

PHOENIX (169)

Arizona

E. E. Moe, 1956

Book: PH 439

Latitude 33°15' Longitude 112°00'

FROM INTERSECTION OF THOMAS ROAD AND 91ST AVENUE,  
GLENDALE, ARIZONA, TO FIELD ROAD AT SOUTH SIDE OF  
BLACKTOP HIGHWAY

Note: Line continues from Avondale quadrangle (170).

	(Y)	(X)
3 25+a. Center of intersection of Thomas Road and 83rd Avenue	902,214.67	402,314.22
↓ 29 = "T T 3 EEM 1956" - Glendale P.O., 4.1 mi. S. of along 59th Ave., thence 1.9 mi. W. along Thomas Road, 27 ft. N. of center of Thomas Road, 48 ft. W. of center of 75th Ave., on SE. corner of concrete irrigation structure; standard tablet stamped "T T 3 EEM 1956"	902,359.88	407,494.50✓
9 33+a. Center of intersection of Thomas Road and 67th Avenue	902,372.47	412,841.81
↓ 38 = "T T 4 EEM 1956" - Glendale, 4.1 mi. S. of, along 59th Ave., 25 ft. W. of center of 59th Ave., 41 ft. S. of center of Thomas Road, on SE. corner of concrete structure; standard tablet stamped "T T 4 EEM 1956"	902,394.88	417,956.94✓
△ 42a. Center of intersection of 59th Avenue and Indian School Rd.	907,713.67	417,979.03
↓ 43. Center of field rd. at S. side of blacktop highway = P P M 134-19A	907,682.54	419,358.74

LINE ENTERS NEW RIVER NO. 4 QUADRANGLE (192)

**NAD 83 VALUES AVAILABLE**

Station: TELEGRAPH PASS

County: Maricopa

33 15  
1E 112 00  
State: Ariz. 167

Observer: A. H. Thompson

Year: 1899 Datum: 1927 N.A.D. (Revised 1953)

Description: U.S.C.&G.S.

1935

*See 33 112 2 - 1025*

Original description in 21st Annual Report, page 346.

NOTE: In 1935, the U.S.C.&G.S. occupied this station. Following is the U.S.C.&G.S. description from Special Publication 224, page 116:

"On the highest point of the range of hills, about 10 mi. airline, S. of Phoenix, and 1/2 mi. S of Telegraph Pass. The U.S. Geological Survey mark was found out of place and the Coast and Geodetic Survey mark was set in the same position as the original mark had occupied. Marked by a standard bronze disk. Reference mark No. 1, a standard bronze reference disk is 23.742 meters (77.89 ft.) from station in azimuth 203°13'. Reference mark No. 2, a standard bronze reference disk is 16.521 meters (54.20 ft.) from station in azimuth 348°15'.

Plane coordinates: (C) X=455,438.27 ft. Y=848,897.23 ft.

FILE COPY

### NAD 83 VALUES AVAILABLE

\* [Latitude 33 20 00.852

\* Longitude 112 03 45.248 ]

To Station—	Azimuth ° ' "	Back Azimuth ° ' "	Distance	
			Log. Meters	<del>Meters</del> Feet
Camels Back	205 11 04.8	25 14 26.4		72,839.27
Superstition Pt.	261 53 29.2	82 15 21.2		204,220.27
				3/23/53 cg

\* = Values by U. S. Coast and Geodetic Survey. ✓

Station: **CRUZ** County: **Maricopa** State: **Ariz. (169)**  
 Observer: **E.B. Latham (C&GS)** Year: **1935** Datum: **1927 N.A.**

Description:

Described in C&GS Special Publications 224, page 116 as follows:

About 17 mi. SW of Phoenix on highest part of a flat gravel ridge west of Gila River. There are washes on south, west, and east sides of ridge. Marked by a standard bronze disk as described in note 5. Ref. mark No. 1, a standard bronze ref. disk, note 12a, is 10.120 meters (33.20 ft.) from station in azimuth  $245^{\circ}36'$ . Ref. mark No. 2, a standard bronze ref. disk, note 12a, is 11.389 meters (37.37 ft.) from station in azimuth  $312^{\circ}45'$ . The azimuth mark (ref. mark No. 3), a standard bronze disk, note 12a, is in azimuth  $272^{\circ}07'50''$  from the station.

### NAD 83 VALUES AVAILABLE

[Latitude **33 17 38.912** Longitude **112 13 48.524** ]

To Station—	Azimuth ° ' "	Back Azimuth ° ' "	Distance Log. Meters	Feet
Initial Monument	142 43 45.15	322 41 16.19	4.0633693	37962.4
Salt	246 58 45.08	67 02 14.78	4.0305567	35199.9
St. Johns	330 19 25.90	150 20 34.13	3.8131112	21335.1

7-30-54 am ✓

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Cashions E

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
J-15	T. 1 S., R. 3 E., near SW. corner of sec. 31; To reach from intersection of South Central Avenue and Baseline Road, go W. along Baseline Road for 5.55 mi to 51st Avenue (Lateral 17); go S. on black top rd. for 6.0 mi to crossroads at St. Johns Mission; turn left and go E. on graded dirt rd. for 4.1 mi to curve in rd. and station site. Station mark is 106 ft NNE. of G.L.O. section corner pipe and is at geometric center of white panel; in top of concrete post projectin 0.8 ft above ground; Corps of Engineers disk stamped "TT J-15 1948"		T-16 Panel AMS	Centered over station mark, black and white cross- target panel. Same position as station mark	1157.5
	X = 444,590.73 Y = 833,318.41 1153.43 <b>33° 17' 26.540" 112° 5' 52.796"</b>				
J-15 Panel AMS	White cross-target panel centered over station mark. Same position as station mark	1152.6			
Q-15	T. 2 S., R. 3 E., near SE. corner of sec. 36. To reach from intersection of Baseline Road and Highline Drive (South 56th Street), go S. on 56th Street to end at Williams Field Road, turn right and go W. for 2.0 mi to rd. S., turn left and go S. for 1.0 mi to curve to E. and station site. Station is located 19 ft W. of centerline of N.-S. rd.; 16 ft SE. of irrigation control gate; 17 ft NE. of electric pump; 9.9 ft NNW. of power pole; 2.5 ft SW. of fence corner; in top of concrete post flush with ground; Corps of Engineers disk stamped "TT Q-15 1948 RESET AMS 1953" (Not visited by USGS in 1965)		W-16	T. 2 S., R. 5 E., near NW. corner of sec. 7 To reach from intersection of Arizona Avenue (State Highway 87) and Germann Road S. of Chandler, drive W. on Germann Road for 3.0 mi to junction with Price Road and station site. Station mark is located in SE. corner of intersection; 66 ft E. of centerline of Price Road; 37 ft S. of centerline of Germann Road; in top of concrete post; Corps of Engineers disk stamped "TT W-16 1948 RESET AMS 1953" (Not visited by USGS in 1965)	
	X = 475,562.48 Y = 833,321.68 1168.5			X = 507,360.25 Y = 827,858.68 1182.33	
PP Q-15 AMS	The NW. end of ditch, at centerline	1168.0	PP W-16 AMS	On W. side of Price Road; centerline of E.-W. ditch at culvert headwall.	1181.5
	X = 475,488.44 Y = 833,282.93 1168.0			X = 507,269.41 Y = 827,858.76 1181.5	
S-15	T. 1 S., R. 4 E., near SE. corner of sec. 32. To reach from intersection of Baseline Road and Highline Drive (South 56th Street), drive S. for 5.0 mi to Williams Field Road, turn left for 0.1 mi to T-rd. S. (Maricopa Highway); turn right and go S. for 1.0 mi to start of curve in hwy. and station site. Station mark is located 28 ft W. of centerline of hwy; 25 ft N. of ditch; 5.6 ft W. of centerline of ditch N.; in top of concrete post set 1.0 ft below surface of ground; Corps of Engineer disk stamped "TT S-15 1960 ARMY MAP SERVICE" (Not visited by USGS in 1965)		X-16	T. 2 S., R. 5 E., near SW. corner of sec. 5. To reach from intersection of Arizona Avenue (State Highway 87) and Germann Road S. of Chandler, drive W. on Germann Road for 2.0 mi to Dobson Road and station site. Station mark is located NE. of intersection; 37 ft N. of centerline of Germann Road; 26 ft E. of centerline of Dobson Road; cemented in top of concrete headwall, 0.6 ft higher than intersection; Corps of Engineers disk stamped "TT X-16 1948" (Not visited by USGS in 1965)	
	X = 485,979.98 Y = 833,308.53 1153.45			X = 512,606.81 Y = 828,012.02 1194.35	
PP S-15 AMS	Intersecting centerline of N.-S. hwy. and E.-W. ditch	1154.1	PP X-16 AMS	Intersecting centerline of N.-S. ditch and ditch W.	1192.5
	X = 486,007.56 Y = 833,284.27 1154.1			X = 512,547.09 Y = 828,099.92 1192.5	
X-15	T. 1 S., R. 5 E., near SE. corner of sec. 31. Located at intersection of Pecos Road and Dobson Road; 20 ft N. of centerline of Pecos Road; 21 ft W. of centerline of Dobson Road; 11 ft S. of centerline of E.-W. ditch; 3 ft SW. of telephone pole; in top of concrete post flush with ground and level with intersection; Corps of Engineers disk stamped "TT X-15 1948" (Not visited by USGS in 1965)				
	X = 512,543.60 Y = 833,522.78 1196.0				
PP X-15 AMS	On W. side of N.-S. rd., centerline of E.-W. ditch at headwall of culvert.	1195.4			
	X = 512,545.21 Y = 833,533.29 1195.4				
	TIER 16				
S-16	T. 2 S., R. 4 E., near SE. corner of sec. 5. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on hwy. for 2.1 mi to intersection of E.-W. track rd., turn left and go ENE. on track rd. for 0.25 mi to intersection of NE.-SW. track rd., continue E. for 0.1 mi to track rd. intersection and station site. Station mark is 7 ft E. of centerline of N.-S. track rd.; 8.5 ft N. of centerline of E.-W. track rd.; in top of concrete post projecting 0.3 ft above ground; Corps of Engineers disk stamped "TT S-16 1948" (Not visited by USGS in 1965)		J-17 Panel AMS	T. 2 S., R. 2 E., approximately 0.1 mi S. of NE. corner of sec. 15. To reach from Laveen, drive S. on black top rd. for 6.35 mi to rd. forks, take left fork and go SE. for 2.4 mi to powerline crossing, turn sharp left and go NW. on powerline rd. for 0.6 mi to cross trail and station site. Station mark is located 26 ft SW. of intersection; 16 ft S. of centerline of NW.-SE. trail; in top of concrete post projecting 0.2 ft; Corps of Engineers disk stamped "TT G-17 1962 ARMY MAP SERVICE"	
	X = 485,752.28 Y = 828,628.28 1148.72			X = 433,942.21 Y = 822,541.20 1071.0 <b>33° 15' 39.702" 112° 7' 57.985"</b>	
PP S-16 AMS	Intersecting centerlines of track rds. (crossroads)	1147.6	G-17 Panel USGS	Centered over station mark, 12- by 12-foot square white panel. Position same as station mark	1070.8
	X = 485,746.93 Y = 828,619.19 1147.6				
T-16	T. 2 S., R. 3 E., near NE. corner of sec. 9. To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive W. on Cleveland Street (which becomes Williams Field Road) for 6.0 mi to intersection of Kyrene Road, turn left and go S. for 1.0 mi, thence jog E. for 0.05 mi, continue S. for 1.0 mi to station site. Station is located 59 ft W. of N.-S. rd., in center of permanent panel; in top of concrete post projecting 0.6 ft; Corps of Engineers disk stamped "TT T-16 1948" (Not visited by USGS in 1965)		J-17 Panel AMS	Geometric center of black asphalt, cross-target panel. Position same as station mark	1071.0
	X = 491,396.62 Y = 827,819.58 1158.1				
			L-17	T. 2 S., R. 3 E., near NE. corner of sec. 17. To reach from main crossroads near St. Johns Mission, drive E. on graded section line rd. for 1.9 mi to powerline crossing, turn right and go SE. on powerline rd. for 4.0 mi to cross road, turn left and go E. on trail for 0.7 mi to station site. Station is located 42 ft S. of trail and is at center of black asphalt panel; in top of concrete post projecting 0.1 ft; Corps of Engineers disk stamped "TT L-17 1948" (Not visited by USGS in 1965)	
				X = 444,806.01 Y = 822,168.09 1071.4 <b>33° 15' 46.109" 112° 3' 50.053"</b>	
			L-17 Panel AMS	Geometric center of black asphalt, cross-target panel. Position same as station mark	1097.3
				X = 454,784.16 Y = 822,858.51 1097.4 <b>33° 15' 43.201" 112° 3' 52.531"</b>	

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
M-17	T. 2 S., R. 3 E., about 0.3 mi S. of NW. corner of sec. 15. Station is located about 1.7 mi N. of Lone Butte Ranch and about 1.0 mi WSW. of Lone Butte; Station mark is in box-shaped clearing; 9 ft S. of centerline of E.-W. rd.; in top of concrete post projecting 0.6 ft; Corps of Engineers disk stamped "TT M-17 1948"		R-17	T. 2 S., R. 4 E., near NE. corner of sec. 18. To reach from the intersection of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 2.1 mi to E.-W. cross trails, turn right and go 0.55 mi to telephone line, turn left and go S. along telephone line rd. for 0.85 mi to telephone pole No. 475. Station mark is about 350 ft W. of telephone line; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "BM R-17 1948"	
	X = 460,252.55 Y = 821,697.30 1099.5 33° 15' 31.784" 112° 2' 48.111"			X = 480,911.24 Y = 822,895.33 1135.47 Position and elevation by USGS in 1965.	
M-17 Panel USGS	Centered over station mark, 6- by 6-foot black tar-paper panel. Position same as station mark	1098.9	R-17 Panel USGS	Centered over station mark, 9- by 9-foot square white panel; two 3- by 12-foot wings for identification. Position same as station mark	1135.0
N-17 JACKSON	T. 2 S., R. 3 E., near NE. corner of sec. 15. To reach from intersection of Arizona Avenue and Cleveland Street in Chandler, drive W. on Cleveland (which becomes Williams Field Road) for 9.0 mi to T.-rd. S., turn left and go S. for 1.0 mi, then jog E. for 0.1 mi, then continue S. for 1.35 mi to crossroads, turn right and go SW. on main rd. for 2.35 mi to curve to S. and trail N., turn sharp right and go N. on trail 0.4 mi to base of butte. Pack to top of butte and station mark (about 15 minute pack). Cemented in drill hole, in bed rock outcropping 0.2 ft below surface; Corps of Engineers disk stamped "JACKSON 1935 RESET AMS 1948" (This station was reset in a slightly different position from USC&GS JACKSON 1935.)		R $\frac{1}{2}$ - 17 USGS	Located about 0.5 mi E. of station R-17; a 3/8-in. reinforcing rod projecting 0.3 ft; centered over station mark, 9- by 9-foot square white panel. No horizontal position Rod Elev. 1141.80 Panel Elev. 1141.5	
	X = 464,815.87 Y = 822,834.26 1257.94 33° 15' 43.086" 112° 1' 54.384"		3-17	T. 2 S., R. 4 E., about 0.25 mi W. of NE. corner of sec. 17. To reach from intersection of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 2.5 mi to rd. SE. by side of gravel pit, turn left and go ESE. for 0.3 mi to trail leading S., turn right and follow trail S. for 0.6 mi to station site. Station is 66 ft E. of trail and at center of black painted panel; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT S-17 1960 ARMY MAP SERVICE"	
N-17 Panel AMS	Geometric center of white rock cross-target panel. Position and elevation same as station mark.		S-17 Panel AMS	Centered over station mark; black cross-target panel. Same horizontal position as station mark 1144.3	
P-17	T. 2 S., R. 3 E., near SE. corner of sec. 11. To reach from intersection of Baseline Road and Highline Drive (South 56th Street), drive S. on 56th Street for 5.0 mi to Williams Field Road, turn right and go W. for 2.0 mi to T.-rd. S., turn left and go S. for 1.0 mi, then jog E. for 0.1 mi, then continue S. for 1.35 mi to intersection, turn right and go SW. for 1.05 mi to trail leading S. between two large trees for 0.2 mi to station site. Station is located 8 ft W. of N.-S. trail; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "BM P-17 1948"		S-17 USGS	Located about 0.25 mi E. of station S-17; in open dry lake bed; station is marked by 3/8-in. reinforcing rod projecting 0.2 ft; paneled with 9- by 9-foot square white panel centered over station mark. No horizontal position Rod Elev. 1144.80 Panel Elev. 1144.6	
	X = 470,730.37 Y = 823,247.35 1120.83 Position and elevation determined by USGS in 1965. 33° 15' 47.233" 112° 1' 44.731"		T-17	T. 2 S., R. 4 E., about 0.2 mi W. of SE. corner of sec. 9. To reach from intersection of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 2.5 mi to rd. SE. by side of gravel pit, turn left and go SE. for 1.4 mi to intersection of cross trails and station site. Station mark is 26 ft N. of centerline of NW.-SE. rd. and 7 ft W. of centerline of N.-S. trail; in top of concrete post projecting 0.4 ft above ground; Corps of Engineers disk stamped "TT T-17 1948"	
P-17 Panel USGS	Centered over station mark, 9- by 9-foot square white panel. There are two 3- by 12-foot wing panels for identification Position same as station mark 1120.3		T-17 Panel USGS	6- by 6-foot square white panel, centered over station mark; two 3- by 12-foot wings for identification. Same horizontal position as station mark 1155.1	
P $\frac{1}{2}$ - 17 USGS	Located about 0.5 mi E. of station P-17; 2- by 2-in. wooden hub projecting 0.1 ft; paneled with 9- by 9-foot square white panel centered over station mark. No horizontal position Hub elev. 1125.46 Panel elev. 1125.4		U-17 Panel USGS	Centered over station mark; 12- by 12-foot square white panel. Same horizontal position as station mark 1164.7	
Q-17	T. 2 S., R. 3 E., near NE. corner of sec. 13. To reach from intersection of Baseline Road and Highline Drive (South 56th Street), drive S. on 56th Street for 5.0 mi to Williams Field Road, turn right and go W. for 2.0 mi to T.-rd. S., turn left and go S. for 1.0 mi, then jog E. for 0.1 mi, then continue S., following powerline for 2.0 mi to station site. Station is on W. side of powerline, just SW. of G.L.O. section corner pipe; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "TT Q-17 ARMY MAP SERVICE"		W-17	T. 2 S., R. 5 E., near SW. corner of sec. 7. To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive W. on Cleveland Street for 3.0 mi to Price Road, turn left and go S. for 3.1 mi to T.-rd. E. and station site. Station is located 36 ft NE. of intersection; 19 ft N. of centerline of E.-W. rd.; 30 ft E. of centerline of Price Road; 11 ft S. of centerline of ditch; in top of concrete post set flush with ground; Corps of Engineers disk stamped "TT W-17 1948"	
	X = 476,018.23 Y = 822,964.56 1131.64 Elev. by USGS			X = 507,383.96 Y = 822,607.54 1186.43	
Q-17 Panel USGS	A 6- by 6-foot square black panel on 12- by 12-foot square white panel, both centered over station mark. Horizontal position same as station mark 1131.2		W-17 Panel USGS	Centered over station mark, 12- by 12-foot square white panel. Same horizontal position and elevation as station mark.	
Q $\frac{1}{2}$ - 17 USGS	Located about 0.5 mi E. of station Q-17; 3/8-in. reinforcing rod projecting 0.2 ft; paneled with 9- by 9-foot square white panel centered over station mark No horizontal position Rod elev. 1135.04 Panel elev. 1134.8				

## TIER 18

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
X-17	T. 2 S., R. 5 E., near NE. corner of sec. 18. To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive W. on Cleveland Street for 2.0 mi, turn left on Dobson Road and go S. for 3.0 mi to rd. intersection and station site. Station is located 100 ft S. of centerline of E.-W. rd.; 20 ft W. of centerline of Dobson Road; 18 ft SE. of SE. corner of electric pump; in top of concrete post projecting 0.4 ft above ground; Corps of Engineers disk stamped "TT X-17 1948 RESET AMS 1953" (Not visited by USGS in 1965)		L-18	T. 2 S., R. 3 E.; about 0.1 mi S. of NW. corner of sec. 21. To reach from Lone Butte Ranch, drive W. for 1.0 mi to T-rd. N., turn right and go N. for 0.9 mi along fence to fence corner where rd. turns W., and station site. Station mark is located 3 ft SW. of fence corner; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT L-18 1948"	
	X = 512,610.14 Y = 822,587.04	1197.0		X = 454,970.82 Y = 817,216.59	1096.0
PP X-17 AMS	At W. edge of Dobson Road, centerline of E.-W. ditch at headwall.		L-18 Panel USGS	A 6- by 6-foot square white panel centered over station mark.	
	X = 512,619.54 Y = 822,645.77	1196.8		Same horizontal position as station mark	1095.7
Y-17	T. 2 S., R. 5 E., near SE. corner of sec. 8. To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive W. on Cleveland Street for 1.0 mi, turn left on Alma School Road and go S. for 3.0 mi to rd. intersection and station site. Station is located 17 ft N. of centerline of E.-W. rd., and 16 ft W. of centerline of N.-S. rd.; cemented in top of concrete headwall, 1.4 ft higher than intersection; Corps of Engineers disk stamped "TT Y-17 1948"		M-18	T. 2 S., R. 3 E., near NW. corner of sec. 22. To reach from main rd. intersection near St. Johns Mission, drive E. on graveled rd. for 1.9 mi to powerline, turn right and go SE. for 5.6 mi to prominent E.-W. ditch, continue SE. on powerline rd. for 0.4 mi to faint N.-S. trail and station site. Station is located 63 ft S. of intersection of N.-S. trail with powerline rd.; 18 ft E. of N.-S. trail; 20 ft W. of large lone tree; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM M-18 1948"	
	X = 517,959.14 Y = 822,798.60	1207.0		X = 460,375.66 Y = 817,575.86	1101.6
Y-17 Panel USGS	Located 86 ft SE. of station Y-17; center of 12- by 12-foot square white panel.		M-18 Panel USGS	A 6- by 6-foot square white panel centered over station mark.	
	X = 518,008.06 Y = 822,728.00	1204.7		Same horizontal position as station mark	1101.2
TIER 17 $\frac{1}{2}$					
(USGS Leveling, 1965)					
P-17 $\frac{1}{2}$ USGS	Located about 0.5 mi S. of station P-17; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 9- by 9-foot square white panel centered over station mark.		N-18	T. 2 S., R. 3 E., near SE. corner of sec. 15. To reach from Lone Butte Ranch, drive E. for 1.0 mi to field rd. N., turn left and go N. for 1.0 mi to E.-W. ditch crossing and station site. Station is located 20.5 ft W. of centerline of N.-S. rd.; 18 ft S. of centerline of E.-W. ditch; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "TT N-18 1948 RESET AMS 1956"	
	Rod Elev. 1115.83 Panel Elev. 1115.6			X = 465,534.09 Y = 818,021.46	1106.92
P $\frac{1}{2}$ -17 $\frac{1}{2}$ USGS	T. 2 S., R. 3 E., near center of sec. 13, in lake bed on W. side of old N.-S. track rd.; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 6- by 6-foot square white panel is centered on a 12- by 12-foot square black panel, both centered over station mark.		N-18 Panel USGS	A 6- by 6-foot square white panel centered over station mark.	
	Rod Elev. 1119.29 Panel Elev. 1119.0			Same horizontal position as station mark	1106.4
Q-17 $\frac{1}{2}$ USGS	Located about 0.5 mi S. of Q-17 at 1/4 cor. reset by powerline survey; on W. side of powerline; station mark is 1/2-in. rod projecting 0.1 ft; 9- by 9-foot square white panel centered over station mark.		P-18	T. 2 S., R. 3 E.; about 0.2 mi S. of NE. corner of sec. 23; 2.0 mi E. of Lone Butte Ranch, thence 0.8 mi N.; station mark is 22 ft E. of NW.-SE. trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM P-18 1948"	
	Rod Elev. 1124.60 Panel Elev. 1124.5			X = 470,736.54 Y = 816,994.76	1116.29
Q $\frac{1}{2}$ -17 $\frac{1}{2}$ USGS	T. 2 S., R. 4 E., near center of sec. 18, near N.-S. track rd.; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 9- by 9-foot square white panel centered over station mark.		P-18 Panel USGS	A 9- by 9-foot square white panel centered over station mark. There are two 3- by 12-foot wing panels for identification.	
	Rod Elev. 1130.17 Panel Elev. 1130.0			Same horizontal position as station mark	1115.9
R-17 $\frac{1}{2}$ USGS	Located about 0.5 mi S. of R-17; in low flat area SW. of 1/4 cor.; about 100 ft W. of telephone line; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 9- by 9-foot square white panel centered over station mark.		P $\frac{1}{2}$ -18 USGS	Located about 0.5 mi W. of station Q-18; in flat open area; 50 ft W. of old N.-S. track rd.; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 9- by 9-foot square white panel is centered over station mark.	
	Rod Elev. 1135.98 Panel Elev. 1135.7			No horizontal position	Rod Elev. 1124.64 Panel Elev. 1124.3
R $\frac{1}{2}$ -17 $\frac{1}{2}$ USGS	T. 2 S., R. 4 E., near center of sec. 17; station mark is 2- by 2-in. wooden hub projecting 0.2 ft; 9- by 9-foot square panel centered over station mark.		Q-18	T. 2 S., R. 3 E., near NE. corner of sec. 24. To reach from RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 13.3 mi to T-rd. SW., turn left and go W. for 0.8 mi to powerline crossing, turn right and go N. on powerline rd. for 1.0 mi to station site. Station mark is located in center of black asphalt panel W. of powerline; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "TT Q-18 1948"	
	Hub Elev. 1142.60 Panel Elev. 1142.4			X = 475,721.68 Y = 817,649.07	1129.79
S-17 $\frac{1}{2}$ USGS	Located about 0.25 mi E. and 0.5 mi S. of station S-17; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 9- by 9-foot square white panel is centered over station mark.		Q-18 Panel AMS	Centered over station mark, black asphalt cross-target panel.	
	Rod Elev. 1146.61 Panel Elev. 1146.4			Same horizontal position as station mark	1129.3
			Q $\frac{1}{2}$ -18 USGS	Located about 0.25 mi E. of station Q-18; marked with 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	
				No horizontal position	Rod Elev. 1131.36 Panel Elev. 1131.2

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STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
Q $\frac{1}{2}$ -18 USGS	Located about 0.5 mi E. of station Q-18; in open area just W. of old N.-S. track rd.; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 9- by 9-foot square white panel centered over station mark.  No horizontal position	Rod Elev. 1133.11 Panel Elev. 1132.9	U-18	T. 2 S., R. 4 E., about 0.1 mi N. of SW. corner of sec. 14. Station is located on reservation of Goodyear Air Force Auxiliary Airfield. (Permission to enter can be obtained at Williams Air Force Base). To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive S. on State Highway 87 for 4.0 mi, turn right on Rittenhouse Road and go W. for 3.0 mi to airfield main gate (which may be locked), from main gate, go due W. for 1.75 mi to main runway, turn right and follow runway NW. for 0.3 mi to station site on left. Station mark is about 390 ft SW. of SW. edge of runway; 15 ft NE. of centerline of old rd.; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT U-18 1948"  X = 497,126.01 Y = 818,147.51 1164.61	
Q3/4-18 USGS	Located about 0.75 mi E. of station, in lake bed; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.  No horizontal position	Rod Elev. 1136.46 Panel Elev. 1136.3	U-18 Panel USGS	A 6- by 6-foot square white panel centered over station mark.  Horizontal position same as station mark 1164.3	
R-18	T. 2 S., R. 4 E., near NW. corner of sec. 20. To reach from junction of Williams Field Road and Maricopa Highway, drive S. on hwy. for 4.3 mi to telephone pole No. 455 E. of hwy. and station site; station mark is under telephone line; 25 ft N. of pole No. 455; 42 ft ESE. of centerline of hwy.; in top of concrete post flush with dirt bank; Corps of Engineers disk stamped "BM R-18 1948"  X = 481,074.55 Y = 817,503.47 1138.38 Position and elevation by USGS in 1965.		X-18	T. 2 S., R. 5 E., near NE. corner of sec. 19. To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive S. on State Highway 87 for 4.0 mi to intersection, turn right and go W. for 2.0 mi to cross roads and station site. Station mark is located 15.5 ft S. of centerline of E.-W. rd.; 9 ft W. of centerline of N.-S. rd.; 4 ft E. of centerline of irrigation ditch; 1.6 ft NW. of fence corner; in top of concrete post projecting 0.2 ft; Corps of Engineers disk stamped "TT X-18 RESET AMS 1952" (Not visited by USGS in 1965)  Horizontal position not available 1193.6	
R-18 Panel USGS	A 9- by 9-foot square white panel centered over station mark. There are two 3- by 12-foot wings for identification.  Horizontal position and elevation same as station mark.		PP X-18 AMS	Located 42 ft NE. of station on E. side of N.-S. rd.; centerline of E.-W. ditch at headwall.  X = 512,674.35 Y = 817,406.08 1192.6	
R $\frac{1}{2}$ -18 USGS	Located about 0.25 mi E. of station R-18, in dry lake bed; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 6- by 6-foot square white panel is centered over station mark.  No horizontal position	Rod Elev. 1141.70 Panel Elev. 1141.4		TIER 18 $\frac{1}{2}$  (USGS Leveling, 1965)	
R $\frac{1}{2}$ -18 USGS	Located about 0.5 mi E. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 9- by 9-foot square white panel centered over station mark.  No horizontal position	Rod Elev. 1143.96 Panel Elev. 1143.8	Q-18 $\frac{1}{2}$	Located about 0.25 mi S. of station Q-18; on W. edge of powerline; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.  Rod Elev. 1127.86 Panel Elev. 1127.7	
R3/4-18	Located about 0.75 mi E. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 6- by 6-foot square white panel centered over station mark.  No horizontal position	Rod Elev. 1145.69 Panel elev. 1145.4	Q $\frac{1}{4}$ -18 $\frac{1}{2}$	Located about 0.25 mi E. and 0.25 mi S. of station Q-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.  Rod Elev. 1131.74 Panel Elev. 1131.5	
S-18	T. 2 S., R. 4 E., near NE. corner of sec. 20. To reach from junction of Williams Field Road and Maricopa Highway, drive S. on Maricopa Highway for 3.95 mi to trail E., just S. of pole No. 467, turn left and go E. for 0.35 mi to cross trail, turn right and go SE. for 0.1 mi to alkali clearing and dim trail E., turn left and go E. for 0.55 mi to large alkaline clearing and station site. Station is located about 275 ft W. of G.L.O. section corner pipe; in top of concrete post projecting 0.1 ft; Corps of Engineers disk stamped "BM S-18 1948"  X = 486,221.98 Y = 817,775.81 1146.80 Horizontal position by USGS in 1965.		Q $\frac{1}{2}$ -18 $\frac{1}{2}$	Located about 0.5 mi E. and 0.25 mi S. of station Q-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.  Rod Elev. 1133.58 Panel Elev. 1133.4	
S-18 Panel USGS	A 9- by 9-foot square white panel centered over station mark. There are two 3- by 12-foot wing panels for identification.  Same horizontal position as station mark 1146.7		Q3/4-18 $\frac{1}{2}$	Located about 0.75 mi E. and 0.25 mi S. of station Q-18; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 6- by 6-foot square white panel centered over station mark.  Rod Elev. 1135.15 Panel Elev. 1134.9	
T-18	T. 2 S., R. 4 E., near SW. corner of sec. 15. To reach from junction of Williams Field Road and Maricopa Highway, drive S. on Maricopa Highway for 1.8 mi thence turn SE. on track rd. which follows the surveyed route of proposed Interstate Highway 10, and go 3.0 mi to station site on right. Station mark is 100 ft W. of track rd.; about 1000 ft S. of USC&GS BM "E 414 1962" about 400 ft N. of G.L.O. section corner pipe; in alkali clearing; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "BM T-18 1948"  X = 491,875.46 Y = 818,246.63 1155.3 Horizontal position by USGS in 1965.		R-18 $\frac{1}{2}$	Located about 0.25 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 6- by 6-foot square white panel centered over station mark.  Rod Elev. 1138.96 Panel Elev. 1138.7	
T-18 Panel USGS	A 6- by 6-foot square white panel centered over station mark. There are two 3- by 12-foot wing panels for identification.  Same horizontal position as station mark 1154.8		R $\frac{1}{2}$ -18 $\frac{1}{2}$	Located about 0.25 mi E. and 0.25 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; at center of 6- by 6-foot square white panel.  Rod Elev. 1140.81 Panel Elev. 1140.5	

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
R $\frac{1}{2}$ -18 $\frac{1}{2}$	Located about 0.5 mi E. and 0.25 mi S. of station R-18; station mark is 2- by 2-in. wooden hub projecting 0.2 ft; 6- by 6-foot square white panel is centered over station mark.	Hub Elev. 1143.35 Panel Elev. 1143.2	R $\frac{2}{2}$ -18 $\frac{1}{2}$	T. 2 S., R. 4 E.; at center of sec. 20; station mark is G.L.O. 1/4 cor. pipe projecting 0.1 ft; 9- by 9-foot square white panel centered over station mark.	Pipe Elev. 1142.44 Panel Elev. 1142.3
R $\frac{3}{4}$ -18 $\frac{1}{2}$	Located about 0.75 mi E. and 0.25 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1146.41 Panel Elev. 1146.2	R $\frac{3}{4}$ -18 $\frac{1}{2}$	Located about 0.75 mi E. and 0.5 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1144.42 Panel Elev. 1144.2
S-18 $\frac{1}{2}$	Location about 0.25 mi S. of station S-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1147.02 Panel Elev. 1146.8	S-18 $\frac{1}{2}$	Located about 0.5 mi S. of station S-18; station mark is G.L.O. 1/4 cor. pipe common to secs. 20 and 21, T. 2 S., R. 4 E., projecting 0.3 ft; 9- by 9-foot square white panel centered over station mark.	Pipe Elev. 1146.81 Panel Elev. 1146.5
TIER 18 $\frac{1}{2}$ (USGS Leveling, 1965)			TIER 18 $\frac{3}{4}$ (USGS Leveling, 1965)		
P-18 $\frac{1}{2}$	Located about 0.5 mi S. of station P-18; about 100 ft N. of edge of cultivated field; station mark is 2- by 2-in. wooden hub projecting 0.3 ft; 9- by 9-foot square white panel is centered over station mark.	Hub Elev. 1122.47 Panel Elev. 1122.2	Q-18 $\frac{3}{4}$	Located about 0.75 mi S. of station Q-18; on W. side of powerline; a reset 1/16 cor. by powerline survey; station mark is 3/4-in. pipe flush with ground; 6- by 6-foot square white panel centered over station mark.	Pipe Elev. 1128.63 Panel Elev. 1128.6
P $\frac{1}{2}$ -18 $\frac{1}{2}$	Located about 0.5 mi E. and 0.5 mi S. of station P-18; T. 2 S., R. 3 E., near center of sec. 24; just N. of edge of heavy brush; station mark is 3/8-in. reinforcing rod projecting 0.1 ft; 9- by 9-foot square white panel is centered over station mark.	Rod Elev. 1121.38 Panel Elev. 1121.3	Q $\frac{1}{2}$ -18 $\frac{3}{4}$	Located 0.25 mi N. of rd. to Lone Butte Ranch and 0.25 mi E. of powerline; station mark is 2- by 2-in. wooden hub projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Hub Elev. 1128.95 Panel Elev. 1128.8
Q-18 $\frac{1}{2}$	Located about 0.5 mi S. of station Q-18; at 1/4 cor. reset by powerline survey; on W. side of powerline; station mark is 1/2-in. steel rod flush with ground; 9- by 9-foot square white panel is centered over station mark.	Rod Elev. 1128.83 Panel Elev. 1128.8	Q $\frac{1}{2}$ -18 $\frac{3}{4}$	Located about 0.25 mi N. of rd. to Lone Butte Ranch and 0.25 mi W. of Maricopa Highway; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1129.72 Panel Elev. 1129.5
Q $\frac{1}{4}$ -18 $\frac{1}{2}$	Located about 0.25 mi E. and 0.5 mi S. of station Q-18; station mark is 2- by 2-in. wooden hub projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Hub Elev. 1130.21 Panel Elev. 1130.0	Q $\frac{3}{4}$ -18 $\frac{3}{4}$	Located about 0.2 mi N. of junction of Maricopa Highway and rd. to Lone Butte Ranch; about 400 ft W. of hwy.; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1131.05 Panel Elev. 1130.9
Q $\frac{1}{2}$ -18 $\frac{1}{2}$	Located about 0.5 mi E. and 0.5 mi S. of station Q-18; T. 2 S., R. 4 E., near center of sec. 19; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 9- by 9-foot square white panel is centered over station mark.	Rod Elev. 1132.59 Panel Elev. 1132.4	R-18 $\frac{3}{4}$	Located about 0.75 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1135.22 Panel Elev. 1134.2
Q $\frac{3}{4}$ -18 $\frac{1}{2}$	Located about 0.75 mi E. and 0.5 mi S. of station Q-18; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 6- by 6-foot square white panel is centered over station mark.	Rod Elev. 1135.39 Panel Elev. 1135.1	R $\frac{1}{4}$ -18 $\frac{3}{4}$	Located about 0.25 mi E. and 0.75 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1137.37 Panel Elev. 1137.2
R-18 $\frac{1}{2}$	Located about 0.5 mi S. of station R-18; station mark is G.L.O. 1/4 cor. pipe common to sections 19 and 20; pipe projects 0.2 ft; 9- by 9-foot square white panel is centered over station mark.	Pipe Elev. 1138.30 Panel Elev. 1138.1	R $\frac{1}{2}$ -18 $\frac{3}{4}$	Located about 0.5 mi E. and 0.75 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-in. square white panel centered over station mark.	Rod Elev. 1139.78 Panel Elev. 1139.6
R $\frac{1}{4}$ -18 $\frac{1}{2}$	Located about 0.25 mi E. and 0.5 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.3 ft; 6- by 6-foot square white panel is centered over station mark.	Rod Elev. 1140.04 Panel Elev. 1139.7	R $\frac{3}{4}$ -18 $\frac{3}{4}$	Located about 0.75 mi E. and 0.75 mi S. of station R-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1142.77 Panel Elev. 1142.6
			S-18 $\frac{3}{4}$	Located about 0.75 mi S. of station S-18; station mark is 3/8-in. reinforcing rod projecting 0.2 ft; 6- by 6-foot square white panel centered over station mark.	Rod Elev. 1145.43 Panel Elev. 1145.2



# FILE COPY

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## TIER 19

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
G-19	T. 2 S., R. 2 E., about 0.2 mi SSE. of NW. corner of sec. 26. To reach from St. Johns Indian School, drive S. on 51st Avenue for 1.3 mi to rd. fork, thence take right fork and go 2.9 mi S. to rd. fork, thence take left fork and go E. for 0.95 mi to canal and water tank, thence turn N. and follow W. side of canal to canal crossing, thence cross canal and turn S. and follow trail for 0.25 mi to large clearing and rd. E., thence follow rd. E. for 0.55 mi to pipeline maintenance rd., thence continue E. on trail for 0.5 mi to dim trail N. and station site; at triangle formed by trails; 85 ft SE. of westernmost tip of triangle and 43 ft SW. of easternmost tip of triangle; in top of concrete post projecting 0.2 ft; Corps of Engineers disk stamped "G-19 1948"		Q-19	T. 2 S., R. 4 E., near NW. corner of sec. 30. To reach from Southern Pacific Railroad crossing in Maricopa, drive N. along hwy. toward Phoenix for 13.3 mi to rd. left to Lone Butte Ranch, thence turn left and go W. for 0.6 mi; about 0.1 mi E. of powerline; 250 ft S. of rd.; at center of black rock panel; in top of concrete post; Corps of Engineers disk stamped "TR Q-19 1960 ARMY MAP SERVICE"	
	X = 434,195.86 Y = 811,252.90	1050.6		X = 476,685.41 Y = 812,326.49	1133.84
G-19 Panel USGS	A 12- by 12-foot square black tar-paper panel centered over station mark.		Q-19 Panel AMS	A black rock cross-target panel centered over station mark. (8- by 8-foot square center of target was filled in with white plastic paneling material by USGS in 1965, this white square also centered over station mark.)	
	Same horizontal position as station mark	1050.4		Same horizontal position as station mark	1133.6
J-19	T. 2 S., R. 3 E., near NW. corner of sec. 30. To reach from post office at Laveen, drive S. along black top rd. for 6.5 mi to rd. fork, thence take left fork and follow main rd. SE. for 4.7 mi to trail S., thence turn right and then left and follow trail paralleling main rd. for 0.25 mi to cross trail, thence turn right and follow trail SW. for 0.15 mi to trail intersection and station site; 44 ft SW. of trail intersection; 2 ft SE. of 4- by 4-in. witness post; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "TT J-19 1948"		Q-19 USGS	About 50 ft S. of graded rd.; 3/8-in. rod projecting 0.3 ft at center of 6- by 6-foot square white panel.	
	X = 444,893.16 Y = 811,864.32	1077.0		Rod Elev. 1134.24 Panel Elev. 1133.9	
J-19 Panel USGS	A 12- by 12-foot square white panel centered over station mark.		Q-19 USGS	About 100 ft S. of graded rd.; 3/8-in. rod projecting 0.2 ft at center of 9- by 9-foot square white panel.	
	Same horizontal position as station mark	1076.6		Rod Elev. 1135.34 Panel Elev. 1135.1	
L-19	T. 2 S., R. 3 E., near SW. corner of sec. 21. To reach from Lone Butte Ranch, drive W. on S. side of canal for 1.2 mi to T-rd. N. and station site; 27 ft SE. of intersecting centerlines of T-rd. N.; 18 ft S. of centerline of E.-W. rd.; 3 ft SW. of fence corner; in top of concrete post set 1.0 ft below surface of ground; Corps of Engineers disk stamped "TR L-19 1960 ARMY MAP SERVICE"		Q3/4-19 USGS	About 100 ft E. of Maricopa Highway; 3/8-in. rod projecting 0.3 ft at center of 6- by 6-foot square white panel.	
	X = 454,967.83 Y = 812,804.59	1103.2		Rod Elev. 1136.84 Panel Elev. 1136.5	
L-19 Panel USGS	A 12- by 12-foot square white panel centered over station mark.		W. of R-19 USGS	Located about 0.25 mi W. of station R-19; G.L.O. section corner pipe projecting 0.2 ft; at center of 9- by 9-foot white panel.	
	Same horizontal position as station mark	1104.2		Pipe Elev. 1139.79 Panel Elev. 1139.6	
M-19	T. 2 S., R. 3 E., about 0.15 mi E. of SW. corner of sec. 22. At Lone Butte Ranch; at rd. intersection; about 30 ft N. of E.-W. rd.; 6 ft N. of centerline of E.-W. ditch; 2.3 ft E. of NE. corner of concrete headwall; in top of concrete post projecting 0.1 ft; Corps of Engineers disk stamped "TT M-19 1962 ARMY MAP SERVICE"		R-19	T. 2 S., R. 4 E., about 0.25 mi E. of NW. corner of sec. 29. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 5.0 mi to rd. junction W. and grove of trees on left; continue S. for 0.1 mi, then turn left around tip of trees and go E. across country for 0.5 mi to station site; 3 ft S. of witness post; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "BM R-19 1948"	
	X = 461,046.10 Y = 812,543.04	1115.5		X = 482,228.97 Y = 812,430.91	1140.53
M-19 Panel USGS	Located 151 ft NW. of station mark; center of 6- by 6-foot black square panel, with two white wing panels for identification.		R-19 Panel USGS	Centered over station mark, 9- by 9-foot square white panel with two 3- by 12-foot wing panels for identification.	
	X = 460,920.50 Y = 812,626.57	1114.0		Same horizontal position as station mark.	1140.2
N-19	T. 2 S., R. 3 E., near SW. corner of sec. 23. To reach from Lone Butte Ranch, drive E. for 1.0 mi to cattle guard and fence and field rd. N. and station site; 24 ft N. of N. edge of cattle guard; 15 ft N. of centerline of rd.; 1.5 ft NE. of fence corner post; in top of concrete post projecting 0.1 ft; Corps of Engineers disk stamped "TT N-19 1961 ARMY MAP SERVICE"		R-19 USGS	Located about 0.25 mi E. of station R-19; G.L.O. 1/4 corner pipe projecting 0.3 ft, at center of 9- by 9-foot square white panel.	
	X = 465,623.45 Y = 812,509.69	1116.63		No horizontal position	Pipe Elev. 1140.54 Panel Elev. 1140.2
N-19 Panel AMS	30 ft S. of station mark, center of 9- by 12-foot cattle guard.		R3/4-19 USGS	Located about 0.5 mi E. of station R-19; 3/8-in. rod projecting 0.2 ft at center of 6- by 6-foot square white panel.	
	X = 465,620.7 Y = 812,479.9	1116.9		No horizontal position	Rod Elev. 1144.03 Panel Elev. 1143.8
P-19 USGS	NW. of T-ditch N.; 3/8-in. reinforcing rod between double stakes projecting 0.1 ft; 9- by 9-foot white panel centered over mark.		W. of S-19 USGS	Located about 0.25 mi WSW. of station S-19; G.L.O. section corner pipe projecting 0.3 ft, at center of 9- by 9-foot square white panel. (3/8-in. reinforcing rod is wired to sec. cor. pipe; projects 0.5 ft)	
	No horizontal position	Rod Elev. 1131.21 Panel Elev. 1131.1			Rod Elev. 1146.90 Panel Elev. 1146.4
			S-19	T. 2 S., R. 4 E., about 0.25 mi ENE. of SW. corner of sec. 21. To reach from S. P. RR. crossing at Maricopa, drive N. on hwy. to Phoenix for 12.6 mi to track rd. crossing, thence turn right and go easterly for 1.5 mi, thence leave rd., turn left and go northerly across country 0.6 mi to large clearing, panel, and station site; in center of black and white panel; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "TR S-19 1948"	
				X = 487,399.07 Y = 812,768.38	1147.21
			S-19 Panel AMS	Center of black and white cross-target panel.	
				Same horizontal position as station mark	1146.8

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
T-19	T. 2 S., R. 4 E., about 0.1 mi E. of SW. corner of sec. 22. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on hwy. for 5.65 mi to E.-W. trail, thence turn left and go E. for 1.2 mi to cross trail, thence continue straight ahead, E., for 1.05 mi to cross trail, thence turn left and go NE. for 0.75 mi to clear alkali flat and station site; 121 ft N. of large clump of brush; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM T-19 1948"		Q-19†	A 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel; 40 ft E. of powerline.	Rod Elev. 1135.97 Panel Elev. 1135.7
	X = 492,465.70 Y = 812,681.07 Position by USGS in 1965.	1155.7	Q4-19†	A G.L.O. 1/16 cor. iron pipe projecting 0.1 ft, in center of 6- by 6-foot square white panel.	Pipe Elev. 1134.78 Panel Elev. 1134.7
T-19 Panel USGS	Centered over station mark, 6- by 6-foot square white panel, with two 3- by 12-foot wing panels for identification.		Q4-19†	A G.L.O. 1/16 cor. iron pipe projecting 0.8 ft, in center of 6- by 6-foot square white panel.	Pipe Elev. 1136.87 Panel Elev. 1136.1
	Same horizontal position as station mark	1155.3	Q3/4-19†	A G.L.O. 1/16 cor. iron pipe projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Pipe Elev. 1137.37 Panel Elev. 1137.1
U-19	T. 2 S., R. 4 E., near SE. corner of sec. 22. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 5.65 mi to E.-W. trail, thence turn left and go E. for 1.2 mi to cross trail, continue E. for 1.05 mi to cross trail, continue E. for 1.45 mi to trail forks and station site; and go N. for 0.15 mi to trail forks and station site; in apex of trail fork; 7 ft E. of N.-S. trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "TT U-19 1948"		R-19†	A 3/8-in. rod projecting 0.4 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1141.65 Panel Elev. 1141.3
	X = 497,013.39 Y = 812,502.16	1164.80	R1-19†	A 3/8-in. rod projecting 0.4 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1142.66 Panel Elev. 1142.3
U-19 Panel USGS	Centered over station mark, 12- by 12-foot square white panel.		R2-19†	A 3/8-in. rod projecting 0.4 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1141.48 Panel Elev. 1141.1
	Same horizontal position as station mark	1164.4	R3/4-19†	A 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1144.79 Panel Elev. 1144.5
W-19	T. 2 S., R. 4 E., near NE. corner of sec. 25. To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive S. on State Highway 87 for 5.0 mi to crossroads, thence turn right and go W. for 3.0 mi to Price Road and station site; 11.6 ft W. of centerline of Price Road; 7.5 ft N. of extended centerline of rd. E.; in top of concrete post flush with ground; Corps of Engineers disk stamped "TT W-19 1948 RESET AMS 1956"		S-19†	A 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1148.04 Panel Elev. 1147.7
	X = 507,377.33 Y = 812,006.96	1183.67		TIER 19† (USGS Leveling, 1965)	
W-19 Panel USGS	Centered over station mark, 12- by 12-foot square white panel.		P-19†	A 3/8-in. rod projecting 0.3 ft, in center of 9- by 9-foot square white panel.	Rod Elev. 1126.68 Panel Elev. 1126.4
	Same horizontal position and elevation as station mark.		P1/2-19†	A 3/8-in. rod projecting 0.3 ft, in center of 9- by 9-foot square white panel.	Rod Elev. 1129.06 Panel Elev. 1128.8
X-19	T. 2 S., R. 5 E., near NE. corner of sec. 30. To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive S. on State Highway 87-93, for 5.0 mi to cross road, thence turn right and go W. for 2.0 mi to cross road and station site; 9 ft W. of centerline of N.-S. rd.; 13 ft S. of E.-W. rd.; 2.5 ft NW. of N. end of concrete culvert; in top of concrete post projecting 0.1 ft; Corps of Engineers disk stamped "TT X-19 1948 RESET AMS 1956" (Not visited by USGS in 1965)		Q-19†	A 3/8-in. rod projecting 0.3 ft, in center of 9- by 9-foot square white panel, 100 ft E. of powerline.	Rod Elev. 1135.24 Panel Elev. 1134.9
	X = 512,628.04 Y = 812,095.82 NOTE: Elevation appears to be ten ft high according to elevation published on map.	1201.4	Q4-19†	A G.L.O. 1/16 cor. iron pipe projecting 0.4 ft, in center of 6- by 6-foot square white panel.	Pipe Elev. 1138.53 Panel Elev. 1138.1
PP X-19 AMS	On W. side of N.-S. rd.; centerline of E.-W. ditch at headwall.		Q1-19†	At center of sec. 30; G.L.O. C1 cor. iron pipe projecting 0.3 ft in center of 9- by 9-foot square white panel; 190 ft W. of Maricopa Highway opposite pole No. 406.	Pipe Elev. 1137.80 Panel Elev. 1137.5
	X = 512,630.50 Y = 812,089.35	1201.4			
Y-19	T. 2 S., R. 5 E., near SW. corner of sec. 21. To reach from intersection of Cleveland Street and Arizona Avenue in Chandler, drive S. on State Highway 87-93 for 5.0 mi to crossroads, thence turn right and go W. for 1.0 mi to cross road and station site; 25 ft N. of centerline of E.-W. rd.; 15 ft E. of centerline of N.-S. rd.; cemented in top of S. end of concrete headwall, 1 ft higher than rd.; Corps of Engineers disk stamped "TT Y-19 1948"				
	X = 518,046.37 Y = 812,223.84	1201.1			
Y-19 Panel USGS	Located 125 ft SW. of station mark, center of 12- by 12-foot square black panel.				
	X = 517,949.76 Y = 812,144.21	1200.5			

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STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
Q3/4-19 1/2	A G.L.O. 1/16 cor. iron pipe projecting 1.1 ft in center of 6- by 6-foot square white panel.	Pipe Elev. 1139.66 Panel Elev. 1138.6	R3/4-19 3/4	In lake bed; 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1148.04 Panel Elev. 1147.7
R-19 1/2	270 ft N. of dirt rd.; G.L.O. 1/4 cor. iron pipe projecting 0.4 ft, in center of 9- by 9-foot square white panel.	Pipe Elev. 1141.01 Panel Elev. 1140.6	3-19 3/4	A 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1148.65 Panel Elev. 1148.4
TIER 20					
R 1/2-19 1/2	A 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1144.62 Panel Elev. 1144.3	K-20	T. 2 S., R. 3 E., near NW. corner of sec. 32. To reach from post office at Laveen, proceed S. along black top rd. for 6.5 mi to rd. fork, thence take left fork and go SE. along main rd. for 6.0 mi to right turn in rd., thence turn right and follow main rd. S. for 0.55 mi to left turn in rd. and station site. Located 65 ft SW. of centerline of main rd. and about 250 ft W. of drain crossing; in top of concrete post projecting 0.2 ft; Corps of Engineers disk stamped "TT K-20 1948"	X = 450,088.02 Y = 807,363.44 1082.45
R 1/2-19 1/2	At center of sec. 29; 33 ft S. of rd.; G.L.O. C 1/4 cor. iron pipe projecting 0.4 ft, in center of 9- by 9-foot square white panel.	Pipe Elev. 1148.47 Panel Elev. 1148.1	P K-20 MS	260 ft SE. of station mark; centerline of NE.-SW. drain at centerline of NW.-SE. trail.	X = 450,223.68 Y = 807,141.80 1079.9
R3/4-19 1/2	200 ft S. and 425 ft E. of track rd. intersection and AMS triangulation station CONFER; G.L.O. 1/16 cor. iron pipe projecting 1.3 ft; in center of 6- by 6-foot square white panel.	Pipe Elev. 1148.19 Panel Elev. 1146.9	-20 C&GS BM (-273)	T. 2 S., R. 3 E., near SE. corner of sec. 29. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.2 mi to black top rd. W., thence turn right and go W. for 4.5 mi to station on right. Located 80 ft N. of centerline of rd.; in top of concrete post projecting 0.3 ft; USCGS standard disk stamped "R 273 1948"	X = 454,657.01 Y = 807,354.72 1094.33 Position by USGS in 1965.
S-19 1/2	320 ft S. of track rd.; 3/8-in. rod projecting 0.3 ft, in center of 9- by 9-foot square white panel.	Rod Elev. 1145.86 Panel Elev. 1145.6	-20 Panel USGS	Centered over station mark, 6- by 6-foot square white panel.	Same horizontal position as station mark 1094.0
TIER 19 3/4 (USGS Leveling, 1965)			M-20	T. 2 S., R. 3 E., near SW. corner of sec. 27. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.2 mi to black top rd. W., thence turn right and go W. for 3.4 mi to trail N. and station site. Located 40 ft N. of centerline of main rd.; in triangle formed by trails; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT M-20 1948"	X = 460,890.30 Y = 807,311.42 1103.80
Q-19 3/4	66 ft SW. of powerline crossing; 1/16 cor. set by powerline survey; 3/4-in. reinforcing rod projecting 0.1 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1134.68 Panel Elev. 1134.6	M-20 Panel USGS	Centered over station mark, 6- by 6-foot square white panel.	Same horizontal position as station mark 1103.5
Q 1/2-19 3/4	A 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1136.20 Panel Elev. 1135.9	N-20	Located about 700 ft ESE. of USC&GS BM "S 273 1948"; about 300 ft SE. of rd. junction S.; about 150 ft S. of black top rd.; in top of concrete post projecting 0.2 ft; Corps of Engineers disk stamped "N 20 1948"	A USGS 6- by 6-foot white panel centered over station. No horizontal position Station mark Elev. 1114.80 Panel Elev. 1114.6
Q 1/2-19 3/4	36 ft E. of Maricopa Highway; 25 ft W. of G. L. O. 1/16 cor. pipe; 7 ft N. of pole No. 398; 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1137.85 Panel Elev. 1137.6	S-273 (C&GS BM)	T. 2 S., R. 3 E., near SE. corner of sec. 27. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.2 mi to black top rd. W., thence turn right and go W. for 2.5 mi to reverse rd. fork and station site on right. Station mark is 78 ft N. of centerline of rd.; about 700 ft WNW. of AMS station "N-20"; in top of concrete post projecting 0.4 ft; USC&GS standard disk stamped "S 273 1948"	X = 464,622.00 Y = 807,339.24 1116.08 Position by USGS in 1965.
Q3/4-19 3/4	A 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1142.58 Panel Elev. 1142.3	S-273 Panel USGS	Centered over station mark, 6- by 6-foot square white panel.	Same horizontal position as station mark 1115.7
R-19 3/4	A G.L.O. 1/16 cor. iron pipe projecting 1.1 ft, in center of 6- by 6-foot square white panel.	Pipe Elev. 1142.53 Panel Elev. 1141.4			
R 1/2-19 3/4	About 185 ft SE. of 1/16 cor.; 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1143.36 Panel Elev. 1143.1			
R 1/2-19 3/4	A G.L.O. 1/16 cor. iron pipe projecting 0.3 ft, in center of 6- by 6-foot square white panel.	Rod Elev. 1146.56 Panel Elev. 1146.3			

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
P-20	T. 2 S., R. 3 E., near NE. corner of sec. 35. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.2 mi to black top rd. W., thence turn right and go 1.5 mi to station site on left; about 140 ft S. of rd. in center of black and white painted panel; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "TT P-20 1948 RESET AMS 1955"	X = 470,638.32    Y = 807,118.37    1123.34	R3/4-20 USGS	60 ft S. of surveyed rd. R.O.W.; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.  Rod Elev. 1147.85 Panel Elev. 1147.6	
P-20 Panel AMS	Centered over station mark, black and white painted cross-target panel.  Same horizontal position as station mark	1122.8	S-20	T. 2 S., R. 4 E., about 0.1 mi E. of SW. corner of sec. 28. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.15 mi to powerline crossing, thence turn left on powerline rd. for about 300 ft, thence turn left again and go E. on surveyed rd. route for 1.5 mi to station site on N. side of E.-W. rd.; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM S-20 1948"	X = 487,096.93    Y = 807,264.91    1152.07 Horizontal position by USGS in 1965.
P4-20 USGS	90 ft S. of black top rd., 3/8-in. rod projecting 0.3 ft, in center of 9- by 9-foot square white panel.  Rod Elev. 1128.55 Panel Elev. 1128.2		W. of S-20 Panel USGS	Located about 580 ft WSW. of station S-20; 80 ft S. of sec. cor. pipe in surveyed rd. R.O.W.; center of 9- by 9-foot square white panel, with two 3- by 12-foot wing panels for identification.  X = 486,525.05    Y = 807,165.35    1151.3	
W. of Q-20 USGS	About 50 ft N. of black top rd; 75 ft W. of powerline; 3/8-in. rod projecting 0.3 ft, in center of 9- by 9-foot square white panel.  Rod Elev. 1135.47 Panel Elev. 1135.2		T-20	T. 2 S., R. 4 E., near SW. corner of sec. 27. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.15 mi to powerline crossing, thence turn left on powerline rd. for about 300 ft, thence turn left again and go E. on surveyed rd. route for 2.5 mi to cross trail, thence turn left and go N. about 0.1 mi to station site; 25 ft W. of trail; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "BM T-20 1948"	X = 492,216.59    Y = 807,758.81    1155.8 Horizontal position by USGS in 1965.
Q-20	T. 2 S., R. 4 E., near NW. corner of sec. 31. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.2 mi to black top rd. W., thence turn right and go 0.15 mi to lone tree on left and station site. Located 78 ft S. of rd.; 7 ft E. of E. edge of mesquite tree; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM Q-20 1948"	X = 477,391.85    Y = 807,184.68    1136.90 Position and elevation by USGS in 1965.	T-20 Panel USGS	Centered over station mark; 6- by 6-foot square white panel, with two 3- by 12-foot wing panels for identification  Same horizontal position as station mark	1155.5
Q-20 Panel USGS	Centered over station mark, 6- by 6-foot square white panel.  Same horizontal position as station mark	1136.5	U-20	T. 2 S., R. 4 E., near NW. corner of sec. 35. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 5.65 mi to E.-W. trail, thence turn left and go E. for 1.2 mi to cross trail, thence continue straight ahead for 1.05 mi to cross trail, thence continue E. for 1.45 mi to cross trail, thence turn right and go S. for 1.05 mi to group of buck brush and station site; 38 ft W. of NW.-SE. trail; in top of concrete post projecting 0.8 ft; Corps of Engineers disk stamped "BM U-20 1948"	X = 498,407.07    Y = 806,546.66    1165.32
Q4-20 USGS	Location 50 ft W. of power pole No. 21-6; 50 ft S. of G.L.O. 1/4 cor. pipe; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.  Rod Elev. 1138.71 Panel Elev. 1138.4		U-20 Panel USGS	Centered over station mark; 6- by 6-foot square white panel.  Same horizontal position as station mark	1164.5
Q3/4-20 USGS	A 3/8-in. rod projecting 0.3 ft, in center of 6- by 6-foot square white panel.  Rod Elev. 1139.95 Panel Elev. 1139.6		Y-20	T. 2 S., R. 5 E., near NE. corner of sec. 32. To reach from intersection of Cleveland Street and Arizona Avenue, in Chandler, drive S. on State Highway 87 for 6.0 mi to cross road, thence turn right and go 1.0 mi to cross road and station site; 63 ft W. of centerline of N.-S. rd.; 21 ft S. of centerline of E.-W. rd.; in top of concrete abutment level with rd.; Corps of Engineers disk stamped "TT Y-20 1948" (Not visited by USGS in 1965)	X = 517,941.74    Y = 806,901.94    1201.7
NE OF R-20 USGS	In center of surveyed rd. R.O.W.; G.L.O. section corner pipe (rusted off).  X = 481,252.75    Y = 807,246.20    (ground) 1141.6 Position by USGS in 1965.		PP Y-20 AMS	At S. edge of E.-W. rd.; centerline of N.-S. ditch at headwall.  X = 517,978.86    Y = 806,912.27    1201.9	
NE OF R-20 Panel USGS	About 80 ft N. and 10 ft E. of section corner; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel, with two 3- by 12-foot wing panels for identification.  X = 481,265.28    Y = 807,322.15    Rod Elev. 1142.23 Panel Elev. 1141.9		Q-20 1/2	50 ft W. of powerline; G.L.O. 1/16 cor. iron pipe projecting 1.2 ft; in center of 6- by 6-foot square white panel.  Pipe Elev. 1136.86 Panel Elev. 1135.7	
R-20	T. 2 S., R. 4 E.; about 0.1 mi SW. of NE. corner of sec. 31. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.15 mi to powerline crossing, thence turn left and follow powerline rd. SE. for 0.55 mi to point midway between power poles No. 221 and No. 223, thence turn left and go N. across country to two large mesquite trees and station site; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "BM R-20 1948"	No horizontal position Not paneled    1142.09	Q4-20 1/2	A 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot white panel.  Rod Elev. 1139.28 Panel Elev. 1139.0	
R1-20 USGS	80 ft S. of surveyed rd. R.O.W.; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.  Rod Elev. 1144.27 Panel Elev. 1144.0				
R1-20 USGS	40 ft S. of surveyed rd. R.O.W.; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.  Rod Elev. 1146.24 Panel Elev. 1145.9				

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STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
Q $\frac{1}{2}$ -20 $\frac{1}{2}$	A 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1138.82 Panel Elev. 1138.5	R $\frac{1}{4}$ -20 $\frac{1}{2}$	About 320 ft S. of powerline; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1143.39 Panel Elev. 1143.1
Q3/4-20 $\frac{1}{2}$	A 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1140.98 Panel Elev. 1140.7	R $\frac{1}{2}$ -20 $\frac{1}{2}$	About 350 ft N. of powerline pole No. 22-8; in center of sec. 32; G.L.O. C1/4 cor. pipe projecting 1.0 ft; in center of 9- by 9-foot square white panel.	Pipe Elev. 1147.18 Panel Elev. 1146.2
R-20 $\frac{1}{2}$	130 ft N. of power pole 22-3; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1142.04 Panel Elev. 1141.7	R3/4-20 $\frac{1}{2}$	27 ft E. of 1/16 cor. iron pipe; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1147.93 Panel Elev. 1147.6
R $\frac{1}{4}$ -20 $\frac{1}{2}$	9 ft S. of 1/16 cor. iron pipe; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1144.59 Panel Elev. 1144.3	S-20 $\frac{1}{2}$	16 ft N. of dim rd.; G.L.O. 1/4 cor. iron pipe projecting 1.2 ft; in center of 9- by 9-foot square white panel.	Pipe Elev. 1151.09 Panel Elev. 1149.9
R $\frac{1}{2}$ -20 $\frac{1}{2}$	240 ft SE. of 1/16 cor. iron pipe, 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1147.56 Panel Elev. 1147.3	TIER 20 3/4 (USGS Leveling, 1965)		
R3/4-20 $\frac{1}{2}$	A 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1148.67 Panel Elev. 1148.4	Q-20 3/4	On powerline right-of-way; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1131.07 Panel Elev. 1130.8
S-20 $\frac{1}{2}$	A 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1149.06 Panel Elev. 1148.8	Q $\frac{1}{4}$ -20 3/4	About 300 ft E. of Maricopa Highway; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1133.41 Panel Elev. 1133.1
TIER 20 $\frac{1}{2}$ (USGS Leveling, 1965)			Q $\frac{1}{2}$ -20 3/4	5 ft W. of 1/16 cor. iron pipe (rusted off); 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1136.30 Panel Elev. 1136.0
P-20 $\frac{1}{2}$	A G.L.O. 1/4 cor. iron pipe projecting 0.7 ft; in center of 9- by 9-foot square white panel.	Pipe Elev. 1122.77 Panel Elev. 1122.1	Q3/4-20 3/4	A 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1139.67 Panel Elev. 1139.4
P $\frac{1}{2}$ -20 $\frac{1}{2}$	At center of sec. 36; G.L.O. C $\frac{1}{4}$ cor. iron pipe projecting 0.7 ft; in center of 9- by 9-foot square white panel.	Pipe Elev. 1127.46 Panel Elev. 1126.8	R-20 3/4	A 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1141.67 Panel Elev. 1141.4
Q-20 $\frac{1}{2}$	About 65 ft W. of powerline; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.	Rod Elev. 1130.96 Panel Elev. 1130.7	R $\frac{1}{4}$ -20 3/4	54 ft E. of rd.; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1143.17 Panel Elev. 1142.9
Q $\frac{1}{4}$ -20 $\frac{1}{2}$	About 100 ft E. of Maricopa Highway; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1139.51 Panel Elev. 1139.2	R $\frac{1}{2}$ -20 3/4	A 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1144.75 Panel Elev. 1144.5
Q $\frac{1}{2}$ -20 $\frac{1}{2}$	At center of sec. 31; G.L.O. C $\frac{1}{4}$ cor. iron pipe projecting 0.3 ft; in center of 9- by 9-foot square white panel.	Pipe Elev. 1139.46 Panel Elev. 1139.2	R3/4-20 3/4	About 175 ft W. of power pole No. 23-2; G.L.O. 1/16 cor. iron pipe projecting 0.5 ft; in center of 6- by 6-foot square white panel.	Pipe Elev. 1147.55 Panel Elev. 1147.1
Q3/4-20 $\frac{1}{2}$	7 ft SW. of 1/16 cor. (rusted off) iron pipe; 3/8-in. rod projecting 0.5 ft; in center of 6- by 6-foot square white panel.	Rod Elev. 1142.25 Panel Elev. 1141.8	S-20 3/4	About 500 ft N. of power pole No. 23-4; G.L.O. 1/16 cor. iron pipe projecting 0.5 ft; in center of 6- by 6-foot square white panel.	Pipe Elev. 1150.51 Panel Elev. 1150.0
R-20 $\frac{1}{2}$	A 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.	Rod Elev. 1142.69 Panel Elev. 1142.4			

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
TIER 21					
G-21	T. 2 S., R. 2 E., near SW. corner of sec. 35. To reach from post office at Laveen, drive S. on black top rd. for 6.05 mi to end of pavement, thence continue on graveled rd. for 0.3 mi to rd. forks, thence take right fork and go SSE. for 3.15 mi to bridge over Santa Cruz Wash, thence continue for 0.05 mi to rd. fork, thence take left fork for 0.15 mi to trail E. at wash, thence turn left on trail and follow about 200 ft to Santa Cruz Wash, thence continue SE. on trail for another 150 ft to trail fork at top of bank, thence turn right and go 0.7 mi SE. to Indian cemetery, thence continue SE. on main trail for 0.9 mi to pipeline, thence stay left of row of trees and continue SE. 0.85 mi to isolated clump of trees on right, thence turn left off trail and go ENE. across country for 0.4 mi to panel and station; in center of black asphalt panel; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "TT G-21 1948" (Not visited by USGS in 1965)	1060.8	P-21	T. 3 S., R. 3 E., near NW. corner of sec. 1. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 11.05 mi to Pinal-Maricopa County line, thence turn left on track rd. and go 0.1 mi to fork, thence take left fork and go 0.2 mi to fork, thence take left fork and go 0.2 mi to cross trail, thence continue W. on track rd. for 0.5 mi to large mesquite tree on S. side of trail, thence turn left and follow dim tracks SW. for 0.25 mi to isolated bush and station site; at NW. edge of isolated bush; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "BM P-21 1948"	1125.53
	X = 434,290.82    Y = 802,155.73			X = 471,060.66    Y = 801,706.05	
G-21 Panel AMS	The center of black asphalt cross-target panel. Same horizontal position as station mark	1060.4	P-21 Panel USGS	22 ft SW. of station P-21; center of 9- by 9-foot square white panel, with two 3- by 12-foot wing panels for identification. X = 471,053.18    Y = 801,685.05	1124.4
J-21	T. 3 S., R. 3 E., about 0.2 mi E. of NW. corner of sec. 6. To reach from St. Johns Indian School, drive S. on 51st Avenue for 1.3 mi to rd. fork, thence take left fork and go 2.4 mi to powerline crossing, thence turn right on powerline rd. and go SE. for 4.0 mi to cross trail, thence turn left and go about 400 ft to panel and station. In center of black and white panel; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "J-21 1948" (Not visited by USGS in 1965)	1082.8	P-21 USGS	A 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel. No horizontal position established. Rod Elev. 1128.33 Panel Elev. 1128.0	
	X = 445,426.52    Y = 801,920.24		Q-21	T. 3 S., R. 4 E., about 650 ft E. of NW. corner of sec. 6. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 7.3 mi to Maricopa-Pinal County line rd. and station site; 36 ft WNW. of centerline of hwy.; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "TT Q-21 1962 ARMY MAP SERVICE"	1134.92
J-21 Panel AMS	The center of black and white cross-target panel. Same horizontal position as station mark	1082.5	Q-21 Panel USGS	Centered over station mark; 6- by 6-foot square black panel in center of 12- by 12-foot square white panel. Same horizontal position as station mark	1134.4
L-21	T. 2 S., R. 3 E., near SW. corner of sec. 33. To reach from post office in Laveen, go S. on black top rd. for 6.05 mi to end of pavement, thence continue on graveled rd. 0.3 mi to rd. fork, thence take left fork and go SE. on graded rd. for 6.15 mi to where rd. makes bend to E. (at station K-20), thence turn right on rd. SE. through heavy brush and go 1.35 mi to T- trail SW. at lone tree, thence turn right and go S. about 400 ft to panel and station; 36 ft E. of trail; in center of black and white panel; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "L-21 1948" (Not visited by USGS in 1965)	1097.5	Q1-21 USGS	54 ft N. of rd.; 45 ft W. of drain; 3/8-in. rod projecting 0.3 ft; in center of 6- by 6-foot square white panel. No horizontal position established. Rod Elev. 1135.69 Panel Elev. 1135.4	
	X = 455,217.32    Y = 802,332.23		Q1-21 USGS	A G.L.O. 1/4 cor. iron pipe projecting 0.4 ft; in center of 9- by 9-foot square white panel. No horizontal position established. Pipe Elev. 1137.11 Panel Elev. 1136.7	
L-21 Panel AMS	Center of black and white cross-target panel. Same horizontal position as station mark	1097.2	Q3/4-21 USGS	A G.L.O. 1/16 cor. iron pipe projecting 1.0 ft; in center of 6- by 6-foot square white panel. No horizontal position established. Pipe Elev. 1139.63 Panel Elev. 1138.6	
M-21	T. 3 S., R. 3 E., near NW. corner of sec. 3. To reach from post office at Laveen, drive S. on black top rd. for 6.4 mi to rd. fork, thence take left fork and follow main rd. for 6.15 mi to bend to E., thence turn right on track rd. and go SE. for 1.75 mi to heavy brush area at drain, thence turn left and follow dim trail on N. side of drain for 0.6 mi to clearing and station site; in center of small sand clearing; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "M-21 1948"	1102.7	R-21	T. 2 S., R. 4 E., about 0.1 mi N. of SW. corner of sec. 32. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.15 mi to powerline crossing, thence turn left and follow powerline rd. SE. for 0.75 mi to cross road, thence turn right and go S. along trail for 0.4 mi to trail fork, thence take left fork SE. for 0.1 mi to trail fork, thence take left fork for 0.05 mi to station site on left; 18 ft ENE. of trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM R-21 1948"	1139.78
	X = 460,304.91    Y = 801,420.42			X = 481,164.51    Y = 802,479.79	
M-21 Panel USGS	Centered over station mark; 6- by 6-foot square black panel. Same horizontal position as station mark	1102.4	R-21 Panel USGS	Position by USGS in 1965. Centered over station mark; 9- by 9-foot square white panel. Same horizontal position as station mark	1139.4
N-21	T. 2 S., R. 3 E., near SW. corner of sec. 35. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 10.0 mi to crossroads, thence turn left and go 1.6 mi to where rd. bends N., thence continue N. on rd. for 1.3 mi to panel and station on right; about 180 ft E. of rd.; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "TR N-21 1948"	1115.65	S. of R-21 Panel USGS	About 0.1 mi S. of station R-21; G.L.O. sec. cor. iron pipe projecting 0.4 ft; in center of 9- by 9-foot square white panel, with two 3- by 12-foot wing panels S. and E. No horizontal position established. Pipe Elev. 1140.53 Panel Elev. 1140.1	
	X = 465,668.11    Y = 802,289.50		R1-21 USGS	A 3/8-in. rod projecting 0.4 ft; in center of 6- by 6-foot square white panel. No horizontal position established. Rod Elev. 1141.98 Panel Elev. 1141.6	
N-21 Panel AMS	Center of black asphalt cross-target panel. Same horizontal position as station mark	1115.2			

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STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
R $\frac{1}{2}$ -21 USGS	18 ft W. of G.L.O. 1/4 cor.; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.  No horizontal position established. Rod Elev. 1144.48 Panel Elev. 1144.2		Y-21	T. 2 S., R. 5 E., near SE. corner of sec. 32. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), go S. on Highway 93 for 0.1 mi, thence turn right and go W. for 1.0 mi to cross road and station site; 65 ft NW. of intersection; 11 ft N. of centerline of E.-W. ditch; 10 ft W. of centerline of N.-S. ditch; 2 ft S. of corner power pole; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT Y-21 RESET AMS 1953"	
R3/4-21 USGS	48 ft W. of dim rd.; G.L.O. 1/16 cor. iron pipe projecting 1.5 ft; in center of 6- by 6-foot square white panel.  Pipe Elev. 1147.59 Panel Elev. 1146.1		X = 517,992.25 Y = 801,681.59	1201.48	
S-21	T. 3 S., R. 4 E., near NW. corner of sec. 4. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.15 mi to powerline crossing, thence turn left and follow powerline rd. SE. for 1.9 mi, thence turn right and go SW. across country for 0.1 mi to panel and station. In center of black and white panel; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT S-21 1948"		Y-21 Panel USGS	About 28 ft W. of station Y-21; center of 12- by 12-foot square white panel.  X = 517,964.58 Y = 801,683.24	1200.4
	X = 486,528.35 Y = 801,964.77	1148.37		TIER 21 $\frac{1}{2}$ (USGS Leveling, 1965)	
S-21 Panel AMS	The center of black and white cross-target panel.  Same horizontal position as station mark.	1148.1	P-21 $\frac{1}{2}$	A 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.	Rod Elev. 1126.30 Panel Elev. 1126.0
T-21	T. 3 S., R. 4 E., about 0.15 mi W. of NE. corner of sec. 4. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 6.15 mi to powerline crossing, thence turn left and follow powerline rd. SE. for 3.0 mi to N.-S. trail, thence turn left and go N. for 0.3 mi to rd. fork in alkali flat, thence take left fork and go NW. for 0.25 mi to station site on left; in small alkali flat; 21 ft SW. of trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM T-21 1948"		P $\frac{1}{2}$ -21 $\frac{1}{2}$	At center of sec. 1; 12 ft N. of rusted off G.L.O. iron pipe; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.	Rod Elev. 1127.72 Panel Elev. 1127.4
	X = 491,033.66 Y = 802,172.79 Horizontal position by USGS in 1965.	1157.70	Q-21 $\frac{1}{2}$	80 ft W. of Maricopa Highway; 40 ft E. of telephone pole No. 6; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.	Rod Elev. 1131.74 Panel Elev. 1131.4
T-21 Panel USGS	Centered over station mark; 6- by 6-foot square white panel, with three 3- by 12-foot wings.  Same horizontal position as station mark	1157.3	Q $\frac{1}{2}$ -21 $\frac{1}{2}$	At center of sec. 6; G.L.O. C1/4 cor. iron pipe projecting 0.4 ft; in center of 9- by 9-foot square white panel.	Pipe Elev. 1140.01 Panel Elev. 1139.6
U-21	T. 3 S., R. 4 E., near NW. corner of sec. 2. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), drive S. on Highway 93 for 0.8 mi to T-rd. W., thence turn right and go W. for 3.0 mi, thence jog S. for 0.2 mi, thence continue W. for 2.0 mi to powerline crossing, thence turn right along powerline for 0.3 mi to crossroads, thence turn right and go NE. for 0.8 mi to panel and station; 40 ft NW. of trail; in center of panel; in top of concrete post; Corps of Engineers disk stamped "TR U-21 1948" (Not visited by USGS in 1965)		R-21 $\frac{1}{2}$	A G.L.O. 1/4 cor. iron pipe projecting 0.7 ft; in center of 9- by 9-foot square white panel.	Pipe Elev. 1143.73 Panel Elev. 1143.0
	X = 498,299.80 Y = 800,710.83	1167.81	R $\frac{1}{2}$ -21 $\frac{1}{2}$	At N. edge of dry lake; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.	Rod Elev. 1146.16 Panel Elev. 1145.9
U-21 Panel AMS	Center of black and white cross-target panel.  Horizontal position and elevation same as station mark.		S-21 $\frac{1}{2}$	A G.L.O. 1/4 cor. iron pipe projecting 0.6 ft; in center of 9- by 9-foot square white panel.	Pipe Elev. 1153.28 Panel Elev. 1152.7
W-21	T. 2 S., R. 4 E., near SE. corner of sec. 36. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), go S. on Highway 93 for 0.1 mi to cross road, turn right and go W. for 3.0 mi to N.-S. rd. and station site; NW. of T-rd. E.; 21 ft W. of centerline of N.-S. rd.; at E. edge of N.-S. ditch; at S. edge of ditch E.; in top of concrete abutment; Corps of Engineers disk stamped "TT W-21 1948"			TIER 22	
	X = 507,403.03 Y = 801,513.98	1183.15	L-22	T. 3 S., R. 3 E., near NW. corner of sec. 9. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 7.0 mi to cross road just N. of Pima Butte, thence turn left and go W. for 1.05 mi to rd. fork, thence take right fork and go 2.95 mi to trail leading N., thence turn right and follow faint trail N. for 0.7 mi to NW. end of dyke, thence go N. across country to S. bank of Gila River and station site; on S. edge of thick salt cedar; 125 ft E. of lone tree; 54 ft W. of another lone tree; in top of concrete post projecting 0.1 ft; Corps of Engineers disk stamped "L-22 1948"	
W-21 Panel USGS	Located 57 ft SW. of station W-21; center of 12- by 12-foot square white panel.  X = 507,378.73 Y = 801,462.11	1181.8		X = 455,085.76 Y = 796,572.12	1087.4
X-21	T. 2 S., R. 5 E., near SE. corner of sec. 31. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), go S. on Highway 93 for 0.1 mi, thence turn right and go 2.0 mi W. to T-rd. N. and station site; 30 ft N. of centerline of E.-W. rd.; 11 ft W. of centerline of rd. N.; 3 ft NW. of fence corner; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT X-21 RESET AMS 1952"		L-22 Panel USGS	Centered over station mark; 6- by 6-foot square white panel.  Same horizontal position as station mark.	1087.3
	X = 512,714.95 Y = 801,581.34	1193.54			
PP X-21 AMS	On E. side of N.-S. rd.; centerline of ditch E. at point of disappearance.  X = 512,734.57 Y = 801,592.97	1192.7			

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
M-22	T. 3 S., R. 3 E., near SW. corner of sec. 3. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 9.9 mi to cross road, thence turn left and go 1.75 mi to where rd. begins to bend N., thence leave main rd. and go W. 0.1 mi to cross road, thence turn left for 0.1 mi to another cross road, thence turn right and go W. for 0.9 mi to fork, thence take left fork and go 350 ft to cross road, thence turn left and go S. for 300 ft to crossroads and station site; on W. edge of trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "M-22 1948"		R-22	T. 3 S., R. 4 E., near SW. corner of sec. 5. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 9.9 mi to cross road, thence turn right and go E. for 1.1 mi to rd. S. and station site; 47 ft N. of centerline of main rd.; 20 ft E. of trail; at S. edge of mesquite tree; in top of concrete post projecting 0.6 ft; Corps of Engineers disk stamped "BM R-22 1948"	
	X = 460,544.52 Y = 797,295.42	1103.2		X = 481,267.32 Y = 796,732.14	1143.17
	Horizontal position by USGS in 1965.			Horizontal position by USGS in 1965.	
M-22 Panel USGS	Centered over station mark; 6- by 6-foot square white panel.		R-22 Panel USGS	18 ft S. of station mark; center of 9- by 9-foot square white panel. (There are wing panels NE. and NW.)	
	Same horizontal position as station mark	1102.8		X = 481,268.92 Y = 796,714.00	1142.3
N-22	T. 3 S., R. 3 E., near SW. corner of sec. 2. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 9.9 mi to cross road, thence turn left and go 1.8 mi to curve to N. and station site; at N. end of curve; 42 ft WSW. of centerline of main rd.; 31 ft E. of centerline of N.-S. secondary rd.; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT N-22 1948"		R $\frac{1}{2}$ -22 USGS	N. of rd.; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.	
	X = 465,520.64 Y = 797,261.01	1120.64		No horizontal position established. Rod Elev. 1147.82 Panel Elev. 1147.5	
N-22 Panel USGS	Centered over station mark; 6- by 6-foot square white panel.		S-22	T. 3 S., R. 4 E., near SW. corner of sec. 4. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 9.9 mi to cross road, thence turn right and go E. for 2.2 mi to trail N. and station site; 35 ft N. of centerline of main rd.; 7 ft E. of trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "TT S-22 1948"	
	Same horizontal position as station mark	1120.3		X = 486,973.21 Y = 796,721.89	1154.42
V-273 C&GS BM	T. 3 S., R. 3 E., about 0.25 mi W. of SE. corner of sec. 2. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 9.9 mi to cross road, thence turn left and go W. for 1.1 mi to station site on right; about 0.35 mi W. of station P-22; 67 ft N. of centerline of rd.; in top of concrete post projecting 0.3 ft; USC&GS standard disk stamped "V 273 1948"		S-22 Panel USGS	Centered over station mark; 9- by 9-foot square white panel, with two 3- by 12-foot wing panels W. and N.	
	X = 469,455.08 Y = 796,750.49	1125.39		Same horizontal position as station mark	1154.0
	Horizontal position triangulated by AMS in 1962.		T-22	T. 3 S., R. 4 E., near SW. corner of sec. 3. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 9.9 mi to cross road, thence turn right and go E. for 3.1 mi to dlm N.-S. trail and station; 33 ft N. of centerline of main rd.; 6 ft E. of trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM T-22 1948"	
V-273 Panel USGS	Centered over station mark; small white cross-target; each wing panel of cross-target is 3- by 12-foot, oriented in approximately cardinal directions.			X = 491,799.48 Y = 796,720.05	1161.96
	Same horizontal position as station mark	1125.1		Horizontal position by USGS in 1965.	
P-22	T. 3 S., R. 3 E., near SW. corner of sec. 1. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 9.9 mi to cross road, thence turn left and go W. for 0.8 mi to panel and station right; about 110 ft N. of rd.; in center of permanent panel; in top of concrete post projecting 0.6 ft; Corps of Engineers disk stamped "TT P-22 1948"		T-22 Panel USGS	Centered over station mark; 6- by 6-foot square white panel.	
	X = 471,156.80 Y = 796,786.91	1128.82		Same horizontal position as station mark	1161.6
P-22 Panel AMS	Centered over station mark; black and white painted cross-target panel.		U-22	T. 3 S., R. 4 E., near SE. corner of sec. 3. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), drive S. on Highway 93 for 0.8 mi to cross road, thence turn right and go 3.0 mi to N.-S. rd., thence turn left for 0.2 mi, thence turn right and continue W. for 2.0 mi to powerline crossing and station site; 51 ft NE. of T-rd. S.; 36 ft N. of centerline of main E.-W. rd.; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "TT U-22 1948"	
	Same horizontal position as station mark	1128.2		X = 497,115.51 Y = 796,710.88	1171.72
P $\frac{1}{2}$ -22 USGS	57 ft N. of centerline of rd.; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.		U-22 Panel USGS	Centered over station mark; 6- by 6-foot square white panel.	
	No horizontal position established. Rod Elev. 1133.03 Panel Elev. 1132.7			Same horizontal position as station mark	1171.3
Q-22	T. 3 S., R. 3 E., about 0.15 mi W. of NE. corner of sec. 12. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 9.9 mi to crossroads and station; 37.5 ft E. of centerline of hwy.; 22.5 ft S. of centerline of E.-W. rd.; 4.7 ft W. of telephone pole; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "TT Q-22 1962 ARMY MAP SERVICE"		PP U-22 AMS	Centerline of E.-W. rd. at intersecting centerline of secondary rd. S. (T-rd. S.)	
	X = 475,267.18 Y = 796,664.32	1136.74		X = 497,079.5 Y = 796,675.4	1170.7
Q-22 Panel USGS	Located 57 ft S. of station mark; center of 9- by 9-foot square white panel.				
	X = 475,277.78 Y = 796,608.46	1135.6			
Q $\frac{1}{2}$ -22 USGS	On S. side of rd.; 3/8-in. rod projecting 0.3 ft; in center of 9- by 9-foot square white panel.				
	Rod Elev. 1137.93 Panel Elev. 1137.6		G-23 Panel AMS	Centered over station mark; black and white cross-target panel.	
				Same horizontal position as station mark	1080.4

TIER 23



# FILE COPY

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STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)	STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
U-24	T. 3 S., R. 4 E., near SW. corner of sec. 14. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 5.0 mi to paved rd. E., thence turn right and go 5.45 mi to cross road, thence turn left and go N. for 3.0 mi to cross trail and station site; 10 ft E. of centerline of N.-S. rd.; 9 ft N. of cross trail; in top of concrete post flush with ground; Corps of Engineers disk stamped "TT U-24 1948 RESET AMS 1956"	1156.66	N-25	T. 3 S., R. 3 E., near NE. corner of sec. 27. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 6.7 mi to cross road on E. side of Pima Butte, thence turn left and go SW. on S. side of Pima Butte for 1.5 mi to small butte on W. side of Pima Butte, and on W. side of Santa Cruz Wash; on top of small butte; cemented in outcropping bedrock; Corps of Engineers disk stamped "TR N-25 1948 RESET 1952"	1161.35
	X = 497,086.86 Y = 786,294.47			X = 465,170.84 Y = 780,320.05	
U-24 Panel USGS	Centered over station mark; 6- by 6-foot square white panel. Same horizontal position and elevation as station mark.		N-25 Panel USGS	Centered over station mark; 12- by 12-foot square white panel. Same horizontal position and elevation as station mark	
TIER 25					
G-25	T. 3 S., R. 2 E., near SE. corner of sec. 22. To reach from post office in Laveen, go S. on black top rd. for 6.4 mi to rd. fork, thence take right fork and go SSE., passing through Santa Cruz village, for 8.6 mi to junction with track rd. from NE., thence turn left and go NE. 0.3 mi to cross trail, thence turn right and go S. for 1.0 mi to station site on right; about 150 ft W. of trail; in center of permanent panel; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "G-25 1949" (Not visited by USGS in 1965)	1174.76	P-25	T. 3 S., R. 3 E., about 0.2 mi ESE. of NW. corner of sec. 25. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 6.7 mi to cross road on E. side of Pima Butte, thence turn left, taking right fork for 0.2 mi to telephone line crossing, thence turn left and go S. along telephone line rd. for 0.15 mi and station; 43 ft E. of telephone line rd.; 90 ft NE. of pole No. 215; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "P-25 1948"	1136.12
	X = 433,180.78 Y = 780,899.06			X = 471,738.78 Y = 780,551.10	
G-25 Panel AMS	Centered over station mark; black and white cross-target panel. Same horizontal position as station mark	1174.5	P-25 Panel USGS	Horizontal position by USGS in 1965. Centered over station mark; 6- by 6-foot square white panel. Same horizontal position as station mark	1135.7
J-25	T. 3 S., R. 2 E., near NE. corner of sec. 25. To reach from post office at Laveen, go S. on black top rd. for 6.4 mi to rd. fork, thence take right fork and go SSE., passing through Santa Cruz village and crossing pipeline, for 7.8 mi to junction with rd. from E., thence turn left and go E. for 0.9 mi past group of houses to corral, thence bear left around NE. corner of corral, thence go SE. for 1.7 mi to trail fork, thence take left fork and continue SE. for 0.4 mi to fork, thence take right fork for 0.1 mi to fork, thence take right fork and go S. for 0.5 mi to T-rd., thence turn left and go E. for 0.1 mi, thence turn left and go N. across country for 0.4 mi and station site; in center of permanent panel; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TR J-25 1948 RESET AMS 1953" (Not visited by USGS in 1965)	1094.0	Q-25	T. 3 S., R. 3 E., near SE. corner of sec. 24. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 6.7 mi to cross road, thence turn right and go 0.7 mi E. to powerline crossing, thence turn left and go N. along powerline for 0.1 mi to rd. NW., thence turn left and go 0.1 mi to fork, thence take right fork for about 150 ft to panel and station; in center of panel; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT Q-25 1948"	1141.47
	X = 443,699.56 Y = 780,370.02			X = 475,644.41 Y = 781,584.22	
J-25 Panel AMS	Centered over station mark; black painted cross-target panel. Same horizontal position as station mark	1093.7	Q-25 Panel AMS	Centered over station mark; black asphalt cross-target panel. Same horizontal position as station mark	1141.2
L-25	T. 3 S., R. 3 E., near SW. corner of sec. 21. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 3.2 mi to powerline crossing, thence turn left and go NW. on powerline rd. for 3.95 mi to power pole No. 221; panel and station are about 270 ft W. of powerline; in top of concrete post projecting 0.1 ft; Corps of Engineers disk stamped "TT L-25 1948"	1103.6	R-25	T. 3 S., R. 4 E., near SE. corner of sec. 19. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 5.1 mi to paved rd. E., thence turn right and go E. for 2.5 mi to rd. N., thence turn left and go N. for 2.15 mi to cross trail and station; 31 ft W. of N.-S. rd.; 9 ft N. of cross trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM R-25 1948"	1141.0
	X = 455,493.67 Y = 781,568.97			X = 481,191.66 Y = 781,330.93	
L-25 Panel AMS	Centered over station mark; black asphalt cross-target panel. Same horizontal position as station mark	1103.5	R-25 Panel USGS	Horizontal position by USGS in 1965. Centered over station mark; 6- by 6-foot square white panel. Same horizontal position as station mark	1140.6
M-25	T. 3 S., R. 3 E., near SE. corner of sec. 21. To reach from SP RR. crossing in Maricopa, drive N. on hwy. toward Phoenix for 3.2 mi to powerline crossing, thence turn left and go NW. on powerline rd. for 3.4 mi to trail NE., thence turn right and go NE. 0.55 mi to crossroads, thence turn left for 0.05 mi to fork, thence take right fork and follow dim trail NE. for 0.3 mi to lone mesquite tree and station site; on SW. edge of tree; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "M-25 1948"	1113.2	S-25	T. 3 S., R. 4 E., about 0.1 mi N. of SE. corner of sec. 20. To reach from junction of Maricopa Highway and Williams Field Road, drive S. on Maricopa Highway for 11.2 mi to cross road on E. side of Pima Butte, thence turn left and go easterly on main rd. for 1.85 mi to cross road, thence go straight ahead (easterly) for 1.1 mi to canal crossing, thence cross canal and turn left and go N. on trail along canal for 1.1 mi to panel and station; about 75 ft E. of trail; in small clearing; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "TT S-25 1948" (Not visited by USGS in 1965)	1147.48
	X = 460,007.46 Y = 781,441.01			X = 486,462.16 Y = 781,457.47	
M-25 Panel USGS	Centered over station mark; 6- by 6-foot square white panel. Same horizontal position as station mark	1112.7	S-25 Panel AMS	Horizontal position by USGS in 1965. Centered over station mark; white painted cross-target panel. Same horizontal position as station mark	1147.2
T-25	T. 3 S., R. 4 E., near SW. corner of sec. 22. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), go S. on Highway 93 for 5.1 mi to cross road, thence turn right and go W. for 5.0 mi to cross road, thence turn right and go N. 1.0 mi to cross road and trail NW., thence turn left and go NW. and W. for 0.3 mi to cross trail, thence continue W. for 0.2 mi to trail N., thence turn right and go 0.5 mi to trail W., thence turn left and go 0.5 mi to N.-S. trail, thence turn left and go S. for 0.5 mi to station on right; 13 ft W. of trail; in top of concrete post projecting 0.4 ft; Corps of Engineers disk stamped "BM T-25 1948"	1156.6	T-25 Panel USGS	Centered over station mark; 6- by 6-foot square white panel. Same horizontal position as station mark	1156.2
	X = 491,779.32 Y = 781,092.87			X = 491,779.32 Y = 781,092.87	

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
U-25	T. 3 S., R. 4 E., near NW. corner of sec. 26. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), go S. on Highway 93 for 5.1 mi to rd. W., thence turn right and go W. for 5.0 mi to cross road, thence turn right and go N. for 1.0 mi to cross road and station; 25 ft E. of centerline of N.-S. rd.; 23.4 ft S. of centerline of rd. E.; 3.5 ft SE. of corner fence post; in top of concrete post projecting 0.1 ft; Corps of Engineers disk stamped "BM U-25 1963 ARMY MAP SERVICE"	1168.9
	No horizontal position established.	
U-25 Panel USGS	87.5 ft NW. of station mark; 12- by 12-foot square white panel.	Panel Elev. 1169.1
	No horizontal position established.	
PP U-25 AMS	Centerline of N.-S. rd. at intersecting centerline of rd. E. (position apparently obtained before old monument was destroyed)	1168.7
	X = 497,063.07    Y = 780,859.29	
W-25 (C&GS BM N-276)	T. 3 S., R. 4 E., near NE. corner of sec. 25. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), go S. on Highway 93 for 5.1 mi to cross road, thence turn right and go W. for 3.0 mi to cross road, thence turn right and go N. for 1.0 mi to E.-W. rd. and station site; 38 ft S. of centerline of E.-W. rd.; 20 ft W. of centerline of rd. S.; 2 ft E. of fence line; in top of concrete post projecting 0.2 ft; USC&GS standard disk stamped "N 276 1948"	1185.72
	X = 507,604.29    Y = 780,844.39	
W-25 Panel USGS	Located 71 ft NNE. of station; 12- by 12-foot square white panel.	1185.4
	X = 507,625.77    Y = 780,912.04	
Y-25	T. 3 S., R. 5 E., about 0.1 mi NE. of SW. corner of sec. 21. To reach from junction of State Highways 87 and 93 (7.0 mi S. of Chandler), drive S. on Highway 93 for 5.1 mi to cross road, thence turn right and go W. 1.0 mi to cross road just W. of canal, thence turn right and go N. 0.9 mi to intersection of 5 trails at bank, thence take trail leading N. for 0.2 mi to station site; 75 ft W. of rd.; in center of panel; in top of concrete post projecting 0.5 ft; Corps of Engineers disk stamped "TT Y-25 1948"	1194.6
	X = 518,655.88    Y = 781,448.11	
Y-25 Panel USGS	The AMS permanent asphalt panel at this station was covered with dirt and no longer clearly visible on aerial photos. An 8- by 8-foot square white temporary panel was centered over station mark by USGS in 1965.	
	Same horizontal position as station mark	1194.1
AMS INTERSECTED STATIONS		
KPHO TV TOWER	On highest ridge in South Mountain Park; easternmost of four large TV towers; a self-supported, tapered, three-legged steel tower painted red and white, and 387 ft tall. Center of tower.	
	X = 455,927.14    Y = 849,034.30	
	<u>33° 20' 2.219"    112° 3' 39.496"</u>	
KTVK TV TOWER	On highest ridge in South Mountain Park; second most westerly of four TV towers; tower is a self-supported, tapered, three-legged steel tower painted red and white. The overall height is 228 ft. Center of tower.	
	X = 455,451.53    Y = 848,910.35	
	<u>33° 20' 00.986"    112° 3' 45.100"</u>	
KTAR TV TOWER	On highest ridge in South Mountain Park. The most westerly of four TV towers; it is a guyed triangular-shaped steel tower painted red and white. Overall height is 350 ft. Center of tower.	
	X = 455,193.39    Y = 848,748.70	
	<u>33° 19' 59.383"    112° 3' 48.140"</u>	
U. OF ARIZONA WATER TANK	Located about 2.0 mi W. of Mesa; 600 ft N. of SP RR. tracks. A cylindrical steel tank painted black with cone roof supported by four-legged steel tower. Overall height is 75 ft. Point observed was the finial of cone roof.	
	X = 515,820.43    Y = 877,657.41	

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
MESA WATER TANK NO. 1	The southernmost and smaller of two tanks at Rendezvous Park in Mesa. A cylindrical steel tank with cone roof, supported by four-legged steel tower, overall height is 136 ft. Point observed was ball at top center of tank.	
	X = 526,404.57    Y = 880,616.48	
MESA WATER TANK NO. 2	The northernmost and larger of two tanks at Rendezvous Park. A cylindrical steel tank with a cone roof supported by a six-legged steel tower, overall height is 136 ft. Point observed was ball at top center of tank.	
	X = 526,406.03    Y = 880,797.18	
CHANDLER W. T. NO. 1	Located about 0.3 mi SE. of city square of Chandler. The tank is the oldest of two water tanks in same fenced enclosure. Tank is a cylindrical steel tank with a cone roof, supported by four-legged steel tower. Overall height is about 135 ft. The center of the ball at the top center of the tank.	
	X = 524,272.34    Y = 836,784.61	
CHANDLER W. T. NO. 2	Tank is the newest and largest of two water tanks in same fenced enclosure in Chandler. The tank has a flattened spherical-appearing shape, and is supported by an eight-legged steel tower. Overall height about 135 ft. Point is the cap on top center of tank.	
	X = 524,250.75    Y = 836,710.81	
TEMPE BUTTE MAST	Located on N. side of Tempe, on highest point of prominent butte known as Tempe Butte. The point observed was the center of a 45 ft long cedar pole supported by a 20 ft high steel tower.	
	X = 494,375.90    Y = 883,297.78	
ST. JOHNS INDIAN SCHOOL W. T.	NO DESCRIPTION	
	X = 421,902.78    Y = 833,510.71	
	<u>33° 17' 27.973"    112° 10' 20.091"</u>	
WESTERN FEED & SEED CO. W. T.	Located 2.5 mi W. of town of Gilbert, and 0.4 mi S. of Guadalupe Road. Tank is a cylindrical steel tank with a cone roof, supported by four-legged steel tower. Overall height is about 105 ft. Point sighted was the finial of the cone roof of tank.	
	X = 526,083.98    Y = 858,159.31	
AMS TRIANGULATION STATIONS		
CONFER	T. 2 S., R. 4 E., about 0.15 mi E. of center of sec. 29. To reach from SP RR. crossing in Maricopa, drive northerly on hwy. toward Phoenix for 12.4 mi to cross road, thence turn right on track rd. and go easterly for 1.2 mi to cross road and station site; 19 ft S. of centerline of E.-W. rd.; 17.5 ft W. of centerline of N.-S. rd.; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "CONFER 1962 ARMY MAP SERVICE"	
	X = 484,813.35    Y = 810,035.16	1145.6
POST	T. 2 S., R. 5 E., about 0.25 mi W. of center of sec. 31. To reach from courthouse in Chandler, drive S. on Highway 87 for 6.0 mi to rd. W., thence turn right and go W. for 2.7 mi to station on right; located midway between two large cottonwood trees; 15 ft N. of centerline of E.-W. rd.; 9 ft S. of irrigation ditch; in top of concrete post projecting 0.3 ft; Corps of Engineers disk stamped "POST 1962 ARMY MAP SERVICE" (Not visited by USGS in 1965)	
	X = 508,849.00    Y = 804,139.94	1184.2
HARVESTER	To reach from intersection of South Central Avenue and Baseline Road, drive S. into South Mountain Park for 2.6 mi to rd. forks, thence take middle fork of three and go 1.3 mi to rd. fork, thence take left fork and continue around a curve and up a long grade on Summit Drive for 3.4 mi to rd. fork, thence take right fork and go E. for 1.2 mi to end of paved rd. at island turnaround, thence go in northerly direction on trail rd. that terminates on a high rd. and station site. Station mark is a Corps of Engineers disk stamped "HARVESTER, AMS 1960" (Not visited by USGS in 1965)	
	X = 463,966.99    Y = 852,078.76	2547.2
	<u>33° 20' 32.443"    112° 2' 4.771"</u>	

STATION	DESCRIPTION PLANE COORDINATES	ELEVATION (feet)
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USC&GS TRIANGULATION STATIONS  
(Occupied by USGS, 1965)

GILA BUTTE	Station is located about 10.0 mi S. of Chandler, and 1.25 mi W. of State Highway 93; just N. of Gila River, and on highest southeasternmost peak of Gila Butte; cemented in drill hole in outcropping bedrock on highest point; USC&GS standard triangulation station disk stamped "GILA BUTTE 1935"	
	X = 516,948.21    Y = 784,156.82	

PIMA BUTTE	Station is located about 16.0 mi SW. of Chandler; about 1.0 mi W. of Phoenix-Maricopa Highway; 1.25 mi S. of Gila River; on eastern end of prominent butte; cemented in drill hole; USC&GS standard triangulation station disk stamped "PIMA BUTTE 1935"	
	X = 468,823.66    Y = 781,072.49	

"100 05 01 51" "884 21 08"

"100 05 01 51" "884 21 08"

"100 05 01 51" "884 21 08"