

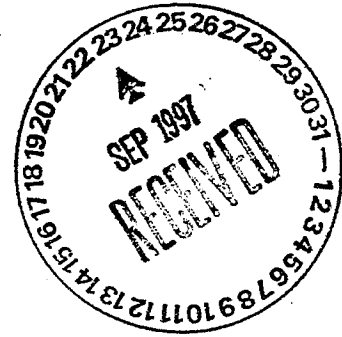
RSI

ROGERS

SURVEYING, INC.

September 17, 1997

Karl Drobny
Parsons Infrastructure & Technology
P. O. Box 1250
Richland, WA 99352



RE: Final Survey Report for Work Order RSI-018

Dear Karl,

Enclosed herein are the final drawings showing our layout and elevations for the 38 survey monuments installed in the vacuum equipment support slabs. The monument layout was accomplished using a "Wild T-2" (one second) optical theodolite and a calibrated 100 foot steel tape. Elevations were determined using a "Wild Na-2" automatic level and a 12 foot Philadelphia rod using 3-wire leveling procedures.

Horizontal and vertical accuracy is estimated to be ± 0.003 mm. The elevations shown at each building are in reference only to the beam tube vacuum equipment monuments for that specific building.

Should you have any questions, please call me at this office.

Sincerely,

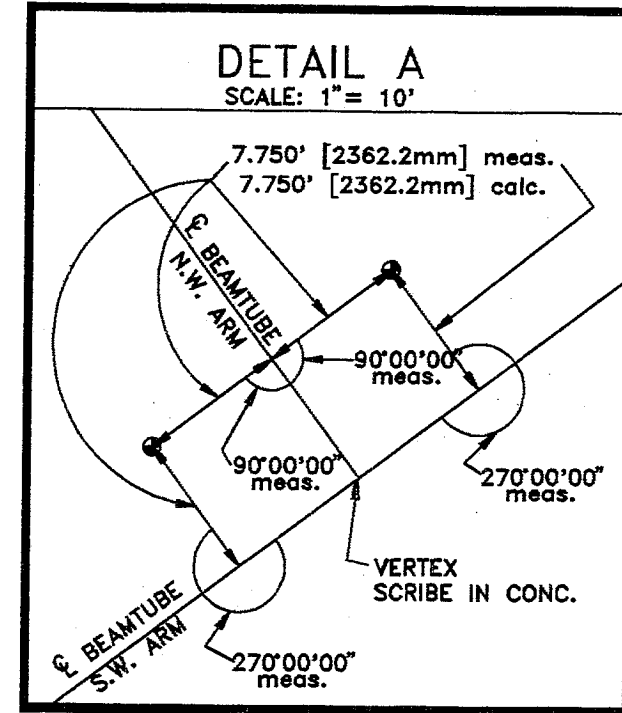
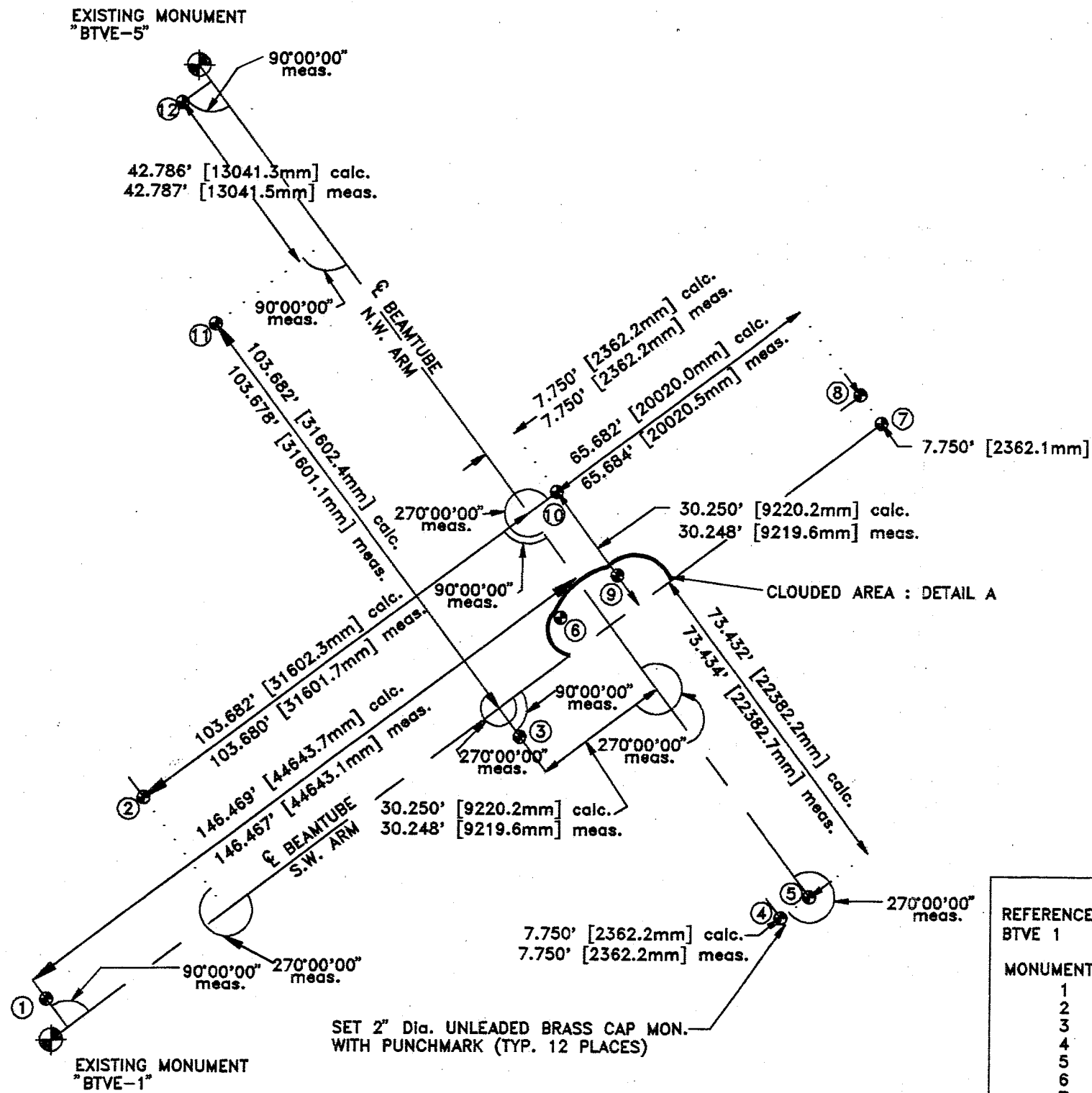
Gary B. Wagner, P.L.S.
Project Manager
cc:

GBW/dam

Distribution:
Otto Mathemy ✓ N/A
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File(s)
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16.5.18 WA
16-2-10 WA

745 Columbia Drive
P.O. Box 507
Richland, WA 99352

LIGO PROJECT-HANFORD SITE
 VACUUM EQUIPMENT MONUMENTS
 CORNER-STATION



NOTES:

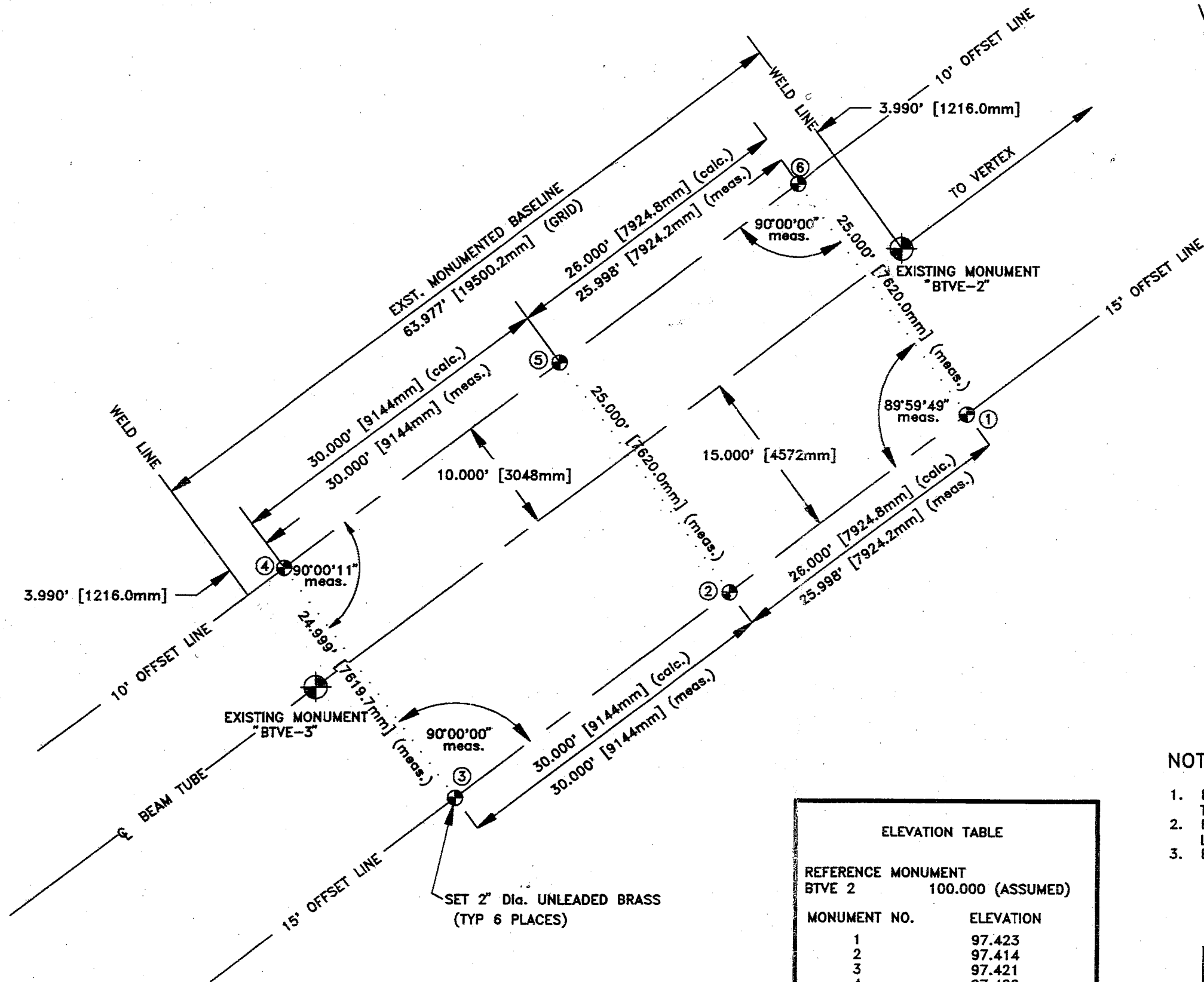
- ELEVATIONS OF BRASS CAP MONUMENTS ARE RELATIVE TO BEAM TUBE INTERFACE MONUMENT (BTVE) NO. 1.
- ELEVATIONS WERE ESTABLISHED BY "3 WIRE" LEVELING PROCEDURES.
- ELEVATIONS SHOWN ARE IN FEET, DIMENSIONS ARE SHOWN IN FEET, THOSE IN PARENTHESES ARE MILLIMETERS.

ELEVATION TABLE	
REFERENCE MONUMENT	
BTVE 1	100.000 (ASSUMED)
MONUMENT NO.	ELEVATION
1	97.289
2	97.285
3	97.304
4	97.286
5	97.296
6	97.302
7	97.277
8	97.285
9	97.277
10	97.282
11	97.284
12	97.292
BTVE 5	99.902

ROGERS SURVEYING INC., PS	
SCALE 1"=30'	RICHLAND, WASHINGTON
SHEET 1 OF 1	CLIENT: PARSONS INFRASTRUCTURE & TECHNOLOGY GROUP INC.
DATE 9/10/97	PROJECT: LVEA CORNER STATION MONUMENT INSTALLATION
DRN. BY M.F.H.	FILE: VERTEX.DWG JOB: NO. 15597

LIGO PROJECT—HANFORD SITE

VACUUM EQUIPMENT MONUMENTS MID-STATION SOUTHWEST ARM



NOTES:

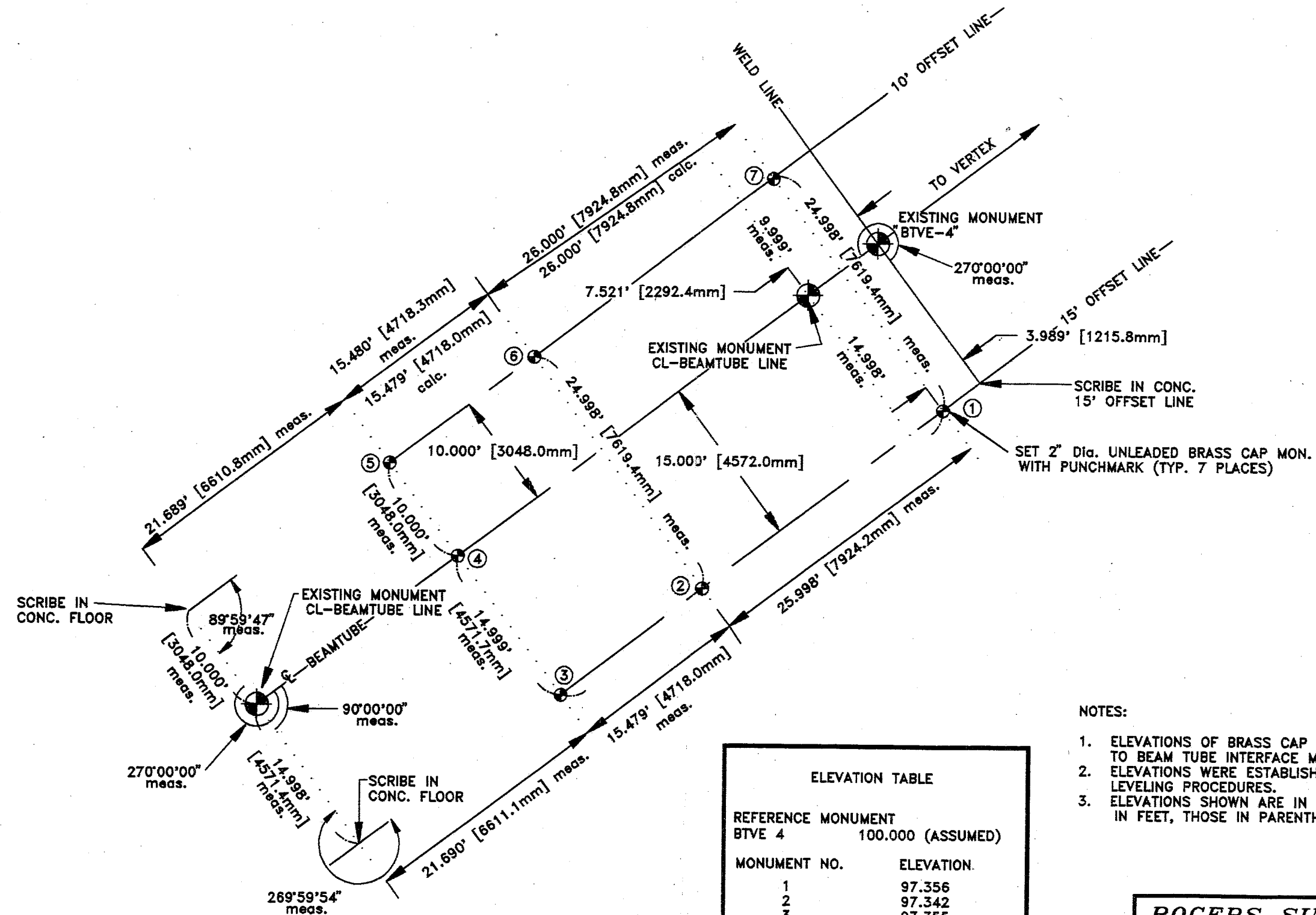
1. ELEVATIONS OF BRASS CAP MONUMENTS ARE RELATIVE TO BEAM TUBE INTERFACE MONUMENT (BTVE) NO. 2.
2. ELEVATIONS WERE ESTABLISHED BY "3 WIRE" LEVELING PROCEDURES.
3. ELEVATIONS SHOWN ARE IN FEET, DIMENSIONS ARE SHOWN IN FEET, THOSE IN PARENTHESES ARE MILLIMETERS.

ELEVATION TABLE	
REFERENCE MONUMENT	
BTVE 2	100.000 (ASSUMED)
MONUMENT NO.	ELEVATION
1	97.423
2	97.414
3	97.421
4	97.420
5	97.427
6	97.426
BTVE 3	100.026

ROGERS SURVEYING INC., PS	
<i>RICHLAND, WASHINGTON</i>	
SCALE 1"=10'	
SHEET 1 OF 1	CLIENT: PARSONS INFRASTRUCTURE & TECHNOLOGY GROUP INC.
DATE 09/10/97	PROJECT: S.W. ARM MID STATION SURVEY MONUMENT INSTALLATION
DRN. BY M.F.H.	FILE: MID-SW.DWG JOB: NO. 15597

LIGO PROJECT—HANFORD SITE

VACUUM EQUIPMENT MONUMENTS END-STATION SOUTHWEST ARM



NOTES:

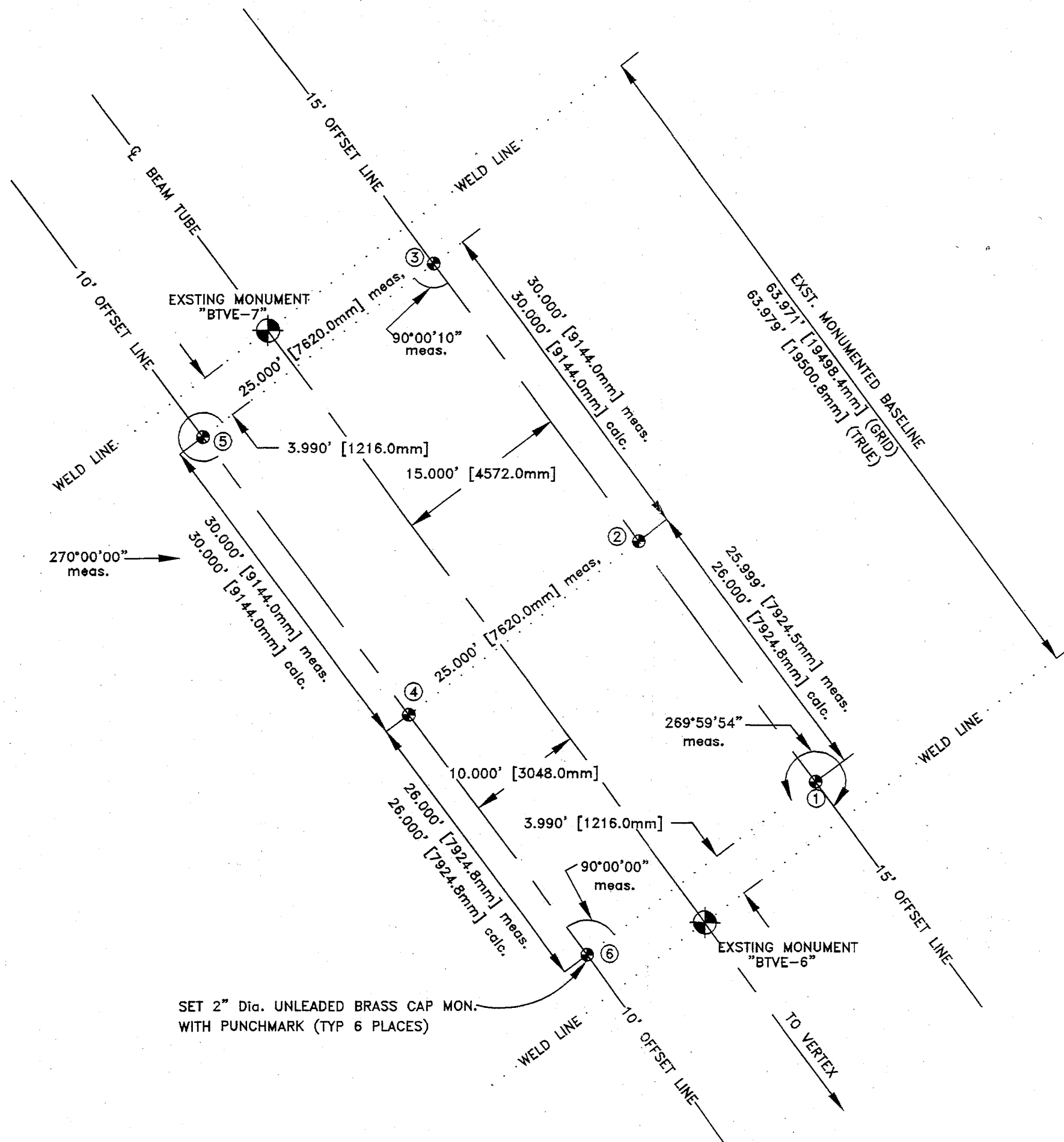
1. ELEVATIONS OF BRASS CAP MONUMENTS ARE RELATIVE TO BEAM TUBE INTERFACE MONUMENT (BTVE) NO. 4.
2. ELEVATIONS WERE ESTABLISHED BY "3 WIRE" LEVELING PROCEDURES.
3. ELEVATIONS SHOWN ARE IN FEET, DIMENSIONS ARE SHOWN IN FEET, THOSE IN PARENTHESES ARE MILLIMETERS.

ELEVATION TABLE	
MONUMENT NO.	ELEVATION.
REFERENCE MONUMENT	
BTVE 4	100.000 (ASSUMED)
1	97.356
2	97.342
3	97.355
4	97.373
5	97.359
6	97.366
7	97.361

ROGERS SURVEYING INC.	
SCALE 1"=10'	RICHLAND, WASHINGTON
SHEET 1 OF 1	CLIENT: PARSONS INFRASTRUCTURE & TECHNOLOGY GROUP INC.
DATE 09/08/97	PROJECT: S.W. ARM END STATION SURVEY MONUMENT INSTALLATION
DRN. BY M.F.H.	FILE: END-SW.DWG JOB: NO. 15597

LIGO PROJECT—HANFORD SITE

VACCUUM EQUIPMENT MONUMENTS MID-STATION NORTHWEST ARM



SET 2" Dia. UNLEADED BRASS CAP MON.
WITH PUNCHMARK (TYP 6 PLACES)

ELEVATION TABLE	
REFERENCE MONUMNET	
BTVE 6	100.000 (ASSUMED)
MONUMENT NO.	ELEVATION
1	97.369
2	97.373
3	97.365
4	97.361
5	97.361
6	97.373
BTVE 7	99.994

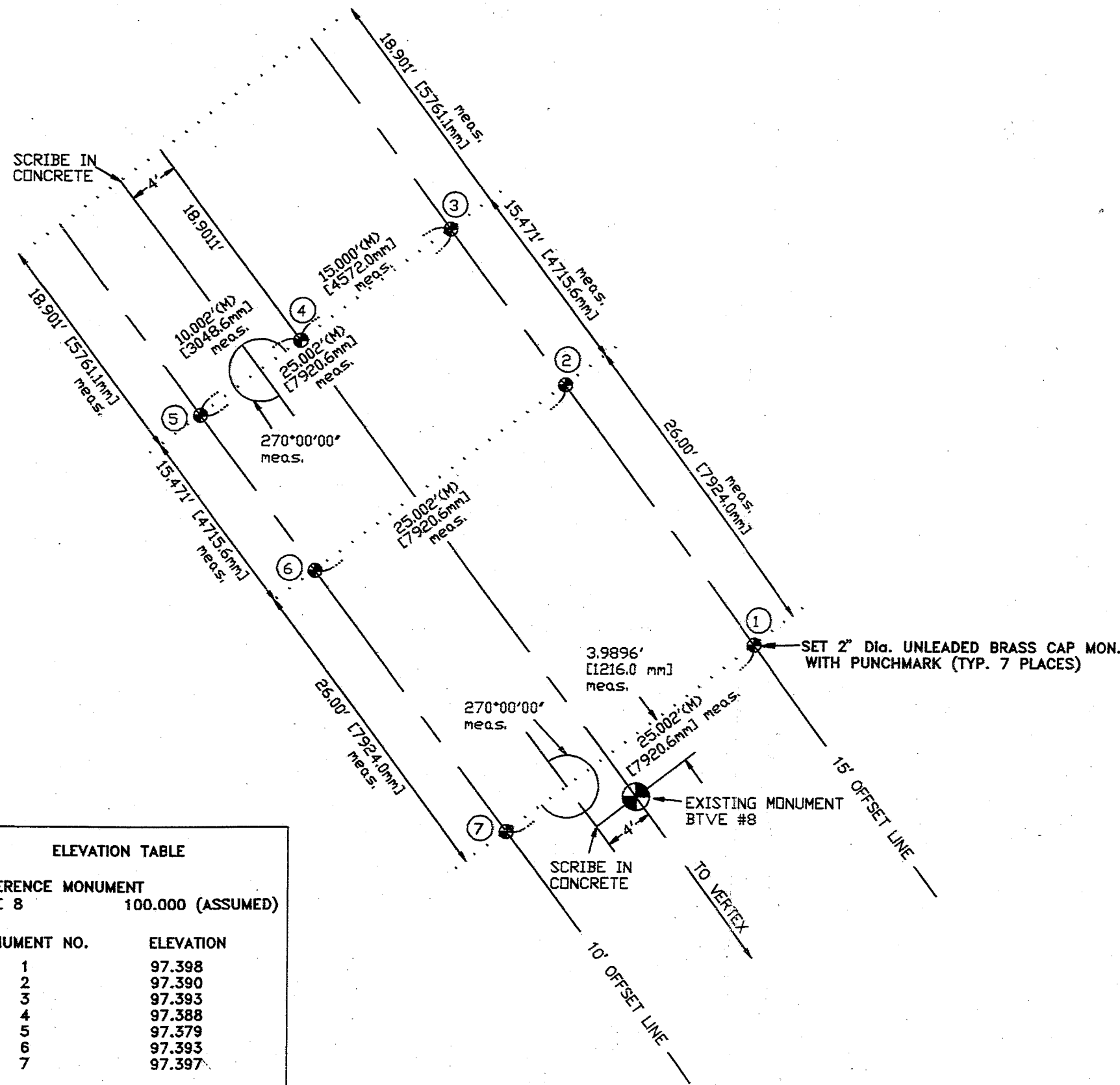
NOTES:

- ELEVATIONS OF BRASS CAP MONUMENTS ARE RELATIVE TO BEAM TUBE INTERFACE MONUMENT (BTVE) NO. 6.
- ELEVATIONS WERE ESTABLISHED BY "3 WIRE" LEVELING PROCEDURES.

ROGERS SURVEYING INC., PS		
RICHLAND, WASHINGTON		
SCALE 1"=10'	CLIENT: PARSONS INFRASTRUCTURE & TECHNOLOGY GROUP INC.	
SHEET 1 OF 1	PROJECT: N.W. ARM MID STATION SURVEY MONUMENT INSTALLATION	
DATE 09/16/97	FILE: MID-NW.DWG	JOB: NO. 15597
DRN. BY M.F.H.		

LIGO PROJECT—HANFORD SITE

VACUUM EQUIPMENT MONUMENTS END-STATION NORTHWEST ARM



ELEVATION TABLE	
REFERENCE MONUMENT	
BTVE 8	100.000 (ASSUMED)
MONUMENT NO.	ELEVATION
1	97.398
2	97.390
3	97.393
4	97.388
5	97.379
6	97.393
7	97.397

NOTES:

1. ELEVATIONS OF BRASS CAP MONUMENTS ARE RELATIVE TO BEAM TUBE INTERFACE MONUMENT (BTVE) NO. 8.
2. ELEVATIONS WERE ESTABLISHED BY "3 WIRE" LEVELING PROCEDURES.
3. ELEVATIONS SHOWN ARE IN FEET, DIMENSIONS ARE SHOWN IN FEET, THOSE IN PARENTHESES ARE MILLIMETERS.

ROGERS SURVEYING INC., PS	
RICHLAND, WASHINGTON	
SCALE 1"=10'	
SHEET 1 OF 1	CLIENT: PARSONS INFRASTRUCTURE & TECHNOLOGY GROUP INC.
DATE 9/11/97	PROJECT: N.W. ARM END STATION SURVEY MONUMENT INSTALLATION
DRN. BY M.F.H.	FILE: END-NW.DWG JOB: NO. 15597