**GENERAL NOTES**

1. ORIGINAL

2. NONDESTRUCTIVE TESTING MAY BE PERMITTED BY THE ARCHITECT, BUT WILL NOT BE USED AS SOLE BASIS FOR ACCEPTANCE.

**CONCRETE NOTES**

1. ORIGINAL

2. NONDESTRUCTIVE TESTING MAY BE PERMITTED BY THE ARCHITECT, BUT WILL NOT BE USED AS SOLE BASIS FOR ACCEPTANCE.

**CONCRETE TESTING**

<table>
<thead>
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<th>TIME</th>
<th>REFERENCE / DATA / REQUIREMENTS</th>
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**CONCRETE SPECIAL INSPECTIONS**

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<tr>
<th>TIME</th>
<th>PROJECT MANAGER:</th>
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**STRUCTURAL DRAWING LIST**

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**SYMBOLS LEGEND**

1. COVERED AND ENGAGED

2. DEDICATED SERVICES

3. INTERNATIONAL BUILDING CODE 2006

4. EXTERIOR

5. SCHEDULE

**DESIGN CRITERIA**

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**STRUCTURAL CONCRETE TESTING NOTES**

1. NONDESTRUCTIVE TESTING MAY BE PERMITTED BY THE ARCHITECT, BUT WILL NOT BE USED AS SOLE BASIS FOR ACCEPTANCE.

2. APPROVAL OF CONCRETE MIXTURES AND AGE OF CONCRETE AT CURING TIMES OF 3, 7, 14, 21 AND 28 DAYS ARE REQUIRED.

**ABBREVIATIONS**

<table>
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<tr>
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<tr>
<td>FMA</td>
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**REFERENCES AND ASSUMPTIONS**

1. REFERENCE / DATA / REQUIREMENTS

2. PROJECT MANAGER:
CONCRETE REINFORCING LAP SPICE AND DEVELOPMENT LENGTH SCHEDULE (INCHES)

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GENERAL NOTES:
1. 1/8" = Compression Embedment Length
2. 1/4" = Compression Lap Splice Length
3. 3/8" = Tension Embedment Length
4. 1/2" = Tension Lap Splice Length
5. 5/8" = TOP Embedment Length
6. 3/4" = TOP Lap Splice Length
7. More than 1/2"_allowance for embedment

LAP SPICE NOTES:
1. Adjustments to lap lengths shall be made when bars are bent.
2. All splices shall be compression and placed vertically.
3. Larger bars shall be bent at the ends.
4. Tension lap splices shall be bent 90° at ends.

ADJUSTMENT TO DRAWN LAP LENGTHS
1. All lap lengths shall be increased to ensure correct embedment lengths.
2. Clear spacing between bars is greater than 2 bar diameters.
3. Larger bar lap lengths shall be used when splicing different sized bars.

CONSTRUCTION SHORING UNDER TUNNEL

CONSTRUCTION SHORING SPECIFICATIONS:
- MINIMUM CLEARANCE BETWEEN BARS IS GREATER THAN 2 BAR DIAMETERS
- CLEAR COVER IS GREATER THAN BAR DIAMETER, BUT NOT LESS THAN 3/4"
- ALL BARS THAT ARE NOT 'TOP' BARS ARE 'OTHER' BARS

SISTER WALL AT PIPE PENETRATION

SISTER WALL PENETRATION:
- ALIGN TOP OF HOUSING AND WALL TO CENTER OF TUNNEL
- ADJUIST LAYOUT OF HOUSING AND WALL TO CENTER OF TUNNEL
- REINFORCEMENT BARS ARE DISTRIBUTED AROUND HOUSING

TUNNEL WALL PENETRATION:
- ALIGN TOP OF HOUSING AND WALL TO CENTER OF TUNNEL
- ADJUIST LAYOUT OF HOUSING AND WALL TO CENTER OF TUNNEL
- REINFORCEMENT BARS ARE DISTRIBUTED AROUND HOUSING

GENERAL NOTES:
1. 'LCE' = COMPRESSION EMBEDMENT LENGTH
2. 'LCS' = COMPRESSION LAP SPLICE LENGTH
3. 'LTE' = TENSION EMBEDMENT LENGTH
4. 'LTS' = TENSION LAP SPLICE LENGTH
5. 'LTH' = HOOK DEVELOPMENT LENGTH

TOP BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 IN. OF FRESH CONCRETE IS CAST BELOW THE BAR

ALL BARS THAT ARE NOT 'TOP' BARS ARE 'OTHER' BARS

LAP SPLICE NOTES:
1. ALL SPLICES SHALL BE WIRED IN CONTACT AND STACKED VERTICALLY
2. ALL SPLICES ARE 'LTS' UNLESS NOTED OTHERWISE
3. SMALLER BAR LAP LENGTH SHALL BE USED WHEN SPLICING DIFFERENT SIZED BARS
4. LAP LENGTHS SPECIFICALLY DETAILED ON DRAWINGS SHALL GOVERN IN LIEU OF LAP LENGTHS SCHEDULED

1. SCHEDULED LAP LENGTHS ASSUME:
   3/8" = 1'-0"
   1/2" = 1'-0"

2. 'TOP' BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 IN. OF FRESH CONCRETE IS CAST BELOW THE BAR
3. ALL BARS THAT ARE NOT 'TOP' BARS ARE 'OTHER' BARS

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