

OBSTRUCTION DATA SHEET

ODS 6845
TORRINGTON MUNICIPAL AIRPORT
TORRINGTON, WYOMING

DIGITIZED FROM

OC 6845
SURVEYED JUNE 1989
1ST EDITION



PREPARED AND DISTRIBUTED BY
THE NATIONAL OCEAN SERVICE
U.S. DEPARTMENT OF COMMERCE
FOR THE FEDERAL AVIATION ADMINISTRATION

OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA Nr. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS (and OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

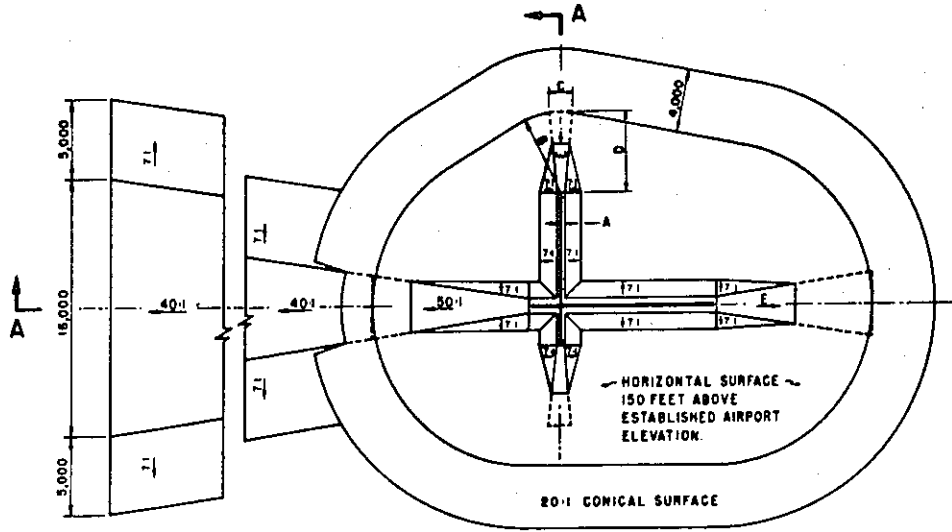
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows (see footnote 2 on page 3):

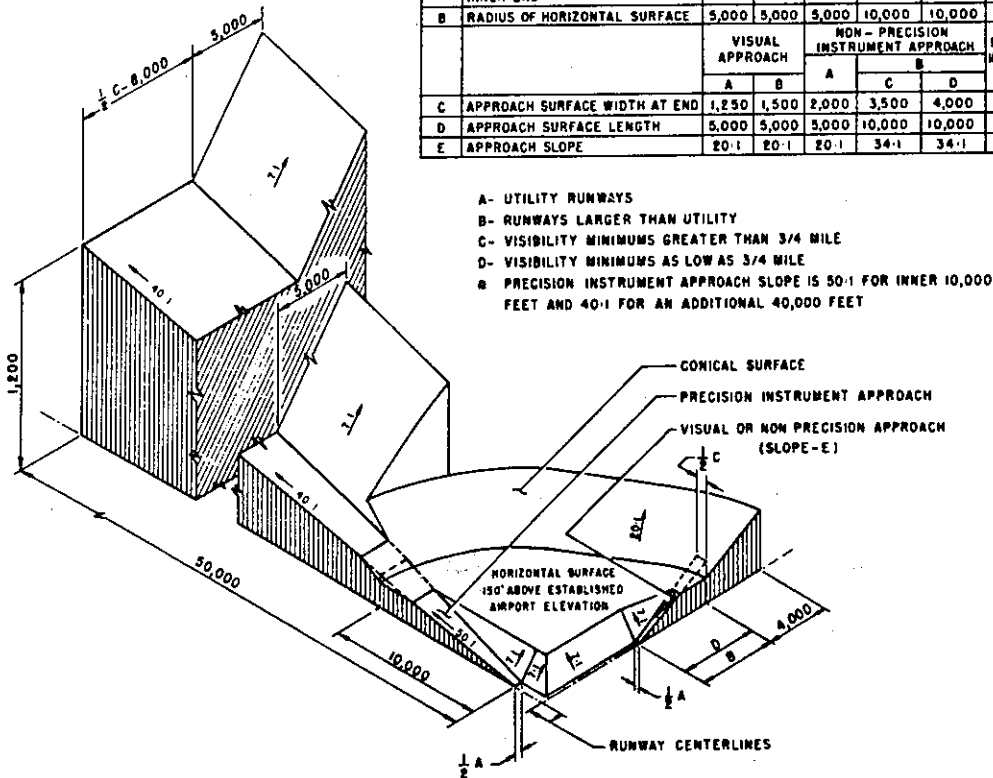
A(V) Utility runway - visual approach only
 A(NP) Utility runway - nonprecision instrument approach
 B(V) Nonutility runway - visual approach only
 C Nonutility runway - nonprecision instrument approach with
 visibility minimums greater than 3/4 mile
 D Nonutility runway - nonprecision instrument approach with
 visibility minimums as low as 3/4 mile
 PIR Precision instrument runway
 SUPLC ... Supplemental C underlying a B(V)

FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	C	D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	C	D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	∅
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	∅



- A- UTILITY RUNWAYS
- B- RUNWAYS LARGER THAN UTILITY
- C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- E- PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

ISOMETRIC VIEW OF SECTION A-A

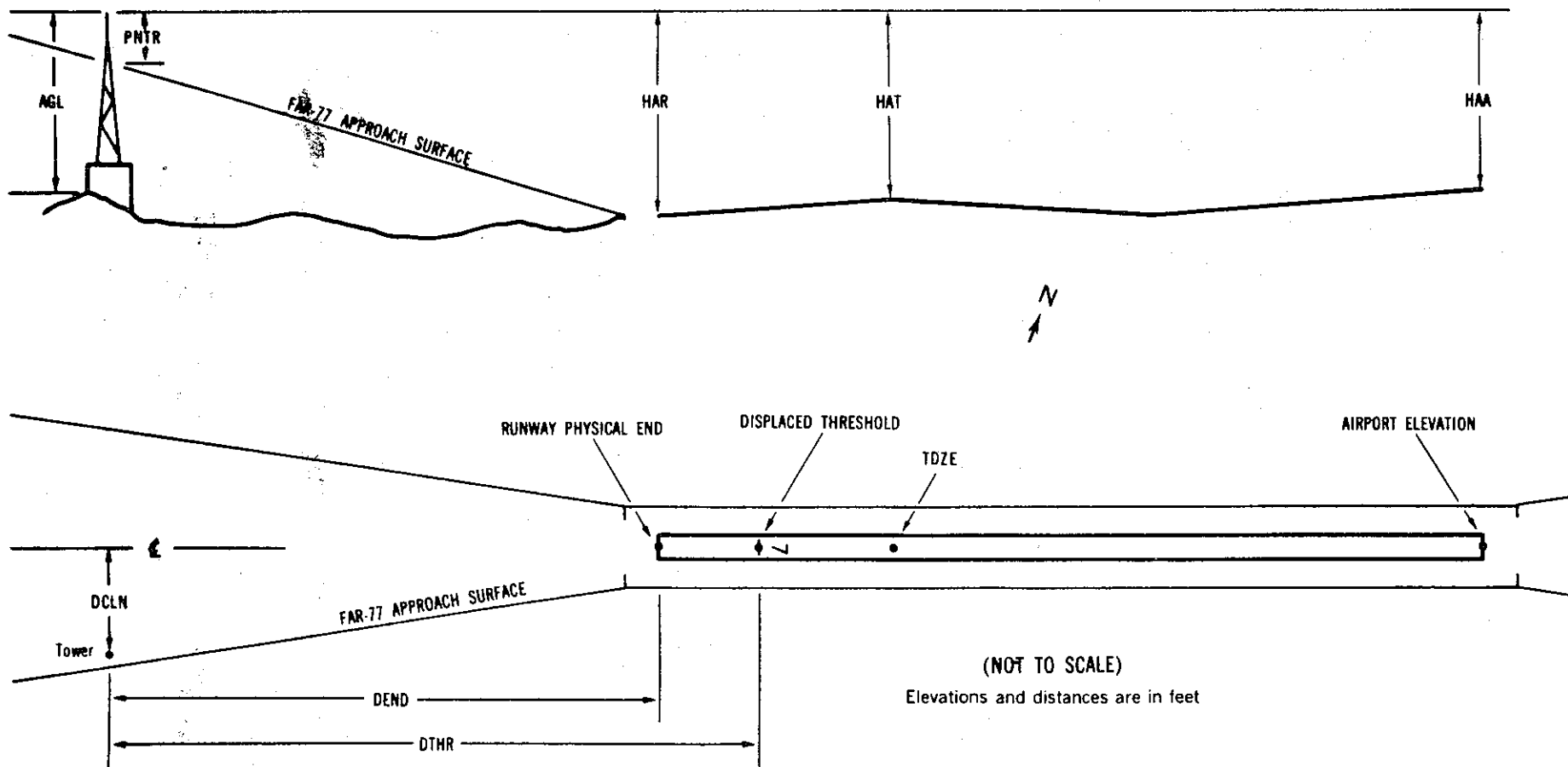
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

X ¹	X ²	XXXX/XXXX ³	XXXXXX.XXX ⁴	XXXXXXXX.XXX ⁴	XXXXXXX ⁵	XXXX/XXXX ⁶	XXXXXX.XXX ⁷	XXXXXXXX.XXX ⁷				
OBJECT	LAT	LONG	A ⁸	ELEV ⁹	AGL ¹⁰	HAR ¹¹	HAT ¹¹	HAA ¹¹	DEND ¹²	DTHR ¹²	DCLN ¹²	PNTR ¹³
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX



EXPLANATION OF FOOTNOTES

- ¹ Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary area of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.
- ² For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)
- ³ Reference runway approach physical end elevation/touchdown zone elevation
- ⁴ Latitude and longitude of reference runway approach physical end
- ⁵ Reference runway geodetic azimuth reckoned clockwise from south
- ⁶ Reference runway displaced threshold elevation/touchdown zone elevation
- ⁷ Latitude and longitude of reference runway displaced threshold
- ⁸ Accuracy Code: Horizontal Vertical
 1 = 20 A = 2
 2 = 40 B = 5
 C = 20
- ⁹ Mean Sea Level (MSL) elevation at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.
- ¹⁰ Height above ground level (AGL). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is ± 10 feet.
- ¹¹ HAA - Height above airport
 HAR - Height above reference runway approach physical end
 HAT - Height above reference runway touchdown zone elevation
- ¹² DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end
 DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway threshold
 DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft.
- A negative value for DEND or DTHR indicates object is in primary area on roll-out side of zero distance point.
- ¹³ PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

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AIRPORT ELEVATION 4205

2 A(V) 4196/4196 420344.497N 10409 5.127W 2082933

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	420404.01	1040852.82	1A	4194		-2	-2	-11	-2179		127L	1
GROUND	420402.05	1040850.47	1A	4194		-2	-2	-11	-2089		124R	0
GROUND	420353.94	1040856.37	1A	4195		-1	-1	-10	-1156		124R	1
GROUND	420343.22	1040904.21	1A	4199		3	3	-6	81		122R	3
GROUND	420343.18	1040907.57	1A	4198		2	2	-7	205		98L	2
GROUND	420340.08	1040908.34	1A	4205		9	9	0	508		OR	-6

20 A(V) 4193/4196 420410.542N 1040846.154W 0282946

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	420343.18	1040907.57	1A	4198		5	2	-7	-3205		98R	2
GROUND	420343.22	1040904.21	1A	4199		6	3	-6	-3081		122L	3
GROUND	420353.94	1040856.37	1A	4195		2	-1	-10	-1844		124L	1
GROUND	420402.05	1040850.47	1A	4194		1	-2	-11	-911		124L	0
GROUND	420404.01	1040852.82	1A	4194		1	-2	-11	-821		127R	1
TREE	420429.22	1040828.74	1A	4216		23	20	11	2288		252L	-81

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AIRPORT ELEVATION 4205

10 C 4203/4205 420401.884N 1040948.459W 2952613

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	420336.04	1040838.35	1A	4195		-8	-10	-10	-5900		90R	1
FENCE POST	420336.79	1040845.90	1A	4206		3	1	1	-5352		267R	13
ELECTRICAL BOX	420342.81	1040859.64	1A	4197		-6	-8	-8	-4155		162R	2
GROUND	420346.63	1040857.74	1A	4203		0	-2	-2	-4118		249L	8
BUSH	420352.21	1040915.40	1A	4204		1	-1	-1	-2673		187L	4
OL ON LIGHTED WINDSOCK	420350.28	1040923.87	1A	4224		21	19	19	-2179		264R	24
GROUND	420355.37	1040922.41	1A	4205		2	0	0	-2058		249L	5
ELECTRICAL BOX	420355.97	1040936.84	1A	4206		3	1	1	-1049		164R	2
SIGN	420402.70	1040942.64	1A	4215		12	10	10	-361		263L	11
FENCE	420403.58	1040945.13	1A	4212		9	7	7	-153		263L	9
FENCE	420404.13	1040946.70	1A	4208		5	3	3	-22		263L	5
GROUND	420402.73	1040950.86	1A	4203		0	-2	-2	200		1R	0
SIGN	420406.34	1040952.96	1A	4212		9	7	7	500		262L	0
FENCE	420403.99	1040954.48	1A	4207		4	2	2	502		3R	-5
OL ON WATER TANK	420455.55	1041137.93	1A	4352		149	147	147	9789		1361L	-133

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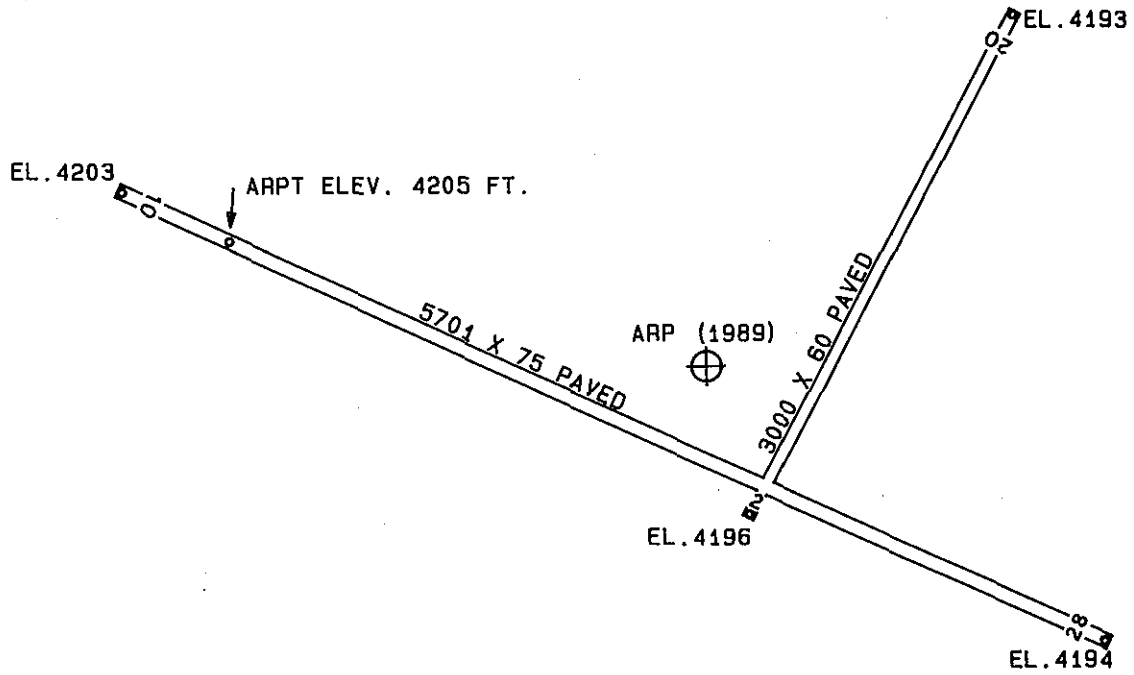
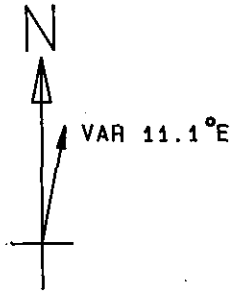
AIRPORT ELEVATION 4205

28 C 4194/4200 420337.694N 1040840.229W 1152659

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	420402.73	1040950.86	1A	4203		9	3	-2	-5900		1L	0
FENCE	420404.13	1040946.70	1A	4208		14	8	3	-5677		263R	5
FENCE	420403.58	1040945.13	1A	4212		18	12	7	-5546		263R	9
SIGN	420402.70	1040942.64	1A	4215		21	15	10	-5339		263R	11
ELECTRICAL BOX	420355.97	1040936.84	1A	4206		12	6	1	-4651		164L	2
GROUND	420355.37	1040922.41	1A	4205		11	5	0	-3642		249R	5
OL ON LIGHTED WINDSOCK	420350.28	1040923.87	1A	4224		30	24	19	-3521		264L	24
BUSH	420352.21	1040915.40	1A	4204		10	4	-1	-3027		187R	4
GROUND	420346.63	1040857.74	1A	4203		9	3	-2	-1582		249R	8
ELECTRICAL BOX	420342.81	1040859.64	1A	4197		3	-3	-8	-1545		162L	2
FENCE POST	420336.79	1040845.90	1A	4206		12	6	1	-347		267L	13
GROUND	420336.04	1040838.35	1A	4195		1	-5	-10	200		90L	1
GROUND	420335.85	1040836.87	1A	4199		5	-1	-6	309		59L	2
GROUND	420335.53	1040831.80	1A	4204		10	4	-1	668		76R	-4

ARP 420352.456N 1040907.893W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG	BEARING	DISTANCE
TOWER	420357.10	1040912.28	1A	4249		44	313	47	575
GROUND	420348.41	1040900.02	1A	4198		-7	113	28	721
GROUND	420355.99	1040859.02	1A	4198		-7	50	46	759
WINDSOCK	420359.47	1040851.52	1A	4206		1	49	1	1424
WINDSOCK	420338.58	1040852.55	1A	4211		6	129	25	1820
ROD ON OL AIRPORT BEACON	420344.71	1040931.70	1A	4249		44	235	18	1959
TREE	420336.24	1040845.39	1A	4212		7	122	56	2361
TREE	420332.71	1040838.98	1A	4212		7	121	24	2958
ROD ON STACK	420252.42	1041108.97	2A	4340	256	135	225	16	10971
OL ON MICROWAVE MAST	420615.66	1040957.38	2A	4505	260	300	334	28	14968



TOUCHDOWN ZONE RUNWAY ELEVATION	
2	4196
20	4196
10	4205
28	4200

TORRINGTON MUNICIPAL AIRPORT
 TORRINGTON, WYOMING
 (NOT TO SCALE)