT			FT 150					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

AVERAGE POST LENGTH = 15 FT

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSSS.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGN SUMMARY SHEET 4

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 44 OF 95

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 5

MILE MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (IN)	HEIGHT (IN)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL LB/FT 1.12	2.0	3.0	SQUARE STEEL (IN) LB/FT 1.75 1.88	2.0 2.42	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) LB/FT 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (IN) FOUND-ATION	LB/FT 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
OPTION ITEMS																																			
SUMMER STREET																																			
400+51, LT		1	9	15	*																												SHS R10-3eL MOUNT ON PROPOSED TRAFFIC PEDESTAL POLE * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
400+52, RT		1	9	15	*																												SHS R10-3eR MOUNT ON PROPOSED TRAFFIC PEDESTAL POLE * PAID UNDER TRAFFIC CONTROL SIGNAL ITEMS		
400+91, LT	TO 302	1 1 1	24 30 21	12 24 15	2.00 5.00 2.19						1						X															#2	SHS M4-5 MOUNT ON 1 #2 FRAME SHS M1-4 SHS M6-1		E-136A
400+91, LT	NORTH VERMONT 14	1 1 1	24 24 21	12 24 15	2.00 4.00 2.19						1						X																SHS M3-1 MOUNT ON 1 #2 FRAME SHS M1-5VT SHS M6-1		E-136B
400+92, RT	NO PARKING ANY TIME	1	12	18	1.50						1						X																SHS R7-1		E-143
400+94, LT	NO PARKING ANY TIME	1	12	18	1.50						1						X																SHS R7-1		E-143
401+43, RT	NO PARKING ANY TIME	1	12	18	1.50						1						X																SHS R7-1		E-143
402+00, LT	ONLY ONLY	1	36	30	7.50						2						X																VR-925		E-145A
402+08, RT	NO PARKING ANY TIME	1	12	18	1.50						1						X																SHS R7-1		E-143
422+20, LT	TO NORTH VERMONT 14	1 1 1 1	24 24 24 21	12 12 24 15	2.00 2.00 4.00 2.19						1						X																SHS M4-5 SHS M3-1 SHS M1-5 (VT) SHS M6-1		E-136B

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

AVERAGE POST LENGTH = 15 FT

	SF	SF	EA.	SF		FT	FT	LB	EA.	LB	EA.	EA.	LB
						FT	FT 135	LB					
TOTAL SHEET 5	41.07	0	0										
TOTAL SHEET 4	68.38	0	0			FT	FT 150	LB	EA.	LB	EA.	EA.	LB
TOTAL SHEET 3	66.13	0	0			FT	FT 165	LB	EA.	LB	EA.	EA.	LB
TOTAL SHEET 2	53.00	63.00	0			FT	FT 0	LB	EA.	LB	EA.	EA.	LB
TOTAL SHEET 1	41.00	21.00	0			FT	FT 0	LB	EA.	LB	EA.	EA.	LB
TOTAL ALL SHEETS	269.58	84.00	0			FT	FT 450	LB	EA.	LB	EA.	EA.	LB

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-I(34) C/I

FILE NAME: z09B240_TSSS.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGN SUMMARY SHEET 5

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 45 OF 95

TRAFFIC SIGNAL PLAN NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR CONSTRUCTION", DATED 2006, WITH CURRENT MODIFICATIONS. ALL TRAFFIC SIGNAL CONTROLLERS SHALL BE ECONOLITE ASC/3-2100 (TS2, TYPE 2).

2. OVERHEAD SIGN/SIGNAL SUPPORTS SHALL CONFORM TO AASHTO'S PUBLICATION ENTITLED "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", DATED 2009 OR ITS LATEST INTERIMS.

3. THE DESIGN CALCULATIONS SHALL TAKE INTO ACCOUNT THE FOLLOWING CRITERIA:

   STRUCTURE CRITERIA
   - DESIGN LIFE: 50 YEARS
   - WIND LOAD: 90 MPH, UNLESS SPECIAL SITE CONDITIONS DICTATE
   - ICE LOAD PER AASHTO'S PUBLICATION ENTITLED 'STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS', DATED 2009

   FATIGUE CRITERIA
   - FATIGUE CATEGORY: I FOR MAST ARM SIGN STRUCTURES, 2 FOR SIGNAL MAST ARMS
   - VORTEX SHEDDING: INCLUDE
   - NATURAL WIND GUST: INCLUDE
   - TRUCK INDUCED WIND GUSTS: INCLUDE FOR ROADWAYS WHERE SPEED LIMIT IS 40 MPH OR GREATER
   - GALLOPING: DO NOT INCLUDE IN DESIGN CALCULATIONS

   FOUNDATION CRITERIA
   - CONCRETE: CONCRETE, HIGH PERFORMANCE CLASS B, STATE OF VERMONT, AGENCY OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR CONSTRUCTION', DATED 2006, SECTION 501
   - REINFORCING STEEL: STATE OF VERMONT, AGENCY OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR CONSTRUCTION', DATED 2006, SUB-SECTION 713.01

   ALLOWABLE BEARING CAPACITY: IN ACCORDANCE WITH GEOTECHNICAL REPORT
   INTERNAL SOIL FRICTION ANGLE, : IN ACCORDANCE WITH GEOTECHNICAL REPORT

4. ANCHOR BOLTS

   A MINIMUM OF FOUR STAINLESS STEEL ANCHOR BOLTS WITH TWO HEXAGON NUTS, ONE WASHER AND ONE LOCK WASHER PER BOLT SHALL BE FURNISHED WITH EACH POLE. ANCHOR BOLT PLATES, WHEN USED, SHALL ALSO BE STAINLESS STEEL. STATE OF VERMONT, AGENCY OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR CONSTRUCTION', DATED 2006, SUB-SECTION 714.09.

5. FLANGE BOLTS

   ALL FLANGE BOLTS AND HEX NUTS SHALL BE HIGH STRENGTH STEEL AND SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR CONSTRUCTION', DATED 2006, SUB-SECTION 714.05.

6. HORIZONTAL AND VERTICAL MEMBERS

   STEEL TUBES SHALL BE FORMED AND WELDED WITH ONE CONTINUOUS LONGITUDINAL WELD ONLY. AFTER FORMING AND WELDING THEY SHALL BE COLD ROLLED TO ENSURE UNIFORMITY OF SIZE AND SMOOTHNESS OF WELD. THERE SHALL BE NO TRANSVERSE WELDING EXCEPT AT THE FLANGE CONNECTIONS AND POLE BASE PLATES, WHERE THE TUBES SHALL TELESCOPE THE FLANGES AND PLATES AND BE CONTINUOUSLY WELDED BOTH SIDES INSIDE AND OUT TO WITHSTAND THE FULL TRANSFER OF THE BENDING STRENGTH TO THE BOLTS. OPTIONALLY, THE MEMBERS MAY BE A SERIES OF TWO OR THREE DIFFERENT DIAMETER PIPES WELDED TOGETHER. STEEL TUBES SHALL BE CONSTRUCTED FROM MATERIALS CONFORMING TO STATE OF VERMONT, AGENCY OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR CONSTRUCTION', DATED 2006, SUB-SECTION 752.02.

7. GALVANIZING

   ANY STEEL COMPONENTS, EXCEPT CONCRETE REINFORCING AND STAINLESS STEEL HARDWARE THAT ARE NOT CALLED OUT TO BE PAINTED BLACK, ARE TO BE HOT DIPPED GALVANIZED AFTER FABRICATION. THE ASSEMBLIES SHALL BE DESIGNED AND FABRICATED TO PERMIT GALVANIZING ON ALL INTERIOR AND EXTERIOR SURFACES AND SHALL BE FREE OF POCKETS AND OTHER STRUCTURAL OBSTRUCTIONS THAT WILL NOT PERMIT PROPER DEPOSITION OF ZINC COATING. GALVANIZING SHALL BE IN ACCORDANCE WITH STATE OF VERMONT, AGENCY OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR CONSTRUCTION', DATED 2006, SUB-SECTION 752.02.

8. WELDING

   ALL DESIGN DETAILS, WORKMANSHIP, PROCEDURES AND INSPECTION SHALL CONFORM TO VTRANS SPECIFICATIONS SUB-SECTION 506.10.

9. FOUNDATIONS

   A. FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE MREI 10-01 GUIDELINES ISSUED BY THE AGENCY.

   B. FOUNDATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING NOTES:

      1. A MINIMUM EMBEDMENT DEPTH OF 5 FEET SHALL BE USED FOR ALL SPREAD FOOTING FOUNDATIONS: MEASURED FROM THE FINISHED GROUND SURFACE ELEVATION TO THE BOTTOM OF THE FOOTING ELEVATION.

      2. EXCEPT FOR THE UPPERMOST 2 FEET OF SOIL, DRILLED SHAFT FOUNDATIONS SHALL BE POURED AGAINST UNDISTURBED MATERIAL: THE TOP 2 FEET OF SOIL SHALL BE NEGLECTED FOR DESIGN PURPOSES. A DISPOSABLE CIRCULAR CONCRETE FORM, IF USED, SHALL NOT BE PLACED DEEPER THAN 2 FEET, IN ORDER NOT TO REDUCE THE FRICTION BETWEEN THE SOIL AND THE CONCRETE.

      3. AS AN ALTERNATIVE TO THE DRILLED HOLES, FOUNDATIONS MAY BE POURED IN EXCAVATED HOLES USING THE PROPER FORMS, WHICH SHALL BE REMOVED. THE EXCAVATED HOLES SHALL BE AT LEAST 2 FEET CLEAR OF THE FOUNDATION SIDES AND 1 FOOT DEEPER THAN THE FOUNDATION. CARE SHALL BE TAKEN TO AVOID EXCAVATING AROUND THE TOP OF THE FOUNDATION. DESIGN LIMITS AS FOR AN AUGURED FOUNDATION APPLY.

      4. BACKFILL MATERIAL PLACED ADJACENT TO THE FOUNDATION SHALL MEET THE REQUIREMENTS FOR GRANULAR BACKFILL FOR STRUCTURES, VTRANS SPECIFICATION SUB-SECTION 704.08. BACKFILL MATERIAL SHALL BE COMPACTED AS DESCRIBED IN VTRANS CONSTRUCTION SPECIFICATIONS SUB-SECTION 204.08.

      5. CONCRETE FOR FOUNDATION SHALL CONFORM TO THE REQUIREMENTS OF 501.34 CONCRETE, HIGH PERFORMANCE CLASS B. IF DRILLED SHAFT FOUNDATIONS ARE REQUIRED, THE CONCRETE SPECIFICATIONS MAY NEED TO BE ADJUSTED FOR CONSTRUCTIBILITY ISSUES. HOWEVER, IF REQUIRED, THE CONTRACTOR SHALL SUBMIT ANY CHANGES TO THE CONCRETE SPECIFICATION FOR REVIEW BY THE VTRANS PROJECT MANAGER.

      6. STEEL PILES SHALL MEET THE REQUIREMENTS OF SECTION 505.

      7. WHEN THE DESIGN DEPTH OF A FOUNDATION CANNOT BE OBTAINED DUE TO UNFORESEEN FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR THE MANUFACTURER TO OBTAIN A REVISED FOUNDATION DESIGN. SUCH A REVISION SHALL BE SUBMITTED TO THE VERMONT, AGENCY OF TRANSPORTATION, PROJECT MANAGER AND MAY REQUIRE UP TO A 4 WEEK REVIEW PERIOD BY VTRANS.

   C. SIGNALS/SIGNS SHALL BE INSTALLED AND LEVELED AND POLES SHALL BE PLUMB PRIOR TO PLACING GROUT UNDER POLE BASE. GROUT MATERIAL SHALL BE NON-SHRINKING MORTAR CONFORMING TO SUB-SECTION 707.03 (MORTAR TYPE IV).

10. EACH OVERHEAD TRAFFIC SIGNAL/SIGN SUPPORT SHALL BE GROUNDED. THE GROUND SHALL CONSIST OF:

    A) AN INTERNAL GROUND LUG OPPOSITE THE HAND HOLE.

    B) A #6 AWG. (MIN.) SOFT DRAWN COPPER GROUNDING ELECTRODE CONDUCTOR.

    C) A ⅝" X 8' (MIN.) COPPER CLAD GROUNDING ELECTRODE. THE RESISTANCE TO GROUND SHALL BE 25 OHMS OR LESS. ADDITIONAL GROUNDING ELECTRODES MAY BE REQUIRED (MINIMUM SPACING SHALL BE 6 FEET).

    WHEN A POWER SERVICE, METER AND DISCONNECT ARE ATTACHED TO A POLE, THERE SHALL BE A CONTINUOUS GROUNDING ELECTRODE CONDUCTOR FROM THE METER AND DISCONNECT WHICH MAY RUN INTERNAL TO THE UPRIGHT, THROUGH THE ½ INCH FLEXIBLE TUBING IN THE CONCRETE BASE TO THE REQUIRED GROUNDING ELECTRODE(S). THE GROUNDING ELECTRODE CONDUCTOR FROM THE POLE GROUNDING LUG, CONTROLLER CABINET AND/OR LUMINAIRE MAY ATTACH TO THIS CONTINUOUS GROUNDING ELECTRODE CONDUCTOR FROM THE SERVICE METER AND DISCONNECT. THE CONTRACTOR SHALL PERFORM A RESISTANCE TO GROUND TEST ON THE CONTINUOUS GROUNDING ELECTRODE CONDUCTOR FROM THE SERVICE METER AND DISCONNECT AND PROVIDE A WRITTEN STATEMENT TO THE AREA ELECTRICAL INSPECTOR THAT THE GROUNDING ELECTRODE CONDUCTOR IS CONTINUOUS FROM THE SERVICE METER AND DISCONNECT AND THE RESISTANCE TO GROUND IS 25 OHMS OR LESS.

11. HORIZONTAL MEMBERS SHALL BE CAMBERED AND THE VERTICAL POLES BACK RAKED (WHERE APPLICABLE) TO THE ANTICIPATED DEAD LOAD DEFLECTION PLUS THE CAMBER, IF ANY, SPECIFIED ON THE PLANS.

12. AN EQUIVALENT ALTERNATE DESIGN MAY BE SUBSTITUTED FOR THE DETAILS AND MATERIALS SHOWN.

13. THE DETAILS OF DESIGN FOR THE STRUCTURE AND FOUNDATION(S) ARE TO BE SUPPLIED BY THE CONTRACTOR AND/OR BY THE MANUFACTURER. THE STRUCTURE SHALL BE DESIGNED TO RESIST THE MAXIMUM LOADING AS OUTLINED IN THE AASHTO STANDARD SPECIFICATIONS (SEE NOTE 2). ALL DESIGN CALCULATIONS FOR THE STRUCTURE AND THE FOUNDATION(S) SHALL BE CHECKED AND STAMPED BY AN ENGINEER REGISTERED IN THE STATE OF VERMONT PRIOR TO SUBMITTAL OF THE FABRICATION DRAWINGS TO THE VERMONT AGENCY OF TRANSPORTATION.

14. THE CONTRACTOR SHALL SUBMIT THREE (3) COPIES OF THE DESIGN CALCULATIONS TO THE VERMONT AGENCY OF TRANSPORTATION, PROJECT MANAGER, SHOWING THE FOLLOWING INFORMATION FOR EACH OF THE VERTICAL AND HORIZONTAL COMPONENTS OF THE STRUCTURE AND FOUNDATION:

    A. THE DESIGN AXIAL AND SHEAR FORCES AND BENDING AND TORSIONAL MOMENTS ACTING AT THE TOP OF THE FOUNDATION.

    B. THE DESIGN AXIAL, BENDING AND SHEAR STRESSES AND THE COMBINED STRESS RATIO.

    C. THE ALLOWABLE AXIAL, BENDING, AND SHEAR STRESSES.

    D. ITEMS A, B, D - SHALL BE SHOWN FOR EACH OF THE GROUP LOADINGS (I,II,III) AND FOR THE BASIC WIND LOAD APPLIED TO THE TWO CASES OUTLINED IN THE AASHTO STANDARD SPECIFICATIONS (SEE NOTE 2) SECTION 1.2.5 (D) (4).

    E. FAILURE TO SUPPLY THE PROPER DESIGN INFORMATION SHALL BE CAUSE FOR REJECTION OF THE STRUCTURE.

    F. A MINIMUM OF FOUR (4) WEEKS SHALL BE REQUIRED FOR REVIEW BY THE VERMONT AGENCY OF TRANSPORTATION AND THE ENGINEER OF RECORD (VANASSE HANGEN BRUSTLIN, INC).

    G. EVERY MEMBER AND CONNECTION IN AN OVERHEAD TRAFFIC SIGN SUPPORT SHALL HAVE A MAXIMUM DESIGN RATIO OF 85% TO PROVIDE RESIDUAL CAPACITY FOR FUTURE MODIFICATIONS TO SIGN SIZE OR CONFIGURATIONS.

15. FABRICATION DRAWINGS (6 COPIES OF EACH) SHALL BE SUBMITTED TO THE STATE OF VERMONT, AGENCY OF TRANSPORTATION, PROJECT MANAGER FOR APPROVAL PRIOR TO FABRICATION. THE FABRICATION DRAWINGS SHALL INCLUDE THE FOLLOWING INFORMATION:

    A. DETAILED DRAWING OF EACH COMPONENT OF THE STRUCTURE.

    B. MATERIAL SPECIFICATION FOR EACH COMPONENT OF THE STRUCTURE, EITHER BY COMPLETE SPECIFICATION OR REFERENCE TO APPLICABLE ASTM STANDARDS.

    C. NOTATION OF PROJECT NAME, PROJECT NUMBER, ROUTE NUMBER, AND STRUCTURE STATIONING (TO BE INCLUDED ON EACH SHEET).

    D. DETAILS FOR LOCATION OF SIGNS/SIGNALS AND ATTACHMENT HARDWARE FOR THE SUPPORT STRUCTURE.

    E. ALL ELEVATIONS AND DIMENSIONS NECESSARY TO PROVIDE A COMPLETE SET OF RECORD PLANS.

    F. DEAD LOAD DEFLECTION AND CAMBER INFORMATION.

    G. WELDING DETAILS AND PROCEDURES ARE REQUIRED FOR ALL WELDS. PROCEDURES SHALL BE SUBMITTED FOR APPROVAL WITH REFERENCE TO EACH WELD IDENTIFIED ON THE FABRICATION DRAWINGS. (SEE SUB-SECTION 506.10).

    H. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETION OF THE STRUCTURE AND FOUNDATION DATA ON THE DETAIL SHEETS.

16. THE TRAFFIC SIGNALS SHALL BE MOUNTED TO THE ARM OR POLE USING A FIXED MOUNT SYSTEM, UNLESS OTHERWISE NOTED ON THE CROSS SECTION SHEET. FOR SIGNALS MOUNTED ON A MAST ARM, THE MAST ARM AND MOUNTING POINT SHALL BE IN THE MIDDLE OF THE SIGNAL HEAD.

SEE NEXT SHEET FOR CONTINUATION OF TRAFFIC SIGNAL PLAN NOTES.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z09B240_TSPS-NOTES.dgn	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
TRAFFIC SIGNAL PLAN NOTES	SHEET 46 OF 95

TRAFFIC SIGNAL PLAN NOTES (CONTINUED)

17. BASE PLATES SHALL BE STAMPED WITH THE VERTICAL POLE DIAMETER, HEIGHT, YIELD STRENGTH, GAUGE AND THE HORIZONTAL MEMBER DIAMETER, LENGTH, YIELD STRENGTH, GAUGE, ALTERNATELY. THE INFORMATION MAY BE STAMPED ON A METAL TAG RIVETED TO THE POLE NEAR THE HAND HOLE.

18. SEE STANDARD E-171A FOR ADDITIONAL NOTES.

19. SEE SHEETS 48-69 FOR SIGNALIZED INTERSECTION LAYOUTS.

20. SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS FOR:
    A. EMERGENCY VEHICLE PREEMPTION EQUIPMENT
    B. OPTICAL DETECTION SYSTEM
    C. PAINTED SIGNAL STRUCTURES

21. FOLLOWING ACCEPTANCE OF THE NEW SIGNAL EQUIPMENT, THE EXISTING SIGNAL (EQUIPMENT AND CONTROLLER) SHALL BE SALVAGED TO THE CITY OF BARRE PUBLIC WORKS AT A LOCATION AS DIRECTED BY THE RESIDENT ENGINEER. ALL OTHER REMOVED SIGNAL EQUIPMENT THAT IS NOT REQUIRED OR ACCEPTED BY THE CITY SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER. SIGNAL FOUNDATIONS SHALL BE REMOVED TO 12 INCHES BELOW FINAL GRADE, WHICH COST SHALL BE INCIDENTAL TO THE NEW SIGNAL ITEM.

22. THIS PROJECT IS THE FIRST OF TWO CONSTRUCTION CONTRACTS PROPOSED FOR THE RECONSTRUCTION OF N. MAIN STREET THROUGH THE CITY OF BARRE. MOST TRAFFIC SIGNAL EQUIPMENT WILL BE INSTALLED AND THE SIGNALS MADE OPERATIONAL UNDER THIS CONTRACT. ADDITIONAL UNDERGROUND EQUIPMENT TO INCLUDE WIRED CONDUIT, CONDUIT SLEEVES, PULL BOXES, AND ANCILLARY ITEMS WILL BE FURNISHED AND INSTALLED UNDER THE SUBSEQUENT CONSTRUCTION CONTRACT BY OTHERS.

SUMMARY OF QUANTITIES

WIRED CONDUIT (PVC) AND ELECTRICAL CONDUIT SLEEVE SCHEDULE

ITEM NUMBER	678.21	678.24	678.23			678.30	
	ELECTRICAL CONDUIT	ELECTRICAL WIRING	WIRED CONDUIT			CONDUIT SLEEVE	
	3"		2"	3"	4"	8"	DESCRIPTION
SHEET 48				36			
SHEET 53		260		143	66	45	
SHEET 58	130			236	61	126	
SHEET 63	91			238	153	91	
SHEET 67			74			43	
SUB-TOTALS	221	260	74	653	280	305	
ROUNDING	9	0	1	22	15	10	
TOTALS	230	260	75	675	295	315	

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

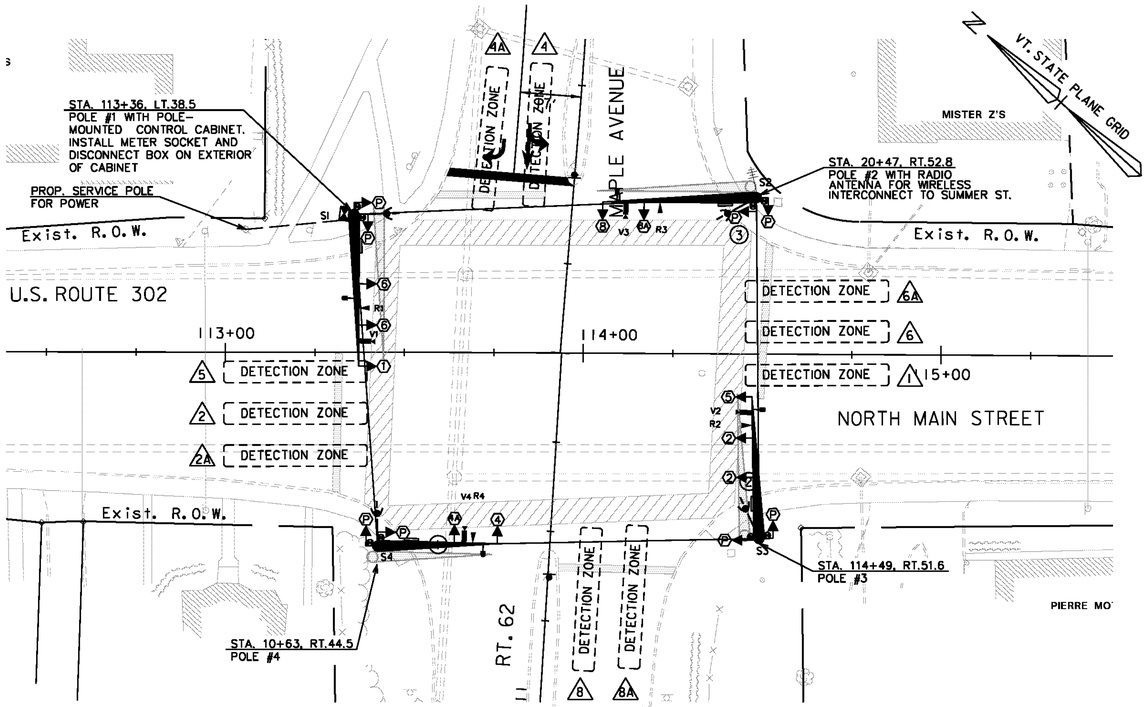
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FEET

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSPS6.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL CONDUIT QUANTITIES

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:



2009 AVERAGE WEEKDAY TRAFFIC DATA

	DHV	PM	AM
	110	95	90
	170	145	255
	40	35	40

DHV	PM	AM
95	85	55
445	410	260
10	10	5

AM	PM	DHV
35	85	95
420	365	395
350	290	315

	AM	PM	DHV
	10	5	5
	60	250	270
	80	325	350

LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15	QUANTITY
ECONOLITE TRAFFIC SIGNAL CONTROLLER	1
ECONOLITE "M" POLE MOUNTED CONTROLLER CABINET PAINTED FLAT BLACK WITH ANCILLARY CONTROL EQUIPMENT	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH 42 FOOT MAST ARM AND 8 FOOT LIGHTING BRACKET ARM (POLE #1)	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH 42 FOOT MAST ARM AND 8 FOOT LIGHTING BRACKET ARM (POLE #2)	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH 40 FOOT MAST ARM AND 8 FOOT LIGHTING BRACKET ARM (POLE #3)	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH 33 FOOT MAST ARM AND 8 FOOT LIGHTING BRACKET ARM (POLE #4)	1
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE MAST ARM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	8
ONE WAY, 5-SECTION, 12-INCH POLYCARBONATE MAST ARM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	2
POLE MOUNTED 16-INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	8
VTRANS SPEC ACCESSIBLE PEDESTRIAN PUSH BUTTONS WITH RIO-3e TYPE SIGN ASSEMBLY AND AUDIBLE INDICATORS	8
ASTRO-BRACKETS	10
OPTICAL DETECTION SENSOR WITH DETECTOR CABLES	4
WIRELESS RADIO INTERCONNECT SYSTEM	1
EMERGENCY VEHICLE PREEMPTION RECEIVER	4
EMERGENCY VEHICLE PREEMPTION 4-CHANNEL PHASE SELECTOR AND CHASSIS	1
EMERGENCY VEHICLE PREEMPTION STROBE	4

WIRED CONDUIT (PVC) AND ELECTRICAL CONDUIT SLEEVE SCHEDULE

ITEM NUMBER		678.23		678.30	
	NOT USED	WIRED CONDUIT		CONDUIT SLEEVE	
FROM/TO		3"	4"	8"	DESCRIPTION
POWER TO CABINET		36			CONDUIT TO POWER POLE
VEHICULAR AND PEDESTRIAN TRAFFIC SIGNAL CABLE, PUSH BUTTON DETECTOR CABLE, VIDEO DETECTION CABLE, EMERGENCY VEHICLE PREEMPTION EQUIPMENT CABLES, AND RADIO INTERCONNECT ANTENNA CABLE SHALL BE LASHED TO SPAN WIRES BETWEEN MAST ARM POLES. SUFFICIENT SLACK CABLE SHALL BE SUPPLIED TO PERMIT TEMPORARY SIGNAL HEAD ADJUSTMENTS (TO BE CONDUCTED BY OTHERS) AS SHOWN IN THE SIGNAL CROSS-SECTIONS.					
SUB-TOTALS		36			
ROUNDING		4			
TOTALS		40	0	0	

DETECTION SCHEDULE

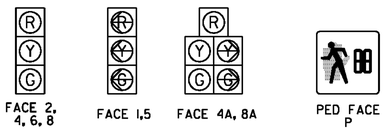
INCIDENTAL TO ITEM 678.15

OPTICAL VIDEO DETECTORS

LOOP NO.	LANE	CALL Ø	SIZE	TYPE & NO. TURNS	DELAY OR PRESENCE	SLOT	CHANNEL
1	WBLT	1	6X40	OPTICAL	PRESENCE	2	1
2	EBTH	2	6X40	OPTICAL	PRESENCE	4	2
2A	SBLT	2	6X40	OPTICAL	5 SEC DELAY	4	3
4	SBRT	4	6X40	OPTICAL	PRESENCE	6	1
4A	EBLT	4	6X40	OPTICAL	5 SEC DELAY	6	2
5	WBTH	5	6X40	OPTICAL	PRESENCE	4	1
6	NBLT	6	6X40	OPTICAL	PRESENCE	2	2
6A	NBRT	6	6X40	OPTICAL	5 SEC DELAY	2	3
8	NBLT	8	6X40	OPTICAL	PRESENCE	8	1
8A	NBRT	8	6X40	OPTICAL	5 SEC DELAY	8	2

SIGNAL FACE ARRANGEMENT

(12" LED LENSES W/ 5" BACKPLATES)



EQUIPMENT NOTES

(A) SEE STANDARDS E-170, E-171A, E-171B, 171C, 173, & 175 FOR ADDITIONAL INFORMATION.

(B) SEE TRAFFIC SIGNAL NOTES ON SHEETS 46, 47 & 49 AND SINGLE MAST ARM CANTILEVER/FOOTING DETAIL SHEET 50 FOR ADDITIONAL INFORMATION.

(C) MAST ARM POLE EXTENSION SHALL BE INCLUDED FOR ALL FOUR SIGNAL POLES AS SHOWN ON SHEETS 51 & 52. SEE SHEET 48 FOR ADDITIONAL NOTES ON POLE AND FOUNDATION DESIGN CRITERIA.

(D) TRAFFIC SIGNAL EQUIPMENT WIRING SHALL BE SPAN WIRE MOUNTED AT LEAST THREE FEET (3') ABOVE MAST ARM MOUNTED SIGNAL EQUIPMENT. A WEATHERHEAD SHALL BE PROVIDED ON EACH SIGNAL POLE FOR SIGNAL CABLE ENTRANCE.

(E) FOR SIGN DETAILS, SEE SHEETS 36 THROUGH 45.

(F) SEE SHEET 70 FOR ADDITIONAL DETAILS FOR TRAFFIC CONTROL, CONSTRUCTION, AND PHASING.

LEGEND

NEW	LEGEND
CC	CONTROLLER CABINET
	SIGNAL HEAD
	OPTICAL DETECTION ZONE
	PEDESTAL POST
	STANCHION
S	SPARE SWEEP
	EMERGENCY VEHICLE PREEMPTION STROBE
	EMERGENCY VEHICLE PREEMPTION RECEIVER
	PROPOSED MAST ARM
	PEDESTRIAN PUSH BUTTON
	OVERHEAD SIGN
	RADIO ANTENNA
	OPTICAL DETECTION
	EXISTING MAST ARM

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

20 0 20 40
FEET

NORTH MAIN ST AND MAPLE AVE / RT 62

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-I(34) C/I

FILE NAME: z09B240_TSPSI.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 1, SHEET 1
PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 48 OF 95

VHB Vanasse Hangen Brustlin, Inc.

TRAFFIC SIGNAL NOTES

A. NEW EQUIPMENT

1. ALL SIGNAL HEADS MOUNTED ON CANTILEVER ARMS SHALL BE POLYCARBONATE. BACKPLATES SHALL BE REQUIRED ON ALL SIGNAL HEADS. SIGNAL HEADS SHALL BE EQUIPPED TO PERMIT SPAN WIRE MOUNTING IN ADDITION TO RIGID MOUNTING.

2. ALL SIGNAL HEADS SHALL BE LIGHT EMITTING DIODES (LED).

3. CABINET SHALL BE POLE MOUNTED. DISCONNECT SWITCH AND METER SHALL BE ATTACHED TO THE EXTERIOR OF THE CABINET ON THE SIDE FURTHEST FROM TRAFFIC. POWER SOURCE SHALL BE UNDERGROUND FEED. RECOMMEND OPTION #5 FROM STANDARD E-175.

4. ALL SIGNAL EQUIPMENT SHALL BE PAINTED FLAT BLACK, IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

5. CONTRACTOR SHALL DESIGN SIGNAL POLES AND FOUNDATIONS TO SUPPORT THE VARIOUS LOADING CONDITIONS EXPECTED FOR THE EQUIPMENT. THE INITIAL INSTALLATION SHALL CONSIST OF CANTILEVER MAST ARMS WITH SIGNAL HEADS, SIGNS, OPTICAL DETECTION EQUIPMENT, AND PREEMPTION EQUIPMENT WITH ALL WIRING TO BE INSTALLED AERIALLY BETWEEN POLE EXTENSION ARMS AS SHOWN ON SHEET 48. THE SIGNAL POLES AND FOUNDATIONS SHALL ALSO BE DESIGNED TO SUPPORT A SPAN WIRE SIGNAL SYSTEM, WITHOUT CANTILEVER MAST ARMS ATTACHED, WITH THE OPTICAL DETECTION EQUIPMENT MOUNTED TO THE SIGNAL POLE UPRIGHT (TO BE INSTALLED/MODIFIED IN A SUBSEQUENT CONTRACT BY OTHERS) AS SHOWN ON SHEET 51.

B. SIGNAL OPERATION

1. SIGNAL TIMING SHOWN ON THE PLANS SHALL BE IMPLEMENTED AT THE COMPLETION OF THE TRAFFIC SIGNAL CONSTRUCTION. SIGNAL TIMING MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC PATTERNS AND CONDITIONS.

2. THE SIGNAL SHALL BEGIN WITH PHASES 2 & 6 FOLLOWING FLASHING OPERATIONS.

3. PEDESTRIAN MOVEMENTS ARE CONCURRENT WITH AUDIBLE INDICATIONS.

C. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL CONDUIT SHALL BE 3-INCH PVC, SCHEDULE 80.

D. OPTICAL VEHICLE DETECTION

1. ALL OPTICAL DETECTION CABLES SHALL BE LABELED WITH THE PHASE NUMBERS AND APPROACH DIRECTION CONTROLLED BY THE OPTICAL DETECTION UNIT (PHASE 1&6, WB).

2. ALL PROGRAMMED DETECTION ZONES SHALL FAIL IN THE "ON" MODE.

3. NO SPLICES SHALL BE PERMITTED IN THE OPTICAL DETECTION CABLES.

4. VIDEO DETECTION ZONES SHALL BEGIN AT 5 FEET IN FRONT OF THE STOP LINE AND EXTEND AT LEAST 40 FEET.

5. FINAL VIDEO DETECTION CAMERA AIM AND DETECTION ZONE PLACEMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND THE RESIDENT ENGINEER.

E. GENERAL

1. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE SIGNAL EQUIPMENT.

2. SEE THE CONTROLLER ID PLAQUE DETAIL ON THIS SHEET.

3. INTERSECTION SHALL BE INTERCONNECTED WITH THE INTERSECTION AT MAPLE AVENUE AND SUMMER STREET VIA WIRELESS RADIO SYSTEM. ANTENNA SHALL BE SECURELY MOUNTED TO MAST ARM POLE EXTENSION OR AS DIRECTED BY THE ENGINEER.

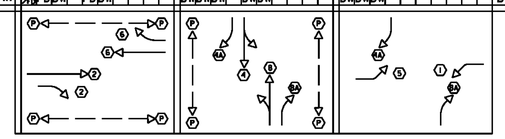
4. INTERSECTION SHALL INCLUDE AN EMERGENCY VEHICLE PREEMPTION SYSTEM AS APPROVED BY THE CITY OF BARRE FIRE DEPARTMENT.
   PREEMPT #3 - RECEIVER 1 CALLS PHASES 1 & 6
   PREEMPT #4 - RECEIVER 2 CALLS PHASES 2 & 5
   PREEMPT #5 - RECEIVER 3 CALLS PHASE 8
   PREEMPT #6 - RECEIVER 4 CALLS PHASE 4

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

TIMING AND PHASING

		PHASE 2+6 (DWELL) R/A	CLEAR TO Ø4+8	CLEAR TO Ø1+5	PHASE 4+8 R/A	CLEAR TO Ø1+5	CLEAR TO Ø2+6	PHASE 1+5 R/A	CLEAR TO Ø 2+6	FLASHING OPERATION
OFF PEAK REST OF DAY	VEHICLE	-			2			2		
	MINIMUM	5/2.5	4 2	4 2	5/2.5	4 2	4 2	5/2.5	4 2	
	MAXIMUM	30	4 2	4 2	25	4 2	4 2	5/2.5	4 2	
	MAXIMUM2	45	4 2	4 2	30	4 2	4 2	5/2.5	4 2	
	PED ACT									
AM PEAK 7-9 AM	VEHICLE	-			2			2		
	MINIMUM	5/2.5	4 2	4 2	5/2.5	4 2	4 2	5/2.5	4 2	
	MAXIMUM	45	4 2	4 2	25	4 2	4 2	5/2.5	4 2	
	MAXIMUM2	60	4 2	4 2	40	4 2	4 2	5/2.5	4 2	
	PED ACT									
PM PEAK 3-6 PM	VEHICLE	-			2			2		
	MINIMUM	5/2.5	4 2	4 2	5/2.5	4 2	4 2	5/2.5	4 2	
	MAXIMUM	45	4 2	4 2	35	4 2	4 2	5/2.5	4 2	
	MAXIMUM2	60	4 2	4 2	50	4 2	4 2	5/2.5	4 2	
	PED ACT									

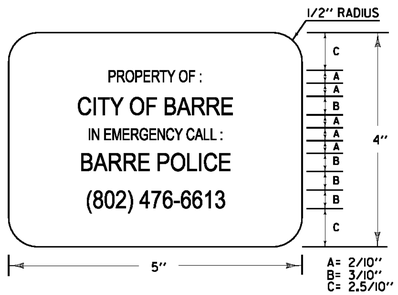
FACE 1	R	R	R	R	R	R	R	R	G	Y	R	FR (ARROW)
FACE 2	G	Y	R	Y	R	R	R	R	R	R	R	FY
FACE 4	R	R	R	R	R	G	Y	R	R	R	R	FR
FACE 4A	R	R	R	R	R	G	Y	R	5/2.5	4	R	FR
FACE 5	R	R	R	R	R	R	R	R	G	Y	R	FR (ARROW)
FACE 6	G	Y	R	Y	R	R	R	R	R	R	R	FY
FACE 8	R	R	R	R	R	G	Y	R	R	R	R	FR
FACE 8A	R	R	R	R	R	G	Y	R	5/2.5	4	R	FR
PED (N-S)	DW	DW	DW	DW	DW	5/2.5	FD	DW	DW	DW	DW	B
PED (E-W)	5/2.5	FD	DW	FD	DW	DW	DW	DW	DW	DW	DW	B



W = WALK, FD = FLASHING DON'T WALK, DW = DON'T WALK, B = BLANK, FR = FLASHING RED, FY = FLASHING YELLOW

1. FACE NUMBERS ARE BASED ON NEMA PHASES
2. EASTBOUND AND WESTBOUND LEFT-TURNS SHALL OPERATE UNDER LEADING PROTECTED ONLY LEFT-TURN PHASING.

CONTROLLER IDENTIFICATION PLAQUE



A= 2/10"
B= 3/10"
C= 2.5/10"

LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING
BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE

NOTES:
1.) THE PLAQUE SHALL BE MOUNTED ON THE TRAFFIC SIGNAL CONTROLLER CABINET. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.
2.) THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE AT LEAST ½ THE BASE MATERIAL THICKNESS.
3.) THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.

PROGRAM PERIODS OF OPERATION

	AM 1	2	3	4	5	6	7	8	9	10	11	12	PM 1	2	3	4	5	6	7	8	9	10	11	12	AM
SUNDAY	4																								
MONDAY	4												1	2		1			3		1			4	
TUESDAY	4												1	2		1			3		1			4	
WEDNESDAY	4												1	2		1			3		1			4	
THURSDAY	4												1	2		1			3		1			4	
FRIDAY	4												1	2		1			3		1			4	
SATURDAY	4																								

NOTES:

PLAN 1 - MIDDAY (MAXIMUM 1): 6:00 AM TO 7:00 AM, M-F
9:00 AM TO 3:00 PM, M-F
6:00 PM TO 10:00 PM, M-F

PLAN 2 - AM PEAK (MAXIMUM 2): 7:00 AM TO 9:00 AM, M-F

PLAN 3 - PM PEAK (MAXIMUM 2): 3:00 PM TO 6:00 PM, M-F

PLAN 4 - OFFPEAK (MAXIMUM 1): MIDNIGHT TO 6:00 AM, M-F
10:00 PM TO MIDNIGHT, M-F
ALL DAY SATURDAYS AND SUNDAYS

COORDINATION CYCLE/SPLIT OFFSET SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	PLAN 4
CYCLE LENGTH	80	80	80	FREE
COS	111	121	131	-
OFFSET	41	39	45	-
SPLIT TIME 01	11	11	14	-
SPLIT TIME 02	37	37	34	-
SPLIT TIME 03	0	0	0	-
SPLIT TIME 04	32	32	32	-
SPLIT TIME 05	20	27	21	-
SPLIT TIME 06	28	21	27	-
SPLIT TIME 07	0	0	0	-
SPLIT TIME 08	32	32	32	-

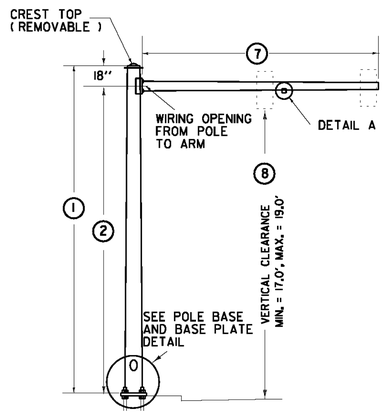
COORDINATION NOTES:
1. OFFSET IS REFERENCED TO BEGINNING OF THE COORDINATED GREEN PHASE (04 & 08)

NORTH MAIN ST AND MAPLE AVE / RT 62

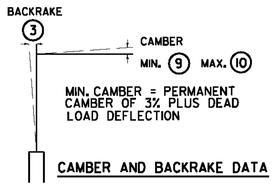
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSPSIA.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 1, SHEET 2
PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 49 OF 95

VHB Vanasse Hangen Brustlin, Inc.

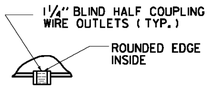


TYPE A

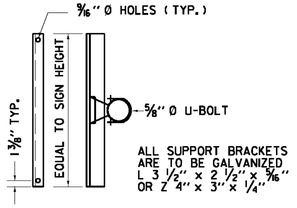


CAMBER AND BACKRAKE DATA

POLE BASE DIAMETER (4)
POLE GAUGE (5)
POLE TAPER RATE (6)
ARM DIAMETER (11)
ARM GAUGE (12)
ARM TAPER RATE (13)



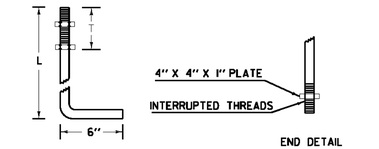
DETAIL A



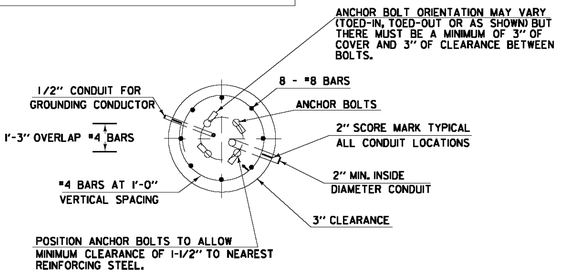
SIGN ON SINGLE
MAST ARM

SIGN BRACKET DETAILS

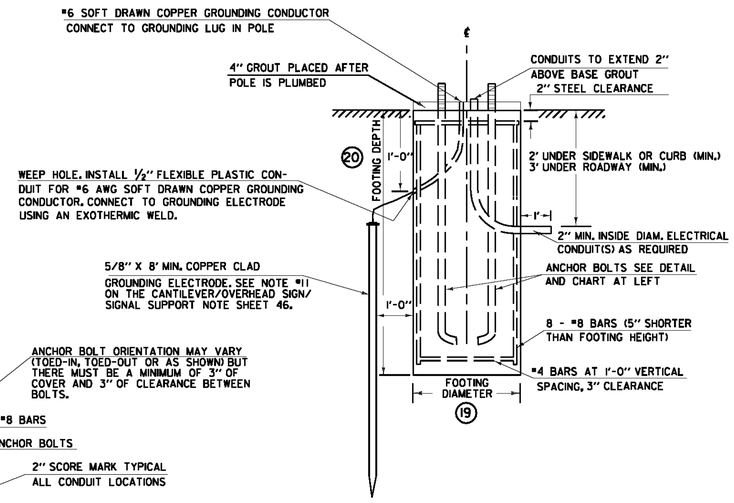
ANCHOR BOLT DETAIL		
SIZE	L (IN)	T (IN)
1- 1/4" X 48"	42	8
1- 1/2" X 60"	54	9
1- 3/4" X 90"	84	9
2" X 96"	96	9



ANCHOR BOLT DETAIL



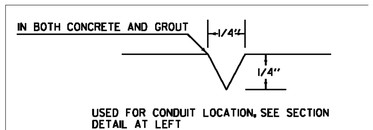
SECTION



ELEVATION

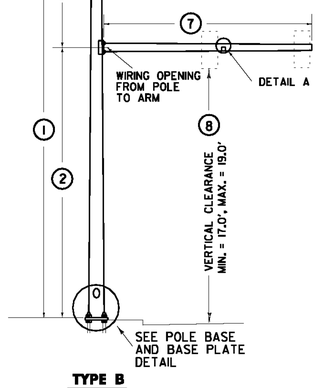
CANTILEVER FOOTING DETAIL

(SPREAD FOOTINGS OR PILES ARE OPTIONAL)

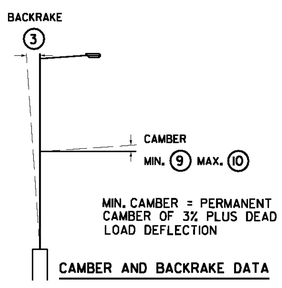


USED FOR CONDUIT LOCATION, SEE SECTION
DETAIL AT LEFT

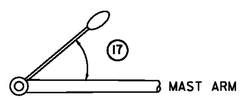
2" SCORE MARK DETAIL



TYPE B



CAMBER AND BACKRAKE DATA



LUMINAIRE ORIENTATION



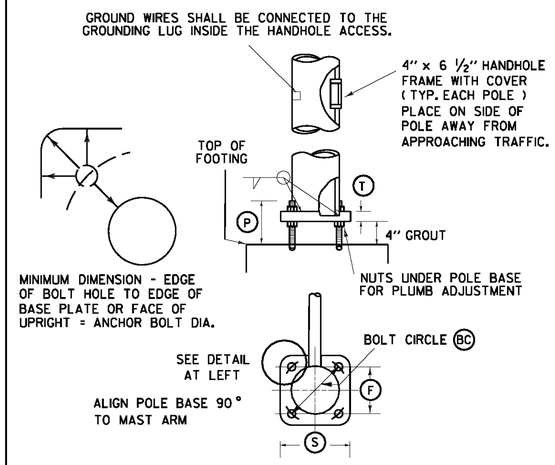
LUMINAIRE ARM RISE

SEE CANTILEVER / OVERHEAD SIGN / SIGNAL SUPPORTS
NOTE SHEET FOR ADDITIONAL INFORMATION (SHEET 46)

SEE SHEETS 51 & 52 FOR CROSS SECTIONS

STRUCTURE DIMENSIONS (IN FEET)

		POLE DATA						ARM DATA							LIGHTING DATA					FOOTING DATA		BASE PLATE / BOLT DATA					
POLE	TYPE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(BC)	(F)	(S)	(T)	(P)	ANCHOR BOLT SIZE
1	B	33	20					42	18						12.5	8		90	2							
2	B	33	20					42	18.5						12.5	8		0	2							
3	B	33	20					40	18						12.5	8		0	2							
4	B	33	20					33	18.3						12.5	8		90	2							



POLE BASE AND BASE PLATE DETAIL

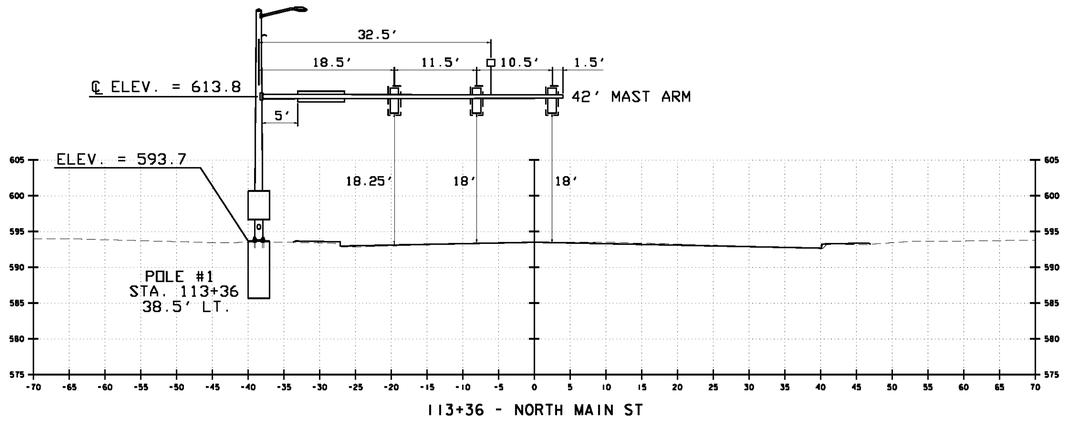
NOTE:
DETAILS
NTS

SINGLE MAST ARM CANTILEVER / FOOTING DETAIL SHEET FOR TRAFFIC SIGNAL PLANS 1 (FEGC F 026-1(34) C/1)

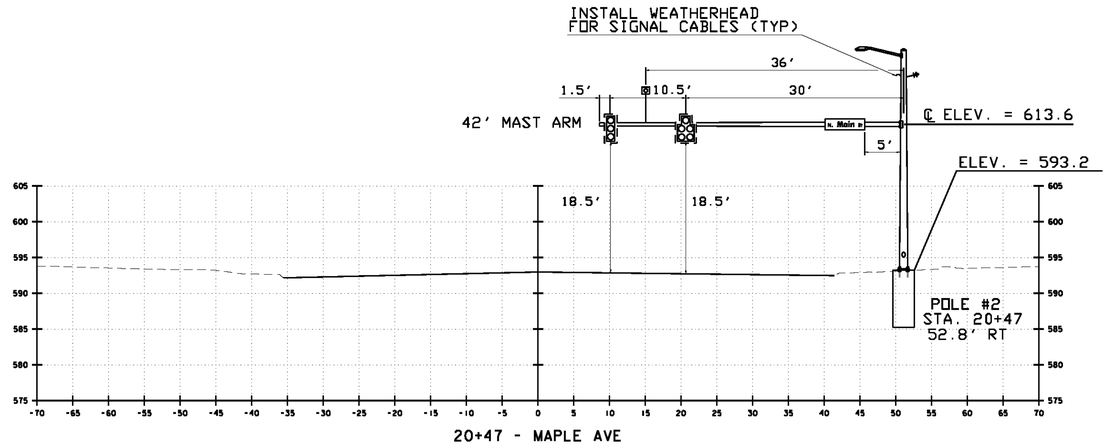
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PLOTTED: 4/5/2010

LAST REVISED 8/15/95

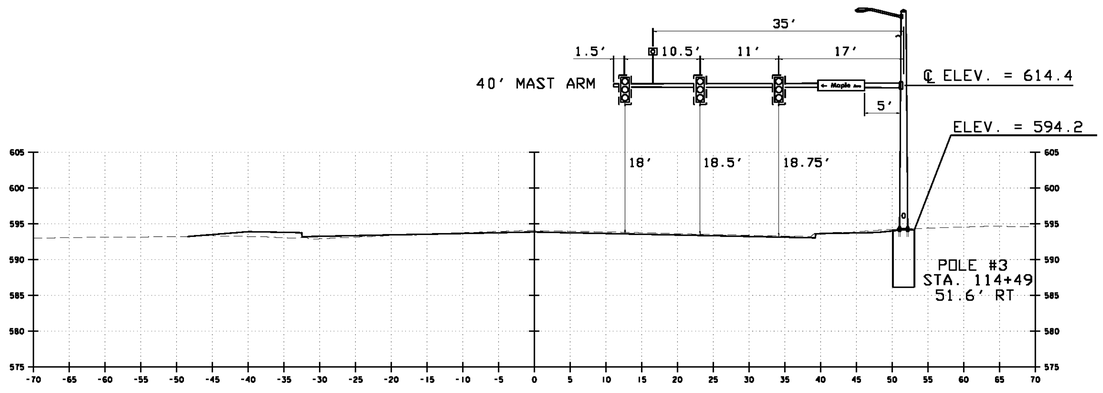
PREPARED BY JAR DATE 4/5/2010
CHECKED BY CMB DATE 4/5/2010
DESIGN SUPERVISOR _____ DATE ____
PROJ. BARRE CITY - NORTH MAIN ST.
TRAFFIC SHEET NO. 3 OF 5
SHEET 50 OF 95 SHEETS



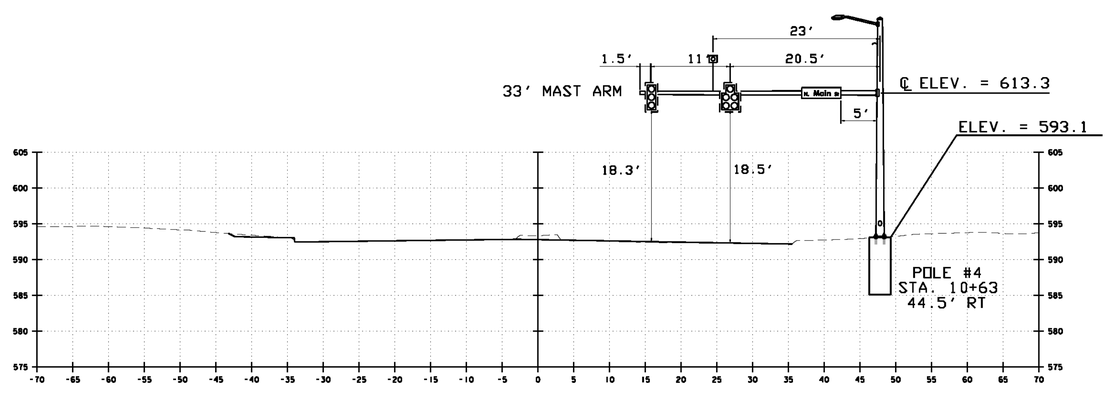
113+36 - NORTH MAIN ST



20+47 - MAPLE AVE



114+49 - NORTH MAIN ST



10+63 - VT 62

NOTES:

1. ALL MAST ARM FOOTINGS SHALL INCLUDE A 4' REVEAL. ELEVATIONS SHOWN IN CROSS-SECTIONS ARE APPROXIMATE FINAL GRADE ELEVATIONS FOR CONTRACTOR BIDDING PURPOSES ONLY. ACTUAL FOOTING ELEVATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO SUBMITTING WORKING DRAWINGS.

2. MAST ARM FOOTING SIZES ARE NOT TO SCALE. FOOTING DESIGNS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH SOIL CONDITIONS AND ACTUAL MAST ARM LOADINGS TRANSMITTED TO THE TOP OF FOOTINGS.

3. LOCATIONS OF OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT ARE APPROXIMATE. FINAL LOCATIONS FOR OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT SHALL BE DETERMINED BY THE CONTRACTOR AND THE ENGINEER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DATUM

VERTICAL NAVD 1929

HORIZONTAL NAD 27

NORTH MAIN ST AND MAPLE AVE / RT 62

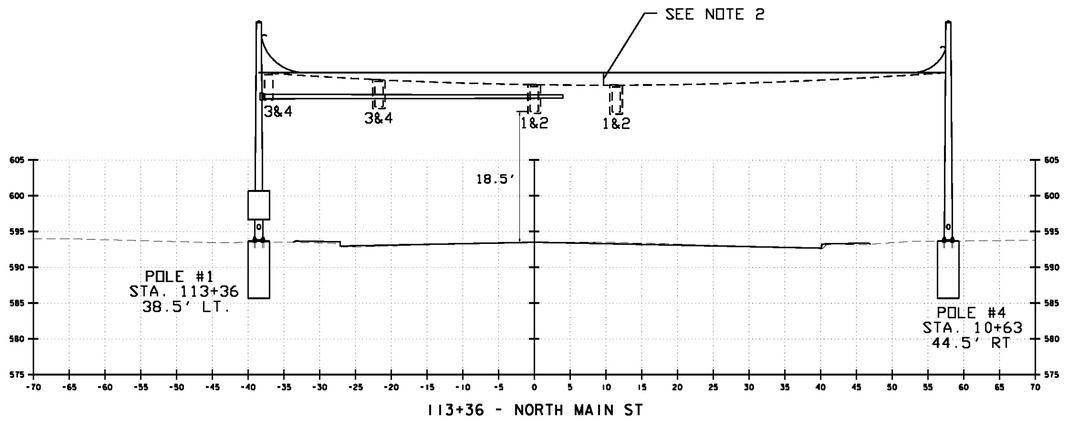
PROJECT NAME: BARRE CITY

PROJECT NUMBER: FEGC F 026-I(34) C/I

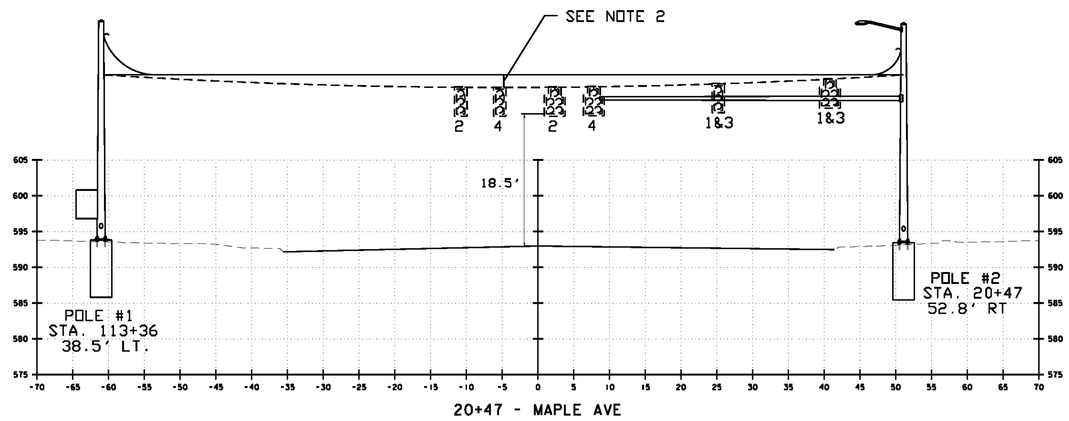
FILE NAME: z09B240_TSPSIC.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 1, SHEET 4

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 51 OF 95

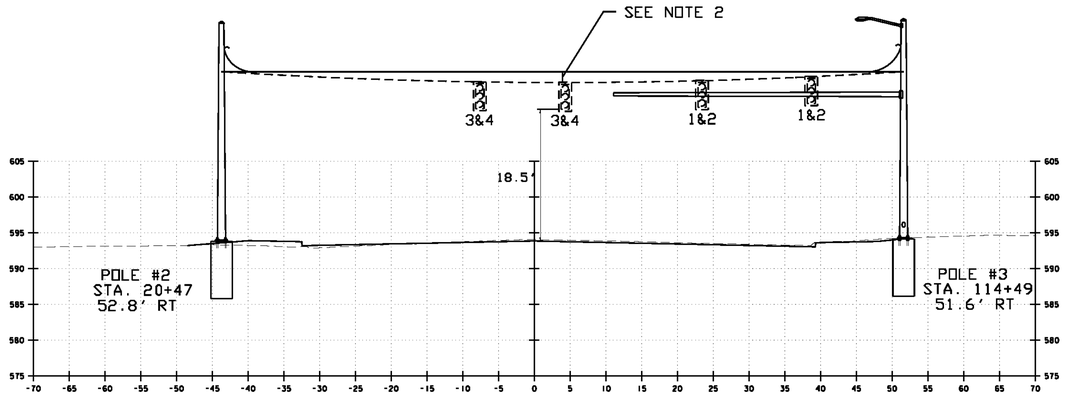
VHB Vanasse Hangen Brustlin, Inc.



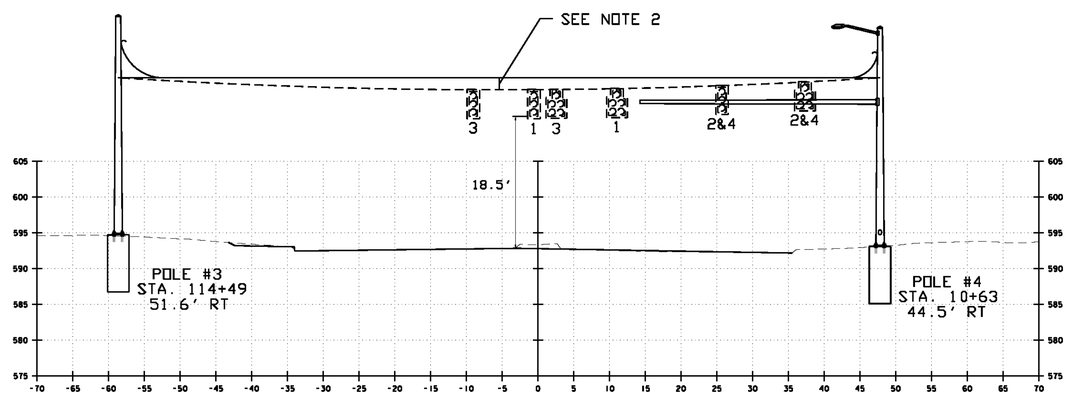
113+36 - NORTH MAIN ST



20+47 - MAPLE AVE



114+49 - NORTH MAIN ST



10+63 - VT 62

NOTES:

1. SPAN WIRE MOUNTED SIGNAL HEADS ARE SHOWN FOR SUBSEQUENT CONSTRUCTION CONTRACT DETOUR PHASING PLAN. NEW POLES SHALL BE DESIGNED FOR SPAN WIRE SIGNAL ATTACHMENTS AS WELL AS PERMANENT MAST ARM MOUNTINGS.SIGNAL HEADS ARE SHOWN AT APPROXIMATE LOCATION (FOR SUBSEQUENT INSTALLATION BY OTHERS) TO GUIDE THE CONTRACTOR ON POLE AND FOUNDATION DESIGN.

2. ALL SIGNAL HEAD WIRING SHALL BE FROM SPAN WIRE SPANNING FROM POLE TO POLE. SPAN WIRE SAG SHALL NOT BLOCK SIGNAL HEAD VIEWING. MAST ARM SIGNAL PLACEMENT IS NOT SHOWN ON THIS SHEET FOR CLARITY; SEE SHEET 51.

DATUM

VERTICAL NAVD 1929

HORIZONTAL NAD 27

NORTH MAIN ST AND MAPLE AVE / RT 62

PROJECT NAME: BARRE CITY

PROJECT NUMBER: FEGC F 026-I(34) C/I

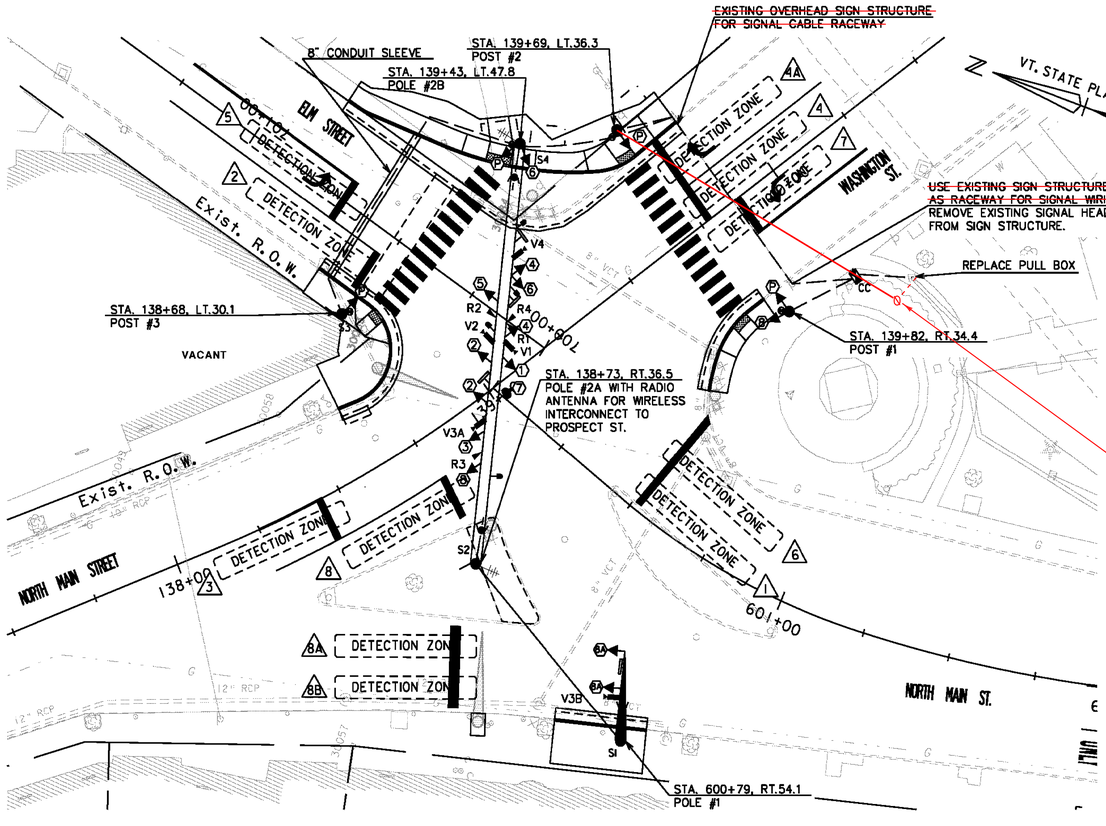
FILE NAME: z09B240_TSPSID.dgn | PLOT DATE: 4/5/2010

PROJECT LEADER: G. BAKOS | DRAWN BY: DMP / JAR

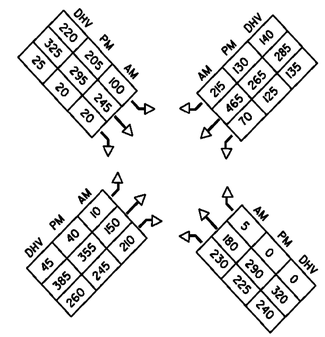
DESIGNED BY: DMP / MDS | CHECKED BY:

TRAFFIC SIGNAL PLAN I, SHEET 5 | SHEET 52 OF 95

VHB Vanasse Hangen Brustlin, Inc.



2009 AVERAGE WEEKDAY TRAFFIC DATA



LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15	QUANTITY
ECONOLITE TRAFFIC SIGNAL CONTROLLER	1
ECONOLTE SYSTEM MASTER CONTROLLER ASC/2M-1000	1
POTS LINE TELECOMMUNICATIONS DROP WITH COMPATIABLE 56K MODEM	1
ECONOLITE "P44" BASE MOUNTED CONTROLLER CABINET WITH 15-INCH EXTENDED BASE ON A CONCRETE FOUNDATION, PAINTED FLAT BLACK WITH ANCILLARY CONTROL EQUIPMENT	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH 25 FOOT MAST ARM WITH 8 FOOT LIGHTING BRACKET ARM (POLE #1)	1
FLAT BLACK PAINTED TUBULAR BEAM SIGN STRUCTURE FOR MOUNTING SIGNAL HEADS AND EQUIPMENT WITH 8 FOOT LIGHTING BRACKET ARMS ON EACH SUPPORT POST (POLE #2A/2B)	1
FLAT BLACK PAINTED PEDESTAL POST	3
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE TUBULAR BEAM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	10
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE MAST ARM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	2
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE POLE MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	2
POLE MOUNTED 16-INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	4
VTRANS SPEC ACCESSIBLE PEDESTRIAN PUSH BUTTONS WITH R10-3e TYPE SIGN ASSEMBLY AND AUDIBLE INDICATORS	4
ASTRO-BRACKETS	12
OPTICAL DETECTION SENSOR WITH DETECTOR CABLES	5
WIRELESS RADIO INTERCONNECT SYSTEM	1
EMERGENCY VEHICLE PREEMPTION RECEIVER	4
EMERGENCY VEHICLE PREEMPTION 4-CHANNEL PHASE SELECTOR AND CHASSIS	1
EMERGENCY VEHICLE PREEMPTION STROBE	4

DETECTION SCHEDULE

INCIDENTAL TO ITEM 678.15

OPTICAL VIDEO DETECTORS

LOOP NO.	LANE	CALL Ø	SIZE	TYPE & NO. TURNS	DELAY OR PRESENCE	SLOT	CHANNEL
1	NBLT	1	6X40	OPTICAL	PRESENCE	2	1
2	SBTH	2	6X40	OPTICAL	PRESENCE	4	2
3	EBLT	3	6X40	OPTICAL	PRESENCE	6	1
4	WBTH	4	6X40	OPTICAL	PRESENCE	8	2
4A	WBRT	4	6X40	OPTICAL	5 SEC DELAY	8	3
5	SBLT	5	6X40	OPTICAL	PRESENCE	4	1
6	NBTH	6	6X40	OPTICAL	PRESENCE	2	2
7	WBLT	7	6X40	OPTICAL	PRESENCE	8	1
8	EBTH	8	6X40	OPTICAL	PRESENCE	6	2
8A	EBRT1	8	6X40	OPTICAL	PRESENCE	8	4
8B	EBRT2	8	6X40	OPTICAL	PRESENCE	8	4

WIRED CONDUIT (PVC) AND ELECTRICAL CONDUIT SLEEVE SCHEDULE

ITEM NUMBER	678.24	678.23		678.30	
	ELECTRICAL WIRING	WIRED CONDUIT		CONDUIT SLEEVE	
FROM/TO		3"	4"	8"	DESCRIPTION
POWER TO CABINET		20			CONDUIT TO CITY-PROVIDED POWER SOURCE
CABINET TO POST #1		20			POST #1
CABINET TO EXISTING SIGN STRUCTURE BASE			18		POLE #1, POLE #2A/B, POST #2, POST #3
USE EXISTING SIGN STRUCTURE AS RACEWAY	108				POLE #1, POLE #2A/B, POST #2, POST #3
EXISTING SIGN STRUCTURE BASE TO POST #2		17			POST #2
EXISTING SIGN STRUCTURE BASE TO POLE #2B			48		POLE #1, POLE #2A/B
USE SIGNAL MONOTUBE AS RACEWAY	152				POLE #1, POLE #2A/B
POLE #2B TO POST #3		86		45	POST #3
POLE #2A TO POLE #1	LASH SIGNAL CABLES TO SPAN WIRE				POLE #1
SUB-TOTALS	260	143	66	45	
ROUNDING	0	7	4	0	
TOTALS	260	150	70	45	

EQUIPMENT NOTES

(A) SEE STANDARDS E-170, E-171A, E-171B, 171C, 173, & 175 FOR ADDITIONAL INFORMATION.

(B) SEE TRAFFIC SIGNAL NOTE SHEETS 46, 47 & 54 AND SINGLE MAST ARM CANTILEVER/FOOTING DETAIL SHEETS 55 & 56 FOR ADDITIONAL INFORMATION.

(C) MAST ARM POLE EXTENSION (POLE #1) AND MONOTUBE STRUCTURE LIGHTING EXTENSION (POLE #2A) SHALL BE DESIGNED FOR SPAN WIRE ATTACHMENT FOR SIGNAL CABLES.

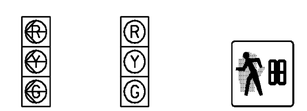
(D) USE EXISTING SIGN STRUCTURE MONOTUBE (STA. 139+61) AS RACEWAY FOR SIGNAL CABLES ACROSS WASHINGTON STREET. PROVIDE WEATHERHEADS FOR POLE 1 AND POLE 2A TO PROVIDE SPAN WIRE CONNECTION BETWEEN POLES. SIGNAL CABLES FOR POLE 1 SHALL BE LASHED TO SPAN WIRE TO CROSS CHANNELIZED RIGHT. SPAN WIRE SHALL MAINTAIN AT LEAST 24-FOOT CLEARANCE ABOVE ROADWAY. SPAN WIRE SAG SHALL NOT IMPEDE SIGNAL DISPLAY OR OPTICAL DETECTION EQUIPMENT.

(E) FOR SIGN DETAILS, SEE SHEET 36 THROUGH 45.

(F) SEE SHEET 70 FOR ADDITIONAL DETAILS FOR TRAFFIC CONTROL, CONSTRUCTION AND PHASING.

SIGNAL FACE ARRANGEMENT

(12" LED LENSES W/ 5" BACKPLATES)



LEGEND

NEW	LEGEND
CC	CONTROLLER CABINET
	SIGNAL HEAD
	CONDUIT
	OPTICAL DETECTION ZONE
	PEDESTAL POST
	STANCHION
—S	SPARE SWEEP
	EMERGENCY VEHICLE PREEMPTION STROBE
	EMERGENCY VEHICLE PREEMPTION RECEIVER
	PROPOSED MAST ARM
	PEDESTRIAN PUSH BUTTON
	OVERHEAD SIGN
	RADIO ANTENNA
	OPTICAL DETECTION
	EXISTING MAST ARM

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

VHB Vanasse Hangen Brustlin, Inc.

NORTH MAIN ST AND ELM ST/WASHINGTON ST

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSPS2.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 2, SHEET 1

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 53 OF 95

TRAFFIC SIGNAL NOTES

A. NEW EQUIPMENT

1. ALL SIGNAL HEADS MOUNTED ON THE OVERHEAD STRUCTURE SHALL BE POLYCARBONATE. BACKPLATES SHALL BE REQUIRED ON ALL SIGNAL HEADS.
2. ALL SIGNAL HEADS SHALL BE LIGHT EMITTING DIODES (LED).
3. CABINET SHALL BE BASE MOUNTED. A DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R), LOCKED CABINET ON A STANCHION NEXT TO OR BELOW THE METER SOCKET. RECOMMEND OPTION #2 FROM STANDARD E-175. POWER SHALL BE OBTAINED FROM CIRCUITS PROVIDED BY CITY OF BARRE NEAR CABINET LOCATION.
4. ALL SIGNAL EQUIPMENT SHALL BE PAINTED FLAT BLACK IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

B. SIGNAL OPERATION

1. SIGNAL TIMING SHOWN ON THE PLANS SHALL BE IMPLEMENTED AT THE COMPLETION OF THE TRAFFIC SIGNAL CONSTRUCTION. SIGNAL TIMING SHOWN ON THE PLANS MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC PATTERNS AND CONDITIONS.
2. THE SIGNAL SHALL BEGIN WITH PHASES 2 & 6 FOLLOWING FLASHING OPERATIONS.
3. PEDESTRIAN MOVEMENTS ARE CONCURRENT WITH AUDIBLE INDICATIONS.

C. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL WIRED CONDUIT SHALL BE 3-INCH OR 4-INCH PVC, SCHEDULE 80.
2. WHEN CONDUIT IS PLACED BELOW THE TRAVELED ROADWAY, IT SHALL BE PLACED IN AN 8-INCH PVC ELECTRICAL CONDUIT SLEEVE, SCHEDULE 80.

D. OPTICAL VEHICLE DETECTION

1. ALL OPTICAL DETECTION CABLES SHALL BE LABELED WITH THE PHASE NUMBERS AND APPROACH DIRECTION CONTROLLED BY THE OPTICAL DETECTION UNIT (PHASE 1&6, WB)
2. ALL PROGRAMMED DETECTION ZONES SHALL FAIL IN THE "ON" MODE.
3. NO SPLICES SHALL BE PERMITTED IN THE OPTICAL DETECTION CABLES.
4. VIDEO DETECTION ZONES SHALL BEGIN AT 5 FEET IN FRONT OF THE STOP LINE AND EXTEND AT LEAST 40 FEET.
5. FINAL VIDEO DETECTION CAMERA AIM AND DETECTION ZONE PLACEMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND THE RESIDENT ENGINEER.

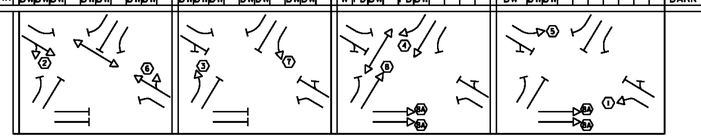
E. GENERAL

1. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY PROVIDER (CITY OF BARRE) TO PROVIDE A PERMANENT POWER SUPPLY TO THE SIGNAL EQUIPMENT.
2. SEE THE CONTROLLER ID PLAQUE DETAIL ON THIS SHEET.
3. INTERSECTION SHALL BE INTERCONNECTED WITH THE INTERSECTION AT N./S. MAIN ST. AND PROSPECT ST./CHURCH ST. ANTENNA SHALL BE SECURELY MOUNTED TO LIGHTING ARM EXTENSION OR AS DIRECTED BY THE ENGINEER.
4. INTERSECTION SHALL BE INTERCONNECTED WITH THE INTERSECTION AT SUMMER STREET AND ELM STREET/WELLINGTON STREET. ANTENNA SHALL BE SECURELY MOUNTED TO LIGHTING ARM EXTENSION OR AS DIRECTED BY THE ENGINEER.
5. INTERSECTION SHALL INCLUDE AN EMERGENCY VEHICLE PREEMPTION SYSTEM AS APPROVED BY THE CITY OF BARRE FIRE DEPARTMENT.
   - PREEMPT #3 - RECEIVER 1 CALLS PHASES 1 & 6
   - PREEMPT #4 - RECEIVER 2 CALLS PHASES 2 & 5
   - PREEMPT #5 - RECEIVER 3 CALLS PHASE 3 & 8
   - PREEMPT #6 - RECEIVER 4 CALLS PHASE 4 & 7

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

TIMING AND PHASING

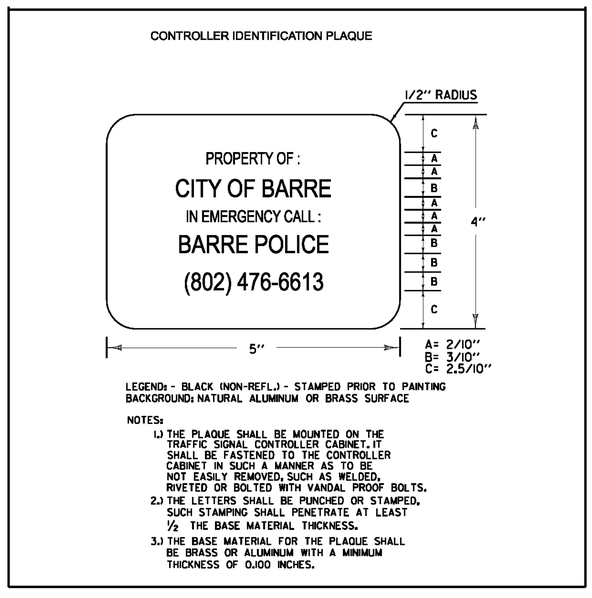
			PHASE 2+6 (DWELL)								PHASE 3+7								PHASE 4+8								PHASE 1+5							
				CLEAR TO								CLEAR TO								CLEAR TO								CLEAR TO						
				Ø 3+7			Ø 4+8		Ø 1+5			Ø 4+8		Ø 1+5		Ø 2+6				Ø 1+5		Ø 2+6						Ø 2+6						
OFF PEAK REST OF DAY	VEHICLE	2									2								2														
	MINIMUM	8½	4	3			4	3			8	4	3			4	3		8½	4	3			4	3		8	4	3				
	MAXIMUM	40	4	3			4	3			10	4	3			4	3		25	4	3			4	3		15	4	3				
	MAXIMUM2	45	4	3			4	3			15	4	3			4	3		30	4	3			4	3		20	4	3				
	MAXIMUM3																																
	PED ACT																																
AM PEAK 7-9 AM	VEHICLE	2									2								2														
	MINIMUM	8½	4	3			4	3			8	4	3			4	3		8½	4	3			4	3		8	4	3				
	MAXIMUM	40	4	3			4	3			10	4	3			4	3		25	4	3			4	3		15	4	3				
	MAXIMUM2	45	4	3			4	3			15	4	3			4	3		30	4	3			4	3		20	4	3				
	MAXIMUM3																																
	PED ACT																																
PM PEAK 3-6 PM	VEHICLE	2									2								2														
	MINIMUM	8½	4	3			4	3			8	4	3			4	3		8½	4	3			4	3		8	4	3				
	MAXIMUM	40	4	3			4	3			10	4	3			4	3		25	4	3			4	3		15	4	3				
	MAXIMUM2	45	4	3			4	3			15	4	3			4	3		30	4	3			4	3		20	4	3				
	MAXIMUM3																																
	PED ACT																																
FLASHING OPERATION																																	
	FACE 1		R	R	R		R	R		R	R	R		R	R		R	R		R	R		R	R		G	R	R				FR (ARROW)
	FACE 2		G	Y	R		Y	R		Y	R	R	R		R	R		R	R		R	R		R	R		R	R				FY
	FACE 3		R	R	R		R	R		R	G	R	R		Y	R		R	R		R	R		R	R		R	R				FR (ARROW)
	FACE 4		R	R	R		R	R		R	R	R	R		R	R		G	Y	R		Y	R		R	R		R	R				FR
	FACE 5		R	R	R		R	R		R	R	R	R		R	R		R	R		R	R		R	R		G	R	R				FR (ARROW)
	FACE 6		G	Y	R		Y	R		Y	R	R	R		R	R		R	R		R	R		R	R		R	R				FY
	FACE 7		R	R	R		R	R		R	G	R	R		Y	R		R	R		R	R		R	R		R	R				FR (ARROW)
	FACE 8		R	R	R		R	R		R	R	R	R		R	R		G	Y	R		Y	R		R	R		R	R				FR
	FACE 8A		R	R	R		R	R		R	R	R	R		R	R		G	G	G		Y	R		G	Y	R						FR
	PED (N-S)		W	FD	DW		FD	DW		FD	DW	DW	DW		DW	DW		DW	DW	DW		DW	DW		DW	DW	DW						DARK
	PED (E-W)		DW	DW	DW		DW	DW		DW	DW	DW	DW		DW	DW		DW	W	FD	DW		FD	DW		DW	DW	DW						DARK



W = WALK, FD = FLASHING DON'T WALK, DW = DON'T WALK, B = BLANK, FR = FLASHING RED, FY = FLASHING YELLOW

1. FACE NUMBERS ARE BASED ON NEMA PHASES
2. ALL LEFT-TURN PHASES SHALL OPERATE UNDER PROTECTED LEFT-TURN PHASING.
3. EASTBOUND RIGHT TURNS (8A) SHALL OVERLAP PHASE 1

CONTROLLER IDENTIFICATION PLAQUE



LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING
BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE

NOTES:
1.) THE PLAQUE SHALL BE MOUNTED ON THE TRAFFIC SIGNAL CONTROLLER CABINET. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.
2.) THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE AT LEAST ½ THE BASE MATERIAL THICKNESS.
3.) THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.

PROGRAM PERIODS OF OPERATION

	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
	AM												PM											AM
SUNDAY	4																							
MONDAY	4												1	2			1			3			1	4
TUESDAY	4												1	2			1			3			1	4
WEDNESDAY	4												1	2			1			3			1	4
THURSDAY	4												1	2			1			3			1	4
FRIDAY	4												1	2			1			3			1	4
SATURDAY	4																							

NOTES:

PLAN 1 - MIDDAY (MAXIMUM 1): 6:00 AM TO 7:00 AM, M-F; 9:00 AM TO 3:00 PM, M-F; 6:00 PM TO 10:00 PM, M-F

PLAN 2 - AM PEAK (MAXIMUM 2): 7:00 AM TO 9:00 AM, M-F

PLAN 3 - PM PEAK (MAXIMUM 2½): 3:00 PM TO 6:00 PM, M-F

PLAN 4 - OFFPEAK (MAXIMUM 1): MIDNIGHT TO 6:00 AM, M-F; 10:00 PM TO MIDNIGHT, M-F; ALL DAY SATURDAYS AND SUNDAYS

COORDINATION CYCLE/SPLIT OFFSET SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	PLAN 4
CYCLE LENGTH	80	90	80	FREE
COS	111	121	131	-
OFFSET	0	0	0	-
SPLIT TIME Ø1	17	19	17	-
SPLIT TIME Ø2	27	27	27	-
SPLIT TIME Ø3	11	11	11	-
SPLIT TIME Ø4	25	33	25	-
SPLIT TIME Ø5	15	16	17	-
SPLIT TIME Ø6	29	30	27	-
SPLIT TIME Ø7	11	14	11	-
SPLIT TIME Ø8	25	30	25	-

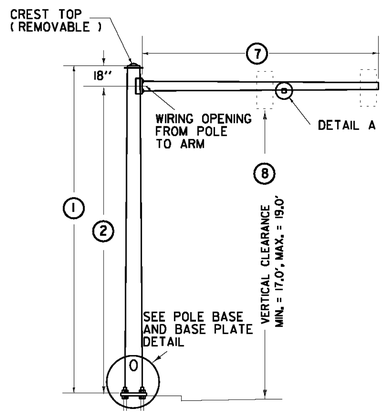
COORDINATION NOTES:
1. OFFSET IS REFERENCED TO BEGINNING OF THE COORDINATED PHASE (Ø1, NBL)

VHB Vanasse Hangen Brustlin, Inc.

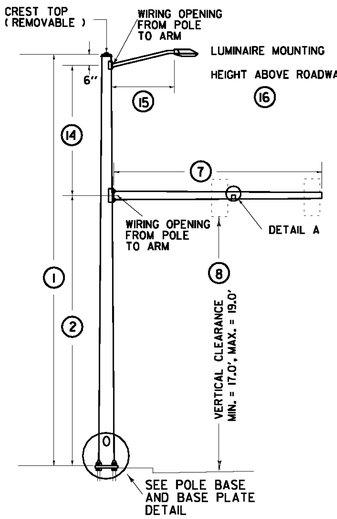
NORTH MAIN ST AND ELM ST/WASHINGTON ST

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

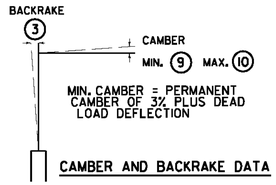
FILE NAME: z09B240_TSPS2A.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 2, SHEET 2
PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 54 OF 95



TYPE A



TYPE B



CAMBER AND BACKRAKE DATA

POLE BASE DIAMETER (4)

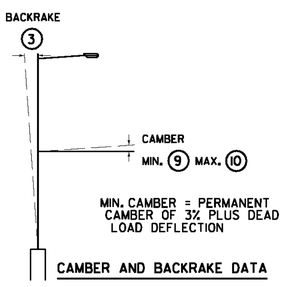
POLE GAUGE (5)

POLE TAPER RATE (6)

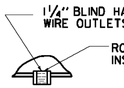
ARM DIAMETER (11)

ARM GAUGE (12)

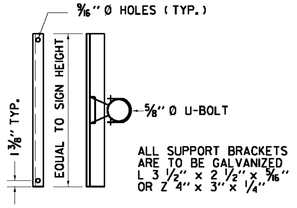
ARM TAPER RATE (13)



CAMBER AND BACKRAKE DATA



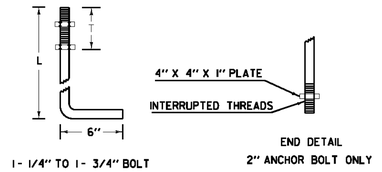
DETAIL A



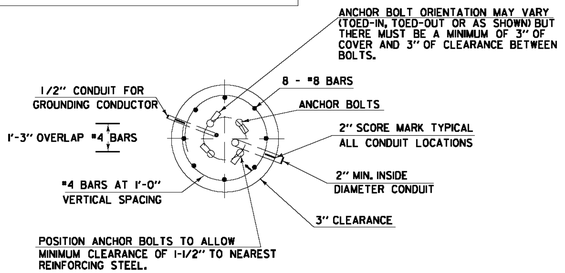
SIGN ON SINGLE
MAST ARM

SIGN BRACKET DETAILS

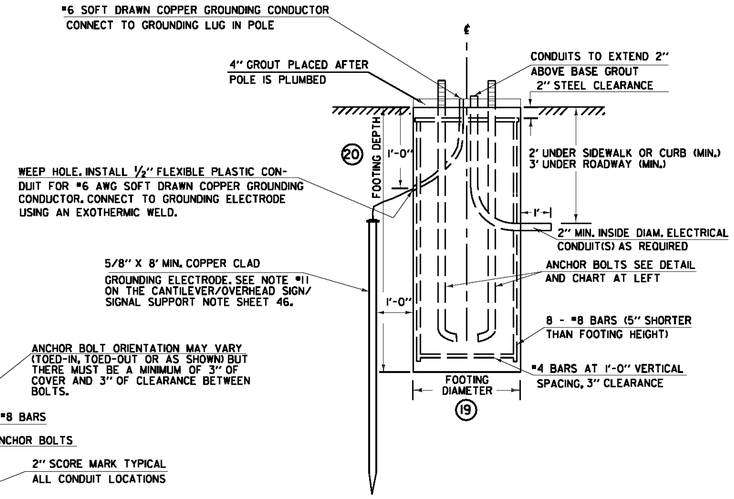
ANCHOR BOLT DETAIL		
SIZE	L (IN)	T (IN)
1- 1/4" X 48"	42	8
1- 1/2" X 60"	54	9
1- 3/4" X 90"	84	9
2" X 96"	96	9



ANCHOR BOLT DETAIL



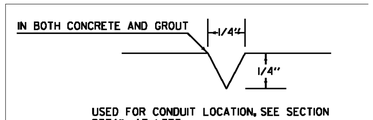
SECTION



ELEVATION

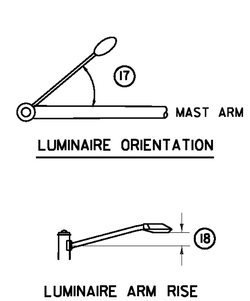
CANTILEVER FOOTING DETAIL

(SPREAD FOOTINGS OR PILES ARE OPTIONAL)



USED FOR CONDUIT LOCATION, SEE SECTION
DETAIL AT LEFT

2" SCORE MARK DETAIL



LUMINAIRE ORIENTATION

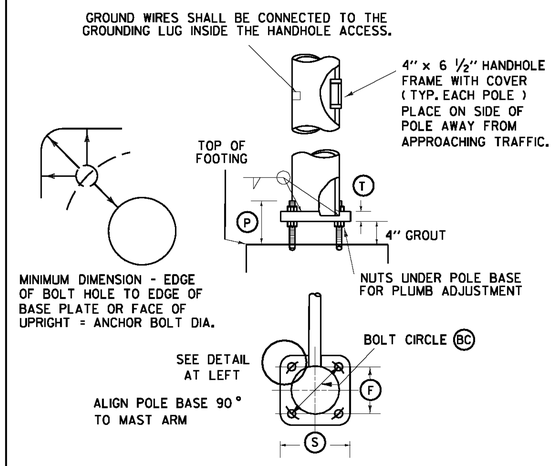
LUMINAIRE ARM RISE

SEE CANTILEVER / OVERHEAD SIGN / SIGNAL SUPPORTS
NOTE SHEET FOR ADDITIONAL INFORMATION (SHEET 46)

SEE SHEET 57 FOR CROSS SECTIONS

STRUCTURE DIMENSIONS (IN FEET)

POLE DATA								ARM DATA							LIGHTING DATA					FOOTING DATA		BASE PLATE / BOLT DATA					
POLE	TYPE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(BC)	(F)	(S)	(T)	(P)	ANCHOR BOLT SIZE
1	B	33	20					25	18						12.5	8		0	2								



POLE BASE AND BASE PLATE DETAIL

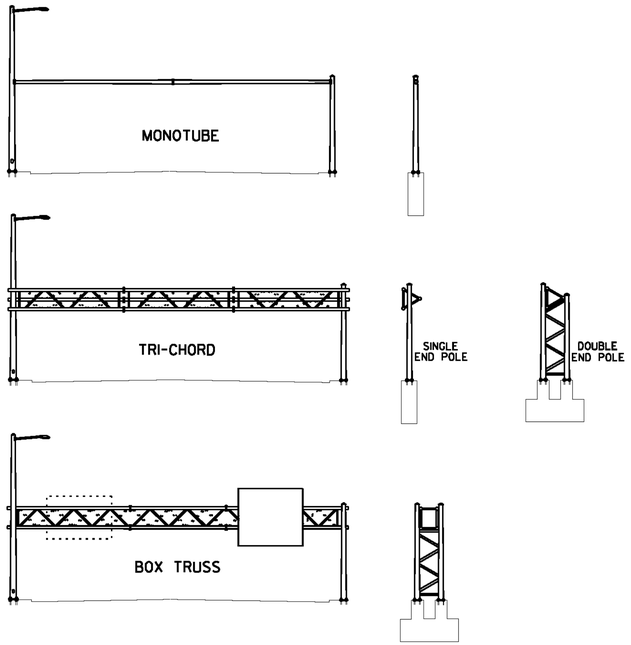
NOTE:
DETAILS
NTS

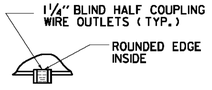
SINGLE MAST ARM CANTILEVER / FOOTING DETAIL SHEET FOR TRAFFIC SIGNAL PLANS 2 (FEGC F 026-1(34) C/1)

z09B240_TSPS2B.dgn
PLOTTED: 4/5/2010

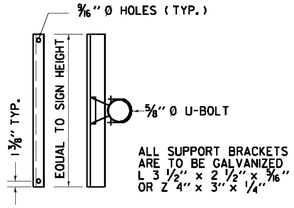
LAST REVISED 8/15/95

PREPARED BY JAR DATE 4/5/2010
CHECKED BY CMB DATE 4/5/2010
DESIGN SUPERVISOR _____ DATE ____
PROJ. BARRE CITY - NORTH MAIN ST.
TRAFFIC SHEET NO. 3 OF 5
SHEET 55 OF 95 SHEETS



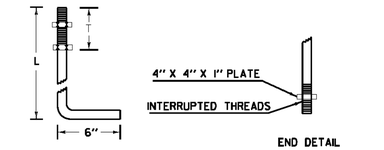


DETAIL A

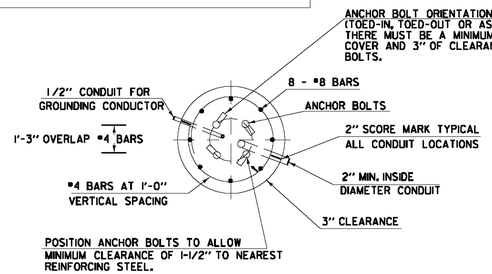


SIGN BRACKET DETAILS

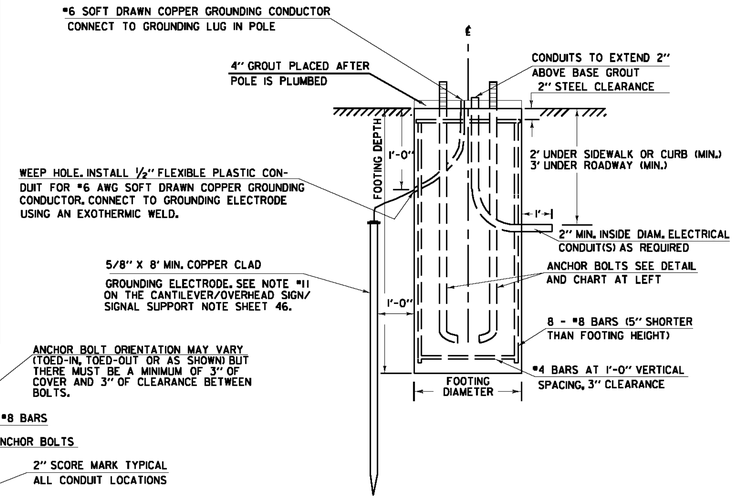
ANCHOR BOLT DETAIL		
SIZE	L (IN)	T (IN)
1- 1/4" X 48"	42	8
1- 1/2" X 60"	54	9
1- 3/4" X 90"	84	9
2" X 96"	96	9



ANCHOR BOLT DETAIL



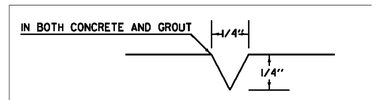
SECTION



ELEVATION

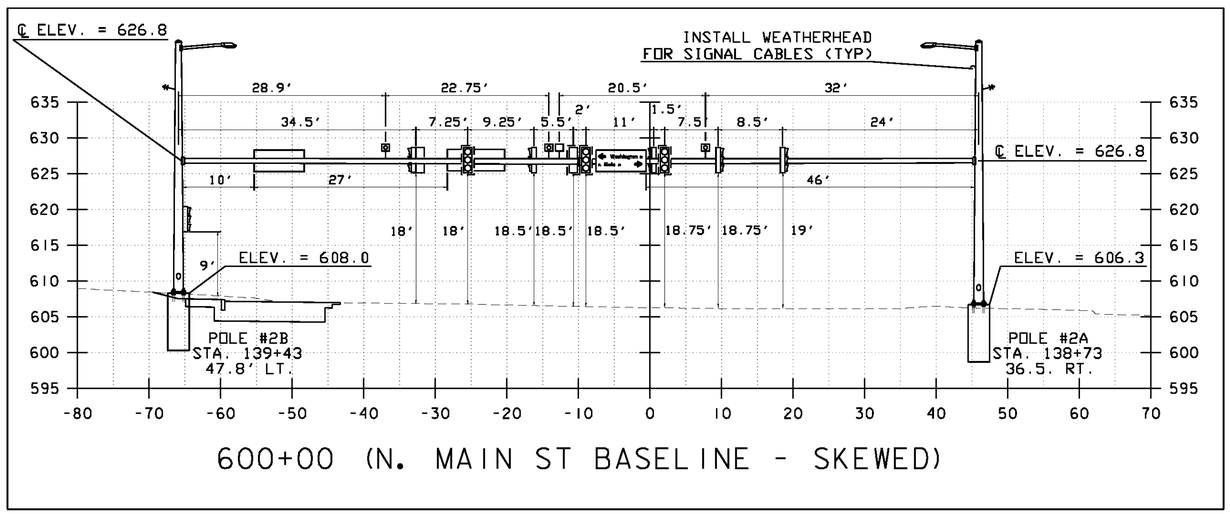
OVERHEAD TRAFFIC SIGN BRIDGE FOOTING DETAIL

(SPREAD FOOTINGS OR PILES ARE OPTIONAL)



USED FOR CONDUIT LOCATION, SEE SECTION DETAIL AT LEFT

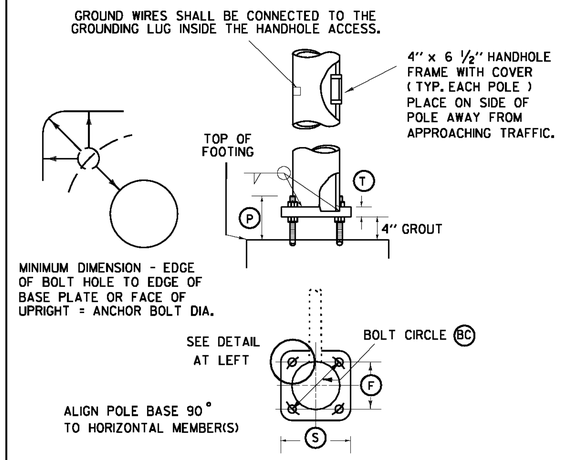
2" SCORE MARK DETAIL



OVERHEAD SIGN BRIDGE CROSS SECTION

NOTES:

1. SEE CANTILEVER / OVERHEAD SIGN / SIGNAL SUPPORTS NOTE SHEET FOR ADDITIONAL INFORMATION (SHEET 46).
2. MANUFACTURER TO DETERMINE TYPE OF STRUCTURE REQUIRED.
3. MINIMUM CLEARANCE FROM SIGNALS TO ROADWAY IS 18'-0".



POLE BASE AND BASE PLATE DETAIL

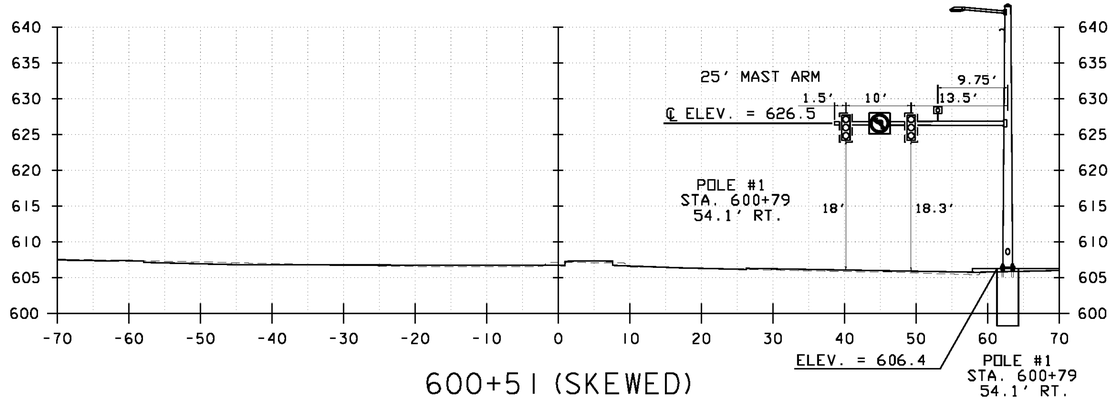
NOTE:
DETAILS
NTS

MULTI-SUPPORT STRUCTURE / FOOTING DETAIL SHEET FOR TRAFFIC SIGNAL PLAN 2 (FEGC F 026-1(34) C/1)

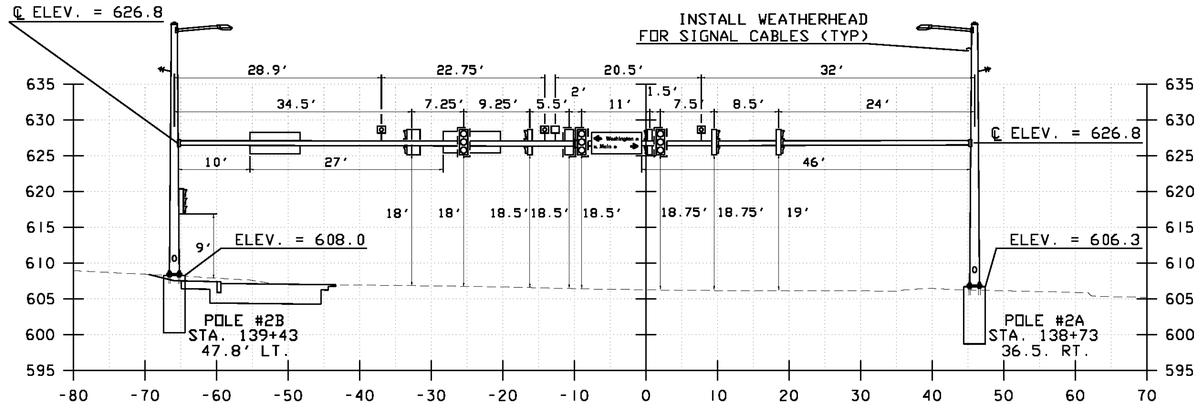
z09B240_TSPS2C.dgn
PLOTTED: 4/5/2010

LAST REVISED 8/15/95

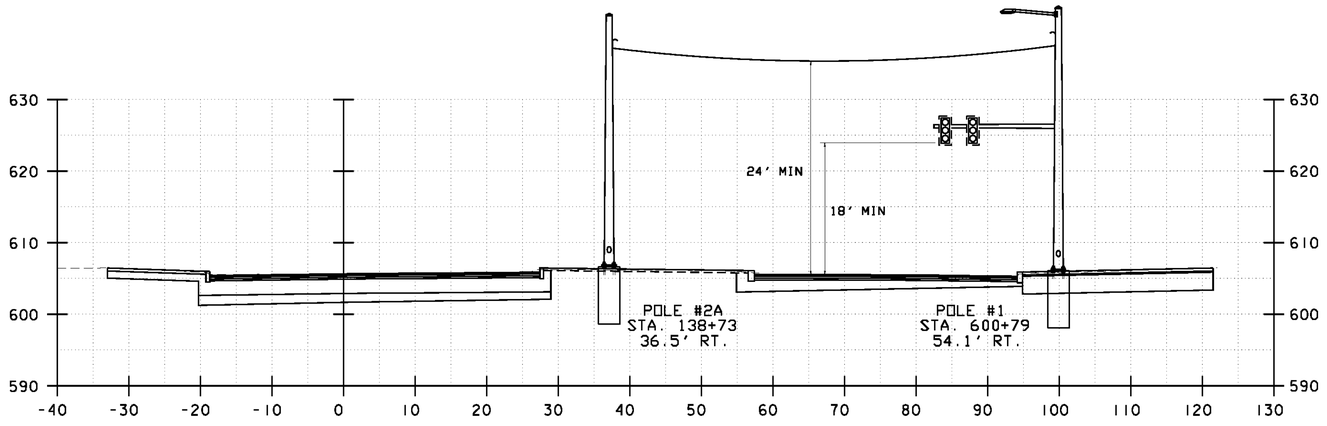
PREPARED BY JAR DATE 4/5/2010
CHECKED BY CMB DATE 4/5/2010
DESIGN SUPERVISOR ____ DATE ____
PROJ. BARRE CITY
FEGC F 026-1(34) C/1
TRAFFIC SHEET NO. 4 OF 5
SHEET 56 OF 95 SHEETS



600+51 (SKEWED)
NORTH MAIN ST (SOUTHBOUND)



600+00 (N. MAIN ST BASELINE - SKEWED)



138+66.6 (SKEWED)

NOTES:

1. ALL MAST ARM FOOTINGS SHALL INCLUDE A 4'' REVEAL. ELEVATIONS SHOWN IN CROSS-SECTIONS ARE APPROXIMATE FINAL GRADE ELEVATIONS FOR CONTRACTOR BIDDING PURPOSES ONLY. ACTUAL FOOTING ELEVATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO SUBMITTING WORKING DRAWINGS.

2. MAST ARM FOOTING SIZES ARE NOT TO SCALE. FOOTING DESIGNS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH SOIL CONDITIONS AND ACTUAL MAST ARM LOADINGS TRANSMITTED TO THE TOP OF FOOTINGS.

3. LOCATIONS OF OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT ARE APPROXIMATE. FINAL LOCATIONS FOR OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT SHALL BE DETERMINED BY THE CONTRACTOR AND THE ENGINEER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

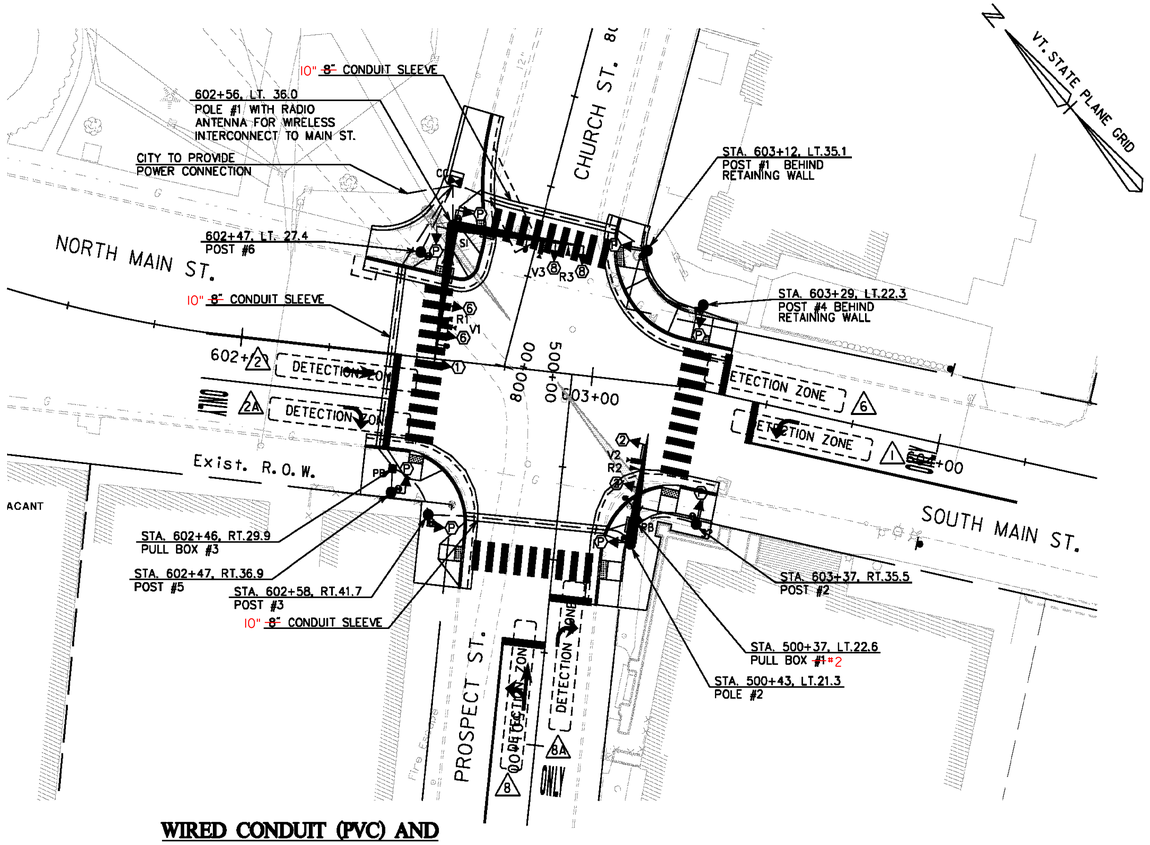
NORTH MAIN ST AND ELM ST/WASHINGTON ST

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-I(34) C/I

FILE NAME: z09B240_TSPS2D.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 2, SHEET 5

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 57 OF 95

VHB Vanasse Hangen Brustlin, Inc.



2009 AVERAGE WEEKDAY TRAFFIC DATA

DHV	PM	AM
5	5	0
550	505	420
165	155	105

AM	PM	DHV
20	50	55
370	420	460
90	145	155

	AM	PM	DHV
AM	45	55	135
PM	95	200	240
DHV	100	220	260

LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15	QUANTITY
ECONOLITE TRAFFIC SIGNAL CONTROLLER	1
ECONOLITE "P44" BASE MOUNTED CONTROLLER CABINET WITH 15-INCH EXTENDED BASE ON A CONCRETE FOUNDATION, PAINTED FLAT BLACK WITH ANCILLARY CONTROL EQUIPMENT	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH TWIN 37 FOOT MAST ARMS (POLE #1)	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH 30 FOOT MAST ARM (POLE #2)	1
FLAT BLACK PAINTED PEDESTAL POST (8')	5
FLAT BLACK PAINTED PEDESTAL POST (4')	1
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE MAST ARM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	6
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE POLE MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	1
POLE MOUNTED 16-INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	3
POST MOUNTED 16-INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	5
VTRANS SPEC ACCESSIBLE PEDESTRIAN PUSH BUTTONS WITH R10-3e TYPE SIGN ASSEMBLY AND AUDIBLE INDICATORS	8
ASTRO-BRACKETS	6
OPTICAL DETECTION SENSOR WITH DETECTOR CABLES	3
WIRELESS RADIO INTERCONNECT SYSTEM	1
EMERGENCY VEHICLE PREEMPTION RECEIVER	3
EMERGENCY VEHICLE PREEMPTION 4-CHANNEL PHASE SELECTOR AND CHASSIS	1
EMERGENCY VEHICLE PREEMPTION STROBE	3

WIRED CONDUIT (PVC) AND ELECTRICAL CONDUIT SLEEVE SCHEDULE

ITEM NUMBER	678.21	678.23		678.30	
	ELECTRICAL CONDUIT	WIRED CONDUIT		CONDUIT SLEEVE	
FROM/TO	3"	3"	4"	8"	DESCRIPTION
POWER TO CABINET		15			CONDUIT TO CITY-PROVIDED POWER SOURCE
CABINET TO POLE #1		15			POLE #1
CABINET TO POST #1	39	59		35	POST #1, POST #4
CABINET TO POST #6		22			POST #6 (PUSH BUTTON ONLY)
CABINET TO PB #3	50		39	50	POLE #2, POST #2, POST #3, POST #5
POST #1 TO POST #4		32			POST #4
PB #3 TO POST #5		6			POST #5
PB #3 TO POST #3			22		POLE #2, POST #2, POST #3
POST #3 TO PB #2	41	61		41	POLE #2, POST #2
PB #2 TO POLE #2		8			POLE #2
PB #2 TO POST #2		18			POST #2
SUB-TOTALS	130	236	61	126	
ROUNDING	5	4	4	4	
TOTALS	135	240	65	130	

DETECTION SCHEDULE

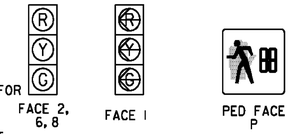
INCIDENTAL TO ITEM 678.15

OPTICAL VIDEO DETECTORS

LOOP NO.	LANE	CALL Ø	SIZE	TYPE & NO. TURNS	DELAY OR PRESENCE	SLOT	CHANNEL
1	NBLT	1	6X40	OPTICAL	PRESENCE	2	1
2	SBTH	2	6X40	OPTICAL	PRESENCE	4	1
2A	SBRT	2	6X40	OPTICAL	5 SEC DELAY	4	2
6	NBTH	6	6X40	OPTICAL	PRESENCE	2	2
8	EBLT	8	6X40	OPTICAL	PRESENCE	8	1
8A	EBRT	8	6X40	OPTICAL	5 SEC DELAY	8	2

SIGNAL FACE ARRANGEMENT

(12" LED LENSES W/ 5" BACKPLATES)



EQUIPMENT NOTES

(A) SEE STANDARDS E-170, E-171A, E-171B, 171C, 173, & 175 FOR ADDITIONAL INFORMATION.

(B) SEE TRAFFIC SIGNAL NOTE SHEETS 46, 47 & 59, SINGLE MAST ARM CANTILEVER/FOOTING DETAIL SHEET 60 AND DOUBLE MAST ARM CANTILEVER/FOOTING DETAIL SHEET 61 FOR ADDITIONAL INFORMATION.

(C) FOR SIGN DETAILS, SEE SHEETS 36 THROUGH 45.

(D) SEE SHEET 70 FOR ADDITIONAL DETAILS FOR TRAFFIC CONTROL, CONSTRUCTION, AND PHASING.

LEGEND

NEW	LEGEND
CC	CONTROLLER CABINET
	SIGNAL HEAD
	CONDUIT
	OPTICAL DETECTION ZONE
	PEDESTAL POST
	STANCHION
S	SPARE SWEEP
	EMERGENCY VEHICLE PREEMPTION STROBE
	EMERGENCY VEHICLE PREEMPTION RECEIVER
	PROPOSED MAST ARM
	PEDESTRIAN PUSH BUTTON
PB	PULL BOX
	OVERHEAD SIGN
	RADIO ANTENNA
	OPTICAL DETECTION
	EXISTING MAST ARM

DATUM

VERTICAL NAVD 1929

HORIZONTAL NAD 27

20 0 20 40

FEET

VHB Vanasse Hangen Brustlin, Inc.

NORTH/SOUTH MAIN ST AND PROSPECT ST/CHURCH ST

PROJECT NAME: BARRE CITY

PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSPS3.dgn PLOT DATE: 4/5/2010

PROJECT LEADER: G. BAKOS DRAWN BY: DMP / JAR

DESIGNED BY: DMP / MDS CHECKED BY:

TRAFFIC SIGNAL PLAN 3, SHEET 1 SHEET 58 OF 95

TRAFFIC SIGNAL NOTES

A. NEW EQUIPMENT

1. ALL SIGNAL HEADS MOUNTED ON CANTILEVER ARMS SHALL BE POLYCARBONATE. BACKPLATES SHALL BE REQUIRED ON ALL SIGNAL HEADS.
2. ALL SIGNAL HEADS SHALL BE LIGHT EMITTING DIODES (LED).
3. CABINET SHALL BE BASE MOUNTED. A DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R), LOCKED CABINET ON A STANCHION NEXT TO OR BELOW THE METER SOCKET. RECOMMEND OPTION #2 FROM STANDARD E-175. POWER SHALL BE OBTAINED FROM CIRCUITS PROVIDED BY CITY OF BARRE NEAR CABINET LOCATION.
4. ALL SIGNAL EQUIPMENT SHALL BE PAINTED FLAT BLACK IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

B. SIGNAL OPERATION

1. SIGNAL TIMING SHOWN ON THE PLANS SHALL BE IMPLEMENTED AT THE COMPLETION OF THE TRAFFIC SIGNAL CONSTRUCTION. SIGNAL TIMING SHOWN ON THE PLANS MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC PATTERNS AND CONDITIONS.
2. THE SIGNAL SHALL BEGIN WITH PHASES 2 & 6 FOLLOWING FLASHING OPERATIONS.
3. PEDESTRIAN MOVEMENTS ARE CONCURRENT WITH AUDIBLE INDICATIONS.

C. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL WIRED CONDUIT SHALL BE 3-INCH OR 4-INCH PVC, SCHEDULE 80.
2. WHEN CONDUIT IS PLACED BELOW THE TRAVELED ROADWAY, IT SHALL BE PLACED IN AN 8-INCH PVC ELECTRICAL CONDUIT SLEEVE, SCHEDULE 80.

D. OPTICAL VEHICLE DETECTION

1. ALL OPTICAL DETECTION CABLES SHALL BE LABELED WITH THE PHASE NUMBERS AND APPROACH DIRECTION CONTROLLED BY THE OPTICAL DETECTION UNIT (PHASE 1&6, WB)
2. ALL PROGRAMMED DETECTION ZONES SHALL FAIL IN THE "ON" MODE.
3. NO SPLICES SHALL BE PERMITTED IN THE OPTICAL DETECTION CABLES.
4. VIDEO DETECTION ZONES SHALL BEGIN AT 5 FEET IN FRONT OF THE STOP LINE AND EXTEND AT LEAST 40 FEET.
5. FINAL VIDEO DETECTION CAMERA AIM AND DETECTION ZONE PLACEMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND THE RESIDENT ENGINEER.

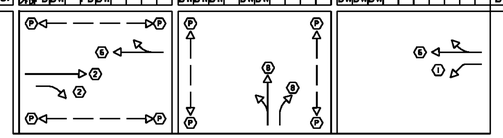
E. GENERAL

1. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY PROVIDER (CITY OF BARRE) TO PROVIDE A PERMANENT POWER SUPPLY TO THE SIGNAL EQUIPMENT.
2. SEE THE CONTROLLER ID PLAQUE DETAIL ON THIS SHEET.
3. INTERSECTION SHALL BE INTERCONNECTED WITH THE INTERSECTION AT N. MAIN ST./WASHINGTON ST. AND ELM ST./N. MAIN ST. ANTENNA SHALL BE SECURELY MOUNTED TO MAST ARM POLE EXTENSION OR AS DIRECTED BY THE RESIDENT ENGINEER.
4. INTERSECTION SHALL INCLUDE AN EMERGENCY VEHICLE PREEMPTION SYSTEM AS APPROVED BY THE CITY OF BARRE FIRE DEPARTMENT.
   PREEMPT #3 - RECEIVER 1 CALLS PHASES 1 & 6
   PREEMPT #4 - RECEIVER 2 CALLS PHASES 2
   PREEMPT #5 - RECEIVER 3 CALLS PHASE 8

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

TIMING AND PHASING

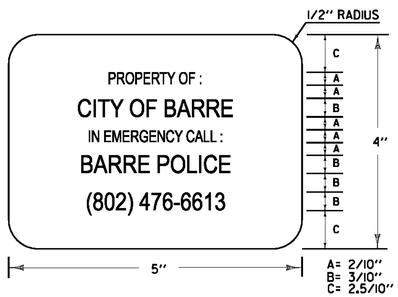
		PHASE 2+6 R/Y	CLEAR TO Ø8	CLEAR TO Ø1+6	PHASE 8 R/Y	CLEAR TO Ø1+6	CLEAR TO Ø 2+6	PHASE 1+6 R/Y	CLEAR TO Ø 2+6	FLASHING OPERATION
OFF PEAK REST OF DAY	VEHICLE	-			2			2		
	MINIMUM	5/3	4 2	4 2	5/3	4 2	4 2	5	4 2	
	MAXIMUM	40	4 2	4 2	5/30	4 2	4 2	12	4 2	
	MAXIMUM2	40	4 2	4 2	5/30	4 2	4 2	12	4 2	
	PED ACT									
AM PEAK 7-9 AM	VEHICLE	-			2			2		
	MINIMUM	5/3	4 2	4 2	5/3	4 2	4 2	5	4 2	
	MAXIMUM	45	4 2	4 2	5/30	4 2	4 2	12	4 2	
	MAXIMUM2	60	4 2	4 2	5/30	4 2	4 2	12	4 2	
	PED ACT									
PM PEAK 3-6 PM	VEHICLE	-			2			2		
	MINIMUM	5/3	4 2	4 2	5/3	4 2	4 2	5	4 2	
	MAXIMUM	45	4 2	4 2	5/30	4 2	4 2	12	4 2	
	MAXIMUM2	60	4 2	4 2	5/30	4 2	4 2	12	4 2	
	PED ACT									
	FACE 1	R R R		R R	R R R		R R	G Y R		FR (ARROW)
	FACE 2	G Y R		Y R	R R R		R R	R R R		FY
	FACE 6	G Y R		G G	R R R		R R	G G G		FY
	FACE 8	R R R		R R	G Y R		Y R	R R R		FR
	PED (E-W)	DW DW DW		DW DW	5/30 FD DW		FD DW	DW DW DW		B
	PED (N-S)	5/30 FD DW		FD DW	DW DW DW		DW DW	DW DW DW		B



W = WALK, FD = FLASHING DON'T WALK, DW = DON'T WALK, B = BLANK, FR = FLASHING RED, FY = FLASHING YELLOW

1. FACE NUMBERS ARE BASED ON NEMA PHASES
2. NORTHBOUND LEFT-TURN SHALL OPERATE UNDER PROTECTED LEFT-TURN PHASING.

CONTROLLER IDENTIFICATION PLAQUE

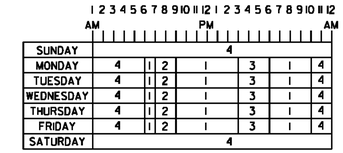


A= 2/10"
B= 3/10"
C= 2.5/10"

LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING
BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE

NOTES:
1.) THE PLAQUE SHALL BE MOUNTED ON THE TRAFFIC SIGNAL CONTROLLER CABINET. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.
2.) THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE AT LEAST ½ THE BASE MATERIAL THICKNESS.
3.) THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.

PROGRAM PERIODS OF OPERATION



NOTES:

PLAN 1 - MIDDAY (MAXIMUM 1): 6:00 AM TO 7:00 AM, M-F
9:00 AM TO 3:00 PM, M-F
6:00 PM TO 10:00 PM, M-F

PLAN 2 - AM PEAK (MAXIMUM 2): 7:00 AM TO 9:00 AM, M-F

PLAN 3 - PM PEAK (MAXIMUM 2): 3:00 PM TO 6:00 PM, M-F

PLAN 4 - OFFPEAK (MAXIMUM 1): MIDNIGHT TO 6:00 AM, M-F
10:00 PM TO MIDNIGHT, M-F
ALL DAY SATURDAYS AND SUNDAYS

COORDINATION CYCLE/SPLIT OFFSET SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	PLAN 4
CYCLE LENGTH	80	90	80	FREE
COS	111	121	131	-
OFFSET	28	25	43	-
SPLIT TIME 01	20	19	17	-
SPLIT TIME 02	35	45	38	-
SPLIT TIME 03	0	0	0	-
SPLIT TIME 04	25	26	25	-
SPLIT TIME 05	0	0	0	-
SPLIT TIME 06	55	64	55	-
SPLIT TIME 07	0	0	0	-
SPLIT TIME 08	0	0	0	-

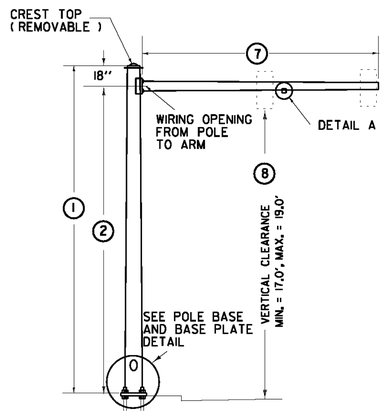
COORDINATION NOTES:
1. OFFSET IS REFERENCED TO BEGINNING OF THE COORDINATED PHASE (02 & 06)

NORTH/SOUTH MAIN ST AND
PROSPECT ST/CHURCH ST

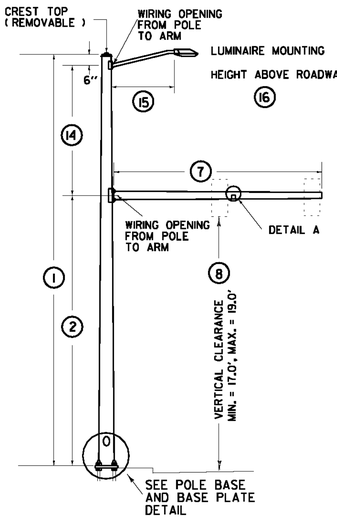
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSPS3A.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 3, SHEET 2
PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 59 OF 95

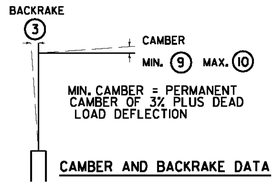
VHB Vanasse Hangen Brustlin, Inc.



TYPE A



TYPE B



CAMBER AND BACKRAKE DATA

POLE BASE DIAMETER (4)

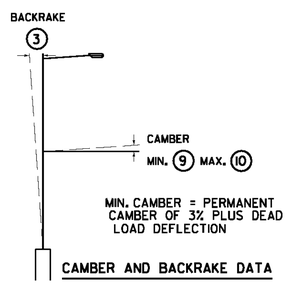
POLE GAUGE (5)

POLE TAPER RATE (6)

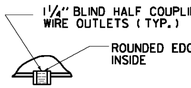
ARM DIAMETER (11)

ARM GAUGE (12)

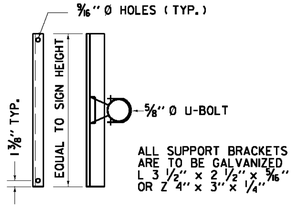
ARM TAPER RATE (13)



CAMBER AND BACKRAKE DATA

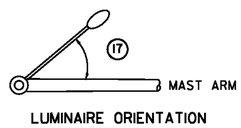


DETAIL A



SIGN ON SINGLE
MAST ARM

SIGN BRACKET DETAILS

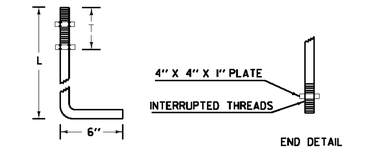


LUMINAIRE ORIENTATION

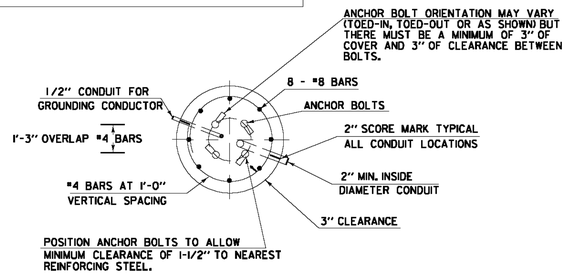


LUMINAIRE ARM RISE

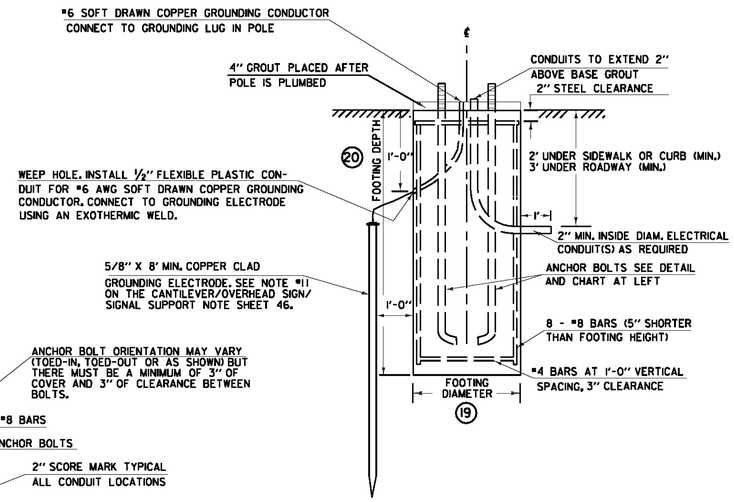
ANCHOR BOLT DETAIL		
SIZE	L (IN)	T (IN)
1- 1/4" X 48"	42	8
1- 1/2" X 60"	54	9
1- 3/4" X 90"	84	9
2" X 96"	96	9



ANCHOR BOLT DETAIL



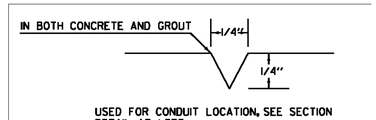
SECTION



ELEVATION

CANTILEVER FOOTING DETAIL

(SPREAD FOOTINGS OR PILES ARE OPTIONAL)



USED FOR CONDUIT LOCATION, SEE SECTION
DETAIL AT LEFT

2" SCORE MARK DETAIL

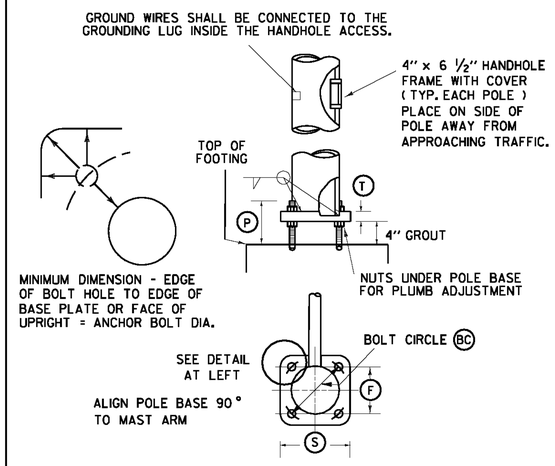
SEE CANTILEVER / OVERHEAD SIGN / SIGNAL SUPPORTS
NOTE SHEET FOR ADDITIONAL INFORMATION (SHEET 46)

◉ SEE SHEET 61 FOR POLE INFORMATION

SEE SHEET 62 FOR CROSS SECTIONS

STRUCTURE DIMENSIONS (IN FEET)

	POLE DATA								ARM DATA							LIGHTING DATA					FOOTING DATA		BASE PLATE / BOLT DATA					
	POLE	TYPE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	BC	F	S	T	P	ANCHOR BOLT SIZE
	2	B	33	20					30	18.7						12.5	8		0	2								
◉	1															12.5	8		0_A	2								



POLE BASE AND BASE PLATE DETAIL

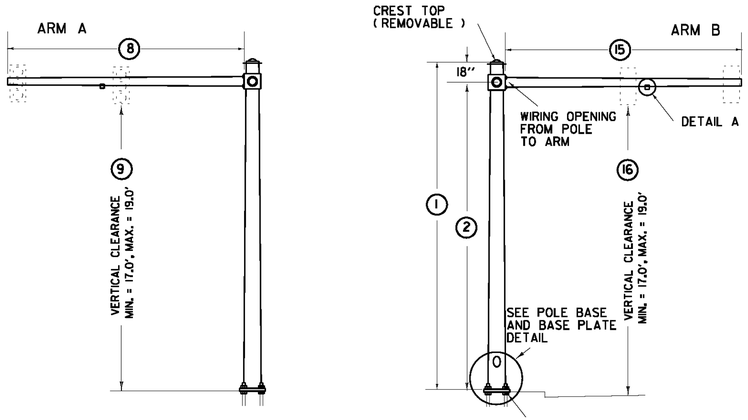
NOTE:
DETAILS
NTS

SINGLE MAST ARM CANTILEVER / FOOTING DETAIL SHEET FOR TRAFFIC SIGNAL PLAN 3 (FEGC F 026-1(34) C/1)

z09B240_TSPS3B.dgn
PLOTTED: 4/5/2010

LAST REVISED 8/15/95

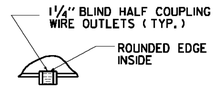
PREPARED BY JAR DATE 4/5/2010
CHECKED BY CMB DATE 4/5/2010
DESIGN SUPERVISOR _____ DATE ____
PROJ. BARRE CITY - NORTH MAIN ST.
TRAFFIC SHEET NO. 3 OF 5
SHEET 60 OF 95 SHEETS



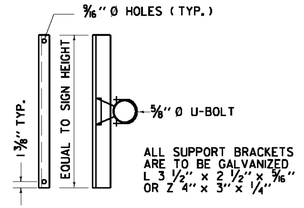
POLE BASE DIAMETER (3)
POLE GAUGE (4)
POLE TAPER RATE (5)

ARM A DIAMETER (10)
ARM A GAUGE (11)
ARM A TAPER RATE (12)

ARM B DIAMETER (17)
ARM B GAUGE (18)
ARM B TAPER RATE (19)



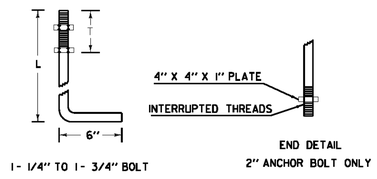
DETAIL A



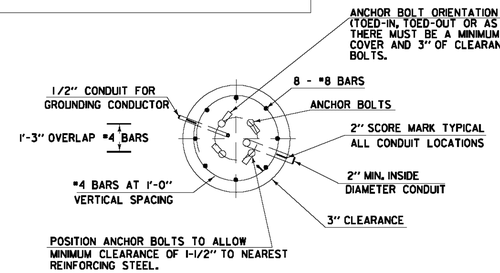
SIGN ON SINGLE
MAST ARM

SIGN BRACKET DETAILS

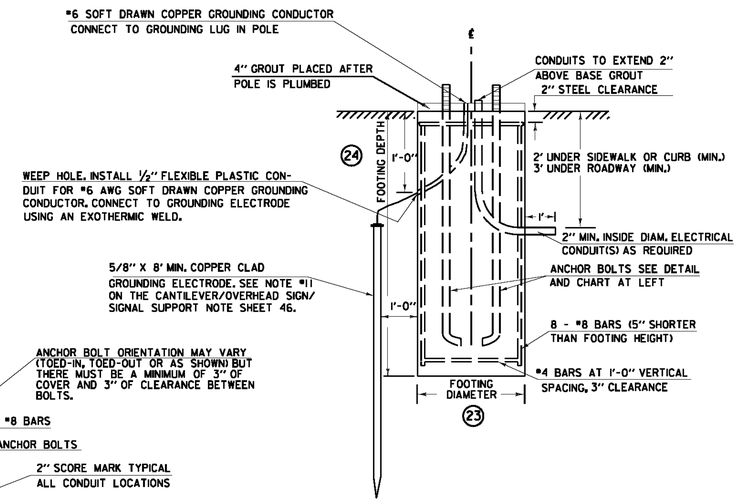
ANCHOR BOLT DETAIL		
SIZE	L (IN)	T (IN)
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ANCHOR BOLT DETAIL



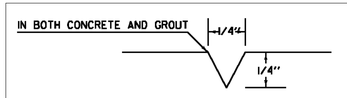
SECTION



ELEVATION

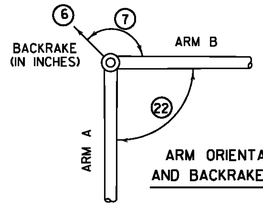
CANTILEVER FOOTING DETAIL

(SPREAD FOOTINGS OR PILES ARE OPTIONAL)

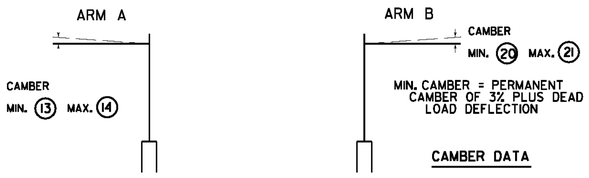


USED FOR CONDUIT LOCATION, SEE SECTION
DETAIL AT LEFT

2" SCORE MARK DETAIL

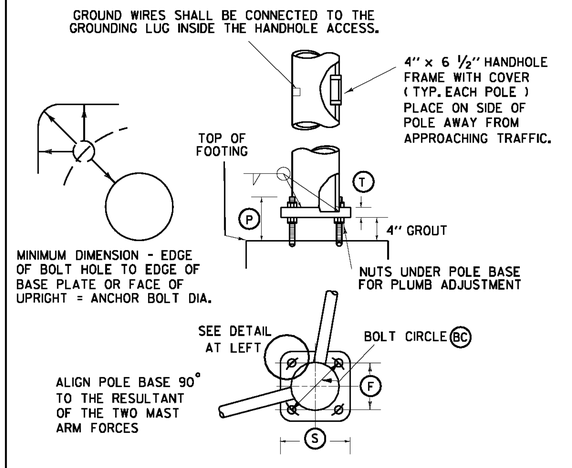


ARM ORIENTATION
AND BACKRAKE DATA



CAMBER DATA

SEE CANTILEVER / OVERHEAD SIGN / SIGNAL SUPPORTS
NOTE SHEET FOR ADDITIONAL INFORMATION (SHEET 46)
SEE SHEET 60 FOR LIGHTING DATA



POLE BASE AND BASE PLATE DETAIL

SEE SHEET 62 FOR CROSS SECTIONS

STRUCTURE DIMENSIONS (IN FEET)																														
	POLE DATA							ARM DATA															FOOTING DATA		BASE PLATE / BOLT DATA					
POLE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(BC)	(F)	(S)	(T)	(P)	ANCHOR BOLT SIZE
1	33	20						37	18						37	18.5						90								

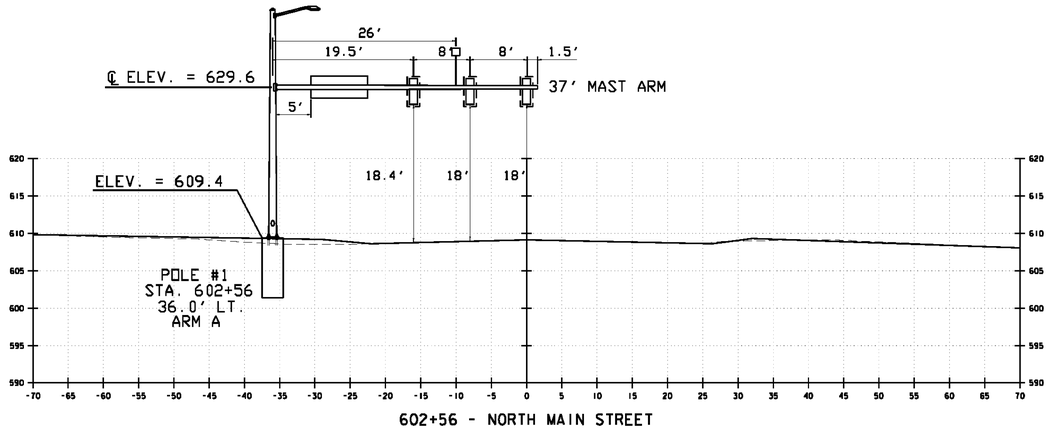
NOTE:
DETAILS
NTS

DOUBLE MAST ARM CANTILEVER / FOOTING DETAIL SHEET
FOR TRAFFIC SIGNAL PLAN 3 (FEGC F 026-1(34) C/1)

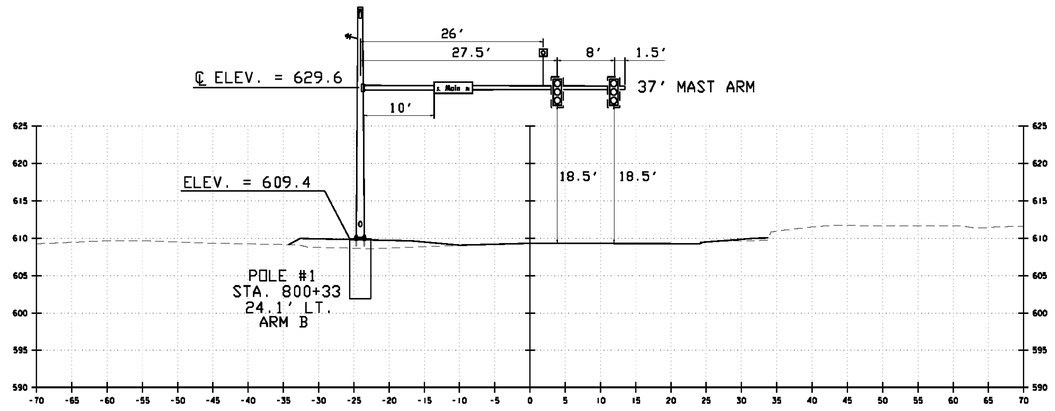
z098240_TSPS3C.dgn
PLOTTED: 4/5/2010

LAST REVISED 8/15/95

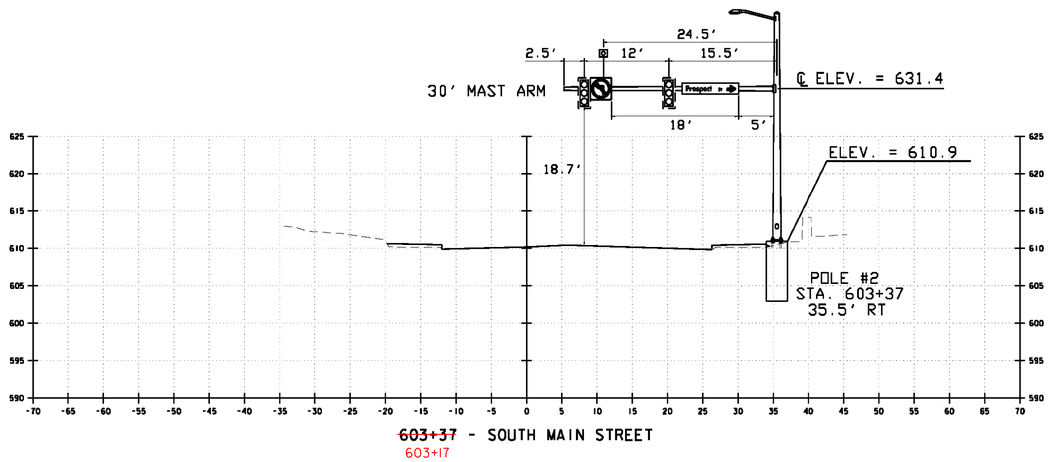
PREPARED BY JAR DATE 4/5/2010
CHECKED BY CMB DATE 4/5/2010
DESIGN SUPERVISOR _____ DATE ____
PROJ. BARRE CITY - NORTH MAIN ST.
TRAFFIC SHEET NO. 4 OF 5
SHEET 61 OF 95 SHEETS



602+56 - NORTH MAIN STREET



800+33 - CHURCH STREET



~~603+37~~ - SOUTH MAIN STREET
603+17

NOTES:

1. ALL MAST ARM FOOTINGS SHALL INCLUDE A 4' REVEAL. ELEVATIONS SHOWN IN CROSS-SECTIONS ARE APPROXIMATE FINAL GRADE ELEVATIONS FOR CONTRACTOR BIDDING PURPOSES ONLY. ACTUAL FOOTING ELEVATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO SUBMITTING WORKING DRAWINGS.
2. MAST ARM FOOTING SIZES ARE NOT TO SCALE. FOOTING DESIGNS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH SOIL CONDITIONS AND ACTUAL MAST ARM LOADINGS TRANSMITTED TO THE TOP OF FOOTINGS.
3. LOCATIONS OF OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT ARE APPROXIMATE. FINAL LOCATIONS FOR OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT SHALL BE DETERMINED BY THE CONTRACTOR AND THE ENGINEER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DATUM

VERTICAL NAVD 1929

HORIZONTAL NAD 27

NORTH/SOUTH MAIN ST AND
PROSPECT ST/CHURCH ST

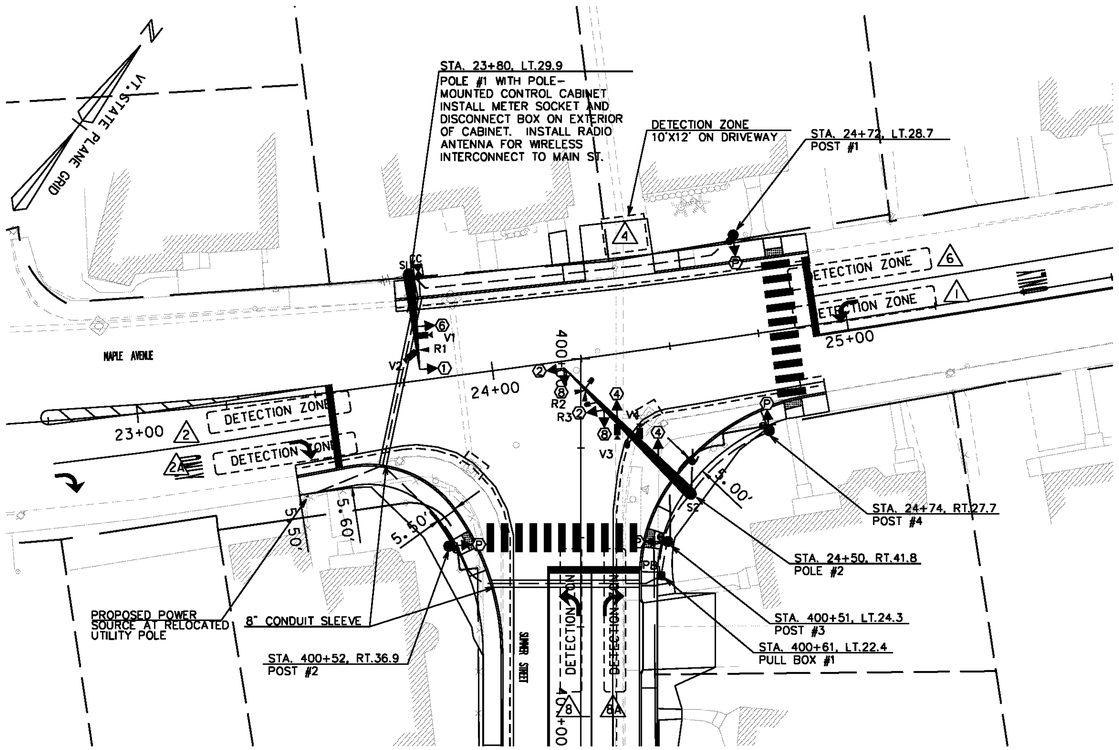
PROJECT NAME: BARRE CITY

PROJECT NUMBER: FEGC F 026-1(34) C/1

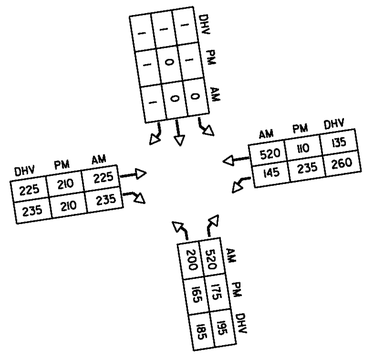
FILE NAME: z09B240_TSPS3D.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 3, SHEET 5

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 62 OF 95

VHB Vanasse Hangen Brustlin, Inc.



2009 AVERAGE WEEKDAY TRAFFIC DATA



LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15	QUANTITY
ECONOLITE TRAFFIC SIGNAL CONTROLLER	1
ECONOLITE SYSTEM MASTER CONTROLLER ASC/2M-2100	1
POTS LINE TELECOMMUNICATIONS DROP WITH COMPATIBLE 56K MODEM	1
ECONOLITE "STRETCH M" POLE MOUNTED CONTROLLER CABINET PAINTED FLAT BLACK WITH ANCILLARY CONTROL EQUIPMENT	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH 25 FOOT MAST ARM (POLE #1)	1
FLAT BLACK PAINTED STEEL MAST ARM SIGNAL POLE WITH 50 FOOT MAST ARM (POLE #2)	1
FLAT BLACK PAINTED PEDESTAL POST	4
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE MAST ARM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	7
ONE WAY, 5-SECTION, 12-INCH POLYCARBONATE MAST ARM MOUNTED LED TRAFFIC SIGNAL HEAD WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	1
POLE MOUNTED 16-INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	4
VTRANS SPEC ACCESSIBLE PEDESTRIAN PUSH BUTTONS WITH R10-3e TYPE SIGN ASSEMBLY AND AUDIBLE INDICATORS	4
ASTRO-BRACKETS	8
WIRELESS RADIO INTERCONNECT SYSTEM	1
OPTICAL DETECTION SENSOR WITH DETECTION CABLES	4
EMERGENCY VEHICLE PREEMPTION RECEIVER	3
EMERGENCY VEHICLE PREEMPTION 4-CHANNEL PHASE SELECTOR AND CHASSIS	1
EMERGENCY VEHICLE PREEMPTION STROBE	3

WIRED CONDUIT (PVC) AND ELECTRICAL CONDUIT SLEEVE SCHEDULE

ITEM NUMBER	678.21	678.23		678.30	
	ELECTRICAL CONDUIT	WIRED CONDUIT		CONDUIT SLEEVE	
FROM/TO	3"	3"	4"	8"	DESCRIPTION
POWER TO CABINET		66			POWER (INCLUDES WIRED CONDUIT FOR RISER)
CABINET TO POLE #1		5			POLE #1
CABINET TO POST #1		98			POST #1
CABINET TO POST #2	48		88	48	POLE #2, POST #2, POST #3, POST #4
POST #2 TO PB #1	43		65	43	POLE #2, POST #3, POST #4
PB #1 TO POST #3		12			POST #3
PB #1 TO POLE #2		27			POLE #2, POST #4
POLE #2 TO POST #4		30			POST #4
SUB-TOTALS	91	238	153	91	
ROUNDING	4	7	7	4	
TOTALS	95	245	160	95	

DETECTION SCHEDULE

INCIDENTAL TO ITEM 678.15

OPTICAL VIDEO DETECTORS

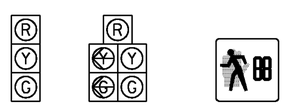
LOOP NO.	LANE	CALL Ø	SIZE	TYPE & NO. TURNS	DELAY OR PRESENCE	SLOT	CHANNEL
1	SBLT	1	6X40	OPTICAL	PRESENCE	2	1
2	NBTH	2	6X40	OPTICAL	PRESENCE	4	1
2A	NBRT	2	6X40	OPTICAL	5 SEC DELAY	4	2
4	DW	4	6X40	OPTICAL	PRESENCE	6	1
5	SBTH	6	6X40	OPTICAL	PRESENCE	2	2
6	WBLT	8	6X40	OPTICAL	PRESENCE	8	1
6A	WBRT	8	6X40	OPTICAL	5 SEC DELAY	8	2

LEGEND

NEW	LEGEND
CC	CONTROLLER CABINET
	SIGNAL HEAD
	CONDUIT
	OPTICAL DETECTION ZONE
	PEDESTAL POST
	STANCHION
S	SPARE SWEEP
	EMERGENCY VEHICLE PREEMPTION STROBE
	EMERGENCY VEHICLE PREEMPTION RECEIVER
	PROPOSED MAST ARM
	PEDESTRIAN PUSH BUTTON
PB	PULL BOX
	OVERHEAD SIGN
	RADIO ANTENNA
	OPTICAL DETECTION
	EXISTING MAST ARM

SIGNAL FACE ARRANGEMENT

(12" LED LENSES W/ 5" BACKPLATES)



EQUIPMENT NOTES

(A) SEE STANDARDS E-170, E-171A, E-171B, 171C, 173, & 175 FOR ADDITIONAL INFORMATION.

(B) SEE TRAFFIC SIGNAL NOTE SHEETS 46, 47 & 64 AND SINGLE MAST ARM CANTILEVER/FOOTING DETAIL SHEET 65 FOR ADDITIONAL INFORMATION.

(C) FOR SIGN DETAILS, SEE SHEETS 36 THROUGH 45.

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

20 0 20 40
FEET

VHB Vanasse Hangen Brustlin, Inc.

MAPLE AVE AND SUMMER ST

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-I(34) C/I

FILE NAME: z09B240_TSPS4.dgn PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS CHECKED BY:
TRAFFIC SIGNAL PLAN 4, SHEET 1 SHEET 63 OF 95

TRAFFIC SIGNAL NOTES

A. NEW EQUIPMENT

1. ALL SIGNAL HEADS MOUNTED ON CANTILEVER ARMS SHALL BE POLYCARBONATE. BACKPLATES SHALL BE REQUIRED ON ALL SIGNAL HEADS.
2. ALL SIGNAL HEADS SHALL BE LIGHT EMITTING DIODES (LED).
3. CABINET SHALL BE POLE MOUNTED. DISCONNECT SWITCH AND METER SHALL BE ATTACHED TO THE EXTERIOR OF THE CABINET ON THE SIDE FURTHEST FROM THE DRIVEWAY. POWER SOURCE SHALL BE UNDERGROUND FEED FROM UTILITY POLE LOCATED ALONG EAST SIDE OF MAPLE AVENUE. RECOMMEND OPTION #5 FROM STANDARD E-175.
4. ALL SIGNAL EQUIPMENT SHALL BE PAINTED FLAT BLACK IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

B. SIGNAL OPERATION

1. SIGNAL TIMING SHOWN ON THE PLANS SHALL BE IMPLEMENTED AT THE COMPLETION OF THE TRAFFIC SIGNAL CONSTRUCTION. SIGNAL TIMING MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC PATTERNS AND CONDITIONS.
2. THE SIGNAL SHALL BEGIN WITH PHASES 2 & 6 FOLLOWING FLASHING OPERATIONS.
3. PEDESTRIAN MOVEMENTS ARE CONCURRENT WITH AUDIBLE INDICATIONS.
4. CONCURRENT PEDESTRIAN PHASE (PHASE 8) SHALL BE ACTUATED BY PUSH BUTTONS AT POSTS 1 OR 4. EXCLUSIVE PEDESTRIAN PHASE (PHASE 9) SHALL BE ACTUATED BY PUSH BUTTONS AT POSTS 2 AND 3.

C. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL WIRED CONDUIT SHALL BE 3-INCH OR 4-INCH PVC, SCHEDULE 80.
2. WHEN CONDUIT IS PLACED BELOW THE TRAVELED ROADWAY, IT SHALL BE PLACED IN AN 8-INCH PVC ELECTRICAL CONDUIT SLEEVE, SCHEDULE 80.

D. OPTICAL VEHICLE DETECTION

1. ALL OPTICAL DETECTION CABLES SHALL BE LABELED WITH THE PHASE NUMBERS AND APPROACH DIRECTION CONTROLLED BY THE OPTICAL DETECTION UNIT (PHASE 1&6, WB)
2. ALL PROGRAMMED DETECTION ZONES SHALL FAIL IN THE "ON" MODE.
3. NO SPLICES SHALL BE PERMITTED IN THE OPTICAL DETECTION CABLES.
4. VIDEO DETECTION ZONES SHALL BEGIN AT 5 FEET IN FRONT OF THE STOP LINE AND EXTEND AT LEAST 40 FEET.
5. FINAL VIDEO DETECTION CAMERA AIM AND DETECTION ZONE PLACEMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND THE RESIDENT ENGINEER.

E. GENERAL

1. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE SIGNAL EQUIPMENT.
2. SEE THE CONTROLLER ID PLAQUE DETAIL ON THIS SHEET.
3. INTERSECTION SHALL BE INTERCONNECTED WITH THE INTERSECTION AT N. MAIN ST. AND ROUTE 62/MAPLE AVE. ANTENNA SHALL BE SECURELY MOUNTED TO MAST ARM POLE EXTENSION OR AS DIRECTED BY THE RESIDENT ENGINEER.
4. INTERSECTION SHALL INCLUDE AN EMERGENCY VEHICLE PREEMPTION SYSTEM AS APPROVED BY THE CITY OF BARRE FIRE DEPARTMENT.
   PREEMPT #3 - RECEIVER 1 CALLS PHASES 1 & 6
   PREEMPT #4 - RECEIVER 2 CALLS PHASES 2
   PREEMPT #5 - RECEIVER 3 CALLS PHASE 8

DATUM

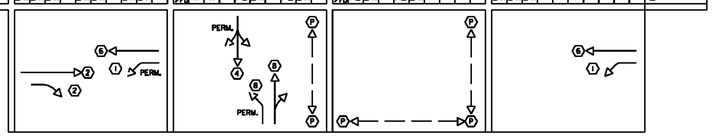
VERTICAL	NAVD 1929
HORIZONTAL	NAD 27

TIMING AND PHASING

		PHASE 2+6 (DWELL)								PHASE 4+8								PHASE 9								PHASE 1+6							
		%	CLEAR TO							%	CLEAR TO							%	CLEAR TO							%	CLEAR TO						
			Ø4+8			Ø9		Ø1+6			Ø9		Ø1+6		Ø2+6				Ø1+6		Ø2+6						Ø 2+6							
OFF PEAK REST OF DAY	VEHICLE	2								2								2								2							
	MINIMUM	10	4	2		4	2	4	2	5/6	4	2		4	2	4	2	1/2	4	2	4	2				5	4	2					
	MAXIMUM	40	4	2		4	2	4	2	20	4	2		4	2	4	2	1/2	4	2	4	2				10	4	2					
	MAXIMUM2	40	4	2		4	2	4	2	25	4	2		4	2	4	2	1/2	4	2	4	2				15	4	2					
	PED ACT																																
AM PEAK 7-9 AM	VEHICLE	2								2								2								2							
	MINIMUM	10	4	2		4	2	4	2	5/6	4	2		4	2	4	2	1/2	4	2	4	2				5	4	2					
	MAXIMUM	45	4	2		4	2	4	2	15	4	2		4	2	4	2	1/2	4	2	4	2				10	4	2					
	MAXIMUM2	55	4	2		4	2	4	2	25	4	2		4	2	4	2	1/2	4	2	4	2				20	4	2					
	PED ACT																																
PM PEAK 3-6 PM	VEHICLE	2								2								2								2							
	MINIMUM	10	4	2		4	2	4	2	5/6	4	2		4	2	4	2	1/2	4	2	4	2				5	4	2					
	MAXIMUM	45	4	2		4	2	4	2	25	4	2		4	2	4	2	1/2	4	2	4	2				10	4	2					
	MAXIMUM2	60	4	2		4	2	4	2	30	4	2		4	2	4	2	1/2	4	2	4	2				20	4	2					
	PED ACT																																

FLASHING OPERATION

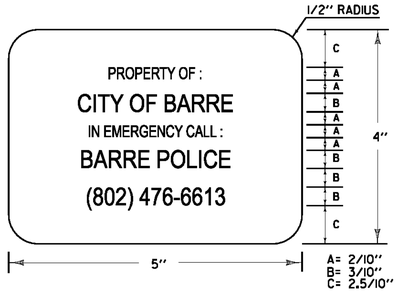
FACE 1	G	Y	R		Y	R	G	G		R	R	R		R	R		R	R	R		R	R			1/2	1/2	G						FY (BALL)
FACE 2	G	Y	R		Y	R	Y	R		R	R	R		R	R		R	R	R		R	R			R	R	R						FY
FACE 4	R	R	R		R	R	R	R		G	Y	R		Y	R		Y	R	R		R	R			R	R	R						FR
FACE 6	G	Y	R		Y	R	G	G		R	R	R		R	R		R	R	R		R	R			G	G	G						FY
FACE 8	R	R	R		R	R	R	R		G	Y	R		Y	R		Y	R	R		R	R			R	R	R						FR
PED (N-S)	DW	DW	DW		DW	DW	DW	DW		DW	DW	DW		DW	DW		DW	DW	1/2 FD	DW	1/2 FD	DW			DW	DW	DW						B
PED (E-W)	DW	DW	DW		DW	DW	DW	DW		1/2 W	W			FD	DW		FD	DW	1/2 FD	DW	1/2 FD	DW			DW	DW	DW						B



W = WALK, FD = FLASHING DON'T WALK, DW = DON'T WALK, B = BLANK, FR = FLASHING RED, FY = FLASHING YELLOW

1. FACE NUMBERS ARE BASED ON NEMA PHASES
2. SOUTHBOUND LEFT-TURN SHALL OPERATE UNDER PROTECTED/PERMISSIVE LEFT-TURN PHASING.

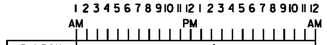
CONTROLLER IDENTIFICATION PLAQUE



LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING
BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE

NOTES:
1.) THE PLAQUE SHALL BE MOUNTED ON THE TRAFFIC SIGNAL CONTROLLER CABINET. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.
2.) THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.
3.) THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.

PROGRAM PERIODS OF OPERATION



SUNDAY	4							
MONDAY	4	1	2	1	3	1	4	
TUESDAY	4	1	2	1	3	1	4	
WEDNESDAY	4	1	2	1	3	1	4	
THURSDAY	4	1	2	1	3	1	4	
FRIDAY	4	1	2	1	3	1	4	
SATURDAY	4							

NOTES:
PLAN 1 - MIDDAY (MAXIMUM 1): 6:00 AM TO 7:00 AM, M-F; 9:00 AM TO 3:00 PM, M-F; 6:00 PM TO 10:00 PM, M-F
PLAN 2 - AM PEAK (MAXIMUM 2): 7:00 AM TO 9:00 AM, M-F
PLAN 3 - PM PEAK (MAXIMUM 2): 3:00 PM TO 6:00 PM, M-F
PLAN 4 - OFFPEAK (MAXIMUM 1): MIDNIGHT TO 6:00 AM, M-F; 10:00 PM TO MIDNIGHT, M-F; ALL DAY SATURDAYS AND SUNDAYS

COORDINATION CYCLE/SPLIT OFFSET SCHEDULE

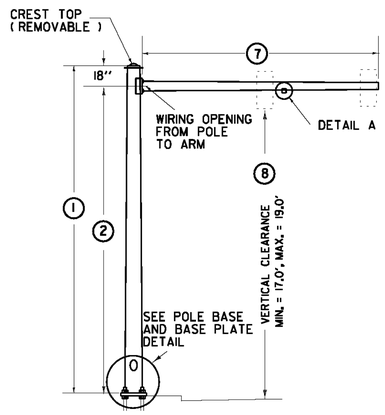
	PLAN 1	PLAN 2	PLAN 3	PLAN 4
CYCLE LENGTH	80	80	80	FREE
COS	111	121	131	-
OFFSET	0	0	0	-
SPLIT TIME 01	15	11	17	-
SPLIT TIME 02	21	23	21	-
SPLIT TIME 03	0	0	0	-
SPLIT TIME 04	24	26	22	-
SPLIT TIME 05	0	0	0	-
SPLIT TIME 06	36	34	38	-
SPLIT TIME 07	0	0	0	-
SPLIT TIME 08	24	26	22	-
SPLIT TIME 09	20	20	20	-

COORDINATION NOTES:
1. OFFSET IS REFERENCED TO BEGINNING OF THE COORDINATED PHASE (02 & 06)

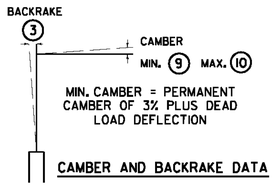
MAPLE AVE AND SUMMER ST

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z09B240_TSPS4A.dgn	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
TRAFFIC SIGNAL PLAN 4, SHEET 2	SHEET 64 OF 95

VHB Vanasse Hangen Brustlin, Inc.

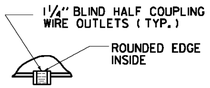


TYPE A

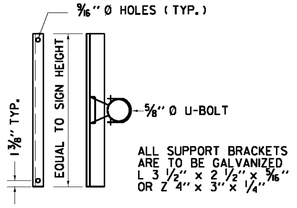


CAMBER AND BACKRAKE DATA

POLE BASE DIAMETER (4)
POLE GAUGE (5)
POLE TAPER RATE (6)
ARM DIAMETER (11)
ARM GAUGE (12)
ARM TAPER RATE (13)



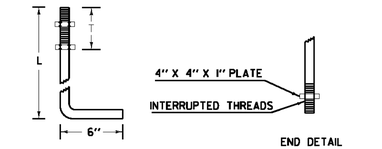
DETAIL A



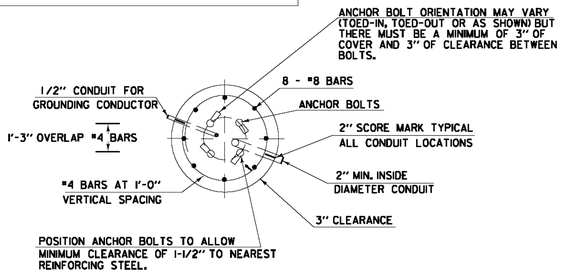
SIGN ON SINGLE
MAST ARM

SIGN BRACKET DETAILS

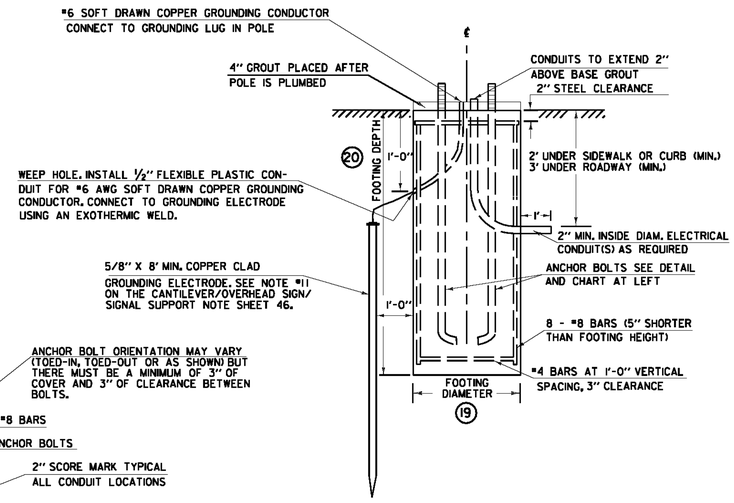
ANCHOR BOLT DETAIL		
SIZE	L (IN)	T (IN)
1- 1/4" X 48"	42	8
1- 1/2" X 60"	54	9
1- 3/4" X 90"	84	9
2" X 96"	96	9



ANCHOR BOLT DETAIL



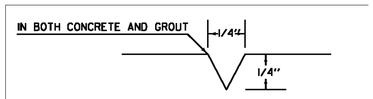
SECTION



ELEVATION

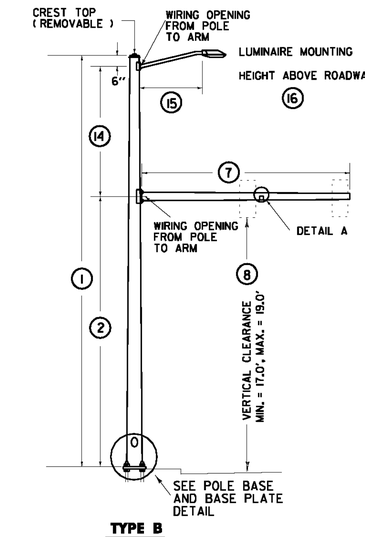
CANTILEVER FOOTING DETAIL

(SPREAD FOOTINGS OR PILES ARE OPTIONAL)

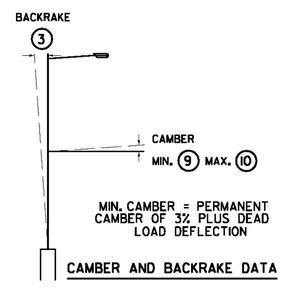


USED FOR CONDUIT LOCATION, SEE SECTION
DETAIL AT LEFT

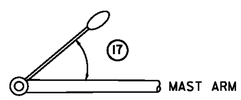
2" SCORE MARK DETAIL



TYPE B



CAMBER AND BACKRAKE DATA



LUMINAIRE ORIENTATION



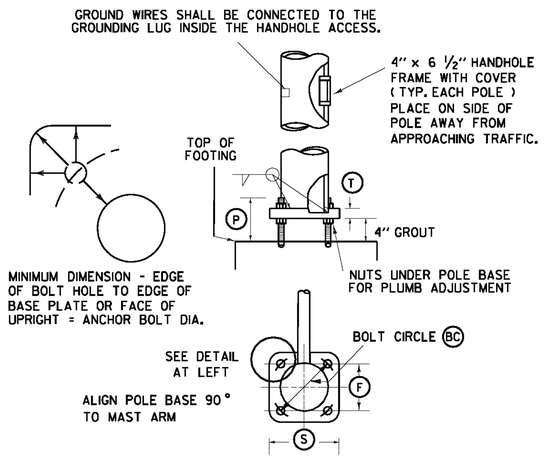
LUMINAIRE ARM RISE

SEE CANTILEVER / OVERHEAD SIGN / SIGNAL SUPPORTS
NOTE SHEET FOR ADDITIONAL INFORMATION (SHEET 46)

SEE SHEET 66 FOR CROSS SECTIONS

STRUCTURE DIMENSIONS (IN FEET)

POLE DATA								ARM DATA							LIGHTING DATA					FOOTING DATA		BASE PLATE / BOLT DATA					
POLE	TYPE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(BC)	(F)	(S)	(T)	(P)	ANCHOR BOLT SIZE
1	B	33	20					25	18.6						12.5	8		0	2								
2	B	33	20					50	19						12.5	8		47	2								



POLE BASE AND BASE PLATE DETAIL

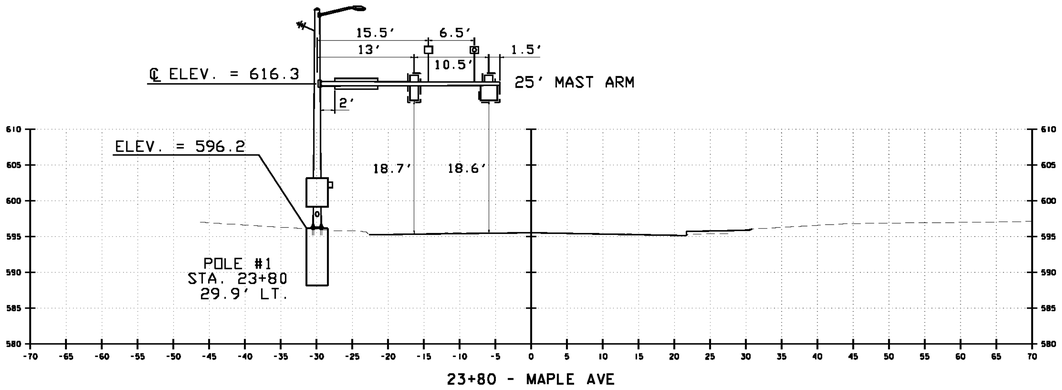
NOTE:
DETAILS
NTS

SINGLE MAST ARM CANTILEVER / FOOTING DETAIL SHEET
FOR TRAFFIC SIGNAL PLAN 4 (FEGC F 026-1(34) C/1)

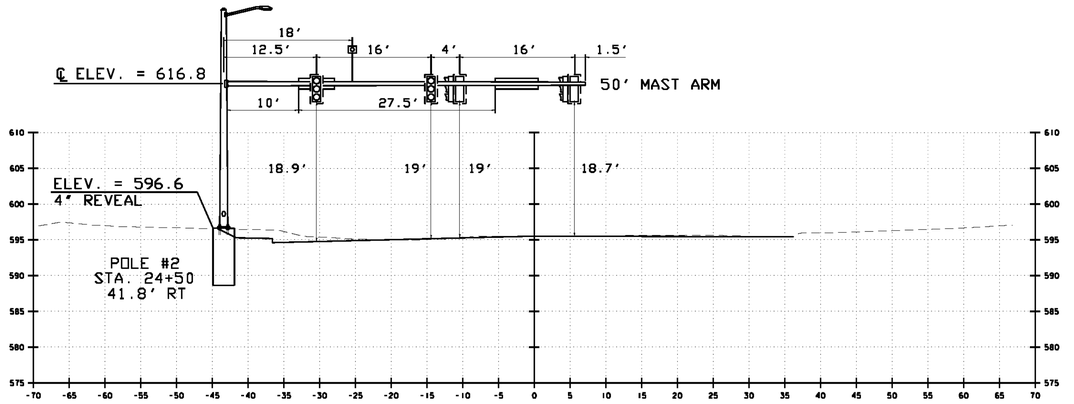
z09B240_TSPS4B.dgn
PLOTTED: 4/5/2010

LAST REVISED 8/15/95

PREPARED BY JAR DATE 4/5/2010
CHECKED BY CMB DATE 4/5/2010
DESIGN SUPERVISOR ____ DATE ____
PROJ. BARRE CITY - NORTH MAIN ST.
TRAFFIC SHEET NO. 3 OF 4
SHEET 65 OF 95 SHEETS



23+80 - MAPLE AVE



400+07 (SKEWED) - SUMMER STREET

NOTES:

1. ALL MAST ARM FOOTINGS SHALL INCLUDE A 4' REVEAL. ELEVATIONS SHOWN IN CROSS-SECTIONS ARE APPROXIMATE FINAL GRADE ELEVATIONS FOR CONTRACTOR BIDDING PURPOSES ONLY. ACTUAL FOOTING ELEVATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO SUBMITTING WORKING DRAWINGS.

2. MAST ARM FOOTING SIZES ARE NOT TO SCALE. FOOTING DESIGNS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH SOIL CONDITIONS AND ACTUAL MAST ARM LOADINGS TRANSMITTED TO THE TOP OF FOOTINGS.

3. LOCATIONS OF OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT ARE APPROXIMATE. FINAL LOCATIONS FOR OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT SHALL BE DETERMINED BY THE CONTRACTOR AND THE ENGINEER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DATUM

VERTICAL NAVD 1929

HORIZONTAL NAD 27

MAPLE AVE AND SUMMER ST

PROJECT NAME: BARRE CITY

PROJECT NUMBER: FEGC F 026-1(34) C/1

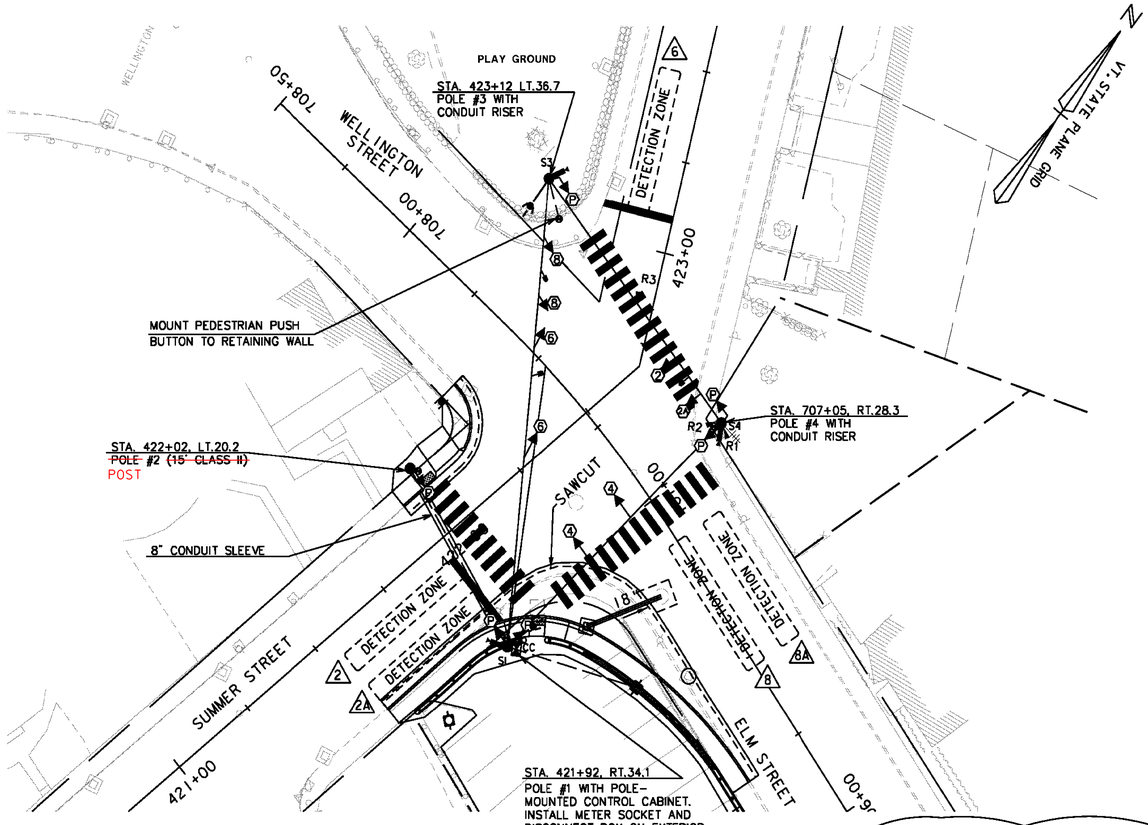
FILE NAME: z09B240_TSPS4C.dgn PLOT DATE: 4/5/2010

PROJECT LEADER: G. BAKOS DRAWN BY: DMP / JAR

DESIGNED BY: DMP / MDS CHECKED BY:

TRAFFIC SIGNAL PLAN 4, SHEET 4 SHEET 66 OF 95

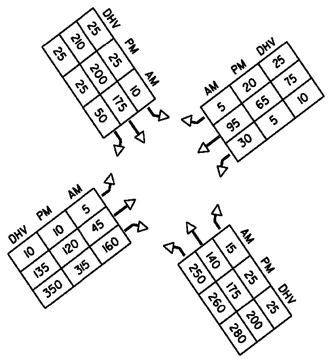
VHB Vanasse Hangen Brustlin, Inc.



WIRED CONDUIT (PVC) AND ELECTRICAL CONDUIT SLEEVE SCHEDULE

ITEM NUMBER	678.23		678.30		
	WIRED CONDUIT		CONDUIT SLEEVE		
FROM/TO	2"	3"	6"	8"	DESCRIPTION
POWER TO CABINET					AERIAL CONNECTION
POLE #2 TO CABINET	57			43	POLE #2
POLE #3 TO PUSH BUTTON	17				
SUB-TOTALS	74			43	
ROUNDING	1			2	
TOTALS	75			45	

2009 AVERAGE WEEKDAY TRAFFIC DATA



DATUM

VERTICAL NAVD 1929

HORIZONTAL NAD 27

DETECTION SCHEDULE

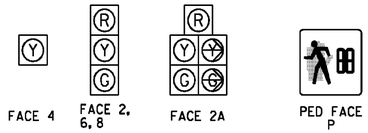
INCIDENTAL TO ITEM 678.15

OPTICAL VIDEO DETECTORS

LOOP NO.	LANE	CALL Ø	SIZE	TYPE & NO. TURNS	DELAY OR PRESENCE	SLOT	CHANNEL
2	EBTH	2	6X40	OPTICAL	PRESENCE	4	1
2A	EBRT	2	6X40	OPTICAL	5 SEC DELAY	4	2
6	WBTH	6	6X40	OPTICAL	PRESENCE	2	1
8	NBLT	8	6X40	OPTICAL	PRESENCE	8	1
8A	NBRT	8	6X40	OPTICAL	PRESENCE	8	2

SIGNAL FACE ARRANGEMENT

(12" LED LENSES W/ 5" BACKPLATES)

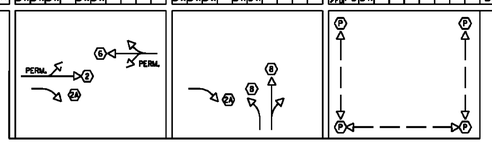


NOTE: INTERSECTION SHALL OPERATE IN FLASHING MODE WITH SIGNALS 4 & 8 FLASHING YELLOW AND SIGNALS 2, 2A & 6 FLASHING RED, PEDESTRIAN SIGNALS AND PUSH BUTTONS SHALL BE COVERED

CONTRACTOR MAY ELECT TO FURNISH AND INSALL SALVAGED SIGNAL HEADS FOR FACES 2, 2A, 6, AND 8.

FOR DETOUR SIGNALIZATION FOR SUBSEQUENT CONSTRUCTION CONTRACT TIMING AND PHASING

		PHASE 2+6 (DWELL)						PHASE 8						PHASE 9						
			CLEAR TO						CLEAR TO						CLEAR TO					
			Ø8		Ø9				Ø9		Ø2+6				Ø 2+6					FLASHING OPERATION
OFF PEAK REST OF DAY	VEHICLE	2						2						2						
	MINIMUM	8	4	2	4	2		10	4	2	4	2		5/16	4	2				
	MAXIMUM	25	4	2	4	2		65	4	2	4	2		5/16	4	2				
	MAXIMUM2	35	4	2	4	2		70	4	2	4	2		5/16	4	2				
	PED ACT																			
AM PEAK 7-9 AM	VEHICLE	2						2						2						
	MINIMUM	8	4	2	4	2		10	4	2	4	2		5/16	4	2				
	MAXIMUM	30	4	2	4	2		70	4	2	4	2		5/16	4	2				
	MAXIMUM2	45	4	2	4	2		80	4	2	4	2		5/16	4	2				
	PED ACT																			
PM PEAK 3-6 PM	VEHICLE	2						2						2						
	MINIMUM	8	4	2	4	2		10	4	2	4	2		5/16	4	2				
	MAXIMUM	35	4	2	4	2		60	4	2	4	2		5/16	4	2				
	MAXIMUM2	45	4	2	4	2		70	4	2	4	2		5/16	4	2				
	PED ACT																			
FACE 2		G	Y	R		Y	R	R	R	R		R	R	R	R	R				FR
FACE 2A		G	Y	R		Y	R	5/16	5/16	R		5/16	R	R	R	R				FR
FACE 6		G	Y	R		Y	R	R	R	R		R	R	R	R	R				FR
FACE 8		R	R	R		R	R	G	Y	R		Y	R	R	R	R				FR
PED (N-S)		DW	DW	DW		DW	DW	DW	DW	DW		DW	DW	5/16	FD	DW				B
PED (E-W)		DW	DW	DW		DW	DW	DW	DW	DW		DW	DW	5/16	FD	DW				B



W = WALK, FD = FLASHING DON'T WALK, DW = DON'T WALK, B = BLANK, FR = FLASHING RED, FY = FLASHING YELLOW

1. FACE NUMBERS ARE BASED ON NEMA PHASES
2. EASTBOUND RIGHT-TURN SHALL OPERATE UNDER PROTECTED/PERMISSIVE RIGHT-TURN PHASING.

LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15	QUANTITY
ECONOLITE TRAFFIC SIGNAL CONTROLLER	1
ECONOLITE "M" POLE MOUNTED CONTROLLER CABINET PAINTED FLAT BLACK WITH ANCILLARY CONTROL EQUIPMENT	1
FLAT BLACK PAINTED STEEL STRAIN POLE WITH 8 FOOT LIGHTING BRACKET ARM	2
FLAT BLACK PAINTED STEEL STRAIN POLE	1
CLASS II WOOD POLES FOR PEDESTRIAN EQUIPMENT	1
ONE WAY, 3-SECTION, 12-INCH POLYCARBONATE SPAN WIRE MOUNTED LED TRAFFIC SIGNAL HEADS WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK (SEE NOTE)	5
ONE WAY, 5-SECTION, 12-INCH POLYCARBONATE SPAN WIRE MOUNTED LED TRAFFIC SIGNAL HEADS WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK (SEE NOTE)	1
ONE WAY, 1-SECTION, 12-INCH POLYCARBONATE SPAN WIRE MOUNTED LED TRAFFIC SIGNAL HEADS WITH TUNNEL VISORS AND LOUVERED BACKPLATES WITH ALL PIECES PAINTED FLAT BLACK	2
POLE MOUNTED 16-INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEADS	6
VTRANS SPEC ACCESSIBLE PEDESTRIAN PUSH BUTTONS WITH R10-3e TYPE SIGN ASSEMBLY AND AUDIBLE INDICATORS	6
SPAN WIRE DISCONNECT BRACKETS	8
EMERGENCY VEHICLE PREEMPTION RECEIVER	3
EMERGENCY VEHICLE PREEMPTION 4-CHANNEL PHASE SELECTOR AND CHASSIS	1
OPTICAL DETECTION SENSOR WITH DETECTOR CABLES	3
EMERGENCY VEHICLE PREEMPTION STROBE	3

LEGEND

NEW	LEGEND
CC	CONTROLLER CABINET
	SIGNAL HEAD
	CONDUIT
	OPTICAL DETECTION ZONE
	PEDESTAL POST
	STANCHION
S	SPARE SWEEP
	EMERGENCY VEHICLE PREEMPTION RECEIVER
	EMERGENCY VEHICLE PREEMPTION STROBE
	PROPOSED MAST ARM
	PEDESTRIAN PUSH BUTTON
PB	PULL BOX
	OVERHEAD SIGN
	OPTICAL DETECTION
	EXISTING MAST ARM

20 0 20 40

FEET

VHB Vanasse Hangen Brustlin, Inc.

SUMMER ST AND ELM ST/WELLINGTON ST

PROJECT NAME: BARRE CITY

PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_TSPS5.dgn PLOT DATE: 4/5/2010

PROJECT LEADER: G. BAKOS DRAWN BY: DMP / JAR

DESIGNED BY: DMP / MDS CHECKED BY:

TRAFFIC SIGNAL PLAN 5, SHEET 1 SHEET 67 OF 95

TRAFFIC SIGNAL NOTES

A. NEW EQUIPMENT

1. ALL SIGNAL HEADS MOUNTED ON SPAN WIRE SHALL BE POLYCARBONATE. BACKPLATES SHALL BE REQUIRED ON ALL SIGNAL HEADS.

2. ALL SIGNAL HEADS SHALL BE LIGHT EMITTING DIODES (LED).

3. CABINET SHALL BE POLE MOUNTED. DISCONNECT SWITCH AND METER SHALL BE ATTACHED TO THE POLE ON THE SIDE FURTHEST FROM TRAFFIC THAT DOES NOT IMPEDE THE SIDEWALK. POWER SOURCE SHALL BE AERIAL FEED. RECOMMEND OPTION #5 FROM STANDARD E-175.

4. ALL SIGNAL EQUIPMENT SHALL BE PAINTED FLAT BLACK IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

5. EXISTING SPAN WIRE POLES, SIGNALS, SPAN WIRE, AND EQUIPMENT CABINET SHALL BE REMOVED AND SALVAGED TO THE CITY OF BARRE AT THE DIRECTION OF THE ENGINEER.

B. SIGNAL OPERATION

1. SIGNAL TIMING SHOWN ON THE PLANS MAY REQUIRE FINE-TUNING IN THE FIELD BASED ON TRAFFIC PATTERNS AND CONDITIONS.

2. THE SIGNAL SHALL BEGIN WITH PHASES 2 & 6 FOLLOWING FLASHING OPERATIONS.

3. SIGNAL EQUIPMENT SHALL BE INSTALLED, TESTED AND THEN LEFT IN FLASHING OPERATIONS UNTIL CONTRACT 2.

4. PEDESTRIAN EQUIPMENT SHALL BE INSTALLED, TESTED AND THEN COVERED WITH OPAQUE MATERIAL AND LEFT DARK UNTIL THE SIGNAL IS FULLY OPERATIONAL (GREEN-YELLOW-RED OPERATIONS). PEDESTRIAN PUSH BUTTONS SHALL BE DEACTIVATED AND PEDESTRIAN SIGNS SHALL BE PROVIDED TO THE CITY FOR STORAGE UNTIL CONTRACT 2.

C. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL CONDUIT SHALL BE 2-INCH PVC, SCHEDULE 80 IN 8-INCH CONDUIT SLEEVES UNDER ROADWAY, SCHEDULE 80.

D. OPTICAL DETECTION

1. ALL OPTICAL DETECTION CABLES SHALL BE LABELED WITH THE PHASE NUMBERS AND APPROACH DIRECTION CONTROLLED BY THE OPTICAL DETECTION UNIT (PHASE 1&6, WB)

2. ALL PROGRAMMED DETECTION ZONES SHALL FAIL IN THE "ON" MODE.

3. NO SPLICES SHALL BE PERMITTED IN THE OPTICAL DETECTION CABLES.

4. VIDEO DETECTION ZONES SHALL BEGIN AT 5 FEET IN FRONT OF THE STOP LINE AND EXTEND AT LEAST 40 FEET.

5. FINAL VIDEO DETECTION CAMERA AIM AND DETECTION ZONE PLACEMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND THE RESIDENT ENGINEER.

E. GENERAL

1. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A POWER SUPPLY TO THE SIGNAL EQUIPMENT.

2. SEE THE CONTROLLER ID PLAQUE DETAIL ON THIS SHEET.

3. INTERSECTION SHALL INCLUDE EMERGENCY VEHICLE PREEMPTION SYSTEM AS APPROVED BY THE CITY OF BARRE FIRE DEPARTMENT

PREEMPT #3 - RECEIVER 1 CALLS PHASE 8
PREEMPT #4 - RECEIVER 2 CALLS PHASE 2
PREEMPT #5 - RECEIVER 3 CALLS PHASE 6

DATUM

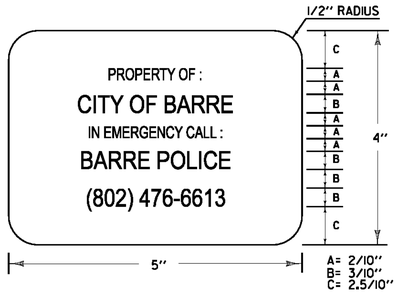
VERTICAL NAVD 1929

HORIZONTAL NAD 27

TIMING AND PHASING

SIGNAL SHALL OPERATE IN FLASHING OPERATION WITH SIGNALS 4 AND 8 FLASHING YELLOW AND SIGNALS 2, 2A, AND 6 FLASHING RED. SEE DETOUR SIGNALIZATION TIMING AND PHASING FOR DEFAULT PROGRAMMING. DETOUR SIGNALIZATION SHALL REQUIRE REMOVAL OF SIGNAL HEADS 4 AND CLOSURE OF WELLINGTON ROAD APPROACH.

CONTROLLER IDENTIFICATION PLAQUE



LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING
BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE

NOTES:

1.) THE PLAQUE SHALL BE MOUNTED ON THE TRAFFIC SIGNAL CONTROLLER CABINET. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.

2.) THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.

3.) THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.

PROGRAMMING FOR FUTURE SIGNAL OPERATIONS

PROGRAM PERIODS OF OPERATION

	1 2 3 4 5 6 7 8 9 10 11 12 AM				1 2 3 4 5 6 7 8 9 10 11 12 PM			AM
SUNDAY	4							
MONDAY	4	1	2	1	3	1	4	
TUESDAY	4	1	2	1	3	1	4	
WEDNESDAY	4	1	2	1	3	1	4	
THURSDAY	4	1	2	1	3	1	4	
FRIDAY	4	1	2	1	3	1	4	
SATURDAY	4							

NOTES:

PLAN 1 - MIDDAY (MAXIMUM 1): 6:00 AM TO 7:00 AM, M-F
9:00 AM TO 3:00 PM, M-F
6:00 PM TO 10:00 PM, M-F

PLAN 2 - AM PEAK (MAXIMUM 2): 7:00 AM TO 9:00 AM, M-F

PLAN 3 - PM PEAK (MAXIMUM 2): 3:00 PM TO 6:00 PM, M-F

PLAN 4 - OFFPEAK (MAXIMUM 1): MIDNIGHT TO 6:00 AM, M-F
10:00 PM TO MIDNIGHT, M-F
ALL DAY SATURDAYS AND SUNDAYS

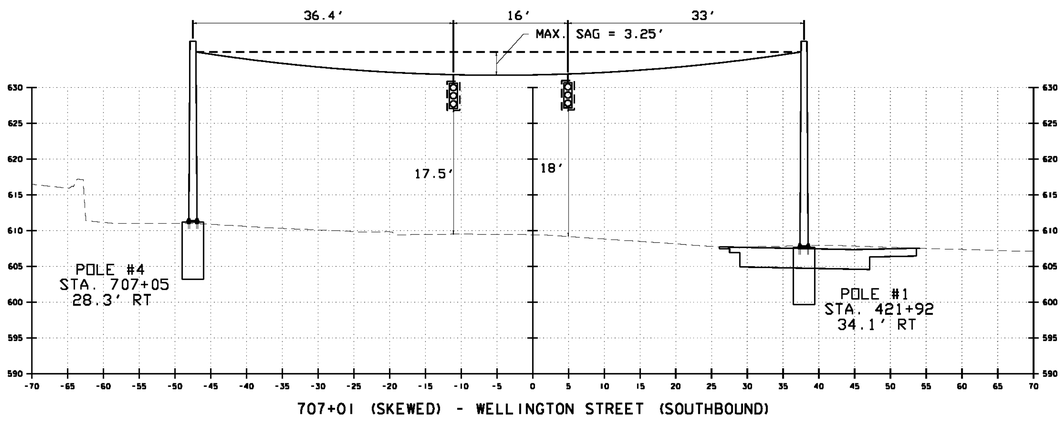
SUMMER ST AND ELM ST/WELLINGTON ST

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

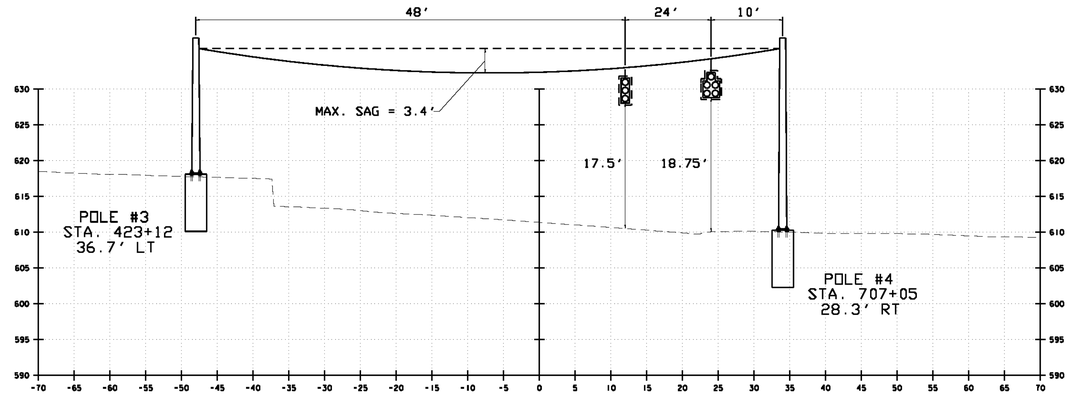
FILE NAME: z09B240_TSPS5A.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 5, SHEET 2

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 68 OF 95

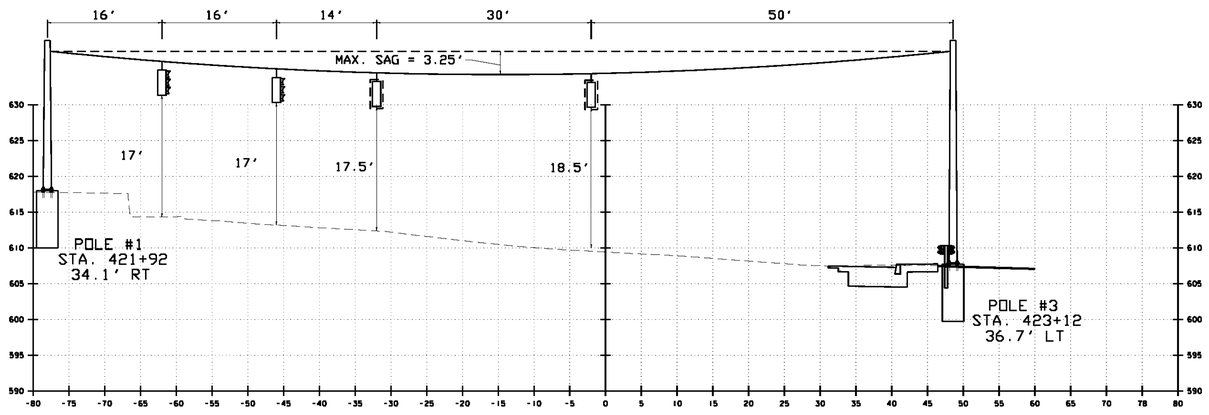
VHB Vanasse Hangen Brustlin, Inc.



707+01 (SKEWED) - WELLINGTON STREET (SOUTHBOUND)



422+81 (SKEWED) - WELLINGTON STREET



422+26 (SKEWED) - SUMMER STREET (NORTHBOUND)

NOTES:

1. ALL MAST ARM FOOTINGS SHALL INCLUDE A 4" REVEAL. ELEVATIONS SHOWN IN CROSS-SECTIONS ARE APPROXIMATE FINAL GRADE ELEVATIONS FOR CONTRACTOR BIDDING PURPOSES ONLY. ACTUAL FOOTING ELEVATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO SUBMITTING WORKING DRAWINGS.

2. MAST ARM FOOTING SIZES ARE NOT TO SCALE. FOOTING DESIGNS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH SOIL CONDITIONS AND ACTUAL MAST ARM LOADINGS TRANSMITTED TO THE TOP OF FOOTINGS.

3. LOCATIONS OF OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT ARE APPROXIMATE. FINAL LOCATIONS FOR OPTICAL DETECTION EQUIPMENT AND WIRELESS EQUIPMENT SHALL BE DETERMINED BY THE CONTRACTOR AND THE ENGINEER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DATUM
VERTICAL NAVD 1929
HORIZONTAL NAD 27

SUMMER ST AND ELM ST/WELLINGTON ST

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-I(34) C/I

FILE NAME: z09B240_TSPS5B.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
TRAFFIC SIGNAL PLAN 5, SHEET 3
PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 69 OF 95

VHB Vanasse Hangen Brustlin, Inc.

GENERAL

1. THE FOLLOWING TRAFFIC CONTROL INFORMATION IS INTENDED TO BE AN OUTLINE FOR HOW THE WORK SHOULD PROCEED. AN ALTERNATIVE PROPOSAL MAY BE SUBMITTED TO THE VTRANS ROADWAY DESIGN ENGINEER, VIA THE ENGINEER. THE CONTRACTOR MUST ALLOW AT LEAST 4 WEEKS FOR VTRANS REVIEW AND APPROVAL.

2. THIS CONTRACT IS THE FIRST OF TWO CONSTRUCTION CONTRACTS PROPOSED FOR THE RECONSTRUCTION OF N. MAIN STREET THROUGH THE CITY OF BARRE. THE PURPOSE OF THIS CONTRACT IS TO RECONSTRUCT THE SIGNALIZED INTERSECTIONS AND INSTALL NEW TRAFFIC SIGNALS. THE NEW SIGNALIZED INTERSECTIONS SHALL BE PROGRAMMED IN ACCORDANCE WITH THE PLANS FOR THE DETOUR PHASING TO BE ESTABLISHED IN THE SUBSEQUENT CONSTRUCTION CONTRACT BY OTHERS. ALL SIGNAL HEADS SHALL BE MAST ARM MOUNTED EXCEPT FOR THE INTERSECTION OF ELM STREET/SUMMER STREET/WELLINGTON STREET WHICH SHALL BE COMPLETED USING SPAN WIRE MOUNTING AND LEFT IN FLASHING OPERATIONS.

3. WORK MAY BE PERFORMED SIMULTANEOUSLY AT ALL INTERSECTIONS AS SHOWN ON THE PLANS. WHEN WORKING ALONG SIDEWALKS, CARE MUST BE TAKEN TO MAINTAIN AN ACCESSIBLE PATH THROUGH THE WORK ZONE FOR PEDESTRIANS IN ACCORDANCE WITH THE MUTCD CHAPTER 6 AND AMERICANS WITH DISABILITIES (ADA) ACCESSIBILITY GUIDELINES.

4. PRIOR TO ELIMINATING PARKING ALONG MAPLE AVENUE, THE PARKING LOT AT THE CORNER OF MAPLE AVENUE AND CORTI STREET SHOULD BE RECONSTRUCTED. THE ON STREET PARKING MUST BE DISCONTINUED PRIOR TO TURN ON OF THE NEW TRAFFIC SIGNAL AT MAPLE AVENUE AND SUMMER STREET. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHOULD BE USED TO ALERT LOCAL RESIDENTS THAT PARKING WILL BE PROHIBITED WHEN THE NEW TRAFFIC SIGNAL IS ACTIVATED. PLACEMENT OF PCMS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. MESSAGE CONTENT SHALL BE APPROVED BY THE ENGINEER.

5. EXISTING TRAFFIC SIGNALS SHALL BE MAINTAINED UNTIL THE NEW SIGNAL EQUIPMENT HAS BEEN INSTALLED, TESTED, AND APPROVED BY THE RESIDENT ENGINEER.

6. SPECIAL CARE MUST BE TAKEN TO PROVIDE ACCESS THROUGH WORK ZONES FOR EMERGENCY VEHICLES. THE CONTRACTOR SHALL COORDINATE WITH BOTH POLICE AND FIRE DEPARTMENTS TO DETERMINE THEIR MINIMUM ACCESS REQUIREMENTS. MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES FOR EMERGENCY VEHICLES. MAINTAIN PEDESTRIAN ACCESS TO ALL COMMERCIAL AND MUNICIPAL PROPERTIES DURING BUSINESS HOURS. ACCESS TO PROPERTIES MAY BE RESTRICTED FOR A SHORT DURATION (NOT MORE THAN FOUR HOURS) WITH PERMISSION OF THE OWNER. COORDINATE MAJOR WORK ON COMMERCIAL OR MUNICIPAL ACCESSES WITH THE OWNER AT LEAST ONE WEEK PRIOR TO STARTING THE WORK.

7. EXISTING SIGNING NOT SHOWN FOR REMOVAL OR RELOCATION SHALL REMAIN. TEMPORARY CONSTRUCTION SIGNING SHALL BE ADDED, AS SHOWN IN THE PLANS AND AS REQUIRED BY THE MUTCD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING CONSTRUCTION SIGNS IN ACCORDANCE WITH THE MUTCD AND AS DIRECTED BY THE RESIDENT ENGINEER. PLACEMENT OF TEMPORARY SIGNS SHALL NOT BLOCK RELEVANT EXISTING SIGNS. PLACEMENT OF TEMPORARY SIGNS SHALL NOT BLOCK SIGHT DISTANCE AT INTERSECTIONS AND DRIVEWAYS. VEGETATION SHALL BE REMOVED FROM THE PUBLIC RIGHT-OF-WAY IF THE VEGETATION WOULD BLOCK SIGHT LINES TO THE TEMPORARY SIGN.

8. CONTRACTOR SHALL MAINTAIN MINIMUM SIGN SPACING BETWEEN EXISTING SIGNS AND TEMPORARY SIGNS AND BETWEEN TEMPORARY SIGNS AND OTHER TEMPORARY SIGNS. MINIMUM SPACING SHALL BE 100 FEET.

9. IT IS EXPECTED THAT THE USE OF PORTABLE CHANGABLE MESSAGE SIGNS (PCMS) WILL BE REQUIRED FOR THIS PROJECT. PCMS SHALL BE USED TO NOTIFY WHEN TRAFFIC SIGNAL OPERATIONS WILL BEGIN OR BE MODIFIED. OTHER APPLICATIONS OF THE PCMS MAY BE REQUIRED AT THE DIRECTION OF THE RESIDENT ENGINEER. PLACEMENT OF PCMS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

10. NEW TRAFFIC SIGNAL HEADS (VEHICULAR AND PEDESTRIAN) SHALL REMAIN COVERED UNTIL TESTED, APPROVED, AND OPERATING. AT NO TIME SHALL UNCOVERED SIGNALS APPEAR BLANK WHILE FACING TRAFFIC. NON-OPERATIONAL PUSH BUTTONS FOR PEDESTRIAN SIGNALS SHALL BE COVERED.

11. FLAGGING MAY BE NECESSARY DURING CONSTRUCTION. FLAGGING OPERATIONS SHALL USE CERTIFIED FLAGGERS OR UNIFORMED TRAFFIC CONTROL OFFICERS. UNIFORMED TRAFFIC OFFICERS SHALL BE USED IF FLAGGING OCCURS WITHIN 200 FEET OF A SIGNALIZED INTERSECTION OR AS DIRECTED BY THE RESIDENT ENGINEER

12. THE FOLLOWING PARAGRAPHS DESCRIBE THE PROPOSED TRAFFIC MANAGEMENT AND CONSTRUCTION SEQUENCING FOR THE ROADWAY/SIDEWALK/STORM DRAINAGE RECONSTRUCTION.

<u>TRAFFIC MANAGEMENT AND ROADWAY CONSTRUCTION SEQUENCING</u>

THE FOLLOWING IS AN OUTLINE OF THE PHASES THAT HAVE BEEN DEVELOPED ON THE BASIS OF MAINTAINING TRAFFIC THROUGHOUT THE LENGTH OF THE PROJECT. THE TYPICAL CONSTRUCTION SIGNS REQUIRED FOR EACH PHASE ARE SHOWN ON THE CONSTRUCTION SIGNING PLANS. SPECIFIC CONSTRUCTION SIGNS AND DEVICES REQUIRED FOR CONSTRUCTION WITHIN THE WORK ZONES SHALL BE IN ACCORDANCE WITH THE VTRANS STANDARDS AND THE MUTCD TYPICAL APPLICATIONS. THE CONTRACTOR SHALL SUBMIT A TRAFFIC MANAGEMENT PLAN TO THE RESIDENT ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO THE START OF WORK.

PHASE 1

RECONSTRUCT THE PARKING LOT AT THE SOUTHWEST CORNER OF MAPLE AVENUE AND CORTI STREET. NEW PARKING SPACES SHALL BE AVAILABLE BEFORE MOVING TO THE NEXT PHASE.

INSTALL NEW SIGNAL EQUIPMENT AT N. MAIN STREET AND RT. 62/MAPLE AVENUE. REMOVE EXISTING SIGNAL SYSTEM AND FOUNDATIONS ONCE THE NEW SIGNAL HAS BEEN INSTALLED, TESTED, AND APPROVED.

RECONSTRUCT CORNERS AT MAPLE AVENUE AND SUMMER STREET. INSTALL NEW SIGNING AND PAVEMENT MARKING. NOTIFY LOCAL RESIDENTS THAT PARKING WILL BE PROHIBITED ALONG MAPLE AVENUE WITHIN THE AREA OF THE NEW TRAFFIC SIGNAL

RECONSTRUCT CORNERS AT N. MAIN STREET AND ELM STREET/WASHINGTON STREET. INSTALL NEW TRAFFIC SIGNAL EQUIPMENT, TEMPORARY TRAFFIC SIGNAL CABLING, PAVEMENT MARKINGS AND DRAINAGE. REMOVE EXISTING SIGNAL SYSTEM AND FOUNDATIONS ONCE THE NEW SIGNAL HAS BEEN INSTALLED, TESTED, AND APPROVED. CONTRACTOR MAY NEED TO OPERATE THE INTERSECTION WITH UNIFORMED TRAFFIC OFFICERS DURING THE TRANSITION OF THE SIGNAL FROM THE EXISTING EQUIPMENT TO THE PROPOSED EQUIPMENT. TRANSITION SHALL BE ACCOMPLISHED EXPEDITIOUSLY. THE INTERSECTION SHALL NOT BE WITHOUT SIGNAL CONTROL FOR MORE THAN EIGHT CONSECUTIVE HOURS.

RECONSTRUCT CORNERS AT N./S. MAIN STREET AND PROSPECT STREET/ CHURCH STREET USING BITUMINOUS PAVEMENT FOR THE SIDEWALK RAMPS AT THE SOUTHWEST CORNER. REMOVE AND RELOCATE THE POST OFFICE SIGN. INSTALL NEW TRAFFIC SIGNAL EQUIPMENT AND PAVEMENT MARKINGS. REMOVE EXISTING SIGNAL SYSTEM AND FOUNDATIONS ONCE THE NEW SIGNAL HAS BEEN INSTALLED, TESTED, AND APPROVED. CONTRACTOR MAY NEED TO OPERATE THE INTERSECTION WITH UNIFORMED TRAFFIC OFFICERS DURING THE TRANSITION OF THE SIGNAL FROM THE EXISTING EQUIPMENT TO THE PROPOSED EQUIPMENT. TRANSITION SHALL BE ACCOMPLISHED EXPEDITIOUSLY. THE INTERSECTION SHALL NOT BE WITHOUT SIGNAL CONTROL FOR MORE THAN EIGHT CONSECUTIVE HOURS.

RECONSTRUCT CORNERS AT ELM STREET AND SUMMER STREET/WELLINGTON STREET. REMOVE EXISTING FLASHING BEACONS AND INSTALL NEW SIGNAL SYSTEM AND NEW PAVEMENT MARKINGS. LEAVE INTERSECTION IN FLASHING MODE.

PHASE 2

NOTIFY LOCAL RESIDENTS THAT PARKING WILL BE PROHIBITED ALONG MAPLE AVENUE WITHIN THE AREA OF THE NEW TRAFFIC SIGNAL. INSTALL NEW SIGNAL EQUIPMENT AT MAPLE AVENUE AND SUMMER STREET.

NEW SIGNAL SHALL NOT BE TURNED ON TO FULL GREEN-YELLOW-RED OPERATIONS UNTIL THE STOP LINES AND OTHER PAVEMENT MARKINGS HAVE BEEN PLACED.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z09B240_TCTRL.dgn	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
TRAFFIC CONTROL NOTES	SHEET 70 OF 95



CONSTRUCTION SIGNS

ROAD WORK AHEAD ①

ROAD WORK 500 FT ②

END ROAD WORK ③

LEGEND

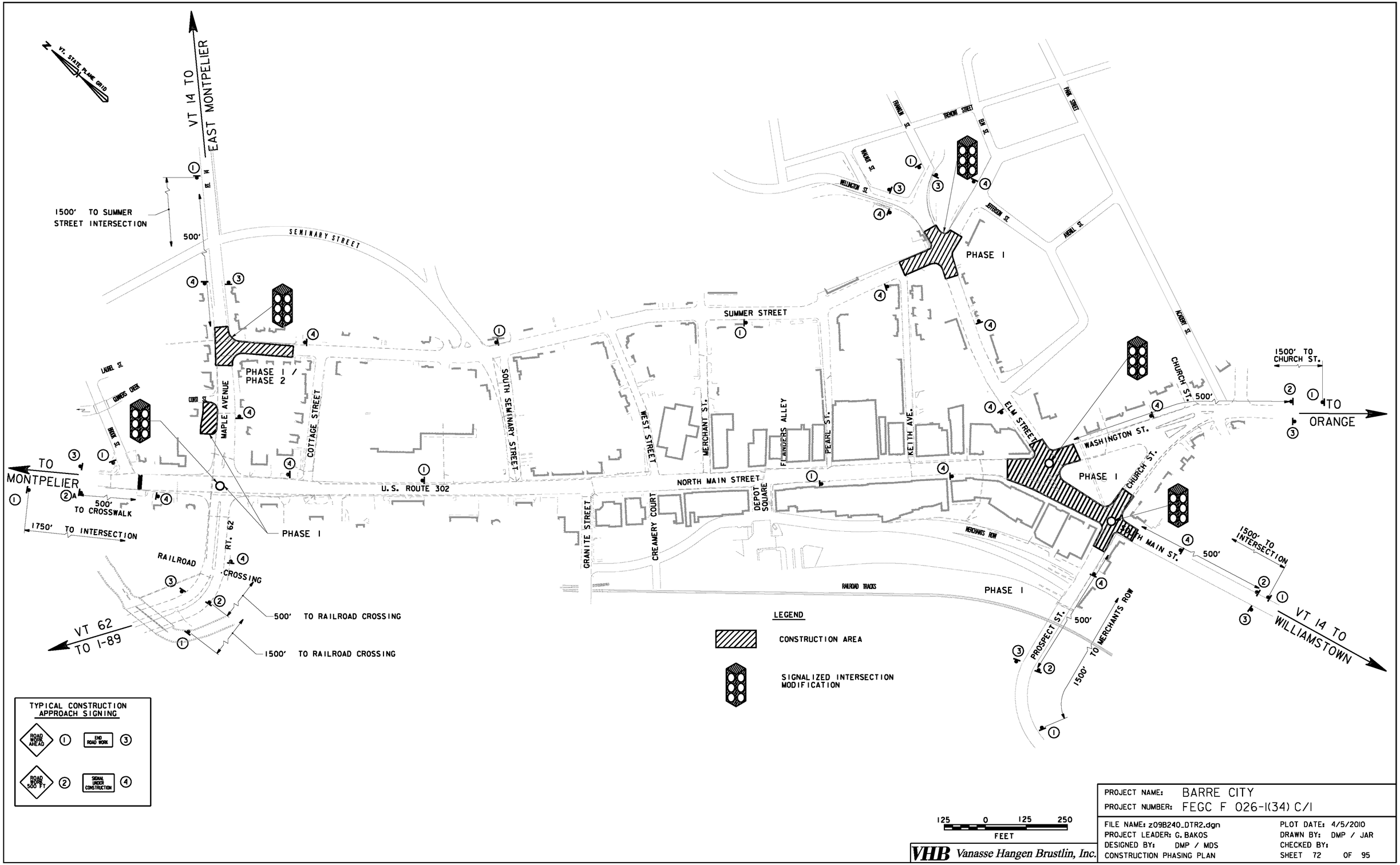
NORTH MAIN STREET TRAFFIC

TRAFFIC SIGNAL MODIFICATIONS / INSTALLATION

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FEET

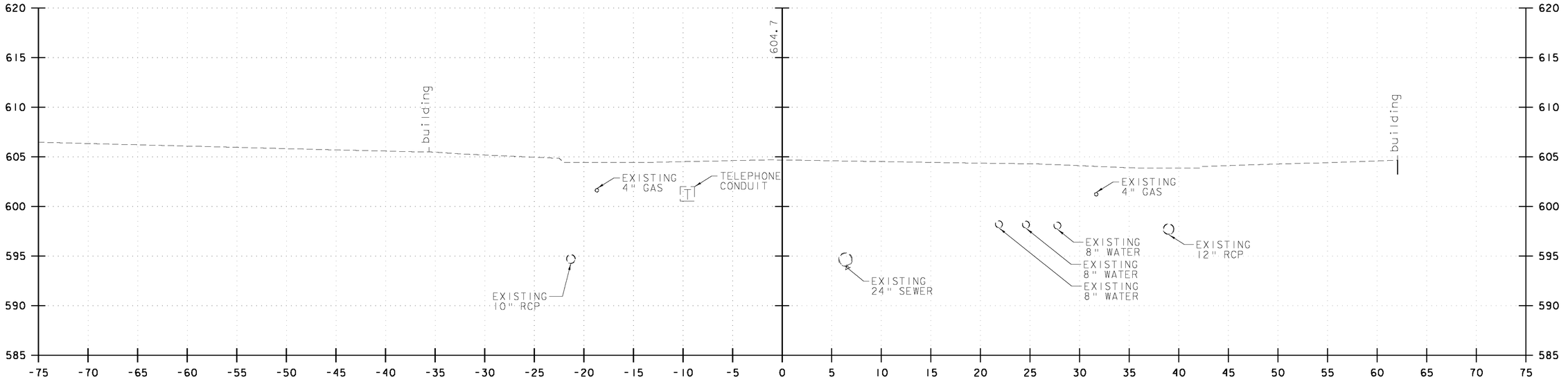
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: BARRE CITY	
PROJECT NUMBER: FEGC F 026-1(34) C/1	
FILE NAME: z09B240_DTRI.dgn	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
CONSTRUCTION AND APPROACH SIGNING	SHEET 71 OF 95

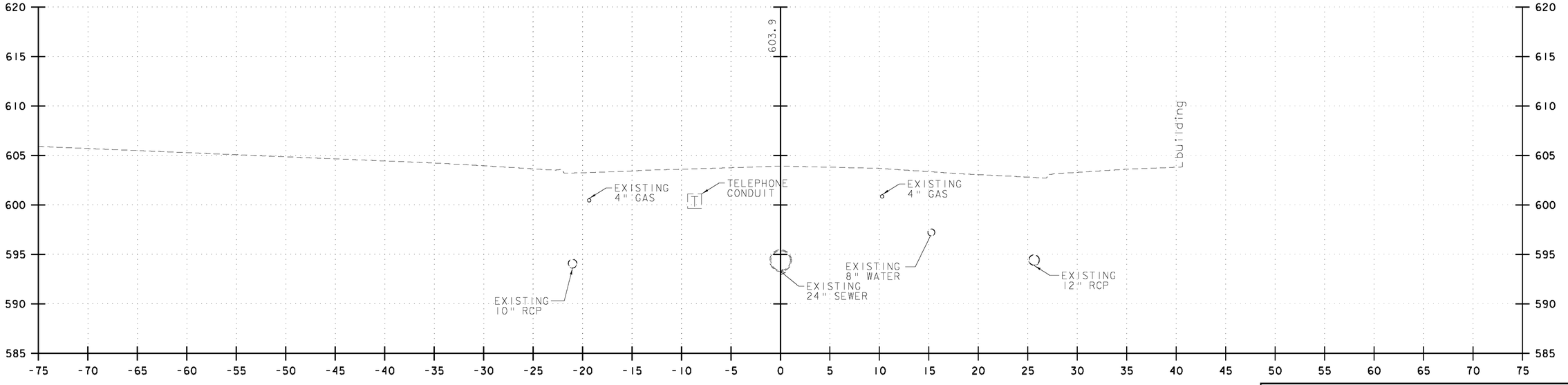


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PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	FEGC F 026-1(34) C/1
FILE NAME: z09B240_DTR2.dgn	PLOT DATE: 4/5/2010
PROJECT LEADER: G. BAKOS	DRAWN BY: DMP / JAR
DESIGNED BY: DMP / MDS	CHECKED BY:
CONSTRUCTION PHASING PLAN	SHEET 72 OF 95



138+00



137+50

5 0 5 10
FEET

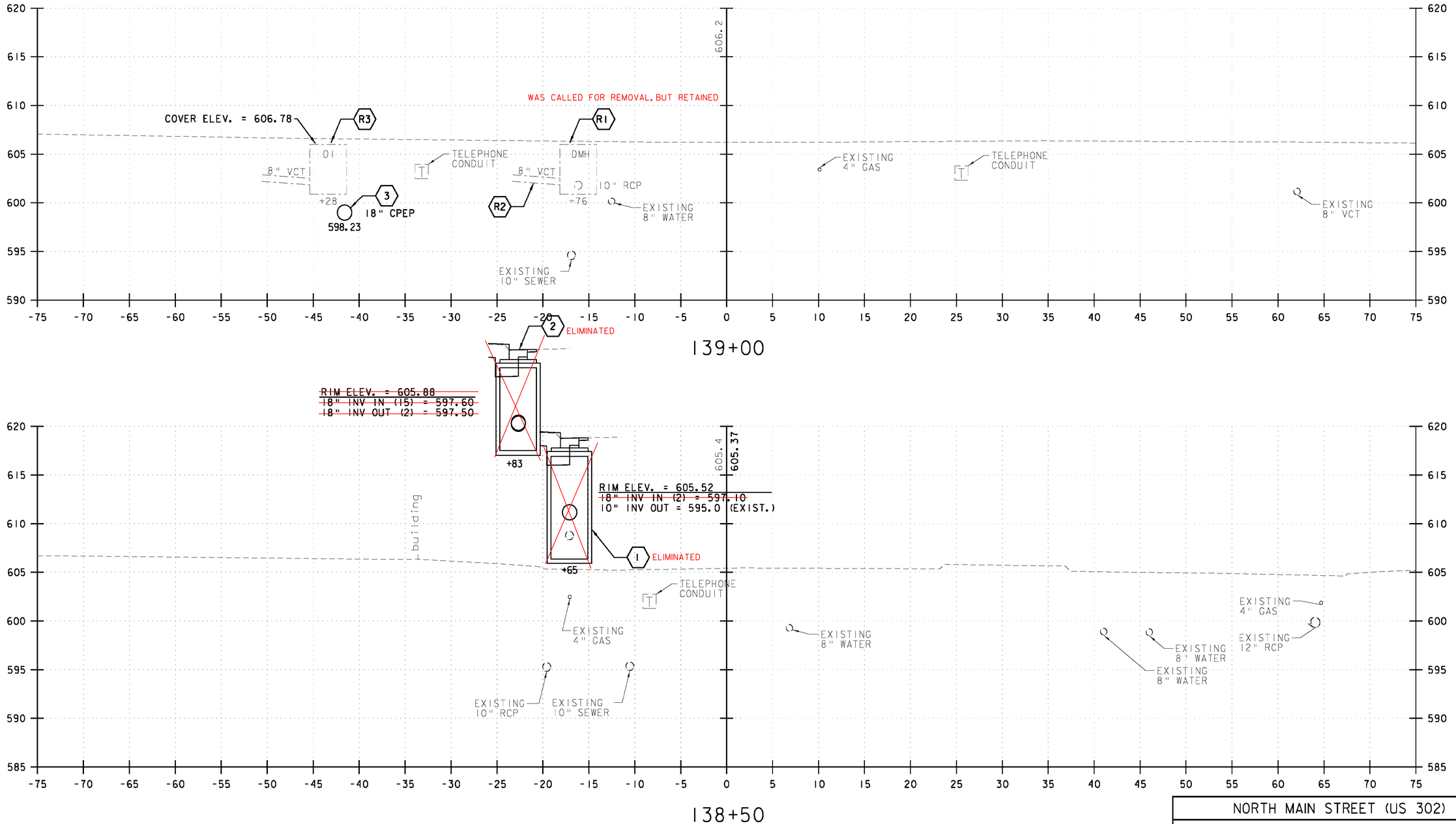
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NORTH MAIN STREET (US 302)

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 73 OF 95



5 0 5 10
FEET

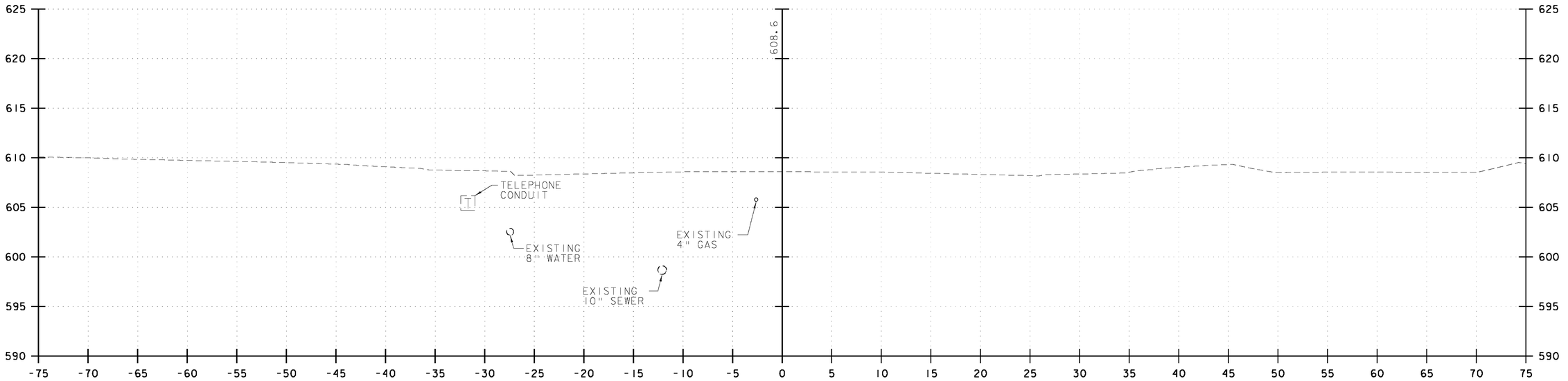
VHB Vanasse Hangen Brustlin, Inc.

NORTH MAIN STREET (US 302)

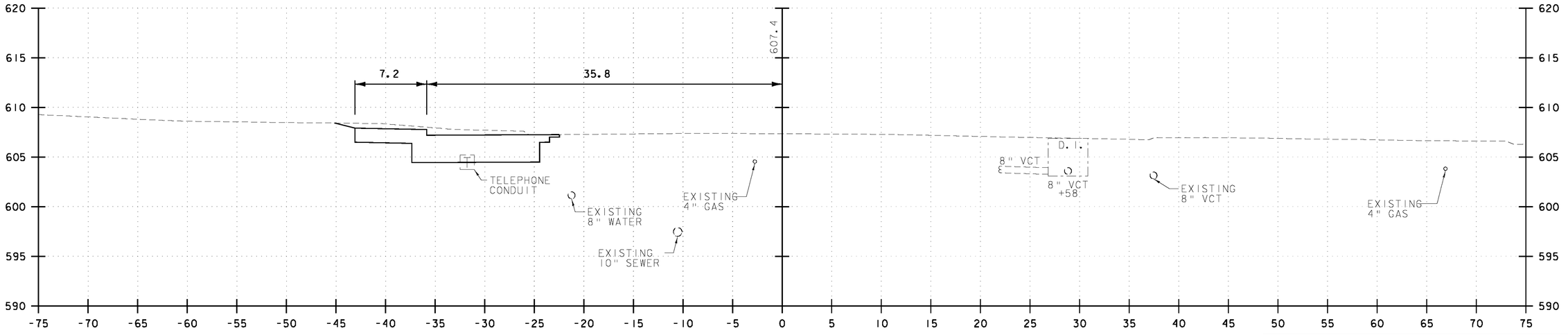
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 74 OF 95



140+00



139+50

5 0 5 10
FEET

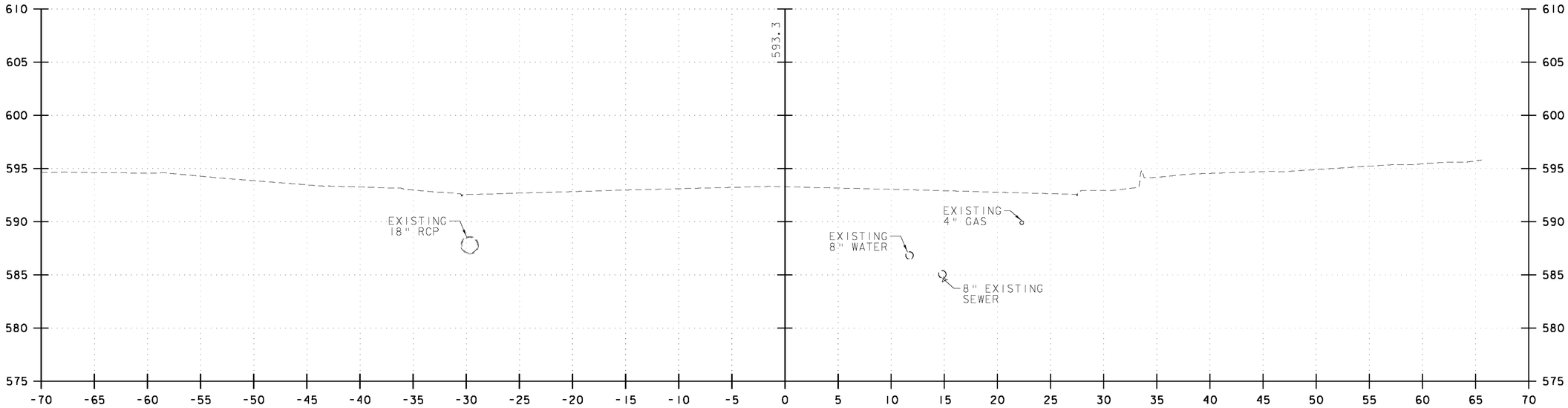
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NORTH MAIN STREET (US 302)

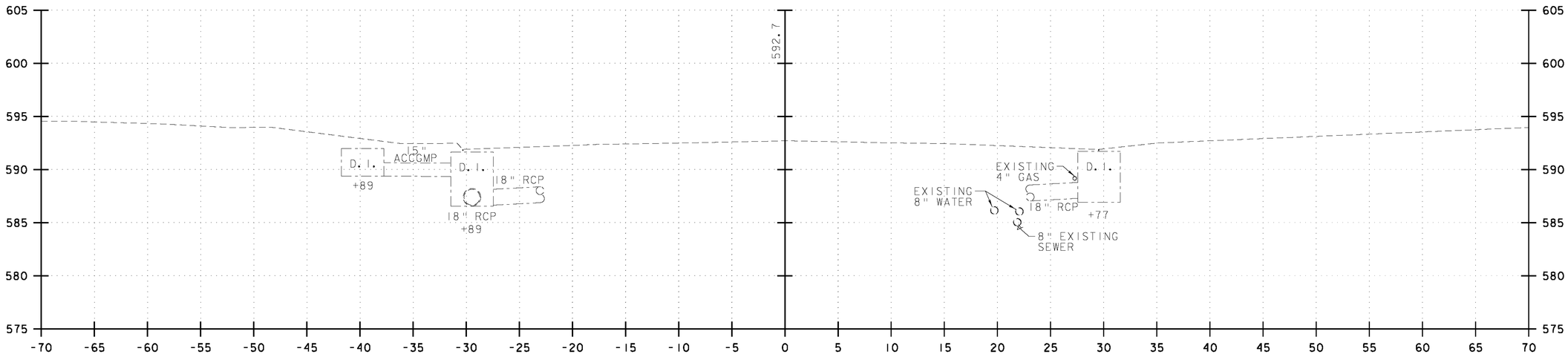
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 75 OF 95



21+50



21+00

5 0 5 10
FEET

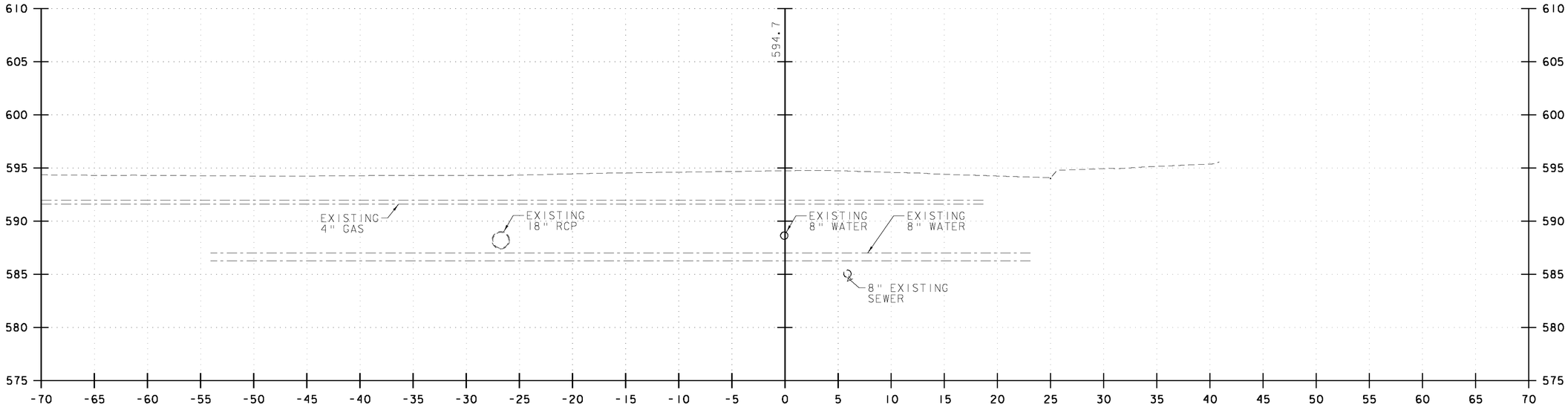
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MAPLE AVENUE

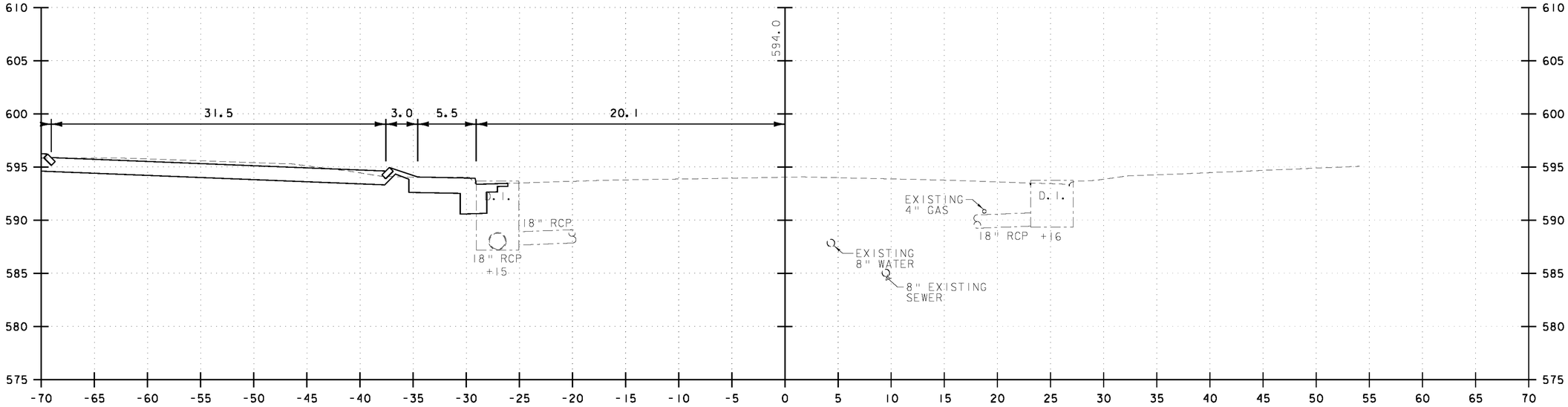
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 76 OF 95



22+50



22+00

5 0 5 10
FEET

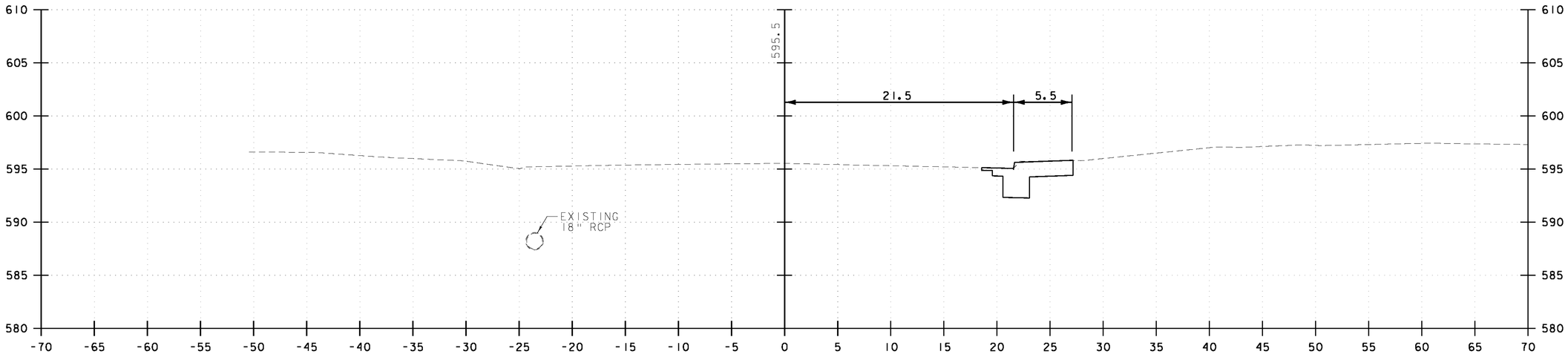
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MAPLE AVENUE

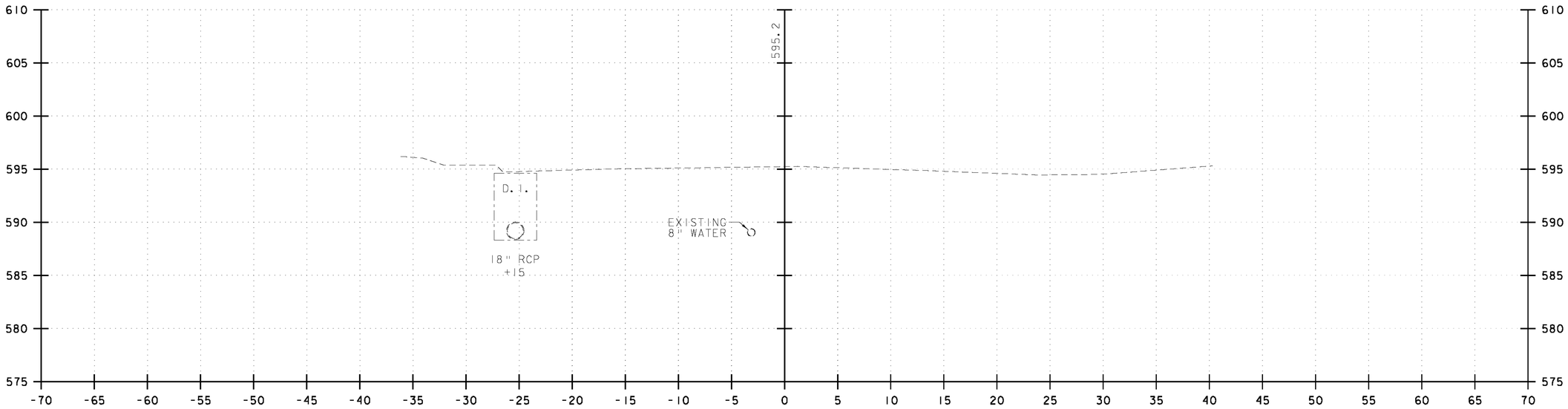
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 77 OF 95



23+50



23+00

5 0 5 10
FEET

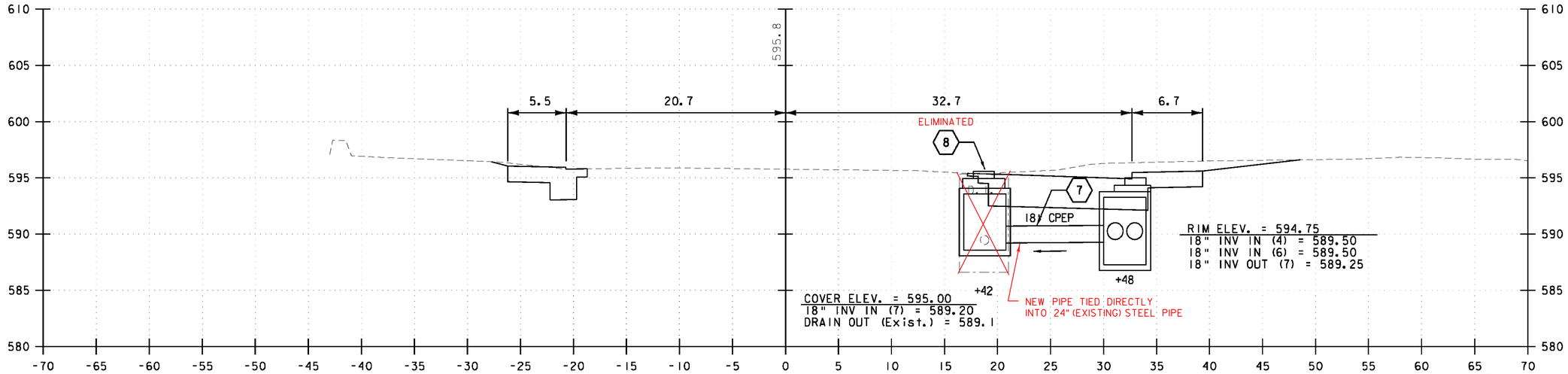
VHB Vanasse Hangen Brustlin, Inc.

MAPLE AVENUE

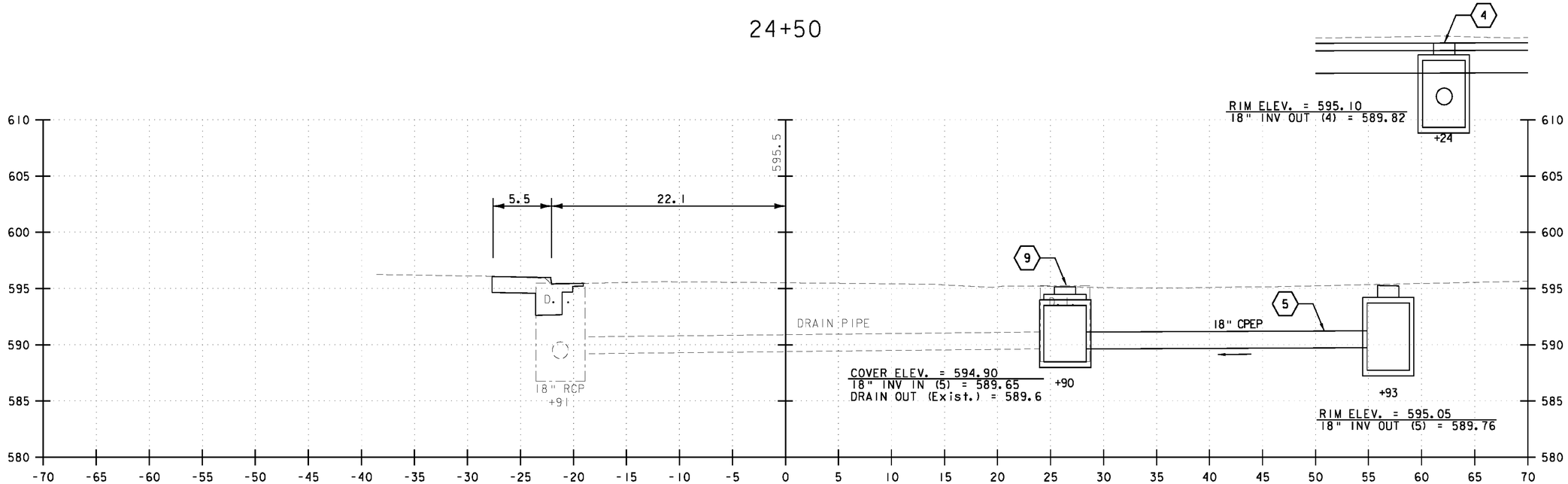
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FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
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SHEET 78 OF 95



24+50



24+00

5 0 5 10
FEET

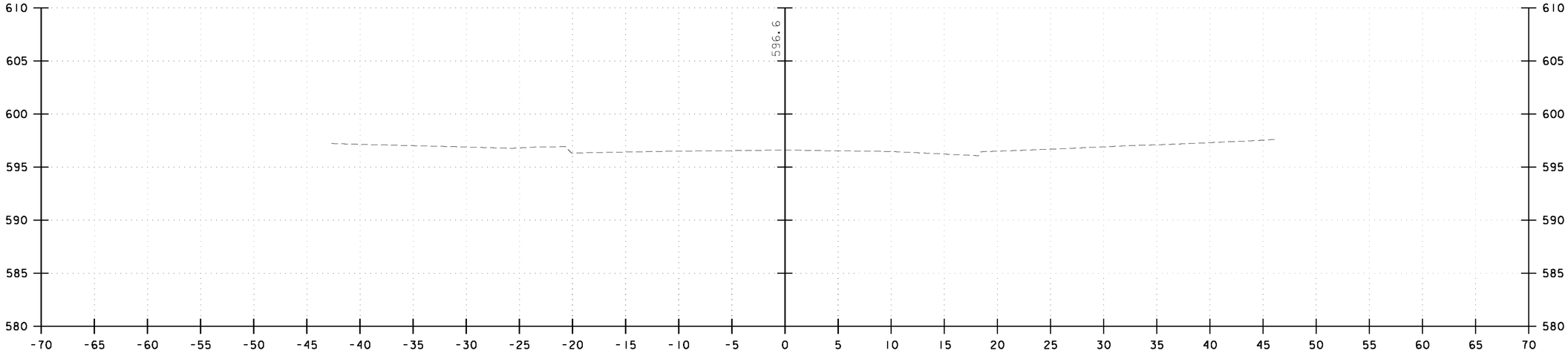
VHB Vanasse Hangen Brustlin, Inc.

MAPLE AVENUE

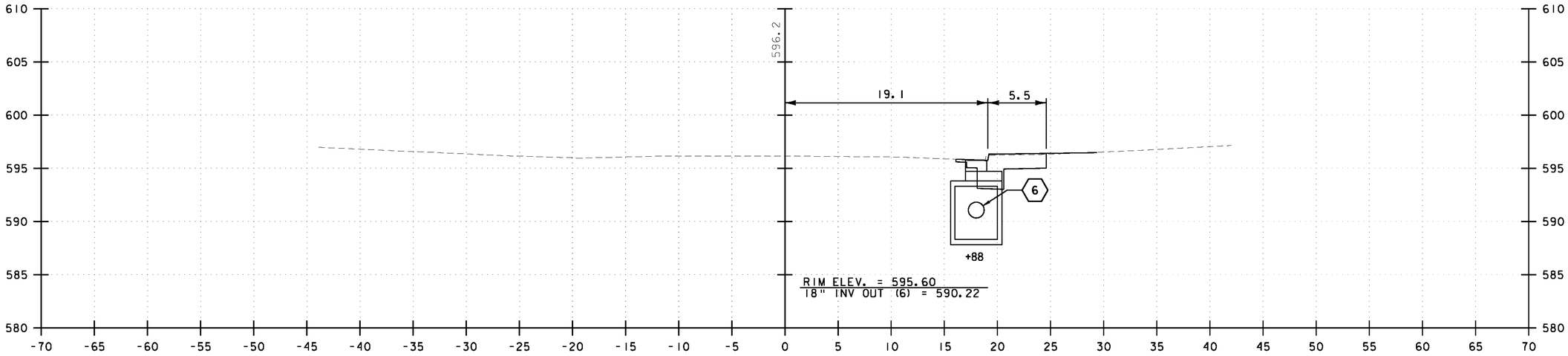
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
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SHEET 79 OF 95



25+50



25+00

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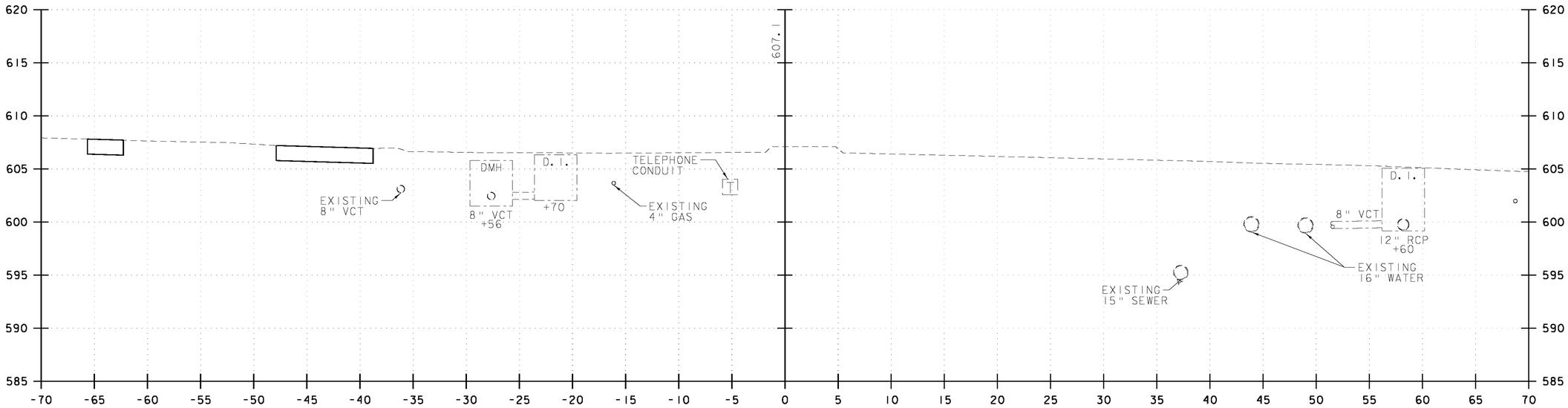
VHB Vanasse Hangen Brustlin, Inc.

MAPLE AVENUE

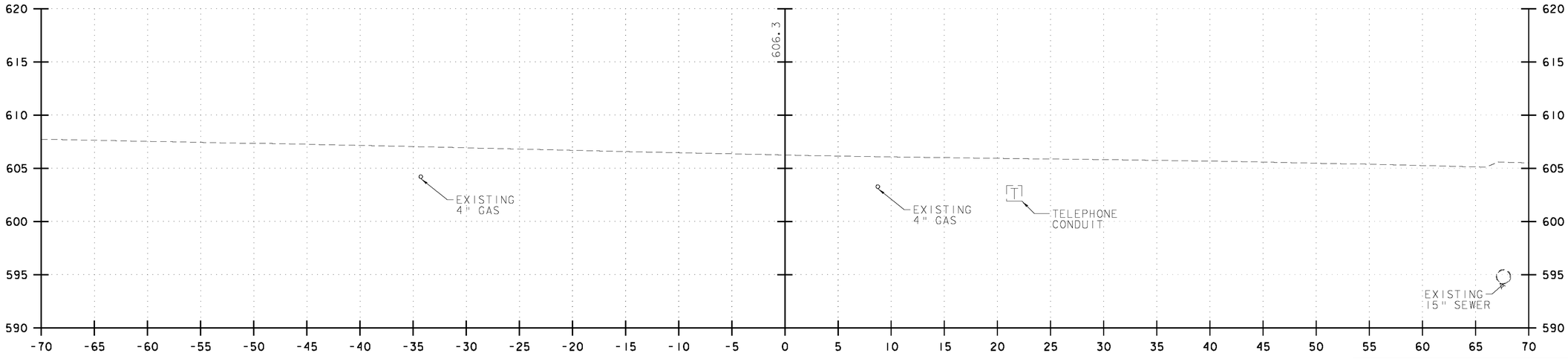
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
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600+50



600+00

5 0 5 10
FEET

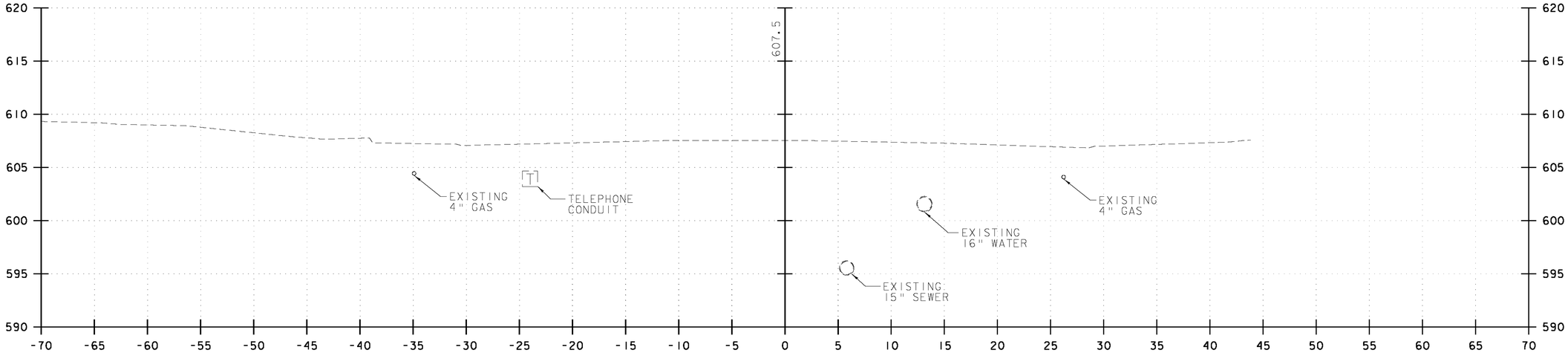
VHB Vanasse Hangen Brustlin, Inc.

NORTH MAIN STREET

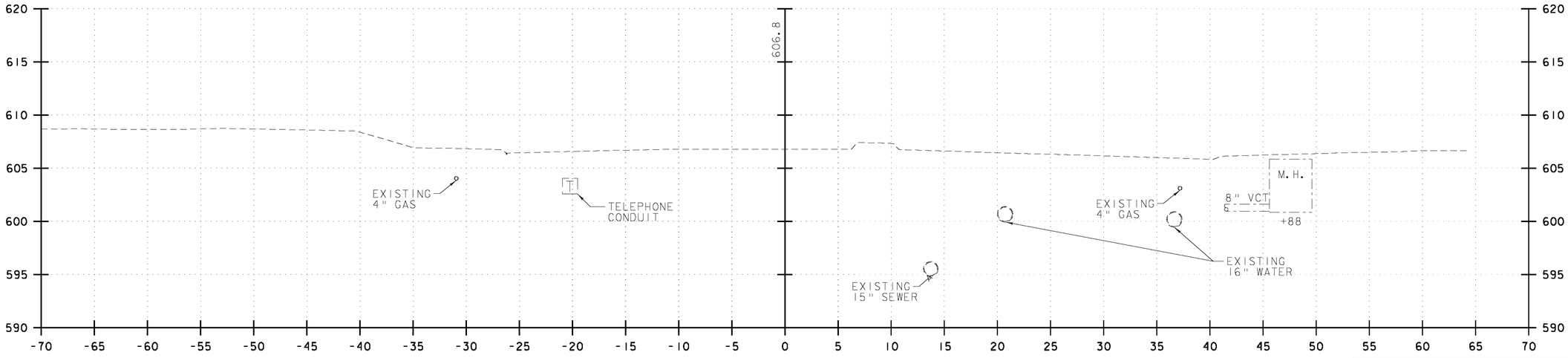
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
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601+50



601+00

5 0 5 10
FEET

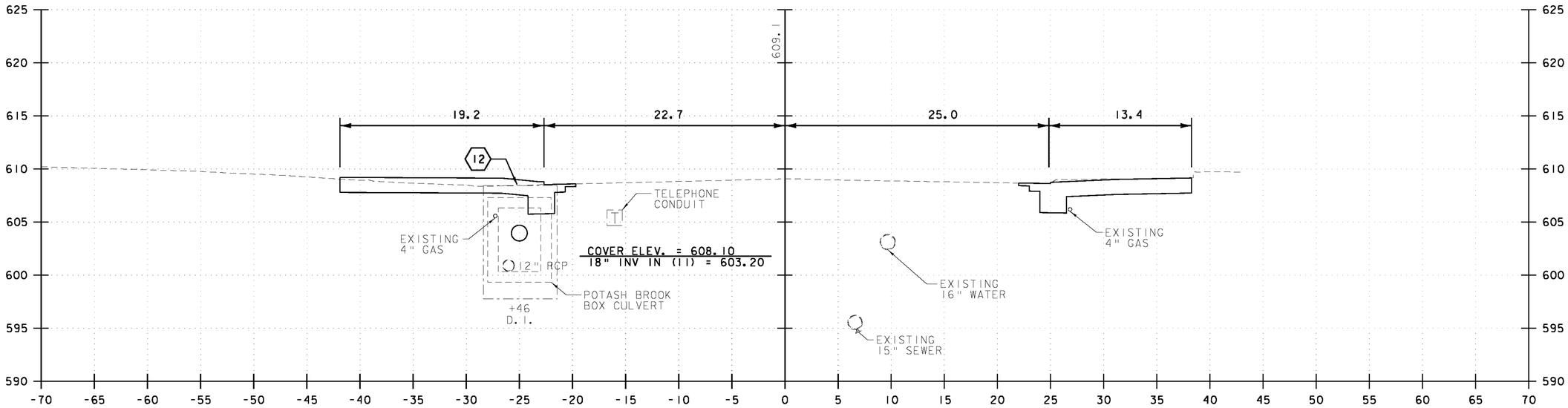
VHB Vanasse Hangen Brustlin, Inc.

NORTH MAIN STREET

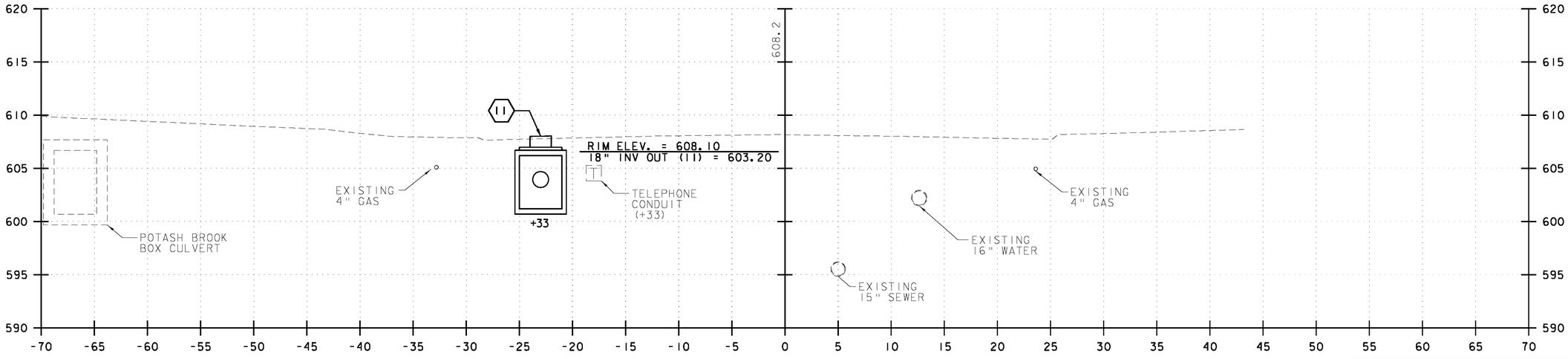
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
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602+50



602+00

5 0 5 10
FEET

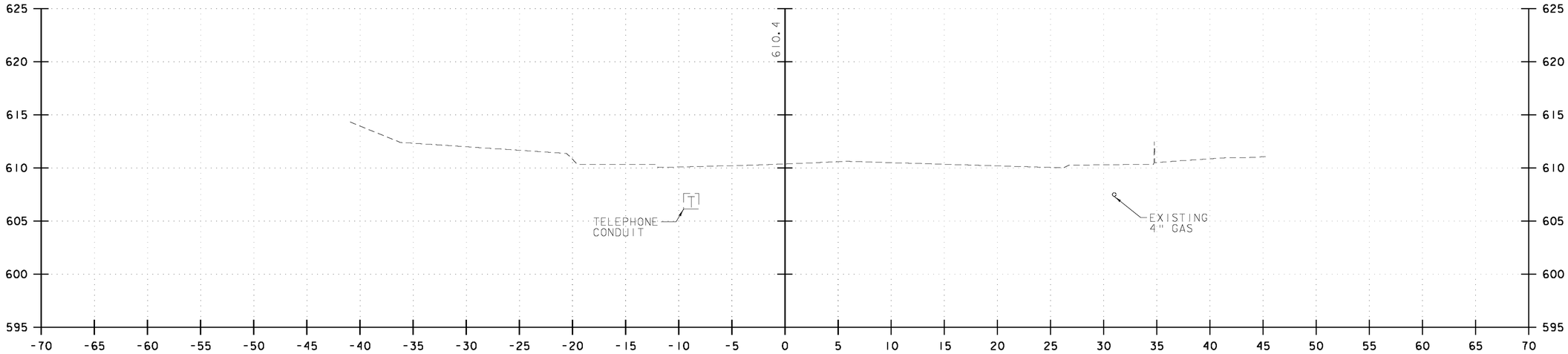
VHB Vanasse Hangen Brustlin, Inc.

NORTH MAIN STREET

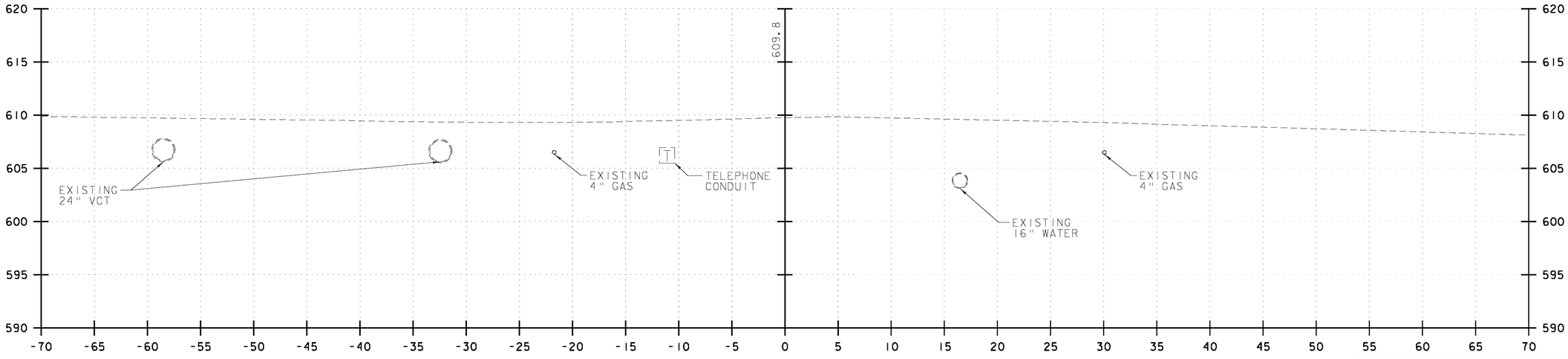
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PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
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603+50



603+00

5 0 5 10
FEET

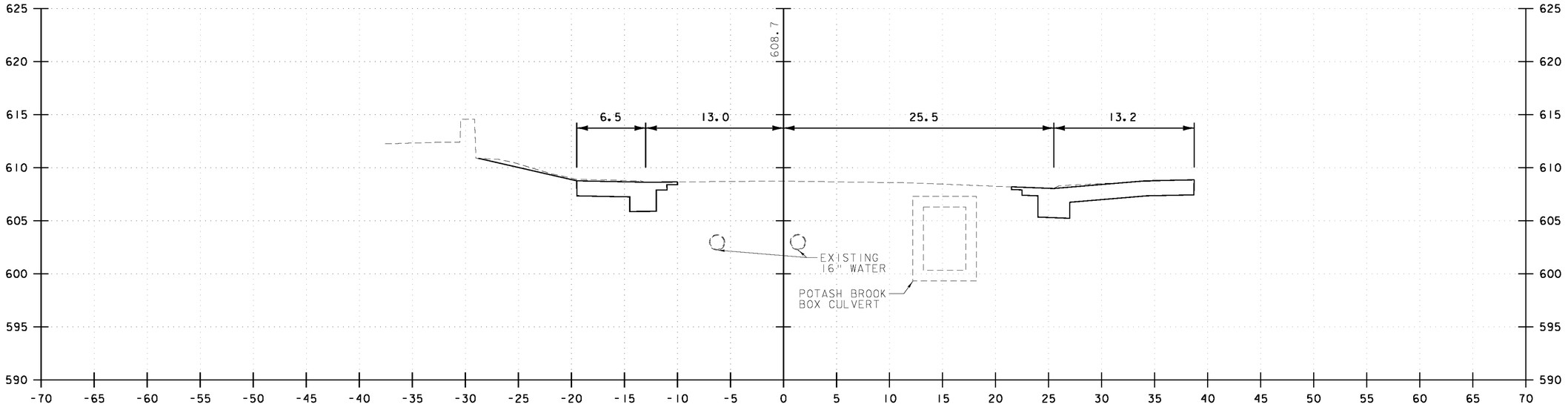
VHB Vanasse Hangen Brustlin, Inc.

NORTH MAIN STREET

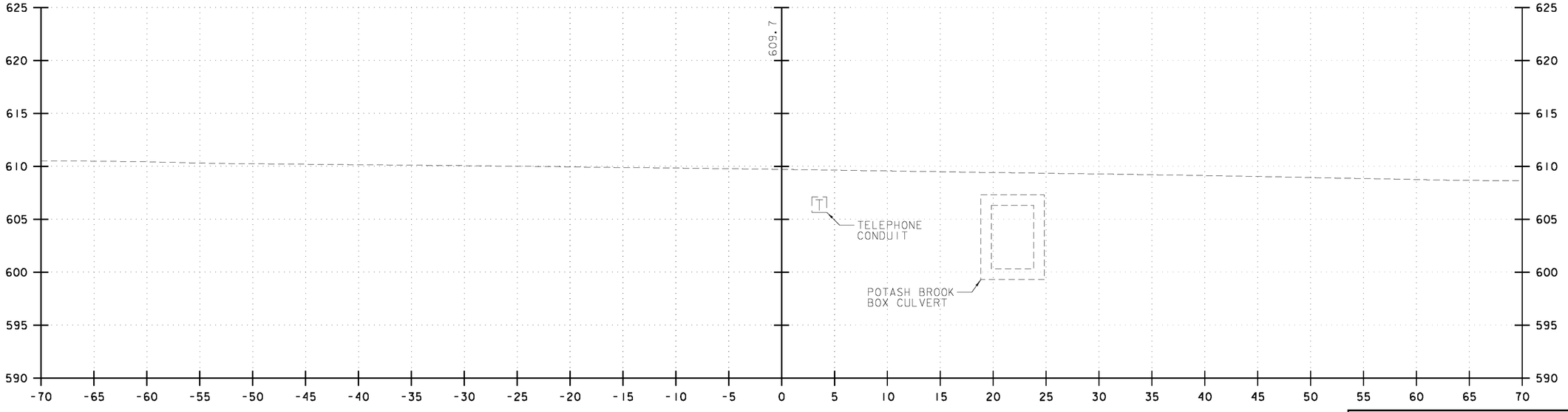
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 84 OF 95



500+50



500+00

5 0 5 10
FEET

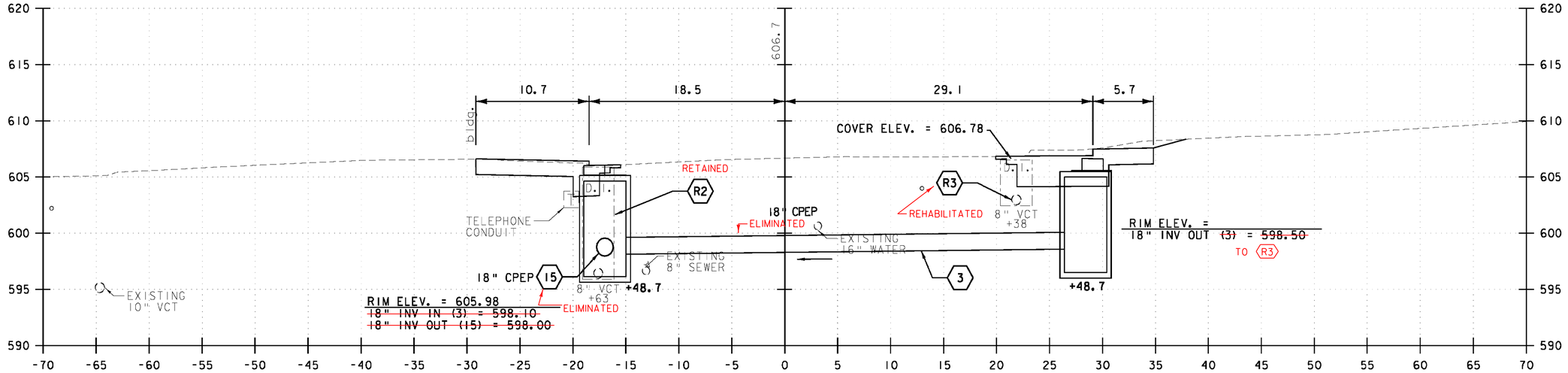
VHB Vanasse Hangen Brustlin, Inc.

PROSPECT STREET

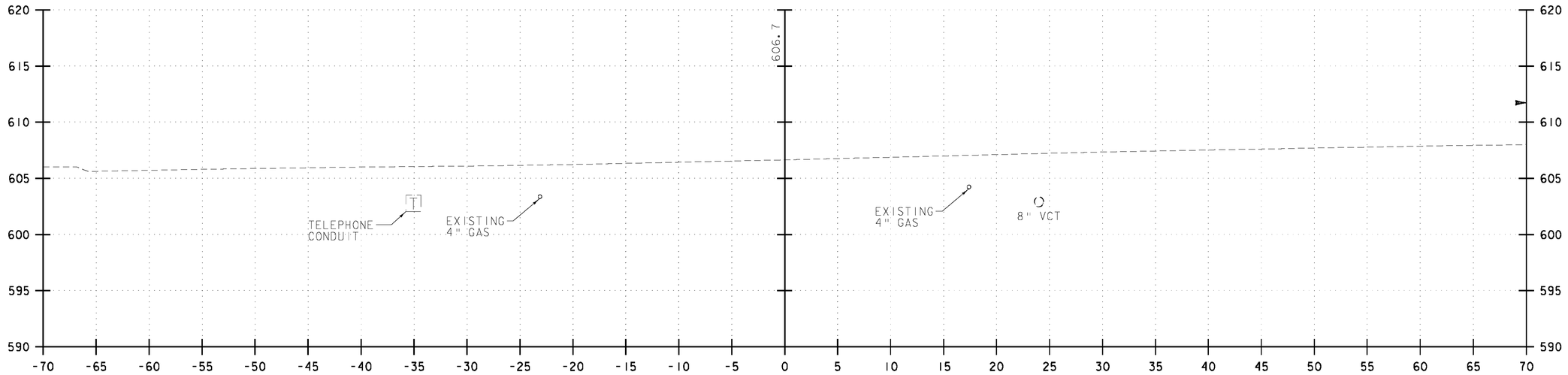
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 85 OF 95



700+50



700+00

5 0 5 10
FEET

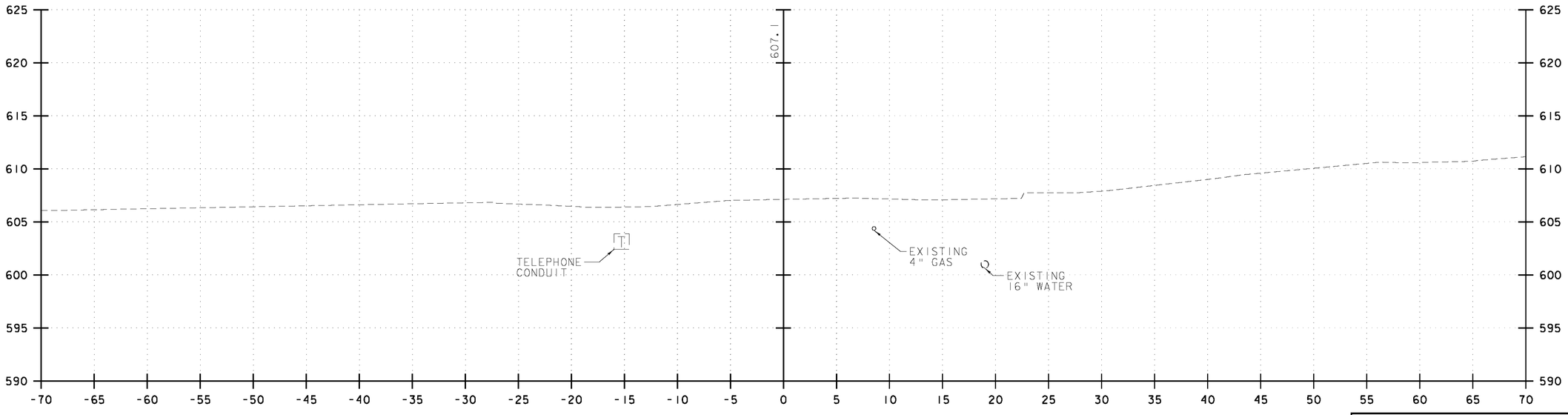
VHB Vanasse Hangen Brustlin, Inc.

ELM STREET

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 86 OF 95



701+00

5 0 5 10
FEET

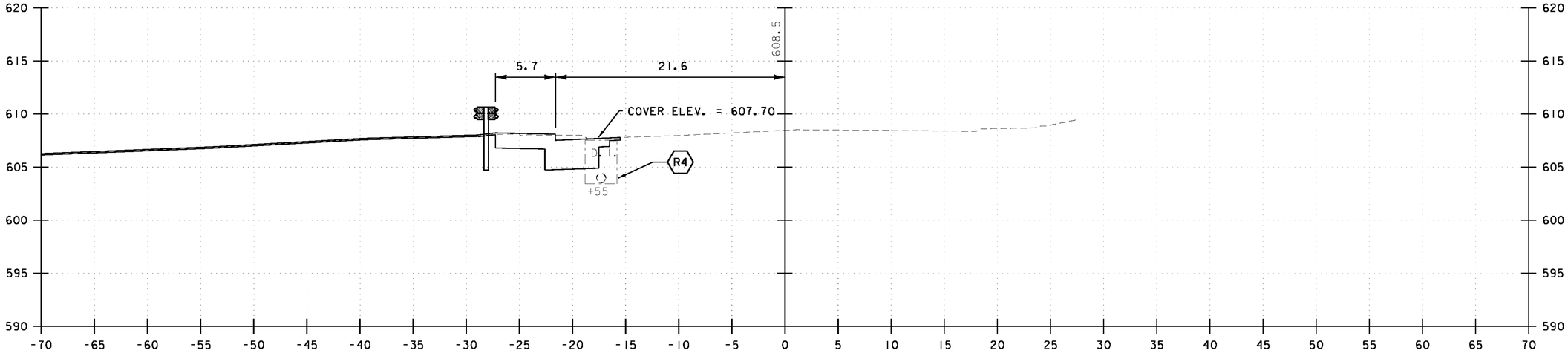
VHB Vanasse Hangen Brustlin, Inc.

ELM STREET

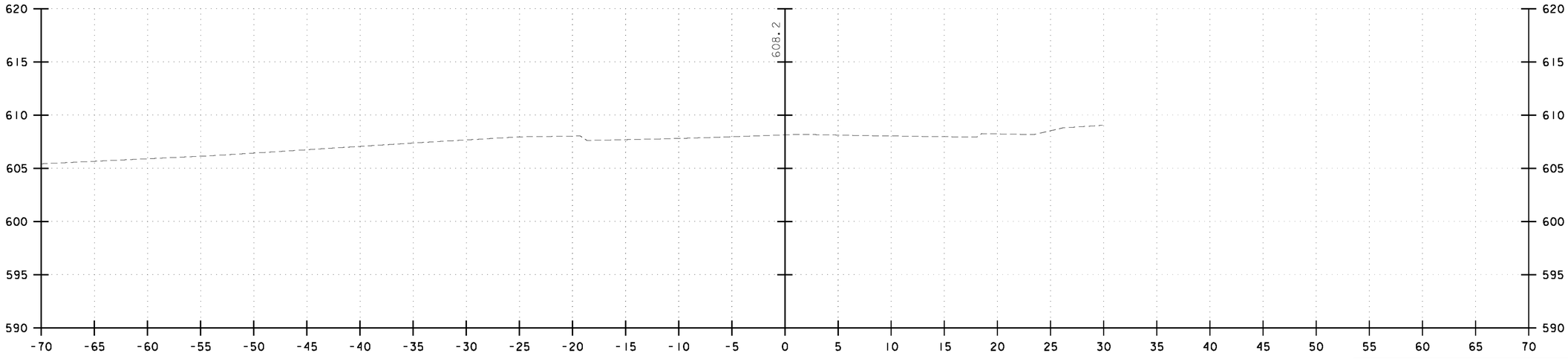
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 87 OF 95



706+50



706+00

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FEET

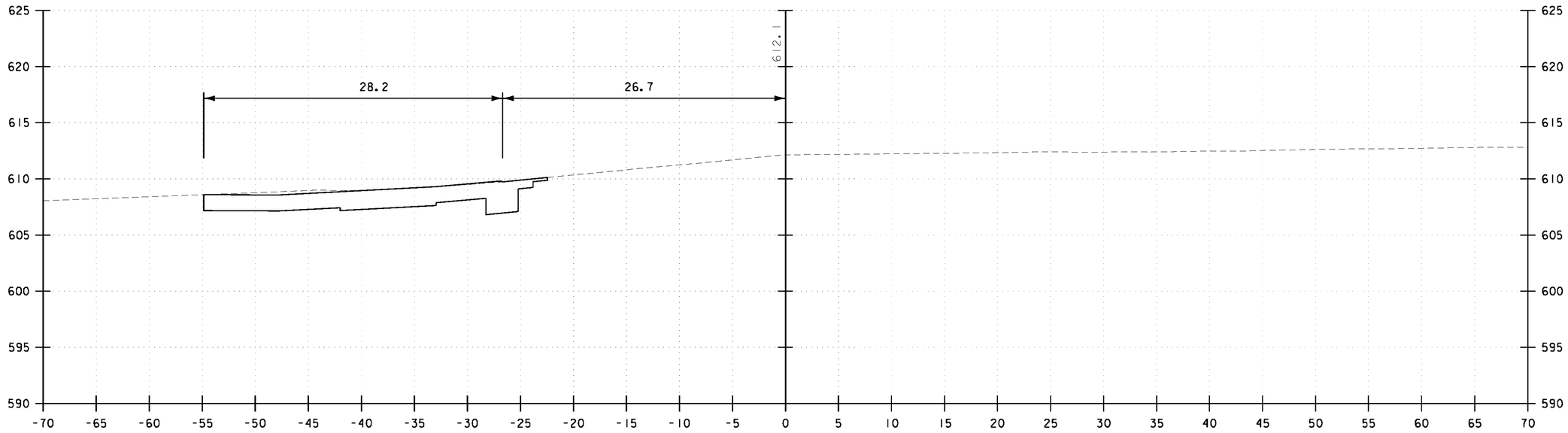
VHB Vanasse Hangen Brustlin, Inc.

ELM STREET

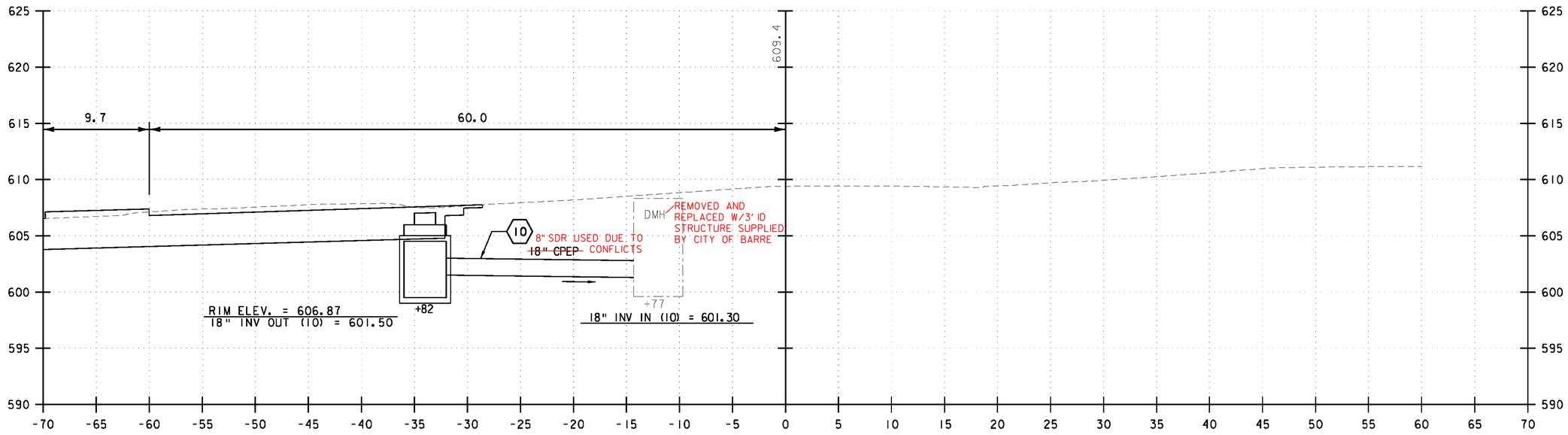
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 88 OF 95



707+50



707+00

5 0 5 10
FEET

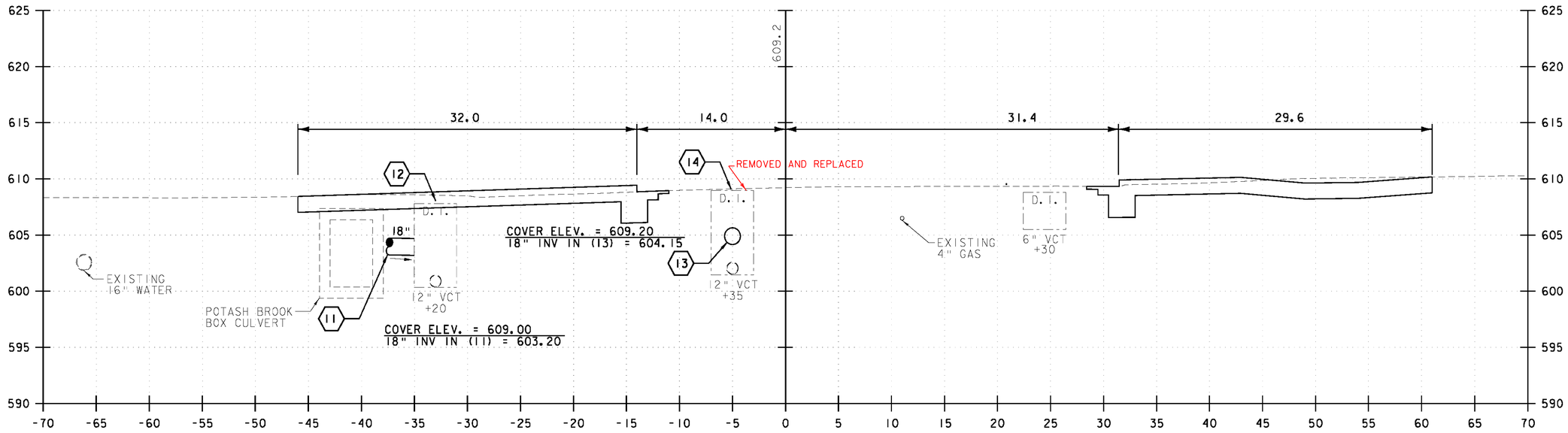
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ELM STREET

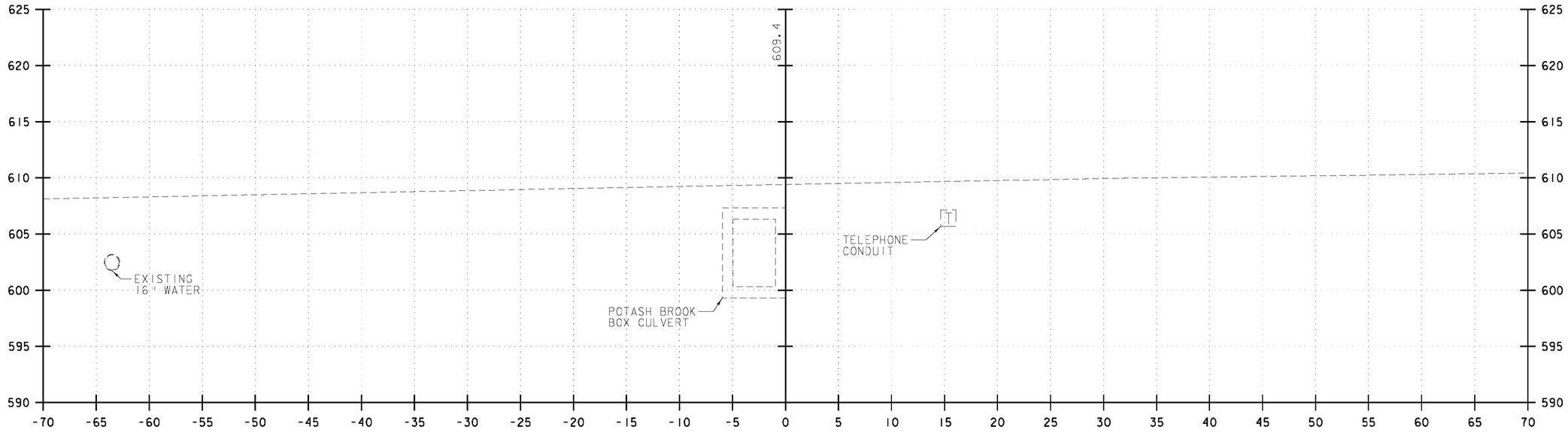
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 89 OF 95



800+25



800+00

5 0 5 10
FEET

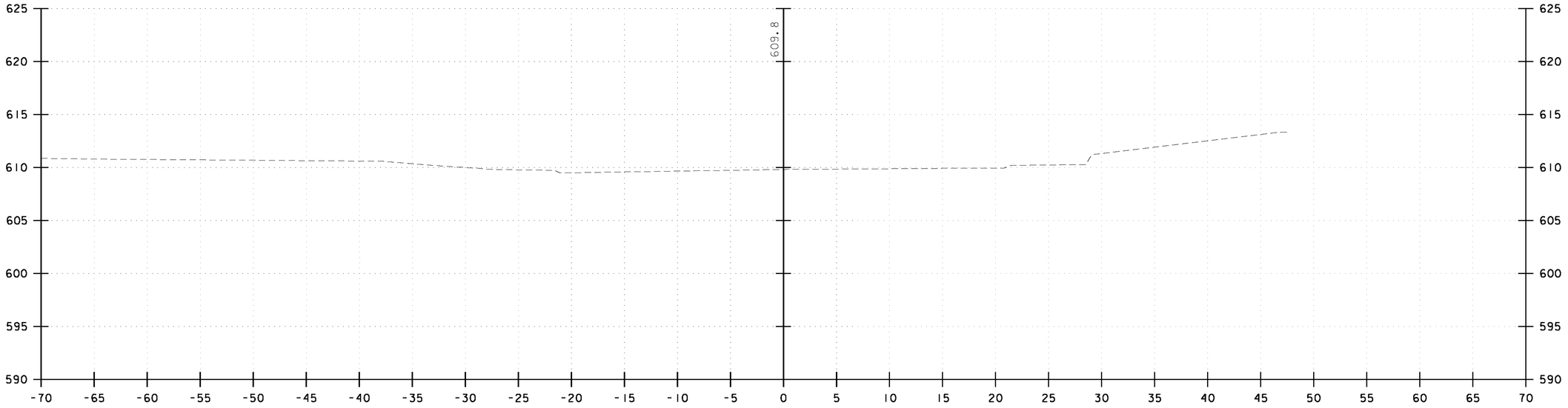
VHB Vanasse Hangen Brustlin, Inc.

CHURCH STREET

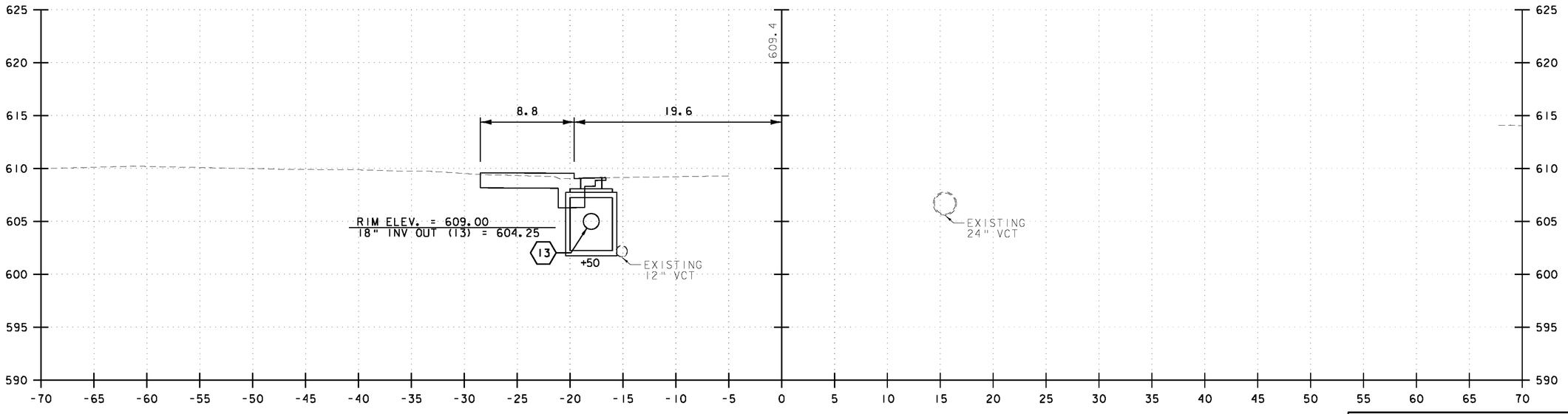
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 90 OF 95



800+75



800+50

5 0 5 10
FEET

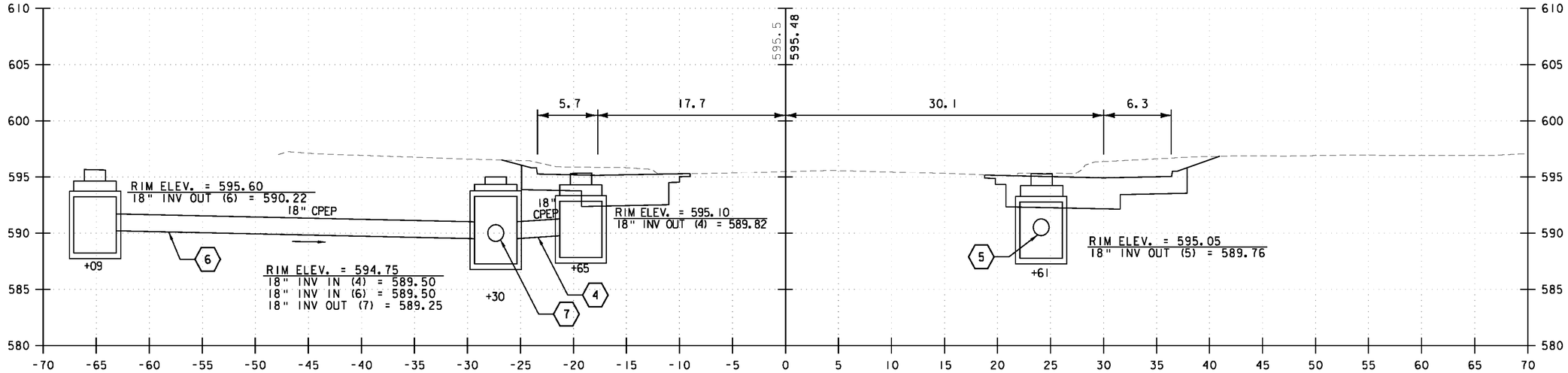
VHB Vanasse Hangen Brustlin, Inc.

CHURCH STREET

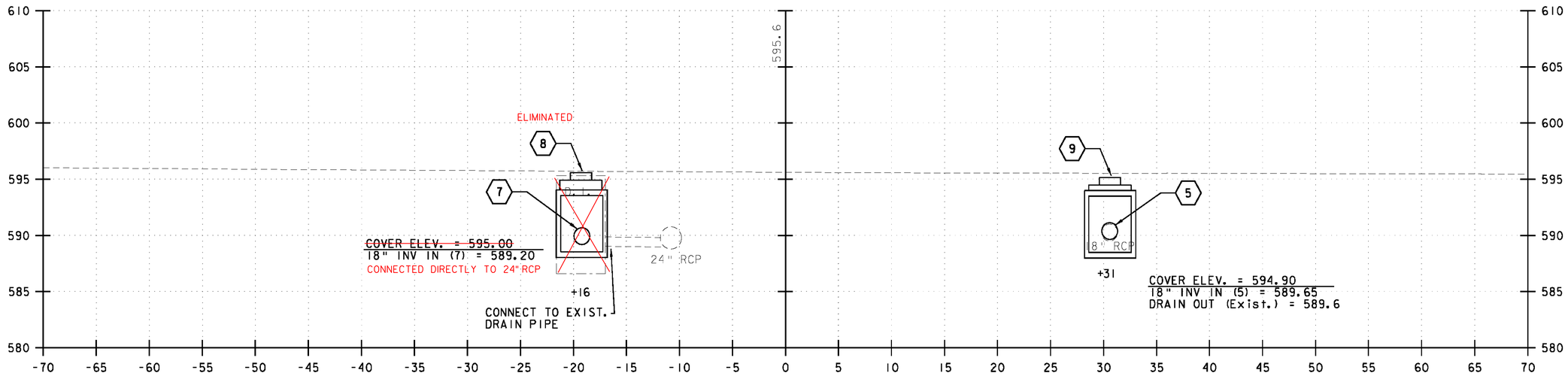
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FILE NAME: z09B240_xsl_Cut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 91 OF 95



400+50



400+00

5 0 5 10
FEET

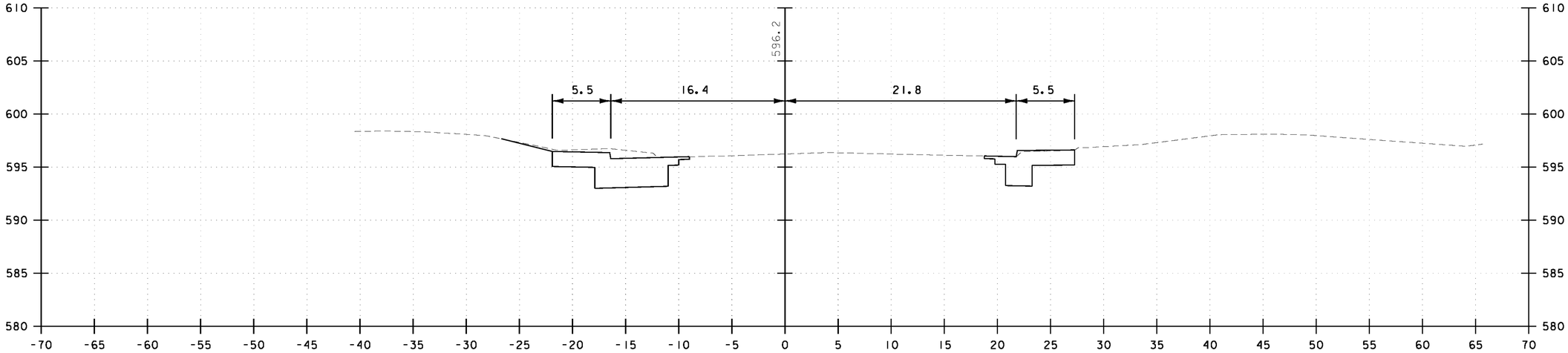
VHB Vanasse Hangen Brustlin, Inc.

SUMMER STREET

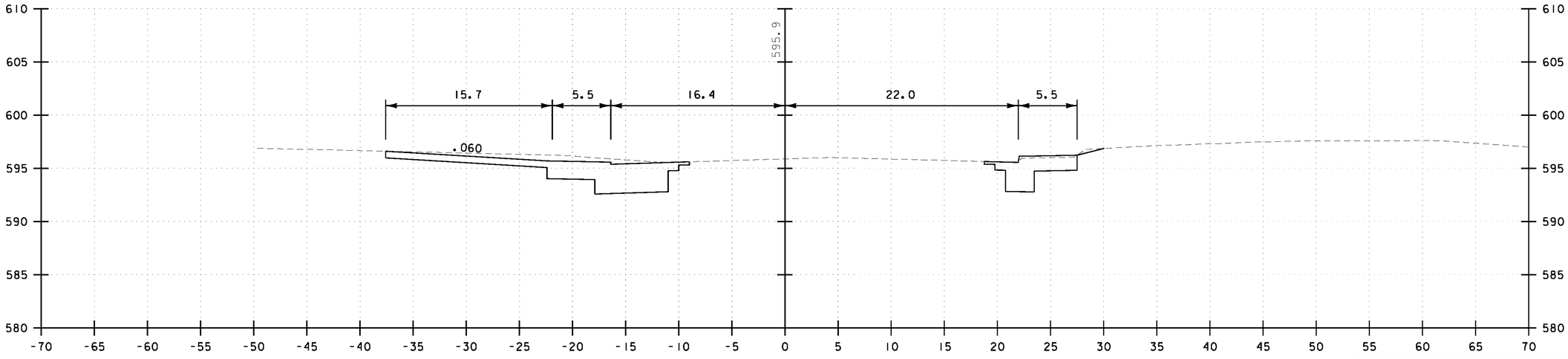
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240 xslCut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
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PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
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401+00



400+78

5 0 5 10
FEET

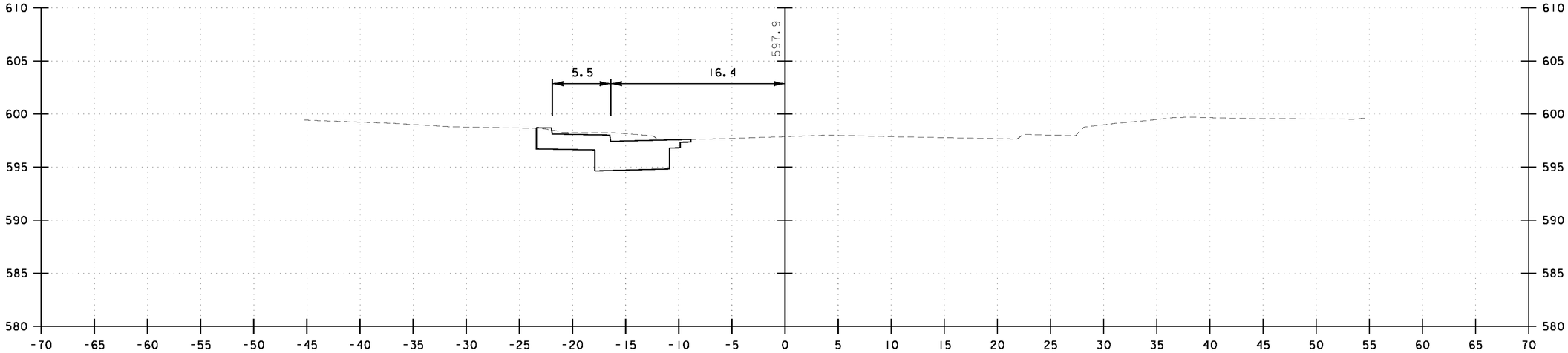
VHB Vanasse Hangen Brustlin, Inc.

SUMMER STREET

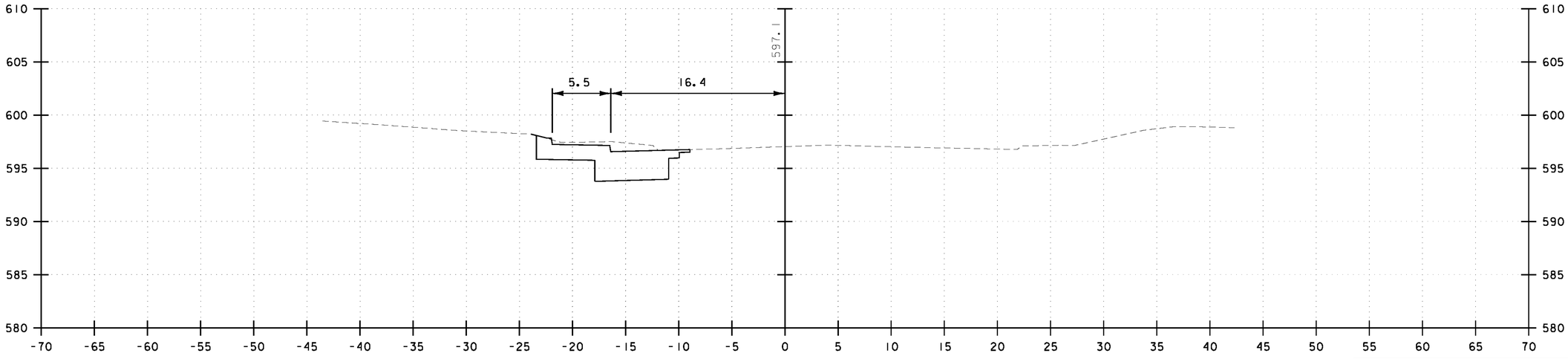
PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240 xslCut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
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SHEET 93 OF 95



402+00



401+50

5 0 5 10
FEET

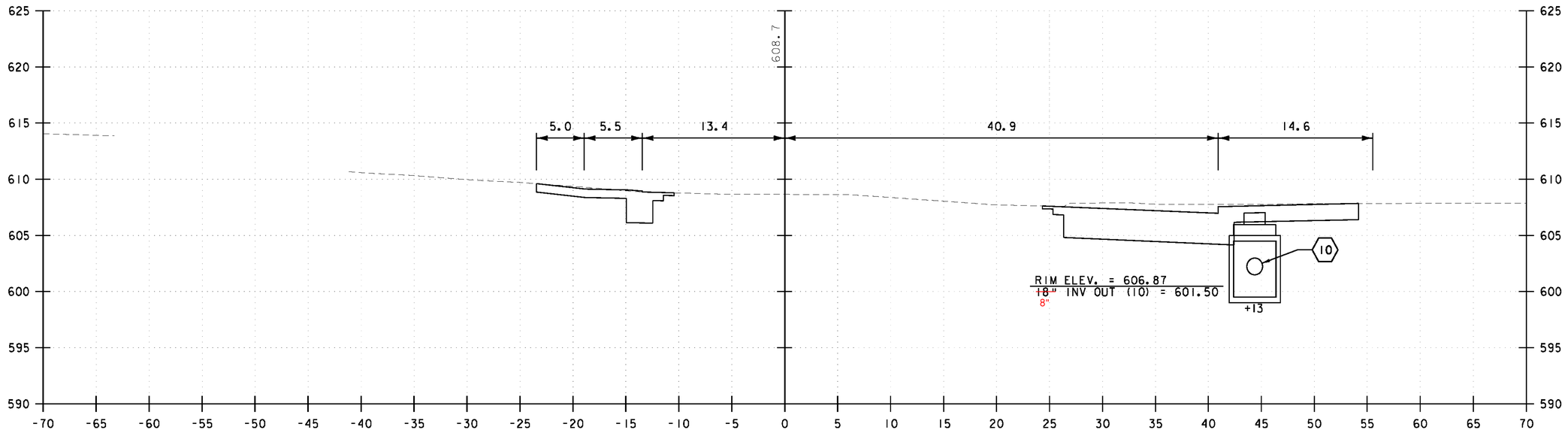
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SUMMER STREET

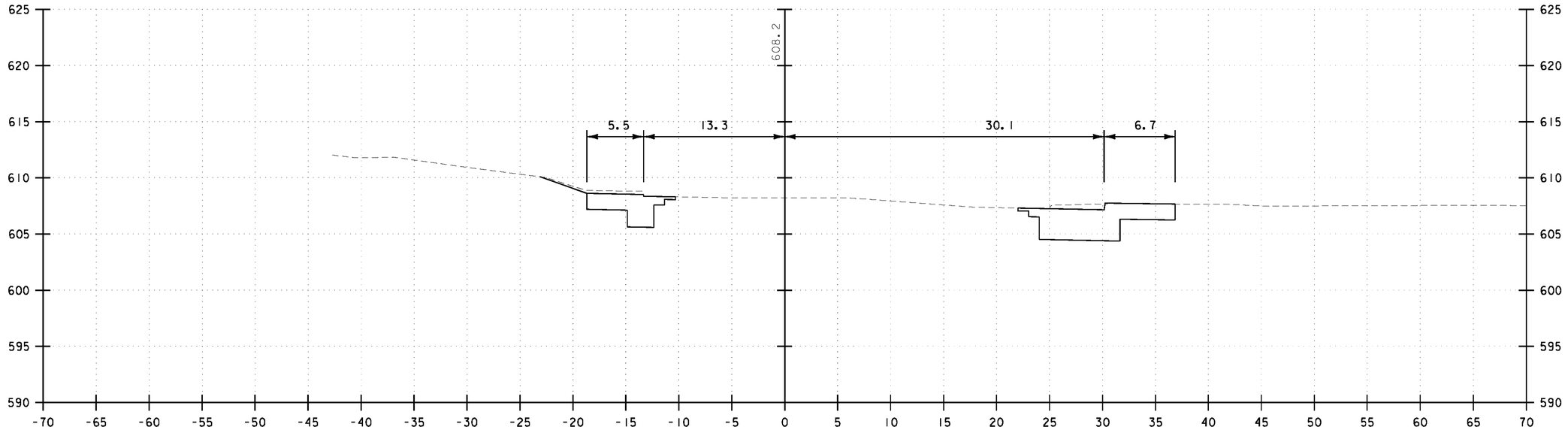
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PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240 xslCut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
DRAWN BY: DMP / JAR
CHECKED BY:
SHEET 94 OF 95



422+11



422+00

5 0 5 10
FEET

VHB Vanasse Hangen Brustlin, Inc.

SUMMER STREET

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026-1(34) C/1

FILE NAME: z09B240 xslCut.dgn
PROJECT LEADER: G. BAKOS
DESIGNED BY: DMP / MDS
CROSS SECTIONS

PLOT DATE: 4/5/2010
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SHEET 95 OF 95