

NOTES:

1) The information produced for this project is based on a field survey performed by DOWL Engineers (DOWL) from September 15, 2005 through June 2006. Tallak D. "Tuck" Maakestad, Alaska Professional Land Surveyor No. 9235, was project manager for DOWL and worked as the supervisor of the survey crews in the field. Positions of horizontal/vertical and horizontal control monuments were determined by a static GPS network using Leica dual frequency series GX1230 and SR530 GPS receivers. The network was adjusted in Leica Geo Office 2.0. Elevations of horizontal/vertical and vertical control monuments were determined by differential leveling using Leica DNA10 digital levels and fiberglass bar code rods. Level loops were adjusted in Leica Digilev.

2) All dimensions and coordinates shown are in U.S. Survey Feet unless otherwise noted.

3) The background information shown hereon was obtained from record data, and is for orientation purposes only. Generally, highway rights-of-way, including the Seward Highway right-of-way, are not shown hereon. Highway centerline only is shown.

4) Whether listed or not, all monuments or property markers, corners, or accessories, which will be disturbed or buried, shall be referenced and re-established in their original position (A.S. 19.10.260) and recorded (A.S. 34.65.040).

HORIZONTAL CONTROL STATEMENT:

Coordinate System:
This project is located entirely within the Portage Adjustment, a local surface grid coordinate system expressed in U.S. Survey feet units developed by the Alaska Department of Transportation & Public Facilities.

Basis of Coordinates:
The Basis of Coordinates is the NAD83(CORS96)(EPOCH: 2003.000) position of USC&GS monument "ALASKA 2", PID UW7503, a 3-1/2" brass cap set in bedrock, having the following coordinates in US Survey Feet:

NAD83(CORS96)(EPOCH: 2003.000) Geodetic Coordinates:
Latitude: 60°53'35.06538" North
Longitude: 149°03'49.84257" West
Ellipsoid Height: 88.52016

Alaska State Plane Zone 4 Coordinates:
N= 2,519,512.28307, E= 1,807,138.38507

Portage Adjustment local coordinates:
N= 58,888.25651, E= 101,105.99287

Conversion Parameters:
To convert Portage Adjustment local coordinates to Alaska State Plane Zone 4 NAD83(CORS96)(EPOCH: 2003.0000) coordinates in US Feet, translate local coordinates using +2,460,813.3907 N and +1,706,168.2150 E, then scale resulting coordinates using 0.9999248466.

VERTICAL CONTROL STATEMENT:

The Vertical Datum is NAVD88, in US Survey Feet, holding USC&GS Triangulation Station "ENDING", PID TT0258, having an elevation of 28.42 feet; USC&GS Bench Mark "P 73", PID TT0260, having an elevation of 27.95 feet; USC&GS Bench Mark "S 12", PID TT0352, having an elevation of 53.19 feet; USC&GS Bench Mark "M 75", PID TT0351, having an elevation of 37.29 feet. Elevations of other control points were determined by differential leveling.

Elevations of USC&GS Bench Marks "H 75", PID TT0359, "F 167", PID TT0357, "Q 72", PID TT0353, are not record, but were established by new differential leveling and prorated in a length-weighted adjustment between USC&GS Bench Marks "P 73" and "S 12". The elevation of USC&GS Bench Mark "R 72", PID TT0350, is not record, but was determined by new differential leveling from USC&GS Bench Mark "M 75".

SURVEYOR'S CERTIFICATE

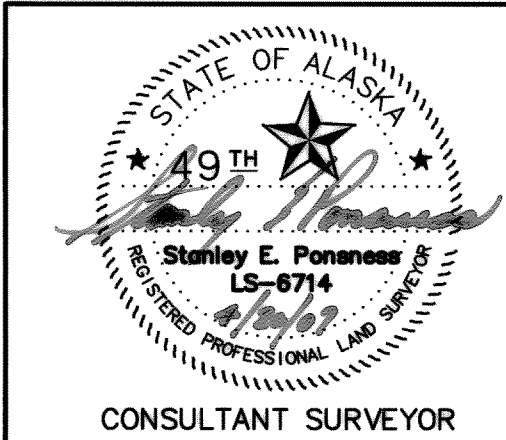
I hereby certify that I am properly registered and licensed to practice land surveying in the State of Alaska, and that this drawing represents a survey made by me or under my direct supervision, and that the monuments shown hereon actually exist as described, and that all dimensions and other details are correct to the extent shown hereon.

Stanley E. Ponsness
Stanley E. Ponsness LS-6714

4/20/07
Date

Tallak D. Maakestad
Tallak D. Maakestad LS-9235

4/20/2007
Date



CONSULTANT SURVEYOR



CONSULTANT SURVEYOR

Anchorage Recording District
State Business - No Fee
This survey does not constitute a subdivision as defined by AS 40.15.900

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
Survey Control Diagram
Record Of Survey
AKSAS 58105
Seward Highway Road & Bridge Rehabilitation
MP 75-90

Located within T10N, R1E, SEC. 24; T10N, R2E, SECS. 19, 29, 30, 32-34; T9N, R2E, SECS. 2, 3, 11, 13, 14, 24-28, 32-36; T9N, R3E, SECS. 19, 29-32; T8N, R3E, SECS. 5 & 6.

DRAWN	LFD	DATE	10/27/2006	SCALE	1"=1/2 mi
CHECKED	TDM	DATE	10/27/2006	SHEET	1 OF 6

2007-40 Anch Rec Dist
(174)

DWG Path: P:\Projects\059275 SURVEY SCD-SHR.dwg File No. 148-938

PRIMARY HORIZONTAL/VERTICAL CONTROL — THIS SHEET

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	35580.59244	93299.85277	372.316	SET BD/ROD[DOT]: GPS SHR-1
553	41583.14823	102602.97791	33.283	FND BC[DOH]: CLINCK

SECONDARY HORIZONTAL CONTROL — THIS SHEET

POINT	NORTHING	EASTING	DESCRIPTION
301	35540.00573	93215.63528	SET RBR/AC[DOWL]: HV SHR-301
445	41091.08785	103180.76798	SET RBR/AC[DOWL]: SHR-445
446	41730.60708	101122.41607	SET RBR/AC[DOWL]: SHR-446
447	41627.96772	101214.72700	SET RBR/AC[DOWL]: SHR-447
448	39720.02363	99109.35542	SET RBR/AC[DOWL]: SHR-448
449	39481.17929	98860.15118	SET RBR/AC[DOWL]: SHR-449
450	37412.39355	95998.47265	SET RBR/AC[DOWL]: SHR-450
451	37367.00345	96028.02405	SET RBR/AC[DOWL]: SHR-451
452	36314.00046	94113.39831	SET RBR/AC[DOWL]: SHR-452
453	36270.73023	94151.05138	SET RBR/AC[DOWL]: SHR-453
454	34753.60510	91716.65510	SET RBR/AC[DOWL]: SHR-454
455	34707.08950	91744.12308	SET RBR/AC[DOWL]: SHR-455
456	33313.28402	89162.73561	SET RBR/AC[DOWL]: SHR-456
457	33266.62497	89188.10050	SET RBR/AC[DOWL]: SHR-457

VERTICAL CONTROL — THIS SHEET

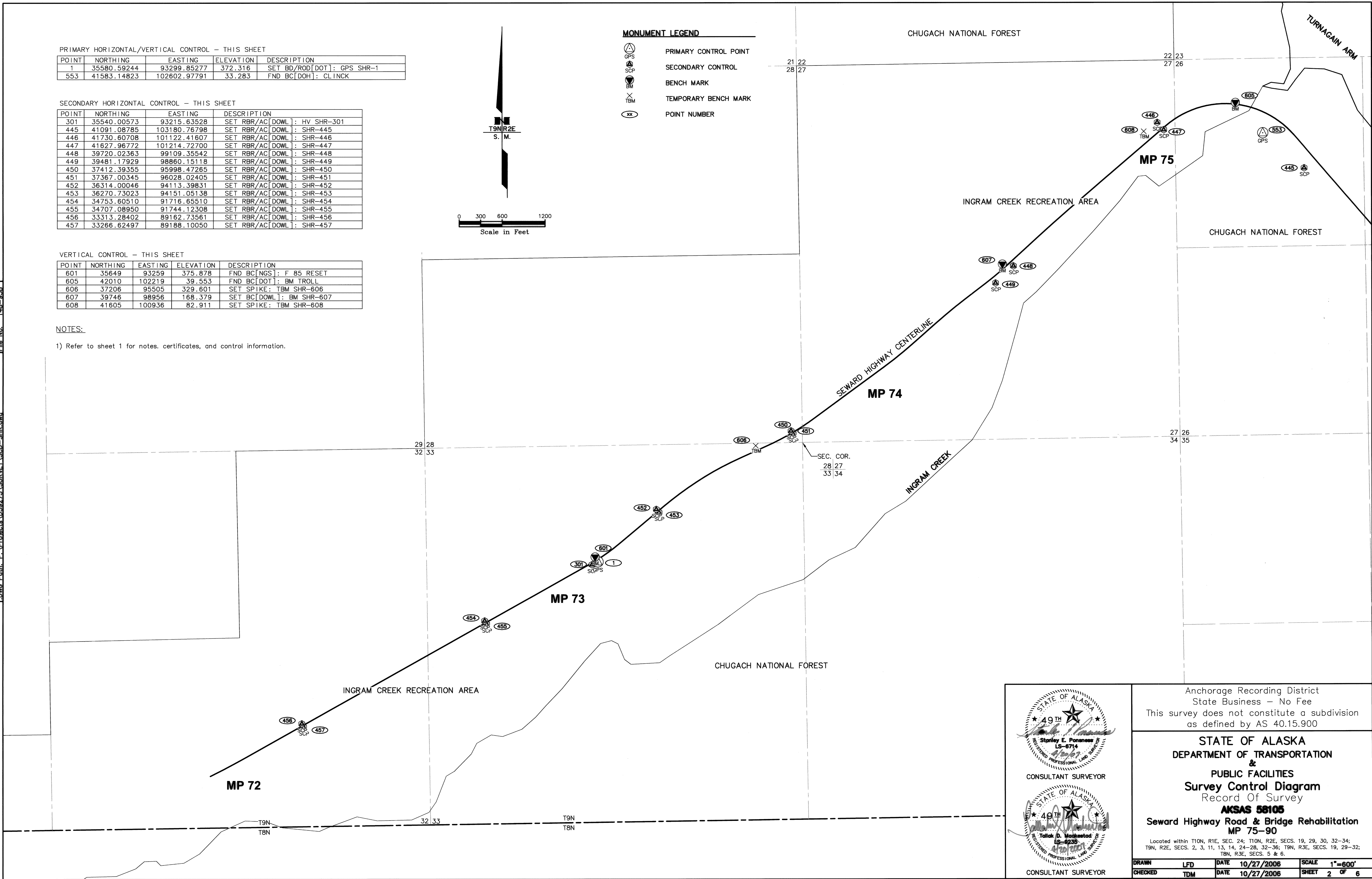
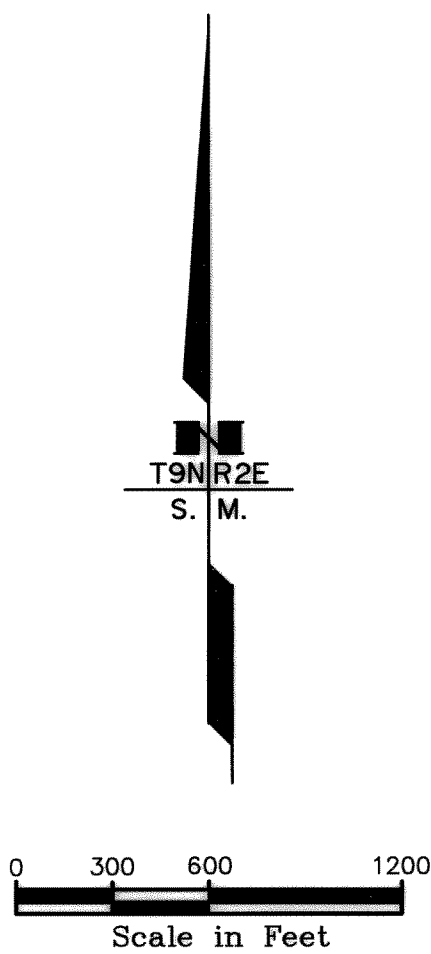
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
601	35649	93259	375.878	FND BC[NGS]: F 85 RESET
605	42010	102219	39.553	FND BC[DOT]: BM TROLL
606	37206	95505	329.601	SET SPIKE: TBM SHR-606
607	39746	98956	168.379	SET BC[DOWL]: BM SHR-607
608	41605	100936	82.911	SET SPIKE: TBM SHR-608

NOTES:

1) Refer to sheet 1 for notes, certificates, and control information.

MONUMENT LEGEND

- GPS
- SCP
- BM
- TBM
- XX
- PRIMARY CONTROL POINT
- SECONDARY CONTROL
- BENCH MARK
- TEMPORARY BENCH MARK
- POINT NUMBER



STATE OF ALASKA
49TH
Stanley E. Ponness
LS-6714
REGISTERED PROFESSIONAL LAND SURVEYOR

CONSULTANT SURVEYOR

STATE OF ALASKA
49TH
Tallak D. Mankstad
LS-6235
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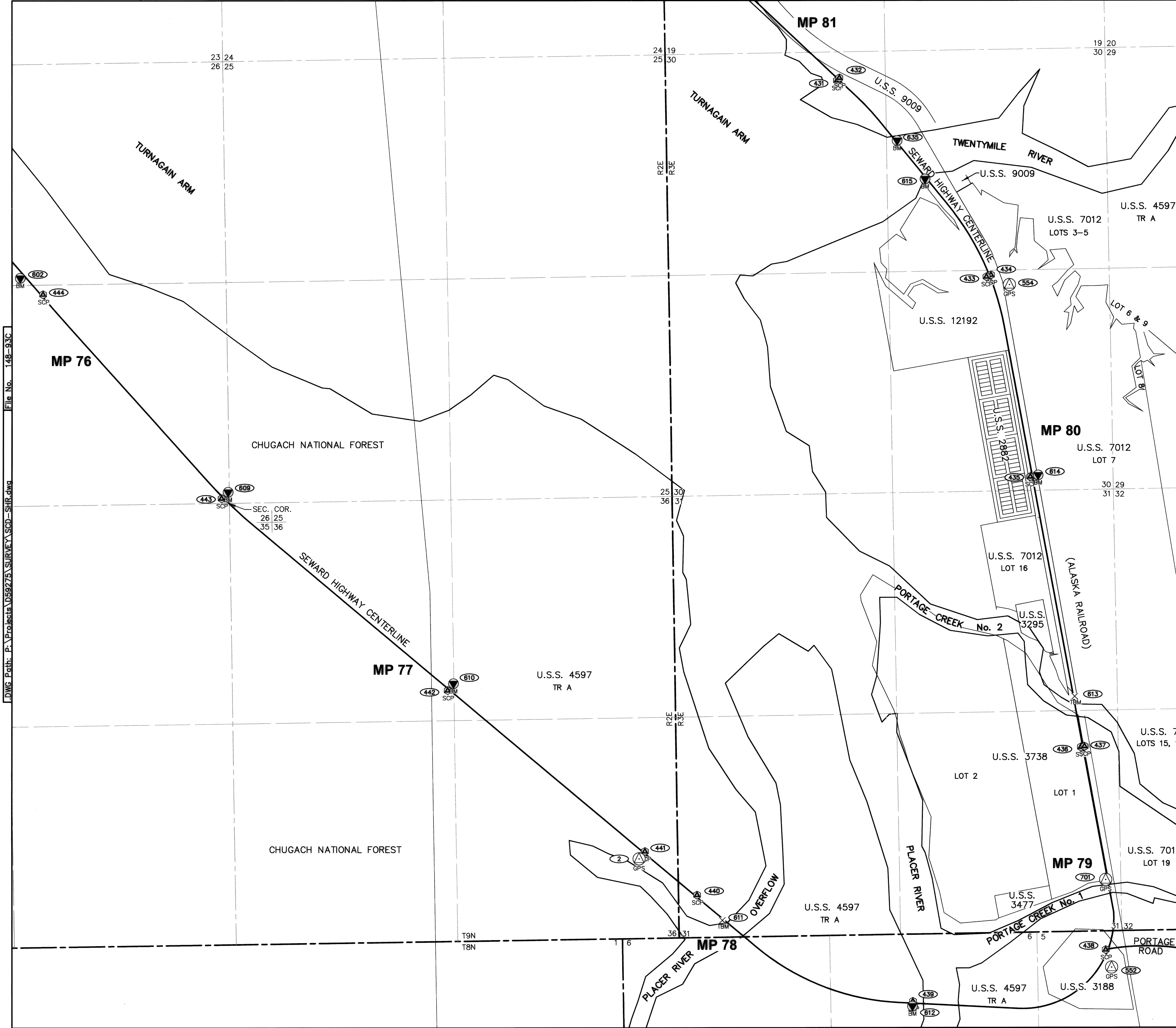
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DRAWN	LFD	DATE	10/27/2006	SCALE	1"=600'
CHECKED	TDM	DATE	10/27/2006	SHEET	2 OF 6

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PRIMARY HORIZONTAL/VERTICAL CONTROL - THIS SHEET

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
2	33152.34443	111600.87035	26.691	SET BD/ROD[DOT]: GPS SHR-2
552	31851.43300	117232.27065	28.420	FND BC[US&GS]: ENDING
554	40012.89279	116023.57461	27.950	FND BC[US&GS]: P 73
701	32898.91269	117163.17991	36.022	FND BD/ROD[DOT]: GPS PORT 1

SECONDARY HORIZONTAL CONTROL - THIS SHEET

POINT	NORTHING	EASTING	DESCRIPTION
431	42455.37453	113968.08435	SET RBR/AC[DOWL]: SHR-431
432	42486.34098	113996.01079	SET RBR/AC[DOWL]: SHR-432
433	40107.08977	115750.46618	SET RBR/AC[DOWL]: SHR-433
434	40129.03487	115804.28382	SET RBR/AC[DOWL]: SHR-434
435	37716.44817	116271.10061	SET RBR/AC[DOWL]: SHR-435
436	34484.70882	116870.03107	SET RBR/AC[DOWL]: SHR-436
437	34492.43823	116913.18067	SET RBR/AC[DOWL]: SHR-437
438	32060.57100	117161.98133	SET RBR/AC[DOWL]: SHR-438
439	31445.71571	114861.54286	SET RBR/AC[DOWL]: SHR-439
440	32718.50370	112291.06887	SET RBR/AC[DOWL]: SHR-440
441	33240.14415	111670.20389	SET RBR/AC[DOWL]: SHR-441
442	35166.20047	109318.69155	SET RBR/AC[DOWL]: SHR-442
443	37462.67070	106624.72986	SET RBR/AC[DOWL]: SHR-443
444	39900.21120	104498.52318	SET RBR/AC[DOWL]: SHR-444

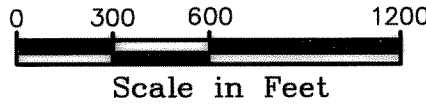
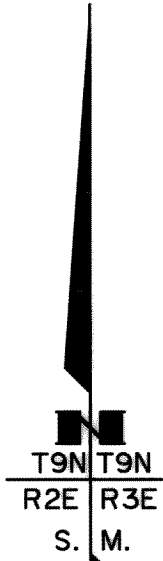
VERTICAL CONTROL - THIS SHEET

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
602	40096	104227	34.730	FND BD/ROD[DOT]: AZ INCK
609	37538.31174	106703.04476	26.130	SET BD/ROD[DOT]: BM SHR-609
610	35248.82078	109387.65481	26.457	SET BD/ROD[DOT]: BM SHR-610
611	32416	112592	37.368	SET BC[DOWL]: TBM SHR-611
612	31388.17354	114856.84331	35.320	SET BD/ROD[DOT]: BM SHR-612
613	35091	116797	37.536	SET BC[DOWL]: TBM SHR-613
614	37736.35473	116363.32694	27.198	SET BD/ROD[DOT]: BM SHR-614
615	41278.36190	115018.82497	37.415	FND BC[ARC]: BM SHR-615
635	41737.05952	114685.71525	37.360	FND BC[ARC]: BM SHR-635

- NOTES:
- 1) Refer to sheet 1 for notes, certificates, and control information.
 - 2) Bench marks with coordinates shown to five places were surveyed to Secondary Horizontal Control standards.

MONUMENT LEGEND

- PRIMARY CONTROL POINT
- SECONDARY CONTROL
- BENCH MARK
- TEMPORARY BENCH MARK
- POINT NUMBER



CONSULTANT SURVEYOR

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Anchorage Recording District
State Business - No Fee
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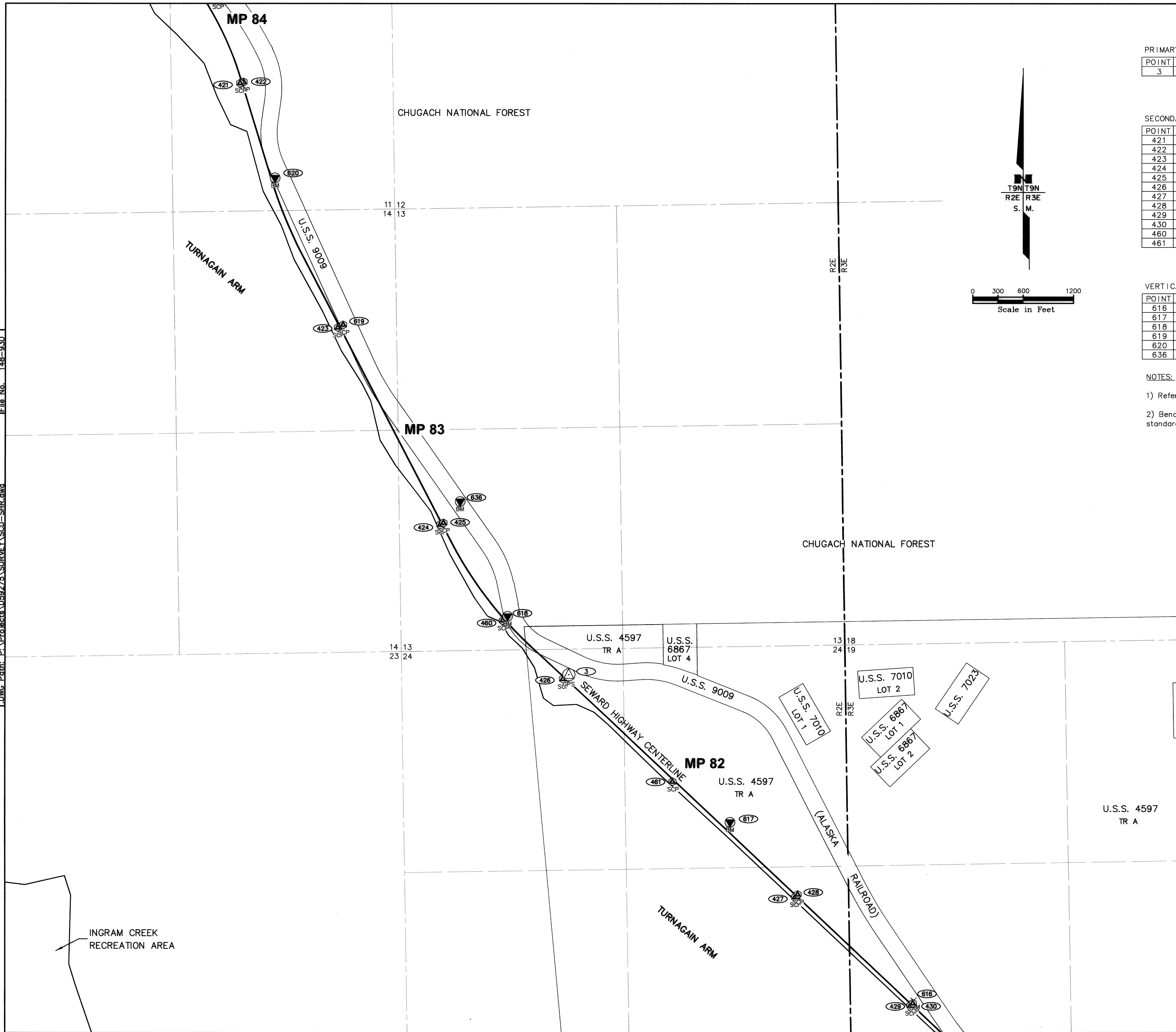
STATE OF ALASKA
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DRAWN	LFD	DATE	10/27/2006	SCALE	1"=600'
CHECKED	TDM	DATE	10/27/2006	SHEET	3 OF 6

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(394)

DWG Path: P:\Projects\059275 SURVEY\SCD-SHR.dwg File No. 148-930



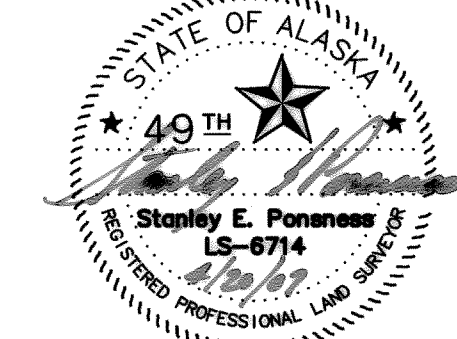
PRIMARY HORIZONTAL/VERTICAL CONTROL - THIS SHEET				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	47688.44256	108551.48260	27.038	SET BD/ROD[DOT]: GPS SHR-3

SECONDARY HORIZONTAL CONTROL - THIS SHEET				
POINT	NORTHING	EASTING	DESCRIPTION	
421	54745.47034	104632.76852	SET RBR/AC[DOWL]: SHR-421	
422	54759.39261	104674.71027	SET RBR/AC[DOWL]: SHR-422	
423	51829.39291	105798.58491	SET RBR/AC[DOWL]: SHR-423	
424	49478.09275	107019.22003	SET RBR/AC[DOWL]: SHR-424	
425	49499.10663	107059.57571	SET RBR/AC[DOWL]: SHR-425	
426	47637.61558	108480.66892	SET RBR/AC[DOWL]: SHR-426	
427	45033.26098	111244.38728	SET RBR/AC[DOWL]: SHR-427	
428	45064.23895	111274.70437	SET RBR/AC[DOWL]: SHR-428	
429	43735.92179	112615.80298	SET RBR/AC[DOWL]: SHR-429	
430	43766.08144	112644.77115	SET RBR/AC[DOWL]: SHR-430	
460	48334.36793	107764.33225	SET RBR/AC[DOWL]: SHR-460	
461	46410.81680	109786.98513	SET RBR/AC[DOWL]: SHR-461	

VERTICAL CONTROL - THIS SHEET				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
616	43798	112655	29.681	SET X/PILE[DOWL]: TBM SHR-616
617	45926	110470	25.373	SET BD/ROD[DOT]: BM SHR-617
618	48385.54500	107822.68085	32.319	FND BC[USACE]: 11 USE
619	51862.07012	105863.07887	27.471	SET BD/ROD[DOT]: BM SHR-619
620	53615	105051	27.372	FND BC[USACE]: 13 USE
636	49754	107257	32.823	FND BC[US&GS]: H 75

- NOTES:
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MONUMENT LEGEND	
	PRIMARY CONTROL POINT
	SECONDARY CONTROL
	BENCH MARK
	TEMPORARY BENCH MARK
	POINT NUMBER




49TH

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LS-6714

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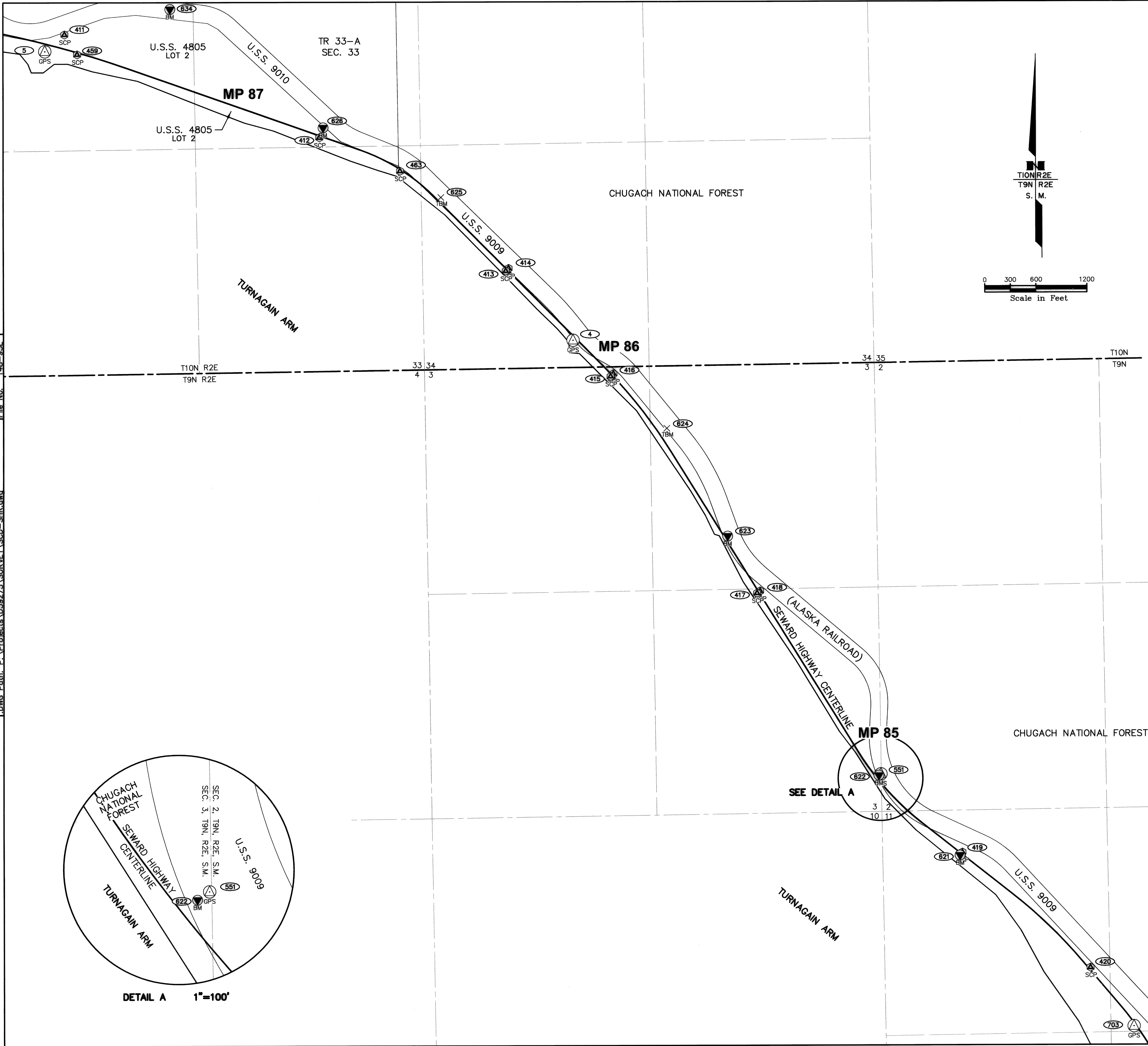
Anchorage Recording District
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DRAWN	LFD	DATE	10/27/2006	SCALE	1"=600'
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2007-40 Anch Rec. Dist.
(484)

DWG Path: P:\Projects\059275\SURVEY\SCD-SHR.dwg File No. 148-93E



PRIMARY HORIZONTAL/VERTICAL CONTROL - THIS SHEET

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
4	63997.90199	97502.25817	32.323	SET BD/ROD[DOT]: GPS SHR-4
5	67405.94387	91314.26943	40.011	SET BD/ROD[DOT]: GPS SHR-5
551	58888.25651	101105.99287	53.668	FND BC[USC&GS]: ALASKA_2
703	55915.80202	104065.98384	36.257	FND BD/ROD[DOT]: GPS BDPSCK

SECONDARY HORIZONTAL CONTROL - THIS SHEET

POINT	NORTHING	EASTING	DESCRIPTION
302	55747.83181	104366.14123	SET RBR/AC[DOWL]: HV SHR-302
411	67604.02993	91543.71608	SET RBR/AC[DOWL]: SHR-411
412	66387.05036	94530.87747	SET RBR/AC[DOWL]: SHR-412
413	64813.87945	96717.07498	SET RBR/AC[DOWL]: SHR-413
414	64845.71664	96749.45229	SET RBR/AC[DOWL]: SHR-414
415	63571.66383	97943.55598	SET RBR/AC[DOWL]: SHR-415
416	63603.57712	97975.74672	SET RBR/AC[DOWL]: SHR-416
417	61018.41390	99655.85361	SET RBR/AC[DOWL]: SHR-417
418	61042.94085	99691.28657	SET RBR/AC[DOWL]: SHR-418
419	57964.12829	102060.78794	SET RBR/AC[DOWL]: SHR-419
420	56605.68747	103557.62107	SET RBR/AC[DOWL]: SHR-420
459	67369.01727	91691.87615	SET RBR/AC[DOWL]: SHR-459
463	65991.03920	95476.98880	SET RBR/AC[DOWL]: SHR-463

VERTICAL CONTROL - THIS SHEET

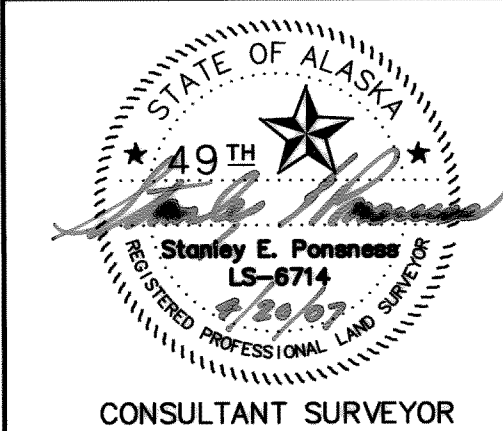
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
603	55903	104428	38.433	FND BC[USC&GS]: F 167
621	57929.67590	102033.24609	33.368	SET BD/ROD[DOT]: BM SHR-621
622	58872	101082	37.835	SET BC[DOWL]: BM SHR-622
623	61689	99312	34.540	SET BC[DOWL]: BM SHR-623
624	62960	98601	37.334	SET SPIKE: TBM SHR-624
625	65682	95956	38.135	SET SPIKE: TBM SHR-625
626	66503.87002	94575.31451	29.235	FND BC[USACE]: 20 USE
634	67901	92780	60.999	FND BC[USC&GS]: Q 72

NOTES:

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- 2) Bench marks with coordinates shown to five places were surveyed to Secondary Horizontal Control standards.

MONUMENT LEGEND

- GPS PRIMARY CONTROL POINT
- SCP SECONDARY CONTROL
- BM BENCH MARK
- TBM TEMPORARY BENCH MARK
- XX POINT NUMBER



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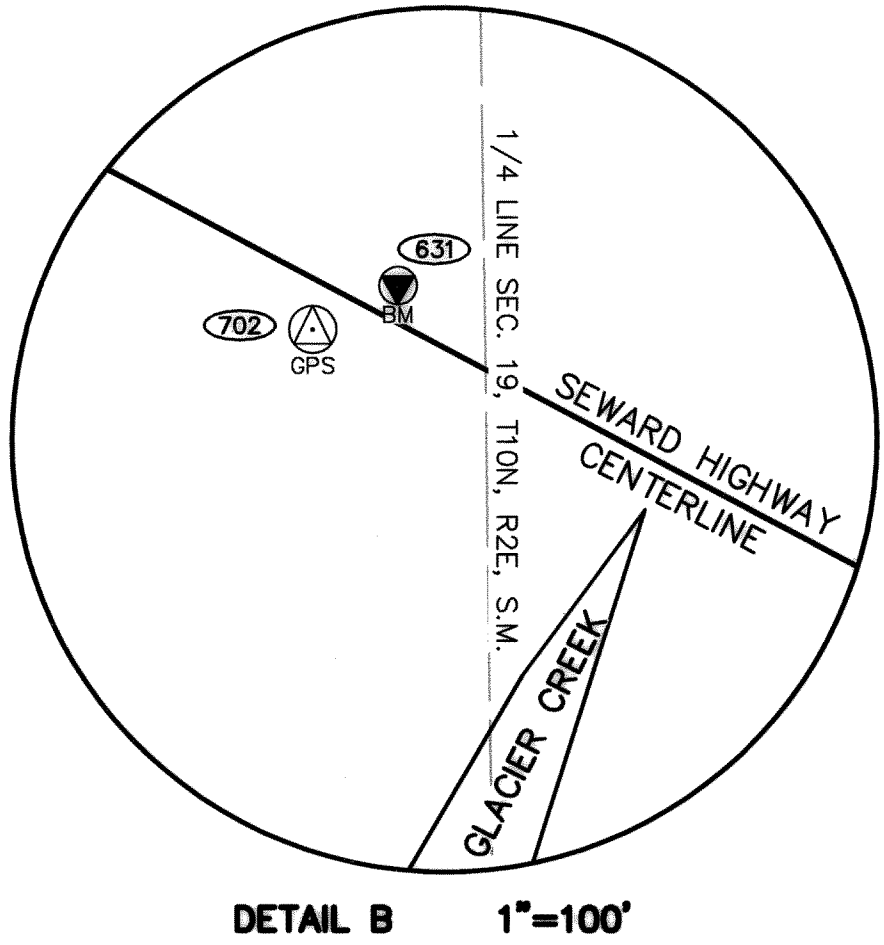
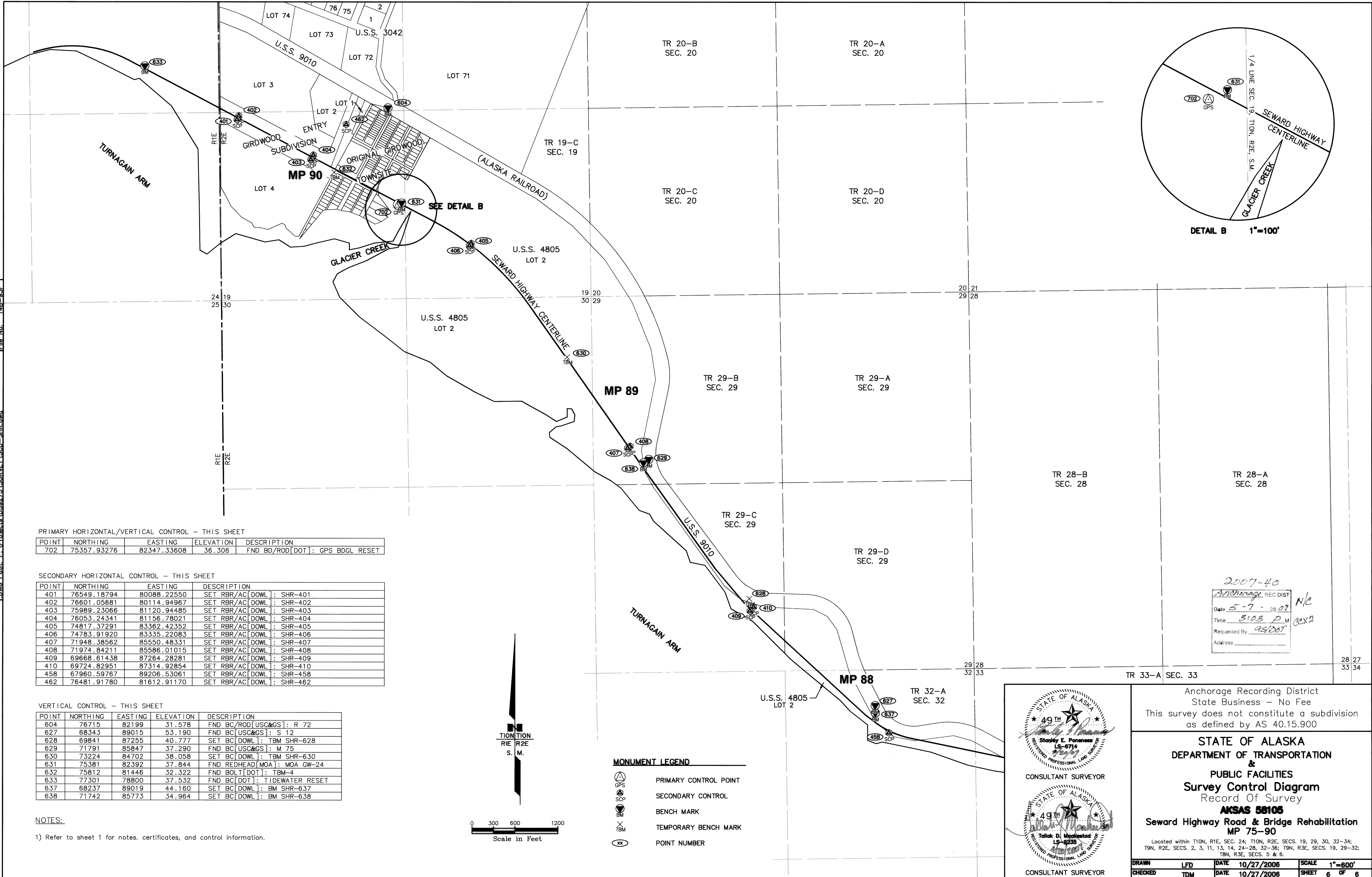
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2007-40 Anch Rec. Dist.
(596)

DWG Path: P:\Projects\059275 SURVEY SCD - SHR.dwg File No. 148-93F



PRIMARY HORIZONTAL/VERTICAL CONTROL - THIS SHEET

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
702	75357.93276	82347.33608	36.306	FND BD/ROD[DOT]: GPS BDGL RESET

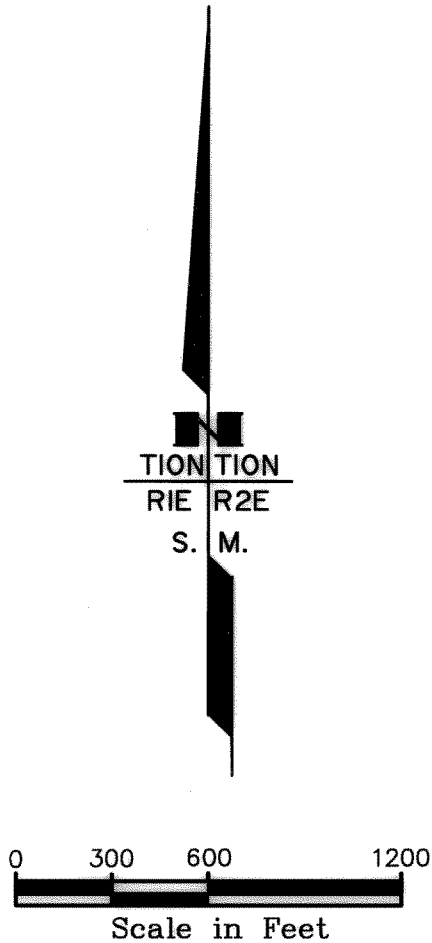
SECONDARY HORIZONTAL CONTROL - THIS SHEET

POINT	NORTHING	EASTING	DESCRIPTION
401	76549.18794	80088.22550	SET RBR/AC[DOWL]: SHR-401
402	76601.05681	80114.94967	SET RBR/AC[DOWL]: SHR-402
403	75989.23066	81120.94485	SET RBR/AC[DOWL]: SHR-403
404	76053.24341	81156.78021	SET RBR/AC[DOWL]: SHR-404
405	74817.37291	83362.42352	SET RBR/AC[DOWL]: SHR-405
406	74783.91920	83335.22083	SET RBR/AC[DOWL]: SHR-406
407	71948.38562	85550.48331	SET RBR/AC[DOWL]: SHR-407
408	71974.84211	85586.01015	SET RBR/AC[DOWL]: SHR-408
409	69668.61438	87264.28281	SET RBR/AC[DOWL]: SHR-409
410	69724.82951	87314.92854	SET RBR/AC[DOWL]: SHR-410
458	67960.59767	89206.53061	SET RBR/AC[DOWL]: SHR-458
462	76481.91780	81612.91170	SET RBR/AC[DOWL]: SHR-462

VERTICAL CONTROL - THIS SHEET

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
604	76715	82199	31.578	FND BC/ROD[USC&GS]: R 72
627	68343	89015	53.190	FND BC[USC&GS]: S 12
628	69841	87255	40.777	SET BC[DOWL]: TBM SHR-628
629	71791	85847	37.290	FND BC[USC&GS]: M 75
630	73224	84702	38.058	SET BC[DOWL]: TBM SHR-630
631	75381	82392	37.844	FND REDHEAD[MOA]: MOA GW-24
632	75812	81446	32.322	FND BOLT[DOT]: TBM-4
633	77301	78800	37.532	FND BC[DOT]: TIDEWATER RESET
637	68237	89019	44.160	SET BC[DOWL]: BM SHR-637
638	71742	85773	34.964	SET BC[DOWL]: BM SHR-638

NOTES:
1) Refer to sheet 1 for notes, certificates, and control information.



- MONUMENT LEGEND**
- GPS: PRIMARY CONTROL POINT
 - SCP: SECONDARY CONTROL
 - BM: BENCH MARK
 - TBM: TEMPORARY BENCH MARK
 - XX: POINT NUMBER

2007-40
Anchorage REC DIST
Date 5-7-2007
Time 3:03 P.M.
Requested By ASD
Address

STATE OF ALASKA
49th
Stanley E. Penness
LS-6714
CONSULTANT SURVEYOR

STATE OF ALASKA
49th
Tallak D. Mackintosh
LS-9235
CONSULTANT SURVEYOR

Anchorage Recording District
State Business - No Fee
This survey does not constitute a subdivision
as defined by AS 40.15.900

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
Survey Control Diagram
Record Of Survey
AKSAS 58105
Seward Highway Road & Bridge Rehabilitation
MP 75-90

Located within T10N, R1E, SEC. 24; T10N, R2E, SECS. 19, 29, 30, 32-34;
T9N, R2E, SECS. 2, 3, 11, 13, 14, 24-28, 32-36; T9N, R3E, SECS. 19, 29-32;
T8N, R3E, SECS. 5 & 6.

DRAWN	LFD	DATE	10/27/2006	SCALE	1"=600'
CHECKED	TDM	DATE	10/27/2006	SHEET	6 OF 6

2007-40 Anch Rec. Dist.
(686)