AIR-PLACED CONCRETE REPAIR LOCATIONS

1. 4 X 4 X .5 X .5 GALVANIZED WELDED WIRE MESH
2. #8 ROCK DOWEL 12"
3. PERFORATIONS 1/4" DIA
4. END CAP
5. NON-SHRINK GROUT

CRACK REPAIR DETAIL

NOTES
1. ALL AIR-PLACED CONCRETE REPAIR DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS OF EACH LOCATION WITH THE ENGINEER.
2. WEEP DRAINS SHALL BE PLACED AT ALL SPALL LOCATIONS 4' X 4' AND LARGER AT A SPACING OF 5' OC EACH WAY. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF EACH WEEP DRAIN WITH THE ENGINEER.

SPALL REPAIR DETAIL (CASE 1)

AREAS LESS THAN 4' X 4'

SPALL REPAIR DETAIL (CASE 2)

AREAS 4' X 4' AND LARGER

WEEP DRAIN DETAIL

1/2" X 1/2" PERFORATIONS (TYP)
3/4" OR 1-1/2" REBAR SHEET (TYP)
SLOPE PROTECTION AND BASIN

ROCK DOWEL DETAIL

4 X 4 X W2.0 X W2.0
BEND #8 BAR 12"
NON-SHRINK COURT

SIERRA MADRE DAM
SLOPE PROTECTION AND BASIN
ACCESS ROAD IMPROVEMENT PROJECT
AIR-PLACED CONCRETE REPAIR PLAN

PROJECT ID NO. FCC0001291

PLAN RD

FCC/56-D33

Los Angeles County Public Works

Drawn by: C. C. Rave
Drafted by: D. Radle
Design Engineer: C. C. Rave

12/03/19
### Air-Placed Concrete Repair Locations

<table>
<thead>
<tr>
<th>Point</th>
<th>Description</th>
<th>North</th>
<th>Easting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remove Spall: 8' x 8' Spall</td>
<td>1,899,205.0</td>
<td>6,546,363.3</td>
</tr>
<tr>
<td>2</td>
<td>6' x 2' Spall: Case 1</td>
<td>1,899,376.7</td>
<td>6,546,445.2</td>
</tr>
<tr>
<td>3</td>
<td>9' x 8' Spall: Case 2</td>
<td>1,899,361.3</td>
<td>6,546,472.2</td>
</tr>
<tr>
<td>4</td>
<td>32' x 8' Spall: Case 2</td>
<td>1,899,415.1</td>
<td>6,546,536.7</td>
</tr>
<tr>
<td>5</td>
<td>1' Crack</td>
<td>1,899,415.0</td>
<td>6,546,562.7</td>
</tr>
<tr>
<td>6</td>
<td>6' Crack</td>
<td>1,899,416.9</td>
<td>6,546,562.7</td>
</tr>
</tbody>
</table>

**Notes:**
1. See Crack and Spall Repair Details on Sheet 12.
2. All Air-Placed Concrete Repair Dimensions are Approximate. The Contractor shall Field Verify the dimensions of each item with the Engineer.
3. See Crack and Spall Repair Details on Sheet 12.

**Dimension:**
- **Scale:** 1" = 10'
- **Plan:** 19" x 28.75"
### AIR-PLACED CONCRETE REPAIR LOCATIONS

<table>
<thead>
<tr>
<th>POINT</th>
<th>DESCRIPTION</th>
<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1</td>
<td>6' CRACK</td>
<td>1,886,489.0</td>
<td>6,548,614.4</td>
</tr>
<tr>
<td>K2</td>
<td>7' CRACK</td>
<td>1,886,461.0</td>
<td>6,548,672.5</td>
</tr>
<tr>
<td>K3</td>
<td>12' CRACK</td>
<td>1,886,452.0</td>
<td>6,548,673.0</td>
</tr>
<tr>
<td>K4</td>
<td>6' CRACK</td>
<td>1,886,461.5</td>
<td>6,548,590.0</td>
</tr>
<tr>
<td>L1</td>
<td>3' x 6' SPALL, CASE 1</td>
<td>1,886,564.7</td>
<td>6,548,801.7</td>
</tr>
<tr>
<td>L2</td>
<td>5' x 14' SPALL, CASE 2</td>
<td>1,886,855.7</td>
<td>6,548,828.7</td>
</tr>
</tbody>
</table>

### Notes:
1. See crack and spall repair details on Sheet 10.
2. All air-placed concrete repair dimensions are approximate. The contractor shall verify the dimensions of each location with the engineer.

### Equipment Measurement

<table>
<thead>
<tr>
<th>POINT</th>
<th>MEASUREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STA 17+00 M</td>
<td>11' CRACK</td>
</tr>
<tr>
<td>STA 17+00 M</td>
<td>12' CRACK</td>
</tr>
<tr>
<td>STA 17+00 M</td>
<td>3' x 6' SPALL, CASE 1</td>
</tr>
<tr>
<td>STA 17+00 M</td>
<td>6' x 14' SPALL, CASE 2</td>
</tr>
</tbody>
</table>

### Plan Scale

- 1" = 10'
MECHANICAL SITE PLAN

ABBREVIATIONS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>AD REQUIRED</td>
</tr>
<tr>
<td>LACFCD</td>
<td>LOS ANGELES COUNTY FLOOD CONTROL DISTRICT</td>
</tr>
</tbody>
</table>

REFERENCES

LACFCD DRAWING NO. 2-D432

NOTES

1. The Contractor shall verify the dimensions with "*".
2. See Plan RD for access road improvements.
3. See Plan SE for shelter house improvements.
4. See Plan SE for roadway improvements.

MECHANICAL:

LEGEND:

- = Water Line
- NW = New Water Line

SCALE: 1/4" = 1'-0"
NOTES:

1. The Contractor shall verify the dimensions with "*".
2. 750-Gallon commercial septic tank shall be designed for H-20 traffic wheel loading based upon dry soil conditions.
3. Overexcavation of the artificial fill shall be required to allow at least 1' of compacted fill to be placed below the tank as bedding material and compacted to at least 90% of the maximum dry density as determined by ASTM D1557. The excavation shall be bedded with suitable granular material and shall be compacted to 90% maximum dry density, or to requirements of the agency's geotechnical engineer.
4. All PVC pipe fittings shall be SCH 80.
NOTES:
1. The Contractor shall verify the dimensions with "*".
2. All PVC pipe fittings to be SCH 80.
SECTION A-A

NOTE: PILE REINFORCEMENT NOT SHOWN FOR CLARITY.

NOTE:
- All hoops are "ULTIMATE" BUTT SPLICED CONTINUOUS.
-Limits of #6 Hoop @ 6" and main #9 bars (No Splice Allowed)
- NO SPLICES ALLOWED IN MAIN VERTICAL COLUMN REINFORCEMENT.
- FOR PILE DATA, SEE "FOUNDATION PLAN AND GENERAL PLAN" SHEET.
- STIRRUPS MAY BE 3" FROM TOP OF BENT CAP AT THE LOCATION WHERE LONGITUDINAL COLUMN STEEL AND HORIZONTAL COLUMN HOOPS INTERFERE.

NOTE:
- #9 Bars, TYP, See Sheet 3
- #4 @ 6 Stirrup, TYP
- 3/4" = 1'-0"
- 1/2" = 1'-0"
- 15'-0"
- 10/30/19

ELEVATION

SECTION B-B

NOTE: PILE REINFORCEMENT NOT SHOWN FOR CLARITY.

SECTION C-C

NOTE: PILE REINFORCEMENT NOT SHOWN FOR CLARITY.

SECTION D-D

NOTE: PILE REINFORCEMENT NOT SHOWN FOR CLARITY.
1. No lap splice allowed for top and bottom main reinforcement.

2. Partial slab shown. Apply reinforcement shown for full width of bridge slab.

3. Bend reinforcement to fit deck curvature.

NOTE:

- Reinforcement - Top Slab
- Reinforcement - Bottom Slab

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
1. No lap splice allowed for top and bottom main reinforcement.

2. Partial slab shown. Apply reinforcement shown for full width of bridge slab.

3. Bend reinforcement to fit deck curvature.

NOTE:
- reinforce steel #4@12”, Transverse
- #10 Continuous
- #7 @ L = 33'-6”
- #7@ L = 26'-6”
- #9@ L = 48'-6”
- #8@ L = 24’
- #8@ L = 15’
- #8@ L = 24’
- #8@ L = 35’
- #7@ L = 21’
- #7@ L = 21’
- #8@ L = 20’-6”
- #8@ L = 28’-6”
- #8@ L = 33’

PIER 6 TO PIER 10 - SLAB DETAILS

REFERENCES:

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD
DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
1. No lap splice allowed for top and bottom main reinforcement.
2. Partial slab shown. Apply reinforcement shown for full width of bridge slab.
3. Bend reinforcement to fit deck curvature.

NOTE:
CABLE RAILING ELEVATION

NOT TO SCALE

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NOTES:
1. MAXIMUM DISTANCE BETWEEN TURNBUCKLES SHALL BE 45'-0" ±.
2. INTERMEDIATE TURNBUCKLES TO BE PLACED IN ADJACENT SPANS.
3. CABLES SHALL NOT BE SPLICED BETWEEN INTERMEDIATE TURNBUCKLES AND END POSTS.
4. POSTS TO BE VERTICAL.
5. ALIGNMENT OF HOLES IN POSTS MAY VARY TO CONFORM TO 1/4" CIRCLES AT TOP OF RETURNING WALL.
6. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.
7. DEPENDENT POSTS SHALL BE BRAZED HORIZONTALLY AND TRUSSED DIAGONALLY IN BOTH DIRECTIONS AT INTERVALS NOT TO EXCEED 10 FT.
8. POST HOLES TO BE CENTERED IN TOP OF WALL.
9. TYPICAL END SPANS, EXCEEDED IN BOTH DIRECTIONS, SHALL BE CONSTRUCTED AS SHOWN IN DETAIL WHERE THE ANGLE OF DEFLECTION IS 15º OR MORE.
10. RAILING BREAKS ARE REQUIRED AT HINGE POINTS LOCATED AT PER 4 AND 10.

ALTERNATIVE DEAD END ANCHORAGE

ALTERNATIVE CABLE CONNECTION

REMOVABLE RAILING DETAIL
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 0-1' Arkansas M, silty clay with some gravel, minor lenses of dense, grey, firm clayey silts and silty clays with some gravel.</td>
</tr>
<tr>
<td>2. 1-4' Arkansas M, grey, silty clayey lenses, some gravel.</td>
</tr>
<tr>
<td>3. 4-5' , silty clayey sandy silt, some gravel.</td>
</tr>
<tr>
<td>4. 5-10' silty clayey sandy silt, some gravel.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 0-1' arkansas m, silty clay with some gravel, minor lenses of dense, grey, firm clayey silts and silty clays with some gravel.</td>
</tr>
<tr>
<td>2. 1-4' arkansas m, grey, silty clayey lenses, some gravel.</td>
</tr>
<tr>
<td>3. 4-5' , silty clayey sandy silt, some gravel.</td>
</tr>
<tr>
<td>4. 5-10' silty clayey sandy silt, some gravel.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 10-20' gravel, sandy silt, some gravel.</td>
</tr>
<tr>
<td>2. 20-30' gravel, sand, sandstone.</td>
</tr>
<tr>
<td>3. 30-40' gravel, sand, sandstone.</td>
</tr>
<tr>
<td>4. 40-50' gravel, sand, sandstone.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 10-20' gravel, sandy silt, some gravel.</td>
</tr>
<tr>
<td>2. 20-30' gravel, sand, sandstone.</td>
</tr>
<tr>
<td>3. 30-40' gravel, sand, sandstone.</td>
</tr>
<tr>
<td>4. 40-50' gravel, sand, sandstone.</td>
</tr>
</tbody>
</table>