STANDARD GUIDE POST

GENERAL REQUIREMENTS

Position posts shall be 6" min & 8" max diameter at a point 6" below top of post and 7" & 9" min. diameters at 12" butt and shall be planted for a gross surface in any one continuous row of guide posts the top diameters shall not vary more than 1/4" & measurement for a shall be made after shrinkage. The minimum height spoil in any post shall equal 2½ times the diameter of post. Guide posts are to be covered with steel plate guide post locations shown on plans are approximate and changes may be necessary in view of local conditions. All placed exterior guide posts shall be about 30' center to center. Use of guide posts in road years' posts shall conform to third project. Deflector plate as shown in above plate installed being traffic after post is erected & painted backside by received of manufacturer. Type C concrete. Guide post anchor shall be galvanized or copper. When Sw Makers are in solid rock type 3 may be substituted for type A and then should be set by manufacturer.
<table>
<thead>
<tr>
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<td>4</td>
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</table>

**City Limits (Zip-a-Tone No.113, Shade inside)**

**County Line**

**Forest or Reservation Boundary (Line-Shading, Shade inside)**

**Property Line**

**Quarter Section Line**

**Right-Of-Way Line**

**Section Line**

**Sixteenth Section Line**

**State or National Boundary**

**Township or Range Line**

**Mile Post**

**Right-Of-Way Marker**

**Survey Monument**

**Angle Point**

**Construction C. Station Marks**

**Quarter Corners**

**Section Corners**

**Survey Control Point**

**Access Control (Chart Pak 256 TAA 1/2 wide, Shade outside)**

**Curb & Gutter with Depressed Curb (1" = 20')**

**Curb & Gutter with Depressed Curb (1" = 100')**

**Curb, Single with Depressed Area**

**Pavement & Sidewalk Edge**

**Turnout (Indicate width & surface material)**

**Cut**

**Fill**

**Transition; Cut to Fill**

**Railroad Track (1" = 20')**

**Railroad Track (1" = 100')**

**Bank Protection**

**Bridge**

**Building**

**Catch Basin, Curb & Gutter**

**Catch Basin, Median Dike**

**Catch Basin, Off Roadway, Flush**

**Catch Basin, Single Curb**

**Cattle Guard**

**Concrete Box Culvert**

**Dike**

**Downdrain, one way**
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<td>Spillway, one way</td>
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<td>Traffic Sign, Two or More Posts</td>
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<tr>
<td>Visible Outlines, Sections, etc.</td>
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NOTE
ALL LINES AND SYMBOLS NOT SHOWN WILL CONFORM TO;
American National Standard Symbols for Section Lining (ANSI Y14.2-1973)
TYPICAL DYKE INSTALLATION AT STRUCTURE.
Dykes or structures to be so placed that they create a water cushion, generally 20' back from end of wings.

SECTION OF DITCH, CHANNEL, DYKE OR LEVEE.
Dimensions shown on plans are respectively width, (depth or height) and length.
Standard case condition as shown on standard drawing.
'A-2' shall be used where revetment, erosion control or beautification in metropolitan areas is necessary.

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION

STANDARD DITCHES, DYKES AND CHANNELS.
DETAIL OF SLOPE ROUNDING GAUGE

Note: Measure external distance on angle bisector.

To determine areas for sem-tangents other than five feet, square sem-tangent, divide by 85, and multiply by indicated area.
Save existing specimen trees. For traffic safety maintain 10 ft. min. horizontal shoulder clearance and 14 ft. min. vertical clearance of tree branches.

The final grade should conform as nearly as possible to the original surface where trees are involved.

Natural ground to be left around base of trees as directed by Engineer.

No clearing of right of way shall be done until a thorough inspection has been made for possible preservation of existing growth. The trees and shrubs to be retained will be carefully and clearly marked. Unnecessary destruction of existing ground cover is prohibited.

PLAN CONSERVATION.

If specimen to be retained should be in greater than 6' fill a dry rubble wall shall be constructed around same.

PLANT CONSERVATION & ROCK AND EARTH CUTS.

ROCK WORK

Straight rock cuts should not be rounded where rock has an earth overburden. Treat the overburden the same as a straight cut in cuts which are composed of rock and earth abutting each other let the excavation follow a smooth rounding course.

Trees and shrubs on top of cuts or crowns of VC's should be preserved where possible.

Small pockets of earth should be left between rocks to permit small growth to re-root.
General Requirements for Road Guard

In order to secure proper alignment, all bolt holes shall be bored and top of posts trimmed after posts are set. Length of bolts shall be governed by size of posts. Round posts shall be 6 in. min. and 9 in. max. diameter at the point 6" below top of post, and 1¾ in. min. and 10 in. max. diameter at the butt, and shall be graded for size so that in any one continuous section of road guard the top diameter shall not vary more than 1". Measurement for size shall be made after shrinkage.

No. 1 Crystal Reflectors in end posts and every third intermediate post facing traffic both ways.

BEAM TYPE GUARD

End panel length: not more than 8½'

Intermediate panel length not more than 10½'

NON FLOATING TENSION TYPE GUARD

All metal fittings, bolts, washers, etc. shall be galvanized, as per State Sld Spec. All painting shall comply with Sld Sld Spec.

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION
ROAD GUARD
EMBANKMENT GUTTER FOR GRAVEL ROADWAY

SECTION FOR OIL GUTTER ON FILL.

OIL FLARES
1. All small structures within one foot of finished grade shall have 3" oil flares.
2. All structures over 20' clear span shall have 80' oil flares.
3. Atrials shall have 100' oil flares.

SECTION FOR OIL GUTTER IN CUT.

GENERAL NOTES
Typical sections and slopes shown on this sheet may be superseded by special cross sections and slopes as shown on plans.

SIDEROAD ENTRANCES.

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION
ROADWAY GUTTERS AND SIDE ROAD ENTRANCES

DRAWN
WMG JAN. 1936
TRACED
A.J. JUNE 1936
CHECKED
A.J. JUNE 1936
APPROVED
ENGR. PLANS
EMBANKMENT CURB FOR GRAVEL ROADWAY

SECTION FOR BIT. MIX CURB ON FILL.

BIT SURF. FLARES
1. All small structures within one foot of finished grade shall have 3'-1" Bit Flares.
2. All structures over 20' clear span shall have 500 Bit Flares.
3. All Flares shall have 100' Bit Flares.

SECTION-BIT. MIX GUTTER IN CUT.
SECTION CONCRETE FORD
Concrete Walls

Subgrade Width

- 8 Gonc.
- 3 1/2" weep holes
- 2 3/4" bars top and bottom, Lap: 2 1/2"

Flow

Elevation to be as near average grade of stream as possible.

Wall may be built to this line.

Upstream wall: 3 1/2" weep holes at 20 stras.

ELEVATION LOOKING UPSTREAM

SECTION OIL SURFACE FORD
Concrete Walls

Subgrade Width

Type and thickness of material noted on plans.

Flow

- 3 1/2" weep holes
- 8 Gonc.
- 2 3/4" bars top and bottom, Lap: 2 1/2"

SECTION UNPAVED FORD
Concrete Wall

Type and thickness of material noted on plans.

Flow

- 1 1/2" weep holes
- 5 Gonc.
- 2 3/4" bars top and bottom, Lap: 2 1/2"

DEPTH GAUGE INSTALLATION

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION

STANDARD FORD NO. 1 CONCRETE WALLS

DRAWING NO. A-9
STANDARD "L" TYPE HEADWALLS

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<th>Dimensions</th>
<th>Single Pipes</th>
<th>Steel</th>
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<tbody>
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Note: All un-noted dimensions and sizes of reinforcing bars same as shown on details of straight type headwalls.

STANDARD STRAIGHT HEADWALL

<table>
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<tr>
<th>Single Type Reinforced Concrete Headwalls for 6&quot; to 18&quot; Pipes</th>
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</thead>
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<tr>
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<table>
<thead>
<tr>
<th>Double Pipe Headwalls</th>
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</thead>
<tbody>
<tr>
<td>Dimensions</td>
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</tbody>
</table>

TYPICAL INSTALLATION OF "L" TYPE HEADWALL.

STRAIGHT TYPE REINFORCED CONCRETE HEADWALLS FOR 30 TO 56 PIPES

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Single Type Headwalls</th>
<th>Double Pipe Headwalls</th>
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<tr>
<td></td>
<td>Steel</td>
<td>Steel</td>
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</table>
**TYPE A RAIL BANK PROTECTION**

- Single wrapped with 3 strands 1/8 wire 1/2 c to c.
- Min. 120° width 2 x 4 A mesh—See note.
- Lace mesh together with 2 strands 1/8 wire.

---

**TYPE B RAIL BANK PROTECTION**

- Min. 116° Width 2 x 4 A mesh (See Note).
- Backfill with rock and brush or stumps placed in layers.
- Slope as required.
- Embankment.

---

**PLAIN RIP RAP**

- Single wrapped with 3 strands 1/8 wire 1/2 c to c. max.
- Lay mesh full width of trench.
- Extend backfill into ground as shown.
- Min. 20° railroad rail 16 long @ 7 0-0 c to c.

---

**TYPE C RAIL BANK PROTECTION**

- Use Gx 19 Galv. Plain Steel Cable, Mild Steel Standard.
- Min. 120° Railroad rail 16 long @ 4 0-0 c to c.

---

**NOTE:** Wire mesh to be either galvanized or galvanealed. Horizontal wires to be 2 strands, twisted, not less than 12 1/2 gauge. Vertical cross wires not less than 14 gauge. Where more than one width is used, lace together with 2 strands 1/8 wire and tie at every rail. All wire to be galvanized as per std. specs. Part 4, Sec. 3.
Where curbs & gutters are both to be constructed they shall be cast monolithic.

Area = Lin. Ft. Valley Gutter

Combined curb & gutter to end at end of return

Detail B

Combined curb & gutter end at end of return

Shaded area to be constructed and measured as per type adjacent

TYPICAL CONSTRUCTION OF VALLEY GUTTER AT STREET INTERSECTION OR ALLEY

W = width as shown on plans.

Single curb shall be measured along a line 3" from the back of the curb.

Single gutter shall be measured along a line midway between the face of the curb & the outer edge of the gutter, along line W.

Combined curb & gutter shall be measured along a line midway between the back of the curb & the outer edge of the gutter along line a.

Measurement of Curb, Gutter or Combined Curb & Gutter on Curves.

TYPICAL CONSTRUCTION OF CEMENT CONCRETE ALLEYS OR DRIVEWAYS

FORMULA FOR QUARTER POINTS

D = Drop from center of intersection to center of return.

Where S = 0 to 90, P = 0.17

S + 90 = 100, P = 0.018

S + 100 = 110, P = 0.009

S + 110 = 120, P = 0.009

P = drop from center of intersection to the quarter point.

Shaded area to be constructed and measured as 6" RC concrete driveway.

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION
CURB & GUTTER MEASUREMENT AND STREET INTERSECTION GRADES

DRAWING NO. A-17
NOTE: Sketches showing the various cross sections are given to show the varied types of curbs and gutters along with the plans. These sketches are not intended to be a complete guide to their construction.

**GENERAL NOTES**

All curbs and gutters to be single course Class A concrete unless otherwise specified on the plans. Where plaster coat is called for it shall consist of 3/4 or 1/2 cement mortar on exposed surfaces of curb and gutter.

All curbs shall be trowel finished.

All flow lines of gutters shall be trampled to an accurate grade for a width of 3 ft. Curbs, curb and gutter shall have a 1/4 open joint extending all the way through the concrete, every 20 feet.

In integral curb oil expansion and contraction joints shall extend through the curb. Expansion joints to be placed at all radius points.

All curbs and gutters to be single course Class A concrete. Fissure control areas shall be marked in squares.

A 2 in expansion joint shall be placed every 15 ft and a 2 premolded filter joint between sidewalk & curb as shown in detail below.

Sidewalk across driveways shall be 6" thick.

*CONCRETE SIDEWALK*

*EXPANSION JOINT BETWEEN CURB & SIDEWALK*

*DEPRESSED CURB FOR DRIVEWAY ENTRANCE*
**GENERAL NOTES**

All curbs & gutters to be single course Class A concrete unless otherwise specified on the plans. Where plaster coat is called for it shall consist of 1/2 of 1-1/2 cement mortar on exposed surfaces of curb & gutter. All curbs shall be travertine finished. All flow lines of gutters shall be traveled to an accurate grade for a width of 9 ft. Curbs or curb & gutter shall have a 1/8 open expansion joint extending all the way through the concrete, every 20 feet. In integral curb all expansion & contraction joints shall extend through the curb. Expansion joints to be placed at all radius points.

---

**ARIZONA HIGHWAY DEPARTMENT**

**CONCRETE CURBS, GUTTERS & SIDEWALKS**

**DEPRESSED CURB FOR DRIVEWAY ENTRANCE**
TYPICAL INSTALLATION OF PERFORATED C.M.P.

Note: Include elbow as part of total length. Call for hinged band coupling for pipe joints. Use 12' band width where pipe is longer than 12', 7' band width, O.K. for 12' or less. Catch basin to have bluish coating, C.M.P. plain unless otherwise specified.

TYPICAL INSTALLATION ON SUPER-ELEVATION IN SIDE HILL CUT.

TYPICAL INSTALLATION FOR EMBANKMENT

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION
PERFORATED C.M.P. & CORRUGATED METAL CATCH BASINS

DRAWING NO. A-23

REV.
LONGITUDINAL SECTION
DETAILS OF NO. 3 CATCH BASIN
Scale 1" = 1'-0"

CROSS SECTION

ARIZONA HIGHWAY DEPARTMENT
PlANS DIVISION
CATCH BASIN
NO. 3

DRAWN: M.H.W.
TRACED: F.L.
CHECKED: V.W.H.
APPROVED: A-27

All concrete to be class A, and all exposed edges are to be finished with a suitable edger.
**TYPE A COVER**
Approx. weight 190 lbs.

**TYPE A-1" COVER**
shall be the same as Type A except that the cover shall be vented with at least six one inch holes equally spaced in a circle 6" from the center of the cover.

Type A' cover shall be used unless otherwise specified.

Notations as shown on the plans shall be as follows: Std M. H. Frame & Cover No. 1-8, the letter denoting the type of cover.

The bearing faces shall be machined so that the cover will have a uniform bearing in any position in the frame.
NOTE: To be furnished by the State and installed and marked by the Resident Engineer on all cut-off, abutment, and other permanent structures. Location and data shall be shown on as-built plans.

The contractor shall bid on the frame and cover complete in place.

Where new survey monuments are required they shall be placed by the contractor where located by the State.

SURVEY MONUMENT AND CAST IRON COVER INSTALLATION.
SUPERELEVATION CHART BASED ON SPEED.

V - Designed or critical velocity in miles per hr.
R - Radius of curve in feet
D - Degree of curvature
S - Super-elevation slope in ft per 114 ft across road = \( \frac{V^2}{R S} = 0.0000003083V^2D \)

ARIZONA MAXIMUM

STopping DISTANCE & SIGHT DISTANCE

STopping DISTANCE:
The total average stopping distance for one vehicle, considering average brakes and average reaction time, may be computed by the formula:

\[ S = \frac{5}{16} V + 0.11 V \]

In which:
S - The distance in f.g along the road to stop
V - Initial velocity of vehicle in miles per hour

Sight DISTANCE:
Sight distance should be double the stopping distance for the sake of two vehicles approaching, or as a stopping factor.

NOTE:
Sight distance should be considered when selecting the designed or critical speed for horizontal and vertical curve limitations.

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION
SUPERELEVATION AND SIGHT DISTANCE CHARTS

REV.

DRAWING NO. A-37
ENCROACHMENT CHART & CURVE WIDENING

R - Radius of curve survey in ft = R = 529.60

B - Wheel base in ft (example 25"

E - Rear wheel encroachment in ft = E = 16.50

F - Total encroachment assuming trailer with added B wheel base = 26

n - Number of traffic lanes across roadway

W - Encroachment curve widening in ft to be added to normal road width

Always on inside of curve.

DEGREE OF CURVATURE

NORMAL WIDTH OF ROADWAY W

SECTION G-G

SECTION S-S

Note: Superelevation slope is proportional to degree of curvature at any point. See Fig. A-3 for the superelevation for any degree of curvature for various critical speeds

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION

SURERELEVATION AND CURVE WIDENING WITH SPIRAL TRANSITION

DRAWING NO A-38
## TABLE-E

**TRANSITION SPIRAL TABLE FOR HIGHWAY CURVES**

60 MILES PER HOUR CRITICAL SPEED ≠ 87.96 FEET PER SEC.

49 MILES PER HOUR SAFE SPEED.

35 MILES PER HOUR FULL COMPENSATION SPEED.

**AVERAGE STOPPING DISTANCE INCLUDING REACTION 306 FEET EXCEPT ON ICE OR SLICK SURFACE.**

\[ \alpha = 1\% \text{ RATE INCREASE IN DEGREES OF CURVATURE PER 100 FEET ALONG SPIRAL.} \]

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**ARIZONA HIGHWAY DEPARTMENT**

**PLANS DIVISION**

**TRANSITION SPIRAL TABLE**

**49 M.P.H. SAFE SPEED**

**DRAWING NO. A-45**
| Time & Depth | Length on Spiral in Feet | Degree of Curvature | Radius in Feet | Offset in Feet | l in Feet | S in Feet | A in Feet | B in Feet | C in Feet | D in Feet | E in Feet | F in Feet | G in Feet | H in Feet | I in Feet | J in Feet | K in Feet | L in Feet | M in Feet | N in Feet | O in Feet | P in Feet | Q in Feet | R in Feet | S in Feet | T in Feet | U in Feet | V in Feet | W in Feet | X in Feet | Y in Feet | Z in Feet | AA in Feet | BB in Feet | CC in Feet | DD in Feet | EE in Feet | FF in Feet | GG in Feet | HH in Feet | II in Feet | JJ in Feet | KK in Feet | LL in Feet | MM in Feet | NN in Feet | OO in Feet | PP in Feet | QQ in Feet | RR in Feet | SS in Feet | TT in Feet | UU in Feet | VV in Feet | WW in Feet | XX in Feet | YY in Feet | ZZ in Feet | AAA in Feet | BBB in Feet | CCC in Feet | DDD in Feet | EEE in Feet | FFF in Feet | GGG in Feet | HHH in Feet | III in Feet | JJJ in Feet | KKK in Feet | LLL in Feet | MLL in Feet | NNN in Feet | OOO in Feet | PPP in Feet | QQQ in Feet | RRR in Feet | SSS in Feet | TSS in Feet | UUU in Feet | VVV in Feet | WVV in Feet | XXX in Feet | YYY in Feet | ZZZ in Feet |
|-------------|--------------------------|---------------------|----------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0           | 0° 00'                   | INFINITY           | 0.00           | 0.00         | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |

**TABLE F**

**TRANSITION SPIRAL TABLE FOR HIGHWAY CURVES**

50 MILES PER HOUR CRITICAL SPEED: 73.30 FEET PER SEC.
41 MILES PER HOUR SAFE SPEED.

29 MILES PER HOUR FULL COMPENSATION SPEED.

AVERAGE STOPPING DISTANCE INCLUDING REACTION 221 FEET EXCEPT ON ICE OR SLICK SURFACE.

1/2 RATE INCREASE IN DEGREES OF CURVATURE PER 100 FEET ALONG SPIRAL.

---

**ARIZONA HIGHWAY DEPARTMENT**

**PLANS DIVISION**

**TRANSITION SPIRAL TABLE**

41 M.P.H. SAFE SPEED

---

**DRAWING NO. A-46**
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<th>RADIUS OF CURVATURE</th>
<th>R₂</th>
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### TABLE - H

**TRANSITION SPIRAL TABLE FOR HIGHWAY CURVES**

40 MILES PER HOUR CRITICAL SPEED = 58.64 FEET PER SEC 33 MILES PER HOUR SAFE SPEED.

23 MILES PER HOUR FULL COMPENSATION SPEED. AVERAGE STOPPING DISTANCE INCLUDING REACTION 151 FEET EXCEPT ON ICE OR SLICK SURFACE.

α = 5 RATE INCREASE IN DEGREES OF CURVATURE PER 100 FEET ALONG SPIRAL.

ARIZONA HIGHWAY DEPARTMENT PLANS DIVISION

**TRANSITION SPIRAL TABLE**

33 M.P.H. SAFE SPEED

**REV.**

**DRAFTED BY:**

**DRAWING NO.:** A-48
GENERAL NOTES
Fireplace to be set on leeward sides of tables in picnic area.

Forms to be removed before concrete has cured, to permit
setting of rounded corners and removal of form marks.
Mortar for fire brick to be mixture of fire clay and 25%
Portland Cement "buttered" on surface lightly with travel to
make a joint about ¼ thick. After setting, the fireplace is to be
fired strongly for several hours to further set the mortar.
Angle iron with 2 anchor bolts attached, to be tilted sufficiently
so as to allow grill to remain upright when raised.
Pipe lengths to be set so that grill will lie flat when lowered.
Grill to be welded.

QUANTITIES
FIREPLACE
0.47 CY. 4'x4' concrete
46 Firebrick
0.6 CY, 3-1/2" Exc.
GRILL
1-3-3½-3½-3-1/2" with anchor bolts
3-3½ x 24" Bars
2-3½ x 24" Bars
2-1" Pipes 16' long

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION

TYPE A FIREPLACE

Scale 1"=1'-0"

TYPE A
GENERAL NOTES
Fireplaces shall be set on exterior sides of tables in picnic areas.
Mortar for fire brick to be mixture of fire clay and 25% Portland Cement "buttered" on surface lightly with trowel to make a joint about 1/8" thick. After setting, the fireplace is to be fired strongly for several hours to further set the mortar.
All joints in stonework to be rated to 1/4" minimum depth.
Use weathered stone where possible for exposed surfaces.
After painting, remove all excess mortar from faces of stonework.
Angle iron with 2 anchor bolts attached to be tilted sufficiently to allow grill to remain upright when raised.
Pipe lengths to be set so that grill will lie flat when lowered. Grill to be welded.

QUANTITIES

FIREPLACE
0.54 C.Y. Cement Rubble Masonry
48 Firebrick
06 C.Y. Str. Exc.

GRILL
1.3 x 1.4 x 2 1/2 with anchor bolts.
3 x 3/4 x 2'0" Bars
23 x 3/4 x 2'0" Bars
2 x 1" Pipes 1'0" long.

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION

TYPE B FIREPLACE

REV.
**TYPE A**

- **Concrete**
- **Scale 1/4" = 1'-0"**

**GENERAL NOTES**
- All exposed edges of concrete must be smooth and rounded with a 1/4" radius.
- Top slab to be precast and bedded on stone piers with 3:1 mix.
- Joints in stonework to be raked to 1/4" minimum depth.
- Use weathered stone for all possible exposed masonry surfaces.
- Fresh cut stone surfaces to be stained, old creosote oil diluted with gasoline, and, when necessary, dusted to absorb excess oil.
- After pointing, remove all excess mortar from faces of stonework.

**QUANTITIES**
- 22 CY *A* Concrete
- 1.5 CY Concrete Rubble Masonry
- 5 Pcs. 9/16" Steel 5'-9 1/2" long.
- 5 Pcs. 3/8" Steel 2'-9 1/2" long.

**TYPE B**

- **12" x 4'-6 1/2" Redwood**
- **4'-3 1/2" Redwood**
- **3'-10" Redwood**
- **6'-0" Redwood**

**GENERAL NOTES**
- All exposed edges of top and seats to be smooth and rounded.
- Table to be well oiled with 2 coats of raw linseed, the first coat of which is to be applied hot (burn underperfected)
- Bolt holes on table top and seats to be countersunk flush with surface.
- Woodwork to be stained after framing, prior to erection.

**QUANTITIES**
- 2 Pcs. 2'-6" x 4'-6 1/2" Rough Redwood
- 1" x 1" x 12'-4" 14 1/2 PINE or Douglas Fir. #2 Clear
- 2" x 4" x 3'-0" 2" x 4" x 5'-0" 2" x 4" x 6'-0"
- 2" x 10" x 6'-0"
- 2" x 12" x 6'-0"
- 9'-36" x 4" Carriage Bolts with nuts (washers)
- 20'-16" x 6 1/2"

---

**AZOREN HIGHWAY DEPARTMENT PLANS DIVISION**

**PICNIC TABLES**

**DRAWN**

**CHECKED**

**REV.**

**DATE**

**NO.**

---

**A-55**
**GENERAL NOTES**

Concrete to be above colored through the use of burnt umber for pigment.

Forms to be removed before concrete has cured to allow staining of rounded corners and removal of form marks. All exposed edges of concrete must be smooth, and rounded with 1/4 radius.

**TYPE A**

Scale 1" = 1'-0"

**TYPE B**

Scale 1/2" = 1'-0"

**QUANTITIES**

1.45 CY. A Concrete
1 Bubbler head
1 Spring faucet
1 Spring valve
71 lin. ft. 1/2" G.I. Pipe

**QUANTITIES**

0.4 CY. B Concrete
0.73 C.V. Cement Block Masonry
1 Bubbler head
1 Spring faucet
1 Spring valve
7 lin. ft. 1/2" G.I. Pipe

**ARIZONA HIGHWAY DEPARTMENT**

**PLANS DIVISION**

**DRINKING FOUNTAINS**

**DRAWN**

**SIGNATURES**

**REV.**

**DRAWING NO.** A-57
GENERAL NOTES
Thatch and lumber to be natural, rough finish.
Logs to have minimum diameter of 6' peeled.
Logs to be given two coats raw linseed oil after framing and prior to erection.
Lintel timber to be counterbored to pass lag screw freely.
Log butts to be creosoted for 1'0" at base.

Thatch: 2'0" to weather, tied to purlins with 14 Ga. copper wire.

Intermediate span
End span, Pt. Lt.

ARIZONA HIGHWAY DEPARTMENT
PLANS DIVISION

RAMADA

DRAWN: PMG NOV 39
TRACED: PMG NOV 39
CHECKED: MDS Dec 39
DRAWING NO. A-58
Minimum distance from traveled way = width of shoulder

Maximum distance from traveled way = 10 Feet

STANDARD
HIGHWAY
SIGN

Shoulder

4:1 Slope

Fills 0'-0" to 2'-0"

8' Maximum

Shoulder

Variable

Fills 2'-0" to 5'-4"

5'-4' Max.

Hold toe of slope at 8'

Shoulder

1/2 Slope faced with riprap.

Fills over 5'-4"

NOTE
Provide 2' diameter basins for temporary shrub watering. Plant signs in culverts only where practical. Where space is limited, shrub on right may be omitted.
Tree basin 5'dia. - 6'deep

Minimum 3'0" - Maximum 5'0"

Quantities
3'1"x2'6"x6'0" Stakes
6 Lin. ft. 36" Chicken wire (6" mesh)

Rabbit Guard