# CE CONSULTING ENGINEERS, CORP. ENGINEERING CONSULTANTS

# Design Guide For

AmDeck Floor and Roof System

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## **Consulting Engineers, Corp**

| <b>Consulting Engineers, Corp</b>          |  |                  |
|--|--|------------------|
| Project: AmDeck Design Guide               | Prepared by: Kapil                     | Date: 05/01/2007 |
| Client: Amvic, Inc.                        | Checked by: Andy / Raj                 | Date: 05/01/2007 |
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## **1** Exemptions (Disclaimer)

The information given in this document is based on engineering design principles as set forth in ACI 318-02 (Building Code Requirements for Structural Concrete) for one way concrete joist.

This document shall only be used by Registered Architects/ Professional Engineers who possess the required credentials and who are competent to evaluate the significance and limitations of the information provided herein.

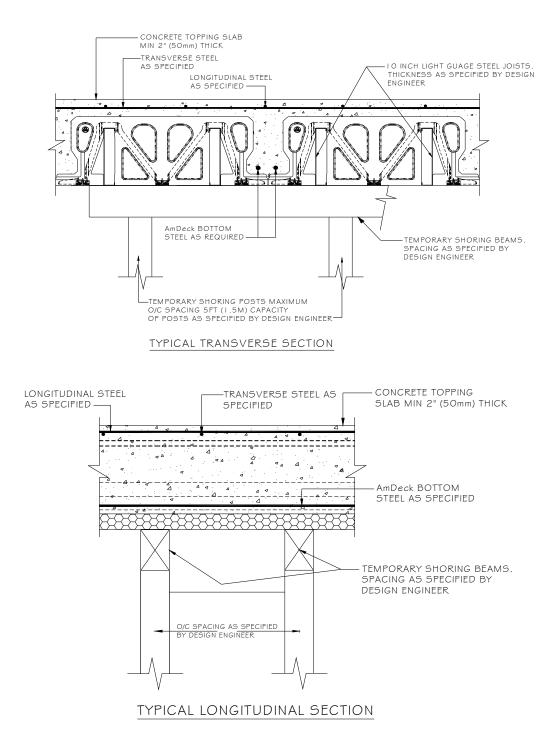
The Registered Architects/ Professional Engineers using this document to specify the AmDeck ® system for a specified project is solely responsible for determining that the project loads, span lengths, span configurations, connection details are in full compliance and within the limitations stated in this reports.

## 2 Scope of Work

- The Review and analysis of the AmDeck floor and roof systems information has been provided by Amvic. [Six (6) different floor configuration with 12" panel depth & toping slabs varying from 2" to 4½" in ½" increment were analyzed and designed.]
- ii. EACH Amvic floor configuration analyzed and designed for:-
  - Uniform dead load of 10 psf and 15 psf.
  - Uniform live load of 40 psf to 100 psf in 10 psf increment.
  - 3500 psi and 4000 psi compressive strength of co concrete were considered.
  - ACI 318 02 and IBC 2003 Codes has been used for analysis and design.
- iii. Temporary shoring spans are designed and provided in tabular form.
- iv. Design guide table for various design parameters including reinforcement design and spans has been provided.

## 3 Introduction

The **AmDeck®** Floor & Roof System consists of modular, lightweight stay-in-place forms made of Expanded Polystyrene (EPS) that is used to construct floors & roofs. The system utilizes 10 inch deep lightweight steel framing stud embedded in the floor form work (refer typical transverse section) to carry temporary construction loads and to acts as furring strips for interior finishing.



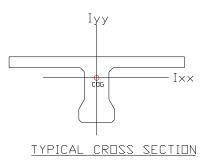
## 4 Am Deck Joist Design Criteria

| Panel Designation                          | = | 12" Pa                      | nel section with 10" beam          |
|--|---|-----------------------------|------------------------------------|
| Beam Depth                                 | = | d <sub>w</sub>              | in inches                          |
| Topping                                    | = | t <sub>f</sub>              | in inches                          |
| Minimum Beam Width, bottom                 | = | b <sub>w</sub>              | in inches                          |
| Average Joist Width                        | = | $\mathbf{b}_{wa}$           | in inches                          |
| Panel Span, Transverse                     | = | b                           | in inches                          |
| Maximum Span of the Deck                   | = | L                           | in feet & inches                   |
| Number of Span                             | = | Single                      | (SS) / Double (DS) / Multiple (MS) |
| Live load acting on the deck               | = | $\mathbf{W}_{LL}$           | in psf                             |
| Dead load acting on the deck               | = | $\mathbf{W}_{DL}$           | in psf                             |
| Unit weight of concrete                    | = | γc                          | in pcf                             |
| Specified compressive strength of concrete | = | f'c                         | in psi                             |
| Yield strength of rebar                    | = | fy                          | in psi                             |
| Rebar cover, Center of rebar               | = | С                           | in inches                          |
| Allowable Deflection factor, Total         | = | $\Delta_{Factor}$ 1         | Fotal                              |
| Allowable Deflection factor, LL            | = | $\Delta_{	extsf{Factor L}}$ | L                                  |

## 4.1 Assumptions

- i. Design criteria are based on IBC 2003 + ACI 318-02 codes.
- ii. Modulus of elasticity of rebar is assumed to be 29000 ksi for the design.
- iii. 'Normal weight concrete' is assumed to be used in wall construction and therefore  $\lambda = 1.0$  corresponding to 'Normal weight concrete' has been use in design.
- iv. Factored load combination of 1.2DL + 1.6LL is used in strength calculation & service load DL
   + LL is used in deflection calculation.
- v. 'AmDeck floor system' is of type 'Concrete joist construction' as specified in code.

## 4.2 Analysis



### Section Properties

Cross-section area of Combined Section (A)

Distance of CG from top (CG<sub>Top</sub>)

Moment of inertia about x-axis ( $I_{XX}$ )

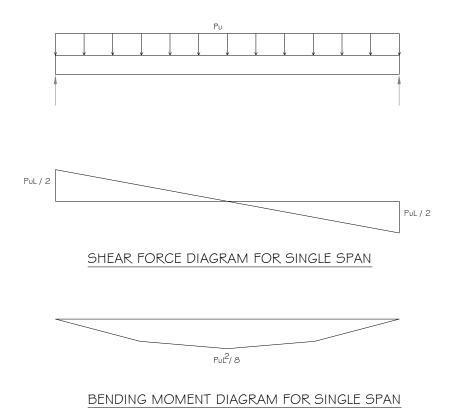
Section Modulus about x-axis (S<sub>XX</sub>)

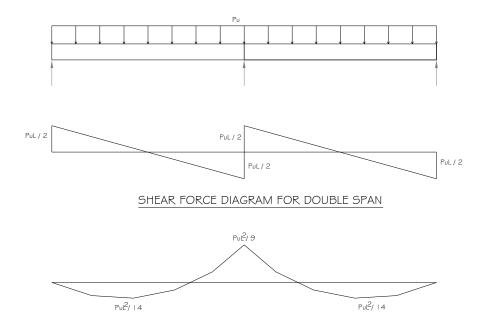
- = As Provided by Amvic (Refer Table below)
- = As Provided by Amvic (Refer Table below)
- = As Provided by Amvic (Refer Table below)
- $= I_{XX} / (Max (CG_{Top}, (d_w + t_f CG_{Top})))$

| Topping<br>(inch) | Area<br>(in <sup>2</sup> ) | Perimeter<br>(inch) | lxx<br>(in <sup>4</sup> ) | lyy<br>(in <sup>4</sup> ) | Rx<br>(inch) | Ry<br>(inch) | Cg <sub>Top</sub><br>(inch) | Cg Bottom<br>(inch) |
|-------------------|----------------------------|---------------------|---------------------------|---------------------------|--------------|--------------|-----------------------------|---------------------|
| 2                 | 115.9922                   | 88.9652             | 1632.1071                 | 5587.8915                 | 3.7511       | 6.941        | 3.8451                      | 8.1549              |
| 2.5               | 131.9922                   | 89.9652             | 1868.2302                 | 6953.2249                 | 3.7622       | 7.258        | 3.8487                      | 8.6513              |
| 3.0               | 147.9922                   | 90.9652             | 2108.2903                 | 8318.5582                 | 3.7744       | 7.497        | 3.9056                      | 9.0944              |
| 3.5               | 163.9922                   | 91.9652             | 2357.9644                 | 9683.8916                 | 3.7919       | 7.685        | 4.001                       | 9.4999              |
| 4.0               | 179.9922                   | 92.9652             | 2621.6218                 | 11049.2249                | 3.8164       | 7.835        | 4.1223                      | 9.8777              |
| 4.5               | 195.9922                   | 93.9652             | 2902.8583                 | 12414.558                 | 3.8485       | 7.959        | 4.2654                      | 10.2346             |
| 5.0               | 211.9922                   | 94.9652             | 3204.7879                 | 13779.8915                | 3.8881       | 8.062        | 4.4246                      | 10.5754             |

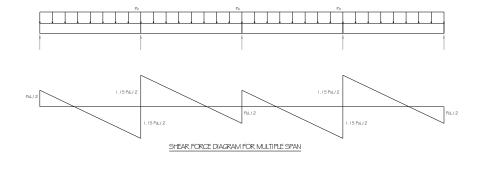
| Effective depth (d)                      | =                      | $d_w - c + t_f$                           |   |  |  |
|--|------------------------|---|---|--|--|
| Self weight of deck (w <sub>Self</sub> ) | =                      | w <sub>C</sub> x A/ 144                   | w <sub>c</sub> x A/ 144   |  |  |
| Total Dead Load W <sub>DTotal</sub>      | =                      | w <sub>Self</sub> + w <sub>DL</sub> x b / | 12  |  |  |
| Live Load $W_{LL}$                       | =                      | w <sub>LL</sub> x b/12                    |   |  |  |
| Total Unfactored Load $W_P$              | =                      | $W_{D Total} + W_{LL}$                    |   |  |  |
| Total factored load $(P_U)$              | =                      | {K <sub>DL</sub> x W <sub>D Total</sub> + | {K <sub>DL</sub> x W <sub>D Total</sub> + K <sub>LL</sub> x W <sub>LL</sub> } |  |  |
| ACI318-02 Section 8.3.3 follow           | wed for fo             | llowing approxim                          | ate Shear & Moment in Joist   |  |  |
| Maximum Shear Force $(V_U)$              | =                      | P <sub>U</sub> x L / 2                    | {For Single & Double Span)  |  |  |
|  | =                      | 1.15P <sub>U</sub> x L / 2                | {For Multiple Span)   |  |  |
| Maximum Positive Moment (N               | l <sub>UP</sub> )      |   |   |  |  |
| =  | (P <sub>U</sub> x l    | <sup>2</sup> /8) x 12 {For S              | ingle Span)   |  |  |
| =  | (P <sub>U</sub> x l    | <sup>2</sup> / 14) x 12 {At E             | nd Spans of Double & Multiple Span)   |  |  |
| =  | (P <sub>U</sub> x l    | _² / 16) x 12 {At In                      | terior Spans of Multiple Span)  |  |  |
| Maximum Negative Moment (I               | M <sub>UN</sub> )      |   |   |  |  |
| = 0                                      |                        | {For Single Sp                            | pan)  |  |  |
| = (P <sub>U</sub> x                      | L <sup>2</sup> / 16) x | 12 {At Exterior S                         | Support of Double & Multiple Span)  |  |  |
| = (P <sub>U</sub> x                      | L <sup>2</sup> / 9) x  | 12 {At 1 <sup>st</sup> Interior           | Support of Double Span)   |  |  |

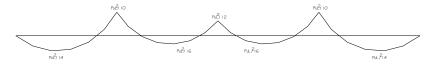
- =  $(P_U \times L^2 / 10) \times 12$  {At 1<sup>st</sup> Interior Support of Multiple Span)
- =  $(P_U \times L^2 / 11) \times 12$  {At Other Interior Support of Multiple Span)





BENDING MOMENT DIAGRAM FOR DOUBLE SPAN







## 4.3 Design

### 4.3.1 Shear Strength

| Shear Strength of the section ( $\phi$    | Vc)        | =          | 1.1 x 0.75 x 2 x (f'c) $^{0.5}$ x b <sub>w</sub> x d (Per Section |
|---|------------|------------|---|
|   |            |            | 8.11.8 & 11.3 of ACI – 318-02)                                    |
| If $\phi Vc < V_U$ , Provide Single leg s | stirrup re | bar and    | provide corresponding rebar at top to support                     |
| stirrups.                                 |            |            |   |
| {   |            |            |   |
| Area of single leg rebar stirrup          | =          | $A_V in^2$ |   |
| Spacing of stirrup rober                  |            | C in       |   |

| Spacing of stirrup rebar = $S_S$ in                           |   |  |
|---|---|--|
| Shear strength provided by shear reinforcement $(\phi V_{S})$ | = | 0.75 x $A_Vx$ fy x d / $S_S$                   |
| Total Shear strength ( $\phi V_N$ )                           | = | $\phi$ Vc + $\phi$ V <sub>S</sub> (Per Section |
|   |   | 11.1 of ACI – 318-02)                          |

### 4.3.2 Moment Strength

| Strength reduction factor ( $\phi$ ) | = | 0.9  |                            |
|--------------------------------------|---|------|----------------------------|
| β1                                   | = | 0.85 | if (f'c ≤ 4000 psi)        |
|                                      |   | 0.80 | if (4000 < f'c ≤ 5000 psi) |
|                                      |   | 0.75 | if (5000 < f'c ≤ 6000 psi) |
|                                      |   | 0.65 | if (6000 < f'c)            |
|                                      |   |      |                            |

(Above Values are per Table 6-1 of "Notes on ACI 318-02")

| Balanced reinforcement ratio ( $\rho_t$ )                   | = | 0.319 x $\beta_1$ x f'c/ fy               |
|---|---|---|
| Maximum allowed reinforcement ratio ( $\rho_{\text{Max}}$ ) | = | $ ho_t$                                   |
| Minimum reinforcement ratio ( $\rho_{Min}$ )                | = | Max (3 x (f'c) <sup>0.5</sup> , 200) / fy |
|   |   |   |

### **Positive Reinforcement**

Reinforcement ratio for +ive moment (p Pos)

$$= (0.85 \text{ x f'c / fy}) \text{ x } \{1 - [1 - 2 \text{ x } M_{UP} / (\phi \text{ x } b_w \text{ x } d^2 \text{ x } 0.85 \text{ x f'c})]^{0.5} \}$$

Area of reinforcement required (A<sub>S Pos</sub> req) =  $\rho_{Pos} x bw x d$ 

 $A_{S Pos}$  provided >  $A_{S Pos}$  required

### Negative Reinforcement (For Span > 1)

Reinforcement ratio for -ive moment (p Neg)

$$= (0.85 \text{ x f'c / fy}) \text{ x } \{1 - [1 - 2 \text{ x } M_{UN} / (\phi \text{ x } b_w \text{ x } d^2 \text{ x } 0.85 \text{ x f'c})]^{0.5} \}$$

### Nominal moment strength

### Plain Concrete

Nominal moment strength of the section ( $\phi$ Mn) = 0.65 x 5 (f'c) <sup>0.5</sup> x S<sub>XX</sub>

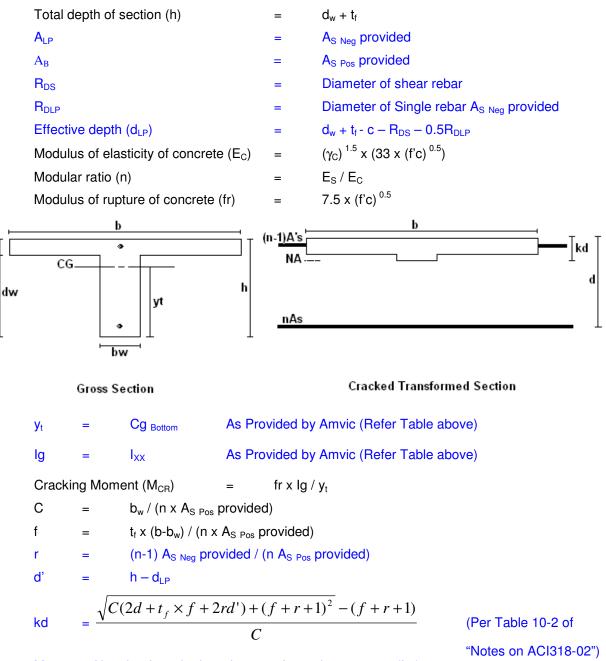
### **Reinforced Concrete**

Nominal moment strength of the section ( $\phi$ Mn)

=  $\phi A_{S Pos}$  provided x fy x [d - ( $A_{S Pos}$  provided x fy / (0.85 x f'c x b))/2]

### 4.3.3 Deflection

tf



Moment of inertia of cracked section transformed to concrete (lcr) =  $(b-b_W)t_f^3/12+b_W(kd)^3/3+(b-b_W)t_f(kd-t_f/2)^2+nA_{Bi}(d-kd)^2+(n-1)A_{LPi}(kd-d')^2$ (Per Table 10-2 of "Notes on ACI318-02") Service Moment (M<sub>P</sub>)

| Dead Load moment, $M_D$        | = | W <sub>D Total</sub> x L <sup>2</sup> / 8 |                            |
|--------------------------------|---|---|----------------------------|
| Live Load moment, $M_L$        | = | $W_{LL} \times L^2 / 8$                   |                            |
| Total moment, M <sub>D+L</sub> | = | $M_D + M_L$                               |                            |
| Sustained Moment, $M_{SUS}$    | = | $M_D + 0.5 \times M_L$                    | (Assuming that 50% of Live |
|                                |   |   | Load as sustained load)    |

Effective moment of inertia for deflection computation (le)

 $= I_{g} if M_{CR} > M_{P}$ = Min. of [{(M<sub>CR</sub> / M<sub>P</sub>)<sup>3</sup> Ig + [1 - (M<sub>CR</sub> / M<sub>P</sub>)<sup>3</sup>] I<sub>CR</sub>} and I<sub>g</sub>] if M<sub>CR</sub> ≤ M<sub>P</sub>

### 4.3.3.1 Short Term Deflection

Κ

For Continuous beam, the mid-span deflection  $\Delta_i = K (5/48) M_P \times L^2 / (Ec \times Ie)$  (Per Section 9.5.2.4 of "Notes on ACI318-02")

Where,

- =  $1.20 0.20 \text{ M}_{\text{P}} / \text{M}_{\text{O}}$  for continuous beam
- = 0.80 for Continuous fixed-hinged beam, mid span deflection
- 0.738 for Continuous fixed-hinged beam, maximum deflection using maximum moment
- = 0.60 for fixed-fixed beam
- = 1.0 for Simple Beam

 $M_{O}$  = Simple span moment at mid span, = (P x L<sup>2</sup> / 8) x 12

Use K = 1.0 to be on conservative side

| $\Delta_{\text{i D}}$  | = | K (5/48) $M_D \times L^2 / (Ec \times Ie)$         |
|------------------------|---|--|
| $\Delta_{\text{i LL}}$ | = | K (5/48) $M_{LL}  x \; L^2  / \; (\text{Ec x Ie})$ |
| $\Delta_{ m i~SUS}$    | = | K (5/48) $M_{SUS} \times L^2 / (Ec \times Ie)$     |

 $\Delta_{i \text{ Total}} = \Delta_{i \text{ D}} + \Delta_{i \text{ LL}}$ 

### Allowable Short Term Deflections

 $\Delta_{i \text{ Allow LL}} = (L \times 12) / (\Delta_{Factor LL})$ 

### 4.3.3.2 Long Term Deflection

| $\Delta_{\rm (CP+SH)}$ | = | $\lambda \ge \Delta_{i \ Sl}$ | JS   | (Per Section 9.5.2.5 of "Notes on ACI318-02") |  |
|------------------------|---|-------------------------------|--|---|--|
| Where                  |   |                               |  |   |  |
| λ                      |   | =                             | ξ/(1+5                                       | j0p')   |  |
| p'                     |   | =                             | Area of compression steel (A') / $(b_w x d)$ |   |  |
| ξ                      |   | =                             | Time- d                                      | lependent factor                              |  |
|                        |   | =                             | 2.0  | 5 years and more Sustained load duration      |  |
|                        |   |                               |  |   |  |

1.0 3 months.  $\Delta_{\rm (CP+SH)} + \Delta_{\rm i\;LL}$ =

### Allowable Long Term Deflection

=

 $\Delta_{\text{LT}}$ 

= (L x 12) / (480 or 240)  $\Delta_{
m i \ Allow \ LL}$ 

## 5 Slab Reinforcement Design Criteria

## 5.1 Transverse Reinforcement

L<sub>Slab</sub> b/12 =  $P_u \mathrel{x} {L_{Slab}}^2 / 12$ M<sub>u Slab</sub> = Balanced reinforcement ratio  $(\rho_t)$ 0.319 x  $\beta_1$  x f'c/ fy (Per Section 7.1 = of Notes on ACI 318-02) Maximum allowed reinforcement ratio (p Max) =  $\rho_t$ Max (3 x (f'c)<sup>0.5</sup>, 200) / fy (Per Minimum reinforcement ratio (p<sub>Min</sub>) = Section 10.5.1 ACI 318-02) Reinforcement ratio for +ive moment ( $\rho_{Pos}$ )  $(0.85 \text{ x f'c} / \text{fy}) \times \{1 - [1 - 2 \times M_{UP} / (\phi \times b_w \times t_f / 2^2 \times 0.85 \times \text{f'c})\}^{0.5}\}$ = Area of reinforcement required (A<sub>S Pos</sub> req)  $= \rho_{Pos} x 12 x t_f / 2$ Area of reinforcement required (A<sub>S Pos</sub> req) (Minimum)  $= \rho_{Min} \times 12 \times t_f / 2$ Area of reinforcement required (A<sub>S Pos</sub> req) (Maximum) =  $\rho_{Max} x 12 x t_f / 2$ lf  $A_{S Pos}$  req (Minimum) >  $A_{S Pos}$  req Then Provided Area of Steel = Minimum of A<sub>S Pos</sub> req (Minimum) or 1.33 x A<sub>S Pos</sub> req lf  $A_{S Pos}$  req (Minimum)  $\leq A_{S Pos}$  req Then Provided Area of Steel A<sub>S Pos</sub> req = Minimum Spacing, S Calculated = (Arebar / Area of Steel Provided) x 12 However per section 7.12 of ACI 318-02, minimum spacing will be lesser of following three (1) S Calculated (2) 18" O.C.

(3)  $5 \times t_f$  ( $t_f$  is thickness of slab)

## 5.2 Longitudinal Reinforcement

Minimum Longitudinal reinforcement as per section 7.12 of ACI 318-02 to be calculated by following equation.

| For Grade 60 rebar, As Minimum                  | = | 0.0018 | x Cross sectional Area                             |
|---|---|--------|--|
| Spacing for As Minimum, S <sub>Calculated</sub> |   | =      | (A <sub>rebar</sub> / Area of Steel Provided) x 12 |

However per section 7.12 of ACI 318-02, minimum spacing will be lesser of following three

- (1) S <sub>Calculated</sub>
- (2) 18" O.C.
- (3)  $5 \times t_f$  ( $t_f$  is thickness of slab)

# 6 Shoring Design Criteria

| Joist Spacing              | =   | 16"   |
|----------------------------|-----|---|
| Self weight of joist       | =   | (Area of Joist/ 2 x Unit wt. of concrete)/144                 |
| Self weight of topping     | =   | (16 x topping thickness x Unit wt. of concrete) /144          |
| Total dead load            | =   | Self weight of joist + Self weight of topping                 |
| Construction Load          | =   | Joist Spacing x W <sub>LL</sub> / 12                          |
| Self weight of steel joist | t = | W <sub>DL Steel</sub>   |
| Total Load, W              | =   | Total Dead Load + Construction load + Self wt. of steel joist |

### Maximum Allowed span

### **Based on Allowable Moment**

| UNPERFORATED PROPERTIES |                 |            |                              |                               |                       |                           |             | PERFOR      | ATED PROPI               | ERTIES          |                              |                               |                       |                                   |
|-------------------------|-----------------|------------|------------------------------|-------------------------------|-----------------------|---------------------------|-------------|-------------|--------------------------|-----------------|------------------------------|-------------------------------|-----------------------|-----------------------------------|
| Joist<br>Designation    | Mrx<br>(in.kip) | Lu<br>(in) | Mry<br>web.comp.<br>(in.kip) | Mry<br>lips.comp.<br>(in.kip) | Shear<br>Vr<br>(kips) | Web Cripp<br>Pr<br>(kips) | lx<br>(in⁴) | ly<br>(in⁴) | Sf<br>(in <sup>3</sup> ) | Mrx<br>(in.kip) | Mry<br>web.comp.<br>(in.kip) | Mry<br>lips.comp.<br>(in.kip) | Shear<br>Vr<br>(kips) | lx<br>defl.<br>(in <sup>4</sup> ) |
| 1000S162-54             | 70.7            | 31.3       | 6.39                         | 6.96                          | 2.12                  | 1.1                       | 9.95        | 0.205       | 1.99                     | 70.7            | 5.99                         | 6.89                          | 2.12                  | 9.31                              |
| 1000\$162-54            | 96.9            | 31.5       | 7.95                         | 8.4                           | 4.27                  | 1.67                      | 12.3        | 0.205       | 2.47                     | 96.9            | 7.51                         | 8.32                          | 4.27                  | 11.9                              |
| 1000S162-08             | 96.9<br>147     | 30.4       | 10.7                         | 0.4<br>10.9                   | 4.27                  | 3.17                      | 12.3        | 0.247       | 3.39                     | 90.9<br>147     | 10.3                         | 0.32<br>10.8                  | 4.27<br>9.17          | 17                                |

| Allowable moment | = | M <sub>Max</sub> from Amvic chart | (Refer Table) |
|------------------|---|-----------------------------------|---------------|
| M <sub>Max</sub> | = | W x L <sup>2</sup> / 8            |               |
| L                | = | $\sqrt{(M_{Max} x 8 / W)}$        |               |

### **Based on Allowable shear**

| $V_{X}$ | = | W x L/2                |
|---------|---|------------------------|
| L       | = | 2 x V <sub>X</sub> / W |

### **Based on Deflection factor**

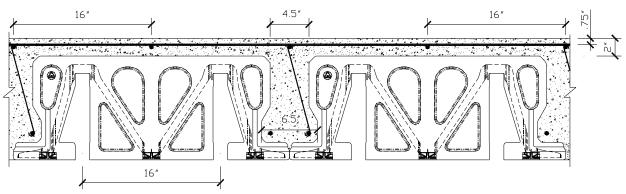
| Allowat | ole defle | ction, ADF   | =                      | L/ Deflee | ction fac         | ctor (D <sub>F</sub> )            |
|---------|-----------|--|------------------------|-----------|-------------------|-----------------------------------|
| ADF     | =         | L/ Deflection fa   | actor $(D_F)$          | =         | $\frac{5}{384}$ × | $\frac{W \times L^4}{E \times I}$ |
| L       | =         | $\sqrt[3]{\Delta \times \frac{384}{5} \times \frac{E}{5}}$ | $\frac{E \times I}{W}$ |           |                   |                                   |

### **Based on Crippling**

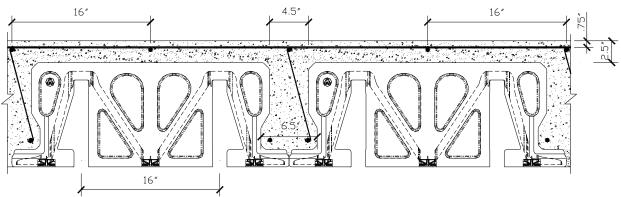
| Web Crippling Load, Pr | = | W x L/2   |
|------------------------|---|---|
| Span of Shoring        | = | Minimum of (L <sub>Moment</sub> , L <sub>Shear</sub> , L <sub>Deflection &amp;</sub> L <sub>Crippling</sub> ) |

## 7 Specifications

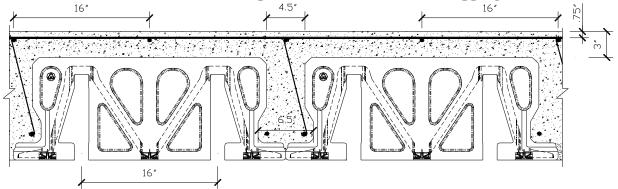
## i. 12" Panel Size With 10" Deep Joist @ 32" O.C. And 2" Topping Slab



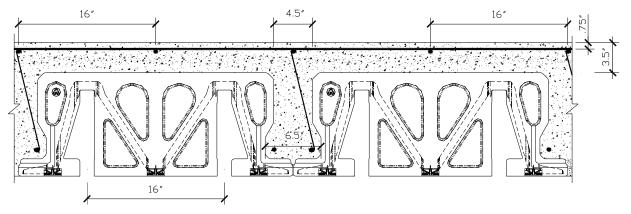
ii. 12" Panel Size With 10" Deep Joist @ 32" O.C. And 2.5" Topping Slab



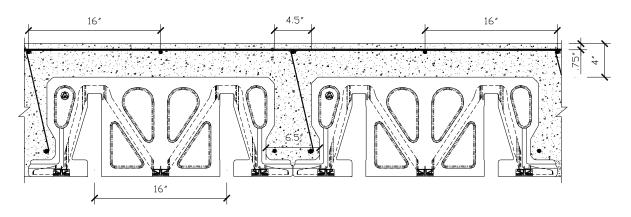
iii. 12" Panel Size With 10" Deep Joist @ 32" O.C. And 3" Topping Slab



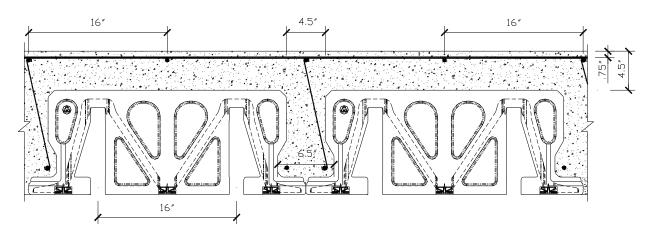
## iv. 12" Panel Size With 10" Deep Joist @ 32" O.C. And 3.5" Topping Slab



## v. 12" Panel Size With 10" Deep Joist @ 32" O.C. And 4" Topping Slab



## vi. 12" Panel Size With 10" Deep Joist @ 32" O.C. And 4.5" Topping Slab



# 8 AmDeck Joist Design Calculations

## 8.1 Single Span Joist

## (12" Panel Size With 10" Deep Joist @ 32" O.C. And 2" Topping Slab)

## 8.1.1 Inputs

8.1.2

| Panel Designation = |  | 12" Panel section with 10" deep beam  |  |  |  |
|---------------------|--|---|--|--|--|
| =                   | 10"  |   |  |  |  |
| =                   | 2"   |   |  |  |  |
| =                   | 6.5"   |   |  |  |  |
| =                   | 5.2"   |   |  |  |  |
| =                   | 32"  |   |  |  |  |
| =                   | 10'-0"   |   |  |  |  |
| =                   | Single   |   |  |  |  |
| =                   | 40 psf   |   |  |  |  |
| =                   | 10 psf   |   |  |  |  |
| =                   | 145 pc   | f   |  |  |  |
| crete (f'c          | ) =  | 3500 p  | si   |  |  |
|                     | =  | 60000   | psi  |  |  |
|                     | =  | 1.25"   |  |  |  |
| <sub>or LL</sub> )  | =  | 180   | (Short Term)   |  |  |
| <sub>or LL</sub> )  | =  | 240   | (Long Term)  |  |  |
|                     |  |   |  |  |  |
|                     |  |   |  |  |  |
| =                   | 12   |   |  |  |  |
|                     | 1.2  |   |  |  |  |
| =                   | 1.6  |   |  |  |  |
| =                   |  |   |  |  |  |
| =                   |  | 88 in <sup>2</sup>  | (Refer Table on Page – 7)  |  |  |
|                     | 1.6<br>115.98  | 88 in <sup>2</sup><br>in from   |  |  |  |
| =                   | 1.6<br>115.98  | in from   |  |  |  |
| =                   | 1.6<br>115.98<br>3.8451<br>1632.1  | in from<br>in <sup>4</sup>  |  |  |  |
| =<br>=              | 1.6<br>115.98<br>3.8451<br>1632.1  | in from<br>in⁴<br>/ {Max [\$  | top  |  |  |
| =<br>=<br>=         | 1.6<br>115.98<br>3.8451<br>1632.1<br>1632.1  | in from<br>in <sup>4</sup><br>/ {Max [3<br>7 in <sup>3</sup>  | top  |  |  |
| =<br>=<br>=         | 1.6<br>115.98<br>3.8451<br>1632.1<br>1632.1<br>200.13                                    | in from<br>in <sup>4</sup><br>/ {Max [(<br>7 in <sup>3</sup><br>+ t <sub>f</sub>  | top  |  |  |
| =<br>=<br>=<br>=    | 1.6<br>115.98<br>3.8451<br>1632.1<br>1632.1<br>200.13<br>d <sub>w</sub> - c -            | in from<br>in <sup>4</sup><br>/ {Max [(<br>7 in <sup>3</sup><br>+ t <sub>f</sub>  | top  |  |  |
| =<br>=<br>=<br>=    | 1.6<br>115.98<br>3.8451<br>1632.1<br>1632.1<br>200.13<br>d <sub>w</sub> - c -<br>10 - 1. | in from<br>in <sup>4</sup><br>/ {Max [3<br>7 in <sup>3</sup><br>+ t <sub>f</sub><br>25 + 2  | top  |  |  |
|                     | =<br>=<br>=<br>=<br>=<br>=<br>crete (f'c   | = 2"<br>= 6.5"<br>= 5.2"<br>= 32"<br>= 10'-0"<br>= Single<br>= 40 psf<br>= 10 psf<br>= 145 pc<br>crete (f'c) =<br>=<br>=<br>=<br>=<br>=<br>=<br>=<br>=<br>=<br>=<br>= | = 2"<br>= 6.5"<br>= 5.2"<br>= 32"<br>= 10'-0"<br>= Single<br>= 40 psf<br>= 10 psf<br>= 145 pcf<br>crete (f'c) = 3500 p<br>= 60000<br>= 1.25"<br>or LL) = 180<br>or LL) = 240 |  |  |

#### **Consulting Engineers, Corp** Project: AmDeck Design Guide Prepared by: Kapil Date: 05/01/2007 Client: Amvic, Inc. Checked by: Andy / Raj Date: 05/01/2007 116.794 plf = Self Weight + Applied Additional Dead Load Total Dead Load W<sub>DTotal</sub> = 116.794 + 10 x 32/12 = = 143.46 plf Live Load W<sub>LL</sub> 40 x 32/12 = 106.67 plf = Total Unfactored Load W<sub>P</sub> = W<sub>D Total</sub> + W<sub>LL</sub> 143.46 + 106.67 = 250.13 plf = Total factored load (P<sub>U</sub>) $\{K_{DL} \times W_{D \text{ Total}} + K_{LL} \times W_{LL}\}$ = 1.2 x 143.46 +1.6 x 106.67 = 342.824 plf = Maximum Shear Force (V<sub>U</sub>) $P_U \times L/2$ = 342.824 x 10 / 2 = 1714.12 lb. = $(P_U \times L^2 / 8) \times 12$ Maximum Positive Moment (MUP) = (342.824 x 10<sup>2</sup> / 8) x 12 = 51423.6 in-lb. = Maximum Negative Moment (M<sub>UN</sub>) = 0 8.1.3 Design 8.1.3.1 Shear Strength $1.1 \times 0.75 \times 2 \times (f'c)^{0.5} \times b_{wa} \times d$ Shear Strength of the section ( $\phi$ Vc) = 1.1 x 0.75 x 2 x (3500)<sup>0.5</sup> x 5.2 x 10.75 = 5456.69 lb. > V<sub>U</sub> (= 1714.12 lb.) (OK) = 8.1.3.2 Moment Strength Strength reduction factor ( $\phi$ ) = 0.9 if (f'c $\leq$ 4000 psi) $\beta_1$ 0.85 = if (4000 < f'c ≤ 5000 psi) 0.80 if $(5000 < f'c \le 6000 \text{ psi})$ 0.75 if (6000 < f'c)0.65 $\beta_1$ 0.85 since (f'c $\leq$ 4000 psi) = Tension controlled reinforcement ratio ( $\rho_t$ ) 0.319 x 0.85 x 3500 / 60000 = 0.0158 = Maximum allowed reinforcement ratio (p<sub>Max</sub>) = $\rho_t$ 0.0158 = Max (3 x (f'c) <sup>0.5</sup>, 200) / fy Minimum reinforcement ratio (p Min) = Max (3 x (3500)<sup>0.5</sup>, 200) / 60000 =

= 200 / 60000

= 0.0033

### **Positive Reinforcement**

Reinforcement ratio for +ive moment (p Pos)

 $= (0.85 \text{ x f'c / fy}) \text{ x } \{1 - [1 - 2 \text{ x } M_{UP} / (\phi \text{ x } b_{wa} \text{ x } d^2 \text{ x } 0.85 \text{ x f'c})]^{0.5} \}$ 

- $= (0.85 \times 3500/60000) \{1 [1 2 \times 51423.6/(0.9 \times 5.2 \times 10.75^2 \times 0.85 \times 3500)]^{0.5}\}$
- $= 0.00161 < (\rho_{Min} = 0.0033)$
- =  $0.0033 < (\rho_{Max} = 0.0158)$  OK

Area of reinforcement required (A<sub>S Pos</sub> req) =  $\rho_{Pos} x$  bwa x d

= 0.0033 x 5.2 x 10.75

 $A_{S Pos}$  provided = 1 # 4 (Area = 0.1963 in<sup>2</sup> > 0.18847) **OK** 

### Nominal moment strength

### Plain Concrete

| Nominal moment strength of the section ( $\phi$ Mn) | = | 0.65 x 5 (f'c) <sup>0.5</sup> x S <sub>XX</sub> |
|---|---|---|
|   | = | 0.65 x 5 x (3500) <sup>0.5</sup> x 200.137      |
|   | = | 38480.86 in-lb.                                 |

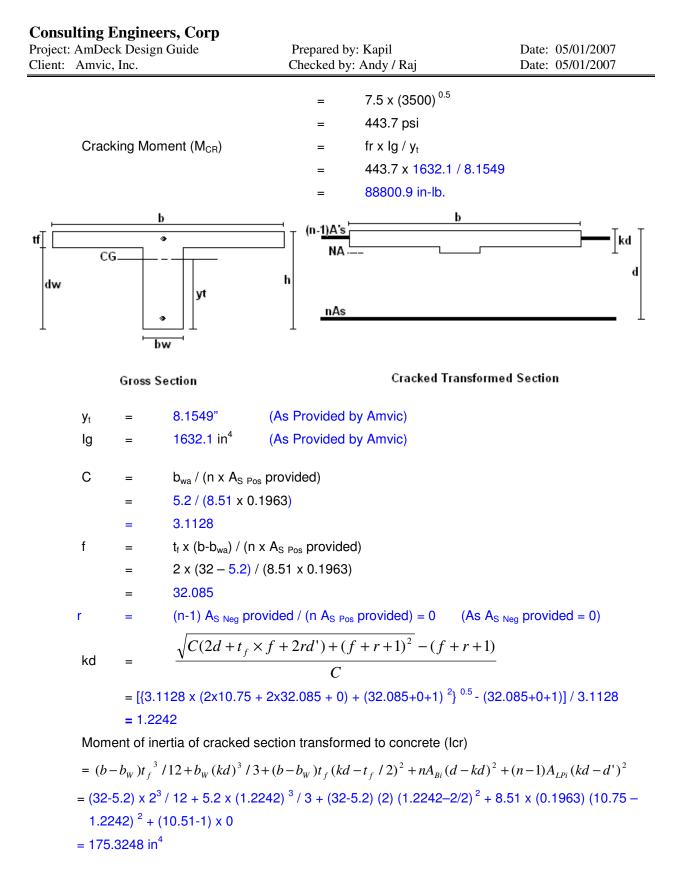
### Reinforced Concrete

Nominal moment strength of the section ( $\phi$ Mn)

- =  $\phi A_{S Pos}$  provided x fy x [d ( $A_{S Pos}$  provided x fy / (0.85 x f'c x b))/2]
- = 0.9 x 0.1963 x 60000 x [10.75 (0.1963 x 60000 / (0.85 x 3500 x 32))/2]
- = 113296.43 in-lb.

### 8.1.3.3 Deflection

| = | d <sub>w</sub> + t <sub>f</sub>                      |
|---|--|
| = | 10 + 2   |
| = | 12"  |
| = | 0 in <sup>2</sup>                                    |
| = | 0.1963 in <sup>2</sup>                               |
| = | 3/8" (For #3 rebar)                                  |
| = | $(\gamma_{\rm C})^{1.5}$ x (33 x (f'c) $^{0.5}$ )    |
| = | (145) <sup>1.5</sup> x (33 x (3500) <sup>0.5</sup> ) |
| = | 3408788 psi  |
| = | 29000000 psi   |
| = | E <sub>S</sub> / E <sub>C</sub>                      |
| = | 29000000 / 3408788                                   |
| = | 8.51   |
| = | 7.5 x (f'c) <sup>0.5</sup>                           |
|   |  |



| Service Moment (M <sub>P</sub> ) |   |                                   |
|----------------------------------|---|-----------------------------------|
| Dead Load moment, M <sub>D</sub> | = | 143.46 x 10 <sup>2</sup> / 8 x 12 |
|                                  | = | 21519 lb-in                       |
| Live Load moment, $M_L$          | = | 106.67x 10 <sup>2</sup> / 8 x 12  |
|                                  | = | 16000 lb-in                       |
| Total moment, M <sub>D+L</sub>   | = | 21519 + 16000                     |

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|------------------------------------|--|--------------------------------|
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| Sustained Moment, M <sub>SUS</sub> | = $37519 \text{ lb- in}$<br>= $M_D + 0.5 \times M_L$ (Assum<br>= $21519 + 0.5 \times 16000$<br>= $29519 \text{ lb-in}$ | ne that 50% Load as sustained) |

Effective moment of inertia for deflection computation (le)

A. Under Dead Load

| Mcr / M <sub>D</sub>    | = | 88800.9 / 21519 |
|-------------------------|---|-----------------|
|                         | = | 4.1266          |
| Hence (le) <sub>d</sub> | = | l <sub>g</sub>  |

B. Under Sustained Load

| Mcr / M <sub>SUS</sub>  | = | 88800.9 / 29519 |
|-------------------------|---|-----------------|
|                         | = | 3.008           |
| Hence (le) <sub>d</sub> | = | l <sub>g</sub>  |

C. Under Dead + Live Load

| Mcr / M <sub>D + L</sub> | = | 88800.9 / 37519 |
|--------------------------|---|-----------------|
|                          | = | 2.3668          |
| Hence (le) <sub>d</sub>  | = | l <sub>g</sub>  |

#### 8.1.3.3.1 Short Term Deflection

For Continuous beam, the mid-span deflection is  $\Delta_i = K$  (5/48)  $M_P \times L^2$  / (Ec x le)

Where,

Κ  $1.20 - 0.20 M_P / M_O$ for continuous beam

- 0.80 for Continuous fixed-hinged beam, mid span deflection =
- 0.738 for Continuous fixed-hinged beam, max deflection using = maximum moment
- 0.60 for fixed-fixed beam
- 1.0 for simple span =

 $M_{O}$  = Simple span moment at mid span, = (P x L<sup>2</sup> / 8) x 12

Use K = 1.0 to be on conservative side

 $\Delta_{iD} = K (5/48) M_D x L^2 / (Ec x le)$ = 1.0 x (5/48) x 21519x (10 x12)<sup>2</sup> / (3408788 x 1632.1) = 0.00580"  $= K (5/48) M_{LL} \times L^2 / (Ec \times Ie)$  $\Delta_{\sf i \ LL}$  $= 1.0 \times (5/48) \times 16000 \times (10 \times 12)^2 / (3408788 \times 1632.1)$ = 0.00431"  $\Delta_{i SUS} = K (5/48) M_{SUS} \times L^2 / (Ec \times Ie)$ 

 $= 1.0 \times (5/48) \times 29519 \times (10 \times 12)^2 / (3408788 \times 1632.1)$ 

### = 0.007959"

#### Allowable Deflections

(10 x 12) / 180 =

0.6666" =

Δ<sub>i LL</sub> = 0.00431" (OK) >

#### 8.1.3.3.2 Long term Deflection

i. Sustained load duration of 5 years & more

| λ  | = | ξ/ (1 + 50 x p')                 |  |
|--|---|----------------------------------|--|
|  | = | 2.0 / (1 + 0)                    |  |
|  | = | 2.0                              |  |
| $\Delta_{\rm (CP+SH)}$                     | = | $\lambda \ x \ \Delta_{i \ SUS}$ |  |
|  | = | 2 x 0.007959                     |  |
| $\Delta_{(CP+SH)} + \Delta_{i \text{ LL}}$ | = | 0.015918 in                      |  |
|  | = | 0.015918 + 0.00431               |  |
|  | = | 0.020228 in                      |  |

### Allowable Deflections

| $\Delta_{\sf i \; Allow}$ | = | (L x 12) / $\Delta_{Factor}$ |
|---------------------------|---|------------------------------|
|                           | = | (10 x 12) / 240              |
|                           | = | 0.5"                         |
|                           | > | 0.020228" (OK)               |

### ii. Sustained load duration of 3 Months

| Sustaine | ed Moment, M <sub>SU</sub> | JS | =       | $M_D$ + 0.5 x $M_L$                        | (Assume that 50% Load as sustained) |
|----------|----------------------------|----|---------|--|-------------------------------------|
|          |                            |    | =       | 21519 + 0.5 x 16000                        |                                     |
|          |                            |    | =       | 29519 lb-in                                |                                     |
| Under S  | oustained Load             |    |         |  |                                     |
|          | Mcr / M <sub>SUS</sub>     | =  | 88800.  | 9 / 29519                                  |                                     |
|          |                            | =  | 3.008   |  |                                     |
|          | Hence (le) <sub>SUS</sub>  | =  | $I_g$   |  |                                     |
|          | $\Delta_{\sf i \; SUS}$    | =  | K (5/48 | 8) M <sub>SUS</sub> x L <sup>2</sup> / (Ed | c x le)                             |

/ (3408788 x 1632.1)

0.000132" =

$$\lambda \qquad = \qquad \xi/\left(1+50\ x\ p'\right)$$

1.0/(1+0)=

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|  | = | 1.0                            |  |  |
|--|---|--------------------------------|--|--|
| $\Delta_{\rm (CP+SH)}$                         | = | $\lambda \ge \Delta_{i \ SUS}$ |  |  |
|  | = | 1 x 0.000132                   |  |  |
| $\Delta_{({\rm CP+SH})}$ + $\Delta_{ m i\ LL}$ | = | 0.000132 in                    |  |  |
|  | = | 0.000132 + 0.00431             |  |  |
|  | = | 0.0044 in                      |  |  |

### Allowable Deflections

| $\Delta_{\rm i\;Allow}$ | = | (L x 12) / $\Delta_{Factor}$ |
|-------------------------|---|------------------------------|
|                         | = | (10 x 12) / 240              |
|                         | = | 0.5"                         |
|                         | > | 0.0044" (OK)                 |

### 8.1.4 Calculation for Transverse Slab Reinforcement

| Consider 12" width of slab,                                 |         |                     |                          |   |  |
|---|---------|---------------------|--------------------------|---|--|
| $L_{Slab} = 27.5 / 12$<br>= 2.292 ft                        |         |                     |                          |   |  |
| Self weight of deck =                                       | 116.794 | 4 (As cale          | culated al               | bove)   |  |
| Total factored load, P <sub>U</sub>                         | =       | 1.2 x 10            | ) x 12 / 1               | 2 + 1.2 x 116.794 + 1.6 x 40 x 12/12          |  |
|   | =       | 216.15              | plf                      |   |  |
| Maximum Moment  | =       | 216.15              | $.15 \times 2.29^2 / 12$ |   |  |
|   | =       | 94.4 ft-            | lb                       |   |  |
|   | =       | 1133.5              | in-lb                    |   |  |
|   |         |                     |                          |   |  |
| Tension controlled reinforcement ratio $(\rho_t)$           |         | (ρ <sub>t</sub> )   | =                        | 0.319 x 0.85 x 3500 / 60000                   |  |
|   |         |                     | =                        | 0.0158  |  |
| Maximum allowed reinforcement ratio ( $\rho_{\text{Max}}$ ) |         | (ρ <sub>Max</sub> ) | =                        | ρ <sub>t</sub>                                |  |
|   |         |                     | =                        | 0.0158  |  |
| Minimum reinforcement ratio ( $\rho_{Min}$ )                |         |                     | =                        | Max (3 x (f'c) <sup>0.5</sup> , 200) / fy     |  |
|   |         |                     | =                        | Max (3 x (3500) <sup>0.5</sup> , 200) / 60000 |  |
|   |         |                     | =                        | Max (177.5, 200) / 60000                      |  |
|   |         |                     | =                        | 200 / 60000                                   |  |
|   |         |                     | =                        | 0.0033  |  |

Reinforcement ratio for +ive moment ( $\rho_{Pos}$ )

 $(0.85 \times f'c / fy) \times \{1 - [1 - 2 \times M_{UP} / (\phi \times b_w \times t_f / 2^2 \times 0.85 \times f'c)]^{0.5}\}$ = 1.78 x 10<sup>-3</sup> = 0.00178  $(\rho_{Min} = 0.0033)$ = < 0.00178  $(\rho_{Max} = 0.0158)$  **OK** < = 0.00178 x 12 x 2/2 Area of Reinforcement Required = 0.021 in<sup>2</sup> = Rebar Used #4 rebar = 0.1963 in<sup>2</sup> Area of Rebar = (0.1963 / 0.021) x 12 Spacing = 112.71 in = Per Section 7.12 of ACI-318-02 Spacing of rebar will be Minimum of the following three (1) Calculated spacing as above = 112.71 in (2) 5 times of thickness of slab = 5 x 2 = 10 in (3) 18 in

Provide #4 rebar @ 10" O.C.

### 8.1.5 Calculation for Longitudinal Slab Reinforcement

Consider 12" width of slab,

| Per Section 7. | 12 of A(             | CI-318-02 Minimum reinfo   | ercement =<br>=<br>=                          | 0.0018 x area of cross section<br>0.0018 x 2 x 12<br>0.0432 in |
|----------------|----------------------|--|---|--|
| Spacing        | =<br>=               | (0.1963 / 0.0432) x 12<br>54.52 in                                       |   |  |
| (1) Ca         | alculated<br>imes of | CI-318-02 Spacing of reba<br>  spacing as above =<br>thickness of slab = | ar will be Minim<br>54.52 in<br>5 x 2 = 10 in | um of the following three                                      |

Provide #4 rebar @ 10" O.C.

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|----------|---------------------|--|
| Client:  | Amvic, Inc.         |  |

## 8.2 Double Span Joist

(12" Panel Size With 10" Deep Joist @ 32" O.C. And 2" Topping Slab)

## 8.2.6 Inputs

| 0.2.0 | mputs  |            |                    |                    |                              |
|-------|--|------------|--------------------|--------------------|------------------------------|
|       | Panel Designation                                      | =          | 12" Pa             | nel secti          | on with 10" deep beam        |
|       | Beam Depth (dw)  | =          | 10"                |                    |                              |
|       | Topping (t <sub>f</sub> )                              | =          | 2"                 |                    |                              |
|       | Minimum Beam Width, bottom (b <sub>w</sub> )           | =          | 6.5"               |                    |                              |
|       | Average Joist Width (b <sub>wa)</sub>                  | =          | 5.2"               |                    |                              |
|       | Panel Span, Transverse (b)                             | =          | 32"                |                    |                              |
|       | Maximum Span of the Deck (L)                           | =          | 10'-0"             |                    |                              |
|       | Number of Span   | =          | Double             | )                  |                              |
|       | Live load acting on the deck $(w_{LL})$                | =          | 40 psf             |                    |                              |
|       | Dead load acting on the deck $(w_{\text{DL}})$         | =          | 10 psf             |                    |                              |
|       | Unit weight of concrete (γc)                           | =          | 145 pc             | f                  |                              |
|       | Specified compressive strength of con-                 | crete (f'c | ;) =               | 3500 p             | si                           |
|       | Yield strength of rebar (fy)                           |            | =                  | 60000              | psi                          |
|       | Rebar cover, Center of rebar (c)                       |            | =                  | 1.25"              |                              |
|       | Allowable Deflection factor, Total ( $\Delta_{Fact}$   | tor LL)    | =                  | 360                | (Short Term)                 |
|       | Allowable Deflection factor, Total ( $\Delta_{Factor}$ | or LL)     | =                  | 480                | (Long Term)                  |
| 8.2.7 | Analysis   |            |                    |                    |                              |
|       | Dead Load factor (K <sub>DL</sub> )                    | =          | 1.2                |                    |                              |
|       | Live Load factor $(K_{LL})$                            | =          | 1.6                |                    |                              |
|       |  |            |                    |                    |                              |
|       | <i>Section Properties</i><br>Cross-section area A      | =          | 115.98             | 88 in <sup>2</sup> | (Refer Table on Page – 7)    |
|       | Distance of CG from top ( $CG_{Top}$ )                 | =          | 3.8451             | in from            | top                          |
|       | Moment of inertia about x-axis $(I_{XX})$              | =          | 1632.1             | in <sup>4</sup>    |                              |
|       | Section Modulus about x-axis $(S_{XX})$                | =          | 1632.1             | / {Max             | [3.8451, (10 + 2 – 3.8451)]} |
|       |  | =          | 200.13             | 7 in <sup>3</sup>  |                              |
|       | Effective depth (d)                                    | =          | d <sub>w</sub> -c  | + t <sub>f</sub>   |                              |
|       |  | =          | 10 – 1.            | 25 + 2             |                              |
|       |  | =          | 10.75"             |                    |                              |
|       | Self weight of deck $(w_{Self})$                       | =          | w <sub>c</sub> x A | Gross              |                              |
|       |  | =          | 145 x 1            | 15.988             | 3/144                        |
|       |  | =          | 116.79             | 4 plf              |                              |
|       | Total Dead Load W <sub>DTotal</sub>                    | =          | Self W             | eight + /          | Applied Additional Dead Load |
|       |  | =          | 116.79             | 4 + 10 x           | 32/12                        |
|       |  | =          | 143.46             | plf                |                              |
|       |  |            |                    |                    |                              |

|                       | <b>lting Engineers, Corp</b><br>AmDeck Design Guide<br>Amvic, Inc.  | Prepared by:<br>Checked by: A                              |   | Date: 05/01/<br>Date: 05/01/  |           |
|-----------------------|---|--|---|---|-----------|
|                       | Live Load $W_{LL}$  | =  | 40 x 32/12  |   |           |
|                       |   | =  | 106.67 plf  |   |           |
|                       | Total Un-factored Load $W_P$  | =  | W <sub>D Total</sub> + W <sub>LL</sub>  |   |           |
|                       |   | =  | 143.46 + 106.6  | 7   |           |
|                       |   | =  | 250.13 plf  |   |           |
|                       | Total factored load $(P_U)$   | =  | $\{K_{DL} \ x \ w_{D \ Total} +$  | K <sub>LL</sub> x w <sub>LL</sub> }   |           |
|                       |   | =  | 1.2 x 143.46 +1   | l.6 x 106.67  |           |
|                       |   | =  | 342.824 plf   |   |           |
|                       | Maximum Shear Force $(V_U)$   | =  | P <sub>U</sub> x L / 2  |   |           |
|                       |   | =  | 342.824 x 10 / 2  | 2   |           |
|                       |   | =  | 1714.12 lb.   |   |           |
|                       | Maximum Positive Moment (MUP)   | =  | $(P_U x L^2 / 14) x$  | 12  |           |
|                       |   | =  | (342.824 x 10 <sup>2</sup>  | / 14) x 12  |           |
|                       |   | =  | 29384.91 in-lb.   |   |           |
|                       | Maximum Negative Moment ( $M_{UN}$ )  |  |   |   |           |
|                       | =   | $(P_{U} \times L^2)$                                       | ² / 16) x 12 {At E  | xterior Support of Doub   | ole Span) |
|                       | =   | (342.82  | $4 \times 10^2 / 16) \times 1$  | 2 = 25711.8in-lb.   |           |
|                       |   | ,  |   |   |           |
|                       | =   | ·  | ·   | Interior Support of Dou   | ıble Spar |
|                       | =   | (P <sub>U</sub> x L <sup>2</sup>                           | <sup>2</sup> /9) x 12 {At 1 <sup>st</sup>   | Interior Support of Dou<br>2 = 45709.87 in-lb.  | ıble Spar |
| .2.8                  | =   | (P <sub>U</sub> x L <sup>2</sup>                           | <sup>2</sup> /9) x 12 {At 1 <sup>st</sup>   |   | ıble Spar |
|                       | =<br>Design   | (P <sub>U</sub> x L <sup>2</sup>                           | <sup>2</sup> /9) x 12 {At 1 <sup>st</sup>   |   | ıble Spar |
|                       | =<br>Design<br>Shear Strength   | (P <sub>U</sub> x L <sup>2</sup><br>(342.82                | <sup>2</sup> / 9) x 12 { <mark>At</mark> 1 <sup>st</sup><br>24 x 10 <sup>2</sup> / 9) x 12  | e = 45709.87 in-lb.   | ıble Spar |
|                       | =<br>Design   | (P <sub>U</sub> x L <sup>2</sup><br>(342.82                | <sup>2</sup> / 9) x 12 {At 1 <sup>st</sup><br>4 x 10 <sup>2</sup> / 9) x 12<br>1.1 x 0.75 x 2 x   | 2 = 45709.87 in-lb.<br>a (f'c) <sup>0.5</sup> x b <sub>wa</sub> x d   |           |
|                       | =<br>Design<br>Shear Strength   | (P <sub>U</sub> x L <sup>2</sup><br>(342.82                | <sup>2</sup> / 9) x 12 {At 1 <sup>st</sup><br>4 x 10 <sup>2</sup> / 9) x 12<br>1.1 x 0.75 x 2 x<br>1.1 x 0.75 x 2 x   | a = 45709.87  in-lb.<br>(f'c) <sup>0.5</sup> x b <sub>wa</sub> x d<br>(3500) <sup>0.5</sup> x 5.2 x 10.75   | i         |
| .2.8.1                | =<br>Design<br>Shear Strength   | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=      | <sup>2</sup> / 9) x 12 {At 1 <sup>st</sup><br>4 x 10 <sup>2</sup> / 9) x 12<br>1.1 x 0.75 x 2 x<br>1.1 x 0.75 x 2 x   | 2 = 45709.87 in-lb.<br>a (f'c) <sup>0.5</sup> x b <sub>wa</sub> x d   |           |
| 2.8.1                 | =<br><b>Design</b><br><b>Shear Strength</b><br>Shear Strength of the section (φVc)  | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=      | <sup>2</sup> / 9) x 12 {At 1 <sup>st</sup><br>4 x 10 <sup>2</sup> / 9) x 12<br>1.1 x 0.75 x 2 x<br>1.1 x 0.75 x 2 x   | a = 45709.87  in-lb.<br>(f'c) <sup>0.5</sup> x b <sub>wa</sub> x d<br>(3500) <sup>0.5</sup> x 5.2 x 10.75   | i         |
| .2.8.1                | =<br>Design<br>Shear Strength<br>Shear Strength of the section (φVc)<br>Moment Strength   | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=      | <sup>2</sup> / 9) x 12 {At 1 <sup>st</sup><br>4 x 10 <sup>2</sup> / 9) x 12<br>1.1 x 0.75 x 2 x<br>1.1 x 0.75 x 2 x<br><b>5456.69 lb. &gt; V</b>  | a = 45709.87  in-lb.<br>(f'c) <sup>0.5</sup> x b <sub>wa</sub> x d<br>(3500) <sup>0.5</sup> x 5.2 x 10.75   | i         |
| .2.8.1                | = Design Shear Strength Shear Strength of the section (φVc) Moment Strength Strength reduction factor (φ)   | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=      | $(2^{2} / 9) \times 12 \{ At 1^{st} + 10^{2} / 9 \} \times 12 $<br>$(1.1 \times 0.75 \times 2 \times 1.1 \times 0.75 \times 2 \times 5456.69 \text{ lb.} > V$<br>$(2^{2} - 0.9)$<br>$(2^{2} - 0.85)$  | a = 45709.87  in-lb.<br>$a (f'c)^{0.5} x b_{wa} x d$<br>$a (3500)^{0.5} x 5.2 x 10.75$<br>a (1714.12  lb.)  | i         |
| .2.8.1                | = Design Shear Strength Shear Strength of the section (φVc) Moment Strength Strength reduction factor (φ) β <sub>1</sub>                          | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=      | $(2^{2} / 9) \times 12 \{ At 1^{st} + 10^{2} / 9 \} \times 12 $<br>$(1.1 \times 0.75 \times 2 \times 1.1 \times 0.75 \times 2 \times 5456.69 \text{ lb.} > V$<br>$(2^{2} - 0.9)$<br>$(2^{2} - 0.85)$  | $f = 45709.87 \text{ in-lb.}$ $f = (f'c)^{0.5} \times b_{wa} \times d$ $f = (3500)^{0.5} \times 5.2 \times 10.75$ $f_{U} (= 1714.12 \text{ lb.})$ $f = (f'c \le 4000 \text{ psi})$ $f = (0.85 \times 3500 / 60000)$   | i         |
| .2.8.1                | = Design Shear Strength Shear Strength of the section (φVc) Moment Strength Strength reduction factor (φ) β <sub>1</sub>                          | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=<br>= | $(2^{2} / 9) \times 12 \{ At 1^{st} \}$<br>$(4 \times 10^{2} / 9) \times 12 \{ At 1^{st} \}$<br>$(1.1 \times 0.75 \times 2 \times 1.1 \times 0.75 \times 2 \times 5456.69 \ \text{lb.} > V \}$<br>$= 0.9 = 0.85 = 0.319 \times 10^{10} \text{ st}$  | $f = 45709.87 \text{ in-lb.}$ $f = (f'c)^{0.5} \times b_{wa} \times d$ $f = (3500)^{0.5} \times 5.2 \times 10.75$ $f_{U} (= 1714.12 \text{ lb.})$ $f = (f'c \le 4000 \text{ psi})$ $f = (0.85 \times 3500 / 60000)$   | i         |
| 2.8.1                 | = Design Shear Strength Shear Strength of the section (φVc) Moment Strength Strength reduction factor (φ) β1 Tension controlled reinforcement re  | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=<br>= | $(2^{2} / 9) \times 12 \{ At 1^{st} \\ (4 \times 10^{2} / 9) \times 12 \}$<br>$(1.1 \times 0.75 \times 2 \times 1.1 \times 0.75 \times 2 \times 5456.69 \ lb. > V$<br>= 0.9<br>= 0.85<br>$= 0.319 \times 1000$<br>= 0.0158  | $f = 45709.87 \text{ in-lb.}$ $f(f'c)^{0.5} \times b_{wa} \times d$ $f(3500)^{0.5} \times 5.2 \times 10.75$ $f_{U} (= 1714.12 \text{ lb.})$ $f(f'c \le 4000 \text{ psi})$ $f(f'c \le 3500 / 60000$  | i         |
| 2.8.1                 | = Design Shear Strength Shear Strength of the section (φVc) Moment Strength Strength reduction factor (φ) β1 Tension controlled reinforcement re  | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=<br>= | $(2^{2} / 9) \times 12 \{At \ 1^{st} \\ (4 \times 10^{2} / 9) \times 12 \}$<br>$(1.1 \times 0.75 \times 2 \times 1.1 \times 0.015 \times 0.$  | $f = 45709.87 \text{ in-lb.}$ $f(f'c)^{0.5} \times b_{wa} \times d$ $f(3500)^{0.5} \times 5.2 \times 10.75$ $f_{U} (= 1714.12 \text{ lb.})$ $f(f'c \le 4000 \text{ psi})$ $f(f'c \le 3500 / 60000$  | i         |
| .2.8.1                | = Design Shear Strength Shear Strength of the section (φVc) Moment Strength Strength reduction factor (φ) β1 Tension controlled reinforcement rad | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=<br>= | $(2^{2} / 9) \times 12 \{At 1^{st} \\ (4 \times 10^{2} / 9) \times 12 \}$<br>$(1.1 \times 0.75 \times 2 \times 1.1 \times 0.75 \times 1.1 \times 0.15 \times 0.1$ | $f = 45709.87 \text{ in-lb.}$ $f = (f'c)^{0.5} \times b_{wa} \times d$ $f = (3500)^{0.5} \times 5.2 \times 10.75$ $f_{U} (= 1714.12 \text{ lb.})$ $f = (f'c \le 4000 \text{ psi})$ $f = (60000 \text{ sc})$   | (OK)      |
| .2.8.1                | = Design Shear Strength Shear Strength of the section (φVc) Moment Strength Strength reduction factor (φ) β1 Tension controlled reinforcement rad | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=<br>= | $(2^{2} / 9) \times 12 \{At 1^{st} \\ (4 \times 10^{2} / 9) \times 12 \}$<br>$(1.1 \times 0.75 \times 2 \times 1.1 \times 0.75 \times 1.1 \times 0.15 \times $      | $f = 45709.87 \text{ in-lb.}$ $f(f'c)^{0.5} \times b_{wa} \times d$ $f(3500)^{0.5} \times 5.2 \times 10.75$ $f_{u} (= 1714.12 \text{ lb.})$ $f(f'c \le 4000 \text{ psi})$ $f(f'c \le 4000 \text{ psi})$ $f(f'c)^{0.5} \times 3500 / 60000$ $f(f'c)^{0.5} \times 3500 / 60000$ | (OK)      |
| <b>.2.8</b><br>.2.8.1 | = Design Shear Strength Shear Strength of the section (φVc) Moment Strength Strength reduction factor (φ) β1 Tension controlled reinforcement rad | (P <sub>U</sub> x L <sup>2</sup><br>(342.82<br>=<br>=<br>= | $(2^{2} / 9) \times 12 \{At 1^{st} \\ (4 \times 10^{2} / 9) \times 12 \}$<br>$(1.1 \times 0.75 \times 2 \times 1.1 \times 0.75 \times 1.1 \times 0.15 \times $      | $f = 45709.87 \text{ in-lb.}$ $f = (f'c)^{0.5} \times b_{wa} \times d$ $f = (3500)^{0.5} \times 5.2 \times 10.75$ $f_{U} = 1714.12 \text{ lb.}$ $f = (f'c)^{0.5} \times 3500 / 60000$ $f = (f'c)^{0.5}, 200) / fy$ $f = (f'c)^{0.5}, 200) / fy$ $f = (f'c)^{0.5}, 200) / 600$ | (OK)      |

### Positive Reinforcement

Reinforcement ratio for +ive moment (p Pos)

- $= (0.85 \text{ x f'c} / \text{ fy}) \text{ x } \{1 [1 2 \text{ x } M_{UP} / (\phi \text{ x } b_{wa} \text{ x } \text{ d}^2 \text{ x } 0.85 \text{ x f'c})]^{0.5}\}$
- $= (0.85 \times 3500/60000) \{1 [1 2 \times 29384.9/(0.9 \times 5.2 \times 10.75^2 \times 0.85 \times 3500)]^{0.5}\}$
- = 0.0009139 < ( $\rho_{Min} = 0.0033$ )
- =  $0.0033 < (\rho_{Max} = 0.0158)$  **OK**

Area of reinforcement required (A<sub>S Pos</sub> req) =  $\rho_{Pos} x$  bwa x d = 0.0033 x 5.2 x 10.75 = 0.18477 in<sup>2</sup>

 $A_{S Pos}$  provided = 1 # 4 (Area = 0.1963 in<sup>2</sup> > 0.18447) **OK** 

### **Negative Reinforcement**

Reinforcement ratio for -ive moment ( $\rho_{Neq}$ )

- $= (0.85 \times f'c / fy) \times \{1 [1 2 \times M_{UN} / (\phi \times b_{wa} \times d^2 \times 0.85 \times f'c)]^{0.5}\}$
- $= (0.85 \times 3500/60000) \{1 [1 2 \times 45709.8/(0.9 \times 5.2 \times 10.75^2 \times 0.85 \times 3500)]^{0.5} \}$

= 0.001429 < ( $\rho_{Min} = 0.0033$ )

=  $0.0033 < (\rho_{Max} = 0.0158)$  OK

| Area of reinforcement  | required (A <sub>S Neg</sub> req) | $= \rho_{Neg} x bwa x d$          |
|------------------------|-----------------------------------|-----------------------------------|
|                        |                                   | = 0.0033 x 5.2 x 10.75            |
|                        |                                   | = 0.18447 in <sup>2</sup>         |
| $A_{S Neg}$ provided = | 1 # 4 (Area = 0.1963 in           | <sup>2</sup> > 0.18447) <b>OK</b> |

#### Nominal moment strength

| Plain Concrete                                      |   |  |
|---|---|--|
| Nominal moment strength of the section ( $\phi$ Mn) | = | $0.65 \times 5$ (f'c) $^{0.5} \times S_{XX}$ |
|   | = | 0.65 x 5 x (3500) <sup>0.5</sup> x 200.137   |

Reinforced Concrete

Nominal moment strength of the section ( $\phi$ Mn)

- =  $\phi A_{S Pos}$  provided x fy x [d ( $A_{S Pos}$  provided x fy / (0.85 x f'c x b))/2]
- = 0.9 x 0.1963 x 60000 x [10.75 (0.1963 x 60000 / (0.85 x 3500 x 32))/2]

=

38480.8594 in-lb.

= 113296.43 in-lb.

### 8.2.8.3 Deflection

 $d_w + t_f = 10 + 2 = 12$ " Total depth of section (h) = 0.1963 in<sup>2</sup>  $A_{S Neg}$  provided = ALP = 0.1963 in<sup>2</sup>  $A_{S Pos}$  provided = A<sub>B</sub> = Diameter of shear rebar = 3/8" (For #3 rebar) R<sub>DS</sub> =  $R_{DLP} =$ Diameter of Single rebar  $A_{S Neg}$  provided = 0.5" (For #4 rebar)  $d_w + t_f - c - R_{DS} - 0.5R_{DLP}$ Effective depth  $(d_{LP}) =$ 10 + 2 - 1.25 - 3/8 - 0.5 (0.5) =

| Client: Amvie             | Engineers, Corp<br>eck Design Guide<br>c, Inc.  | Prepared by: K<br>Checked by: Ar   |  | Date: 05/01/2007<br>Date: 05/01/2007 |
|---------------------------|---|--|--|--------------------------------------|
|                           | =   | 10.125"  |  |                                      |
| Mo                        | dulus of elasticity of concr  |  | γ <sub>C</sub> ) <sup>1.5</sup> x (33 x (f'c) <sup>0.5</sup> ) |                                      |
|                           | ,   |  | 145) <sup>1.5</sup> x (33 x (3500) <sup>0.5</sup> )            | )                                    |
|                           |   |  | 408788 psi   |                                      |
| Mo                        | dulus of elasticity of steel  |  | 9000000 psi  |                                      |
| Mo                        | dular ratio (n)   | = E  | s / E <sub>C</sub>   |                                      |
|                           |   | = 2  | 9000000 / 3408788  |                                      |
|                           |   | = 8  | .51  |                                      |
| Mo                        | dulus of rupture of concre  | te (fr) = 7  | .5 x (f'c) <sup>0.5</sup>                                      |                                      |
|                           |   | = 7  | .5 x (3500) <sup>0.5</sup>                                     |                                      |
|                           |   | = 4  | 43.7 psi   |                                      |
| Cra                       | cking Moment (M <sub>CR</sub> )   | = fr   | x lg / y <sub>t</sub>  |                                      |
|                           |   | = 4  | 43.7 x 1632.1 / 8.1549   |                                      |
|                           |   | = 8  | 8800.9 in-lb.  |                                      |
| ı ———                     | b   | , (n-1)A's   | b  |                                      |
| f                         | ·<br>G  |  |  | kd                                   |
| dw                        | yt  | h  |  |                                      |
|                           | yt<br>> bw  | nAs  |  |                                      |
|                           | •   |  | Cracked Transformed  | Section                              |
|                           | bw  |  |  | Section                              |
| y <sub>t</sub><br>Ig      | Gross Section<br>= 8.1549"  | <u>nAs</u>   | Amvic)   | Section                              |
| y <sub>t</sub><br>Ig      | $\frac{\bullet}{bw}$ Gross Section $= 8.1549^{\circ}$ $= 1632.1 \text{ in}^{4}$   | (As Provided by A<br>(As Provided by A   | Amvic)   | Section                              |
| у <sub>t</sub>            | $\frac{\bullet}{bw}$ Gross Section $= 8.1549''$ $= 1632.1 \text{ in}^4$ $= b_{wa} / (n \times A_{S PO})$                                  | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)   | Amvic)   | Section                              |
| <br>y <sub>t</sub><br>Ig  | Gross Section<br>= $8.1549''$<br>= $1632.1 \text{ in}^4$<br>= $b_{wa} / (n \ge A_{S Po})$<br>= $5.2 / (8.51 \ge 0.1)$                     | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)   | Amvic)   | Section                              |
| y <sub>t</sub><br>Ig<br>C | Gross Section<br>= $8.1549''$<br>= $1632.1 \text{ in}^4$<br>= $b_{wa} / (n \times A_{S PO})$<br>= $5.2 / (8.51 \times 0.0)$<br>= $3.1128$ | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)<br>1963)  | Amvic)   | Section                              |
| <br>y <sub>t</sub><br>Ig  | $\begin{array}{c} \bullet \\ \bullet $            | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)<br>1963)<br>x A <sub>S Pos</sub> provided)  | Amvic)   | Section                              |
| y <sub>t</sub><br>Ig<br>C | $\begin{array}{c} \bullet \\ \bullet $            | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)<br>1963)  | Amvic)   | Section                              |
| y <sub>t</sub><br>Ig<br>C | $\begin{array}{c} \bullet \\ \bullet $            | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)<br>1963)<br>x A <sub>S Pos</sub> provided)  | Amvic)<br>Amvic)   | Section                              |
| y <sub>t</sub><br>Ig<br>C | $\begin{array}{c} \bullet \\ \bullet $            | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)<br>1963)<br>x A <sub>S Pos</sub> provided)<br>(8.51 x 0.1963)                                       | Amvic)<br>Amvic)<br>ovided)                                    | Section                              |
| y <sub>t</sub><br>Ig<br>C | $\begin{array}{c} \bullet \\ \bullet $            | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)<br>1963)<br>x A <sub>S Pos</sub> provided)<br>(8.51 x 0.1963)<br>byided / (n A <sub>S Pos</sub> pro | Amvic)<br>Amvic)<br>ovided)                                    | Section                              |
| y <sub>t</sub><br>lg<br>C | $\begin{array}{c} \bullet \\ \bullet $            | (As Provided by A<br>(As Provided by A<br>(As Provided by A<br>s provided)<br>1963)<br>x A <sub>S Pos</sub> provided)<br>(8.51 x 0.1963)<br>byided / (n A <sub>S Pos</sub> pro | Amvic)<br>Amvic)<br>ovided)<br>3)                              | Section                              |

 $= [{3.1128 \times (2 \times 10.75 + 2 \times 32.085 + 2 \times 0.8825 \times 1.875) + (32.085 + 0.8825 + 1)^2}^{0.5} - (32.085 + 0.8825 + 1)] / 3.1128$ = 1.2393

Moment of inertia of cracked section transformed to concrete (lcr)

```
= (b - b_{W})t_{f}^{3}/12 + b_{W}(kd)^{3}/3 + (b - b_{W})t_{f}(kd - t_{f}/2)^{2} + nA_{Bi}(d - kd)^{2} + (n - 1)A_{LPi}(kd - d')^{2}
= (32 - 5.2) \times 2^{3}/12 + 5.2 \times (1.2393)^{3}/3 + (32 - 5.2) (2) (1.2393 - 2/2)^{2} + 8.51 \times (0.1963) (10.75 - 1.2393)^{2} + (8.51 - 1) \times 0.1963 \times (1.2393 - 1.875)^{2}
= 209.43 \text{ in}^{4}
Dead Load moment, M<sub>D</sub> = 143.46 × 10<sup>2</sup>/14 × 12

= 12296.57 lb-in
```

|                                | = |   |  |  |
|--------------------------------|---|---|--|--|
| Live Load moment, $M_L$        | = | 106.67 x 10 <sup>2</sup> / 14 x 12                      |  |  |
|                                | = | 9142.86 lb-in   |  |  |
| Total moment, M <sub>D+L</sub> | = | 12296.57 + 9142.86                                      |  |  |
|                                | = | 21439.43 lb- in   |  |  |
| Sustained Moment, $M_{SUS}$    | = | $M_D$ + 0.5 x $M_L$ (Assume that 50% Load as sustained) |  |  |
|                                | = | 12296.57 + 0.5 x 9142.86                                |  |  |
|                                | = | 16868.0 lb-in   |  |  |

Effective moment of inertia for deflection computation (le)

A. Under Dead Load

| Mcr / M <sub>D</sub>    | = | 88800.9 / 12296.57 |
|-------------------------|---|--------------------|
|                         | = | 7.221              |
| Hence (le) <sub>d</sub> | = | l <sub>g</sub>     |

B. Under Sustained Load

 $\begin{array}{rcl} Mcr \, / \, M_{SUS} & = & 88800.9 \, / \, 16868.0 \\ \\ & = & 5.264 \\ \\ Hence \, \, (Ie)_d & = & I_g \end{array}$ 

C. Under Dead + Live Load

| Mcr / $M_{D + L}$       | = | 88800.9 / 21439.43 |
|-------------------------|---|--------------------|
|                         | = | 4.142              |
| Hence (le) <sub>d</sub> | = | l <sub>g</sub>     |

### 8.2.8.3.1 Short Term Deflection

For Continuous beam, the mid-span deflection is  $\Delta_i = K (5/48) M_P x L^2 / (Ec x le)$ 

Where,

| K | = | 1.20 – | 0.20 $M_P / M_O$ for continuous beam                   |
|---|---|--------|--|
|   | = | 0.80   | for Continuous fixed-hinged beam, mid span deflection  |
|   | = | 0.738  | for Continuous fixed-hinged beam, max deflection using |
|   |   | movim  | um moment  |
|   |   | Шаліпі |  |
|   | = | 0.60   | for fixed-fixed beam                                   |
|   | = |        |  |

 $M_{O}$  = Simple span moment at mid span, = (P x L<sup>2</sup> / 8) x 12

Use K = 1.0 to be on conservative side

| $\Delta_{\rm i\ D}$   | = | K (5/48) $M_D \times L^2 / (Ec \times Ie)$                         |
|-----------------------|---|--|
|                       | = | 1 x (5/48) x 12296.57 x (10 x12) <sup>2</sup> / (3408788 x 1632.1) |
|                       | = | 0.00331"   |
| $\Delta_{\rm i\;LL}$  | = | K (5/48) M <sub>LL</sub> x L <sup>2</sup> / (Ec x le)              |
|                       | = | 1 x (5/48) x 9142.86 x (10 x12) <sup>2</sup> / (3408788 x 1632.1)  |
|                       | = | 0.002465"  |
| $\Delta_{\rm i\;SUS}$ | = | K (5/48) M <sub>SUS</sub> x L <sup>2</sup> / (Ec x le)             |
|                       | = | 1 x (5/48) x 16868.0 x (10 x12) <sup>2</sup> / (3408788 x 1632.1)  |
|                       | = | 0.004548"  |
|                       |   |  |

### Allowable Deflections

$$\Delta_{i \text{ Allow LL}} = (L \times 12) / \Delta_{Factor Total}$$

- = (10 x 12) / 180
- = 0.6666"
- > Δ<sub>i LL</sub> = 0.002465" (OK)

### 8.2.8.3.2 Long term Deflection

p' = 0.1963 / (5.2 x 10.75) = 0.0035

i. Sustained load duration of 5 years & more

| λ   | = | ξ/ (1 + 50 x p')               |  |  |
|---|---|--------------------------------|--|--|
|   | = | 2.0 / (1 + 50 x 0.0035)        |  |  |
|   | = | 1.702                          |  |  |
| $\Delta_{(CP+SH)}$                              | = | $\lambda \ge \Delta_{i \ SUS}$ |  |  |
|   | = | 1.702 x 0.004548               |  |  |
|   | = | 0.007741 in                    |  |  |
| $\Delta_{({\rm CP+SH})}$ + $\Delta_{\rm i\ LL}$ | = | 0.007741 + 0.002465            |  |  |
|   | = | 0.0102 in                      |  |  |

### Allowable Deflections

| $\Delta_{\text{i Allow}}$ | = | (L x 12) / $\Delta_{Factor}$ |
|---------------------------|---|------------------------------|
|                           | = | (10 x 12) / 240              |
|                           | = | 0.5"                         |
|                           | > | 0.0102" (OK)                 |

### ii. Sustained load duration of 3 Months

| Sustained Moment, $M_{SUS}$ | = | $M_D$ + 0.5 x $M_L$ | (Assume that 50% Load as sustained) |
|-----------------------------|---|---------------------|-------------------------------------|
|                             | = | 12296.57 + 0.5      | x 9142.86                           |
|                             | = | 16868 lb-in         |                                     |

Under Sustained Load

| Mcr / M <sub>SUS</sub>  | = | 88800.9 / 16868 |
|-------------------------|---|-----------------|
|                         | = | 5.264           |
| Hence (le) <sub>d</sub> | = | l <sub>g</sub>  |

|                        | $\Delta_{ m iSUS}$ | =   | K (5/48) M <sub>SUS</sub> x L <sup>2</sup> / (Ec x le)            |
|------------------------|--------------------|-----|---|
|                        |                    | =   | 1.0 x (5/48) x 16868 x (10 x12) <sup>2</sup> / (3408788 x 1632.1) |
|                        |                    | =   | 0.004548"   |
|                        | λ                  | =   | ξ/ (1 + 50 x p')  |
|                        |                    | =   | 1.0 / (1 + 50 x 0.0035)   |
|                        |                    | =   | 0.851   |
|                        | $\Delta_{(CP+SH)}$ | ) = | $\lambda \times \Delta_{i \text{ SUS}}$                           |
|                        |                    | =   | 0.851 x 0.004548  |
|                        |                    | =   | 0.00387 in  |
| $\Delta_{\rm (CP+SH)}$ | + $\Delta_{i LL}$  | =   | 0.00387 + 0.002465  |
|                        |                    | =   | 0.00634 in  |
|                        |                    |     |   |

### Allowable Deflections

| $\Delta_{\rm i\;Allow}$ | = | (L x 12) / $\Delta_{Factor}$ |      |
|-------------------------|---|------------------------------|------|
|                         | = | (10 x 12) / 240              |      |
|                         | = | 0.5"                         |      |
|                         | > | 0.00634"                     | (OK) |

### 8.2.9 Calculation for Transverse Slab Reinforcement

| Consider 12" width of slab,                                 |         |                                 |           |   |  |
|---|---------|---------------------------------|-----------|---|--|
| $L_{Slab} = 27.5 / 12$                                      |         |                                 |           |   |  |
| = 2.292 ft  |         |                                 |           |   |  |
| Self weight of deck =                                       | 116.794 | 4 (As cal                       | culated a | bove)   |  |
|   |         |                                 |           |   |  |
| Total factored load, P <sub>U</sub>                         | =       |                                 |           |   |  |
|   | =       |                                 |           |   |  |
| Maximum Moment  | =       | 216.15 x 2.29 <sup>2</sup> / 12 |           |   |  |
|   | =       | 94.4 ft-                        |           |   |  |
|   | =       | 1133.5                          | in-lb     |   |  |
|   |         |                                 |           |   |  |
| Tension controlled reinforcement ratio ( $\rho_t$ )         |         | (ρ <sub>t</sub> )               | =         | 0.319 x 0.85 x 3500 / 60000                   |  |
|   |         |                                 | =         | 0.0158  |  |
| Maximum allowed reinforcement ratio ( $\rho_{\text{Max}}$ ) |         | (ρ <sub>Max</sub> )             | =         | $ ho_t$                                       |  |
|   |         |                                 | =         | 0.0158  |  |
| Minimum reinforcement ratio ( $\rho_{Min}$ )                |         |                                 | =         | Max (3 x (f'c) <sup>0.5</sup> , 200) / fy     |  |
|   |         |                                 | =         | Max (3 x (3500) <sup>0.5</sup> , 200) / 60000 |  |
|   |         |                                 | =         | Max (177.5, 200) / 60000                      |  |
|   |         |                                 | =         | 200 / 60000                                   |  |
|   |         |                                 | =         | 0.0033  |  |

Reinforcement ratio for +ive moment ( $\rho_{Pos}$ )

 $(0.85 \text{ x f'c} / \text{ fy}) \text{ x } \{1 - [1 - 2 \text{ x } M_{UP} / (\phi \text{ x } b_w \text{ x } \text{t}_f / 2^2 \text{ x } 0.85 \text{ x f'c})]^{0.5}\}$ =  $1.78 \times 10^{-3}$ = 0.00178  $(\rho_{Min} = 0.0033)$ = < 0.00178  $(\rho_{Max} = 0.0158)$  **OK** < = Area of Reinforcement Required = 0.00178 x 12 x 2/2 0.021 in<sup>2</sup> = Rebar Used #4 rebar = 0.1963 in<sup>2</sup> Area of Rebar = Spacing (0.1963 / 0.021) x 12 = 112.71 in = Per Section 7.12 of ACI-318-02 Spacing of rebar will be Minimum of the following three (1) Calculated spacing as above = 112.71 in (2) 5 times of thickness of slab =  $5 \times 2 = 10$  in (3) 18 in

Provide #4 rebar @ 10" O.C.

### 8.2.10 Calculation for Longitudinal Slab Reinforcement

Consider 12" width of slab,

| Per Section 7.<br>Spacing  | 12 of AC<br>=<br>= | I-318-02 Minimum reinforcement<br>(0.1963 / 0.0432) x 12<br>54.52 in | =<br>=<br>= | 0.0018 x area of cross section<br>0.0018 x 2 x 12<br>0.0432 in |  |
|--|--------------------|--|-------------|--|--|
| Per Section 7.12 of ACI-318-02 Spacing of rebar will be Minimum of the following three |                    |  |             |  |  |

(1) Calculated spacing as above = 54.52 in (2) 5 times of thickness of slab =  $5 \times 2 = 10$  in (3) 18 in

Provide #4 rebar @ 10" O.C.

8.3.1

## 8.3 Multiple Span Joist

## (12" Panel Size With 10" Deep Joist @ 32" O.C. And 2" Topping Slab)

| Inputs<br>Panel Designation                          | =          | 12" Pa               | nel secti          | on with   | 10" deep  | beam         |
|--|------------|----------------------|--------------------|-----------|-----------|--------------|
| Beam Depth (dw)                                      | =          | 10"                  |                    |           |           |              |
| Topping (t <sub>f</sub> )                            | =          | 2"                   |                    |           |           |              |
| Minimum Beam Width, bottom $(b_w)$                   | =          | 6.5"                 |                    |           |           |              |
| Average Joist Width (b <sub>wa)</sub>                | =          | 5.2"                 |                    |           |           |              |
| Panel Span, Transverse (b)                           | =          | 32"                  |                    |           |           |              |
| Maximum Span of the Deck (L)                         | =          | 10'-0"               |                    |           |           |              |
| Number of Span                                       | =          | Multiple             | е                  |           |           |              |
| Live load acting on the deck $(w_{LL})$              | =          | 40 psf               |                    |           |           |              |
| Dead load acting on the deck $(w_{\text{DL}})$       | =          | 10 psf               |                    |           |           |              |
| Unit weight of concrete ( $\gamma$ c)                | =          | 145 pc               | f                  |           |           |              |
| Specified compressive strength of con-               | crete (f'c | ;) =                 | 3500 p             | si        |           |              |
| Yield strength of rebar (fy)                         |            | =                    | 60000              | psi       |           |              |
| Rebar cover, Center of rebar (c)                     |            | =                    | 1.25"              |           |           |              |
| Allowable Deflection factor, Total ( $\Delta_{Fact}$ | tor LL)    | =                    | 360                | (Short    | Term)     |              |
| Allowable Deflection factor, Total ( $\Delta_{Fact}$ | tor LL)    | =                    | 480                | (Long     | Term)     |              |
|  |            |                      |                    |           |           |              |
| Analysis   |            |                      |                    |           |           |              |
| Dead Load factor (K <sub>DL</sub> )                  | =          | 1.2                  |                    |           |           |              |
| Live Load factor (K <sub>LL</sub> )                  | =          | 1.6                  |                    |           |           |              |
| Section Properties                                   |            |                      |                    |           |           |              |
| Cross-section area A                                 | =          | 115.98               | 88 in <sup>2</sup> | (Refer    | Table or  | n Page – 7)  |
| Distance of CG from top $(CG_{Top})$                 | =          | 3.8451               | in from            | top       |           |              |
| Moment of inertia about x-axis $(I_{XX})$            | =          | 1632.1               | in <sup>4</sup>    |           |           |              |
| Section Modulus about x-axis $(S_{xx})$              | =          |                      |                    | 3.8451,   | (10 + 2 - | - 3.8451)]}  |
|  | =          | 200.13               | 7 in <sup>3</sup>  |           |           |              |
| Effective depth (d)                                  | =          | d <sub>w</sub> -c    | + t <sub>f</sub>   |           |           |              |
|  | =          | 10 – 1.              | 25 + 2             |           | =         | 10.75"       |
| Self weight of deck (w <sub>Self</sub> )             | =          | w <sub>c</sub> x A   | Gross              |           |           |              |
|  | =          | 145 x 1              | 15.9888            | 3/144     | =         | 116.794 plf  |
| Total Dead Load W <sub>DTotal</sub>                  | =          | Self W               | eight + A          | Applied / | Additiona | al Dead Load |
|  | =          | 116.79               | 4 + 10 x           | 32/12     | =         | 143.46 plf   |
| Live Load W <sub>LL</sub>                            | =          | 40 x 32              | 2/12               |           | =         | 106.67 plf   |
| Total un-factored Load W <sub>P</sub>                | =          | W <sub>D Total</sub> |                    |           |           |              |
|  | =          | 143.46               | + 106.6            | 57        | =         | 250.13 plf   |

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|---------|--|---|------------------------|---------------------|--|--------------|
|         | Total factored load (P <sub>U</sub> )            | =   | {K <sub>DL</sub> x w   | D Total +           | $K_{LL} \times w_{LL}$                         |              |
|         |  | =   | 1.2 x 14               | 3.46 + <sup>-</sup> | 1.6 x 106.67 = 342                             | 2.824 plf    |
|         | Maximum Shear Force $(V_{U})$                    | =   | 1.15 x P               | u x L /             | 2 (For Multiple Span)                          |              |
|         |  | =   | 1.15 x 3               | 42.824              | x 10 / 2                                       |              |
|         |  | =   | 1971.24                | lb.                 |  |              |
|         | Maximum Positive Moment ( $M_{UP}$ )             |   |                        |                     |  |              |
|         | =  | (P <sub>U</sub> x L                                 | .² / 14) x 1           | 2                   | {At End Spans of M                             | ultiple Span |
|         | =  |   |                        | -                   | 2 = 29384.91 in-lb.                            |              |
|         | =  | • -   | · · · · ·              |                     | nterior Spans of Multi                         | ple Span)    |
|         | =  | (342.82   | 24 x 10 <sup>2</sup> / | 16) x 1             | 2 = 25711.8 in-lb.                             |              |
|         | Maximum Negative Moment (M <sub>UN</sub>         | -   |                        |                     |  |              |
|         |  | -   |                        | · · · ·             | erior Support of Multi                         | ple Span)    |
|         |  | 342.824 x 10 <sup>2</sup>                           |                        |                     |  |              |
|         |  |   |                        |                     | Interior Support of Mu                         | ultiple Span |
|         |  | $342.824 \times 10^2$                               |                        |                     |  |              |
|         |  | $^{2}U \times L / 11) \times 342.824 \times 10^{2}$ |                        |                     | erior Support of Multip                        | bie Span)    |
|         | = (3   | 042.024 X TU  | / 11) X 12             | . = 373             | 90.90 III-ID.                                  |              |
| 8.3.2   | Design   |   |                        |                     |  |              |
| 8.3.2.1 | Shear Strength                                   |   |                        |                     | <i>(</i> , <u>)</u> 0.5                        |              |
|         | Shear Strength of the section ( $\phi V$         | C) =  |                        |                     | $(f'c)^{0.5} \times b_{wa} \times d$           |              |
|         |  | =   |                        |                     | (3500) <sup>0.5</sup> x <mark>5.2</mark> x 10. |              |
|         |  | =   | 5456.69                | ID. >               | V <sub>U</sub> (= 1714.12 lb.)                 | (OK)         |
| 8.3.2.2 | Moment Strength                                  |   |                        |                     |  |              |
|         | Strength reduction factor ( $\phi$ )             |   | =                      | 0.9                 |  |              |
|         | $\beta_1$  |   | =                      | 0.85                | if (f'c ≤ 4000 psi)                            |              |
|         | Tension controlled reinforcement                 | ratio ( $\rho_b$ )                                  | =                      | 0.319>              | x 0.85 x 3500 / 60000                          | 1            |
|         |  |   | =                      | 0.0158              | 3  |              |
|         | Maximum allowed reinforcement                    | ratio (ρ <sub>Max</sub> )                           | =                      | $\rho_t$            |  |              |
|         |  |   |                        | 0.0158              |  |              |
|         | Minimum reinforcement ratio ( $\rho_{\text{Mi}}$ | n)  |                        |                     | 3 x (f'c) <sup>0.5</sup> , 200) / fy           |              |
|         |  |   | =                      | Max (3              | 8 x (3500) <sup>0.5</sup> , 200) / 60          | 0000         |
|         |  |   |                        |                     | 77.5, 200) / 60000                             |              |
|         |  |   | = 2                    | 200 / 6             | 0000   |              |

### Positive Reinforcement

Reinforcement ratio for +ive moment ( $\rho_{Pos}$ )

 $= \qquad (0.85 \ x \ f'c \ / \ fy) \ x \ \{1 - [1 - 2 \ x \ M_{UP} / \ (\phi \ x \ b_{wa} \ x \ d^2 \ x \ 0.85 \ x \ f'c)]^{0.5}\}$ 

=

0.0033

|         | AmDeck Design<br>Amvic, Inc.        |  | repared by: Kap<br>necked by: Andy |                                  | Date: 05/01/2007<br>Date: 05/01/2007                  |
|---------|-------------------------------------|--|------------------------------------|----------------------------------|---|
|         | =                                   | (0.85 x 3500/60000) {                        | 1—[1—2 x 293                       | 84.91/ (0.9 x <mark>5.2</mark> ) | x 10.75 <sup>2</sup> x 0.85 x 3500)] <sup>0.5</sup> } |
|         | =                                   | $0.0009139 < (\rho_{Min} = 0$                | .0033)                             |                                  |   |
|         | =                                   | $0.0033 < (\rho_{Max} = 0.013)$              | 58) <b>OK</b>                      |                                  |   |
|         | Area of reinford                    | ement required (A <sub>S Pos</sub>           | req) = ρ                           | <sub>Pos</sub> x bwa x d         |   |
|         |                                     |  | = 0.                               | 0033 x <mark>5.2</mark> x 10.7   | 75  |
|         |                                     |  | = 0.                               | 18477 in <sup>2</sup>            |   |
|         | A <sub>S Pos</sub> provided         | = 1 # 4 (Area =                              | 0.1963 in <sup>2</sup> > 0         | .18477) <b>OK</b>                |   |
|         | Negative Rein<br>Reinforcement      | <b>forcement</b><br>ratio for -ive moment (p | o <sub>Neg</sub> )                 |                                  |   |
|         | =                                   | (0.85 x f'c / fy) x {1 - [                   | 1 – 2 x M <sub>UN</sub> / (¢       | $x b_{wa} x d^2 x 0.85$          | x f'c)] <sup>0.5</sup> }                              |
|         | =                                   | (0.85 x 3500/60000) {                        | 1 – [1 – 2 x 41                    | 138.88/ (0.9 x <mark>5.2</mark>  | 2 x 10.75 <sup>2</sup> x 0.85 x 3500)] <sup>0.5</sup> |
|         | =                                   | $0.001284 < (\rho_{Min} = 0.0)$              | 0033)                              |                                  |   |
|         | =                                   | $0.0033 < (\rho_{Max} = 0.015)$              | 58) <b>OK</b>                      |                                  |   |
|         | Area of reinford                    | ement required ( $A_{S Neg}$                 | req) = $\rho$                      | <sub>Neg</sub> x bwa x d         |   |
|         |                                     |  | = 0.                               | 0033 x <mark>5.2</mark> x 10.7   | 75  |
|         |                                     |  | = 0.                               | 18447in <sup>2</sup>             |   |
|         | A <sub>S Neg</sub> provided         | = 1 # 4 (Area =                              | 0.1963 in <sup>2</sup> > 0         | .18447) <b>OK</b>                |   |
|         | Nominal mon<br>Plain Concret        | -  |                                    |                                  |   |
|         |                                     | ent strength of the secti                    | on ( $\phi$ Mn) =                  | 0.65 x 5 (f'c)                   | <sup>0.5</sup> x S <sub>XX</sub>                      |
|         |                                     |  | =                                  | 0.65 x 5 x (3                    | 500) <sup>0.5</sup> x 200.137                         |
|         |                                     |  | =                                  | 38480.8594                       | in-lb.  |
|         | <b>Reinforced C</b><br>Nominal mome | <i>oncrete</i><br>ent strength of the secti  | on (øMn)                           |                                  |   |
|         | =                                   | $\phi A_{S Pos}$ provided x fy x             | [d – (A <sub>S Pos</sub> pr        | ovided x fy / (0.8               | 5 x f'c x b))/2]                                      |
|         | =                                   | 0.9 x 0.1963 x 60000                         | x [10.75 – (0.1                    | 963 x 60000 / (0.                | 85 x 3500 x 32))/2]                                   |
|         | =                                   | 113296.43 in-lb.                             |                                    |                                  |   |
| 3.3.2.3 | Deflection                          |  |                                    |                                  |   |
|         | Total depth of                      | section (h)                                  | = d <sub>w</sub> -                 | ⊦ t <sub>f</sub>                 |   |
|         |                                     |  | = 10 -                             | + 2                              |   |
|         |                                     |  | = 12"                              |                                  |   |

|   | = | 12"   |
|---|---|---|
| A <sub>LP</sub>                               | = | 0 in <sup>2</sup>                                   |
| A <sub>B</sub>                                | = | 0.1963 in <sup>2</sup>                              |
| R <sub>DS</sub>                               | = | 3/8" (For #3 rebar)                                 |
| Modulus of elasticity of concrete ( $E_{C}$ ) | = | $(\gamma_{C})^{1.5} \times (33 \times (f'c)^{0.5})$ |

#### **Consulting Engineers, Corp** Project: AmDeck Design Guide Prepared by: Kapil Date: 05/01/2007 Client: Amvic, Inc. Checked by: Andy / Raj Date: 05/01/2007 (145)<sup>1.5</sup> x (33 x (3500)<sup>0.5</sup>) = 3408788 psi = Modulus of elasticity of steel (E<sub>s</sub>) 2900000 psi = Modular ratio (n) Es / Ec = 29000000 / 3408788 = 8.51 = 7.5 x (f'c) <sup>0.5</sup> Modulus of rupture of concrete (fr) = 7.5 x (3500)<sup>0.5</sup> = 443.7 psi = Cracking Moment (M<sub>CB</sub>) fr x lg / y<sub>t</sub> = 443.7 x 1632.1 / 8.1549 = 88800.9 in-lb. = b (n-1)A's tf ۵ kd NA CG h dw yt nAs bw Cracked Transformed Section Gross Section 8.1549" (As Provided by Amvic) Уt = 1632.1 in<sup>4</sup> (As Provided by Amvic) lg = С b<sub>wa</sub> / (n x A<sub>S Pos</sub> provided) = 5.2 / (8.51 x 0.1963) = 3.1128 = f t<sub>f</sub> x (b-b<sub>wa</sub>) / (n x A<sub>S Pos</sub> provided) = 2 x (32 - 5.2) / (8.51 x 0.1963) = 32.085 = (n-1) A<sub>S Neg</sub> provided / (n A<sub>S Pos</sub> provided) r = (8.51-1) x (0.1963 / (8.51 x 0.1963) = 0.8825 = ď $h - d_{LP} =$ 12 - 10.125 1.875" = $\sqrt{C(2d + t_f \times f + 2rd') + (f + r + 1)^2} - (f + r + 1)$ kd = $\overline{C}$

 $= [{3.1128 \times (2 \times 10.75 + 2 \times 32.085 + 2 \times 0.8825 \times 1.875) + (32.085 + 0.8825 + 1)^2}^{0.5} - (32.085 + 0.8825 + 1)] / 3.1128$ 

= 1.2393

Moment of inertia of cracked section transformed to concrete (Icr)

 $= (b-b_{W})t_{f}^{3}/12 + b_{W}(kd)^{3}/3 + (b-b_{W})t_{f}(kd-t_{f}/2)^{2} + nA_{Bi}(d-kd)^{2} + (n-1)A_{LPi}(kd-d')^{2}$  $=(32-5.2) \times 2^{3} / 12 + 5.2 \times (1.2393)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} + 8.51 \times (0.1963) (10.75 - 10.10)^{3} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} / 3 + (32-5.2) (2) (1.2393-2/2)^{2} / 3 + (32-5.2) (2) / 3 + (32-5.2) (2) (2) (32-5.2) (2) (32-5.2) (2) (32-5.2) (32 (1.2393)^{2} + (8.51-1) \times 0.1963 \times (1.2393-1.875)^{2}$  $= 209.43 \text{ in}^4$ Service Moment (M<sub>P</sub>) 143.46 x 10<sup>2</sup>/ 14 x 12 Dead Load moment, M<sub>D</sub> = 12296.57 lb-in = Live Load moment, M  $106.67 \times 10^2 / 14 \times 12$ = = 9142.86 lb-in Total moment, M<sub>D+L</sub> 12296.57 + 9142.86 = 21439.43 lb- in = Sustained Moment, M<sub>SUS</sub>  $M_D$  + 0.5 x  $M_L$  (Assume that 50% Load as sustained) = 12296.57 + 0.5 x 9142.86 = 16868.0 lb-in =

Effective moment of inertia for deflection computation (le)

### A. Under Dead Load

| Mcr / M <sub>D</sub>    | = | 88800.9 / 12296.57 |
|-------------------------|---|--------------------|
|                         | = | 7.221              |
| Hence (le) <sub>d</sub> | = | l <sub>g</sub>     |

### B. Under Sustained Load

| $Mcr / M_{SUS}$         | = | 88800.9 / 16868.0 |
|-------------------------|---|-------------------|
|                         | = | 5.264             |
| Hence (Ie) <sub>d</sub> | = | ا <sub>g</sub>    |

### C. Under Dead + Live Load

| Mcr / $M_{D + L}$       | = | 88800.9 / 21439.43 |
|-------------------------|---|--------------------|
|                         | = | 4.142              |
| Hence (le) <sub>d</sub> | = | l <sub>g</sub>     |

### 8.3.2.3.1 Short Term Deflection

For Continuous beam, the mid-span deflection is  $\Delta_i = K (5/48) M_P \times L^2 / (Ec \times Ie)$ 

Where,

K =  $1.20 - 0.20 \text{ M}_{\text{P}} / \text{M}_{\text{O}}$  for continuous beam = 0.80 for Continuous fixed-hinged beam, mid span deflection

| <b>Consulting Engine</b> | ers, Corp   |  |                  |  |  |  |  |
|--------------------------|---|--|------------------|--|--|--|--|
| Project: AmDeck Desig    | n Guide   | Prepared by: Kapil   | Date: 05/01/2007 |  |  |  |  |
| Client: Amvic, Inc.      |   | Checked by: Andy / Raj   | Date: 05/01/2007 |  |  |  |  |
|                          | = 0.738   | for Continuous fixed-hinged beam, max deflection using um moment |                  |  |  |  |  |
|                          | = 0.60  | for fixed-fixed beam   |                  |  |  |  |  |
|                          | = 1.0   | for simple span  |                  |  |  |  |  |
| M <sub>O</sub> = Simple  | span moment at r  | mid span, = (P x $L^2 / 8$ ) x 12                                |                  |  |  |  |  |
| $\Delta_{i D} =$         | K (5/48) M <sub>D</sub> x I   | L <sup>2</sup> / (Ec x le)                                       |                  |  |  |  |  |
| =                        | $= 0.8 \times (5/48) \times 12296.57 \times (10 \times 12)^2 / (3408788 \times 1632.1)$ |  |                  |  |  |  |  |
| =                        | 0.002652"   |  |                  |  |  |  |  |
| $\Delta_{i LL} =$        | K (5/48) M <sub>LL</sub> x  | L <sup>2</sup> / (Ec x le)                                       |                  |  |  |  |  |
| =                        | 0.8 x (5/48) x 9  | 9142.86 x (10 x12) <sup>2</sup> / (3408788 x 163                 | 2.1)             |  |  |  |  |
| =                        | = 0.001972"   |  |                  |  |  |  |  |
| $\Delta_{i SUS}$ =       | K (5/48) M <sub>SUS</sub>   | x L <sup>2</sup> / (Ec x le)                                     |                  |  |  |  |  |
| =                        | (100, (500, 100, 100, 100, 100, 100, 100, 100,  |  |                  |  |  |  |  |
| =                        | = 0.003638"   |  |                  |  |  |  |  |

### Allowable Deflections

| $\Delta_{i \text{ Allow LL}} = (L x)$ | 12) / $\Delta_{Factor Total}$ |
|---------------------------------------|-------------------------------|
|---------------------------------------|-------------------------------|

- = (10 x 12) / 180
- = 0.6666"
- > Δ<sub>i LL</sub> = 0.001972" (OK)

### 8.3.2.3.2 Long term Deflection

i. Sustained load duration of 5 years & more

| λ   | = | ξ/ (1 + 50 x p')               |
|---|---|--------------------------------|
|   | = | 2.0 / (1 + 50 x 0.0035)        |
|   | = | 1.702                          |
| $\Delta_{\rm (CP+SH)}$                      | = | $\lambda \ge \Delta_{i \ SUS}$ |
|   | = | 1.702 x 0.003638               |
|   | = | 0.006192 in                    |
| $\Delta_{\rm (CP+SH)} + \Delta_{\rm i\;LL}$ | = | 0.006192 + 0.001972            |
|   | = | 0.008164 in                    |

### Allowable Deflections

| $\Delta_{\rm i\;Allow}$ | = | (L x 12) / $\Delta_{Factor}$ |      |
|-------------------------|---|------------------------------|------|
|                         | = | (10 x 12) / 240              |      |
|                         | = | 0.5"                         |      |
|                         | > | 0.008164"                    | (OK) |

| AmDeck Desig<br>Amvic, Inc.            | gn Guide            |                           |                        | Prepared by: Kapil<br>hecked by: Andy / F | aj              | Date: 05/01/2007<br>Date: 05/01/2007 |
|--|---------------------|---------------------------|------------------------|---|-----------------|--------------------------------------|
| ii. Sustaine                           | d load du           | ration o                  | f 3 Mon                | ths                                       |                 |                                      |
| Sustained Mo                           | oment, M            | SUS                       | =                      | $M_D$ + 0.5 x $M_L$                       | (Assume that 50 | 0% Load as sustained)                |
|  |                     |                           | =                      | 12296.57 + 0.5                            | x 9142.86       |                                      |
|  |                     |                           | =                      | 16868 lb-in                               |                 |                                      |
| Under Sustai                           | ned Load            | l                         |                        |   |                 |                                      |
| Mcr /                                  | M <sub>SUS</sub>    |                           | =                      | 88800.9 / 1686                            | 8               |                                      |
|  |                     |                           | =                      | 5.264                                     |                 |                                      |
| Henc                                   | e (le) <sub>d</sub> | =                         | l <sub>g</sub>         |   |                 |                                      |
| λ                                      | =                   | ξ/ (1 -                   | + 50 x p               | ')  |                 |                                      |
|  | =                   | 1.0/(                     | (1 + <mark>50</mark> : | x 0.0035)                                 |                 |                                      |
|  | =                   | 0.851                     |                        |   |                 |                                      |
| $\Delta_{(CP+I)}$                      | <sub>SH)</sub> =    | $\lambda \times \Delta_i$ | SUS                    |   |                 |                                      |
|  | =                   | 0.851                     | x 0.003                | 3638                                      |                 |                                      |
|  | =                   | 0.003                     | 8096 in                |   |                 |                                      |
| $\Delta_{(CP+SH)}$ + $\Delta_{i \ LL}$ | =                   | 0.003                     | 8096 + 0               | 0.001972                                  |                 |                                      |
|  | =                   | 0.005                     | 6 <mark>068</mark> in  |   |                 |                                      |
| Allowable D                            | eflection           | s                         |                        |   |                 |                                      |
| $\Delta_{\sf i \; Allow}$              | =                   | (L x 1                    | 2) / $\Delta_{Fac}$    | ctor                                      |                 |                                      |

|                           | > | 0.005068"                  | (OK) |
|---------------------------|---|----------------------------|------|
|                           | = | 0.5"                       |      |
|                           | = | (10 x 12) / 24             | C    |
| $\Delta_{\sf i \; Allow}$ | = | (L x 12) / $\Delta_{Fact}$ | or   |

### 8.3.3 Calculation for Transverse Slab Reinforcement

| Consider 12" width of slab, |  |                   |                              |   |   |  |  |  |  |  |  |  |
|-----------------------------|--|-------------------|------------------------------|---|---|--|--|--|--|--|--|--|
| _                           | 27.5 / 1                                 |                   |                              |   |   |  |  |  |  |  |  |  |
| $L_{Slab} =$                | 27.37 ft                                 |                   |                              |   |   |  |  |  |  |  |  |  |
| Self weight                 |  | =                 | 116.794 (As o                | calculated a  | ubove)  |  |  |  |  |  |  |  |
| Total factore<br>Maximum M  |  |                   | = 216.<br>= 216.<br>= 94.4   | x 10 x 12 / 1<br>15 plf<br>15 x 2.29 <sup>2</sup> /<br>ft-lb<br>8.5 in-lb | 12 + 1.2 x 116.794 + 1.6 x 40 x 12/12<br>/ 12       |  |  |  |  |  |  |  |
| Tension co                  | ontrolled reir                           | forceme           | ent ratio (p,)               | =   | 0.319 x 0.85 x 3500 / 60000                         |  |  |  |  |  |  |  |
|                             |  |                   |                              | =   | 0.0158  |  |  |  |  |  |  |  |
| Maximum                     | allowed rein                             | forceme           | nt ratio (ρ <sub>Max</sub> ) | =   | ρ <sub>t</sub>                                      |  |  |  |  |  |  |  |
|                             |  |                   |                              | =   | 0.0158  |  |  |  |  |  |  |  |
| Minimum r                   | reinforcemer                             | nt ratio (p       | o <sub>Min</sub> )           | =   | Max (3 x (f'c) <sup>0.5</sup> , 200) / fy           |  |  |  |  |  |  |  |
|                             |  |                   |                              | =   | Max (3 x (3500) <sup>0.5</sup> , 200) / 60000       |  |  |  |  |  |  |  |
|                             |  |                   |                              | =   | Max (177.5, 200) / 60000                            |  |  |  |  |  |  |  |
|                             |  |                   |                              | =   | 200 / 60000   |  |  |  |  |  |  |  |
|                             |  |                   |                              | =   | 0.0033  |  |  |  |  |  |  |  |
| Reinforcem                  | nent ratio for                           | +ive mo           | ment (p <sub>Pos</sub> )     |   |   |  |  |  |  |  |  |  |
| = (0.                       | .85 x f'c / fy)<br>′8 x 10 <sup>-3</sup> | x {1 — [1         | $-2 \times M_{UP}$ / (¢      | x b <sub>w</sub> x t <sub>f</sub> /2                                      | 2 <sup>2</sup> x 0.85 x f'c)] <sup>0.5</sup> }      |  |  |  |  |  |  |  |
|                             | 0178                                     | <                 | $(\rho_{Min} = 0.003)$       | 33)   |   |  |  |  |  |  |  |  |
|                             | 0178                                     | <                 | $(\rho_{Max} = 0.01)$        |   |   |  |  |  |  |  |  |  |
| Area of Reir                | nforcement Re                            | equired           | =                            | 0.0017<br>0.021   | /8 x 12 x 2/2<br>in <sup>2</sup>                    |  |  |  |  |  |  |  |
| Rebar Used                  | d =                                      | #4 reba           | ar                           |   |   |  |  |  |  |  |  |  |
| Area of Rel                 | bar =                                    | 0.1963            | in <sup>2</sup>              |   |   |  |  |  |  |  |  |  |
| Spacing                     | =<br>=                                   | (0.1963<br>112.71 | 3 / 0.021) x 12<br>in        | 2   |   |  |  |  |  |  |  |  |
| (1)<br>(2)                  |  | spacing           | as above =                   | 112.7   | e Minimum of the following three<br>1 in<br>= 10 in |  |  |  |  |  |  |  |
|                             |  |                   |                              |   |   |  |  |  |  |  |  |  |

Provide #4 rebar @ 10" O.C.

### 8.3.4 Calculation for Longitudinal Slab Reinforcement

Consider 12" width of slab,

| Per Section 7.12 of ACI-318-02 Minimum reinforcement | = | 0.0018 x area of cross section |
|--|---|--------------------------------|
|  | = | 0.0018 x 2 x 12                |

Prepared by: Kapil Checked by: Andy / Raj

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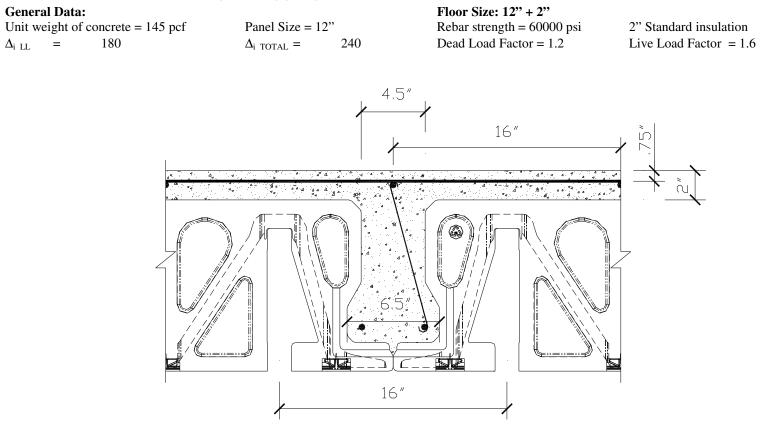
 $\begin{array}{rcl} = & 0.0432 \text{ in} \\ \text{Spacing} &= & (0.1963 / 0.0432) \times 12 \\ = & 54.52 \text{ in} \end{array}$ Per Section 7.12 of ACI-318-02 Spacing of rebar will be Minimum of the following three (1) Calculated spacing as above = & 54.52 in (2) 5 times of thickness of slab = & 5 \times 2 = 10 \text{ in} \\ & (3) 18 \text{ in} \end{array}

Provide #4 rebar @ 10" O.C.

# 9 AmDeck Joist Design Chart

| Project: AmDeck Design Guide | Prepared by: Vinay/Kapil | Date: 04/17/2007 |
|------------------------------|--------------------------|------------------|
| Client: Amvic, Inc.          | Checked by: Andy         | Date: 04/17/2007 |

## 9.1 Table A: f'c = 3500 psi, Topping Thickness = 2.0"



| Project: | AmDeck Design Guide |
|----------|---------------------|
| Client:  | Amvic, Inc.         |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea   | Dead Load = 10 psf   |  |                           |                              |  |                                 |  |                          |                          |                            |                          |                          |                          |                              |                          |                           |                          |                             |                             |                            |                          |                        |
|---|--|--|---------------------------|------------------------------|--|---------------------------------|--|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|------------------------------|--------------------------|---------------------------|--------------------------|-----------------------------|-----------------------------|----------------------------|--------------------------|------------------------|
| ירוו- ו - ארך |  |  |                           |                              |  |                                 |  |                          |                          |                            |                          |                          |                          | 1 -100 U - 0                 |                          |                           |                          |                             |                             |                            |                          |                        |
| 76.95   | Fu uu  |  | 174                       | 174                          | 1#   | 174                             | 174  | 1#                       | <br>174                  | 174                        | 1#                       | 174                      | 174                      | 1#                           | 174                      | 174                       | 14                       | 174                         | 174                         | 1#                         | 174                      | 174                    |
|   | Serro centeri - Hi Scaro   |  | 14                        | 14                           | 14   | 14                              | 14:<br>14:                                     | - 1#<br>1#               | 14                       | 14<br>14                   | - 14<br>14               | 14:<br>14:               | 14                       | . 1#<br>1#                   | 14                       | 14)<br>14)                | - 14<br>14               | 14                          | 14:<br>14:                  | - 14<br>14                 | 14                       | 14:                    |
| п   | Entradadi (Folenar Folge<br>Loninudadi (Finc Buipo                           |  | 14                        | 14 <sup>.</sup>              | 142  | 141                             | 147  | 141                      | 147                      | 147                        | 144                      | 14"                      | 14°<br>156               | 14"                          | 14%                      | 142                       | 147                      | 142                         | 147                         | 142                        | 142                      | 141                    |
|   | Servicement Cities Fr. S. j  | ur 14'                                   | 14                        | 14                           | 14   | 14                              | 14   | 14                       | 14                       | 14                         | 14                       | 14                       | 14                       | 1#                           | 14                       | 14                        | 14                       | 14                          | 14                          | 14                         | 14                       | 14                     |
|   | Siac<br>rankve beilke mi   | - MQ(Jn)<br>- MQ(Jn)                     |                           |                              | <ul> <li>MQ(0)(0)</li> <li>MQ(0)(0)</li> </ul> | - MQ(UniO)<br>- MQ(UniO)        | <ul> <li>MO(0) 00</li> <li>MO(0) 00</li> </ul> | - MQ(Uni0)<br>- MQ(Uni0) | MQ10600<br>MQ10600       | - MQ(UND);<br>- MQ(UND);   | MQ(UniO)<br>MQ(UniO)     | MQ(UND)<br>MQ(UND)       | 44200000<br>44200000     | - MQ(UniO)<br>- MQ(UniO)     | M201600<br>M201600       | - MQ(UND)<br>- MQ(UND)    | MQ(UniO)<br>MQ(UniO)     | <ul> <li>MQCUNCT</li> </ul> | M200000<br>M20000           | MQ(Uni0)<br>MQ(Uni0)       | MQCUN DC                 | MQ136.00<br>MQ136.00   |
|   | Full Full Full Scar  | 14                                       | <u>, nagono.</u><br>1≄    | <u>. איץ טווט.</u><br>14     | 14 <sup>-</sup>                                | 14°                             | 14<br>14                                       | 14°                      | 14                       | 14°                        | <u>nag un u.</u><br>1#   | 14°                      | 14°                      | 145                          | 1¢                       | 14<br>14                  | 145                      | 14°                         | 14°                         | 145                        | 14                       | 14<br>14               |
|   | Serve server) Int. Scars   | 174                                      | 144                       | 144                          | 172  | 144                             | 174  | 144                      | 144                      | 174                        | 142                      | 144                      | 144                      | 145                          | 145                      | 174                       | 145                      | 174                         | 144                         | 145                        | 174                      | 144                    |
| 17  | Lete o 20:p<br>Logi dost 1° o Forp   | 10 174                                   | 144                       | 14                           | 144  | 14                              | 144  | 144                      | 14                       | 14                         | 144                      | 14                       | 14                       | 144                          | 14                       | 114                       | 14                       | 14                          | 144                         | 14                         | 145                      | 144                    |
| · · ·   | we no center! wher this Sup  | 0.1 174                                  | 174                       | 144                          | 174  | 144                             | 174  | 144                      | 144                      | 144                        | 144                      | 144                      | 144                      | 144                          | 144                      | 174                       | 174                      | 144                         | 174                         | 144                        | 174                      | 144                    |
|   | Sa   | - MS( 10.)                               |                           |                              | . Mg 00.00                                     | - MSC Do DO                     | <ul> <li>MS(0)(0)</li> </ul>                   | - MS(0)+00               | - MS: 00.00              | - MS(10.00                 | - MS: 00.00              | MSCOUDE                  | - MS: 00.00              | - MS( 00.00                  | - MS: 00.00              | - MS( 00.00               | - MS: 00.00              | - MS: 00.00                 | - MS: 00.00                 | MS: 00.00                  | HS: 00.00                | MS: 00.00              |
|   | Transverve Derof<br> Lottom   Lind Star                                      |  | ം കുട്ടവം കുട<br>പം       | : କାର୍ଟ୍ର ମହାରେ<br>କାର୍ଷ     | ୍ କଞ୍ଚିଲାରେ<br>କ୍ର                             | - MS: 00.00<br>154              | . କାର୍ଡ୍ର ୨୦୦୦<br>I <del>ସ</del> ୍ଥ            | સ્ટ્રિવેન્ટર<br>જ        | MS: 16.00<br>154         | - MS: 06.00<br>154         | MS: 06.00<br>150         | मित्र २००२०<br>१९६       | 서영: 16-20<br>159         | - M <u>B</u> , 16, 20<br>155 | 2459 Dia 20<br>154       | - MS(1)+20<br>184         | - MS(1)+20<br>185        | - MS: 00.00<br>159          | MS: 06.00<br>189            | 24년: Dal Dal<br>192        | MS: Do DC<br>INC         | Alg: 0 a 0.0<br>154    |
|   | Tenún enert - Hi Spara   | 145                                      | 14                        | 14                           | 145  | 14                              | 14   | 145                      | 14                       | 14                         | 145                      | 14                       | 14                       | 145                          | 14                       | 14                        | 145                      | 14                          | 14                          | 24                         | 14                       | 141                    |
|   | Fater or Focp  | dx 1₽                                    | 14                        | 14                           | 14   | 14                              | 14   | 14                       | 14                       | 14                         | 14:                      | 14                       | 14                       | 141                          | 14                       | 141                       | 14                       | 14                          | 14                          | 14                         | 14                       | 14                     |
| 14  | Lonin dinti (A no Bucpa<br>Dentin enerti Cal-o bi Sig                        | n 14°                                    | 14                        | 14                           | 14   | 14                              | 14   | 14                       | 14                       | 14                         | 14                       | 14                       | 14                       | 14                           | 14                       | 14                        | 14                       | 14                          | 145                         | 14                         | 14                       | 145                    |
|   | 5 ac   | - MQ(Un)                                 |                           |                              |  |                                 |  | M2010.00                 | 4470.0000                | MQ(06.00                   |                          | MQ106.00                 | M2010.00                 | MQ(Un 00                     | M2010.00                 | 4470.0000                 | M20.04.00                | M2210.00                    | M20104-00                   | M2210.000                  | 4420.0 M 00              | 440210 h 100           |
|   | Fallste de Heim.   | MQ1061<br>145                            | 01 - MQ10600<br>444       | : MQ(Unit);<br>1#            | - MQ10600<br>145                               | - MQ10600<br>444                | - <u>MQ(UniO)</u><br>141                       | MQ10m100<br>145          | MQ106100<br>141          | 4000n00<br>140             | MQ106.00<br>244          | MQ106.00<br>442          | 74021Un 100<br>140       | 74021Un 00<br>200            | MQ10600<br>145           | MQ10m00<br>145            | 1400 Jan 00<br>1401 - 26 | 4021Un 00<br>145            | MQ10m00<br>145              | 84000000<br>1411 #         | 44000 00<br>145          | - #4021Um 001<br>145   |
|   | verroisement - 11. Stars   |  | 174                       | 174                          | 175  | 174                             | 174  | 150                      | 174                      | 174                        | 34                       | 174                      | 174                      |                              | 175                      | 174                       | 174.4                    | 150                         | 174                         | 1744174                    | 155                      | 15                     |
|   | Lele o Euro  |  | 144                       | 174                          | 174  | 144                             | 174  | 174                      | 174                      | 175                        | 144                      | 144                      | 174                      | 144                          | 174                      | 174                       | 174                      | 154                         | 175                         | 174                        | 175                      | 15                     |
| 16  | <ul> <li>Logindost 11 m. Enepti<br/>servo certerti Cihar (r), Sup</li> </ul> |  | 145                       | 145                          | 14   | 145                             | 145  | 141                      | 145                      | 145<br>150                 | 141                      | 145                      | 145<br>170               | 141                          | 24)<br>174               | 145<br>170                | 14                       | 244<br>175                  | 241                         | 14)<br>154                 | 242                      | 24)<br>17)             |
|   | Sa   | - MS: 10.3                               | u Aginad                  | <ul> <li>MS(0)(0)</li> </ul> | - Mg 00.00                                     | - Mgi Du Dü                     | <ul> <li>MgcDuD0</li> </ul>                    | - Algebride              | HS: Do DC                | Hg Du Dù                   | Alg: Du Dù               | Algebra Di               | - MS: 06.00              | - Alg: 00.00                 | - Mgi Du Du              | - Mge Dia Dü              | MS(DuDC                  | - Algebrach                 | Algebrach                   | Alg: Du DU                 | - Hg(0),00               | HS TO DO               |
|   | Тоятолягня Теної   | - MS: 000                                | ର କରୁମାନର<br><del>କ</del> |                              | . м <u>а</u> рыра                              |                                 |  | - Mgi Du Dû              |                          | - MS: 06:00                | MS: 00.00<br>(544) 5     | MS: Do DC                | MS(Dub)                  |                              | MS: Du DO                |                           | - MSC Dir DC             |                             | - Mgr Dir Dü                | - MSE DIE DO               | Mg Dalod<br>Mg           | Mg Du Du               |
|   | Lottom Uni Stan<br>Territoriement Int Scare                                  |  | 14                        | 14                           |  | 14                              | 14   | <br>>#                   | 145                      | 14                         | 141.8                    | 145                      | 145                      | 14416                        | 145                      | 145                       | 245                      | 115                         | 145                         | 245                        | 145                      | 145                    |
|   | Faler or Forg  | dx 1₽                                    | 14                        | 14                           | 14   | 14                              | 14   | 141                      | 14                       | 14                         | 141                      | 145                      | 145                      | 141                          | 145                      | 145                       | 141                      | 145                         | 145                         | 141                        | 145                      | 145                    |
| IL.   | Loninudinal (Primiliauspo<br>Demoniement Calvaria) Sig                       | ur 14                                    | 110                       | 145                          | 144  | 145                             | 145  | 144                      |                          | 145                        | 144                      | 14                       | 145                      | 144                          | 144126                   | 254                       | 174                      | 1441 AL<br>145              | 144+165                     | 174                        | 14441 AL<br>144          | 174+175                |
|   | Sa:  | MQ(Ja)                                   | ທີ່ Mຊີບົດວະ              |                              | <ul> <li>MQ(0)(0);</li> </ul>                  | - MQ(UNO)                       |  | MQ(Unit);                | 4420 h 00                | MQ10600                    |                          | MQUAD:                   | MQ10600                  | MQUAD:                       | MQ(J600                  | HQUAD:                    | MQ106.00                 | - MQ(Un 00                  | ALC: NO.                    | MQ106.00                   | MQ106.00                 | MQ106.00               |
|   | ranste de Heim.  | 24Q(Un)                                  | 0 MQ10600                 |                              | <ul> <li>MQCUNDC</li> </ul>                    | - MQ106.00                      | <ul> <li>MQ106.00</li> </ul>                   | MQ106.00                 | MQ106.00                 | MQ10600                    | MQ106.00                 | MQ106.00                 | MQ106.00                 | MQ106.00                     | MQ106.00                 | - MQ106-00                | MQ106.00                 | - MQ106.00                  | MQ106.00                    | MQ106.00                   | MQ106.00                 | MQ106.00               |
|   | For on For Span<br>we molected in the Span                                   | 141 A<br>144 A                           | 145                       | 145<br>150                   | 1年)詳<br>1441年に                                 | 145<br>150                      | 145<br>170                                     | 1年11年<br>1444年2月         | 145<br>150               | 145<br>150                 | 245<br>370               | 145<br>155               | 145                      | 745<br>370                   | 749<br>254               | 74<br>15                  | 1451 (#<br>1554) M       | 74)<br>254                  | 740<br>170                  | 145) #<br>1554180          | 24                       | 244                    |
|   | L-le o Luip  | 13 174                                   | 145                       | 175                          | 174  | 175                             | 175  | 144                      | 175                      | 175                        | 174                      | 175                      | 175                      | 174                          | 175                      | 175                       | 174                      | 175                         | 175                         | 174                        | 244                      | 284                    |
| х   | Logical data from Forget<br>Serve terre d' Ciher Pit, Sup                    | 07 14 <sup>4</sup>                       | 24)<br>154                | 24)<br>15)                   | 14   | 24)<br>154                      | 741  | 141                      | 141 M                    | 24                         | 14                       | 141 M<br>154             | 1411 #                   | 141                          | 245                      | 14日 新<br>1544 元           | 141                      | 245<br>154                  | 245<br>154+165              | 141                        | 1451 26                  | 245<br>(54+16)         |
|   | Sar  | 0: 15-<br>- HS: 10:                      |                           |                              |  | ASCOUNT AND                     | - MS(00.00                                     | Algebrack                |                          | - 204<br>- 2459: 0 to 0 0  |                          |                          | Algebrach                | - MS(10.00                   | - 200<br>2010 - 201      | - HS: 10.20               |                          |                             | - 1944 (A.<br>- Algebra D.  | HS: Dr. DL                 | - HS 16.00               |                        |
|   | Тояталят-я Тегої   | - MS( Do.)                               |                           | : M§(0)(0)                   | - M@ 00.00                                     | - MSCOUDE                       |  | Mğı Durbü                | - Mgi Diriba             | - MSED HOU                 | - MSCOUDE                | - MSEDINOU               | - Mgeonios               | - MSEDIEDE                   | - MSCOUDE                | - Mgi na bu               | - MSCOUDE                | - MSCOUDE                   | - Mgroups                   | - Million Da               | - MSEDINDO               | - Mgran an             |
|   | Lottom Lint Star<br>De d'or ement i Int Spara                                | 25                                       | 15                        | 145                          | 25   | 115                             | 145  | - <u></u>                | 24                       | 145                        | 145+180                  | 284                      | 244                      | 15418                        | 1441 A                   | 144+165<br>244            | 245                      | 1441 A.<br>1441 - Al        | 1#4+1#2<br>2#2              | 1694.55                    | 14412                    | 144+164                |
|   | Fater or Focu  |  | 145                       | 145                          | 14   | 145                             | 145  | 14                       | 145                      | 145                        | 14                       | 24                       | 244                      | 1#                           | 241                      | 24                        | 14                       | 24                          | 244                         | 14                         | 1411 #                   | 1411 8                 |
|   | Long nud not 1 <sup>45</sup> m Lauppe  | ur 144                                   | 1444175                   | 1744174                      | 144  | 144176                          | 174+174  | 144                      | 275<br>141               | 1441年1月                    | 144                      | 30                       | - 25)<br>141 1 22        | 174                          | 145+160                  |                           | 174                      | 145+160                     | 145+160<br>245              | 114                        | <br>141                  | 145+140                |
|   | Certific entent Other Mul Sig<br>Mac   | 14 14 14 14 14 14 14 14 14 14 14 14 14 1 |                           |                              |  | - 4420-000<br>140               |  | 140<br>14000             | MQ10600                  | 1401.00                    |                          | 1400 J M D0              | M2010600                 | 144<br>1440 U n D 1          | 140<br>1400 D0 D0        | - MQ(Un 00                | 140010 NO                | 1400 D n D 0                | - 2402/UND0                 | 140<br>1400 0.00           | 140<br>140<br>140        | MQ(Un UC)              |
|   | ranste pelikeim.   | MQ(Un)                                   | / អណ្ដូមកប                | <ul> <li>MQ10m00</li> </ul>  | <ul> <li>MQUADE</li> </ul>                     | MQ10h00                         | MOVED NOT                                      | - MQ10600                | MQ106.00                 | - MQ10 n 00                | MQ(Unit)C                | MOUNDE                   | #40210 n 00              | MQ10h00                      | - MQ(Un 00               | MQUINDC                   | MQ10h 00                 | MOVUM DC                    | MQ10h00                     | MOVUM DC                   | MQ10h00                  | MQ10h 00               |
|   | For on For Scar.<br>Remotented 14, Stars                                     | 1451 #<br>150418                         | 244<br>244                | 74)<br>175                   | 1451 #<br>1454 M                               | 240<br>274                      | 74<br>175                                      | 1451 AF<br>1554 (A       | 法法                       | 244<br>274                 | 245<br>259               | 1411 #<br>1444 M         | 14 i 14<br>24            | 145 L 22<br>165 E 25         | 141 ) #<br>1444 8        | 141 A<br>1441 A           | 145 L 22<br>16941 M      | 14 H                        | 245<br>154+164              | 1451 M<br>1654 M           | 745<br>32                | 245<br>(54+16)         |
|   | Lefe o Bulp  | ds 154                                   | 100                       | 10                           | 174  | 150                             | 165  | 155-16                   | 274                      | 254                        | 142                      | 254                      | 254                      | 144                          | 174+174                  | 154+17                    | 174                      | 174+174                     | 154+154                     | 174                        | 144+174                  | 174+174                |
| 24  | Lugi dust 1° n Empi  | 14                                       | 245                       | 245                          | 14   | 245                             | 245  | 141                      | 1451.26                  | 245                        | 141                      | 1451.26                  | 1451 #                   | 141                          | 245                      | 145) #                    | 141                      | 245                         | 245                         | 14                         | 1451 22                  | 245                    |
|   | Series Content Citizer 14, Sup   | 00 <u>154</u><br>2459 Dati               | 154<br>0 2459, 1 a - 20   | 174+175<br>- 2455: 0 a 20    | 154<br>- Altie Die 20                          | 154<br>2459: Do 20              | 174+174<br>- 2459:00:00                        | 154<br>2459:00:00        | 154<br>2010 0 201        | - <u> </u>                 | - 154<br>- Altie Die 20  | 154<br>2459: Do DC       | - 250<br>- 2459: Die 200 | 174<br>2010 1994             | 154<br>24(5):00:00       | 155+150<br>- Altis Dir 20 | 174<br>2459 Da.20        | 154<br>2010-01-924          | 155+150<br>2459:00:00       | - 174<br>- 20 0 0 20       | 154<br>2010 2010         | 259<br>259 Do 20       |
|   | Толожитни Тигої  | Algebra 1                                |                           |                              | - M§ 00.00                                     | MSCHOOL                         |  |                          | MS( Dir Dir              | Marchine                   | MS: Do DC                | MSCHOOL                  | Mg Du Du                 | MSCOULDE                     | MS(DuD)                  | - MSI DI DO               | MS DEDU                  | - Mgi Du Dû                 | MS(Dub)                     | MS(DuD)                    | Mg Du Du                 | Mgran at               |
|   | Lottom Line Stan<br>De officierten UNI Scaro                                 | 245                                      | 桜41色 <br> 桜11  新          | 144+165                      | 245  | 1644 A.<br>144 J M              | 1444176  | 1694.55                  | 1441 A.<br>1441 A.       | 1441 A.<br>1441 A.         | 1694 M                   | <u>- 30</u><br>345       | 25<br>14 i 8             | 1694165<br>1450-145          | 275<br>245               | - 35<br>14 i 8            | 1454124                  | 1454 M.<br>1451 M           | 145+160<br>245              | - 1694 が<br>1494 - 第       | 1454180                  | 175+170<br>245         |
|   | Faterior Foop  |  | 24                        | 24                           | 14   | 24                              | 24   | 14                       | 141 8                    | 141 8                      | 14                       | 141.8                    | 14118                    | 14                           | 1411                     | 141 8                     | 14                       | 245                         | 245                         | 14                         | 245                      | 245                    |
| 2   | Long rud not 11th no Bulgo   | 174                                      | 155+150                   | 35                           | 174  | 175+180                         | 35   | 174                      | 36                       | 175+170                    | 174                      | 39                       | 36                       | 174                          | 1494144                  | 39                        | 174                      | 1594155                     | 1594155                     | 174                        | 1594155                  | 149+144                |
|   | Tention entent Calvader Sig  | n: 144<br>MQ1Jn (                        | 144<br>/: ₩121Un 00       | 245<br>: 約2010-00            | 14)<br>1400 Jan Di                             | 1#<br>#Q10n00                   | 245<br>11/2010/00                              | 141<br>MQ106100          | 141<br>MQ106100          | 245<br>- 20 a U 1214       | 14)<br>MQ10600           | 141<br>MQ1Jn100          | 145) #6<br>MQ13500       | 14)<br>MQ(Un 00)             | 14<br>MQ10600            | 245<br>745(1)6(0)         | 141<br>MQ106100          | 14)<br>#1200.00             | 245<br>170 nU12246          | 14)<br>MQ(Un (0)           | 14)<br>#Q10n100          | 1451-22<br>#4021Un 001 |
|   | ranste de weim.  | M2(10)                                   |                           |                              | - MQ(JhO)                                      | - MQ10600                       | - M2(0n 0).                                    | - MQ10600                | M201000                  | - MQ(J600)                 | MQ(Unit);                | M2/Un 00                 | MQ10600                  | MQ(Jh/)(                     | MQ(0000)<br>MQ(0000)     | - MQ(UND);                | M20000                   | - MQ(0000)                  | M2/06/07                    | MQ(0000)                   | MQ(0600)                 | MQ10600                |
|   | For on For Scar  |  | 1411 #                    | 1411 8                       | 1451-22  | 1411 #                          | 1411 #   | 1451 22                  | 245                      | 245                        | 1451-22                  | 245                      | 245                      | 1451 22                      | 1451 #                   | 145) #                    | 1451 H                   | 145) #                      | 145) #                      | 1451-22                    | 245                      | 245                    |
|   | weino berreit – Tri, Stan-<br>Leie o Butp                                    | 175+175<br>15 174                        | 1944年1月1<br>1944年1月1      | 1944年1月1<br>1944年1月1         | 149+174<br>144                                 | 1744) (M.<br>1744) (M.          | 1744) A.<br>1744) A.                           | 149+174<br>144           | 275<br>17541 (5.         | 1744) A.                   | 175+174<br>174           | 30<br>30                 | 30<br>20                 | 149+174<br>174               | 175419U<br>175           | 30<br>30                  | 149+174<br>144           | 175419U<br>175419U          | 150+150<br>150+160          | 175+174<br>174             | 255<br>150+160           | 155+160                |
| *   | ենք մնչեր հեր  | 141                                      | 245                       | 1451.26                      | 144  | 245                             | 1451 26  | 14                       | 1451 22                  | 245                        | 14                       | 1451 27                  | 1451 #                   | 14                           | 1451 #                   | 1451 #                    | 14                       | 1451 #                      | 1451 27                     | 14                         | 1451 #                   | 1451 22                |
|   | servo centeri Cihar In. Sup  | 0.5 174                                  | 144                       | 140+140                      | 174  | 174                             | 145+140  | 195                      | 175                      | 175+176                    | 175                      | 175                      | 36                       | 144                          | 144                      | 149+144                   | 174                      | 174                         | 149+144                     | 174                        | 174                      | 149+144                |
|   | Sar<br>Tarawar-e Ceuri   | - MS: 167                                |                           |                              | . <u>Mg 1600</u><br>. Mg 1600                  | - <u>MS: 0600</u><br>- MS: 0600 | <u>. සල කොරා</u><br>. සල කොරා                  | - MS(1600)<br>- MS(1600) | - Mg 16.00<br>- Mg 16.00 | - MS: 06.00<br>- MS: 06.00 | - MS(1620)<br>- MS(1620) | - MS 36.20<br>- MS 36.20 | - Mg 06.00<br>- Mg 06.00 | - MS: 16.20<br>- MS: 16.20   | - Mg(06.00<br>- Mg(06.00 | - M& 16.00<br>- M& 16.00  |                          | - MS: 16.20<br>- MS: 16.20  | - <u>Mgrada</u><br>- Mgrada | - MS: 06.00<br>- MS: 06.00 | - MS(10.00<br>- MS(10.00 | HS 1620<br>HS 1620     |
| i   | Lottom Lni Star  |  | 30                        |                              | 149+144  | 35                              | - 36   | 1594155                  | 150+150                  | 150+170                    | 1594125                  | 175+170                  | 170+170                  | 1594175                      | 259                      |                           | 1594175                  |                             | 255                         |                            | 175+175                  | 149+144                |
|   | Tenforiement - Int Scare   | - 145 i A                                | 245                       | 1411 8                       | 1451 22  | 245                             | 1411 第一  | 1451 22                  | 1451-26                  | 245                        | 1451 22                  | 145 i 26                 | 145) X                   | 1451 22                      | 245                      | 1451 #                    | 1451 22                  | 245                         | 1451 #                      | 4.1                        | 1451 22                  | 245                    |
|   | Enternation Frage<br>Lonariadinati (I <sup>le</sup> no Bulgo                 |  | 141 F<br>1694 M           | 141 AF<br>143                | 14)<br>144                                     | 1411 H<br>1694 M                | 141 i #<br>50                                  | 14-                      | 245<br>14941 M           | 245<br>1454174             | 14)<br>156               | 145 (196<br>1694) M      | 1451 AF<br>15941 M       | 14                           | 145 (196<br>1594) M      | 145 (146<br>1464) M       | 141                      | 145 (196<br>1594) M         | 145 (196<br>1594) M         | 14                         | 245<br>145+144           | 245<br>(49+174         |
| 1 ^   | Tentin enert Cabacht Sig   | n 14                                     | 14                        | 245                          | 154  | 14                              | 245  | 14                       | 14                       | 245                        | 14                       | 14                       | 1451 27                  | 14                           | 14                       | 1451 27                   | 14                       | 14                          | 1451 27                     | 14                         | 14                       | 1451 27                |
|   | Sa:  | 14Q13.01                                 |                           |                              |  |                                 |  |                          | MQ106.00                 |                            |                          |                          |                          |                              |                          | MQ106.00                  |                          |                             | MQ106.00                    |                            |                          | #4021Un 001            |
| L   | ranste de Heim.  | - MQ(Un)                                 | ); MQ(UND)                | : MQ10600                    | - 14 A. D. D.                                  | - MQ(UniO)                      | <ul> <li>MØ(0)(0);</li> </ul>                  | - MQ(UniO)               | 2475,010,00              | MAX 30.00                  | - MQ(Un 00               | 147 JUD.                 | - MQ10600                | - MQ(UniO)                   | - MQ(Un 00               | - MQ10600                 | - MQ(0600)               | - 947 DU DU                 | - MQ106.00                  | - MQ(Un 00                 | - MQ(Un 00               | MQ106.00               |

| Project: | AmDeck Design Guide |  |
|----------|---------------------|--|
| Client:  | Amvic, Inc.         |  |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

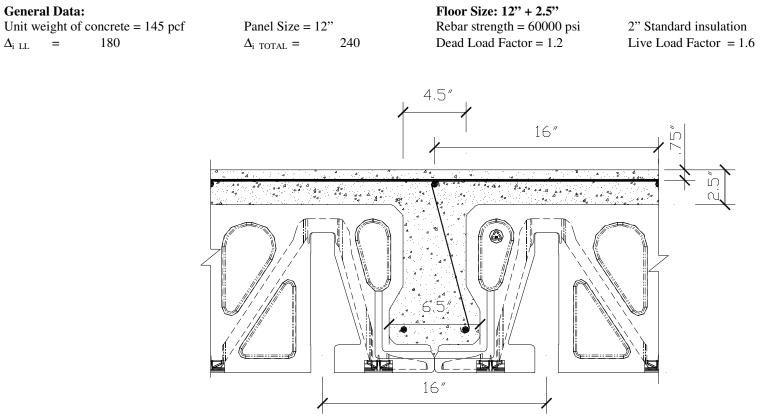
| Dead  | 1 Load                                 | =   | 1.                      | 5 psf                  |                            |                          |                        |                         |                            |                        |                              |                          |                          |                             |                          |                        |                                  |                       |                               |                               |                         |                              |                              |
|-------|--|---|-------------------------|------------------------|----------------------------|--------------------------|------------------------|-------------------------|----------------------------|------------------------|------------------------------|--------------------------|--------------------------|-----------------------------|--------------------------|------------------------|----------------------------------|-----------------------|-------------------------------|-------------------------------|-------------------------|------------------------------|------------------------------|
| e     |  | <u>): %1</u>  |                         | - STD - 1:             | ÷<br>                      | 07                       | 1 - 50 D - 19<br>DZ    | ÷<br>⊻8                 | 07                         | 1 - Y D - 19           | :<br>~8                      | 07                       | 1 - 20 D - 15<br>DZ      |                             | 07                       | 1 -30 D - 15<br>D2     | ~8                               | 07                    | 1 -00 D -15<br>D2             |                               | 07                      | 1 -10 U - 5                  |                              |
| 76.97 | =                                      | Line State  | 1 14                    | 174                    | 174                        | 14                       | 174                    | 174                     | 14                         | 174                    | 154                          | 14                       | 175                      | 154                         | 1#                       | 174                    | 174                              | 14                    | 154                           | 154                           | 14                      | 174                          | 154                          |
|       | He mo be the                           |   | 1#                      | 14                     | 14                         | 1#                       | 14                     | 14                      | 14                         | 14                     | 14                           | 14                       | 1#                       | 14                          | - 14                     | 14                     | 14                               | - 14                  | 14                            | 14                            | 1#                      | 14                           | 14                           |
| IL.   | Lan: r. d nal                          | Faterior Frogradix<br>I I <sup>len</sup> no Buliport  | 14                      | 14                     | 14                         | 141                      | 14                     | 14                      | 14                         | 14                     | 14-                          | 14<br>14                 | 14                       | 14                          | 142                      | 14                     | 14                               | 14                    | 14                            | 14                            | 14                      | 14-                          | 14                           |
|       | THUN HOR                               | Ciliar Fr. S. proc.                                   | 1#                      | 14                     | 14                         | 14                       | 14                     | 1#                      | 14                         | 14                     | 14                           | 14                       | 14                       | 14                          | 14                       | 14                     | 14                               | 14                    | 14                            | 14                            | 14                      | 14                           | 14                           |
|       | L                                      | Siac<br>stelloe Heimt                                 | MQ136.00                | MQ106.00               | MQ(UND)<br>MQ(UND)         | 84021Jn 00<br>84021Jn 00 | MQ(UND)<br>MQ(UND)     | MQ(UND))<br>MQ(UND)     | MQ106.00<br>MQ106.00       | MQ(UND)<br>MQ(UND)     | MQ(UND)<br>MQ(UND)           | MQ10600<br>MQ10600       | MQ(J60);<br>MQ(J60);     | MQ10600                     | MQ(UND))<br>MQ(UND)      | MQ(UND)<br>MQ(UND)     | - MQ10600<br>- MQ10600           | M2216.00              | MQ10600<br>MQ10600            | MQ10600<br>MQ10600            | MQ136.00<br>MQ136.00    | 840213 n 100<br>840213 n 100 | 845213 6 100<br>845213 6 100 |
|       | =                                      | Fur State   | 14                      | 14                     | 14                         | 14                       | 14                     | 14                      | 14                         | 14                     | 14                           | 14                       | 14                       | 14                          | 145                      | 14                     | 14                               | 145                   | 14                            | 14                            | 145                     | 14                           | 14                           |
|       | we molecine :                          |   | 144                     | 144                    | 144                        | 174                      | 144                    | 144                     | 174                        | 144                    | 144                          | 174                      | 174                      | 144                         | 145                      | 144                    | 174                              | 175                   | 174                           | 174                           | 175                     | 144                          | 174                          |
| 1-    | 1                                      | Lele o Euspario<br>1 1 n Facent                       | 144                     | 14                     | 144                        | 144                      | 144                    | 14                      | 144                        | 14                     | 144                          | 144                      | 14                       | 14                          | 14                       | 14                     | 14                               | 144                   | 114                           | 14                            | 14                      | 145                          | 144                          |
|       | He mo server                           | 1 Cilher Ini, Support                                 | 174                     | 174                    | 174                        | 174                      | 174                    | 174                     | 174                        | 174                    | 174                          | 174                      | 174                      | 174                         | 174                      | 174                    | 174                              | 174                   | 174                           | 174                           | 174                     | 174                          | 174                          |
|       |  | Sar   | Mgr Du Dù               | Mgr Du Du              | - MS: 00.00                | - MS: 00.00              | - MS: 00.00            | - Mg: 0a.00             | - MS: 00.00                | - Mgi Du Dû            | M2: 00.00                    | - MS: 00.00              | MS: 04.00                | M3: 00.00                   | - Mgi Du Dû              | M2: 04:00              | - MS: 00.00                      | - MS: 00.00           | - MS: 00.00                   | - MS: 00.00                   | - Mg( 0 a 00            | - MS: 00.00                  | M2: 00.00<br>M2: 00.00       |
|       | 075200                                 | zar-e Telo"<br>Li una Stark                           | - MS: 16-20<br>152      | MS: Daloc<br>INC       | - MS: 06.00                | 2459 Dia 20<br>185       | 2439 Dia 20<br>186     | MS: 06.00<br>189        | MS: Do DC<br>INC           | - 2459 Dia 201<br>1950 | - 24 <u>5,</u> 16, 20<br>159 | MS: 00.00                | - 245, 16-00<br>150      |                             | MS: Data:                | - MS: 16.20<br>159     | - MS: 00.00                      | MS: DED.              | - 2459 Dia 20<br>156          | - MS: 00.00                   | MS: 16.00<br>           | MS: 16.00<br>189             | 24(2) To 15.                 |
|       | Tenin erer                             | 1 In Searce   | 145                     | 1#                     | 14                         | 145                      | 14                     | 14                      | 145                        | 14                     | 14                           | 145                      | 14                       | 14                          | 145                      | 14                     | 14                               | 145                   | 14:                           | 14                            | 244                     | 14                           | 141                          |
|       | 1                                      | Faterior Focipietx<br>I I <sup>ust</sup> ing Guispant | 14                      | 14                     | 14                         | 14                       | 14                     | 14                      | 14.                        | 14                     | 14                           | 14                       | 14                       | 14                          | 14                       | 14                     | 14                               | 14                    | 14                            | 14                            | 14                      | 14                           | 14                           |
|       | THUN HTH                               | <ul> <li>Cili-ciliti Signaria</li> </ul>              | 14                      | 14                     | 14                         | 14                       | 14                     | 14                      | 14                         | 14                     | 14                           | 14                       | 14                       | 14                          | 14                       | 14                     | 145                              | 14                    | 14                            | 145                           | 14                      | 14                           | 145                          |
|       |  | S as  | MQ106.00                | MO104.00               | M22104-00                  | M22106-00                | MQ106.00               | MQ106.00                | MQ106.00                   | 240210 n.00            | MQ106.00                     | MQ106.00                 | M22106-00                | MQ106.00                    | 240210 N DC              | MQ106.00               | MO109.00                         | MQ106.00              | MQ106.00                      | MQ106.00                      | MQ106.00                | MQ106.00                     | 24021010-001                 |
|       | Fa **                                  | ste beinem.<br>For Scars                              | MQ(Un 0)<br>145         | 14021Um 001<br>140     | 44200 n 00<br>420          | 440000000<br>145         | MQ10n/00<br>140        | 4021016-00<br>142       | MQ10607                    | 1400 Jan 00            | MQ106.07<br>442              | 74000000<br>740          | MQ10600<br>141           | MQ106.00<br>442             | 74-01-00<br>940          | MQ10600<br>145         | 745210 n 00<br>145               | 842(UniO)<br>14(1)#   | 442(Unit)0<br>145             | 145 M                         | 140106-00<br>1411-26    | 145                          | 44021016-001<br>145          |
|       | He mo be the                           |   | 15                      | 194                    | 174                        | 155                      | 174                    | 174                     | 254                        | 174                    | 194                          | 244                      | 174                      | 194                         | 244                      | 15                     | 174                              | 174+17                | 155                           | 174                           | 174417                  | 155                          | 145                          |
| 16    | Lugi dust                              | Lele o Euspario                                       | 175                     | 174                    | 174                        | 175                      | 175                    | 174                     | 174                        | 174                    | 174                          | 174                      | 175                      | 174                         | 144                      | 144                    | 174                              | 175                   | 154                           | 174                           | 144                     | 155                          | 175                          |
| 11-   |  | I 1° n Fn:prit<br>11 Ciher I 1. Suptor:               | 14                      | 145                    | 145                        | 144                      | 145                    | 145<br>150              | 144                        | 145                    | 145                          | 144                      | 145                      | 145                         | 142                      | 155                    | 145                              | 141                   | 244<br>174                    | 244<br>150                    | 142                     | 155                          | 74                           |
|       |  | Sat   |                         | Mg Du Dù               |                            | - Mgi Du Dû              | - Mgi Du Du            | Alg: Du Dù              | Mg Du Dù                   | - Alg: 36.30           | - Mgi Du Dü                  |                          | MS: Du DO                | Mgr Du Dù                   |                          |                        | - Mgi Du Dû                      |                       | - Mgi Du Dû                   | HS: DOD.                      | Mg Du Dù                |                              | MS: Du DU                    |
|       | Lottem                                 | sterve Telli<br>Lint Stars                            | MS(0)000                | MS DECK                | - MS(1)0.00                | MS: Du DC                | Mgr Du Dù<br>Let       | କାର୍ଥ୍ୟ କଳାକାର<br>କଳ    | MS: 16-20<br>174416        | MS: 16.20<br>155       | - Mg( 16.00                  | 8439 Dia 20<br>1594 Mite | MS: 06.00<br>150         | Algebra De                  | - MS: 06-00<br>1544165   | - Algebrach            | - MS(10000)<br>150               | MSEDIEDE              | - Mgranac                     | - Mgronos                     | Marchine                | Mg Du Dù                     | MS DEDC                      |
|       | Te n'n ere                             | 1 In State  | 24                      | 145                    | 14                         | 244                      | 145                    | 14                      | 141.1                      | 145                    | 14                           | 141.4                    | 145                      | 145                         | 141.2                    | 145                    | 145                              | 245                   | 145                           | 145                           | 245                     | 244                          | 145                          |
|       |  | Faler or Focipiels                                    | 1#                      | 14                     | 141                        | 141                      | 141                    | 14                      | 141                        | 14                     | 14                           | 141                      | 145                      | 145                         | 141                      | 145                    | 145                              | 141                   | 145                           | 145                           | 141                     | 145                          | 145                          |
| IC.   | Tenin erer                             | 1 1 <sup>45</sup> m Guipert<br>1 Ciliar Fri Stipere   | 144                     | 14                     | 145                        | 144                      | 14                     | 145                     | 14                         | 14                     | 145                          | 14                       | 14                       | 244                         | 144                      | 144+164                | 274                              | 14                    | 144-162                       | 24                            | 1%<br>1#                | 14                           | 1444                         |
|       |  | S ac  | MQ106.00                | MQ106.00               | MQ106.00                   | MQ106.00                 | MQ106.00               |                         | MODIFIC                    |                        |                              | MQ106.00                 |                          | MO106.00                    |                          |                        | MQ106.00                         |                       | MQ106.00                      | MQ106.00                      |                         | MQ106.00                     | 24:02106-001                 |
|       |  | <u>ste de Helm.</u><br>Eur Scara                      | 1400 Jn 00<br>1401 26   | M22136-30              | MQ106.00                   | 1407 Uni 00<br>141 1 26  | M22136-30              | MQ10600                 | M22106-00                  | 145 145                | MQ106107<br>145              | 245<br>245               | MQ106100<br>145          | 145                         | 40010 n 001<br>1451 - 26 | 74021Un 00             | 74021Un 00<br>244                | MQ10600<br>1451-26    | MQ106.00                      | MQ106.00                      | 145) 26<br>145) 26      | MQ106.00                     | MQ106.00                     |
|       | He mo perfer                           |   | 1441.44                 | 145                    | 145                        | 1441 144                 | 145                    | 145                     | ÷                          | 145                    | 145                          | ÷                        | 145                      | 145                         | 1451 #                   | 254                    | 175                              | 1451 44               | 274                           | 274                           | 1451 44                 | 274                          | 274                          |
| ×     |  | Late o Europario                                      | 175                     | 170                    | 175                        | 174                      | 175                    | 175                     | 174                        | 175                    | 145                          | 144                      | 175                      | 175                         | 144                      | 175                    | 145                              | 194                   | 244                           | 244                           | 194                     | 294                          | 294                          |
| 1     | l ngi dusi<br>se mo terrer             | I 1° n Fnaprat<br>11 Cihari (I. Suptor:               | 14                      | 141 i #<br>154         | 244                        | 141                      | 1411.24                | 244                     | 14-                        | 141174                 | 1411 AF<br>254               | 144                      | 141174                   | 1字) (字<br>) (字) (字)         | 14                       | 245                    | 1年) 新<br>14年1年                   | 141                   | 245                           | 245<br>155+175                | 14                      | 145 i AF<br>154              | 245<br>32                    |
|       |  | Sar   | Alg: 00.00              | Mg Du Dù               | - MS(00.00                 | MS(Du D)                 | Mg Du Dù               | Algebra Di              | Algebra Di                 | - Mg( 0 a 00           | Mg Du Dù                     | Alg: Du Dù               | Algebra Di               | Algebra Di                  | - Alg: 36.00             | - Mgi Du Dù            | Algebra Di                       | Algebra Di            | - Algebrach                   | Algebra Dis                   | Mg Du Dù                | Algebra Dis                  | Algebra Die                  |
|       | Lottem                                 | ster-e Telo"<br>  Uni Stars                           | MS: Du DC               | MS: Daloc              | Alge Dia Dia               | M3: 00.00                | - MS: 00.00            | MS: 16.20               | Algebracht.                | MS: Du DO              | - MSEDINOU                   | - 2455 Dia 201<br>1959 M | Mgi na ba                | - MSEDIEDE                  | - MS: 16.20              | - MS: 00.00<br>(54+18) | - 24(3): 1 (a - 2 ))<br>1524-175 | - MS( 06.00)<br>      | - 245; 0 a 20<br>154+18       | - Alge Da DC<br>15441 (54     | - Alĝi Du DO<br>15941 M | - 245; 0 a 20<br>1524125     | - 2459 Dia 201<br>1594 Mai   |
|       | Tenin erer                             |   | 245                     | 145                    | 145                        | 245                      | 145                    | 145                     | 1451 24                    | 244                    | 145                          | 1451 26                  | 244                      | 244                         | 245                      | 141.8                  | 24                               | 245                   | 141.4                         | 24                            | 1451 22                 | 141.1                        | 1411.26                      |
|       |  | Faler or For polix                                    | 1#                      | 145                    | 145                        | 141                      | 145                    | 145                     | 141                        | 145                    | 145                          | 141                      | 245                      | 244                         | 14                       | 244                    | 245                              | 141                   | 244                           | 245                           | 141                     | 1411 26                      | 1411 #                       |
|       | Tenin eren                             | L 1 <sup>45</sup> no Europan<br>11 Cilier Hit Siljone | 14                      | 14416                  | 1444 色。<br>1441 第          | 144                      | 144-165                | 1位41元<br>1441 年         | 174                        | <br>1#                 | 1444 AL<br>1441 AL           | 114                      | <u></u><br>1#            | <br>141 - 26                | 14                       | 145+190                |                                  | 144                   | 145+180                       | 245                           | 114                     | <br>1#                       | 145+160                      |
|       |  | S ac  | MQ(06.00                | 24021Un 00             |                            | 2402136-00               | 74021Un 00             | 740210 n 000            | MQ106.00                   | 74021Un 00             | 74021Un (00                  |                          |                          | 74021Un (00                 | 74021Un 00               | 74021Un 00             | 74 Q U N D C                     |                       | 20 a C (244)                  | MQ106.00                      | 24021316-00             | 74021316-001                 | 240210 n 001                 |
|       | Fa 13                                  | ste de Heim.<br>Foir Scara                            | 74:00 Jn 00<br>1451 26  | 2010 C (2010           | - 74021Um 100<br>244       | 145) 26<br>1451 26       | 240°076'00             | 740210 n 00<br>040      | 245 C                      | - MQ10m00<br>1441-26   | - MQ10600<br>1401-26         | 74021Un 00<br>245        | MQ10600<br>1411-26       | - MO21UIN DC<br>- 1421 - 26 | - MQ10m00<br>1451-22     | - MQ106000<br>1401-26  | - #4021Um 000<br>                | MQ13630<br>1451-22    | - 740210 h 001<br>245         | 242(Un 00)<br>245             | MQ10m00<br>1451-22      | 7402101000<br>245            | 740210 n 001<br>245          |
|       | He mo server                           |   | 1554170                 | <u> </u>               |                            | 170+170                  | ÷.                     |                         |                            | 1444174                | _74                          | ÷                        | 1441                     | _74                         | 14541.44                 | 1441.0                 | 1744174                          | 14541.45              | ÷                             | 175.417.                      | 14941.04                | æ                            | ÷                            |
| 24    |  | Lete o Europario                                      | 144                     | 284                    | 284                        | 174                      | 284                    | 284                     | 174                        | 284                    | 284                          | 174                      | 284                      | 284                         | 174                      | 174+175                | 174+175                          | 174                   | 154+154                       | 174+175                       | 154                     | 26                           | 35                           |
| 24    |  | I filo Fospiot<br>11 Cihari (I. Suptor:               | 141                     | 245                    | 245<br>15441 (*            | 141                      | 245                    | 245<br>154+16           | 142                        | 145) #<br>145          | 245                          | 14                       | 1451 #<br>145            | 1451 #                      | 14                       | 245<br>145             | 1451 AF<br>15541 M               | 14                    | 145 (172)<br>174              | 245<br>14541 M                | 14°<br>148              | 1451 AP<br>174               | 245                          |
|       |  | Sat   | ANSI DU DU              | Algebrach              | <ul> <li>MSCORD</li> </ul> | Mg Du DO                 | Mg Du Du               | - Algebrach             | Mgr Du DC                  | - Mg( 0 a 00           | - Mgr Du DC                  |                          | - Mgi Du Dû              | Martinoc                    | Algebrach                | - Algebrach            | <ul> <li>Mg(0)(0);</li> </ul>    | Mg Du DU              | <ul> <li>MS(0)(0).</li> </ul> | <ul> <li>MS(0)(0);</li> </ul> | Algebra Di              | - Mgr Dir Dü                 | Algebrach                    |
|       |  | жылы Тылі   | MS: Du DC               | MSC 1020               | - Mgi Du Dû                | MS: Du DU                | - Mgi Du Du            | - MS: 06.00             | - 24년: Dia 201<br>1594년:20 | - Mgi Du Du            | - Mgi Du Du                  | - MSEDIEDE               | Magnation                | Maronos                     | - Mgi Du Du              | - Mgi na bu            | - MS: 00.00                      | - Mgi Du Dû           | - MSEDILOU                    | Algi Du Du                    | Mgi Du Du               | Mgr Du Dù                    | Algebracht.                  |
|       | Lottom<br>Telufor en er                | uni Stars<br>nu in Scars                              | 245                     | 14416                  | 241                        | 245                      | 1444 AL<br>1444 A      | 24                      | 1451 8                     | 1444 A.<br>1444 A.     | 1444 6.                      | 14541261                 | 245                      | - 255<br>141 i 81           | 14541.041                | 245                    | 245                              | 14541761              | 1451-26                       | 155+150<br>245                | 14541741                | 14541 AL<br>1451 - AF        | 145+180<br>248               |
|       |  | Faler or Focipiels                                    | 141                     | 242                    | 245                        | 141                      | 245                    | 245                     | 141                        | 1411 26                | 1411 #                       | 141                      | 1411 #                   | 1411 #                      | 14                       | 245                    | 245                              | 141                   | 245                           | 245                           | 141                     | 245                          | 245                          |
| 1     | Lenin dinel                            | L 1 <sup>45</sup> no Bulipón<br>11 Cilicador Signar   | 144                     | 145+160                | 170+170<br>200             | 144                      | 145+180                | 175+170                 | 174                        | 285                    | 1454-30                      | <u>1代</u><br>任会          | 145+144                  | <br>1451_26                 | 144                      | 149+144                | 255                              | 114                   | 145+144                       | 145+144                       | 144                     | 145+144                      | 1494164                      |
|       |  | S a:  | MQ106.00                | MOUTOD                 | MQ106.00                   | MQ10600                  | MQ10600                | MQ106.00                | MQ106.00                   | MQ106.00               | MQ106.00                     | MQ106.00                 | MOUNDE                   | MO2136-301                  | MQ106.00                 | MQ106.00               | MQ106.00                         | MQ106.00              | MOUTINE                       | MQ106.00                      | MQ106.00                | MQ106.00                     | MQ106.00                     |
|       |  | ste se hem.   | MQ106.00                | MQ106.00               | 20 0 ( CPM                 | MQ136.00                 | MQ136.00               | MQ10600                 | MQ106.00                   | 20 a C (204            | 242(UniOC<br>245             | MQ106.00                 | MQ106.00                 | MQ106.00                    | 20 a C (204              | MQ106.00               | MQ106.00                         | MQ106.00              | MQ106.00                      | MQ106.00                      | MQ136.00                | MQ136.00                     | MQ106.00                     |
|       | The molection                          | For Scars<br>1 14, Scars                              | 145 (1927)<br>155 - 155 | 245<br>370             | 245<br>15441 M             | 1451 M<br>1654 M         | 745<br>270             | 245<br>15441 (5         | 1451 AF<br>14541 AF        | 245<br>270             | 745                          | 1451 AF<br>14541 M       | 1451 AF<br>1754 M        | 145 i 24<br>250             | 145 (1927)<br>1559 (192  | 1451 AF<br>15541 AL    | 145 i 24<br>375                  | 145 i 22<br>1594 55   | 25<br>24                      | 245<br>1954 M                 | 1451 (22)<br>1454 (22)  | 245<br>245                   | 245<br>1554180               |
|       |  | Lefe o Europario                                      | 174                     | 174+175                | 174+175                    | 174                      | 174+175                | 154+154                 | 174                        | 174+175                | 174+175                      | 174                      | 35                       | 35                          | 174                      | 35                     | 35                               | 174                   | 175+190                       | 175+170                       | 174                     | 175+170                      | 175+170                      |
| *     | I ugi dusi                             |   | 14                      | 245                    | 245                        | 141                      | 245                    | 245                     | 14                         | 145 i 22<br>155        | 245                          | 14                       | 1451 22                  | 1451 22                     | 14                       | 145 (172<br>175        | 1451 22                          | 14                    | 1451 22                       | 1451 AZ<br>1594 M             | 14                      | 1451 22                      | 1451 (22)<br>1564 (25)       |
|       |  | <sup>1</sup> Ciliar Fill, Support<br>Start            | - 194<br>- AlS: 00.00   | - 154<br>- 245: 0 a 20 | 175+170<br>24(5):00:00     | - 194<br>- Alge Dar DC   | - 194<br>- 2459 Din 20 | 150+150<br>2455: 0 n 20 | - 154<br>- 245: 0 a 20     | - 144<br>- 2459 Din 20 | - 259<br>- 265 (16.00        | - 194<br>- 2010 - 201    | - 154<br>- Al St Din Din | - 259<br>- 269 Dia 20       |                          |                        | 1594155<br>2455:00:00            | - 194<br>- 245: Cu CC | 154<br>245: 0 a 20            |                               | - 154<br>- 2459 Dia 20  | - 154<br>- Alge Du Dü        | 19941761<br>2455 Dia 201     |
| 1     |  | хи-н Тно  | MSCOUDE                 | Marchine               | MS DODG                    | Mg Du Du                 | MS: Du DO              | - Mgronos               | - Mgi na bu                | Mg nu nu               | - Mgi na po                  | - Mgr Du Dù              | - MSEDIEDS               | Marcheor                    | - MS(00.00               | MS: Do DO              | MS DODE                          | MS DED.               | Algebra De                    | - MS: 06.00                   |                         | Algebra Di                   | ANSI DI DU                   |
|       | Lottom<br>Telufor en er                | Und Stark<br>H Di Spans                               | 1454126                 | 275                    | 275                        | 1454124                  | 275                    |                         | 1494124                    | 1451-26                | 175+170                      | 1454124                  | 1451-26                  | 1451.26                     | 14541.02                 | 245                    | 239<br>1451 æ                    | 1494126               | 1694166                       | 149+144                       |                         | 1454124                      | 145+144                      |
|       |  | Fater or Focpula                                      | 1451 #                  | 245                    | 245                        | 1451 22                  | 245                    | 245                     | 1411 22                    | 245                    | 245                          | 1411 22                  | 1451.24                  | 1451.24                     | 1401 22                  | - 245<br>1451 26       | 1451.24                          | 140 8                 | 245                           | 245                           | 14                      | 245                          | 245                          |
|       | Longinudinal                           | I In a purport  | 174                     | 15941251               | 145+144                    | 174                      | 1494144                | 149+144                 | 174                        | 149+144                | 149+144                      | 174                      | 145+144                  | 155+155                     | 174                      | 149+144                | 1554155                          | 194                   | 15941251                      | 149+144                       | 174                     | 145+144                      | 145+144                      |
|       | 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | <sup>1</sup> Offer FL S proc.<br>S at:                | 1#<br>#2010-00          | 14)<br>MQ106100        | 245<br>#122110-111         | 14)<br>MQCUN 00          | 141<br>MQ106.00        | 245<br>742(1)n 1)0      | 14)<br>MQ106.00            | 141<br>MQ10m00         | 1451 / 2<br>5100 1610        | 14)<br>MQ106.00          | 141<br>MQ136100          | 1451 AF<br>51021 In 101     | 141<br>MQ131000          | 141<br>MQ131000        | 145 (127<br>7402) Uni 00         | 141<br>MQ136100       | 14)<br>MQ106100               | 1451 22<br>MQ136 30           | 141<br>MQ1Jn 00         | 14)<br>MQ106100              | 1451 22<br>240210100         |
|       | Ta 13                                  | sve bei veim.   | MQ10600                 | M02104000              |                            | M2(16.00                 | - MQ(06.00             | M201000                 | M2(10.00                   | M201000                | M201000                      | MO2101000                | MO2120120                | M201000                     | M201000                  | M201000                | - MQ10600                        | M201000               | - MC(18.00                    | M201000                       | M2(16.00                | M201000                      | MO(UN UT                     |
|       |  |   |                         |                        |                            | -                        |                        |                         |                            |                        | -                            |                          |                          |                             |                          | -                      |                                  |                       |                               |                               |                         |                              |                              |

### Notes

- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.
- Blank Cells indicates that the joists are failing in deflection.

Project: AmDeck Design Guide Client: Amvic, Inc. Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

## 9.2 Table B: f'c = 3500 psi, Topping Thickness = 2.5"



| Project: | AmDeck Design Guide | Prepare |
|----------|---------------------|---------|
| Client:  | Amvic, Inc.         | Checkee |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Image: Viscour Processor         Viscour Processor <th>Dea</th> <th colspan="14">Dead Load = 10 psf</th>   | Dea      | Dead Load = 10 psf       |                             |                         |                          |                             |                          |                    |                          |                        |                          |                             |                      |                   |                     |                          |                         |                             |                               |                            |   |                              |                           |                                   |
|--|----------|--------------------------|-----------------------------|-------------------------|--------------------------|-----------------------------|--------------------------|--------------------|--------------------------|------------------------|--------------------------|-----------------------------|----------------------|-------------------|---------------------|--------------------------|-------------------------|-----------------------------|-------------------------------|----------------------------|---|------------------------------|---------------------------|-----------------------------------|
| 0         1  | <b>.</b> |                          | ۶r                          |                         | 97 D - 10                |                             | 1 -                      | SCD - 10           |                          | 1                      | - YCD - 10               |                             | 07                   | I - 70 D -        | 10                  | 07                       | 1 - 31 D - 1            |                             | 07                            | 1 - Y D -1                 | <u>، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، </u> | 07                           | 1 -100 01-                | 1                                 |
| A.         Market Part Part Part Part Part Part Part Par   | 76.8     |                          |                             | ] 🖗                     | 144                      |                             |                          |                    | 174                      | 14                     |                          |                             |                      | 174               | 174                 | 1#                       | 174                     | 174                         | 1#                            |                            | 174   |                              | 174                       | 174                               |
| IN         IN<   |          |                          |                             | 14                      |                          |                             |                          |                    |                          | 14                     |                          |                             |                      |                   |                     | 14                       |                         |                             | 14                            |                            |   | 14                           |                           |                                   |
|  | IL.      | Lon: n.d.net  P          | nt purport                  | 154                     | 144                      | 144                         | 174                      |                    |                          | 174                    |                          | 174                         | 154                  |                   | 174                 | 174                      | 174                     |                             | 174                           |                            | 174   | 174                          | 174                       | 174                               |
| V          |          | 5 a                      |                             |                         |                          |                             |                          | Conco Mar          | Concol May               |                        | griin cu w               |                             | May 2 an e           | n Marzane         |                     |                          |                         | o Mortoni                   |                               | tu Maylari                 |   | u MagiZane                   |                           |                                   |
|  |          |                          |                             | MQ120100 MQ<br>14       | 1201 CU MA               | <u>71201-00, 745</u><br>144 |                          | 120100 MQ1<br>14   |                          | <u>720100 M</u><br>14  |                          |                             |                      |                   |                     |                          |                         |                             | 145 145                       |                            | <u>0 MQ(2010)</u><br>14                       |                              | u MQ(2010)<br>14          |                                   |
| 1          |          | we molected t            | HL Stars                    |                         |                          | 174                         |                          |                    |                          | ••                     |                          |                             | 174                  |                   |                     |                          | 174                     |                             |                               |                            | 174   |                              |                           |                                   |
|  | 1-       | I ugi dust ff            | ս քայր մ                    |                         |                          | 14                          |                          |                    |                          |                        |                          |                             |                      |                   |                     |                          | 14                      |                             |                               |                            | 14  |                              |                           |                                   |
| Version are<br>mark and<br>mark are<br>mark are  |          | He molecter il Cità      | orini. Supto t              | 174<br>245-256-00-2456  | 174                      | 174<br>5 2 65 0 0 - 245     |                          | 144<br>2.50 CC 240 |                          |                        | 472 00 471               | 174<br>                     | 174<br>              |                   | 174<br>0 - 2450 - 0 | 174<br>0 - 2450 - 0 0    | 471<br>0.000 0044 0     |                             | - 174<br>0. 494 - 100         | 174<br>174 - 01            | 174<br>0 - 2450 - 01                          | 174                          | 174<br>                   | 174                               |
| Internal         Unit one  |          |                          |                             |                         | 258 CO MS                |                             |                          | DEPOCH MG          | 260 CO 145               | (25) CO H              | Si zer de la             |                             | મહિત્ર સામ દ         | ମା କରି ମନ୍ଦ ମ     | ମାନ୍ୟର୍ଭି ଅନେ ସ     | C #8:28:00               |                         | n महिल्ला (                 |                               | ମ କରିଥାନ ମ                 |   |                              |                           |                                   |
| H          |          |                          |                             | 145                     |                          | 14                          | 145                      |                    |                          |                        |                          |                             |                      |                   |                     |                          | 14                      |                             | 145                           |                            | 114   | <br>74                       | 14                        |                                   |
|  |          | F:I                      | eror Focpi da               | 14:                     | 1#                       | 14                          | 14                       |                    | 14:                      |                        | 14                       |                             |                      | 14                | 14                  | 14:                      | 14                      | 14                          | 14:                           | 14                         | 14  |                              | 14                        | 14                                |
| Image: Processes         Image: Processes<   | 14       | Servicement Cali         | nd Bulgan<br>Arth Signar    |                         |                          |                             |                          | 14                 |                          |                        |                          | 14                          | 14                   |                   |                     |                          |                         |                             | 14                            |                            |   | 14                           |                           |                                   |
| N = n         N = n <th< td=""><td></td><td>S a</td><td>:</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>  |          | S a                      | :                           |                         |                          |                             |                          |                    |                          |                        |                          |                             |                      |                   |                     |                          |                         |                             |                               |                            |   |                              |                           |                                   |
| Fight (a)         (b)         (b)<         (b)< <td></td> <td>=</td> <td>Fur Scars</td> <td>145</td> <td>14:</td> <td>141</td> <td>145</td> <td>14:</td> <td>14:</td> <td>145</td> <td>14</td> <td>14</td> <td>241</td> <td>14</td> <td>14</td> <td>245</td> <td>145</td> <td>145</td> <td>241</td> <td>145</td> <td>145</td> <td>1411 22</td> <td>145</td> <td>145</td>   |          | =                        | Fur Scars                   | 145                     | 14:                      | 141                         | 145                      | 14:                | 14:                      | 145                    | 14                       | 14                          | 241                  | 14                | 14                  | 245                      | 145                     | 145                         | 241                           | 145                        | 145   | 1411 22                      | 145                       | 145                               |
| IP         IP<         IP         IP        IP        IP        IP <td></td> <td></td> <td></td> <td>175</td> <td></td> <td>170<br/>170</td> <td></td>  |          |                          |                             | 175                     |                          |                             |                          |                    |                          |                        |                          |                             |                      |                   |                     |                          |                         |                             |                               |                            |   |                              | 170<br>170                |                                   |
| Law         Convert         Co   | 1F       | Lugi dust 1              | ս քայր մ                    | 14                      | 145                      | 145                         | 14                       |                    |                          |                        | 145                      |                             |                      | 145               | 145                 | 14                       |                         | 145                         | 14                            |                            |   | 14                           | 241                       | 245                               |
| Image: State of the s  |          | Sa                       |                             |                         |                          |                             |                          | 258 CC 245         | 25F CO MS                | 258 CC - 24            |                          | 45; 256 CC -                | મહારમાં દ            |                   |                     |                          | n Mg, 266 G             |                             |                               | 10 MS(28) 0                | C - M(3) 2.55 C                               |                              |                           |                                   |
| End         Subscription         Solution   |          |                          |                             | માલું 25% લગભાષિક<br>મહ | i 256 COLIMS<br>TRA      | ij 256 COLIMS<br>THE        | ji 250 do i Alĝ<br>No    |                    | 259 COLIMS)<br>186       | : 255-00-24;<br>96     |                          | 45) 250 CC 1<br>150         |                      | ા અનુવાર છે.<br>આ |                     |                          | େ ਅਤੁਹਰਜ਼ਾਨ<br>ਜਵਾ      | 20 MS( 2594)<br>189         | CO 1459 259 0<br>140          |                            | .이 사망, 25% O<br>17%                           | ୁ କାର୍ଥ୍ୟ ଅନ୍ୟାର<br>କାର୍ଯ୍ୟ  | କା କାନ୍ତ୍ର ଅନ୍ୟାର<br>ଜନ୍ମ | <ul> <li>Alge 2.5% CO.</li> </ul> |
| Internal  |          | Tenfor enert             | HL Scars                    |                         |                          |                             |                          | 14:                |                          |                        | 145                      |                             | 1411 #               |                   | 145                 | 1411.86                  |                         |                             |                               | 145                        |   |                              |                           |                                   |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  | IL.      | Lon: n.d.net 15          | hog: up in                  | 14                      | 14°<br>150               | 140                         | 142                      |                    |                          |                        | 142                      |                             |                      | -54               | -145                |                          |                         | -54                         |                               |                            |   |                              |                           |                                   |
| Image: Processing of the set of   |          | Tenúc enert Cilli<br>Mis | erter Sijone                | 141                     | 14)<br>1400 - 400        |                             |                          |                    |                          |                        |                          |                             |                      |                   |                     |                          | 14                      |                             |                               | 141                        | 944<br>1                                      |                              | 14°                       | 242<br>##2011 1.1.1.1             |
| V Hole         V Hole<  |          | Ta reve be               | -<br>nem.                   | MOTOLICO MO             |                          | 2 Dan da Ma                 | ģizanca Mģ               |                    | CONCUMP                  | 20ncu M                |                          |                             | MQ <sup>1</sup> 2010 | u Mgʻ2urc         | u Mgʻ2ar¢           |                          |                         |                             | сы майзана                    | tu Maylan u                |   | u Mortene                    |                           |                                   |
| N         Intelligence   |          |                          |                             |                         | 145<br>155               |                             |                          | 145<br>155         |                          |                        |                          |                             |                      |                   |                     | 245<br>25                | 245                     | 244<br>155                  |                               |                            | 24)<br>155                                    |                              | 244<br>274                | 244<br>274                        |
| Normalization         Normalin themalinatinterance         Normalization   |          | L-I                      | e o Lucparto                | 195                     | 175                      | 175                         | 174                      | 175                | 175                      | 174                    | 175                      | 175                         | 174                  | 175               | 175                 | 174                      | 175                     | 175                         | 174                           | 175                        | 175   | 174                          | 244                       | 284                               |
| Transversion         Height Free Mag 246 Or Mig 246 Or M   | 1        | He mo serve il c'h       | or Fospio<br>crifil Support | 174                     | 14                       | 254                         | 174                      | 174                | 254                      | 174                    | 174                      | 254                         | 174                  | 174               | 254                 | 144                      | 174                     | 174+175                     | 174                           | 174                        | 154+155                                       | 174                          | 174                       | 174+174                           |
| Jestim and<br>intervent         Sub (3)<br>(1)         Sub (4)  |          | Sa<br>Tarxara            | Ceuí                        |                         |                          |                             |                          |                    |                          |                        |                          |                             |                      |                   |                     |                          |                         |                             |                               |                            |   |                              |                           |                                   |
| 2         Image: Second Processing   | 1        |                          |                             | 30                      | 175                      | 175                         | 35                       | 175                | 175                      | 30                     | 254                      | 274                         | 1754170              |                   |                     | 175+170                  |                         |                             |                               | 15441.54                   | 154+155                                       |                              | 174+174                   | 154+154                           |
|  |          |                          |                             | 745<br>14               |                          |                             |                          |                    |                          | 14                     |                          |                             |                      | 241               | 241                 |                          | 241                     | 241                         | 745<br>141                    |                            | 24  | 141                          |                           |                                   |
| S2         Matrix Constraint         Matrix C  | -        | Lon: n. dinci   P        | no Bulgori                  | 154 1                   | <u>6416.  </u>           | 174+175                     | 154 1                    | 74+174 IN          | 541 (M)<br>2019          |                        | 35                       |                             | 154                  | <u>- 25</u>       | 25                  | 154                      | 1504130                 | <u></u>                     | 174                           | 145+160                    | 155+150                                       | 154                          |                           | 150+160                           |
| Figure         Figure         HAT #         Dot         DAT         DAT <thdat< th="">         DAT         DAT         <thd< td=""><td></td><td>5 a</td><td>: .</td><td></td><td></td><td>albun du Me</td><td></td><td></td><td></td><td>y2arcu ₩</td><td></td><td>40/20100</td><td>мар 26-е</td><td>α Mαγ2and</td><td>u Mayland</td><td>u May Zarot</td><td>u May Zand</td><td>o wg?Gri</td><td>cu May2ana</td><td>iu wayizore</td><td>u waɗara</td><td>u May Zano</td><td>u Maržano</td><td>L May Tar cu</td></thd<></thdat<>  |          | 5 a                      | : .                         |                         |                          | albun du Me                 |                          |                    |                          | y2arcu ₩               |                          | 40/20100                    | мар 26-е             | α Mαγ2and         | u Mayland           | u May Zarot              | u May Zand              | o wg?Gri                    | cu May2ana                    | iu wayizore                | u waɗara                                      | u May Zano                   | u Maržano                 | L May Tar cu                      |
| Leve served         Hole /R         X         K  |          |                          |                             |                         | 12 an de Mai<br>24       |                             |                          | Condu 网络"<br>24    |                          |                        | <u>247 CONCON</u><br>244 | 44212 Cini Ciulia<br>244    |                      |                   |                     |                          | u May Band<br>14 t M    | <u>し おなじい</u><br>1411 新     | <u>ru Mayizana</u><br>1451 20 | <u>.с. мер Зеле</u><br>245 | <u>u Magratan di</u><br>245                   | に構築(2010)<br>1451 第          | u MQ(2010)<br>245         |                                   |
| $2^{-1}$ $1 + \frac{1}{9} + \frac$   |          | we molected t            | HL Scare                    | 175+170                 |                          | 145                         | 175+170                  |                    | 175 F                    | 10+17C                 | 254                      | 254                         | 249                  |                   | 274                 |                          |                         | 174+174                     | 149+144                       |                            |   | 145+144                      |                           | 174+175                           |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  | 24       | L ngi dust [1]           |                             |                         |                          |                             |                          |                    |                          |                        | <u>- 3%</u><br>1451 #    | 245                         |                      | 1451 #            | <br>1451 #          | 14                       | 245                     |                             |                               |                            |   |                              |                           |                                   |
| $ \left  \begin{array}{c c c c c c c c c c c c c c c c c c c $   |          | He molecter il Citt      | orini. Supto t              |                         |                          |                             |                          |                    |                          | 174                    | 174<br>                  | - <del>20</del><br>49 26 60 | 174<br>              | 174<br>174 - 0    | <u></u>             | 174<br>0 - 242 - 242 - 2 | 471<br>                 | 175+170<br>1.454 - 244 - 27 | - 174<br>0 - 65 C - 646 - 01  | 174<br>174 - 01            | 175+170<br>0 - 2450 - 2450 - 01               | 174                          | 174<br>0. 242 0.00        |                                   |
| Fair and and an algorithm         Fair and and algorithm         Fair algorithm  |          | Тагалаг-н                | Cent.                       | ଲଗ୍ର ଅଟନ କରି            | 256.00 MS                |                             | i za co wi               | 256 CC MS          | 256 CO (485              |                        | Si zek collik            | નસું ગામ દાવા -             | સર્ક 260 વ           |                   |                     |                          |                         |                             | CO MSIDERO                    | লে মন্ত্রিসকল              |   | ા મહિત્યકાર                  |                           |                                   |
| A         Located by Parkage   |          |                          |                             | 245 11                  | <u>441 AL  </u><br>41 AF | 桜+1た <br> 241               |                          |                    | 841 AL<br>241            | <br>245                | 1446.<br>1446.           | 1446                        | 14541761<br>1450-26  | <u></u>           |                     |                          | <u></u>                 | <br>141 - 25                | 1454 M                        | 1454 M                     | 175+170<br>245                                | 14541 M<br>1450 M            |                           | 150+160<br>248                    |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  | 1.       | F:I                      | eror Focialis               |                         |                          | 24                          |                          |                    | 24                       | 1#                     | 1411 28                  |                             | 14                   | 1411 26           | 1411 #              | 141                      | 1411 26                 | 1411 8                      | 141                           |                            |   | 14                           | 245                       |                                   |
| Nover to new series         Marganeone Margan   | 1        | Tenin enert Cili         | na Buipan<br>Parkt Siljaan  | 144                     | <u>14</u>                | <u></u>                     | 142 1                    | 141<br>141         | <u>-70</u><br>745        | 14                     | 14                       |                             | 14                   | <br>1#            | 1451 AF             | 14                       | 14941761                | <br>1451 #                  | 14                            | 14941751<br>144            | 245   | 14                           | 149+175                   |                                   |
| Find         Find <th< td=""><td></td><td>S a</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>  |          | S a                      | -                           |                         |                          |                             |                          |                    |                          |                        |                          |                             |                      |                   |                     |                          |                         |                             |                               |                            |   |                              |                           |                                   |
| $ \frac{1}{2} = \frac{1}{2} \frac$ |          | =                        | For Scars                   | 1451 22 1               | ¢ra≓ 1                   | #1 # · ·                    | 1451 22 1                | 4 i A 14           | ar ar ta                 | 451 M                  | 245                      | 245                         | 1451 22              | 245               | 245                 | 1451-22                  | 1451 #                  | 1451-26                     | 1451-22                       | 1451 26                    | 1451 26                                       | 1451-22                      | 245                       | 245                               |
| 26         Inglind         for supple         14         26         165         165         26         165         26         165         26         165         26         165         26         165         26         165         26         165         26         165         26         165         26         165         26         165         26         <  |          |                          |                             |                         |                          |                             |                          |                    |                          |                        |                          |                             |                      | 20<br>20          | 20<br>20            |                          | 154180                  |                             | 145+1641                      |                            |   |                              |                           |                                   |
| 含水         純素2方100 (水素10000000)           Lotting         Lotting <thlotting< th=""> <thlotting< th=""> <thlotti< td=""><td>*</td><td>I ugi dust ff</td><td>ս քուր մ</td><td>14</td><td>245 1</td><td>45) ¥</td><td></td><td>245 14</td><td>St #</td><td></td><td></td><td>245</td><td></td><td>1451 #</td><td>1451 22</td><td>14:</td><td>1451 27</td><td>1451-22</td><td>14:</td><td></td><td>1451 22</td><td></td><td></td><td>1451-27</td></thlotti<></thlotting<></thlotting<>  | *        | I ugi dust ff            | ս քուր մ                    | 14                      | 245 1                    | 45) ¥                       |                          | 245 14             | St #                     |                        |                          | 245                         |                      | 1451 #            | 1451 22             | 14:                      | 1451 27                 | 1451-22                     | 14:                           |                            | 1451 22                                       |                              |                           | 1451-27                           |
| Jantiment         Jantiment <thjantiment< th=""> <thjantiment< th=""> <t< td=""><td></td><td>Sales in the second City</td><td>erini. Suptot</td><td></td><td>DEFICE MS</td><td>i zer de Mi</td><td></td><td>DEFICIA MS:</td><td>269 CO 1469</td><td></td><td></td><td>ძვე 25% იი ს</td><td></td><td></td><td></td><td></td><td></td><td>20 MS: 259 0</td><td></td><td></td><td>A M3:281 O</td><td></td><td></td><td><ul> <li>Alg: 259-001</li> </ul></td></t<></thjantiment<></thjantiment<>   |          | Sales in the second City | erini. Suptot               |                         | DEFICE MS                | i zer de Mi                 |                          | DEFICIA MS:        | 269 CO 1469              |                        |                          | ძვე 25% იი ს                |                      |                   |                     |                          |                         | 20 MS: 259 0                |                               |                            | A M3:281 O                                    |                              |                           | <ul> <li>Alg: 259-001</li> </ul>  |
| Tanin sensel 14 States 1451 27 245 1421 24 1451 27 245 1421 24 1451 27 1451 24 1451 27 1451 24 1451 27 1451 24 1451 27 1451 24 1451 27 1451 24 145   |          | โตกระหา-ค                | Centi<br>Centi              |                         | Der on Mg                |                             |                          | CORPORE MB:        |                          |                        |                          | 43) 250 CC -                |                      |                   |                     |                          | ମା କାର୍ଥ୍ୟ ଅନ୍ୟାର<br>ଅନ | ମା କରି ମନ୍ଦ                 |                               | COLMERCER OF               | ମ କରିଯ୍ୟାର<br>ଆ                               |                              |                           | 1 MS 259 CO                       |
| স্বস্থা স্বস্থা সাজা স্বস্থা স্বস্থা স্বস্থা সাজাল স্বস্থা স্বস্থা স্বস্থা স্বস্থা স্বস্থা স্বস্থা সাজা বিদ্যালয় বিদ্যালয় 🕅 বিদ্যালয় 🕅  |          | Tenún enert              | Ft State                    | 1451 22                 |                          | (おこな) 、                     | 145 i 22                 |                    | ar ar ta                 | 451 M                  | 145 i X                  |                             | 1451 22              | 145 i 26          | 245                 | 1451 22                  |                         |                             | 1451 22                       |                            |   | 1451 22                      | 1451 22                   |                                   |
|  | 1        |                          |                             |                         |                          | 44 i 24                     |                          |                    | 21 <del>22</del><br>- 93 | 142                    |                          |                             | 14                   |                   | 245<br>1554155      | 14                       |                         | 1451 AF                     | 14                            |                            | 145) #<br>1594-159                            | 14                           |                           | 245                               |
|  | -        | Senior enert Cali        | erbt Sijon                  | 14                      | 1#                       | 245                         | 14                       | 141                | 245                      | 14                     | 1#                       | 245                         | 14                   | 141               | 1451 27             | 14                       | 1#                      | 1451 22                     | 14                            | 14                         | 1451 22                                       | 14                           | 141                       | 1451 22                           |
| [37] MALINE M  |          | Sia<br>Tanyte be         | ent.                        | MQCOLCC MQ              | Conce Ma<br>Conce Ma     | y Bandu Ma<br>y Bandu Ma    | y sanca Ma<br>y sanca Ma | CONCUMATION        | Cance May<br>Cance May   | y Bancu M<br>Y Bancu M | ⊈iseree ∦<br>⊈iseree ∦   |                             |                      |                   |                     |                          |                         |                             | се маузанс<br>Се маузанс      | .с мфранс<br>(с мфранс     | C MAGGORD<br>C MAGGORD                        | и марински с<br>И марински с | 0 MQ(2010)<br>0 MQ(2010)  | n May Sanda<br>May Sanda          |

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| Client:  | Amvic, Inc.         | Check |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea   | d Load  | =  | 15 psi  | f   |  |  |                                  |                            |                                  |                                |                               |  |  |                                      |                                |                                  |                                     |                                   |                            |                                    |                                    |                            |
|-------|---|--|---|---|--|--|----------------------------------|----------------------------|----------------------------------|--------------------------------|-------------------------------|--|--|--------------------------------------|--------------------------------|----------------------------------|-------------------------------------|-----------------------------------|----------------------------|------------------------------------|------------------------------------|----------------------------|
| e     | <u> </u>  | 200<br>200   | <u>ି</u> କାର୍ଯ୍ୟ କାର୍ଯ୍ୟ<br>ଅଭିନୟ କାର୍ଯ୍ୟ କାର | D - 18<br>F - 18  |  | 1 - 50 D - 15<br>D2                            | ¥8                               |                            | - V D - 1                        | £<br>\≤S                       |                               | I - 70 D -                                     | - 15<br>                                 | 07                                   | 1 -30 D - 1                    | 15<br>\\S                        |                                     | 1 - 30 D - 1                      | ₹<br>\\%                   | 07                                 | 1 -100 til - 5                     |                            |
| 76.9* | 1=  | Ling Scare   | ] 1#  | r: 17   | ∠ 1#°  | 174  | 174                              | 14                         |                                  | 174                            | 14                            | 174  | 174                                      | 14                                   | 174                            | 174                              | 14                                  | 174                               | 194                        | 14                                 | 174                                | 174                        |
|       | se mo perre il                                  | H1 Scars<br>Esteror Focpuls                        | 14 14 14  | 4 14<br>4 12  | · 1#<br>· 1#   | 14   | 14                               | 14                         | 14                               | 14                             | 14                            | 14   | 14                                       | 14                                   | 14                             | 14                               | 14                                  | 14                                | 14                         | 14                                 | 14                                 | 14                         |
| IL.   | Lon: n.d.net                                    | Int putpert  | 174 17  | r: 17   | - 174  | 174  | 174                              | 174                        | 174                              | 174                            | 174                           | 174  | 174                                      | 174                                  | 174                            | 174                              | 174                                 | 174                               | 174                        | 174                                | 144                                | 174                        |
|       | 2011/01/01/01                                   | Cili-chi Sipore<br>Sia:                            | 149 149<br>MQ120100 MQ129   | € 14<br>απου Μα22γ  | / 1#<br>.ncu ₩2/20nu   | 1#<br>:u ₩2:30+00-                             | 1#<br>M©120100                   | 1#<br>M©1201.00            | 1#<br>#20100.00                  | 14<br>. Mortunicu              | 1#<br>M2/20                   | 144<br>100 MQ23011                             | 1#<br>CC ₩9/3010                         | 1#<br>∿ ₩9212010                     | 1#<br>:u ₩121:000              | 1#<br>50 <b>M</b> 2/2010         | 149<br>10 1 <b>1</b> 9012 0110      | 144<br>10 1 <b>11</b> 2010        | 1#<br>⊎ #12110             | 144<br>U MAQ12010                  | 1#<br>u M©rianicu                  | 1#<br>. M©120100           |
|       | Fa.192  | e se Helm.   | MQ201CU MQ23  |   |  |  |                                  |                            |                                  |                                |                               |  |  |                                      |                                | U MQCON                          | C Mg/2010                           |                                   |                            |                                    |                                    |                            |
|       | se mo perrent                                   | For Scars<br>14, Scars                             | 14 14   | 4-<br>14-<br>15-  | · 14·<br>- 15-   | 14   | 14                               | 14-                        | 14                               | 14                             | 144                           | 14   | 14                                       | 145                                  | 14-                            | 14                               | 145<br>175                          | 144                               | 141                        | 145                                | 14                                 | 14                         |
|       |   | Lete o purporto.                                   | 144 14  | r- 17   | L 174  | 174  | 144                              | 174                        | 144                              | 174                            | 174                           | 144  | 144                                      | 174                                  | 144                            | 174                              | 144                                 | 174                               | 174                        | 174                                | 174                                | 174                        |
| '     |   | 1° o Fospid<br>Clharth, Support                    | 14 14   | 64 IN   | 4 154  | 14   | 14                               | 14-                        | 14                               | 144                            | 14                            | 14   | 14                                       | 14-                                  | 14                             | 141                              | 14                                  | 14-                               | 14/                        | 14-                                | 145                                | 141                        |
|       |   | Sa<br>Marina Terra                                 | <u> ଅଗ୍ରାହିଳ କୋଳଗ୍ରହ</u><br>ଅଗ୍ରହଳ କୋଳଗ୍ରହ  | 69 CO MS 26   | 9-00-24 <u>9</u> -26-0   | CO 2450 250 CO                                 | MS: 255-00                       | MS: 259-00                 | Mg; 265-00<br>आग-265-00          | <u>: କାର୍</u> ତ୍ତ 25% ୦୦       | MS: 25                        | <u>ାରେ କାର୍ଥ୍ୟ ଅଟେ</u> ।<br>କୋଳ                | <u>୧୦ କାରୁ 25% ୧</u> ୦<br>୧୦ କାର୍ଯ୍ୟ ହୋଇ | <u>ମାନ୍ୟର</u> 25% ମ<br>ରାଜ୍ୟର ସମ୍ଭାର | CO 1439,259-0<br>CO 1460-269-0 | C M3:2510                        | <u>ମେ କାର୍ଥ୍ୟ ଅଟନ ସ</u>             | <u>କ ଅନ୍ତର୍ଥର</u><br>କାର୍ଯ୍ୟର ସହର | <u>ମା କାର୍ଥ୍ୟ ମଧ୍ୟ ମ</u>   | ୦ କାର୍ଥ୍ୟ 25% ପ<br>୦. ସାହ          | n M <u>B</u> 269 CC                | MS 255 CC                  |
| ł     | Lottem  | Line Statis  | 175 17  | নি নি নির্দেশনের<br>দি নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির<br>বিষয়ার নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্দেশনের নির্ | নাচাল আনুয়ালে।<br>২ াপ্ট  | 174 (1974)<br>174                              | 144<br>144                       | 150 N                      | 144<br>144                       | 134                            | 175                           | - 194 (BRA - 1944)<br>194                      | ा गर्भ<br>  इस्                          | ে মানু সময়।<br>হিচ                  | 174 - 174<br>174               | 174 (BPA) - 174<br>- 174         | ে নার্যু স্বান্য<br>।বহ             | 24 gi 2 61 - 1.<br>174            | 174 - 174 - 174<br>174     | - 254 - 134<br>- 254               | 144                                | 144                        |
|       | Tenfor energy                                   | H1 Scars<br>Foteror Focp ds                        | 145 14<br>14: 14  | e 14<br>e 14  | · 145<br>· 14  | 14<br>14                                       | 14:<br>14:                       | 145                        | 14                               | 14-<br>14-                     | 145                           | 14   | 14                                       | 145                                  | 14                             | 14                               | 145                                 | 14                                | 14                         | 74 <sup>0</sup><br>14 <sup>0</sup> | 14 <sup>-</sup><br>14 <sup>-</sup> | 14                         |
| 14    | Long radiosi                                    | Int purport  | 14% 14<br>14  | * +<br>* +  | · 14-  | 144  | 144                              | 144                        | 145                              | 174                            | 175                           | 145  | 14<br>140                                | 144                                  | 14-<br>14-                     | 145                              | 144                                 | 140                               | 145                        | 175                                | 14-<br>14-                         | 195                        |
|       | Tenjo eren                                      | Cili-chi Sipore<br>Stat                            | 142 142<br>MQ120100 MQ124   | 6 - 14<br>Single <b>M</b> 2212  | 2 142<br>1910 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 - 1420 | 1#<br>30. #101.00                              | 144<br>5452 / Juni Cu            | 1#<br>#1201.00             | 14)<br>5100 - 200 - 200          | 14)<br>、 村公120000              | 141                           | 14)<br>1106 - 8402 - 2004                      | 1#<br>CC #1921/CCC                       | 1#<br>16. #10012.000                 | 14)<br>16 - 1410 - 1711 - 17   | 145<br>10. 510212.011            | 14)<br>36 - 5600 - 2000 - 2         | 14)<br>16 - 5100 - 200 - 0        | 145<br>1. 5100 - 200 - 0   | 142<br>G. 181021-2011-01           | 14<br>6 - 5400 - 200 - 200         | 145<br>- 2012 - 110 - 110  |
|       | Fa.192  | e se he m.   | MOREL NO. 1   |   | ando Migizano  | CONSTRUCTION                                   | MQ1201CU                         |                            | MQ12 CH CC                       |                                | MQ12.0                        | TCU MQC2011                                    | CU MQ1201C                               | U MQCONC                             | CE MQCORE                      | C MQ12010                        | C MQCORC                            | C MQ12010                         | U MQCORD                   | u May Bar O                        | u Migʻizaricu                      | MQC20100                   |
|       | He mo percent                                   | For Scars<br>14, Scars                             | 145 14  | 4 14<br>6 15  | · 145<br>- 170   | 14   | 14                               | 241                        | 14                               | 14                             | 244<br>274                    | 14   | 14                                       | 245                                  | 145                            | 145                              | 1411 #                              | 145<br>170                        | 145                        | 141 H<br>1441 A                    | 145                                | 145                        |
|       |   | Lefe o Europario                                   | 174 17  | r- 17   | L 174  | 174  | 174                              | 174                        | 174                              | 174                            | 174                           | 174  | 174                                      | 174                                  | 174                            | 174                              | 154                                 | 174                               | 174                        | 174                                | 175                                | 175                        |
| 16    | <ul> <li>Logi dost<br/>se mo percent</li> </ul> | ff in Fach it<br>Clifer Fill Support               | 14 14   | 5 14<br>6 IS  | 5 141  | 145  | 145<br>155                       | 14                         | 145                              | 145                            | 14                            | 145  | 145                                      | 14                                   | 244<br>174                     | 145                              | 14                                  | 240<br>154                        | 244<br>175                 | 141                                | 245<br>175                         | 244                        |
|       |   | Sat  | Mg(25) C0 Mg(2)   | 58 CC (MS) 23   | 9 CO 24 <u>5</u> 259 C   | COLUMN 255 COL                                 | MS(25) CC                        | MS(25) CO                  | Mg, 255 CC                       | - M <u>S</u> (25) CO           | 24(5) 2.53                    | - CO (MS) 250                                  | CC - M <u>B</u> 258 C                    | C 245-25-0                           | 10 MS 250 0                    | .e. 관광, 25% (                    | 10 MS(25) C                         | C M <u>3</u> 250 C                | A 245:25:0                 | <u>ମାନ୍ୟର</u> 25% ପ                | n M <u>a</u> rzer co               | 2456 2 56 C.C.             |
|       | _075500   | атан Төрг<br> ng Spark                             | MS: 25: CO MS: 2:<br>   | 600 MB/75<br>6 15   |  | 175  | AS 250 U.                        | 1744174                    | #1일: 256 UT<br>[15]              | - 2439 746 0.1<br>(*)          |                               |  | 175                                      | 174417                               | . 이 44일(2560).<br>(국)          | 17 - HSI 7400                    | ла наде Улек I.<br>250              | 175                               | и марияни.<br>175          | 20                                 | ा अधुर स्वता ()<br>(*)             | 15                         |
|       | Tenin erent                                     | HI Scars   | 242 14  | 5 14<br>4 14  | 242  | 145  | 14<br>14                         | 141 27                     | 145                              | 14<br>14                       | 1413                          |  | 145                                      | 1411 #                               | 145                            | 145                              | 245                                 | 145                               | 145                        | 245                                | 145                                | 145                        |
| IL.   | Lon: r. dinel                                   | Faterior Froip ids.<br>1 <sup>47</sup> no Guiport  | 154 14  | r 1⊄<br>r-  | / 14/<br>/ 15/4  | -74  | 14                               | 14-                        | -54                              | 274                            | 144                           |  | 145                                      | 144                                  | 144                            | 145                              | 144                                 | 140                               | 144                        | 154                                | 154.41.25                          | 154+154                    |
|       | Tentor energy                                   | Ciliar Et Sipore                                   | 14 14   | ÷ 14  |  | 14   | 145                              | 14                         | 14                               | 145                            | 14                            | 14   | 74                                       | 14                                   | 14                             | 244                              | 14                                  | 14:                               | 244                        | 14                                 | 14                                 | 1411 24                    |
|       | Fa.197  | jola:<br>ze se nem.                                | MØ120FCC MØ12F<br>MØ120FCC MØ12F  | 0100 MQ/20<br>0100 MQ/20  | 160 MQ2060<br>160 MQ2060   | 10 MQ120100                                    | MQ1201CC                         | MQ120FCC                   | MQCONCO<br>MQCONCO               | , MQ-20100<br>, MQ-20100       | MQ120                         | ree May serv                                   | ce May Sand                              | u Mayizara                           | ie May zere<br>Je May zere     | C MQ12010                        | 10 MQ/2010<br>10 MQ/2010            | 0 MQ12010                         | 6 MQ2010                   | 6 MQ12010                          | 6 MQ20100                          | - MQCCARCU<br>- MQCCARCU   |
|       | =   | Fur Scars  | 1411 # 14   | vs 14   | 5 14117  | 145  | 145                              | 1411 #                     | 145                              | 145                            | 245                           | 145  | 145                                      | 245                                  | 24                             | 744<br>155                       | 1451.46                             | 24                                | 24                         | 1451.26                            | 24                                 | 2#                         |
|       | He mo be the fi                                 | Th. Stars<br>Lefe o Dutports                       | 17641 A. 17<br>176 17   | 6 17<br>6 17  | 5 14441A<br>5 144  | 175<br>176                                     | 170<br>170                       | 1764*176.<br>1764          | 175<br>176                       | 175<br>176                     | 25)<br>174                    | 115<br>116                                     | 170<br>170                               | 275<br>174                           | 244<br>145                     | 175                              | 175+170<br>174                      | 299.<br>299.                      | 2744<br>2744               | 175+170<br>174                     |                                    |                            |
| х     | I ngi dusi                                      | 1' or Foop d<br>Ciher Ini, Support                 | 14 14 1   | i¥ 24<br>⊭  | · 14   | 1441 - 244                                     | 24                               | 14                         | 1411.26                          | 1411.84                        | 14                            | 144 ( 144<br>144                               | 1411 27                                  | 14                                   | 245                            | 14日 新<br>1441 年                  | 14                                  | 245                               | 245                        | 14                                 | 1451 #                             | 245<br>1564155             |
|       |   | Sar  | MS: 255 CO MS: 25   |   |  |  |                                  |                            |                                  |                                |                               |  |  |                                      |                                | 0 - Alg: 259-0                   |                                     |                                   |                            |                                    |                                    | - A45: 259-00              |
|       |   | ar-e Telli<br>  Ling Stark                         | M3:25:00 M3:25  | 89.00 Mg(28   | er og Mgroer o   | COLLANS: 259-COLL<br>March                     | MS(249-CC)                       | MS(24) CO                  | MS: 255-00                       | Here and the second            | - 24년: 259<br>1524년           |  | COLIM <u>S</u> E 255 C                   | in Mgi zakin<br>Lui                  | 10 - 269 269 0<br>15941년       | 이 사망, 25% 이<br>15% (15%          | n Marzero<br>La                     | .이 24일: 249-0<br>1594년 전          | n Mgi 260 Q<br>Marina      | n Mgi 255 O                        | n Mgi 259 Ch<br>Marata             | 1 A43: 259-001<br>159-155  |
|       | Senio enert                                     | Ft Scars   | 245 14  |   |  | 145  | 145                              | 1451.26                    | 244                              | 145                            | 1451.2                        |  | 244                                      | 245                                  | 141.2                          | 24                               | 245                                 | 1411 24                           | 24                         | 1451 22                            | 1411                               | 1411 26                    |
|       | Lon: rud not                                    | Faterior Froip ids.<br>1 <sup>47</sup> no Lautport | 14: 14<br>174 1744  |   |  | 145<br>15641 (5                                | 145<br>15541 (S.                 | 141                        | 145                              | 145<br>15441 (S.               | 14                            | 244  | 245                                      | 141                                  | 244<br>14541 M                 | 240                              | 142                                 | 244<br>17541 ML                   | 24)<br>17541 M             | 141                                | 1#11#<br>96                        | 1411 #<br>1554100          |
| -     | Tenfor errent                                   | Other FT S proc.                                   | 14 14   | 4 74  | · 14·  | 14   | 241                              | 14                         | 14                               | 1411 22                        | 14                            | 14   | 1411 #                                   | 14                                   | 141                            | 245                              | 14                                  | 14                                | 245                        | 14                                 | 14                                 | 1451 #                     |
|       | Fa 150  | isia:<br>xe se weim.                               | MOREGNEC MORE<br>MOREGNEC MORE  |   | inde Maybane<br>Inde Maybane   |  | MQ120100<br>MQ120100             |                            |                                  |                                |                               | 100 MQ(201)<br>100 MQ(201)                     |  |                                      |                                |                                  |                                     | U MQ12010<br>U MQ12010            |                            |                                    | U MQ12010U<br>U MQ12010U           |                            |
|       | =   | For Scars  | 145) # 24   | e - 74  | / 1451 ¥   | 741  | 241                              | 245                        | 1411 22                          | 1411.84                        | 245                           | 141 8  | 1411 22                                  | 1451 22                              | 1411 #                         | 1411 #                           | 1451 22                             | 245                               | 245                        | 1451 22                            | 245                                | 245                        |
|       | se mo perre il                                  | Thi Scars<br>Lefe o Bucports                       | 15+30 5   | NL 24   | 2 175+170<br>2 170   | -74  | 256                              | 289                        | 1764176                          | 1944<br>1956                   | 289                           | 174+174  |  | 145+164                              | 1944年代。<br>1944年代              | 桜中花。<br> 桜中花。                    | 1494164                             | 275<br>1754 - 25                  | 1994年1月1日<br>1996年1月1日     | 175+174                            | 255<br>15541 (55                   | 1544154                    |
| 24    | I ugi dust                                      | ք ո քայր մ   | 14 24   | vs 24   | 5 14   | 245  | 245                              | 14                         | 1451.46                          | 245                            | 14                            | 1451 #   | 1451.76                                  | 14                                   | 245                            | 1451.26                          | 14                                  | 245                               | 245                        | 14                                 | 1451 22                            | 245                        |
|       | -eno serre i                                    | Cilher Ini, Support<br>Stat                        | H3: 25: 00 H3: 2;   | 60 00 2458-26   | 174 - 174<br>51 O.C. (415): 2,51 C   | 174<br>10 - 2456-256-00                        | 154+164<br>2459-259-550          | 45:25:00                   | 174<br>2459 259 00               | <u>- 255</u><br>1. MSR 256-501 | - 194<br>- Adds 2.55          | - 174<br>• COL 2456 2560                       | <u></u>                                  | .0. 2456-236-0                       | 174<br>10 - 252 252 0          | 15+18.<br>21 Alts: 255-0         | 174<br>10 - 2456 236 0              | 174<br>2011 Adds 2,56, 0          | 175+170<br>2012/156-256-01 | 174<br>0. Altis 2.55 O             | 0 459 259 CC                       | 259<br>1. 2459: 259: 0.01  |
|       |   | н-н Тип'   | କରି ମଳ ମୋକରି ମ  |   |  |  |                                  |                            |                                  |                                |                               |  | ଦେ କରିଥେବା କ                             | ા મહિત્યન વ                          | କୋଇଥିଲେ କ                      | লে মন্ত্রিসকল                    |                                     |                                   |                            |                                    | ମା କରି ଅନ୍ୟାରଣ                     |                            |
|       | Lottom<br>Tembri en er t                        | Lini Spark<br>Ini Koana                            | 245 1444<br>245 1444  |   | 1 <u>74 - 175</u><br>1 - 245   | 1444 6.  | 144+164<br>244                   | 14541761<br>14501765       | 144.6                            | 14412                          | 145412                        | <u>*</u>                                       |  | 14541 M                              |                                |                                  | 14541741                            | 1454170                           | 245                        | 14941 M                            | 1454170                            | 175+170<br>248             |
|       |   | Faler or Focipiots                                 | 141 24  | e >4  | · 14/  | 241  | 241                              | 14                         | 1411 #                           | 1411 26                        | 141                           | 1411 #   | 1411 #                                   | 141                                  | 1411 #                         | 1411 #                           | 141                                 | 245                               | 245                        | 141                                | 245                                | 245                        |
| 1     | Tentin enert                                    | 1 <sup>45</sup> m Laupon<br>Citier Fit Signar      | 142 1434  | *170 170*<br># 24   | 174 <u>174</u><br>5 141  | 145+170  | 245                              | 174                        | <br>1#                           | 145+180<br>1451-24             | 114                           | 15941761<br>144                                | <br>1451 #                               | 174                                  | 16941 M                        | 245                              | 174                                 | 15041761                          | 245                        | 174                                | 14941761                           | 1454126                    |
|       |   | Sac  | MQ120100 MQ12   |   |  |  |                                  |                            |                                  |                                |                               |  |  |                                      |                                |                                  |                                     |                                   |                            |                                    |                                    |                            |
|       | = ra*%  | e colleont.<br>Fue Scaria                          | 1451 2 24 CU 142(2)   | <u>undu Mayiza</u><br>8 - 24  | 1451 2010  | 245  | <u>245</u>                       | 1451 A                     | 245                              | 245                            | 1451.2                        | <u>reu Mayizan</u><br>21 - 1451-26             | 1451 AF                                  | 1451 8                               | 1451 AF                        | 1451 #                           | 1451 #                              | 245                               | <u>0 MQ12010</u><br>245    | 1451 #                             | <u>u Mayi 2an du</u><br>245        | - Migridian da.<br>245     |
|       | se mo perre il                                  | 14. Stats  | 149+161 24  |   |  | 255  | 174+175                          | 149+144                    | 265                              | 1744175                        | 145+14                        |  | 255                                      | 149+144                              | 1454176                        | 255                              | 149+144                             | 249                               | 145+140                    | 145+144                            | 249                                | 175+170                    |
| *     | I ugi dust                                      | Lele o Butparlo.<br>1º o Focput                    | 144 144+  |   |  | 144+175  | 1451.26                          | 144                        | 1444 (201                        | 144+174.<br>245                | 114                           | <br>1451 #                                     | <br>1451_22                              | 144                                  |                                | 1451 22                          | 114                                 | 145+130<br>1451-22                | 1451-22                    | 114                                | 1454-20                            | 1454180                    |
|       | se mo se tre t                                  | Ciliar Ini, Support                                | 154 15  | 6. I√.+   | 181 182  | 175  | 151+151                          | 155                        | 1952                             | NG                             | 1954                          | 192  | NG                                       | 1952                                 | 175                            | 1551+1551                        | 192                                 | 175                               | 125141251                  | 185                                | 1954                               | 125141251                  |
| 1     |   | Sar<br>Mi-H THUÍ                                   | M3:25:00 M3:25<br>M3:25:00 M3:25  | <u>ଟା କଳା କାର୍ଥ୍ୟ ଅନ୍</u><br>ଟା କଳା କାର୍ଥ୍ୟ ଅନ  |  | <u>tel                                    </u> | <u> 서영(239-00)</u><br>서영(239-00) | 2459-239-00<br>2459-239-00 | <u> 서영: 2년: 00</u><br>서영: 2년: 00 | · 관광 25년 60<br>· 관광 25년 60     | <u>- 서영: 2년:</u><br>- 서영: 2년: | <u>· CO                                   </u> | <u>이 제품 2년 (</u><br>이 제품 2년 이            | <u>가 24일(23) (</u><br>21 24일(23) (   | 10 월일:239.0<br>10 월일:239.0     | <u>가 전망 251 (</u><br>21 전망 251 ( | 2011년(21년) 0<br>2011년(21년) 0        | <u>.이 제품 25% 이</u><br>.이 제품 25% 이 |                            | <u>이 서영(23) 이</u><br>이 서영(23) 이    |                                    |                            |
| í     | Lottem  | Ln: Stars  | 14941741 24   | <u>e z</u>  | 5 T+S+1#1  | - X5   | - Ho                             | 15541551                   | 175+170                          | 175+176                        | 175+17                        | だ けつぞうし  | 175+170                                  | 15541551                             | 249                            | 255                              | 15541551                            | 15541551                          | 1594155                    | 149+144                            | 145+161                            | 149+164                    |
| 1     | Tenún enert                                     | Foterior Focipiots                                 | 1451 # 24<br>14 24  | ज्य २७<br>जन्म  | 5 1451 22<br>5 142   | 245  | 245                              | 1451 22<br>145             | 145) #<br>245                    | 245                            | 1451 3                        | 27 1451 24<br>1451 24                          | 145) #<br>145) #                         | 1451 X2<br>145                       | 245<br>1451 #                  | 145) #<br>145) #                 | 1451 P<br>145                       | 1451 245                          | 245                        | 1451 PP<br>145                     | 1451-245                           | 245                        |
| × 1   | Lon: rud nel                                    | hogene on Pt                                       | 174 175+  |   | 3 174  | 1494174  | 39                               | 174                        | 149+144                          | 145+144                        | 174                           | 1454174  | 145+174                                  | 174                                  | 14541741                       | 145+144                          | 174                                 | 149+144                           | 145+144                    | 154                                | 149+144                            | 1454144                    |
| 1     |   | Ciliar Et Sipore.<br>Sia:                          | 142 142<br>MQ120100 MQ124   | e   | 5 – 142<br>ar€u Ma©r2ana   | 1#<br>10 M2120100                              | 245<br>24212 01:00               | 14<br>M2012 CF CC          | 14<br>M2012 OF CU                | 1451 22<br>- Maxilan da        | 14                            | 1 <del>4</del><br>100 MS(2011                  | 1451 22<br>CC おかじいつの                     | 14 <sup>0</sup><br>14 M 2010 0       | 14)<br>2011/10/2011/0          | 1451 22<br>10 1412/2011          | 14 <sup>0</sup><br>(U. 1412) 2000 0 | 14 <sup>0</sup><br>161 (M1210110  | 1451 22<br>U 24202010      | 14)<br>U MONDORO                   | 14<br>U M 2010 CU                  | 1451-22<br>- 145212 Griece |
|       | Ta 192  | e se he m  |   |   | ando Migracino   |  |                                  |                            |                                  |                                |                               |  |  |                                      |                                |                                  |                                     |                                   |                            |                                    |                                    |                            |

### Notes

• Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.

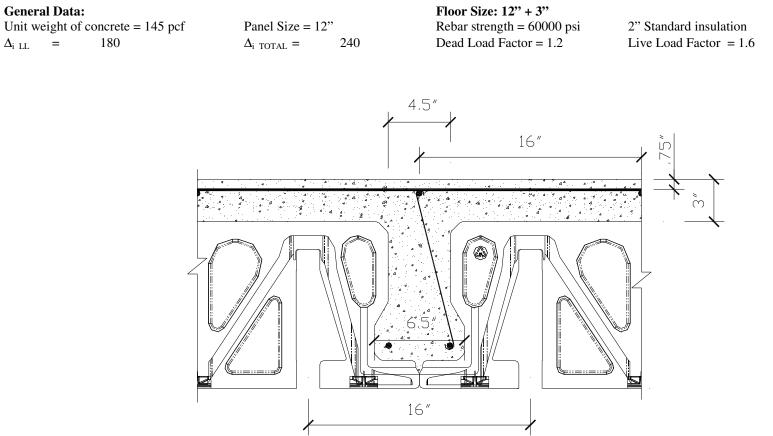
• Blank Cells indicates that the joists are failing in deflection.

Project: AmDeck Design Guide Client: Amvic, Inc.

 $\Delta_{i \ LL}$ 

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

## 9.3 Table C: f'c = 3500 psi, Topping Thickness = 3.0"



| Project: | AmDeck Design Guide |  |
|----------|---------------------|--|
| Client:  | Amvic, Inc.         |  |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

Dead Load = 10 psf

| Alt         Alt <th></th> <th> ì</th> <th>e 3400</th> <th>- I -</th> <th>SCD - 10</th> <th></th> <th></th> <th>L - 90 D - 10</th> <th></th> <th></th> <th>L - VCD - 10</th> <th></th> <th></th> <th>1 - 70 D - 10</th> <th></th> <th></th> <th>1 -30 D - 10</th> <th></th> <th></th> <th>1 -00 D -10</th> <th></th> <th></th> <th>1, -100 04- 0</th> <th>-</th>  |      | ì                       | e 3400   | - I -                  | SCD - 10             |  |                       | L - 90 D - 10            |                     |  | L - VCD - 10        |                     |                      | 1 - 70 D - 10        |                     |  | 1 -30 D - 10                             |                                    |                              | 1 -00 D -10          |                    |                     | 1, -100 04- 0        | -                       |
|--|------|-------------------------|--|------------------------|----------------------|--|-----------------------|--------------------------|---------------------|--|---------------------|---------------------|----------------------|----------------------|---------------------|--|--|------------------------------------|------------------------------|----------------------|--------------------|---------------------|----------------------|-------------------------|
| No.         No. <th>Scar</th> <th></th> <th>1/3</th> <th>87</th> <th>DF</th> <th>48</th> <th>8F</th> <th>DF</th> <th></th> <th>8F</th> <th>-1</th> <th>¥S.</th> <th>8F</th> <th>DF</th> <th>~S</th> <th>85</th> <th>DF.</th> <th></th> <th>87</th> <th>D-F</th> <th>¥8</th> <th>85</th> <th>D-</th> <th>¥8</th>  | Scar |                         | 1/3  | 87                     | DF                   | 48   | 8F                    | DF                       |                     | 8F                                       | -1                  | ¥S.                 | 8F                   | DF                   | ~S                  | 85                                       | DF.                                      |                                    | 87                           | D-F                  | ¥8                 | 85                  | D-                   | ¥8                      |
| A         Bit  |      | -0 00<br>-e 00 ce ::e 1 |  | 14                     | 174                  | 174  | - 14                  |                          |                     | - 14                                     |                     | 144                 | 14                   | 174                  | 174                 | - 14                                     | 174                                      |                                    | - 14                         |                      | 14                 | · 145               | 14                   | 14                      |
| N         Normal  |      |                         |  | 14                     | 14                   |  | 14                    |                          |                     | 14                                       |                     |                     | 14                   |                      |                     | 14                                       |  |                                    | 14                           |                      | 14                 | 14                  |                      | 14                      |
| Mathematical and service in strates in stra  | IL.  |                         | Information in the   | 154                    | 174                  | 174  | 174                   | 174                      |                     | 174                                      |                     | 174                 | 174                  | 174                  | 174                 | 174                                      | 174                                      | 174                                | 174                          | 174                  | 174                | 174                 | 174                  | 144                     |
| No.2.4.4.4.         No.2.4.4.         No.2.4.  |      | TH DOT HT HT            | Charlet Spore  | 14                     | 141                  | 14   | 141                   | 14                       |                     | 14                                       |                     | 141                 | 14                   | 14"                  |                     | 14                                       | 14"                                      | 14                                 | 14                           | 14                   | 14                 | 14                  | 14                   | 14                      |
| No.         No. <th></th> <th>-</th> <th>Sa:</th> <th></th>  |      | -                       | Sa:  |                        |                      |  |                       |                          |                     |  |                     |                     |                      |                      |                     |  |  |                                    |                              |                      |                    |                     |                      |                         |
| No.         No. <th></th> <th>= n m</th> <th></th> <th>145 N</th> <th>1420 D.L.</th> <th>142 56 5.</th> <th>145</th> <th>142</th> <th>142 JN J.<br/>144</th> <th>145</th> <th>142 JA J.</th> <th>142 JN J.</th> <th>145</th> <th>142 JN J.</th> <th>142 56 5.</th> <th>145</th> <th>142 06 0.</th> <th>142 JN J.<br/>142</th> <th>145</th> <th>1442 JN J.<br/>144</th> <th>142 JN J.</th> <th>145</th> <th>142 JN J.<br/>144</th> <th>142 JN J.</th>   |      | = n m                   |  | 145 N                  | 1420 D.L.            | 142 56 5.                                    | 145                   | 142                      | 142 JN J.<br>144    | 145                                      | 142 JA J.           | 142 JN J.           | 145                  | 142 JN J.            | 142 56 5.           | 145                                      | 142 06 0.                                | 142 JN J.<br>142                   | 145                          | 1442 JN J.<br>144    | 142 JN J.          | 145                 | 142 JN J.<br>144     | 142 JN J.               |
| P          |      | we mo be the f          |  | 175                    | 174                  | 174  | 175                   | 174                      | 174                 | 175                                      | 174                 | 174                 | 175                  | 174                  | 174                 | 175                                      | 174                                      | 174                                | 175                          | 174                  | 174                | 175                 | 174                  | 174                     |
| No.         No. <th></th> <th></th> <th>Lefe o Europario</th> <th>174</th>   |      |                         | Lefe o Europario   | 174                    | 174                  | 174  | 174                   | 174                      | 174                 | 174                                      | 174                 | 174                 | 174                  | 174                  | 174                 | 174                                      | 174                                      | 174                                | 174                          | 174                  | 174                | 174                 | 174                  | 174                     |
| Image: mark and set in a   | 17   | l ngi dusl              | 1՝ ս Բարմ  | 14                     | 141                  | 141  | 141                   | 14                       | 141                 | 14                                       | 14                  | 141                 | 14                   | 145                  | 141                 | 141                                      | 145                                      | 145                                | 14                           | 145                  | 145                | 141                 | 145                  | 145                     |
| Norm         Norm <th< th=""><th></th><th>we mo be the fi</th><th>Cher H. Support</th><th>174</th><th>174</th><th>174<br/></th><th>174<br/></th><th>174</th><th>174<br/></th><th>144</th><th>144</th><th>174<br/></th><th>144</th><th>174<br/></th><th>174<br/>2450 E.J. D.</th><th>174<br/>2450 E.u.D.</th><th>174</th><th>174<br/>2450 E.u.D.</th><th>174<br/>2450 E.J. D.</th><th>174<br/>3450 E.J. D.</th><th>175<br/></th><th>174</th><th>174</th><th>175<br/>2450 5 - 21</th></th<>  |      | we mo be the fi         | Cher H. Support  | 174                    | 174                  | 174<br>                                      | 174<br>               | 174                      | 174<br>             | 144                                      | 144                 | 174<br>             | 144                  | 174<br>              | 174<br>2450 E.J. D. | 174<br>2450 E.u.D.                       | 174                                      | 174<br>2450 E.u.D.                 | 174<br>2450 E.J. D.          | 174<br>3450 E.J. D.  | 175<br>            | 174                 | 174                  | 175<br>2450 5 - 21      |
| Home         Home <th< th=""><th></th><th></th><th>Terre Cerri</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>All 50.00</th><th>2459 Str.20</th><th>All 50.00</th><th>245: 50.20</th><th>2456 Str. 20</th><th>A15: 50.20</th><th></th><th>- HS: 50.20</th><th>- HS: 50.20</th><th>- HS 50.20</th><th></th><th></th><th></th><th></th></th<>  |      |                         | Terre Cerri  |                        |                      |  |                       |                          |                     |  | All 50.00           | 2459 Str.20         | All 50.00            | 245: 50.20           | 2456 Str. 20        | A15: 50.20                               |  | - HS: 50.20                        | - HS: 50.20                  | - HS 50.20           |                    |                     |                      |                         |
| Bit Normal         Linksons         Distance  | i    | Lottem                  |  | 175                    | 174                  | 174  | 175                   | 174                      | 174                 | 175                                      | 174                 | 174                 | 175                  | 174                  | 174                 | 175                                      | 175                                      | 175                                | 175                          | 175                  | 175                | 274                 | 175                  | 175                     |
| III         IIII         IIIII         IIIIII         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII   |      | THING HOLES             | <ol> <li>FL Scars</li> </ol>   |                        | 141                  | 14   |                       | 14                       |                     | 145                                      |                     | 14                  |                      | 14                   |                     |  | 145                                      | 14                                 | 145                          |                      | 14                 | 24/                 | 145                  |                         |
| No.         No. <th></th> <th></th> <th></th> <th>14</th> <th></th> <th>145</th> <th>145</th>  |      |                         |  | 14                     | 14                   | 14   | 14                    | 14                       | 14                  | 14                                       | 14                  | 14                  | 14                   | 14                   | 14                  | 14                                       | 14                                       | 14                                 | 14                           | 14                   | 14                 |                     | 145                  | 145                     |
| Image: Normal with the second secon  | 14   |                         |  | 14                     | 14                   | 14   | 14                    | 145                      | 14                  | 14                                       | 14                  | 145                 | 14                   | 145                  | 145                 | 14                                       | 14                                       | 145                                | 14                           | 14                   | 145                | 14                  | 14                   | 145                     |
| No.         No. <th></th> <th></th> <th>Siac</th> <th>MQ126.00 M</th> <th>10/10/07</th> <th>MOTONOC</th> <th>74:07:06:00</th> <th>MQ106.00</th> <th>74 Q10 n 00</th> <th>MQ156.00</th> <th>74 Q10 n 00</th> <th>74 Q10 n 00</th> <th>740210 n 00</th> <th>7402106-00</th> <th>MQ106.00</th> <th>MOTONICO</th> <th>MQ106.00</th> <th>MQ106.00</th> <th>MQ106.00</th> <th>MQ106.00</th> <th>MQ156.00</th> <th>MQ106.00</th> <th>74 Q10 n 00</th> <th>MQ106.00</th>   |      |                         | Siac   | MQ126.00 M             | 10/10/07             | MOTONOC                                      | 74:07:06:00           | MQ106.00                 | 74 Q10 n 00         | MQ156.00                                 | 74 Q10 n 00         | 74 Q10 n 00         | 740210 n 00          | 7402106-00           | MQ106.00            | MOTONICO                                 | MQ106.00                                 | MQ106.00                           | MQ106.00                     | MQ106.00             | MQ156.00           | MQ106.00            | 74 Q10 n 00          | MQ106.00                |
| Image: 1.1        1.1         1.1         1  |      | TA19                    |  |                        |                      |  |                       |                          |                     | MQ106.00                                 |                     |                     |                      |                      |                     | MQ106.00                                 |  |                                    | MQ106.00                     |                      |                    |                     | MQ106.00             |                         |
| Image: product of the state         Image: product of the state <t< th=""><th></th><th></th><th></th><th>145</th><th></th><th></th><th>145</th><th></th><th></th><th>145</th><th></th><th></th><th></th><th></th><th></th><th>242</th><th>145</th><th></th><th>24</th><th></th><th></th><th></th><th>145</th><th></th></t<>  |      |                         |  | 145                    |                      |  | 145                   |                          |                     | 145                                      |                     |                     |                      |                      |                     | 242                                      | 145                                      |                                    | 24                           |                      |                    |                     | 145                  |                         |
| V         Light de lange ange ange ange ange ange ange ange  |      |                         |  | 174                    |                      | 174  | 174                   |                          |                     | 174                                      |                     |                     |                      |                      | 10                  |  | 15                                       | 15                                 |                              | 10                   | 10                 |                     | 10                   | 10                      |
| No.         No. <th>1F</th> <th></th> <th>ք ո քարմ</th> <th>14:</th> <th>145</th> <th>145</th> <th>141</th> <th></th> <th>145</th> <th></th> <th></th> <th>145</th> <th></th> <th></th> <th>145</th> <th>14</th> <th>245</th> <th>145</th> <th>14:</th> <th>241</th> <th>145</th> <th>1#</th> <th>241</th> <th>244</th>  | 1F   |                         | ք ո քարմ   | 14:                    | 145                  | 145  | 141                   |                          | 145                 |  |                     | 145                 |                      |                      | 145                 | 14                                       | 245                                      | 145                                | 14:                          | 241                  | 145                | 1#                  | 241                  | 244                     |
| Transmark and the set of the set  |      | we mo be the f          | Ciber H. Support   | 144                    | 174                  | 175  | 174                   | 174                      | 175                 | 144                                      | 174                 | 175                 | 144                  | 174                  | 150                 | 174                                      | 174                                      | 175                                | 174                          | 174                  | 175                | 144                 | 174                  | 175                     |
| Image: Series with the series of th  |      |                         | Dia:   |                        |                      |  |                       |                          |                     |  |                     |                     | 2429 Stat 20         |                      |                     | - 24(2): 5 (r. 3).<br>- 24(5): 5 (r. 3). | - 24(2): 5 (r. 3.)<br>- 24(5): 5 (r. 3.) | - 2429 5 0 .3.5<br>- 2450 5 0 .3.1 | 2429 Statute<br>2456 Statute |                      |                    |                     |                      |                         |
| N         No.         No.        No.         No.         No.   | 1    | Lottem                  |  | - 13 - 14 - 14<br>- 15 |                      | 175 - 175                                    | 34                    |                          |                     | 250 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - |                     |                     |                      | 15                   | 175                 |  | 15                                       | 150                                |                              | 15                   | 15                 | 35                  | 15                   | 15                      |
| b         Sum et al.  |      | Te n'in ener            | <ol> <li>FL Scars</li> </ol>   | 24                     |                      |  | 245                   |                          |                     | 244                                      |                     |                     |                      |                      |                     |  |  |                                    |                              |                      | 1                  |                     |                      |                         |
| Mainternal         Mainter  |      |                         |  |                        | 145                  | 145  |                       |                          |                     |  | 145                 |                     |                      | 145                  | 145                 |  |  | 145                                |                              |                      | 145                |                     |                      |                         |
| No.         No. <th>IL.</th> <th>Lon: r.d not</th> <th>In Build and Bui</th> <th></th> <th>175</th> <th>175</th> <th>174</th> <th>170</th> <th>175</th> <th>144</th> <th></th> <th>155</th> <th></th> <th>254</th> <th></th> <th>175</th> <th>11441</th> <th>254</th> <th>174</th> <th>154+154</th> <th>284</th> <th>175</th> <th>144+164</th> <th>154+16</th> | IL.  | Lon: r.d not            | In Build and Bui |                        | 175                  | 175  | 174                   | 170                      | 175                 | 144                                      |                     | 155                 |                      | 254                  |                     | 175                                      | 11441                                    | 254                                | 174                          | 154+154              | 284                | 175                 | 144+164              | 154+16                  |
| Burgers et al.<br>August Margin   |      |                         | Sa:  |                        | 1970 n 00            | M2120.20                                     | M200000               | M2106.00                 | M210 n 00           | M2010 n 00                               | M2126.20            | M210 n 00           |                      | M2126.20             |                     | M2156.00                                 | - M2126-20                               | M200000                            | 14000 n 00                   | 14000 n 00           | M2106.00           | 2420000             | M210n 00             | M2156.00                |
| No.         No. <th></th> <th>ra 19</th> <th>ce se Helm.</th> <th></th>  |      | ra 19                   | ce se Helm.  |                        |                      |  |                       |                          |                     |  |                     |                     |                      |                      |                     |  |  |                                    |                              |                      |                    |                     |                      |                         |
| Y         Hold Area         Hold A   |      | =                       |  |                        | 145                  |  |                       |                          |                     |  |                     |                     |                      |                      |                     |  | 245                                      | 244                                |                              | 244                  | 241                |                     | 241                  | 241                     |
| N          |      | we mo be the f          |  |                        | 170                  | 175  |                       | 175                      |                     |  |                     | 175                 |                      | 175                  | 175                 | - <u></u>                                |  | 170                                | 175+170                      |                      | 170                | 175+190             | -54                  | -34                     |
| 1          | x    | I usi dust              |  | 11-                    | 24                   | 24   |                       | 24                       |                     |  |                     | 24                  |                      | 141.2                | 141.6               | 14                                       |  | 141.18                             | 14                           | 245                  | 141.8              | 14                  | 245                  | 245                     |
| 1/2         1/2 <th></th> <th>we molecule t</th> <th></th> <th>154</th> <th>174</th> <th>254</th> <th>174</th> <th>175</th> <th>254</th> <th>174</th> <th>174</th> <th>254</th> <th>174</th> <th>174</th> <th>254</th> <th>174</th> <th>174</th> <th>1744176</th> <th>154</th> <th>154</th> <th>174+174</th> <th>174</th> <th>174</th> <th></th>   |      | we molecule t           |  | 154                    | 174                  | 254  | 174                   | 175                      | 254                 | 174                                      | 174                 | 254                 | 174                  | 174                  | 254                 | 174                                      | 174                                      | 1744176                            | 154                          | 154                  | 174+174            | 174                 | 174                  |                         |
| Matrix         Matrix<  |      |                         | Sat  |                        |                      |  |                       |                          |                     |  |                     |                     |                      |                      |                     |  |  |                                    |                              |                      |                    |                     |                      |                         |
| Indicard         Indicard         Information         Information <th< th=""><th></th><th>:</th><th></th><th>- M2(50.00 - M</th><th>igi Sintu<br/>Territa</th><th>etgi Suttu</th><th>-43g Sol. (c)</th><th>P429 50.00</th><th>-429 Str. 9.</th><th></th><th>A129 Stat. 1</th><th></th><th></th><th>etgi Surtu</th><th>engi Su Ju</th><th></th><th>engi Surtu.</th><th>engi Su Ju</th><th></th><th></th><th></th><th></th><th></th><th></th></th<>  |      | :                       |  | - M2(50.00 - M         | igi Sintu<br>Territa | etgi Suttu                                   | -43g Sol. (c)         | P429 50.00               | -429 Str. 9.        |  | A129 Stat. 1        |                     |                      | etgi Surtu           | engi Su Ju          |  | engi Surtu.                              | engi Su Ju                         |                              |                      |                    |                     |                      |                         |
| 1/2         Lance And I/F no. angli         Hos.         Hos   |      |                         |  | 245                    | 145                  | 145  | 245                   | 145                      | 145                 | 245                                      | 24                  | 145                 |                      | 244                  | 244                 |  | 244                                      | 244                                | 245                          |                      | 24                 | 245                 |                      |                         |
| India and parts         India and  |      |                         |  |                        |                      | 145  | 14                    |                          |                     | 14                                       | 145                 | 145                 | 1#                   | 244                  | 244                 | 141                                      | 244                                      | 244                                | 141                          | 244                  | 244                | 141                 | 244                  |                         |
| Bar All         Bar All All All All All All All All All Al   | -    |                         |  |                        | 154+154              | 174+174                                      | 144                   | 174+174                  | 174+175             | 174                                      | 35                  |                     | 174                  | 30                   | 30                  | 174                                      | 170+170                                  | 30                                 | 174                          | 175+180              | <u></u>            | 174                 | 175+170              | 175+180                 |
| Norm         Norm <th< th=""><th></th><th></th><th>Sa:</th><th>17</th><th>144</th><th>249<br/>242213 n 332</th><th>144<br/>2412213 p. 302</th><th>144<br/>510213 n 100</th><th>249<br/>242210 n 00</th><th>14/<br/>51:210 n 00</th><th>144<br/>545210 n 100</th><th></th><th>144<br/>2410210 n 000</th><th>144<br/>2410210 n 100</th><th></th><th>142<br/>545210 n 001</th><th>144<br/>545205 n 100</th><th></th><th>149<br/>545215 n 100</th><th>149<br/>545215 n 301</th><th>240<br/>242213.0.30</th><th>144<br/>545215 n 100</th><th>149<br/>24:00:00</th><th>245<br/>242213 n 333</th></th<>   |      |                         | Sa:  | 17                     | 144                  | 249<br>242213 n 332                          | 144<br>2412213 p. 302 | 144<br>510213 n 100      | 249<br>242210 n 00  | 14/<br>51:210 n 00                       | 144<br>545210 n 100 |                     | 144<br>2410210 n 000 | 144<br>2410210 n 100 |                     | 142<br>545210 n 001                      | 144<br>545205 n 100                      |                                    | 149<br>545215 n 100          | 149<br>545215 n 301  | 240<br>242213.0.30 | 144<br>545215 n 100 | 149<br>24:00:00      | 245<br>242213 n 333     |
| Arrowson  |      | ra 19                   | ce se Helm.  |                        |                      |  |                       |                          |                     |  |                     |                     |                      |                      |                     |  |  |                                    |                              |                      |                    |                     | MQ156.00             |                         |
| Hole         Hole <th< th=""><th></th><th>=</th><th></th><th></th><th>741</th><th></th><th></th><th>741</th><th></th><th></th><th></th><th>244</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>245</th><th></th></th<>   |      | =                       |  |                        | 741                  |  |                       | 741                      |                     |  |                     | 244                 |                      |                      |                     |  |  |                                    |                              |                      |                    |                     | 245                  |                         |
| 1          |      | He mo be the f          |  | 175+170                |                      |  |                       |                          |                     |  | -94                 | - 54                |                      | 174+174              | 134                 |  |  |                                    | 145+144                      |                      |                    |                     |                      |                         |
| $ \frac{1}{94} $   | 24   | Lusi dust               |  | 14                     | 112                  |  |                       | 1.12                     |                     |  | 1451-26             | 245                 |                      | 1451-26              | 1451.26             |  |  |                                    | 144                          | 245                  |                    |                     |                      |                         |
| Ser         Mg 5 n 32         Mg 5   |      |                         |  | 174                    | 174                  | 174+175                                      | 174                   | 174                      | 174+174             | 174                                      | 174                 | 35                  | 194                  | 174                  | 35                  | 174                                      | 154                                      | 365                                | 174                          | 174                  | 175+170            | 174                 | 174                  | 175+170                 |
| sector         and State         a   |      |                         | Sat  |                        |                      |  |                       |                          |                     |  |                     |                     |                      |                      |                     |  |  |                                    |                              |                      |                    |                     |                      |                         |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  |      |                         |  |                        |                      |  | etg: 5 n 2 č<br>ex:   |                          |                     |  |                     |                     |                      | etgi Su Dü           | High Star D.C.      |  | Magi Su Da                               | Mag Su Da                          |                              | - May Su D.)<br>     | - Mg: 50.00        |                     |                      |                         |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  |      |                         |  |                        |                      | 24   | 245                   |                          | 24                  | 245                                      |                     |                     |                      | 245                  | 141.18              |  | 245                                      | 141.14                             |                              | 245                  | 245                |                     |                      | 245                     |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  |      |                         |  |                        |                      | 245  | 141                   |                          | 244                 | 1#                                       | 1411 8              |                     | 1#                   | 1411.86              |                     | 141                                      |  |                                    | 141                          |                      |                    |                     | 245                  |                         |
| S2         M325 00         M355 00         M355 00         M   | 1    |                         |  |                        | 145+140              | 20   | 174                   | 175+170                  | 30                  | 144                                      | 249                 | 175+170             | 175                  | 259                  |                     | 174                                      |  | 249                                | 174                          | 1554155              | 149+144            | 174                 | 175+175              |                         |
| 日本部本書         田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田   |      |                         | Satisfies Spent  | 1.1                    | 149<br>1920 (n. 110  | 245  | 142<br>#10200.000     | 142<br>#10210.0.101      | 245<br>#12213.0.101 | 142<br>#10210.0.000                      | 147                 | 245<br>#10213.0.120 | 142                  | 142                  |                     | 144<br>24102000-000                      |  |                                    | 144<br>25102000-000          | 144<br>2510210 p.000 | 245                | 149<br>#10210.0.000 | 149<br>2510200 p.000 |                         |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  |      | TA 19                   | ce ce he m.  |                        |                      |  |                       |                          |                     |  |                     |                     |                      |                      |                     |  |  |                                    |                              |                      |                    |                     |                      |                         |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  |      | =0 00                   |  | 1451-22                | 1411 🚟               | 1411 #                                       | 1451-22               | 1411 #                   | 1411 #              | 1451 22                                  |                     |                     | 1451-22              | 245                  |                     |  | 1451-26                                  | 1451-26                            | 1451 22                      | 1451.26              | 1451.26            |                     | 245                  |                         |
| 8/2       1 agi duel f' n reque       14/2       2/45       4/51       2/45       1/451       2/451       1/451       2/451       1/451       2/451       1/451       2/451       1/451       2/451       1/451       2/451       1/451       2/451       1/451       2/451       1/451       2/451       1/451       2/451  |      | He mo be the f          |  |                        |                      |  |                       |                          |                     |  |                     |                     |                      | 30                   | 30                  |  | 170+170                                  |                                    | 175+174                      | 175+170              | 30                 |                     |                      |                         |
| Performant         International         Internatinternatintera         Internatinternational  | - 26 | 1 10 10-1               |  |                        |                      |  |                       |                          |                     |  |                     |                     |                      | 145 1 17             | 105 - 17            |  | 105 1 17                                 | 105 1 17                           | 174                          | 1.5 - 72             | 145 1 17           |                     |                      |                         |
| Ser         経営ないと、経営   | "    |                         |  | 174                    | 154                  |  | 144                   | 155                      |                     | 144                                      |                     |                     | 14                   | 1451 24              | 259                 | 144                                      | 1451 142                                 |                                    | 144                          | 174                  |                    | 144                 | 1411 22              |                         |
| -scim         -action         -action <t< th=""><th></th><th></th><th>Sat</th><th></th><th></th><th>Alg: 50.00</th><th></th><th></th><th>- A45: 5 n D0</th><th></th><th>Alg: 50.00</th><th>- Alg: 56.00</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Alg: 50.00</th><th></th><th></th><th>- Alg: 5 a 20</th></t<>   |      |                         | Sat  |                        |                      | Alg: 50.00                                   |                       |                          | - A45: 5 n D0       |  | Alg: 50.00          | - Alg: 56.00        |                      |                      |                     |  |  |                                    |                              |                      | Alg: 50.00         |                     |                      | - Alg: 5 a 20           |
| Contracted         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26         1451 26         2451 26   | 1    |                         |  |                        | (§ 5 a 00            | HS: 50.00                                    |                       | Mg: 56.00                | HS: 50.00           |  |                     |                     |                      |                      |                     |  | - Alg: 50.00                             | - Alg: 50.00                       | - AS: 50.00                  | - HS: 50.00          | - HS: 50.00        |                     |                      |                         |
| Felore Terry its         1年         14 <th14< th="">         14         14</th14<>  |      |                         |  |                        | 275                  | 255  |                       | 375                      | 275                 |  |                     |                     |                      |                      |                     |  | 255                                      | 275                                | 175+171                      | 255                  | 255                |                     |                      |                         |
| মান্দ্ৰপূচা আগতে হয়। বিদ্যাহে<br>Anime and Anime and An<br>Anime and Anime and Anime<br>Anime and Anime and Ani<br>Anime and Anime a<br>Anime and Anime and An  |      |                         |  |                        | 141.7                |  |                       |                          |                     |  |                     |                     |                      |                      |                     |  | 1451.26                                  |                                    |                              |                      |                    |                     |                      |                         |
| ర్జర్జులులో (Aberli Span) 14: 14: 245 14: 14: 245 14: 14: 245 14: 14: 14: 14: 245 14: 14: 14: 245 14: 14: 245 14: 14: 245 14:  | 1    | Longinudinal            |  |                        |                      | 279  |                       |                          |                     |  |                     |                     |                      |                      |                     |  |  |                                    | 174                          |                      |                    |                     |                      |                         |
|  |      |                         |  | 141                    | 141                  | 245  | 141                   | 141                      | 245                 | 14                                       | 141                 | 245                 | 14                   | 141                  | 1451 22             | 141                                      | 141                                      | 1451 22                            | 141                          | 141                  | 1451 22            | 141                 | 141                  | 1451 22                 |
| । অসমৰা বিষয়ে অৱসায় অৱসায় আবেয়া বিষয়া ব   |      |                         | Sac  | MQ156.00 M             | isyl Sin OC          | MQ106.00                                     | MQ156.00              | 740210 n 00              | MQ156.00            | MQ156.00                                 |                     | MQ15 n 00           |                      |                      |                     |  | 740210 n 001                             | MQ156.00                           | MQ15 n 00                    | MQ15 n 00            | MQ156.00           | 740210 n 00         | MQ15 n 00            | 740210 n 001            |
|  | L    | 1 1975                  | de se heint.   | 142,000, M             | ng un ut             | - 24 Q 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 1402 DN 00            | 1940 <u>2</u> , 210, 20, | 142/08/00           | - 20 A 27 A 20                           | - 20 n 20           | - 24 Q 0 N 00       | - 942 <u>0</u> 0.000 | 142/01/00            | 14/2/01/00          | 1402 DN 00                               | 1412 DB 00                               | 1470 DU 00                         | 1912 OF 00                   | 1912 OF 00           | - MQ 00 00         | - 0402 UN UC        | 1402 OR 00           | - 940 <u>7</u> 0 0 00 1 |

| Project: | AmDeck Design Guide | Pre |
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| Client:  | Amvic, Inc.         | Che |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea  | l Load                         | =   | 1:                             | 5 psf  |                            |                              |                            |                            |                                |                                  |                            |                              |                                      |                                |                              |                           |                               |                              |                               |                            |                            |                               |                              |
|------|--------------------------------|---|--------------------------------|--|----------------------------|------------------------------|----------------------------|----------------------------|--------------------------------|----------------------------------|----------------------------|------------------------------|--------------------------------------|--------------------------------|------------------------------|---------------------------|-------------------------------|------------------------------|-------------------------------|----------------------------|----------------------------|-------------------------------|------------------------------|
| Scar | <u> </u>                       | 2 VY  | 97                             | 1 - 51 D - 19<br>D7                          | e<br>198                   | 27                           | 1 - 50 D - 1:<br>D7        |                            | 97                             | 1 – VCD – 15<br>Ti               | -<br>                      | 87                           | 1 - 70 D - 15<br>DF                  | ¥8                             | 27                           | 1 -80 D - 18<br>DF        | -<br>                         | 27                           | 1 -00 D -15<br>DF             | ¥8                         | 87                         | 1 -100 0J - 5<br>DF           |                              |
|      | Fu mi                          | Line Stars<br>Inti Scars                            | 14                             | 114  | 144                        | 14                           | 114                        | 1%                         | 14                             | 144                              | 114                        | 14                           | 114                                  | 114                            | 14                           | 114                       | 114                           | 145                          | 174                           | 114                        | 145                        | 144                           | 144                          |
|      |                                | Faler or Focipied x                                 | 14                             | 14   | 14                         | 14                           | 14                         | 14                         | 14                             | 14                               | 14                         | 14                           | 14                                   | 14                             | 14                           | 14                        | 14                            | 145                          | 14                            | 14                         | 145                        | 14                            | 14                           |
| IL.  | Lon: rudinet<br>Ceruin: errent | 1 <sup>45</sup> no Buispont<br>Other Fitt Stipping  | 114                            | 144  | 174                        | 144                          | 144                        | 144                        | 144                            | 144                              | 144                        | 144                          | 144                                  | 144                            | 144                          | 144                       | 144                           | 144                          | 114                           | 144                        | 114                        | 144                           | 144                          |
|      |                                | Siac  | MQC0000                        | MQ156.00                                     |                            | MQ106.00                     | MODINE                     | MQ156.00                   | MQC NOT                        | 74 QC 6 C (2 M                   | MOTONOC                    | MQ10A D0                     | MQ156.00                             | MQ106.00                       |                              |                           |                               | MODADE                       | MODADE                        | 740215 n 00                | MORDADE                    | MQ156.00                      | MQ156.00                     |
|      | Fa 10                          | e se Heint.<br>For Scars                            | MQ106.00<br>145                | MQ10m00<br>1#                                | #Q15.6.00<br>141           | MQ15.6.00<br>145             | 14<br>14                   | #Q10m00<br>1#              | 145                            | #\$210 n.00<br>1#                | 14000 NOC                  | MQ106.00<br>145              | 14/2/06/00<br>14/                    | #1210 n 00<br>141              | 145                          | 14000000<br>140           | - MQ106-00<br>1#              | 145                          | #Q15m100<br>144               | #\$215 n 00<br>1#          | MQ15.6.00<br>145           | #Q10m00<br>1#                 | MQ10.6.00<br>141             |
|      | He mo be trent                 | Th. Spans<br>Lefe or Busparts                       | 175                            | 175  | 144                        | 175                          | 142                        | 174                        | 175                            | 144                              | 174                        | 175                          | 172                                  | 174                            | 175                          | 174                       | 174                           | 145                          | 174                           | 144                        | 145                        | 144                           | 144                          |
| 17   |                                | ք ո քայր մ  | 14                             | 14   | 14                         | 14                           | 14                         | 14                         | 14                             | 145                              | 14                         | 14                           | 145                                  | 14                             | 14                           | 145                       | 145                           | 14                           | 145                           | 145                        | 14                         | 145                           | 145                          |
|      | we mo be the fi                | Cilhor Ini, Support<br>Stat                         | 154<br>Adds 5 a 20             | 154<br>2459 5 a 20                           | 144<br>2459 5 n.20         | 154<br>2459: 5 n. 2 0        | 154<br>2459 5 n.20         | 174<br>2459 5 n D l        | 154<br>2459: 5 a 2 d           | 154<br>2459, 5 a 2 d             | 154<br>Adds 5 a 20         | 154<br>Attic 5 a.D.C         | 154<br>2429 5 n.20                   | 154<br>Adds 5 a 20             | 154<br>Altin Su D.C          | 154<br>Altie Su Dü        | 154<br>Adds 5 a 20            | 154<br>Altie 5 a.00          | 154<br>2459 5 n.20            | 155<br>2456 5 n 2 0        | 154<br>Adds 5 a 20         | 144<br>2409 5 n 2 h           | 150<br>2459: 5 a 2 a         |
|      | Tion as                        | н-н Тип'  | କାର୍ଟ୍ର କୋଇକ<br>ଅଭ             | Alg: 50.00                                   | અંગુ ૬૫.૦૦<br>હત           | AlS: 50.00                   | AS 50.00                   | - MS: 55-20<br>182         | Alg: 51.00                     | AS: 51.00                        | - MS: 50.00                | AS: 51.00                    | AS: 50.00                            | - 24 <u>5</u> , 55, 20<br>154  | Alge Suites                  | અંગુ ૬૫.૦૦<br>છે          |                               | AS: 50.00                    | અંગુ ૬૫.૦૦<br>ન્યુ            | Alg: 50.00                 | - MS: 50.00                | AS: 51.00                     | Al <u>S</u> : 50.00          |
|      | Lottom<br>Teloforiement        | Line State<br>Inti Scate                            | 145                            | 144<br>144                                   | 14                         | 145                          | 14                         | 14                         | 145                            | 144<br>144                       | 144                        | 145                          | 144<br>144                           | 14                             | 145                          | 145                       | 175<br>142                    | 145                          | 145                           | 14                         | 274                        | 145                           | 145                          |
| 14   | Lan: r. dinal                  | Folenor Focipielas<br>1 <sup>47</sup> no Galeport   | 14                             | 14   | 14                         | 14                           | 14                         | 14                         | 14                             | 14                               | 14                         | 14                           | 14                                   | 14                             | 141                          | 14                        | 14                            | 14                           | 14                            | 14                         | 14                         | 145                           | 145                          |
|      | Tentor energy                  | Ciliar Et Sipere                                    | 14 <sup>0</sup><br>510210 n 00 | 14 <sup>2</sup><br>510215 n 100              | 145<br>#40(10 n 100        | 144<br>MIQ156.00             | 1#<br>MQ10m00              | 145<br>MQ10m00             | 14                             | 14<br>MQ10n 00                   | 145<br>MQ106.00            | 14                           | 14<br>MQ156.50                       | 145                            | 14<br>MQ156.00               | 14                        | 145<br>MQ10m00                | 14<br>MQ106.00               | 14<br>#Q15n100                | 145<br>MQ106.00            | 141<br>MQ106-00            | 1#<br>#\$156.00               | 145<br>(MQ100.00)            |
|      | TA 192                         | roac<br>xe ce ⇒e m                                  | MQ10600<br>MQ10600             | MQ10600                                      | MQ106.00                   | MQ156.00                     | MQ106100<br>MQ10600        | MQ106.00                   | MQ156.00<br>MQ156.00           | MQ106.00                         | MQ10600                    | MQ106000<br>MQ10600          | MQ156.00                             | MQ10600                        | - MQ10600.<br>- MQ10600      | MQ156.00<br>MQ156.00      | - MQ 0600.<br>- MQ 0600       | MQ106.00                     | MQ10600                       | MQ106000<br>MQ10600        | MQ106.00                   | MQ126.20<br>MQ126.20          | MQ106.00                     |
|      | He mo perrent                  | Fur Scars<br>14, Scars                              | 145<br>15                      | 145<br>150                                   | 145<br>15                  | 14 P                         | 145<br>150                 | 145                        | * *                            | 145<br>150                       | 14 P                       | ¥ \$                         | 145<br>150                           | 14 P                           | ¥ \$                         | 145<br>150                | 145                           | 141 A<br>144 A               | 145 E                         | 145                        | 141 F<br>144 A             | 145<br>150                    | 14 12                        |
| 16   |                                | Lefe o Eutporto                                     | 174                            | 174  | 174                        | 174                          | 174                        | 174                        | 174                            | 175                              | 175                        | 174                          | 175                                  | 175                            | 174                          | 175                       | 175                           | 174                          | 175                           | 175                        | 154                        | 175                           | 155                          |
| 16   | se mo perrent                  | f' o Focput<br>Ciherini, Suptore                    | 144                            | 145<br>174                                   | 145<br>175                 | 144                          | 145                        | 145<br>170                 | 14-                            | 145                              | 145<br>175                 | 144                          | 145<br>174                           | 145<br>175                     | 144                          | 244<br>174                | 145<br>175                    | 144                          | 244<br>174                    | 244<br>170                 | 144                        | 744<br>174                    | 249<br>170                   |
|      |                                | Sar<br>Mari Terul                                   | - Mg: 56-00<br>- Mg: 56-00     | HS: 51.00<br>HS: 51.00                       |                            | Alg: 56.00<br>Alg: 56.00     | - HS: 51 00<br>- HS: 51 00 | <u> </u>                   | <u> 서영: 56.00</u><br>서영: 56.00 | <u> अञ्च ५०.२३</u><br>अञ्च ५०.२३ | MS 5600<br>MS 5600         | Alg: 511.00<br>Alg: 511.00   | 24(5): 5 (r. 0.)<br>24(5): 5 (r. 0.) | Hg 56.00<br>Hg 56.00           |                              |                           |                               | - Mg(50.00<br>- Mg(50.00     | - MS: 51-00<br>- MS: 51-00    | - MS: 50-00<br>- MS: 50-00 | - Mg: 56.00<br>- Mg: 56.00 | <u>ජාල 56.00</u><br>ජාල 56.00 | - Alg: 56.00<br>- Alg: 56.00 |
| i i  | Lottem                         | Line State  | - 274                          | 152  | 150                        | _344                         | 155                        | 152                        | 174+175                        | 152                              | 150                        | 174+174                      | 150                                  | 155                            | 174+17                       | 145                       | 152                           | 265                          | 155                           | 145                        | <br><br>                   | 145                           | 155                          |
|      | Tenio enert                    | Follow Folge day                                    | 740<br>140                     | 145  | 145                        | 74)<br>14)                   | 145                        | 145                        | 141 27                         | 145                              | 145                        | 141 H<br>14                  | 145<br>145                           | 145                            | 141 24                       | 145<br>145                | 145                           | 245<br>141                   | 145<br>145                    | 145                        | 245                        | 145                           | 145                          |
| IC.  | Lon: n.d.n.t.                  | 1 <sup>45</sup> no Bulgori<br>Cither Fri Silpone    | 114                            | 254  | 145                        | 174                          | 254                        | 145                        | 144                            |                                  | 145                        | 174                          | 244                                  | 274                            | 144                          | 144+174                   | 254                           | 174                          | 154+154                       | 154+155                    | 144                        | 154+175                       | 154+175                      |
|      |                                | Sia:  | 740215 n 00                    | MQ106.00                                     | MQ156.00                   | MQ106.00                     | MQ106.00                   | MQ106.00                   | MQ106.00                       | MOTONOC                          | #4200.00                   | MQ106.00                     | MQ106.00                             | 74021016-001                   | MQ156.00                     | MQ106.00                  |                               | M2212.0.00                   |                               | MQ <sup>1</sup> On OC      | 240210 h 00                | MQ156.00                      | MOTION                       |
|      | Farw.                          | e celikeint.<br>Fur Scara                           | 24000000<br>1411 #             | 145  | 4000000<br>145             | 140106-00<br>1411-26         | 145 MQ106 00               | #145                       | 14000000<br>1401 #             | 145                              | 145                        | AQ106-00<br>245              | MQ10m00<br>145                       | 145                            | 245<br>245                   | 244<br>244                | - MQ106-00<br>241             | - 240210 n 001<br>1451 26    | 2400000<br>24                 | #40/06/00<br>241           | 240210 n 00<br>1451 26     | #40/06/00<br>241              | 7400000<br>249               |
|      | se mo perre il                 | TH, Stars<br>Lefe o Suppris                         | 170+170                        | 145  | 10                         | 174+174                      | 175                        | 175                        | 174+175                        | 10                               | 175                        | 35                           | 175                                  | 155                            | 30                           | 254                       | 15                            | 170+170                      | 254                           | 15                         | 175+170                    | 284                           | 284                          |
| ×    | Lugi dust                      | t o Foco d  | 14                             | 140<br>141 #                                 | 745                        | 144                          | 140 H                      | 74                         | 144                            | 140<br>141 14                    | 24                         | 144                          | 140 H                                | 141 #                          | 144                          | 245                       | 141 8                         | 144                          | 245                           | 245                        | 144                        | 245                           | 245                          |
|      | He mo be the fi                | Cilher Ini, Support<br>Star                         | 194<br>24(5):50-00             | 154<br>2459: 5 a 2 a                         | 254<br>24 <u>55</u> 56 20  | 154<br>24(5): 5 a .0 0       | 154<br>24(5):50-00         | 284<br>245: 5 a 2 a        | 154<br>2459: 5 a 2 d           | 154<br>2459: 5 a 2 a             | 284<br>285, 5 a 2 b        | 154<br>245: 5 a 2 a          | 174<br>24(5): 5 a .0 b               | - 254<br>- 24 <u>9:</u> 5 a 20 | 154<br>24(5): 5 a 2 b        | 154<br>24(5): 5 a .0 b    | 154+175<br>24(5):50-00        | 154<br>24(5): 5 a .0 0       | 154<br>245: 5 a 2 a           | 154+165<br>24(5):50:00     | 154<br>24(5):5 a (0.)      | 154<br>245: 5 a 2 a           | 154+175<br>2455:50-00        |
|      | !                              | н-н Тип   | Alg: 51-00                     | HS SHOL                                      |                            | M3: 50.00                    | AS 56.00                   | HS: 50.00                  | - MS: 50.00                    | AS SUDD                          | Alg: 50.00                 | - MS: 54-00                  | M3:50.00                             | HS: 50.00                      | - MS: 50.00                  | 24(5) 5 a 2 a<br>1564 2 5 | - MS: 50.00                   | Mig Su Di                    | 24%) 5 a 2 a<br>15641 क       | - Mg: 56-00                | Mg Subb                    | - HS: 50.00                   | - MS: 56.00                  |
|      | Lottom<br>De cóchement         | Line State<br>Inti Scate                            | <br>245                        | 145  | 145                        | <br>245                      | 145                        | 145                        | 145+180<br>1451-26             | <br>74                           | 145                        | 145+160<br>1451 #            | 244                                  | 274                            | 14541 AL<br>1451 - AF        | 1411.22                   | 144+164<br>244                | 245                          | 1411 22                       | 144+164<br>244             | 245                        | 1441 AL<br>1441 AL            | 144 M AL                     |
| 4    | Lan: r. d nai                  | Faterior Focipiets<br>1 <sup>47</sup> no legispart  | 14                             | 145<br>15541 (5                              | 145<br>15441 M             | 14                           | 145                        | 145<br>15441 (t.           | 14                             | 145                              | 145<br>15541 (5            | 141                          | 74 Y                                 | 74)<br>74                      | 141                          | 24)<br>150+150            | ž ž                           | 144                          | 24)<br>150+160                | 94)<br>1704-170            | 144                        | 141 H<br>319                  | 1411 #<br>1504130            |
| -    |                                | Other FT Scipere                                    | 1#                             | 14   | 245                        | 14                           | 14                         | 242                        | 14                             | 14                               | 1411 #                     | 14                           | 14                                   | 141.4                          | 14                           | 141                       | 245                           | 14                           | 14                            | 245                        | 14                         | 141                           | 245                          |
|      | Fa.195                         | isia:<br>e celveint                                 | MQC5600<br>MQC5600             | MQ156.00<br>MQ156.00                         | - MQ156-90<br>- MQ156-90   | MQ156.00<br>MQ156.00         | MQ156.00<br>MQ156.00       | MQ100.00                   | MQ156.00<br>MQ156.00           | MQCSnDC<br>MQCSnDC               | MQ106.00<br>MQ106.00       | MQ156.00<br>MQ156.00         | MQ156.00<br>MQ156.00                 | MQ156.00<br>MQ156.00           | - MQ156.00<br>- MQ156.00     | MQ15n 00<br>MQ15n 00      | - MQ106.00<br>- MQ106.00      | MQ156.00<br>MQ156.00         | MQ156.00<br>MQ156.00          | MQ106.00<br>MQ106.00       | MQC55000<br>MQC55000       | MQ156.00<br>MQ156.00          | MQ156.00<br>MQ156.00         |
|      | Full in<br>He moltoment        | Fun Scans<br>14. Scans                              | 1451 #<br>1554180              | 241  | 74<br>34                   | 1451 #<br>1554180            | 74<br>32                   | 74<br>34                   | 245<br>250                     | 1411 #<br>1544 M                 | 141 H                      | 245<br>259                   | 1411年<br>1544年年                      | 141 FF<br>254                  | 1451 AZ<br>1594 M            | 1411年<br>1441年            | 1411年<br>1444年2月              | 1451 (#<br>1694) M           | 245<br>35                     | 245<br>15441 (A.           | 1451 (#<br>1694) M         | 245<br>25                     | 245<br>154+164               |
|      |                                | Lefe o Europario                                    | 174                            | 254  | 254                        | 174                          | 254                        | 254                        | 174                            | 254                              | 274                        | 174                          | 274                                  | 274                            | 174                          | 174+175                   | 174+174                       | 174                          | 1744174                       | 174+174                    | 174                        | 174+175                       | 174+174                      |
| 24   | l ngi dusi<br>se mo terreri    | f' o Focpid<br>Ciharini, Suptor                     | 14                             | 245<br>155                                   | 245<br>15541 (5.           | 141                          | 245<br>155                 | 245<br>154+155             | 14                             | 1451 AF<br>155                   | 245<br>                    | 141                          | 1451 #<br>155                        | 1451 AF                        | 141                          | 245<br>179                | 1451 æ<br>1654 bl             | 141                          | 245                           | 245<br>150+160             | 14                         | 1451 22                       | 245<br>155+160               |
|      |                                | Sar<br>Non Chui                                     | Alg: 56.00<br>Alg: 56.00       | - MS( 50.00<br>- MS( 50.00                   | - Alg: 56.00<br>Alg: 56.00 | Alg: 56.00<br>Alg: 56.00     | - MS( 50.00<br>- MS( 50.00 | - MS: 56.00<br>- MS: 56.00 | 2459 5 n DC<br>2459 5 n DC     | 2459 Stable<br>2459 Stable       | - MS( 50.00<br>- MS( 50.00 | AS: 51.00<br>AS: 51.00       | - MS: 50.00<br>- MS: 50.00           | 2459 5 n.00<br>2459 5 n.00     | - Alg: 50.00<br>- Alg: 50.00 |                           | - MS( 50.00<br>- MS( 50.00    | - Alg: 56.00<br>- Alg: 56.00 | - MS( 56.00<br>- MS( 56.00    | - MS: 50.00<br>- MS: 50.00 | Alg: 56.00<br>Alg: 56.00   | - MS( 50.00<br>- MS( 50.00    | - Alg: 56.00<br>- Alg: 56.00 |
|      | Lottem                         | Line Scaro  | 359                            | 1744174                                      | 154+154                    | 349                          | 1754175                    | 174+174                    | 1594125                        | 1754175                          | 1744176                    | 155+155                      | 30                                   | 385                            | 1594125                      | 30                        | 365                           | 15941251                     | 175+170                       | 175+170                    | 149+174                    | 145+140                       | 155+190                      |
|      | Tentor energy                  | Fri Adaria<br>Faterior Filopolia                    | 245                            | 141 AF<br>241                                | 24                         | 245                          | 141 AF<br>245              | 24°<br>24°                 | 1450 E<br>145                  | 141 F                            | 141 H                      | 14%) #<br>14                 | 245<br>1411 #                        | 141 H                          | 14%) #<br>14                 | 245<br>1411 #             | 141 F                         | 14%) 22<br>142               | 1451 AF<br>245                | 245<br>245                 | 14%) 22<br>145             | 145) AF<br>245                | 245                          |
| ٤.   |                                | 1 <sup>45</sup> no Bulgori<br>Other bit Stroom      | 174                            | 170+170                                      | 145+14L<br>245             | 174                          | 175+176                    | 1754176                    | 144                            | 245                              | 145+180<br>1451 #          | 154                          |                                      | _55<br>1451 #                  | 154                          | 145+144                   | 245                           | 154                          | 149+144                       | 175+171                    | 174                        | 145+144                       | 145+164                      |
|      |                                | Children († 1755 pene)<br>Stat                      | 140<br>1400 00 00              | 140<br>MQ106.00                              | MQ106.00                   | 140<br>740210 n 00           | 140<br>140000              | 245<br>24200000            | 140<br>MQ106.00                | 140<br>14021016-00               | 1451 AF<br>200 n C (245    | 140<br>MQ106.00              | 140<br>1400 D 0                      | 1451 AF<br>140210 n 00         | 140<br>MQC00000              | 140<br>7402106-00         | - MO210 N 00                  | 140<br>1400 00               | 140<br>1400 00                | 245<br>74:00:00            | 140<br>1400 0.00           | 140<br>74021010-00            | 1451 AF                      |
|      | FA192                          | e belike m.<br>Fun Scans                            | MQ106-00<br>1451-27            | 245<br>245                                   | 245<br>245                 | MQ10m00<br>1451 22           | 245<br>245                 | 245<br>245                 | MQ10 n 00<br>1450 - 22         | 245 245                          | 245<br>245                 | 44000 n 00<br>1451 - 22      | MQ10m00<br>1451 #                    | 145) 26                        | - MQ106-00<br>1451-22        | - MQ10 n 00<br>1451 - 26  | - MQ10m100<br>- 1451 26       | MQ10m00<br>1451 22           | - 240210 n 001<br>- 1451 - 26 | 4000n00<br>1451 #          | MQ106.00<br>1451 22        | 245                           | 740210 n 100<br>245          |
|      | He mo serveri                  | 14. Scars   | 155+155                        | 35   | 174+174                    | 149+144                      | 20                         | 174+175                    | 149+144                        | 35                               | 154+154                    | 149+144                      | 175+170                              | 255                            | 149+144                      | 170+170                   | 35                            | 149+144                      | 175+170                       | 170+170                    | 149+144                    | 289                           | 175+170                      |
| *    | I ugi dust                     | Lele o Butporto.<br>1º o Focput                     | 174                            | 174+174<br>245                               | 1451.26                    | 144                          | 174+174<br>245             | 1444 (A)<br>1451 (A)       | 144                            | 1451-22                          | 174+174<br>245             | 144                          | - 255<br>1451 22                     | - 255<br>1451 #                | 174                          | - 255<br>1451 #           | - 255<br>1451 #               | 174                          | 1454170                       | 14541 AL                   | 144                        | 1451-22                       | 1454120                      |
|      | He molecter (                  | Cilher Ini, Support<br>Star                         | 194<br>2459 5 n 0 0            | 174  | 155+150<br>2459:50-00      | 154<br>245: 5 a D C          | 184<br>245: 5 a 0 a        | 150+150<br>2459: 5 n. 0 0  | 194<br>2459 5 n.00             | 154<br>2459 5 n.00               | 155+180<br>2459:50-00      | 154<br>245: 5 n.00           | 174                                  | 239                            | 154                          | 154<br>2459, 5 n. 2 0     | 179+174                       | 194<br>2459, 5 a. 0 c.       | 144<br>2459 5 n.00            | 159+155<br>2459:50-00      | 194<br>2459 5 n D C        | 154<br>2459 5 n.00            | 149+164<br>AdSt 5 0.00       |
|      |                                | н-н Тни'  | - AlS: 50.00                   | - 24 <u>09 50 00</u><br>- 24 <u>09 50 00</u> | - Mg 56.00                 | - MS: 56.00                  | - Mg: 56.00                |                            | - HS: 54.00                    | - MS: 50.00                      | HS: SHOL                   | - AlS: 50.00                 | - MSr Su Da                          | HS SHOL                        | - MS: 54.00                  | - Mg 56.00                | - 2429 50 000<br>- 2429 50 00 | - MS: 54.00                  | - Mg 56.00                    | - HS: 50.00                | HS: SHOL                   | - HS: 54-00                   | - AlSt 5 (100)               |
|      | Lottom<br>De númernent         | Lint State<br>Int Scate                             | 1694165                        |  | 245                        | 14541 M                      | <del>20</del><br>245       | <br>245                    | 1694165<br>1451-22             | 1451-26                          | 245                        | 14541 M<br>14541 AR          | 1454180                              | 1451.26                        | 1694165<br>1451-22           | 245                       | 259<br>1451 #                 | 1694164<br>1451-22           | 245                           | <br>1451 #                 | 14941 M                    | 1454165                       | 145+144                      |
| Ι.   |                                | Faler or Focipielia                                 | 141                            | 245  | 245                        | 141                          | 245                        | 245                        | 14                             | 245                              | 245                        | 14                           | 1451 26                              | 1451.26                        | 14                           | 1451-26                   | 145 i #                       | 141                          | 1451-26                       | 145 i 26                   | 145                        | 245                           | 245                          |
| 1 ^  | Tenin enert                    | 1 <sup>45</sup> no Buispont<br>Culti-cultur Support | 114                            | 1694185<br>142                               | 245                        | 174                          | 1694185<br>142             | 245                        | 144                            | 149+144<br>144                   | 145+144<br>245             | 144                          | 145+175<br>145                       | 14541 M<br>1451 - M            | 174<br>142                   | 1894185<br>142            | 14541.65                      | 174                          | 149+164<br>144                | 14541 M<br>14511 M         | 174                        | 145+1751<br>145               | 145+165                      |
|      |                                | Siac<br>e celive mi                                 | 740210 n 001<br>740210 n 001   | MQ156.00<br>MQ156.00                         |                            | #4021016-000<br>#4021016-000 | - MQ106-00<br>- MQ106-00   | 料Q10m00<br>料Q10m00         | MQ106-00<br>MQ106-00           | MQ106.00<br>MQ106.00             | MQ156.00<br>MQ156.00       | #40210 n 000<br>#40210 n 000 | MQ156.00<br>MQ156.00                 | MQ156.00<br>MQ156.00           | - MQ106-00<br>MQ106-00       | MQ156.00<br>MQ156.00      | - #Q156.00<br>#Q156.00        | - MQ156,00<br>MQ156,00       | - #40210 n 00<br>#40210 n 00  | MQ106.00<br>MQ106.00       | MQ156-00<br>MQ156-00       | MQ106-00<br>MQ106-00          | 740210 n 000<br>640210 n 000 |
| L    | 1 14 5.                        | 5 #5 7V II.   |                                |  |                            | 144 20 2.                    | 144 20 2.                  |                            |                                |                                  |                            | 144 20 2.                    | 144 20 2.                            |                                |                              |                           |                               |                              |                               |                            |                            |                               | 144 20 21                    |

### Notes

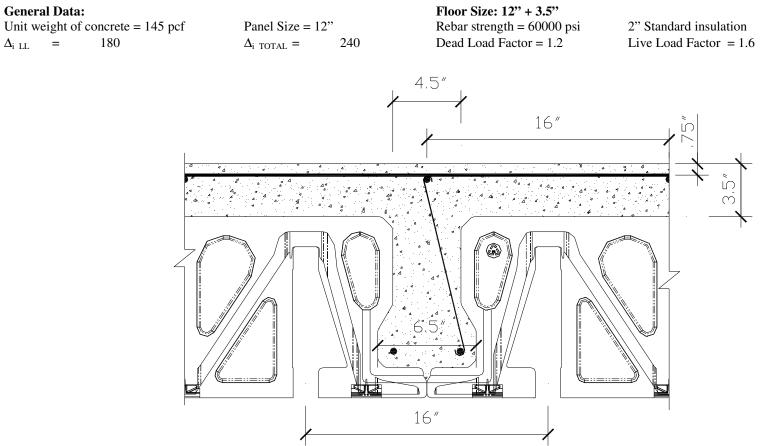
- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.
- Blank Cells indicates that the joists are failing in deflection.

Project: AmDeck Design Guide Client: Amvic, Inc.

 $\Delta_{i \ LL}$ 

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

#### Table D: f'c = 3500 psi, Topping Thickness = 3.5" 9.4



| Project: AmDeck Design Guide | Prepared by: Kapil     |
|------------------------------|------------------------|
| Client: Amvic, Inc.          | Checked by: Andy / Raj |

Date: 12/07/2007 Date: 12/07/2007

| Dea | ıd L         | .oad =   | 10 g                                      | osf                        |                          |                                      |                                      |                                   |                             |                              |                                |                             |                                     |                                |                                    |                      |                                      |                              |                                |                                |                                |                                    |                                     |
|-----|--------------|--|---|----------------------------|--------------------------|--------------------------------------|--------------------------------------|-----------------------------------|-----------------------------|------------------------------|--------------------------------|-----------------------------|-------------------------------------|--------------------------------|------------------------------------|----------------------|--------------------------------------|------------------------------|--------------------------------|--------------------------------|--------------------------------|------------------------------------|-------------------------------------|
| e   |              | <u>):</u> %11  | 1 -1                                      | 90 D - 10<br>DE            |                          | <u>1 - ۹</u>                         | r D - 10<br>DZ                       | -8                                | 1 -                         | VED - 10                     |                                | - 1 -                       | 20 D - 10                           |                                | 07                                 | 1-310-<br>D2         | - 10<br>                             | 07                           | 1 - 30 D - 1<br>DZ             | ıر<br>مە                       | 07                             | 1 -100 CI - 1                      | 1                                   |
|     | =            | m Line Stark   | i <sup>4</sup>                            | 144                        |                          | 14°                                  |                                      | 174                               | 14                          | 174                          | 174                            | 14                          | 174                                 | 174                            | 14                                 | 174                  | 174                                  | 14                           | 174                            | 174                            | 145                            | 174                                | 154                                 |
|     | -01          | Fotenor Fropola  | 14  | 14:<br>14:                 | 14                       |                                      |                                      | 14<br>14                          | 14<br>14                    | 14<br>14                     | 14                             | 1#<br>1#                    | 14                                  | 14                             | 14                                 | 14                   | 14                                   | 14                           | 14                             | 14                             | 145                            | 14                                 | 1#<br>1#                            |
| IL. |              | nonudinal (1 <sup>47</sup> no Lausport                     | 174                                       | 174                        | 174                      | 174                                  |                                      | 174                               | 174                         | 174                          | 174                            | 154                         | 174                                 | 174                            | 174                                | 154                  | 174                                  | 174                          | 174                            | 174                            | 174                            | 174                                | 174                                 |
|     | .н.          | ober en ent Calva ball Support.<br>Sita:                   | 14<br>Mainance Ma                         | 14)<br>'7 Griet (M2)'      | 141<br>7 GHCU 1400       | 141<br>7 GH CU 1 <b>8</b> 1201       | 141<br>7 GH CU 1 <b>M</b> 201        | 14)<br>7 GH CU 14(2)              | 14)<br>7 an du 142          | 142<br>17 UNICO 1843         | it#<br>27 an du Mas            | it#<br>Marcu Ma             | 144<br>Marine art                   | 142<br>14217 UNICO             | 144<br>/ 14007-01-00               | 1#<br>u #a⊉17 un     | 14)<br>Cu 14217 Ur                   | 14<br>CU MQ17010             | 144<br>30 1 <b>71</b> 277 0110 | 1#<br>:0.14017.010             | 144<br>2011 M 2017 OF C        | 144<br>10 1 <b>4</b> 10017 (0110)  | 144<br>U MQ17 CH CU                 |
|     |              | ranste pelike m  |   |                            | VULCE MO                 |                                      |                                      |                                   |                             | Wards M                      |                                | ya un du Me                 |                                     |                                | <ul> <li>MQ17 unice</li> </ul>     | u Mayarun            |                                      | CU MQ17 UNC                  |                                |                                | C MQY OLD                      |                                    | C MQ17 CHOC                         |
|     |              | no Enri Scars<br>moltement - Tri, Scars                    | 145                                       | 14-                        | 142                      | 145 ·                                | 14r<br>14r                           | 14-                               | 145<br>170                  | 14-                          | 14-                            | 145<br>170                  | 144                                 | 144                            | 145 E                              | 14                   | 14-                                  | 145<br>175                   | 14-                            | 14-                            | 145                            | 14-                                | 14)<br>174                          |
|     |              | Lefe o Europario   | 174                                       | 174                        |                          |                                      |                                      |                                   | 175                         | 174                          | 174                            | 174                         | 175                                 | 174                            | 174                                | 174                  | 174                                  | 174                          | 174                            | 175                            | 174                            | 144                                | 174                                 |
| '   |              | ugi dust 1° n Encput<br>Moterrett Cihorini, Support        | 14  | 14)<br>14)                 | 144 - 174<br>174         | 14: · ·                              | 142<br>142                           | 14:<br>17:                        | 14)<br>154                  | 14:<br>14:                   | 14)<br>154                     | 14)<br>154                  | 145<br>154                          | 14                             | 14-                                | 145                  | 145                                  | 14                           | 145                            | 145<br>150                     | 14-                            | 145                                | 145<br>175                          |
|     |              | Sar<br>Баралан Бері  | MS: 759 CC - MS:                          |                            |                          |                                      |                                      |                                   |                             |                              |                                |                             |                                     |                                |                                    |                      |                                      |                              |                                |                                |                                |                                    |                                     |
|     | 1.00         | tomLnc Stark   | କରି ଅନ୍ତର କରି<br>କର                       | 144<br>144                 | 174 (J. 1942)<br>174     | : सन्दर्भ समिति।<br>155              | 144<br>144                           | 146<br>146 - Chiller Mañie        | েলে চেলা মানু।<br>পিঠ       | 174<br>174                   | 174<br>174                     | 97766 (C) 140<br>150        | 9 7 80 100 V                        | 144<br>•••56 : 2 : 5 : 1 : 0 : | - High Sec ()<br>175               | ে মন্ত্রালে ।<br>কি  | ে লাভু সেন<br>বিচ                    | 100 Algi 2000<br>170         | ে লাভ বেলা।<br>বিচ             | ে নার্ডে লেন।<br>কি            | ан маралана.<br>194            | с мариянск<br>150                  | - High 2 (197)<br>1950              |
|     | Te r         | obmement int Spans   | 145                                       | 141                        |                          |                                      |                                      |                                   | 145<br>145                  | 14:<br>14:                   | 14<br>14                       | 145                         | 14:                                 | 14)<br>14)                     | 145<br>141                         | 145                  | 14                                   | 145                          | 145<br>141                     | 14)<br>14)                     | 24)<br>14)                     | 145                                | 145                                 |
| 14  | La           | Foterior Focipiets<br>non-dinati (Pinni Support            | 144                                       | 142                        | 14)<br>150               | 14°<br>14°                           | 140<br>140                           | 142<br>175                        | 144                         | 142                          | 142                            | 144                         | 142                                 | 142                            | 142                                | 141                  | 140                                  | 147                          | 142                            | 140                            | 144                            | 145                                | 145                                 |
|     | 1.00         | of enert Ciliar Et Supor-                                  | 1#<br>MQ1710100 MQ                        |                            |                          |                                      |                                      |                                   | 14                          | 1#<br>                       | 145                            | 14                          | 1#<br>                              | 145                            | 14                                 | 14                   | 145                                  | 14                           | 14                             | 145                            | 14                             | 14                                 | 145                                 |
|     |              | ranste pelle mil   |   |                            | Vence Mar                |                                      | nanco Mag                            | ranco May<br>∕unco May            | nanco May<br>Yanco May      | an an do hai<br>An an do hai | γranco Ma<br>γranco Ma         | γranco Ma<br>γranco Ma      | ynanca f                            | αφηταrico<br>αφηταrico         | , MQ7 CEC<br>, MQ7 CEC             | u Mayrur             | CU MQ170                             | CO MQ11010                   | te Magirare<br>Cu Magirare     | te Magirana<br>Ce Magirana     | CU MAY YOF C                   | C M271010                          |                                     |
|     | =            | m For Scars<br>modement 14, Scars                          | 145                                       | 145<br>12                  | 145 · ·                  | 145 ·<br>150                         |                                      | 145<br>154                        | 145<br>170                  | 145<br>170                   | 145                            | 24<br>25                    | 145<br>150                          | 145<br>15                      | ξţ.                                | 145<br>120           | 145<br>120                           | 14 K                         | 145<br>12                      | 145<br>120                     | 141 F<br>144 A                 | 145<br>120                         | 145                                 |
|     |              | Lele o Eurparis  | 144                                       | 144                        | 174                      |                                      |                                      | 174                               | 144                         | 174                          | 174                            | 174                         | 10                                  | 15                             | 174                                | 10                   | 10                                   | 174                          | 10                             | 10                             | 144                            | 15                                 | 145                                 |
| 1F  |              | ugi dust 11 m. Enclant<br>Molecteri Ciharini, Support      | 14  | 145                        | 145                      | 141 - 1<br>142                       | 145<br>15                            | 145                               | 1#<br>185                   | 145                          | 145                            | 141                         | 145                                 | 145                            | 141                                | 244<br>146           | 145                                  | 141                          | 244<br>145                     | 145                            | 14                             | 244                                | 244                                 |
|     |              | Sa:  | MS: 759 CC - MS:                          | 750 CC 2456                | 750 CO M(8)              | 759 CO MSC                           | ne<br>759 og Mgr                     | 759 CO MS                         | 759 CO (MS)                 | 750 CO (4)                   | 9.758 CO 145                   | 750 CO (4)                  | 1758 CC 2                           | 4 <u>9</u> ,78,00              | 1.45.75-0                          | е м <u>а</u> 786     | CO MS 755                            | CO M3:78-0                   | 00 MS 750 0                    | 20 Mg 750 0                    | CO (MS) 750 C                  | जनसङ्ख्यान् वि                     | e Marzer de                         |
|     | 100          | Torisver-e Delo"<br>tom I Ling Stars                       | মঞ্জের জাবের মঞ্<br>আর্থ                  | 750 CC 2439<br>189         | 759-00 Mgr.<br>199       | ଅଟନ କଳା କାନ୍ତିକ<br>କଳ                | 788 COLIMS).<br>HA                   | 780 COLMS)<br>Her                 | 788 CO 1489<br>146          | 1759-001-245<br>195          |                                | 9.769.00 MS<br>154405       | 9.788.000 P                         | Mgi Zeli Co<br>Ive             | 1 MS: 7 원 CO<br>15941년             | C MS(755)<br>145     | CC MS(78)                            | CO - MS: 759-0<br>140-24     | 10 14월 759 0<br>189            | 2011년(1789년)<br>1947년          | 10 [MS: 789.0<br>년:            | ାମ କାର୍ଥ୍ୟ ମହା ପ<br>ଜନ୍ମ           | 이 24일: 7 원: CO<br>199               |
|     |              | on enert of Scars  | 24  |                            |                          |                                      |                                      |                                   |                             | 145                          | 145 1                          | 41.4                        | 145                                 | 145                            | 1411.44                            | 145                  | 145                                  | 141.6                        | 145                            | 145                            | 245                            | 145                                | 145                                 |
|     | I - 1        | Fater or Foop day<br>non-dination Foop day                 | 14  | 145                        | 145                      |                                      | 145<br>170                           |                                   | 14)<br>154                  | 145                          | 145<br>155                     | 14 <sup>4</sup>             | 145                                 | 145                            | 14                                 | 145<br>154+100       | 145                                  | 141                          | 145<br>15441 (S.               | 145                            | 14                             | 145<br>15441 (5                    | 145<br>15441 (*                     |
|     | 7.01         | the energy Ciliar Fr. Stipper-                             | 14  | 14                         | 145                      | 14.                                  | 14.                                  | 145                               | 14                          | 14                           | 145                            | 14                          | 14                                  | 145                            | 14                                 | 14                   | 244                                  | 14                           | 141                            | 244                            | 14                             | 141                                | 242                                 |
|     | $\vdash$     | IS as<br>ranste de Heim                                    | MQ1701CC MQ<br>MQ1701CC MQ                |                            |                          |                                      |                                      |                                   |                             |                              |                                |                             |                                     |                                |                                    |                      |                                      |                              |                                |                                |                                |                                    |                                     |
|     | =            | m Fur Stars  | 1411 26                                   | 145                        | 145 14                   | (1)#                                 | 45                                   | 145 14                            | er we                       | 145                          | 145                            | 245                         | 145                                 | 145                            | 245                                | 244                  | 244                                  | 1451 #                       | 244                            | 244                            | 145 i Af                       | 241                                | 242                                 |
|     |              | molecteri Iri, Scars<br>Lule o Eucporis                    | 154+154                                   | 175<br>175                 |                          | 4+1 (*).<br>1964                     | で                                    | 175 17<br>175                     | K+1∱.<br>174                | 175                          | 175                            | 50<br>15                    | 170                                 | 175                            | 25)<br>154                         | 24<br>12             | に                                    | 175+170                      | -54<br>155                     | に                              | 175+170                        | 254                                | 254                                 |
| ×   |              | ոց՝ ժոժ 1՝ ո քաշրա   | 14  | 24                         | 245                      | 14 :                                 | )¢:                                  | 74                                | 14 1.                       | #1#                          | 245                            | 14                          | #1#                                 | 1411 28                        | 14                                 | 1411 8               |                                      |                              | 245                            | 1411 #                         | 141                            | 245                                | 245                                 |
|     | -01          | No certeri Cihor H. Support<br>Stat                        | <u>। १४</u><br>अञ्च ७२२ - २० - अञ्च       | 174<br>7.5% C.C. 24%       | <u></u>                  | 154<br>7.59: 0.01: 24:90             | 144<br>7.56.000 (AMS)                | <u>.94</u><br>7.55 C.C. (M.S.     | <u>154</u><br>755:00 - 2459 | 174<br>(7.5): CO (At)        | <u></u>                        | 174<br>6 7 56 00 - 645      | 1%4<br>• 7.5h 0.0 #                 | <u>194</u><br>Millio 7 59 - 00 | 174<br>1. 84% 7.5% 00              | 174<br>0. 2490 7.50  | 174417<br>001-8496-756               | <u>. 144</u><br>00 849 755 0 | 174<br>2012 ANN 755-0          | 1544160<br>11647-0164 - 10     | 174<br>VC - 24% 7.5% C         | 174<br>.01.24% 7.5% 07             | 174+175<br>01 24% 7.5% 0.01         |
|     |              | Талам-н Төш  | MS 750 CC MS                              | 780 CC - MS                | 788 CC #8                | zer og Mig-                          | zer og Mig                           | ZER CO ME                         | ZER COLIMS                  | 7.89 CO - H                  | 17 FRIDD MS                    | THE COLOR                   | 1786 CC 2                           | Mgr Zen Co                     | n Mgi zer di                       | n Mg(78)             | CO MS 750                            | CO MS 750 0                  | ග මනුදෙන ද                     | 0 MS 780                       | CO MS 750 C                    | <u>त अर्थुः 7सः स</u>              | n Mgi Zeri Ch                       |
|     | Lott<br>Te u | tom – Lind Stark<br>nömement – Int Spank                   | - 250<br>- 245                            | 145                        | 145                      | <u>-75</u><br>245 - 1                | 15                                   | 145                               | <u></u>                     | 244                          | <u>- 5%</u><br>145 - 1         | 1541 AL<br>1451 AF          | 244                                 | 145                            | 1451 #                             | 244                  | 244                                  | 245                          | 1444 AL<br>1444 AL             | 14441 AL<br>244                | 245                            | 164 F (2)<br>164 F (2)             | 174+175.<br>244                     |
|     |              | Fater or Focipiets   |   |                            |                          |                                      |                                      |                                   | 14                          | 145                          | 145                            | 14                          | 145                                 | 145                            | 14                                 | 241                  | 241                                  | 14                           | 244                            | 245                            | 141                            | 245                                | 242                                 |
|     | 1.0          | nanudinali (Anima Bulgari)<br>nimement Cabardati Sigana    | 144 14                                    |                            | 241 AL                   | 14 14<br>14 14                       | 141 AL                               | 241                               | 14                          | 14                           | 桜台湾 <br> 安白斎                   | 144                         | 14                                  | 1411                           | 144                                | 150+130<br>144       | . <u>14</u> 114                      |                              | 145+130<br>142                 | <br>245                        | 14                             | 145+130                            | 245                                 |
|     |              | Sac  |   |                            | Vance Mar<br>Vance Mar   |                                      |                                      | 7 GHOU MAY<br>7 GHOU MAY          |                             |                              | gran du Ma                     |                             |                                     |                                |                                    |                      |                                      | CO MQ17 CHO                  |                                |                                |                                |                                    |                                     |
|     | =,,          | ministrative believe m.<br>International Fund Science      | 1451 #                                    | 70000 Mag<br>24            |                          |                                      |                                      |                                   | <u>ZCINCC NAQ</u><br>SLÆ    | 2#                           | <u>27 en du 145</u><br>24      |                             | 7 (1 (C) 7<br>14 (1 <del>14</del> 7 | 4 <u>4770700</u><br>1411 #     | 245                                | 0 740701<br>14117    | <u>CC MAQ 7 Ch</u><br>144 T A        |                              | 1411 #1217 0010                | 141 #<br>141 #                 | 1451 #                         | 245                                | 0 MQ17 CH CC<br>245                 |
|     | -01          | molected Int. Stars<br>Letero Eutports                     | 155+170                                   | 244<br>155                 |                          |                                      |                                      |                                   | 5+170<br>174                | 250<br>250                   | -14-<br>                       | 289                         | 144 + 1 Au                          | -54                            | 245                                | 1944年末<br>1944年末年    | . (******<br>(******                 |                              | 1764176.<br>1764176.           | 1944年代。<br>1944年代初日            | 149+174<br>146                 | 275<br>1754 (*)                    | 1744174.<br>1744174                 |
| 24  | 1.           | ngi dusi 1° n Encput                                       |   |                            |                          |                                      |                                      |                                   |                             | <br>451 #                    | 245                            |                             | 451.26                              | 245                            | 144                                | 245                  | 1451.4                               |                              | 245                            | 1451.26                        | 14                             | 1451 22                            | 245                                 |
|     | -01          | molecteri Cihar Iri, Support                               | 154<br>MS(75) CO MS(                      |                            |                          | 174<br>7.69.00 - 546                 |                                      | 2+1¢L<br>Tablic Chiloday          | 174<br>7.69 C.C. 2459       | 174<br>7.60 C.C. 345         | 174+174<br>5 7 65 0 0 - 545    | 174<br>- 7.60, 0.01, 545    | 174                                 | <u></u>                        | 174<br>                            | 154                  | - <del>20</del><br>                  | 174                          | 174<br>175 - 246 - 20          | 175+170<br>1.457 J.246 - 01    | 174<br>175 - 246 - 21          | 174                                | 175+170<br>01 - 2450 - 7 - 2450 - 0 |
|     | $\vdash$     | Тагжисн Тиш  | MS: 755 CO MS:                            |                            |                          |                                      |                                      |                                   |                             |                              |                                |                             |                                     |                                |                                    |                      |                                      |                              |                                |                                |                                |                                    |                                     |
|     |              | tom – Lind Stark<br>nörr errent – Inti Scark               |   | 52+152 In<br>211-22        | <u>61+174</u><br>2441    |                                      |                                      | 2+1;#2<br>2421                    |                             | 441 AL<br>44 1 AL            |                                | 1541 M<br>4541 M            | <u>35</u><br>365                    | 270<br>147 1 26                | 145+174                            | <u> </u>             | - 275<br>141 - 4                     | 14541741<br>8 14531-22       |                                | <u> </u>                       | 145+174                        | 175+170                            | 175+170<br>245                      |
|     |              | Fater or Focp dis  | 1#  | 74                         | 24                       | 14 1                                 | <u>)</u> #                           | 24                                |                             |                              | 14 1 H                         |                             | #1#                                 | 1411 #                         | 14                                 | 1411 8               |                                      |                              | 245                            | 245                            | 1#                             | 245                                | 245                                 |
| 1   | Lor          | nanudinati (Anima Bulapari<br>Konjement Calva Mali Silpana | 174 11                                    | 6+180<br>140               | <u>30</u><br>205         | 174 17.<br>144 - 1                   | 5+1%L<br>142                         | <u>२०</u><br>२४४                  | 144                         | 285                          | 175+170<br>245                 | 144                         | 285                                 | 1451-26                        | 174                                | 145+175<br>145       | : 259<br>1451 A                      | 174<br>F 144                 | 14941761<br>149                | 255                            | 174                            | 145+174                            | 145+174                             |
|     |              | S ac   | MONTO-CO MO                               |                            |                          |                                      |                                      |                                   |                             |                              |                                | yi ar cu <del>M</del> a     |                                     | Adda Charles                   |                                    | u waya ur            | CO MOVIO                             | CO MOVIER                    | a May Varia                    |                                |                                |                                    | L MONTONCO                          |
|     | =            | TATISTE DE HEIM.   | NOT OF CUL NO<br>1451 22 14               | Nundu MQI<br>An Alian Ing  |                          | 7 GH CU 14921<br>NH 22 - 14          |                                      |                                   | 7 un du 1842<br>51 27       | Anton Coll Mit<br>DAS        |                                | <u>Yn an de He</u><br>Hôl M | <u>77 CH CU 14</u><br>245           | 942)17 CH CU<br>245            | <u>, MQ1 or Co</u><br>1451 /2      | u MQ17 un<br>1451 #  |                                      |                              | 145) 26<br>145) 26             | <u>iu Migʻruni.</u><br>1451 Af | 2011/14/2017 01:0<br>1450 - 22 | <u>U MQ17 CH C)</u><br>205         | 5 MQ17 CH CC<br>245                 |
|     | -01          | moltement Int. Stars                                       | 1594155 15                                |                            | 6+16. Ist                | 6+174 IN                             | 418. IS                              | 441 M. 18                         | S+174                       | 35                           | 174+175                        | 49+174                      | ÷.                                  | ÷.                             | 145+151                            | 150+180              |                                      | 145+144                      | 15.41%                         | 35                             | 145+174                        | Re                                 | 145+140                             |
| ~   | <u>ا</u> .   | ugi dust 1° n Facput                                       |   |                            |                          |                                      |                                      |                                   |                             | <u>4416.</u><br>451.22       | 144+165<br>245                 | 144                         | <u>- 355</u><br>451 - 27            | 25                             | 174                                | 35<br>145 u #        | <br>1451 A                           | 174<br>7 144                 |                                |                                | 174                            | 1641 AL<br>1651 - AL               | 1454180                             |
|     | -01          | no content Cihor M. Support                                | ार<br>।स्य<br>अन्तु: 7.5% ००% अन्तु:      |                            |                          |                                      |                                      |                                   |                             |                              |                                |                             |                                     |                                |                                    |                      |                                      |                              |                                |                                |                                |                                    |                                     |
|     | $\vdash$     | Sar<br>Taraare Deuf  | <u>- 25:75:00 - 25:</u><br>25:75:00 - 25: | 750 CC 2450<br>750 CC 2450 | 768-00 Mgr<br>768-00 Mgr | ମିଳି କରି କାର୍ଥିକ<br>ମିଳି କରି କାର୍ଯ୍ୟ | 768-00-24 <u>9</u> ;<br>768-00-2499; | 766 CO M <u>S</u> E<br>766 CO MSE | 768 CO 245<br>768 CO 245    | (76) CO (M)<br>(76) CO (M)   | y ZEN COLLARY<br>V ZEN COLLARY | 9756 CO (M)<br>9756 CO (M)  | 1786 CC 2                           | <u>서영(78) CC</u><br>서영(78) CC  | 1 분명: 78: CO<br>1 분명: 78: CO       | 이 서영(78)<br>이 서영(78) | ୦୦ କାର୍ଥ୍ୟ <del>ମ</del><br>୦୦ କାର ମହ | <u>ରେ କରୁମେନ</u><br>ରୋକରୁମନ  | 10 원왕(78)0<br>10 원왕(78)0       | 2011년(7년)<br>2011년(7년)         | 10 원왕(78) 0<br>10 원왕(78) 0     | <u>ମ କାର୍ଥ୍ୟ ମହା ସ</u>             | <u>는 위영(738-00)</u><br>이 위영(738-00) |
| 1   |              | tomLni Stars   | 149+164                                   | 35                         | . <del>75</del> 18       | 9+1#1                                | 35 T                                 | 35 ÎK                             | S+1# T                      | 75+1°N                       | ₹5+1%L                         | 75+17 <sup>1</sup>          | 70+17L                              | 175+170                        | 145+164                            | - 26                 |                                      | 15541551                     | - 259                          | - 256                          | 1454164                        | 1454164                            | 14941241                            |
|     | - H I        | non-ement int Scars<br>Exterior Propriats                  | 1451 #<br>1451 #                          |                            |                          |                                      |                                      |                                   |                             | 451 #<br>245                 | 245 1                          | 14)<br>14)                  | 451 #<br>245                        | 245                            | 1451 22                            | 245<br>1451 A        | 145) A<br>145) A                     |                              | 245<br>1451 #                  | 145) #<br>145) #               | 1451 PP<br>145                 | 145 i 245<br>245                   | 245                                 |
| - x | La           | nonudinal (1 <sup>47</sup> no Lausport                     | 174 1                                     | 63+1741                    | 35                       |                                      | i+1**                                | 245                               |                             | - /**)<br>*3****             | - 2000<br> 1554-1かい            |                             | - 200<br>1554 1 101                 | 175+175                        | 174                                | 1401 AF              | 159+16                               | 174                          | 1401 AF                        | 149+144                        | 174                            | 740<br>14941 #1                    | 2490<br>1453+1441                   |
|     |              | of energi Ciliar Et Suport<br>Stat                         | 14<br>MQ170100 MQ                         |                            | SLAF<br>Vende Mexi       | t≄<br>Aunicu <del>M</del> ee         |                                      | ST #F<br>7 GH CU 18921            | 1#<br>Vunicu ∌es            | 1#<br>Granda #P              | 245<br>277 GP CU - 545         | 1#<br>Marco #r              | 144<br>March Collida                | 1451 /#<br>9007 UNDU           | 14)<br><del>1</del> 400 / 1110 / 1 | 1#<br>U 140217-00    | 1451 A<br>Cui 5102 7 Un              |                              | 14/<br>36_34:0017-0010         | 1451 #<br>30 84000 000         | 14/<br>36_345217-0110          | 14 <sup>0</sup><br>No. 5150 (2000) | 1451 #2<br>6. #19217 CHILON         |
|     |              | ranste pelike m  | MOTO CO MO                                |                            |                          |                                      |                                      |                                   |                             |                              |                                |                             |                                     |                                |                                    |                      |                                      |                              |                                |                                |                                |                                    |                                     |

| Project: AmDeck Design Guide | Prepared by: Kapil     | Date: 12/07/2007 |
|------------------------------|------------------------|------------------|
| Client: Amvic, Inc.          | Checked by: Andy / Raj | Date: 12/07/2007 |

Dead Load = 15 psf

|            |                        | <u>); %1</u>   | - I - I                              | SCD - 15                           |                                      | 1 - 9                          | D - 15                        |                                   | 1 - 3                           | CD - 15  |                                | 1 - 70                              | D - 15                                   |                              | 1-810                                 |   |                                     | 1 -00 D -                  | -17                                 |                                   | L -100 CI-                 | 5                         |
|------------|------------------------|--|--------------------------------------|------------------------------------|--------------------------------------|--------------------------------|-------------------------------|-----------------------------------|---------------------------------|--|--------------------------------|-------------------------------------|--|------------------------------|---------------------------------------|---|-------------------------------------|----------------------------|-------------------------------------|-----------------------------------|----------------------------|---------------------------|
| Scar       | =                      | II 3F<br>Line Scare                                  | 87<br>14                             | DF 5<br>174 P                      | ≺S S<br>14 14                        | יד ו<br>יד עי                  |                               | -8  <br>174   1                   | SF<br>I#                        | 1.1 ÷<br>1⊀4 I   | ୍ଷ :<br>କ <u>୍</u>             | יד ח<br>ליד שיי                     | е и<br>К М                               | ର   ମ<br><u>ଜ 14</u>         | ים יי<br>א <u>ון א</u>                | र ⊻श<br>६ ।⊀ध   | . 14                                | DF<br>174                  | ~S<br>174                           | S≂<br>145                         | DF<br>174                  | ~S<br>174                 |
|            | He mo be t             | Folenor Folge das                                    | 14 <sup>4</sup><br>14 <sup>4</sup>   |                                    | + 14<br>+ 14                         | 4 <u>1</u><br>4 1              | + 1<br>+ 1                    | + 1<br>+ 1                        | 4<br>4                          | 14 1<br>14 1   |                                | 4 1.<br>4 1.                        | 2 1.<br>2 1.                             | e 14<br>e 14                 | × 14<br>× 14                          |   | 14                                  | 14                         | 14<br>14                            | 145                               | 14                         | 4<br>4                    |
| IC.        |                        | of 15 m Busperi<br>and Citization Signar             | 175                                  | 175 1                              | 74 IT                                | <u>* 1</u>                     | <u>* 1</u>                    | 72.<br>10                         | <b>7</b> 4                      | 174  | <u>* 1</u>                     | <u>* 1</u>                          | <u>s</u> 1                               | <u>s-</u> 17                 | <u>- 17</u>                           | c 170   | 174                                 | 174                        | 174                                 | 174                               | 175                        | 174                       |
|            |                        | Stat   | MOTO CO MO                           |                                    |                                      |                                |                               |                                   |                                 |  |                                |                                     |  |                              |                                       |   |                                     |                            |                                     |                                   |                            |                           |
|            | =                      | For Spark  | 145                                  | <u>14 14</u>                       | <u>rundu Magʻ7</u><br>≇ 14           | <u>นายมหญา</u><br>ส. 1         | <u>randa Magn</u><br>≄ 1      |                                   | rando Magr<br>HAS               | / Unicol 14/0/7<br>14/ 1                                 |                                | - <u>0100 Magir</u><br>45 14        | <u>uncu Magʻi</u><br>A                   | <u>undu Magiri</u><br>A 14   |                                       | 01100 MQ170<br>14                                     | 145                                 | <u>14</u><br>14            | 1#                                  | <u>145</u>                        | <u>u Magʻ7 un C</u><br>1#  | u Magʻ7tin Cu<br>1₽       |
|            | He mo be t             | Lefe or Butports                                     | 175                                  | 144 1                              |                                      | ち I<br>だ I                     | ri 1<br>ri 1                  | き                                 | 170<br>174                      | 174  |                                | ちって                                 | к р<br>к р                               | 71 X                         | K 14                                  | C 170   | · 175                               | 144                        | 144                                 | 175                               | 144                        | 144                       |
| 17         | L ngi di               | ol 11 n English<br>1911 Cihor I 1, Support           | 14                                   | 14 1                               | 4° 14<br>4° 14                       | ψ 1<br>• I                     | 4° 1                          | 47 1<br>17                        | 14 <sup>1</sup>                 | 145 1  | 4 1<br>                        | 4 1.<br>                            | ጽ 14<br>« ዞ                              | 6 14<br>S                    | 2 14<br>C 14                          | 5 145   | : 1#<br>                            | 145                        | 145                                 | 14                                | 145                        | 145                       |
|            |                        | Sar  | M3:78:00 M3:                         | 78 CC M3 7                         | 58 CC M3 7                           | <u>स्<br/>सः ६० सञ्च</u>       | <u></u>                       | en co Mari                        | 789 CC 서영                       | 245 CO MS 2  | en co Mars                     | <u>~</u><br>(관·CC 서영 7              | <u>е</u><br>ексерн <u>е</u> 7            | <u>e co M8-7</u>             | <u>स् १९</u><br>सः ६० स <u>ध</u> ः २४ | 194<br>194 CC 서영 7년                                   | 194<br>11 CO - Mgi 781              | - CO - MS: 7-9-            | CO M3:78-0                          | 20 M (2 7 7 1 C                   | 2 M3: 78: 0                | n M3:78-00                |
|            |                        | ersoner-er Terof<br>Ling Spark                       | মন্ত্র সমানে মন্ত্র<br>।রহ           | 144 DE 248(2                       | ren de la Major<br>Réference avagior | SECENSES<br>DE                 | en de Mais<br>An              | en de Mais<br>An                  | েরন মেনা মেন্ডি।<br>মেন         | Zeron Magia<br>I≮4 II                                    | <i>₹</i> ⊂                     | 70 IN                               | en de langez<br>Militer angez            | fi 17                        | 5 17                                  | 5 IV.   | 170                                 | 175                        | েল নাগুলেনে।<br>পে                  | л муртын.<br><i>3</i> 4           | ে সন্থ্য সভাব<br>হিচ       | e Mgi 786 Ce<br>155       |
|            | Tenjo er               | ent Int Scars<br>Faterior Focputs                    | 145                                  |                                    | + 14<br>+ 14                         |                                |                               |                                   |                                 |  |                                | 45 1×<br>4 1×                       |  |                              |                                       |   |                                     | 145                        | 14<br>14                            | 74)<br>14)                        | 145                        | 145                       |
| 14         | Long rud               |  | 175                                  | 15 1                               | ₹ <u></u> 1                          | <u>≪ 1</u>                     | <del>10</del> 1               |                                   | 144<br>145                      | 1 <del>70</del>  <br>112                                 | ₹5 I                           | <u>* 1</u><br># 1                   | 6 I                                      | 6 It                         | s 1 <del>3</del>                      | 5 IV.   | 175                                 | 15                         | 15                                  | 144                               | 145                        | 175                       |
|            |                        | S a:   | MOTO CO MO                           | Warde Mari                         | ance Mari                            | ance May?                      | Tanca May                     | CITCO MOD                         | an cui May                      | Tanco Mari   | CITCO MOV                      | Gree May?                           | Gree May?                                | arcu May7                    | unce Marri                            | ando Mayrro   | n cu Mayiya                         | CO MOVIO                   | CO MQ/7010                          | o Mariano                         | u May York                 | u May Vancu               |
|            | =                      | For Scars  | MQ17 01 CU MQ<br>145                 | 145 1                              | - <u>undu Magʻr</u><br>45 14         | <u>นายม พญา</u><br>ศ.ศ. 1      | - <u>undu Magn</u><br>45 1    | 145 (1.141)<br>145 (1.141)        |                                 | 7 UN CU 1410/17<br>145 1                                 | - <u>undu Maj</u> r<br>45 - 2  | <u>rundu Magʻ7</u><br>∉ 14          | <u>undu Mayir</u><br>8 - 14              | <u>นายม พญาก</u><br>ส. 24    | <u>undu Majiri</u><br>2011-14         |   | 24 NG 10                            | 145                        | 145                                 | 141 8<br>141 8                    | <u>0 840/2020</u><br>145   | 0 Might Childu<br>145     |
|            | He mo be t             | rent 11. Spans<br>Lete or Burports                   | 175                                  |                                    | 174 In<br>174 In                     | 6 I<br>6 I                     | もし                            | 14.<br>14.                        | 170<br>174                      | 170 I  | た 1<br>た 1                     | 54 P<br>54 P                        | 5 F                                      | 6 X                          | १८ । २<br>१८ - १२                     | 5 IN<br>5 IN  |                                     | 170<br>170                 | 145                                 | 1744174                           | 145                        | 10                        |
| 1F         |                        | ավ քիս քարրու  | 14                                   | 145 1                              | 45 14                                | ÷ 1                            | -5 1                          | 45                                | ιψ:<br>                         | 145 1  | -5 1                           | ÷ 1.                                | <u>δ</u> 1.                              | <b>Γ</b> 14                  | - 24                                  | 145   | 14                                  | 24                         | 244                                 | 14                                | 242                        | 244                       |
|            |                        | off Ciher H. Supton<br>Sat                           | <u>। २२</u><br>अञ्च २२: २० - अञ्च    |                                    |                                      |                                |                               |                                   |                                 |  |                                |                                     |  |                              |                                       |   |                                     |                            |                                     |                                   |                            |                           |
|            |                        | ersoneren Terro'<br>  Enc Spark                      | Mg: 759-00- Mg:<br>अब                | 1756-00-2489.7<br>170 P            | 1990 CC 241397<br>170 - 27           | 86 CC 24863<br>74 - 1          | も                             | た ば                               |                                 | -  |                                | + 1. 1.                             | 5 P                                      | C 154                        | CA. 15                                | 5 IN  | 174+1;                              | N 160-                     | CC 2439 759 0<br>150                | න මෙලා වෙන න<br>ප්ර               | ে সন্ত্রালয়।<br>বিচ       | n Mg(780.00)<br>160       |
|            | CHILLIN H              | ent Int Scars<br>Esterior Foculits                   | 244<br>144                           |                                    | 45 74<br>45 14                       |                                |                               |                                   |                                 |  |                                | 1.27 1.<br>47 1.                    |  | <u>त्र 14</u> ा<br>त 14      | i¥≓ 14<br>⊱ 14                        |   |                                     | # 145<br>145               | 145                                 | 245                               | 145                        | 145                       |
| IL.        | Lon: r.d               | hold in particular                                   | 175                                  | 254 1                              | <u>ti</u>                            | <u>r:</u>                      | <u>54</u>                     |                                   | 174                             | <del></del>  |                                | <u> </u>                            | <u>s</u>                                 | <u>8 17</u>                  | <u>s:</u> 172+                        |   | 174                                 | 172+17                     | 174+174                             | 174                               | 174+174                    | 170.41.70                 |
|            |                        | will Other Et. Stipper<br>State                      | MOTOLCO MO                           |                                    |                                      |                                |                               |                                   |                                 |  |                                |                                     |  |                              |                                       |   |                                     |                            |                                     |                                   |                            |                           |
|            | - r                    | For Scars  | MQ17 GHCU MQ<br>1411 M               |                                    | CULCU 構築で<br>柄 14日                   |                                |                               |                                   |                                 |  |                                | <u>чансы март</u><br>45 — 14        |  | ando Magar<br>A A            | <u>undu Magʻzi</u><br>8 - 24          | unicu <u>Mityinu</u><br>24                            | <u>n du Miştîr di</u><br>145 d      |                            | <u>100 MQ170110</u><br>24           | <u>145) 85</u>                    | <u>u May'z en d</u><br>2#  | u Maynandu<br>24          |
|            | He mo be t             |  | 172.+175                             | 15 1                               | 70 174<br>70 174                     | • * * · · ·                    | 70 I                          |                                   |                                 | 170 I  | 70 L                           | 10 IN                               |  | 6 3<br>6 1                   | S - 34                                | L 173   |                                     |                            | 15                                  | 175+170                           | -34                        | 26                        |
| ж          | l ngi d                | of the English                                       | 14 14                                | 41.44 X                            | ψ 14                                 | ψ 14 <sup>.</sup>              | 1.¥F 2                        | μ÷ 1                              | 4 14                            | 1.47   | ψ 1                            | ÷ 1÷                                | i # 1#                                   | i# 14                        | 2 24                                  |   |                                     | 245                        | 1411.44                             | 14                                | 245                        | 245                       |
|            | -eno .e                | rent Cilher Int. Support<br>Star                     | <u>। १२</u><br>अञ्चः १२ः ६० - अञ्च   | 174 CO MS(7                        | <u>त्र ।</u><br>स्वर्गतः अक्तुर      | <u>।</u><br>सः ६० मधुः ३       | ଲ୍ଲ<br>କୋର୍ଯ୍ୟ କାର୍ଥ୍ୟ        | ar<br>Maria da Maria              | ne<br>780-00-2435               | 194<br>7년: CC 세종: 3                                      | ଅକ୍ଟରେ କାର୍ଥ୍ୟ ।<br>ଅନ୍ୟାର୍ଥରେ | <u>कः ।</u><br>१९२१-२०११ मध्रिः १   | ଲା କରି କାର୍ଥ୍ୟ ଅ<br>ଅନ୍ୟାର୍ଥ୍ୟ କାର୍ଥ୍ୟ ଅ | <u>କାରେ</u> କାନ୍ତ୍ର ଅ        | <u>। ।</u><br>सः ६० मधुः ७३           | <u>େ                                     </u>         | FOR MSIZE                           | - COL MS: 755              | 174+175<br>0.0 - 2435 7.59 0        | जन्मकु 7 सन्द                     |                            | 1494160<br>0.001759-00    |
|            | 1_0000m                | erson-e Telof<br> n: Stars                           | মন্ত্র সমানে মন্ত্র<br>সম            | 1759-000-04 <u>8</u> 17<br>1750 11 | ren on Migit<br>Roll - D             | କାର୍ମ୍ୟାର୍ଡ୍<br>ଅନ୍ମ           | କେମ୍ବର<br>ଅନ୍ୟାର୍ଥ୍ୟ          | 786 CO 24393<br>155               | 786 CO MBC<br>35                | 54 L   | 54 150                         |                                     | 8000 MB17<br>M                           | କାରକାୟରୁ ଅନ<br>ଜାନାସ         |                                       | 89 CO 24일 78<br>174 - 1744)                           |                                     | · CO : 사망: 759-<br>하나카카    | CC 24명(759-0<br>5 - 1544년전          | ю мартано.<br>39                  | 가 24일: 75% 다.<br>1994년     | 이 24일: 759: CO<br>1994년 전 |
|            | Tenin er               | ent Int Scars<br>Faterior Focipiets                  | 245                                  |                                    | 45 24                                |                                |                               | 45 )<br>15 1                      | 24 <b>5</b><br>142              |  | 45 145<br>45 1                 | 1247 - 24<br>24 - 24                | 2 X<br>2 X                               | ביים בא<br>ביים ביים         | i#F 1#≏i<br>⊵ ⊃w                      | 24 - 244<br>2 - 244                                   | 245                                 | 14÷ià<br>≎e                | 6 244<br>244                        | 245                               | 141 F                      | 141 F<br>141 F            |
| 4          | Longinud               | hogene on The Inc.                                   | 174 1                                |                                    | 41 AL                                |                                |                               | • •                               | 174<br>174                      | 35 IN  | + n. I                         | * *                                 | 6 3                                      | <u>6 11</u>                  | × 175+                                |   | 174                                 | 170+18                     | <u> </u>                            | 144                               | 15+18                      | 175+176                   |
|            |                        | er) Ciharlet Sipore<br>Siaz                          | NOTOLOU NO                           |                                    |                                      |                                |                               |                                   |                                 | nan da Magri   |                                |                                     |  | CHOCK MODAL                  |                                       |   |                                     |                            |                                     |                                   |                            |                           |
|            | - r                    | Fun Spans  | MOTOLICU MO<br>1451 JE               | <u>// chi Cui 州会行</u><br>2年 - 2    | CULCU 相望行<br>史 1451                  |                                | rando 困惑な<br>空ます。<br>2        |                                   |                                 |  |                                | <u>ていてい 料袋(7</u><br>45 - 14)        |  |                              |                                       | unicu 网络Yru<br>第二十十日                                  |                                     |                            | <u>- CU MQ17 CH C</u><br>245        | <u>16 MQ17 01 C</u><br>1451 22    | <u>u Mayarana</u><br>245   | 0 MQ170100<br>245         |
|            | He mo be t             | rent Int. Spans<br>Lete or Bupperts                  | 170+170                              | 256 2                              | 54 IN-                               | • N. 2                         |                               |                                   |                                 | + * *  |                                | 75 174<br>7                         |  |                              |                                       |   |                                     | 50 - 250<br>150415         | 174+175<br>174+175                  | 175+174                           | 275<br>175+175             | 174+174                   |
| 24         | ا نور ا                | ավ քիս քարսին  | 14                                   | 245 2                              | 45 14                                | 4                              | w <b>r</b> s 2                |                                   | 14 14                           | 51.¥F 2  | ψ <b>5</b> 1                   | ÷ 145                               | i AF 145                                 | i¥ 14                        | 24<br>24                              | 5 1451  | æ 14                                | 245                        | 145 i #                             | 14                                | 1451 22                    | 245                       |
|            | -eno :e                | ort Ciher Int. Support<br>Star                       | <u>। १२</u><br>अञ्च २३% २०% अञ्च     | 7.59 CO (MS) 7                     | 2418년 - 18<br>7년: CO 124일: 7         | <u>।</u><br>सम्बद्धाः स्वयुः २ | ren on leiger                 | ere<br>Secon Age                  | ne<br>759 CO Mge                | 194 ମନ୍ଦ୍ର କାର୍ଥ୍ୟ ଅନ୍ୟାର୍ଥ<br>ମିଳା କାର୍ଯ୍ୟ କାର୍ଥ୍ୟ ଅନ୍ୟ | ଅନ୍ତର<br>କୋଟର କାର୍ଥ୍ୟ          | <u>कः ।</u><br>१९२१-२०२ मध्रः २     | ы<br>86 се м <u>а</u> 7                  | ର<br>କାରମାନ୍ତ୍ର ଅନ୍ତର        | <u>।</u><br>सः ६० मधुः ७३             | <u>େ                                     </u>         | E COL MS( 75)                       | - 00 MS:755                | 175+170<br>0.0 Alg: 7.61-0          | १९ मधुर समय                       |                            | 150+180<br>0.045;759:00   |
|            | Lottem T               | erson-e Telof<br> n: Stars                           | ਸਤੁਹਾਰਜ ਸਤੁਹ<br>ਤੁਹਾਰਾ ਸ             | 1759-00 ANG17<br>1841 No           | ren on Mair<br>Mai                   |                                |                               | କେଲ୍ଲର କାର୍ଥ୍ୟ<br>କାର୍ଥ୍ୟ କାର୍    |                                 |  | କେନ୍ଦ୍ରାର<br>କାର୍ଷ୍ଣ ଅନ୍ତ୍ର    | ren de langez<br>Arter - La         | 8000 MB17<br>6                           | କାରକାୟରୁ ଅ<br>ଅକ୍ୟ           |                                       | ансо манта<br>У — — — — — — — — — — — — — — — — — — — | ୋରକ କାର୍ଥ୍ୟ ଅଟେ<br>କାର୍ଯ୍ୟ ଅନ୍ତିକାର | нол мартан<br>М. — — жо    | 00 Mg 789 0<br>20                   | ମ କାର୍ଥ୍ୟ ଅନ୍ତର<br>ଜନ୍ମ କାର୍ଥ     | ମ କାର୍ଥ୍ୟ ଅନ୍ୟାର<br>କାରକାର | n Mg(759-00)<br>1904-190  |
|            | Centre er              | ent Int Scars<br>Faterior Focpula                    | 245 14<br>142                        | キョンボ ン<br>ンキ ン                     | v÷ >4<br>v÷ 14                       |                                | i#- 2<br>₩- 2                 |                                   |                                 |  |                                | a 22 - 22<br>42 - 14                |  | (#* 145)<br>(#* 14           | ראך אין<br>אין אין                    | 8 141<br>26 141                                       |                                     | 247<br>245                 | 245<br>245                          | 145 i 22<br>145                   | 1451 Af<br>245             | 245<br>245                |
| л.         |                        | Indexes on The Indexes                               | 174 1                                | 10+1A 110                          | + 11 11                              |                                | +*** IT                       | + 1                               | 174                             | 59 15  |                                | <u> </u>                            | 8 S                                      | 15 15<br>16 14               | <u>s 175</u> +                        |   | 174                                 | 175+17                     |                                     | 174                               | 1494174                    | 149+144                   |
|            |                        | S a:<br>S a:   | MOTOLCO MO                           |                                    |                                      |                                |                               |                                   |                                 | nan da Magri   | ando Mega                      |                                     | an da Magri                              | anca Marzi                   |                                       | an du Magrir u  | н со мери о                         |                            |                                     |                                   |                            |                           |
|            | - r                    | Fun Spans  | MOTOLICU MO<br>1450 Z                | <u>77 GEOUINAQ17</u><br>245 - 2    | <u>rende 料設に</u><br>45 - 1451        |                                | <u>nan da Magin</u><br>45 - 2 |                                   | nanda Magi<br>Mizi              | <u>/undu May'/</u><br>245 - 2                            |                                | iando Magin<br>a 21 - 24            | <u>undu MAY7</u><br>るーニン                 | <u>นายม ฟญาก</u><br>ชี้ 1450 |                                       |   |                                     |                            |                                     | <u>16 MQ17 01 C</u><br>1451 - 22  | <u>u May'z Grid</u><br>245 | 0 MQ17 CH CC<br>245       |
|            | -e mo ce i             |  | 149+144                              |                                    | +175 1759<br>+175 17                 | +174 L                         |                               |                                   | 3+1 #V                          |  |                                |                                     | 5 - 5<br>                                |                              |                                       |   | 155+1                               |                            | L 150+170                           | 145+144                           | 255                        | 1504130                   |
| <b>7</b> 8 |                        | Lefe o Bulparis<br>el 11 o Focput                    | 14                                   | 245 145                            | i)# 14                               |                                | 45 145                        | a ae i t                          |                                 | N # 2  | 45 1                           | <u>r</u><br>+ 145                   | 145                                      | 147 14                       | 2 <u>7.</u><br>21. 1451               | 9 <u>145</u> 1<br>27 1451                             | 2 14 <sup>-</sup>                   | 1451 8                     | 2 1451 A                            | 14                                | 1451 #                     | 1451 22                   |
|            | He mo se :             | Sar<br>Sar   | <u>। १९</u><br>अनुस् 7 सन्दर्भ अनुस् | 174 175<br>(75):00 M(3):7          | <u>। । ।</u><br>इन्हेः ६० सन्द्रः 7  | 14 - 1<br>159: CO - M(3): 7    | 74 OO MSG                     | म्बर <b>स्</b><br>१९२१ वर्षे महिल | 174<br>7 59: 0.0 - 24 <u>39</u> | 174 173<br>779: 00 14(5) 3                               | <u>।<br/>स्वर्ण के सिंह</u> ा  | <del>१८ ।</del><br>'सम्बद्धाः स्थित | <u>е з</u><br>еколом <u>е</u> т          | <u>51 CO MS(7)</u>           | <u>। स</u><br>सन्दर्भ सन्दर्भ जन्म    | <u>େ ଅଟ</u><br>ଅନ୍ୟର ଅନ୍ତି ଅନ                         | ।<br>२. ६०० - स्पर्क्ष 7.81         | 174<br>- C.C. (AlS): 7.51- | 1 <del>19+171</del><br>오이 사망 7:51-0 | <u>। १९</u><br>२० : मन्द्र 7 सः २ | 174<br>A MS: 755 C         | 149+1741<br>n: Mg: 759-00 |
|            |                        | e sver-e Teloř<br>Lint Stars                         | মন্ত্র সভা মন্ত্র<br>সভালের          |                                    |                                      |                                |                               |                                   | zer og Mgr                      | ଅନ୍ୟ କଳା କାଞ୍ଚିତ   |                                |                                     | er on M§rz                               | କାରମାନ୍ୟର୍ଥ୍ୟ ଅ              |                                       |   |                                     |                            |                                     |                                   |                            |                           |
|            | Lottem<br>Territori en | ent Int Scars  | 1451 22                              | 245 2                              |                                      |                                | 45 2                          |                                   | 14 AV                           | 51 #F 2  | 45 145                         | 1 27 145                            | i¥ 145                                   | i# 145)                      |                                       | 5 145i  |                                     |                            | <br>1451 #                          | 1451 22                           | 1451.22                    | 245                       |
| x          | Lon: r. d              | Faterior Focipiets<br>NTI 1 <sup>45</sup> no Bulgori | 14)<br>154 (1                        | ೧೩೯ ೧<br>ಕರ್ತೆಗಳ ತಿ                | 45 14<br>35 In                       |                                | 95 )<br>Hini 2                | 45 1<br>59                        |                                 |  |                                | 4 145<br>76 145                     |  | 146 14<br>4167 15            | 2 145)<br>X 145+                      |   |                                     | 1451 A<br>14541 A          |                                     | 14                                | 245<br>14941/201           | 143+144<br>146            |
|            |                        | <ul> <li>Cthackt Spore</li> <li>S a:</li> </ul>      | 1#<br>MQ170100 MQ                    | 14 - 2<br>Crance Marz              | 45 14<br>Sundu Mesta                 | ¢ 1<br>αrcu <del>M</del> err   | ¥ − 2<br>Naricu Mesa          | WS 1<br>NGCCU ★MAN                | 141                             | 141 2  | WS 1<br>COLOGI MANON           | # 14<br>191106 840017               |  |                              | 2 14<br>Gried (#15217.4               |   |                                     | 144<br>1 C.C. 18100 (2010  | 1451 22<br>100 - MQ17 0110          | 1#<br>16. #1017.0000              | 1#<br>1. 510217-0110       | 1451 #<br>u M:017 un du   |
|            | , I                    | arsve bei veint.                                     | MOVIER COLMON                        |                                    |                                      |                                |                               |                                   |                                 |  |                                |                                     |  |                              |                                       |   |                                     |                            |                                     |                                   |                            |                           |

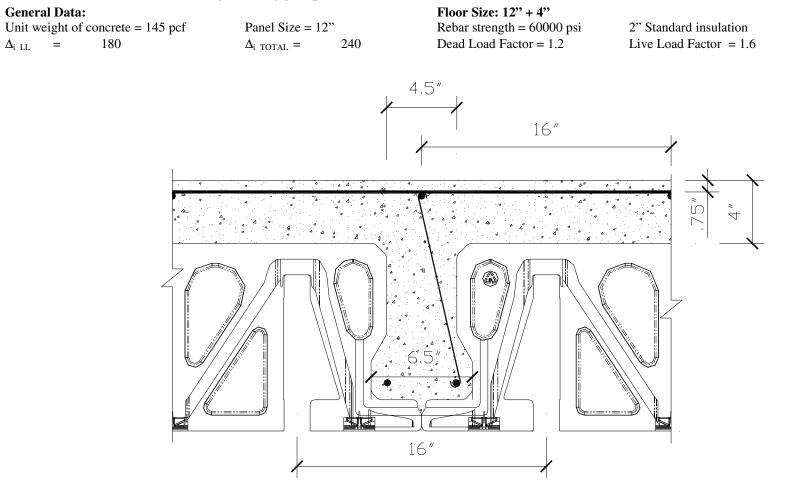
### Notes

• Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.

• Blank Cells indicates that the joists are failing in deflection.

| Project: AmDeck Design Guide | Prepared by: Kapil     | Date: 12/07/2007 |
|------------------------------|------------------------|------------------|
| Client: Amvic, Inc.          | Checked by: Andy / Raj | Date: 12/07/2007 |

## 9.5 Table E: f'c = 3500 psi, Topping Thickness = 4.0"



| Project: | AmDeck Design Guide |  |
|----------|---------------------|--|
| Client:  | Amvic, Inc.         |  |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea | d Load                       | =   |                           | psf   |                           |                        |                                    |                             |                         |                       |                                  |                          |                                |                           |                              |                                 |  |                              |                                  |                              |                            |  |  |
|-----|------------------------------|---|---------------------------|---|---------------------------|------------------------|------------------------------------|-----------------------------|-------------------------|-----------------------|----------------------------------|--------------------------|--------------------------------|---------------------------|------------------------------|---------------------------------|--|------------------------------|----------------------------------|------------------------------|----------------------------|--|--|
| 0.4 |                              | 4 790<br>1/2                                      | 97                        | - 91 D - 10<br>DF                               | r<br>vs                   | 07                     | I – SCD – 16<br>DF                 | VS                          | 97                      | 1 - YOD - 10<br>1     | ¥8                               | 97                       | L = 70 D = 10<br>D7            | VS                        | 97                           | 1 -31 D - 10<br>DF              | VS   | 97                           | 0 - 20 D - 10<br>D2              | ¥\$                          | 07                         | 1 -1010-0<br>DF                                | V9   |
|     | =                            | Line Scaro  | 1 i# _                    | 174   | 174                       | 14                     | 174                                | 174                         | 14                      | 174                   | 174                              | 14                       | 174                            | 174                       | 14                           | 174                             | 174  | 14                           | 174                              | 174                          | 145                        | 174  | 154  |
|     | He mo be the f               | Elefon Fregults                                   | 1#<br>1#                  | 14<br>14  | 14<br>14                  | - 14:<br>14:           | 14 <sup>-</sup><br>14 <sup>-</sup> | 14<br>14                    | - 1#<br>1#              | 14<br>14              | 14                               | 14°<br>14°               | 14                             | 14<br>14                  | - 14:<br>14:                 | 14                              | 14<br>14   | 14                           | 14                               | 14                           | 145                        | 14   | 14   |
| IL. | Lon: rud net                 | Ind put to The                                    | 174                       | 174   | 174                       | 144                    | 174                                | 174                         | 144                     | 174                   | 174                              | 174                      | 144                            | 174                       | 144                          | 144                             | 144  | 144                          | 174                              | 144                          | 174                        | 174  | 174  |
|     | Te d'or errer                | Cilier Fri Sippre-<br>Missi                       | 1#<br>MQ10600 - :         | 141<br>MQ106100                                 | 141<br>MQ10n100           | 14)<br>MQ1Jn (01)      | 14)<br>MQ106100                    | 141<br>MQ1Un 001            | 14)<br>MQ(Un 00)        | 141<br>MQ1Jn 00       | 14)<br>MQ106101                  | 141<br>MQ1Jn (00         | 141<br>MQ136100                | 141<br>MQ1Un 00           | 141<br>MQ1Un 00              | 14)<br>MQ10600                  | 141<br>MQ10600                                   | 141<br>MQ106100              | 141<br>MQ106100                  | 141<br>MQ106100              | 14<br>MQ106100             | 14)<br>MQ106100                                | 14)<br>MQ10600   |
|     | TA 15                        | tola:<br>velse ≂em.                               |                           | MQ10600.<br>MQ10600                             | - 4470,0000<br>- 447,0000 | M3(10.00               | M2(10.00)<br>M2(10.00)             | M2(16.00)                   | MQ(060).                | 4470.000<br>447.000   | M2(16.00)<br>M2(16.00)           | M301000                  | M2(16.00)<br>M2(16.00)         | 400.0000<br>M00.000       | M201000                      | - M22104000                     | - MQ(UNU);                                       | M2(16.00)<br>M2(16.00)       | MQ10600                          | MQ10600                      | MQ(0600)<br>MQ(0600        | MQ(060).                                       | MQ(06.00)<br>MQ(06.00)   |
|     | =                            | For Scars   | 145<br>150                | 14  | 14:<br>154                | 145                    | 14                                 | 14                          | 145                     | 14                    | 14                               | 145                      | 14                             | 14                        | 145                          | 14                              | 14   | 145                          | 14                               | 14                           | 145                        | 14   | 14   |
|     | He mo be the f               | Lefe or Bulports                                  | 142                       | 174   | 174                       | 175                    | 144                                | 144                         | 175                     | 144                   | 145                              | 175<br>174               | 144                            | 144                       | 175                          | 144                             | 144  | 14                           | 144                              | 144                          | 175                        | 145  | 147  |
| 17  | Lugi dust                    | 1 ս Բարմ  | 14                        | 14  | 14                        | 14                     | 141                                | 14"                         | 14                      | 14                    | 141                              | 14                       | 145                            | 14                        | 14                           | 145                             | 145  | 14                           | 145                              | 145                          | 141                        | 145  | 145  |
|     | we mo be nen                 | Ciliar H. Support<br>Stat                         | 174<br>24/30 3 a 20       | 154<br>2456 3 a D.C                             | 154<br>24(5) 3 a DC       | 154<br>24(5):3 a . 0 0 | 154<br>24(5):3 a. 0 0              | 154<br>24(5): 3 a .0 C      | 154<br>24(5): 3 a . 0 C | 154<br>24(5) 3 a 0 0  | 154<br>24(5):3 (r. 0.)           | 154<br>24(5):3 a .0 0    | 154<br>24(5):3 a. 0 0          | 154<br>24(5):3 a .0 0     | 154<br>24(5) 3 a 0 0         | 154<br>24(5):3 a .0 0           | 174<br>24(5): 3 a .0 0                           | 154<br>Adds 3 a 00           | 154<br>24(5):3 a. 2 C            | 155<br>24(5):30-00           | 154<br>24(5):30-00         | 154<br>2459 3 a 0 0                            | 150<br>2450 3 a 20   |
|     | Tiana                        | м-н Тної  |                           | HS: SHOL  | - MS: 36-20               | MS: 36.00              | MS(30.00                           | Mg Su Di                    | Mg Bu Du                | - HS: 30.00           | - MS: 36-00                      | - Mg( 3 a D.)            | - MS: 30.00                    | - Mg: 36-00               | - MS: 36-00                  | - MS: 36.00                     | - Mg 36.00                                       | MS SHOC                      | - HS: 30.00                      | HS: 30.00                    | Mg BulDu                   | Mg Bullo                                       | Alg: 36.00   |
|     | Lottem<br>De númerneti       | Line Stats<br>Inti Scats                          | 145                       | 14  | 144                       | 145                    | 14                                 | 144                         | 145                     | 144                   | 14                               | 145                      | 144                            | 14                        | 145                          | 14                              | 144  | 145                          | 145                              | 145                          | 145                        | 145  | 145  |
|     |                              | Faleror Focpula                                   | 14                        | 14  | 14                        | 14                     | 14                                 | 14                          | 14                      | 14                    | 14                               | 14                       | 14                             | 14                        | 14                           | 14                              | 14   | 14                           | 14                               | 14                           | 14                         | 145  | 145  |
| 14  | Lon: r. d noi                | 1 <sup>47</sup> no Balapán<br>Cili-c Hill Signar  | 144                       | 145   | 145                       | 144                    | 145                                | 145                         | 144                     | 145                   | 145                              | 144                      | 145                            | 145                       | 144                          | 145                             | 145  | 144                          | 145                              | 145                          | 144                        | 145  | 145  |
|     |                              | S a:  |                           | 14<br>14 10 10 10 10 10 10 10 10 10 10 10 10 10 |                           |                        | 42,0000                            | M201000                     | MQ(Un 00                | 44200000              | M2(16.00                         | 4420-000<br>14           |                                |                           |                              | MQ(UNU);                        |  |                              | MQ(UND);                         | MQ(Un 00)                    | MQ(Un 00                   | M20000   | MQ10600  |
|     | TA 19                        | ve belike m.                                      |                           | MQ <sup>CUM DC</sup>                            | MQ106.00                  | MQ10600                | MQ106.00                           | MQUADE                      | MQ10600                 | MQ106.00              | MQ10600                          | MQ10600                  | MOTING                         | MQ106.00                  | MQ10600                      | - MQ10600                       | - MQ10600  | MQ10600                      | MQ106.00                         | MQUADE                       | 740210 n 00                | MQ106.00                                       | MQ106.00   |
|     | He mo perren                 | For Scars<br>11. Scars                            | 145                       | 145   | 145                       | 145<br>155             | 145<br>175                         | 145                         | 145<br>150              | 145                   | 145                              | 244<br>274               | 145<br>150                     | 145                       | 244<br>274                   | 145<br>150                      | 145  | 244<br>244                   | 145<br>150                       | 145                          | 1年11年<br>1年4月年             | 145  | 145  |
|     |                              | Lefe o Eutports                                   | 174                       | 154   | 154                       | 174                    | 174                                | 154                         | 174                     | 154                   | 154                              | 154                      | 175                            | 15                        | 154                          | 175                             | 175  | 174                          | 175                              | 155                          | 174                        | 155  | 175  |
| 16  | l ngi dusi<br>setto terreti  | 1' or Fospol<br>Cihar M. Support                  | 14                        | 145   | 145<br>150                | 141                    | 145                                | 145<br>155                  | 144                     | 145                   | 145<br>155                       | 141                      | 145                            | 145<br>150                | 14                           | 244<br>154                      | 145  | 141                          | 244<br>154                       | 145                          | 14                         | 744<br>174                                     | 244<br>170   |
|     |                              | Sar   | MS(BulD)                  | Mg Bulla  | Alg: Su Di                | Alg: Su DC             | - Mg( 3a D).                       | MS: Su DC                   | AS(30.00                | Alg: Su DC            | AS SUD.                          | Alg: Su DC               | Alg: Su DO                     | Alg: Su DO                |                              | - Alg: 36.00                    | Alg: Su DO                                       | Alg: BulDC                   | Alg: Su DO                       | - MS(30.00                   | Alg: 30.00                 | Alg: Build:                                    | Alge Bin DO  |
|     |                              | ана Тепі  | M3:30.00                  |   | - MS( 3 a 20              | M3: 36.00              | - MS( 311.00)                      | - MS( 36.00                 | Mg( 30.00               | MS(Sub)               | MSERIES                          | 24년: 36.00<br>1594년: 55  |                                |                           | 24년: 36.00<br>1524년: 15      | - MS( 30.00                     |  |                              |                                  | - Mgr Suites                 | - MS( 30.00                | MS: SHOC                                       |  |
|     | Lottom<br>Telufor en eri     | Line Sparks<br>I Hill Sparks                      |                           | 145   | 145                       | 24                     | 145                                | 145                         | 274                     | 145                   | 145                              | 141.2                    | 145                            | 145                       | 141.8                        | 145                             | 145  | 1441 A.<br>1441 A.           | 145                              | 145                          | 245                        | 145  | 145  |
|     |                              | Faler or Foc pulk                                 | 14                        | 145   | 145                       | 14                     | 145                                | 145                         | 141                     | 145                   | 145                              | 14                       | 145                            | 145                       | 14                           | 145                             | 145  | 14:                          | 145                              | 145                          | 141                        | 145  | 145  |
| IC. | Lon: rudinal<br>De cómiement | 1 <sup>45</sup> no Bulgori<br>Other Hill Stipper  | 14                        | 14  | 145                       | 14                     | 175                                | 145                         | 14                      | <br>14                | 145                              | 14                       | <br>14                         | 145                       | 114                          | 14+16.<br>14                    | 244  | 14                           | 1#418.<br>1#                     | 244                          | 174<br>144                 | 14+16.   | 144+164<br>244   |
|     |                              | Sac   | MQ10600 - 3               | MQ <sup>1</sup> Un DC                           |                           |                        | MQ106.00                           | MQ106.00                    | MQ106.00                | 400.000               | 24021Un 00                       | MQ10600                  | MOTING                         | 402101-00                 |                              |                                 |  |                              | M02106-00                        | MQ106.00                     | MQ106.00                   | MQ106.00                                       | MQ106.00   |
|     | Fa.19                        | te belike m.<br>For Scars                         | - MQ10600 - 3<br>- 1411 # | MQ10600<br>145                                  | - MQ10n 00<br>145         | #Q106.00<br>1411.22    | MQ10600<br>145                     | 145                         | 1410 A                  | MQ10600<br>145        | MQ10600<br>145                   | MQ(Uni0)<br>245          | 74021016-00<br>145             | 145                       | MQ106.00                     | - MQ1Un 00                      | 70 n C (2 M                                      | 200 (CDM)<br>200             | - MQ106-00                       | MQ(Un 00<br>200              | 440(10) 00<br>1451 #       | - 74021Un 00                                   | MQ1Un 00   |
|     | He mo perfert                | <ol> <li>PLStars</li> </ol>                       | 1544125                   | 15  | 15                        | 174+175                | 155                                | 150                         | 174+175                 | 155                   | 145                              | 35                       | 145                            | 165                       | - E                          | 344                             | 15   | - R                          | 34                               | i Ro                         | 155+150                    | 34   | 244  |
| ×   | Lusi dust                    | Late of Busparts                                  | 144                       | 175   | 175                       | 174<br>144             | 145                                | 145                         | 14                      | 141.2                 | 145                              | 144                      | 141.2                          | 110                       | 144                          | 160<br>141 8                    | 160<br>141 8                                     | 144                          | 145                              | 175<br>141 - 22              | 194                        | 244  | 245  |
| ~   | He mo be nert                |   | 174                       | 174   | 254                       | 174                    | 174                                |                             | 144                     | 1411.44               | 254                              | 174                      | 174                            | 254                       | 174                          | 174                             | 1441.4   | 144                          | 154                              | 154+154                      | 174                        | 174  | 1754174  |
|     |                              | Sar<br>Mire Teur                                  |                           | M <u>8</u> : 36.00                              |                           |                        | M2: 30.00                          | - MS: 36-00<br>- MS: 36-00  | Mg(30.00                | MS: 30.00             | - Mg( 30.00                      |                          |                                | - MS( 3 a 00              | - MS( 30.00                  |                                 | - MS(30.00                                       | - MS: 30.00                  | - Alg: 30.00                     | - Alg: 36-20<br>- Alg: 36-20 | - Alg: 30.00               | - Mg( 3 n 00                                   | - Mg: 36-00<br>- Mg: 36-00   |
|     | Lottem in a                  | uni Staro   |                           | મકુ સ્વાઝ્ડ<br>મજ                               | - मधुः ३०.२०<br>। १२      | M(9, 36, 20)<br>- 20   | - MS: 36-20<br>152                 | 15                          | 2459 3 a D.C.<br>250    | मनुः ३०.२०<br>.४५     |                                  | - 2459 Bir 00<br>15041 M | - Alge Stirler.<br>- 34        | - स्मर्थुः ३७.२२<br>- अभ  | સ્લિક ઉત્ત ગઇ<br>જીવન સ      | - Mg: 36-00<br>- 294            | - MS: 36.00<br>- 39                              | - Mg: 36-20<br>- 269         | - Alg: 36-00<br>1544184          |                              | - MS: 36-20<br>            | - Alg: 3 a 0 0<br>15441 (5                     | 154+154  |
|     | Tenin erer                   | H Statis  | - 35)<br>245              | 145   | 145                       | 245                    | 145                                | 145                         | 245                     | 241                   | 145                              | 1451.26                  | 241                            | 145                       | 1451.26                      | 24                              | 241  | 245                          | 1411 26                          | 745                          | 245                        | 1411 26  | 242  |
| -   | Lon: rud not                 | Faterior Focipiets<br>1 <sup>45</sup> no Bultport | 14                        | 145<br>156+125                                  | 145<br>154+16             | 14                     | 145<br>15641 M                     | 145<br>154+164              | 14                      | 145<br>X              | 145<br>15441 M                   | 14                       | 145<br>- Xi                    | 145<br>154+16             | 14)<br>15)                   | 74 22                           | 74<br>75   | 14)<br>154                   | 244<br>1704170                   | 74°<br>                      | 174<br>144                 | 74)<br>17541 M                                 | 24)<br>150+160   |
|     |                              | Cili-chi Sipor                                    | 14                        | 14  | 245                       | 14                     | 141                                | 244                         | 14                      | 14                    | 1411 第                           | 14                       | 14                             | 1411 22                   | 14                           | 141                             | 1411 8   | 14                           | 14                               | 245                          | 141                        | 141  | 245  |
|     | 10.10                        | i Siac<br>Veloe Heim                              |                           | MQ(Uni00)<br>MQ(Uni00)                          |                           |                        | MQ(0600)<br>MQ(0600)               | MQ136.00<br>MQ136.00        | MQ(UniO)<br>MQ(UniO)    | MQ(Uni0)<br>MQ(Uni0)  | - 4400,0 P.00.<br>- 4400,0 P.00. | MQ(UniO)<br>MQ(UniO)     | MQ106.00<br>MQ106.00           | MQ(UND)<br>MQ(UND)        | MQ(Un 00<br>MQ(Un 00         | - MQ(UniO)<br>- MQ(UniO)        | <ul> <li>料公(Jn 0):</li> <li>料公(Jn 0):</li> </ul> | MQ136.00<br>MQ136.00         | - MQ(Un 00<br>- MQ(Un 00         | - 料公(Un 00)<br>料公(Un 00)     | - 村公(Jin 50)<br>村公(Jin 50) | 料の(16.00<br>料の(16.00                           | MQ136.00<br>MQ136.00   |
|     | =                            | Fur State   | 1451 #                    | 741   | 244                       | 1451 #                 | 245                                | 244                         | 1451 #                  | 244                   | 245                              | 245                      | 1411 8                         | 1411 22                   | 245                          | 1411 26                         | 1411 22  | 1451 22                      | 1411 8                           | 1411 #                       | 1451 22                    | 245  | 245  |
|     | He mo be the f               | Lefe or Bulports                                  | 175+170<br>174            | 54<br>150                                       | 175<br>175                | 175+170                | 34<br>150                          | 175<br>175                  | 175+170<br>174          | 2992<br>2992          | -34                              | 249<br>144               | 1764176.<br>276                | -35                       | 289<br>184                   | 1944年代。<br>1944年代初日             | 1994年1月21<br>1994年1月21                           | 149+144<br>144               | 1744) A.<br>1744) A.             | 1994年1995<br>1994年1995       | 149+174<br>174             | 175<br>1754 (A.                                | 174+175.<br>174+175.   |
| 24  | Lugi dust                    | 1 ս Բարմ  | 14                        | 245   | 245                       | 14                     | 245                                | 245                         | 14                      | 1451.26               | 245                              | 14                       | 1451 #                         | 245                       | 14                           | 1451 26                         | 1451 26  | 14                           | 245                              | 1451.26                      | 14                         | 245  | 245  |
|     | He mo be the f               | Ciher H. Support                                  | 154<br>2456 3 a 20        | 184<br>MS(31100                                 | 154+165<br>(AdS) 3 0 0 0  | 154<br>2459 3 a 0 0    | 154<br>2450 3 n 20                 | 154+165<br>(455; 3 a .00)   | 174<br>245: 3 a 2 a     | 154<br>- Alg: 3 a 2 c | 154+155<br>2455 3 n 20           | 154<br>24(5):3 a 0 0     | 154<br>2459 3 n 0 0            | - 255<br>- 2459; 3 a - 20 | 154<br>24(5):30(00)          | 154<br>2459 3 a D.C             | - 355<br>- 2459, 3 a - 2 c                       | 154<br>Adde Sin OC           | 154<br>245; 3 a 20               | 175+180<br>245: 3 n 20       | 154<br>AlSe 3 a D.C        | 154<br>2459 3 n 0 0                            | 145+180<br>A456 Bit 00   |
|     | Tara                         | jaran<br>Maren Della                              |                           |   |                           |                        | - H29 50 200<br>- H29 30 200       | - H29 50 000<br>- H29 30 00 | High Structure          | MS(Subt)              | Algebrach                        | Algebrack.               | Algebrach                      | HS: Su DU                 | Algebraichte<br>Algebraichte | - Algebrach                     |  | - 2459 Sta 20                | Algebraichte<br>Algebraichte     | High Star 20                 | Algebrach                  | Algebrack.                                     | Algebracket<br>Algebrack   |
| i   | _ottom                       | Line Scaro  | 245                       | 14417   | 154+155                   | 245                    | 157417                             | 174+174                     | - 15                    | 144+164               | 151+17                           | 149+174                  | 144+14                         | 174+174                   | 149+174                      | <u></u><br>245                  | - 35   | - 2%                         | <u></u>                          | <u> </u>                     | - 24                       | 175+190  | 175+190<br>245   |
|     | Te ofor energy               | Elener Focularia                                  | 245                       | 141 H<br>241                                    | 24                        | 14                     | 141 H<br>24                        | 74°<br>74°                  | 245<br>141              | 141 H                 | (中) 第<br>(中) 第                   | 1451 AF<br>145           | (中) 第<br>(中) 第                 | 141 8                     | 1451 H                       | 248<br>141 #                    | 141 年<br>141 年                                   | 14                           | 248                              | 245                          | 14                         | 145) #<br>245                                  | 248  |
| 2   | Lon: rud net                 | Indicate on the                                   | 154                       | 150+160   | 35                        | 174                    | 175+170                            | 35                          | 174                     | 175+170               | 175+170                          | 174                      | 36                             | 175+170                   | 154                          | 1494174                         | 269  | 174                          | 1494144                          | 249                          | 174                        | 24   | 1494144  |
|     | THILD HTH                    | Ciliar Et Signar-<br>Mar                          | 14)<br>MQ10600 - 3        | 14)<br>MQ136301                                 | 245<br>20 n U 1244        | 141<br>MQ1Jn 00        | 141<br>MQ106100                    | 245<br>MQ1Un 00             | 14)<br>MQ(Un 00)        | 141<br>MQ10n 001      | 245<br>740210 n 001              | 141<br>MQ1Un 00          | 14)<br>MQ106100                | 145) #<br>MQ13500         | 141<br>MQ10n 001             | 14)<br>MQ10600                  | 145) #<br>MQ136.00                               | 141<br>MQ1Un 001             | 14)<br>MQ(Un 00)                 | 245<br>74021Un 00            | 14)<br>MQ(Un (0)           | 14)<br>MQ(Un (0)                               | 245<br>24500.00  |
|     | TA 19                        | ve se Helm.                                       |                           | MQ106.00  | - 4470.0000<br>1475.0000  | M2(10.00               | M201000                            | M201000                     | MQ106.00                | M00.00.00             | M20000                           | M201000                  | M2010.00                       | - 4470.0000               | M2010.00                     | - MAXUN DC                      | MQ10600  | MQ136.00                     | M201000                          | MQ10600                      | M20000                     | M201000  | MQ106.00   |
|     | =                            | For Scars   | 1451 22                   | 1411  | 1411 22                   | 1451 22                | 1411 22                            | 1411 22                     | 1451 22                 | 245                   | 245                              | 247                      | 245                            | 245                       | 247                          | 1451 #                          | 1451 #   | 247                          | 1451 26                          | 1451 26                      | 247                        | 1451 #   | 1451 #   |
|     | He mo be ne f                | Lefe of Busparia                                  | 145+144<br>144            | 14441年。<br>1944年年初                              | 1744) A.<br>1744) A.      | 175+1741<br>174        | 1994年1月21<br>1994年1月21             | 1744) A.<br>1744) A.        | 145+144<br>144          | 275<br>1744 (75       | 1994年1月2日<br>1994年1月2日           | 174<br>174               | 50<br>50                       | 30<br>30                  | 27)<br>174                   | 1754°AU<br>275                  | 50<br>50   | 174<br>174                   | 1754°N<br>275                    | 300<br>300                   | -74<br>174                 | 17541代<br>17541代                               | 175+170<br>175+170   |
| *   | Lugi dust                    | 1՝ ո ≣աշրմ  | 145                       | 245   | 1451 #                    | 14:                    | 245                                | 145) X                      | 14                      | 1451 22               | 245                              | 141                      | 1451 22                        | 245                       | 141                          | 247                             | 1451 22  | 14                           | 247                              | 1451 22                      | 14                         | 247  | 247  |
|     | He mo be nert                | Cilher H. Support<br>Sat                          | 174<br>2420-3 n.20        | 154<br>2459, 3 a .0 c                           | 155+150<br>24(5) 3 n 2 0  | 174<br>20.00 (Shi      | 154<br>2439 3 n 0 0                | 175+170<br>24(5) 3 n 20     | 154<br>Adol: Sin DC     | 154<br>24(5) 3 n 0 0  | 175+170<br>24(5) 3 n 20          | 154<br>24(5) 3 a 0 0     | 174<br>2450 Stu D1             | 259<br>2456 Sto D1        | 154<br>24(5) 3 n 0 0         | 174<br>24% 3 - 01               | <br>269 36-20                                    | <u>। १९८</u><br>अश्चिः २००२० | 154<br>Altis: Stat 20            | 1594155<br>2450 8 0 0 1      | 154<br>26 3 a 2 5          | 174<br>24(5):3 a. 0 0                          | 149+164<br>2450 3 0 00   |
|     | Tiana                        | verse Tello"                                      |                           | <u>සල හා වැ.</u><br>සිලිලි හා වර                |                           |                        | - Mg 36.00                         | Algebrach                   | Algebrach               | Algebrach             |                                  | Mg Sulta                 | - Algebrach                    |                           |                              |                                 |  |                              | - Alge Station<br>- Alge Station | - Alg: 50.00                 |                            | - 24 <u>09 50 000</u><br>- 24 <u>09 50 000</u> | - Horston - Hors |
|     | _ottem                       | Line Scars  | 24                        | <u>- 350</u><br>245                             | 30                        | 257                    | 30                                 | 35                          | 20                      | 175+170               | 175+170                          | 257                      | 170+170                        | 145+140                   | 2%                           | 175+170                         | 145+140  | 257                          |                                  | 289                          | 247                        |  | 249  |
|     | Te d'ortement                | Electri Ficquida                                  | 247<br>141                | 245<br>141 #                                    | 141 H                     | 247<br>141             | 245<br>141 8                       | 141 H                       | 247<br>141              | 145) #<br>245         | 245<br>245                       | 247<br>141               | 1451 #<br>245                  | 245<br>245                | 14                           | 145) #<br>145) #                | 145) #<br>145) #                                 | 247<br>14                    | 245<br>1451 #                    | 145) #<br>145) #             | 247                        | 245<br>1451 #                                  | 145) #<br>145) #   |
| 1 A | Lon: rud net                 | Ind put the                                       | 154                       | 149+144   | 249                       | 174                    | 1594155                            | 36                          | 174                     | 24                    | 14541241                         | 174                      | 24                             | 1594155                   | 174                          | 257                             | 26   | 174                          | 27                               | 277                          | 174                        | 24   | 24   |
|     | - H IL (11 - H - H - H       | Ciliar Et Signar<br>Stat                          | 14)<br>MQ10600 - 3        | 141<br>MQ106100                                 | 145) #<br>MQ13n100        | 141<br>M-2010-00       | 14)<br>MQ10600                     | 1451 AF<br>51001 In 101     | 14)<br>MQ(Un 00)        | 141<br>5100 1 M D D   | 245<br>#1021.16.101              | 141<br>5100 16 10        | 14 <sup>2</sup><br>24020 Jacob | 145 (172<br>5100 (1610)   | 141<br>5000 (A.D.C.          | 14 <sup>2</sup><br>50000 16 000 | 145 (147<br>5102) (n. 101                        | 141<br>MQ106100              | 141<br>54000 Jacob               | 247<br>5500 UNIO             | 14)<br>MQ106100            | 14)<br>MQ(Un 00)                               | 247<br>51001 (5.000  |
|     | TA 19                        | ve se Helm.                                       |                           | MQ10600.<br>MQ10600                             |                           |                        |                                    |                             | M2(06.00)<br>M2(06.00)  |                       |                                  | M201000                  |                                |                           |                              |                                 |  | M201000                      |                                  | MQ10600                      |                            |  |  |
|     |                              |   |                           |   |                           |                        |                                    |                             |                         |                       |                                  |                          |                                |                           |                              |                                 |  |                              |                                  |                              |                            |  |  |

Project: AmDeck Design Guide Client: Amvic, Inc.

Prepared by: Kapil Checked by: Andy / Raj

Date: 12/07/2007 Date: 12/07/2007

| 15 ps | f |  |
|-------|---|--|

| Dead | Load                         | =  | 15 psf   |                              |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
|------|------------------------------|--|--|------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|      | fi                           | c 3500   |  |                              |                          | LL = 50 DL = 18          |                          |                          | LL = 60 DL = 1           |                          |                          | LL = 70 DL = 15          |                          |                          | LL=80 DL = 15            |                          |                          | LL=90 DL=15              |                          |                          | LL=100 DL=15             |                          |
| Span | 1                            | tf 4   | SS DS<br>1#4 1#4                               | MS 1#4                       | SS                       | DS 1#4                   | MS<br>1#4                | SS 1#4                   | DL<br>1#4                | MS 1#4                   | SS 1#4                   | DS 1#4                   | MS<br>1#4                | SS                       | DS 1#4                   | MS<br>1#4                | SS<br>1#4                | DS<br>1#4                | MS 1#4                   | SS 1#6                   | DS 1#4                   | MS<br>1#4                |
|      | Bottom<br>Reinforcemen       | End Spans<br>t Int. Spans                            | 1#4 1#4  | 1#4                          | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#6                      | 1#4                      | 1#4                      |
|      | T Cerment                    | Exterior Supports                                    | 1#4 1#4  | 1#4                          | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      |
| 10   | Longitudinal                 | 1 <sup>st</sup> Int. Support                         | 1#4 1#4  | 1#4                          | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      |
|      | Reinforcemen                 |  | 1#4 1#4  | 1#4                          | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      |
|      |                              | Slab   | #4@18in OC #4@18in OC                          |                              | #4@18in OC               |
|      | Trans<br>Bottom              | verse Reinf.   | #4@18in OC #4@18in OC 1#5 1#4                  | : #4@18in OC                 | 2 #4@18in OC             | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC<br>1#4        | #4@18in OC<br>1#4        | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC<br>1#4        | #4@18in OC               |
|      | Reinforcemen                 | End Spans<br>t Int. Spans                            | 1#5 1#4  | 1#4                          | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      |
|      |                              | Exterior Supports                                    | 1#4 1#4  | 1#4                          | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      |
| 12   | Longitudinal                 |  | 1#4 1#4  | 1#4                          | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      |
|      | Reinforcemen                 | t Other Int. Support                                 | 1#4 1#4<br>#4@18in OC #4@18in OC               | 1#4<br>: #4@18in.OC          | 1#4<br>#4@18in OC        | 1#4<br>#4@18in.OC        | 1#4<br>#4@18in OC        | 1#4<br>##@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>##@18in OC        | 1#5<br>#4@18in OC        | 1#4<br>#4@18in.OC        | 1#4<br>#4@18in OC        | 1#5<br>#4@18in.OC        |
|      | Trans                        | verse Reinf.   | #4@18in OC #4@18in OC #4@18in OC               | 2 #4@218in OC                | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@218in OC              | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               |
|      | Bottom                       | End Spans  | 1#6 1#4  | 1#4                          | 1#6                      | 1#4                      | 1#4                      | 1#6                      | 1#4                      | 1#4                      | 1#6                      | 1#4                      | 1#4                      | 1#6                      | 1#6                      | 1#6                      | 1#6                      | 1#6                      | 1#6                      | 2#4                      | 1#6                      | 1#6                      |
|      | Reinforcemen                 | t Int. Spans   | 1#5 1#4  | 1#4                          | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#6                      | 1#4                      | 1#6                      | 1#5                      | 1#4                      | 2#4                      | 1#6                      | 1#6                      |
| 14   | Longitudinal                 | Exterior Supports                                    | 1#4 1#4  | 1#4                          | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#5                      | 1#5                      |
| 14   | Reinforcemen                 | 1 <sup>st</sup> Int. Support<br>t Other Int. Support | 1#4 1#6  | 1#6                          | 1#4                      | 1#5                      | 1#6                      | 1#4                      | 1#6                      | 1#6                      | 1#4                      | 1#5                      | 1#6                      | 1#4                      | 1#6                      | 1#6                      | 1#4                      | 1#6                      | 1#5                      | 1#4                      | 1#6                      | 1#6                      |
|      |                              | Slab   | #4@18in OC #4@18in OC                          |                              | #4@18in OC               |
|      |                              | verse Reinf.   | #4@18in OC #4@18in OC                          |                              | #4@18in OC               |
|      | Bottom                       | End Spans  | 1#5 1#5  | 1#5                          | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      |
|      | Reinforcemen                 | t Int. Spans<br>Exterior Supports                    | 1#5 1#5<br>1#4 1#4                             | 1#4                          | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5<br>1#6               | 1#5                      | 2#4                      | 1#5                      | 1#5<br>1#6               | 2#4                      | 1#5<br>1#6               | 1#5<br>1#6               | 2#4                      | 1#5<br>1#6               | 1#5<br>1#6               | 1#4+1#5<br>1#4           | 1#5<br>1#6               | 1#5<br>1#6               |
| 16   | Longitudinal                 |  | 1#4 1#5  | 1#5                          | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 2#4                      | 1#5                      | 1#4                      | 2#4                      | 1#5                      | 1#4                      | 2#4                      | 2#4                      |
|      | Reinforcemen                 | t Other Int. Support                                 | 1#4 1#4  | 1#5                          | 1#4                      | 1#4                      | 1#6                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      |
|      | T                            | Slab<br>verse Reinf,                                 | #4@18in OC #4@18in OC #4@18in OC               | #4@18in OC                   | #4@18in OC               | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC               |
|      | Bottom                       | End Spans  | 2#4 1#5  | 1#5                          | 2#4                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      | 2#5                      | 1#5                      | 1#5                      |
|      | Reinforcemen                 | t Int. Spans   | 2#4 1#5  | 1#6                          | 2#4                      | 1#6                      | 1#6                      | 2#4                      | 1#6                      | 1#5                      | 1#4+1#6                  | 1#6                      | 1#6                      | 1#4+1#6                  | 1#6                      | 1#6                      | 1#4+1#6                  | 1#6                      | 1#6                      | 2#6                      | 1#6                      | 1#6                      |
|      |                              | Exterior Supports                                    | 1#4 1#5  | 1#5                          | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      |
| 18   | Longitudinal<br>Reinforcemen | 1 <sup>st</sup> Int. Support<br>t Other Int. Support | 1#4 2#4<br>1#4 1#4                             | 1#6                          | 1#4                      | 2#4                      | 1#6<br>1#6               | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 1#4+1#5                  | 2#4                      | 1#4                      | 1#4+1#6                  | 2#4                      | 1#4                      | 1#4+1#5                  | 1#4+1#5                  |
|      | remoreemen                   | Slab   | #4@18in OC #4@18in OC                          |                              | #4@18in OC               |
|      | Trans                        | verse Reinf.   | #4@18in OC #4@18in OC                          | : #4@18in OC                 | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               |
|      | Bottom                       | End Spans  | 1#4+1#5 1#5                                    | 1#5                          | 1#4+1#5                  | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      | 2#5                      | 1#5                      | 1#5                      | 2#5                      | 2#4                      | 2#4                      | 1#5+1#6                  | 2#4                      | 2#4                      | 1#5+1#6                  | 2#4                      | 2#4                      |
|      | Reinforcemen                 | t Int. Spans<br>Exterior Supports                    | 1#4+1#5 1#5<br>1#4 1#5                         | 1#5                          | 1#4+1#5                  | 1#5                      | 1#5<br>1#6               | 1#4+1#5                  | 1#5                      | 1#5                      | 2#5                      | 1#5                      | 1#5                      | 2#5                      | 2#4                      | 1#5<br>1#6               | 1#5+1#6<br>1#4           | 2#4<br>1#5               | 1#5                      | 1#5+1#6                  | 2#4                      | 2#4                      |
| 20   | Longitudinal                 |  | 1#4 1#4+1#5                                    | 2#4                          | 1#4                      | 1#4+1#5                  | 2#4                      | 1#4                      | 1#4+1#5                  | 2#4                      | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 2#5                      | 1#4+1#5                  | 1#4                      | 2#5                      | 1#4+1#5                  | 1#4                      | 2#5                      | 2#5                      |
|      | Reinforcemen                 | t Other Int. Support                                 | 1#4 1#4  | 2#4                          | 1#4                      | 1#4                      | 2#4                      | 1#4                      | 1#4                      | 2#4                      | 1#4                      | 1#4                      | 2#4                      | 1#4                      | 1#4                      | 1#4+1#5                  | 1#4                      | 1#4                      | 1#4+1#5                  | 1#4                      | 1#4                      | 1#4+1#5                  |
|      | Trong                        | Slab<br>verse Reinf,                                 | #4@18in OC #4@18in OC #4@18in OC #4@18in OC    |                              | #4@18in OC<br>#4@18in OC | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               |
|      | Bottom                       | End Spans  | 2#5 1#5  | 1#5                          | 2#5                      | 1#5                      | 1#5                      | 2#5                      | 2#4                      | 2#4                      | 1#5+1#6                  | 2#4                      | 2#4                      | 1#5+1#6                  | 2#4                      | 2#4                      | 2#6                      | 1#4+1#5                  | 1#4+1#5                  | 2#6                      | 1#4+1#5                  | 1#4+1#5                  |
|      | Reinforcemen                 | t Int. Spans   | 2#6 1#6  | 1#5                          | 2#6                      | 1#5                      | 1#6                      | 2#5                      | 2#4                      | 1#5                      | 1#5+1#6                  | 2#4                      | 2#4                      | 1#5+1#6                  | 2#4                      | 2#4                      | 2#6                      | 1#4+1#5                  | 2#4                      | 2#6                      | 1#4+1#5                  | 2#4                      |
| 22   | Longitudinal                 | Exterior Supports                                    | 1#4 1#5<br>1#4 1#4+1#5                         | 1#5                          | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 2#4                      | 2#4                      |
| 22   | Reinforcemen                 |  | 1#4 1#4+1#6                                    | 1#4+1#6                      | 1#4                      | 1#4+1#5                  | 2#4                      | 1#4                      | 2#6                      | 1#4+1#5                  | 1#4                      | 2#5                      | 2#6<br>1#4+1#6           | 1#4                      | 1#5+1#6<br>1#4           | 2#5                      | 1#4                      | 1#6+1#6                  | 2#5                      | 1#4                      | 1#5+1#6<br>1#4           | 1#6+1#6                  |
|      |                              | Slab   | #4@18in OC #4@18in OC                          |                              | #4@18in OC               |
|      |                              | verse Reinf.   | #4@18in OC #4@18in OC                          |                              | #4@18in OC               |
|      | Bottom<br>Reinforcemen       | End Spans<br>t Int. Spans                            | 1#5+1#6 2#4<br>1#5+1#6 2#4                     | 2#4                          | 1#5+1#6<br>1#5+1#6       | 2#4                      | 2#4                      | 1#5+1#6<br>1#5+1#6       | 1#4+1#5<br>1#4+1#5       | 1#4+1#5                  | 2#6                      | 1#4+1#5<br>1#4+1#5       | 1#4+1#5<br>2#4           | 2#6                      | 1#4+1#5<br>1#4+1#5       | 1#4+1#5<br>1#4+1#5       | 1#6+1#7<br>1#6+1#7       | 2#6                      | 2#5<br>1#4+1#5           | 1#6+1#7                  | 2#5                      | 2#5                      |
|      | reiniorcemen                 | Exterior Supports                                    | 1#6+1#6 2#4                                    | 2#4                          | 1#0+1#6                  | 2#4                      | 2#4                      | 1#6+1#6                  | 2#4                      | 2#4                      | 2#6                      | 2#4                      | 2#4                      | 2#6                      | 1#4+1#5                  | 1#4+1#6                  | 1#6+1#/                  | 2#6<br>1#4+1#5           | 1#4+1#5                  | 1#6+1#/                  | 2#6                      | 1#4+1#6                  |
| 24   | Longitudinal                 | 1st Int. Support                                     | 1#4 2#5  | 2#5                          | 1#4                      | 2#5                      | 2#5                      | 1#4                      | 1#5+1#6                  | 2#5                      | 1#4                      | 1#5+1#6                  | 1#5+1#6                  | 1#4                      | 2#6                      | 1#5+1#6                  | 1#4                      | 2#6                      | 1#5+1#6                  | 1#4                      | 1#6+1#7                  | 2#6                      |
|      | Reinforcemen                 |  | 1#4 1#4  | 1#4+1#5                      | 1#4                      | 1#4                      | 1#4+1#5                  | 1#4                      | 1#4                      | 2#5                      | 1#4                      | 1#4                      | 2#5                      | 1#4                      | 1#4                      | 2#5                      | 1#4                      | 1#4                      | 1#5+1#6                  | 1#4                      | 1#4<br>#4@18in.OC        | 1#5+1#6                  |
|      | Tranc                        | Slab<br>werse Reinf.                                 | #4@18in OC #4@18in OC<br>#4@18in OC #4@18in OC | #4@18in OC                   | #4@18in OC               | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC               | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC |
|      | Bottom                       | End Spans  | 2#6 1#4+1#5                                    | 1#4+1#5                      | 2#6                      | 1#4+1#5                  | 1#4+1#5                  | 1#6+1#7                  | 1#4+1#5                  | 1#4+1#5                  | 1#6+1#7                  | 2#5                      | 2#5                      | 2#7                      | 2#5                      | 2#5                      | 2#7                      | 2#5                      | 2#5                      | 2#7                      | 1#5+1#6                  | 1#5+1#6                  |
|      | Reinforcemen                 | t Int. Spans   | 2#6 1#4+1#6                                    | 2#4                          | 2#6                      | 1#4+1#5                  | 2#4                      | 1#6+1#7                  | 1#4+1#5                  | 1#4+1#5                  | 1#6+1#7                  | 2#5                      | 1#4+1#5                  | 2#7                      | 2#5                      | 1#4+1#5                  | 2#7                      | 2#5                      | 2#5                      | 2#7                      | 1#5+1#6                  | 2#5                      |
| 26   | Longitudinal                 | Exterior Supports                                    | 1#4 2#4<br>1#4 1#5+1#6                         | 2#4                          | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 1#4+1#6<br>2#6           | 1#4+1#5<br>1#5+1#6       | 1#4                      | 1#4+1#6<br>2#6           | 1#4+1#6<br>2#6           | 1#4                      | 1#4+1#6<br>1#6+1#7       | 1#4+1#5<br>2#6           | 1#4                      | 2#6<br>1#6+1#7           | 2#6                      | 1#4                      | 2#5<br>2#7               | 2#6                      |
| 20   | Reinforcemen                 | 1 <sup>st</sup> Int. Support<br>t Other Int. Support | 1#4 1#6+1#6<br>1#4 1#4                         | 1#5+1#6                      | 1#4                      | 1#5+1#6                  | 1#5+1#6<br>2#5           | 1#4                      | 2#6                      | 1#5+1#6                  | 1#4                      | 2#6                      | 2#6                      | 1#4                      | 1#6+1#/                  | 2#6 1#5+1#6              | 1#4                      | 1#6+1#/                  | 2#6                      | 1#4                      | 2#/                      | 1#6+1#/                  |
|      |                              | Slab   | #4@18in OC #4@18in OC                          | #4@18in OC                   | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               |
|      |                              | verse Reinf.   | #4@18in OC #4@18in OC                          |                              | #4@18in OC               |
|      | Bottom<br>Reinforcemen       | End Spans  | 1#6+1#7 2#5<br>1#6+1#7 2#5                     | 2#5                          | 1#6+1#7                  | 2#5                      | 2#5                      | 2#7                      | 2#5                      | 2#5                      | 2#7                      | 2#5                      | 2#5                      | 2#7                      | 1#5+1#6<br>1#5+1#6       | 1#5+1#6<br>2#5           | 2#7                      | 1#5+1#6<br>1#5+1#6       | 1#5+1#6<br>2#5           | 2#7                      | 2#6                      | 2#6                      |
|      | remorcemen                   | t Int. Spans<br>Exterior Supports                    | 1#6+1#/ 2#6<br>1#4 1#4+1#5                     | 1#4+1#5                      | 1#6+1#/                  | 2#6<br>1#4+1#5           | 1#4+1#5                  | 2#/                      | 2#5                      | 1#4+1#5                  | 2#/                      | 2#6                      | 2#6                      | 2#/                      | 2#5                      | 2#6                      | 2#/                      | 2#5                      | 2#5                      | 2#/                      | 2#6                      | 1#5+1#6                  |
| 28   | Longitudinal                 | 1 <sup>st</sup> Int. Support                         | 1#4 2#6  | 1#5+1#6                      | 1#4                      | 2#6                      | 1#5+1#6                  | 1#4                      | 1#6+1#7                  | 2#6                      | 1#4                      | 1#6+1#7                  | 1#6+1#7                  | 1#4                      | 2#7                      | 1#6+1#7                  | 1#4                      | 2#7                      | 2#7                      | 1#4                      | 2#7                      | 2#7                      |
|      | Reinforcemen                 |  | 1#4 1#4  | 1#5+1#6                      | 1#4                      | 1#4                      | 1#5+1#6                  | 1#4                      | 1#4                      | 1#5+1#6                  | 1#4                      | 1#4                      | 2#6                      | 1#4                      | 1#4                      | 2#6                      | 1#4                      | 1#4                      | 1#6+1#7                  | 1#4                      | 1#4                      | 1#6+1#7                  |
|      | Te                           | Slab<br>werse Reinf                                  | #4@18in OC #4@18in OC<br>#4@18in OC #4@18in OC | 2 #4@18in OC<br>2 #4@18in OC | #4@18in OC               | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC |
|      | Bottom                       | End Spans  | 2#7 2#5  | 2#5                          | 2#7                      | 2#5                      | 2#5                      | 2#7                      | 1#5+1#6                  | 1#5+1#6                  | 2#7                      | 1#5+1#6                  | 1#5+1#6                  | 2#7                      | #4@18in UC               | #4@18in UC               | 2#7                      | #4@/18in UC              | 2#6                      | 2#7                      | 1#6+1#7                  | 1#6+1#7                  |
|      | Reinforcemen                 | t Int. Spans   | 2#7 2#6  | 2#6                          | 2#7                      | 2#6                      | 2#6                      | 2#7                      | 1#5+1#6                  | 2#6                      | 2#7                      | 1#5+1#6                  | 2#6                      | 2#7                      | 2#6                      | 1#6+1#6                  | 2#7                      | 2#6                      | 1#5+1#6                  | 2#7                      | 1#6+1#7                  | 2#6                      |
|      |                              | Exterior Supports                                    | 1#4 2#5  | 2#5                          | 1#4                      | 2#5                      | 2#5                      | 1#4                      | 2#5                      | 2#5                      | 1#4                      | 2#5                      | 2#5                      | 1#4                      | 1#5+1#6                  | 1#5+1#6                  | 1#4                      | 1#5+1#6                  | 1#5+1#6                  | 1#4                      | 2#6                      | 2#6                      |
| 30   | Longitudinal<br>Reinforcemen |  | 1#4 1#6+1#7<br>1#4 1#4                         | 2#6                          | 1#4                      | 1#6+1#7                  | 2#6                      | 1#4                      | 2#7                      | 1#6+1#7<br>2#6           | 1#4                      | 2#7                      | 2#7                      | 1#4                      | 2#7                      | 2#7<br>1#6+1#7           | 1#4                      | 2#7                      | 2#7                      | 1#4                      | 2#7                      | 2#7                      |
|      |                              | Slab   | #4@18in OC #4@18in OC                          |                              |                          | #4@18in OC               | 2#0<br>#4@18in OC        | #4@18in OC               | #4@18in OC               | #o<br>#4@18in OC         | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | 2#/<br>#4@18in OC        | #4@18in OC               | #4@18in OC               | #4@18in OC               |
|      | Trans                        | verse Reinf.   | #4@18in OC #4@18in OC                          | #4@18in OC                   | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               |
|      |                              |  |  |                              |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |

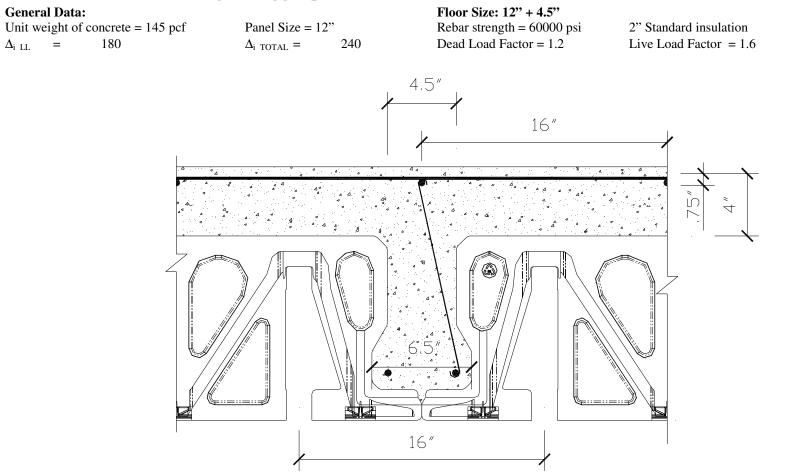
### Notes

Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C. Blank Cells indicates that the joists are failing in deflection. ٠

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| Project: AmDeck Design Guide | Prepared by: Kapil     | Date: 12/07/2007 |
|------------------------------|------------------------|------------------|
| Client: Amvic, Inc.          | Checked by: Andy / Raj | Date: 12/07/2007 |

## 9.6 Table F: f'c = 3500 psi, Topping Thickness = 4.5"



| Project: | AmDeck Design | n Guide |
|----------|---------------|---------|
| Client:  | Amvic, Inc.   |         |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dead | l Load                         | =  | 10 psf   |  |                                    |   |  |                          |                            |                                 |                              |  |  |                          |                              |                                   |                            |                             |                          |                           |                                   |                            |
|------|--------------------------------|--|--|--|------------------------------------|---|--|--------------------------|----------------------------|---------------------------------|------------------------------|--|--|--------------------------|------------------------------|-----------------------------------|----------------------------|-----------------------------|--------------------------|---------------------------|-----------------------------------|----------------------------|
| S    | <u> </u>                       | 290<br>274   | <u> </u>   | 10<br>   | 07                                 | 1 - 90 D - 10<br>DE                     | VS                                     | 07                       | 1 - XCD - 10<br>71         | ¥8                              | 07                           | I - 70 D - 10<br>D2                    | VS                                     | 07                       | 1 -30 D - 10<br>D2           | VS                                | 07                         | 1 -00 D -10<br>D7           | 28                       | 07                        | 1 -100 U - 0<br>DF                | ¥8                         |
| 76.8 | =                              | Ling Scars   | 14 174   | 174  | 14                                 | 174                                     | 174                                    | 14                       | 174                        | 174                             | 14                           | 174                                    | 174                                    | 14                       | 174                          | 174                               | 14                         | 174                         | 174                      | 145                       | 174                               | 174                        |
|      | He molte ment                  | HL Scars<br>Esteror Focputs                          | 14 <u>14</u><br>14 14  | 14<br>14                                       | 14 <sup>1</sup><br>14 <sup>1</sup> | 14<br>14                                | 14:<br>14:                             | 14                       | 14<br>14                   | 14<br>14                        | 14                           | 14:<br>14:                             | 14<br>14                               | 14                       | 14                           | 14<br>14                          | - 14-<br>14-               | 14                          | 14<br>14                 | 145                       | 14                                | 14:<br>14:                 |
| IL.  | Lon: rud nel                   | 1 <sup>47</sup> m Bulgori<br>Citier Fit Silpore      | 142 142  | 174  | 174                                | 174                                     | 174                                    | 144                      | 144                        | 174                             | 174                          | 174                                    | 144                                    | 174                      | 144                          | 144                               | 174                        | 174                         | 174                      | 174                       | 174                               | 144                        |
|      |                                | Sac  | MQ(JND) MQ(JND)  | CONCIDENCE -                                   | MQ10600                            | MQUADT.                                 | MQ(Jn 00                               | MQ106.00                 | MQ106.00                   | MOYUNDO                         | MQ(J6.00                     | MODINE                                 | MOUNDE                                 | MQ(0600                  | MQ10600                      | 400.000                           | MQUAD:                     | MQ10600                     | MQ10600                  | MQ10600                   | 4420 n.00                         | MQ(Un 00                   |
|      | Faller<br>For the              | e de Heim.<br>Fair Scara                             | MQ10n00 MQ10n00<br>145 144   | - MQ10h 00<br>141                              | 44Q1Um100<br>145                   | MQ10h 00<br>141                         | 40210100<br>144                        | MQ10600<br>145           | MQ10n/00<br>141            | MQ106.00<br>144                 | MQ106.00<br>145              | MQ106.00<br>144                        | MQ10600<br>14                          | MQ10600<br>145           | - MQ10600<br>141             | - MQ10600<br>145                  | #Q10m100<br>145            | MQ10h00<br>141              | MQ106.00<br>144          | 4021Un 00<br>145          | MQ(UniO)<br>14                    | MQ136.00<br>141            |
|      | He mo be ment                  | TH, Stars  | 175 174  | 174  | 145                                | 174                                     | 174                                    | 155                      | 144                        | 174                             | 145                          | 174                                    | 174                                    | 15                       | 174                          | 174                               | 155                        | 144                         | 174                      | 155                       | 174                               | 174                        |
| 17   | l ngi dust                     | Lele o Bulparis.<br>1º la Faciplat                   | 14 14  | 144  | 14                                 | 14                                      | 144                                    | 144                      | 144                        | 144                             | 144                          | 145                                    | 144                                    | 14                       | 145                          | 145                               | 14                         | 145                         | 145                      | 14                        | 145                               | 145                        |
|      | we molected i                  | Ciher Fill Support                                   | 174 174<br>Mg(30.00 Mg(30.00   | 144  | 144                                | 154<br>245: 3 a 2 c                     | 154<br>2459 3 a 2 c                    | 144                      | 144                        | 144                             | 144                          | 144                                    | 174                                    | 154<br>24(5):30(20)      | 144                          | 154                               | 174                        | 154<br>245: 3 a 2 c         | 144                      | 154<br>2455 3 a D C       | 144                               | 150<br>2450 3 a 20         |
|      |                                | N-H THU'   | M8(3000 M8(3000  |  |                                    | HS: 30.00                               | - Hg: 36.00                            | MS: 36.00                | HS 36.00                   |                                 | Alg: 31.00                   |  | HS: SHOL                               | Alg: 30.00               |                              | HS: 34.00                         |                            | HS: 34.00                   |                          |                           |                                   | HS 36.00                   |
|      | Lottern<br>Terraint enter t    | Line State<br>Inti Scate                             | 145 144  | 14   | 145                                | 14                                      | 114                                    | 145                      | 144                        | 144                             | 145                          | 144                                    | 14                                     | 145                      | 114                          | 14                                | 145                        | 145                         | 14                       | 145                       | 145                               | 145                        |
|      | torus deal                     | Faler or Focipiels                                   | 14 14  | 14:  | 14                                 | 14                                      | 14                                     | 14                       | 14                         | 14                              | 14                           | 14                                     | 14                                     | 14                       | 14                           | 14                                | 14                         | 14                          | 14                       | 14                        | 14                                | 14:                        |
| 14   | Centro and                     | t≜ine ⊒uspert<br>Oth-cht Sipere                      | 14 14  | 14   | 14                                 | 14                                      | 14                                     | 14                       | 145                        | 145                             | 144                          | 14                                     | 145                                    | 14                       | 14                           | 145                               | 14                         | 14                          | 145                      | 14                        | 14                                | 145                        |
|      | D0.153                         | Siac<br>reice weint.                                 | M2(100) M2(100)<br>M2(100) M2(100)   | <ul> <li>MQ(0h00)</li> <li>MQ(0h00)</li> </ul> | MQ(160)<br>MQ(160)                 | MQ134.00<br>MQ134.00                    | 4400,00,00<br>4400,00,00               | 4470,00000<br>4470,0000  | MQ(UND)<br>MQ(UND)         | 442006.00<br>442006.00          | 4470,00,00<br>4475,00,00     | 4450.00.00<br>4450.0000                | 4475,09,00<br>4475,09,00               | MQ106.00<br>MQ106.00     | - 9450,00,00<br>- 9450,00,00 | M2(14.0)<br>M2(14.0)              |                            | MØ(19.00<br>MØ(19.00        | 400,00,00<br>400,00,00   | MQ10600<br>MQ10600        | M201000<br>M201000                | MQ136.00<br>MQ136.00       |
|      | =                              | For Scars  | 145 145  | 145  | 145                                | 145                                     | 145                                    | 145                      | 145                        | 145                             | 245                          | 145                                    | 145                                    | 241                      | 145                          | 145                               | 741                        | 145                         | 145                      | 141.12                    | 145                               | 145                        |
|      | He mo be the fi                | Th. Spans<br>Lefe or Busparts                        | 01 01<br>14 14   | 144  | 145                                | 170<br>174                              | 144                                    | 175                      | 175                        | 144                             | 174<br>174                   | 175<br>175                             | 170<br>170                             | 174<br>174               | 170<br>170                   | 170<br>170                        | 174<br>174                 | 170<br>170                  | 170<br>170               | 174+174<br>174            | (で)<br>(で)                        | 170<br>170                 |
| 1F   | I ngi dusi                     | fillor Focpilat<br>Cilher Fill Support               | 14 145<br>156 156  | 145  | 14                                 | 145                                     | 145                                    | 14)<br>154               | 145                        | 145                             | 14)<br>155                   | 145<br>155                             | 145                                    | 14                       | 145                          | 145                               | 14<br>15                   | 74)<br>174                  | 145                      | 14)<br>15)                | 244<br>176                        | 244<br>155                 |
|      |                                | Sat  | MS: 30.00 MS: 30.00  | . Mg(3a.00                                     | - 194<br>- Mg: 311-00              | Alg: Su Du                              | - HS 36.00                             | Alg: Su Do               | - HS: 30.00                | - HS: 31-20                     | Alg: Su Du                   | Alg: Su Di                             | - MS: 36.00                            | - 245: 36-20             | AS: 30.00                    | - MS: 30.00                       | Alg: Su DO                 | Alg: Su DC                  | - MS 36.00               | MS SHOL                   | AS(30.00                          | - Alg: 3 a 0.0             |
| ł    | l Tianavi<br>Lottem            | ar-a Talu'<br>  Ling Stars                           | ମହିରେ ଅନ୍ତିରେ ଅ<br>ଅନ୍ତିରେ ଅନ୍ତିରେ | . କରୁବନ୍ଦର<br>କର                               | - अर्थुः २०.२०<br>                 | સ્લકુ સવાગલ<br>નજ                       | અંગુ ૨૦૦૦<br>ન્યુ                      | 245; 36.00<br>सर         | સ્લિક સમાગવ<br>નજ          | અંગુ ૨૦૦૦<br>ન્ય                | 24년: 36.00<br>1594년 전        | અંધુ ઉત્તરના<br>જરૂ                    | MS: 36.00<br>150                       | 24년: 36-20<br>15441년:    | মন্ত্র ৪৯০০<br>মন্ত          | MS: 30.00<br>।इ.                  | - 245, 3 a 0 c<br>154+1 &  | - MS(30.00<br>180           | - महिल्ला २०००<br>जन्म   | - MS(30.00<br>- MS        | - 26 Sta 20<br>(국)                | - MS: 36-201<br>155        |
|      | Tenin enert                    | H. Scars   | 24 145   | 145  | 24                                 | 145                                     | 145                                    | 74<br>14                 | 145                        | 145                             | 141 14                       | 145                                    | 145                                    | 141 AF                   | 145                          | 145                               | 141 8                      | 145                         | 145                      | 245                       | 145                               | 145                        |
| к    | Lon: rud nel                   | Felerio: Fospoils<br>1 <sup>47</sup> no Buispari     | 14 14  | 145  | 142                                | 145<br>150                              | 145                                    | 144                      | 145                        | 145                             | 144                          | 145                                    | 145                                    | 14                       | 145                          | 145                               | 142                        | 145<br>154+175              | 145                      | 144                       | 145<br>15441 (5.                  | 145                        |
|      |                                | Ciliar Et Signari<br>Missi                           | 14 14<br>おないかい おないかい   | 145<br>: MQ1Un 00                              | 14)<br>51021Jn (0))                | 1#<br>MQ106100                          | 145<br>MQ106100                        | 14)<br>MQ1Un 00          | 14)<br>MQ1Un 00            | 145<br>MQ106100                 | 14)<br>MQ106100              | 14)<br>MQ106100                        | 145                                    | 1#<br>#Q106.00           | 141                          | 240<br>740(10)00                  | 141                        | 141<br>MQ106100             | 24)<br>2420 Ja DC        | 1#<br>₩©10n 00            | 1#<br>#021Un 00                   | 24)<br>24(2) Jin (0)       |
|      | ra 192                         | e se Heim.   | MQ(JND) MQ(JND)  | - MQ10600                                      | MQ106.00                           | MQ106.00                                | MQ106.00                               | 20 a U/204               | 840206-00                  | MQ106.00                        | MQ(Un 00                     | MQ10600                                | 140006-00                              | MQ106.00                 | - MQ106.00                   | 1402106-00                        | MQ106.00                   | - MQ106.00                  | MQ106.00                 | MQ10600                   | MQ106.00                          | MQ106.00                   |
|      | ≂o no<br>⊸e mo serre ti        | For Scars<br>14, Scars                               | 1411年 145<br>1541年 155   | 145<br>150                                     | 1年11年<br>1年4月年                     | 145<br>150                              | 145<br>175                             | 1年) 新<br>1541 年          | 145<br>150                 | 145<br>150                      | 745<br>370                   | 145<br>175                             | 145<br>175                             | 245<br>250               | 145<br>170                   | 145<br>170                        | 245<br>250                 | 74<br>37                    | 244<br>150               | 1451 AF<br>1754170        | 244<br>274                        | 244<br>175                 |
| ×    |                                | L-le o Eusparis<br>1º la Facilitat                   | 174 175  | 145  | 174                                | 145                                     | 145                                    | 174                      | 141.67                     | 175                             | 174                          | 110                                    | 175                                    | 194                      | 16                           | 16                                | 114                        | 115                         | 160<br>1421 #            | 174                       | 245                               | 145                        |
| 1    |                                | n in Facilia<br>Cilitar Ini, Support                 | 144 144  | 254  | 174                                | 174                                     | 254                                    | 174                      | 174                        | 254                             | 174                          | 174                                    | 1411 #<br>2%                           | 14)<br>174               | 174                          | 174+174                           | 154                        | 174                         | 174+175                  | 174                       | 174                               | 745<br>1744 (M             |
|      |                                | Sar<br>พระค.โคบไ                                     | - MS(3000 - MS(3000<br>- MS(3000 - MS(3000   |  | - MS: 36-00<br>- MS: 36-00         | - MS(30.00<br>- MS(30.00                | <u> ජාති</u> 36.00<br>ජාති 36.00       | 245: 36.00<br>245: 36.00 | - MS: 36-00<br>- MS: 36-00 | - MS: 36.00<br>- MS: 36.00      | - MS: 36.00<br>- MS: 36.00   | - 24 <u>59</u> 3 a 20<br>- 2459 3 a 20 | - Ad <u>St</u> Sin OC<br>- AdSt Sin OC | - MS: 36.00<br>MS: 36.00 |                              | - M <u>S</u> (30.00<br>- MS(30.00 | - MS: 30.00<br>- MS: 30.00 | - MS: 36-00<br>- MS: 36-00  | - MS(30.00<br>- MS(30.00 | - MS 36.00<br>- MS 36.00  | - M <u>S</u> (36.00<br>- MS(36.00 | - MS(30.00)<br>- MS(30.00) |
| i    | _ottem                         | Line State   | <u>-75 175</u><br>245 145  | 155  | - <u>-</u> 70<br>245               | 115                                     | 145                                    | - <u></u><br>245         | <br>>#                     | - 54                            | 1451-26                      | 244                                    | -54                                    | 1554180                  | - 254                        | 254                               | 1451-26                    | 144+144                     | 144+144                  | 245                       | 154+154                           | 144+164                    |
|      | Tenio erent                    | Hill Scars<br>Fateror Focipida                       | 745 145<br>14° 145   | 145  | 14                                 | 145                                     | 145                                    | 14                       | 145                        | 145                             | 1451 #                       | 145                                    | 145                                    | 1451 #                   | 74                           | 745                               | 1451 #                     | 14 i #<br>24                | 24                       | 141                       | 141 ) #<br>24                     | 24                         |
| -    | Lon: rudinal<br>Cercia: en ent | 1 <sup>47</sup> m Busport<br>Other HT Silpone        | 174 174+174<br>145 145   | 174+175.<br>242                                | 174                                | 14416                                   | 174+175<br>244                         | 144                      | 275<br>141                 | 1644 A.<br>1641 A.              | 174                          | 265<br>144                             | 1441 A.<br>1441 A.                     | 144                      | - 35<br>14                   | - 25)<br>141 8                    | 174                        | 145+145                     | - <del>35</del><br>345   | 144                       | 175+170                           | 155+170                    |
|      |                                | Sac  | MQ(JND) MQ(JND)  | CONCIDENCE.                                    | MQ10h00                            | MQ106.00                                | MOVUM DO                               | MQ10600                  | MOUNDE                     | MQ106.00                        | MQ106.00                     | M22106-00                              | MQ106.00                               | MO2106-00                | MQ106.00                     | - MQ106.00                        | MQ10h 00                   | - MQ106.00                  | MQ10600                  | MOUNDE                    | MQ106.00                          | MQUADE                     |
|      | Fa 192                         | e belike m.<br>Fun Spans                             | MQ10600 MQ10600<br>1451 #  | - MQ106.00<br>241                              | MQ10600<br>1451 #                  | 24<br>24                                | 24000000000000000000000000000000000000 | MQ106-00<br>1451 #       | 제작(UniO))<br>2년            | - MQ106-00<br>244               | 74021Un 100<br>245           | - MQ(Un 00)<br>- 14(1)#                | - MQ106-00<br>1411-8                   | 245                      | - MQ(Un 00)<br>14(1)#        | - MQ10600<br>1411 #               | 440(UniO)<br>1451 #        | - MQ(Un 00)<br>- 14(1)#     |                          | 44Q1Un 00<br>1451 #       | 740210 n 00<br>245                | #4021Um 001<br>245         |
|      | we mo be ment                  | Th. Spans<br>Lefe or Bupperis                        | 175+176 - 374<br>176 - 176   | 15   | 175+170                            | -74-<br>170                             | 10                                     | 175+170<br>174           | 294<br>294                 | 5                               | 246<br>154                   | 1444176                                | -35                                    | 249<br>174               | 174+174.<br>1754             | 2942<br>2942                      | 145+144<br>144             | 144-165<br>154-165          | 1994年1995<br>1994年1995   | 145+164<br>146            | 25)<br>1564 (A)                   | 1744175.<br>1744175        |
| 24   | Lugi dust                      | 1՝ ս Բայլս   | 14 245   | 1411 #   | 14                                 | 245                                     | 1411 22                                | 14                       | 1451.26                    | 245                             | 14                           | 1451.26                                | 245                                    | 14                       | 1451 #                       | 1451.26                           | 14                         | 245                         | 1451 #                   | 14                        | 245                               | 245                        |
|      | we mo be trent                 | Cilher Ini, Support<br>Star                          | 154 154<br>2450 3 0.00 2450 3 0.00   | 154+165<br>- 24(5) 3 a 201                     | 154<br>2456 3 a 3 d                | 154<br>2459, 3 a . 2 c                  | 1544165<br>(AdSt 3 or 0 0              | 174<br>2459 3 a 20       | 154<br>2459 3 n 2 0        | 154+155<br>Alfo 3 n.00          | 154<br>AlSe Sin DC           | 154<br>Alto 3 a 30                     | 255<br>2456 3 a 20                     | 154<br>Addie Ban 20      | 154<br>Adds 3 a 00           | 250<br>2450 3 a 20                | 154<br>2459, 3 a 2 c       | 154<br>A456 3 a 00          | 170+170<br>24190 3 n 200 | 154<br>2459, 3 a. 2 c.    | 154<br>2459 3 n 2 0               | 155+180<br>AlSe 3 a 201    |
|      | :                              | N'-H THU'  | អត្ថន៍ ខណ្ឌា អត្ថន៍ ខណ្ឌា  | HS SHOL  |                                    | MS SHOC                                 | - HS: 36-00                            | Mg SulDu                 | HS SHOL                    | Mg Su Da                        | HS: SHOL                     | Alge Sta DC                            | HS SHOL                                | HS SHOL                  |                              | HS SHOL                           |                            | HS SHOL                     |                          |                           | Mg Subb                           | HS 36.00                   |
|      | Lottom<br>Tembri errent        | und Stars<br>Int Scars                               | 245 144416.<br>245 144164  | 144+160<br>244                                 | 245                                | 14418                                   | 174+174<br>244                         | 245                      | 1444 A.<br>1444 A.         | 1944) A.<br>1441 A.             | 1454126                      | 1444 AL                                | 1444 6.                                | 1454125                  | X<br>245                     |                                   | 247                        | <br>245                     | - 25)<br>1411 #          | <br>>47                   | 14541 AL                          | 145+160<br>245             |
|      | Login decl                     | Fotenin Fosipilita<br>1 <sup>47</sup> m. Bulgori     | 14 24<br>15 15 15  | 74°  | 14)<br>154                         | 24)<br>150+160                          | 74°                                    | 144<br>144               | 1#11#<br>1#241#            | 1411 AF<br>15041 AL             | 14                           | 1411 #                                 | 141 F<br>154 A                         | 14                       | 141 8                        | 1411 22                           | 14)<br>154                 | 1#11#<br>1#22#              | 14118                    | 14)<br>154                | 245<br>1594155                    | 245<br>15941 51            |
|      | Tenin enert                    | Cili-ci Et Si porc                                   | 14 14  | 245  | 141                                | 141                                     | 245                                    | 14                       | 145+130                    | 245                             | 141                          | 14                                     | 1451 #                                 | 14                       | 14                           | 1451.26                           | 14                         | 149+144                     | 245                      | 14                        | 141                               | 245                        |
|      | F9.152                         | isiac<br>e celleent                                  |  | - MQ(UniO)<br>- MQ(UniO)                       | 料の(Un 0))<br>料の(Un 0))             | MQ13600<br>MQ13600                      | <b>対応</b> (19.00<br>対応(19.00           | MQ(Uni0)<br>MQ(Uni0)     | MQ(Uni0)<br>MQ(Uni0)       | MQ(UND)<br>MQ(UND)              | MQ(UniO)<br>MQ(UniO)         | MQ(06.00<br>MQ(06.00                   |  | MQ(Uni0)<br>MQ(Uni0)     |                              | - MØJPD)<br>- MØJPD)              | MQ(060)<br>MQ(060)         | MQ(UND)<br>MQ(UND)          | MQ(UniO)<br>MQ(UniO)     |                           | <b>対応</b> (19.00<br>対応(19.00      | MQ136.00<br>MQ136.00       |
|      | =                              | For Scars  | 1451 22 1421 22  | 1411 #   | 1451 22                            | 1411 #                                  | 1411 22                                | 1451-22                  | 245                        | 245                             | 247                          | 245                                    | 245                                    | 247                      | 1451.26                      | 1451 #                            | 247                        | 1451 #                      | 145) #                   | 247                       | 145) ¥                            | 1451-26                    |
|      | He mo be trent                 | This Stans<br>Lefe lo Butports                       | 150+155  150+150  <br> 150  150  150  150  150  150  150   | 1744) (M.<br>1744) (M.                         | 175+174<br>174                     | 1744) (M.<br>1744) (M.                  | 1944年2月<br>1944年2月                     | 149+144                  | 275<br>17541 (* 1          | 1944年代。<br>1944年代               | 2%<br>1%                     | 30<br>30                               | 30<br>30                               | 172<br>174               | 1754° A.<br>275              | 30<br>30                          | 250<br>154                 | 175+170<br>275              | 30<br>30                 | 276<br>176                | 17541 M.<br>17541 M.              | 175+170<br>175+170         |
| *    |                                | 1՝ ո ∓արմ  | 141 245  | 1451 #   | 14                                 | 245                                     | 1451 AF                                | 14                       | 245                        | 245                             | 14                           | 1451 22                                | 245                                    | 14                       | 247                          | 1451 22                           | 14                         | 247                         | 1451 22                  | 14                        | 247                               | 247<br>155+151             |
|      | seno tene i                    | Cilitar Ini, Support<br>Star                         | <u>। १९८</u><br>- मिर्छ, ३०.२३ - मिर्छ, ३०.२३  |  | 154<br>- Alg: 36-00                | <u>। १९८</u><br>- स्टि <u>र</u> २०, २०, | <u>। १८७२ थे।</u><br>अनुसरकारण         | 154<br>24(5):35(-00)     | 154<br>24(5):36(00)        |                                 | - 154<br>- Alg: Su DC        |  | <br>                                   |                          | 154<br>- Alg: Su DC          | <br>                              |                            | <u>। १९</u><br>सन्दुः २०.२३ | - Alg: 30.00             | <u>। १९</u><br>मधुः ३०.२० | <u>। १९</u><br>- मिशुः २०.२०      | - AlS: 30.00               |
|      | Tian at<br>Lottem              | er-e Telli<br>Ling Stars                             | - Mg(3000) - Mg(3000)<br>  | ୍ଳାରୁ ୨୦୦୦<br>କର                               | અંગુ ૨૦૦૦<br>મહ                    | ાસણ સમાગ્ય<br>જેવ                       | - સંશેષ સ્વાગ્ય<br>જેવ                 | ાસ્ટ્રિક્સાઝર<br>જ       | ્રસ્ટ્રિક્સ ગઇ<br>1954 સંદ | ાન્સ્ટ્રિયેલ ગાઉ<br>જીવ્યું છે. | અંગુ સાગળ<br>જ               | ્રસ્ટ્રિયેલ ગાઉ<br>1954 સંદ            | માં ગુપ્ર કે છે.<br>મુખ્યત્વે          | માં ગુપ્ર કરતા છે.<br>અન | - મહિલ્લા ગાઉ<br>1954 છે.    | માં ગુપ્ર કે છે.<br>મુખ્યત્વે     | અંગુ ૨૦૦૦<br>મહ            | ાસણ સામગળ<br>સંસ            | ୍ମ ମହି ଅନ୍ୟ ୦୦<br>କର     | - ମହିତ୍ର ଅନ୍ୟର<br>କର      | અંગુ ૨૦૦૦<br>કર                   | - સંશેષ ઉપરાંગ<br>કરા      |
|      | Lottem<br>Tenún errent         | Ft Statis  | 247 245<br>247 245   | 141 8  | 247                                | 245                                     | 1411 #                                 | 247                      | 145) X                     | 245                             | 247                          | 145) <i>H</i>                          | 245                                    | 247                      | 145 L #F                     | 145 i #                           | 247                        | 245                         | - 375<br>1451 #          | 247                       | 245                               | 145) #                     |
|      | Lon: rud pri                   | Faterior Fosipilitis<br>1 <sup>45</sup> no Liuteport | 14 141 F   | 141 F<br>56                                    | 14                                 | 1411年<br>15541年                         | 14 ( #<br>.53                          | 14<br>14                 | 245<br>1454174             | 245<br>15541551                 | 14<br>14                     | 24 X                                   | 245<br>1554155                         | 14<br>15                 | 1451 #<br>%                  | 145) #<br>%                       | 14<br>14                   | 145) #<br>_%                | 145) #<br>%              | 14-<br>14-                | 145 i #<br>%                      | 145) #<br>%                |
|      |                                | Cili-citi Sipor                                      | 14 14  | 1451 #   | 14                                 | 1#                                      | 1451-26                                | 14                       | 141                        | 245                             | 141                          | 14                                     | 1451 22                                | 14                       | 14                           | 1451.72                           | 14                         | 141                         | 247                      | 14                        | 14                                | 247                        |
|      | FA 192                         | iSiac<br>reice Heim                                  | ねがいりの。 ねがいりの<br>ねがいりの。 ねがいりの   |  | MQ(06.00<br>MQ(06.00               | MQ136.00<br>MQ136.00                    | 4400,0 M 00.<br>4400,0 M 00.           | MQ(UND)<br>MQ(UND)       | MQ(UND)<br>MQ(UND)         | 460,0 P.00.<br>460,0 P.00.      | 4400,0 P.00.<br>4400,0 P.00. | M2010.00<br>M2010.00                   | 4400,099,00<br>4400,099,00             | MQ106.00<br>MQ106.00     | - MQ(06.00<br>- MQ(06.00     | - 4400.0000<br>4400.0000          | MQ(060)<br>MQ(060)         | - 400,00,00<br>- 400,00,00  | - 460,00,00<br>460,00,00 | MQ13630<br>MQ13630        | MQ(UND)<br>MQ(UND)                | 940210.000<br>940210.000   |
|      |                                |  |  |  |                                    |   |  |                          |                            |                                 |                              |  |  |                          |                              |                                   |                            |                             |                          |                           |                                   |                            |

| Project: | AmDeck Design Guide | Pre |
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| Client:  | Amvic, Inc.         | Che |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dead  | l Load                        | =   |  | psf                                    |  |                            |                            |                            |                            |                        |                                    |                            |                       |                                  |                          |                            |                                   |                            |  |                           |  |                          |                            |
|-------|-------------------------------|---|--|--|--|----------------------------|----------------------------|----------------------------|----------------------------|------------------------|------------------------------------|----------------------------|-----------------------|----------------------------------|--------------------------|----------------------------|-----------------------------------|----------------------------|--|---------------------------|--|--------------------------|----------------------------|
| e     | <u> </u>                      | - ¥Y  |  | - ST D - 1/                            | -  |                            | 1 - 50 D - 18              | e<br>V9                    | 07                         | I - V D - 15           |                                    | 07                         | 1 - 20 D - 12         |                                  | 07                       | 1 -80 D - 15               | ¥2                                | 07                         | 1 - 10 D - 15                                  | V.9                       | 07   | 1 -100 0 - 5             |                            |
| 26.95 | =0 00                         | Line Mears                                      | ) 1#                                   | 174                                    | 174  | 14                         | 174                        | 174                        | 14                         | 174                    | 174                                | 14                         | 174                   | 174                              | 14                       | 174                        | 174                               | 14                         | 174  | 154                       | 145  | 174                      | 174                        |
|       | He mo be nert                 | HI Scars  | 1#                                     | 14                                     | 14<br>14   | - 14<br>14                 | 1#                         | 14                         | 1#                         | 1#                     | 14                                 | 1#                         | 14                    | 14                               | 14                       | 14                         | 14                                | - 14                       | 14   | 14                        | 145  | 1#                       | 1#                         |
| п     | Lon: rud not                  | Fotenin Frografix<br>1 <sup>45</sup> no Bulgod  | 14                                     | 14                                     | 14   | 144                        | 14-                        | 14-                        | 141                        | 14                     | 14                                 | 14                         | 14                    | 14                               | 141                      | 14                         | 14                                | 14                         | 14-  | 144                       | 14   | 14                       | 14                         |
|       |                               | Cili-chi Sipor-                                 | 14                                     | 14                                     | 14   | 14                         | 14                         | 14                         | 14                         | 14                     | 14                                 | 14                         | 14                    | 14                               | 14                       | 14                         | 14                                | 14                         | 14   | 14                        | 14   | 14                       | 14                         |
|       |                               | Siac<br>Velocitie entit                         |  | 4000600<br>4000600                     |  | MQ10600<br>MQ10600         | MQ(06.00<br>MQ(06.00       | MQ(UND)<br>MQ(UND)         | 村公(Jin 0)<br>村公(Jin 0)     | MQ(UND)<br>MQ(UND)     | 構築(Unit)()<br>構築(Unit)()           | 対応(16.00<br>対応(16.00       | MQ(UND)<br>MQ(UND)    | 440000000<br>44000000            | MQ(UND)<br>MQ(UND)       |                            | MQ(0600)<br>MQ(0600)              | MQ(06.00<br>MQ(06.00       | MQ(UND)<br>MQ(UND)                             | MQ10600<br>MQ10600        | 村公(Ja 00)<br>村公(Ja 00)   | 村公(Ja 0)<br>村公(Ja 0)     | MQ13637<br>MQ13637         |
|       | =                             | Fur Scars                                       | 145                                    | 402/08/0.<br>142                       | 144<br>144   | 145                        | 14                         | 14°                        | 145                        | 142                    | 14<br>14                           | 145                        | 14<br>14              | 144<br>144                       | 145                      | 14                         | 14                                | 145                        | 144<br>144                                     | 14°                       | 145  | 14                       | 14°                        |
|       | se mo perrent                 | HL Stars  | 15                                     | 174                                    | 174  | 175                        | 144                        | 174                        | 175                        | 174                    | 174                                | 175                        | 174                   | 174                              | 155                      | 144                        | 174                               | 175                        | 174  | 174                       | 175  | 174                      | 174                        |
| 4-    | I usi dust                    | Lefe o Europario                                | 144                                    | 14                                     | 144  | 174                        | 144                        | 144                        | 14                         | 145                    | 14                                 | 14                         | 145                   | 14                               | 14                       | 145                        | 145                               | 144                        | 145  | 145                       | 14   | 145                      | 145                        |
|       |                               | 1' or Fospert<br>Cihar M. Support               | 144                                    | 144                                    | 144  | 144                        | 144                        | 144                        | 144                        | 140                    | 144                                | 144                        | 140                   | 144                              | 144                      | 144                        | 174                               | 144                        | 140  | 100                       | 144  | 144                      | 100                        |
|       |                               | Sat   |  |  | - Hg; 30.00  | HS: 30.00                  | AS 36.00                   | Alg: 3 a 20                | AS(3)(0)                   | HS: 311.00             | Hg: 34.00                          | HS(3)(00                   | - HS: 34.00           |                                  | - HS: 311-00             | - HS(3)(00                 | - Hg; 3a D0                       | - Hg; 3a D0                | - Alg: 31-00                                   | Alg: 30.00                | AS 36.00   | HS: 31 00                | Alg: 3 a 20                |
|       | _07500                        | oer-e Teluí<br>  Ling Spark                     | Alg: 36.00 - 4                         | 45:30.70<br>                           | 245:30-00<br>154   | MS: 31.00<br>MS:           | M(3) 30.00<br>154          | માં છે. ઉપ ગયે<br>અન્ય     | Alg: 36.00<br>Mar.         | 245:30.00<br>154       | - MS(31.00)<br>147                 | સ્લિક ઉત્ત ગઇ<br>નજી       | 242:30.00<br>154      | - Alĝi 36-00<br>154              | - Alg: 3 a .7 5<br>1 ar. | - मिट्रा 36.00<br>मिट्र    | - MS: 36-00<br>155                | - MS: 311-00<br>144        | Adg. 3 a. 00.<br>145                           | MS: 30.00<br>MS:          | 245:30.00<br>195   | Alg: 36.00<br>145        | MS: 30.00<br>150           |
|       | Service energy                | ht State  | 145                                    | 14                                     | 14   | 145                        | 14                         | 14                         | 145                        | 14                     | 14                                 | 145                        | 14                    | 14                               | 145                      | 145                        | 14                                | 145                        | 145  | 14                        | 145  | 145                      | 145                        |
|       |                               | Faler or Focipials                              | 14:                                    | 141                                    | 14   | 14:                        | 141                        | 14                         | 14                         | 141                    | 14                                 | 141                        | 14                    | 14                               | 14                       | 14                         | 141                               | 14                         | 14   | 14:                       | 14   | 145                      | 145                        |
| 13    | Londradianal<br>Tembri errent |   | 140                                    | 14                                     | 145  | 14                         | 14                         | 145                        | 14                         | 14                     | 145                                | 14                         | 14                    | 145                              | 14                       | 14                         | 145                               | 14                         | 14   | 145                       | 14   | 14                       | 145                        |
|       |                               | Siac  |  | 400000                                 |  | MQ106.00                   | MQ106.00                   | MOYUMOT                    | MOVUM DC                   | MODINE                 | 74021Un 00                         | MQ106.00                   | MODINE                | MQ106.00                         | MOVUM DC                 |                            |                                   | MQ106.00                   | MQ106.00                                       | MQ106.00                  | 74 Q U 6 D 0   | MOUNDE                   | MQ106.00                   |
|       | Fa.1%                         | te belleent.<br>Fun Spans                       | 74Q1Un 00 7<br>145                     | 4001Un 001<br>145                      | MQ106.00   | MQ10600<br>145             | MQ10m00<br>145             | 145                        | M0106.00                   | MQ10n100<br>145        | 7402101000<br>145                  | 24 <sup>0</sup>            | MQ106100<br>145       | 74021Un 00<br>145                | 74021Um 00               | MQ10m00<br>145             | 84000000<br>145                   | M22136-30                  | MQ106100<br>145                                | MQ10600<br>145            | MQ10600<br>1411 #  | M22106-00                | MQ10600<br>145             |
|       | He mo perrent                 |   | 100                                    | iê.                                    | 140  | 150                        | 150                        | 140                        | 150                        | 150                    | 15                                 |                            | 100                   | 120                              |                          | 100                        | 150                               |                            | 15   | 160                       | 14-1-4-  | 150                      | 100                        |
|       |                               | Lefe o Europario                                | 175                                    | 174                                    | 174  | 174                        | 175                        | 174                        | 174                        | 155                    | 175                                | 174                        | 155                   | 155                              | 174                      | 175                        | 175                               | 174                        | 155  | 175                       | 174  | 175                      | 155                        |
| 1F    | l ngi dusi<br>sento terteri   | 1' or Fosport<br>Cilhar Ini, Support            | 141                                    | 145                                    | 145  | 14                         | 145                        | 145                        | 14                         | 145                    | 145                                | 141                        | 145                   | 145                              | 141                      | 241                        | 145                               | 14                         | 241  | 145                       | 14   | 24)<br>182               | 242                        |
|       |                               | Sar   | A15: 30.00 A                           | 45:30.00                               |  | Alg: 36.00                 | AlS: 31.00                 | AS 30.00                   | Mg(BulD)                   | MS(Sub)                | Alg: Su Du                         | AS 31.00                   | MS: Su DO             | AlS: 30.00                       | AlS: 30.00               | AlS: 30.00                 | MS: Su D.                         | AlS: 30.00                 | Alge Sur Du                                    | Alg: Su Du                | Alg: 31.00   | MS( Su DC                | Alge Bin DO                |
|       |                               | м-н Тно   | Mg(3)(0) A                             | 45,80.00                               | Mg: 30-00  | - MS: 36-20                | - M <u>B</u> (36.00        |                            | AQ: 31-00                  | MS: 31-00              | Mg: 30.00                          |                            | - M <u>S</u> , Saloc  |                                  |                          |                            | MS: 30.00                         |                            |  | - Mgr Su Dù               | Alge Station   | MS: 30.00                |                            |
|       | Lottem<br>De núm en ent       | Line Stars<br>In Die Scars                      | 244                                    | 145                                    | 16   | 274                        | 145                        | 145                        | 274                        | 145                    | 145                                | 14+12                      | 145                   | 15                               | 1441 2                   | 145                        | 145                               | 14416                      | 15   | 145                       | <br>245  | 145                      | 145                        |
|       |                               | Faler or Focipielia                             | 14                                     | 145                                    | 145  | 14                         | 145                        | 145                        | 14                         | 145                    | 145                                | 14                         | 145                   | 145                              | 14                       | 145                        | 145                               | 14                         | 145  | 145                       | 14   | 145                      | 145                        |
| IL.   | Lon: rud not                  |   | 115                                    | 254                                    | 175  | 174                        | 254                        | 115                        | 144                        | - 254                  | 145                                | 175                        |                       |                                  | 144                      | 174+174                    | 254                               | 114                        | 174+174  | 254                       | 144  | 176+176                  | 1744176                    |
|       |                               | Ciliar Et Signer<br>Siac                        |  | 147<br>147 Ja DC                       | 145<br>74:200 000  | 147<br>74121-010-00        | 1421.7 0.72                |                            | 147<br>M-2010-00           | 142<br>741221Jn 100    | 145<br>145                         | 1421.010.00                | 141<br>MQ10600        | 145<br>MQ10600                   | 14/<br>/4/2/Un/00        | ·+                         | - 74-21Un UC                      | 144<br>M 2010 N 001        |  | 74200 D0                  |  | 147<br>7412010100        | 240<br>2010 00             |
|       | Fa.192                        | te se Helm.                                     | สญาวธิวาก ส                            | ຟຊ່າມຄວະ                               | MQ106.00   | - MQ(Un 00                 | MQ106.00                   | MQ106.00                   | MOVUM DC                   | MOUNDE                 | MQ(Un 00                           | - MQ(Un 00                 | MQ106.00              | MOVUM DO                         | MQ10h00                  |                            | MODINE                            | MOUNDE                     | MQ106.00                                       | MQ106.00                  | 74021Un 00   | MODINOT                  | 24021Un 00                 |
|       | ≂u uu<br>≂eimo serrert        | For Scars<br>14, Scars                          | 1#1 #<br>1#41 #                        | 145                                    | 145<br>155   | 1年11年<br>1年4月年             | 145                        | 145                        | 1年1月年<br>1544年2月           | 145                    | 145                                | 245<br>- 22                | 145<br>155            | 145<br>155                       | 245                      | 245                        | 242                               | 1451 AF<br>15041 (N        | 24)<br>24)                                     | 242                       | 1451 AF<br>15041 (N  | 245                      | 244                        |
|       |                               | Lefe o Europario                                | 144                                    | 160                                    | 10   | 1944                       | 100                        | 165                        | 1944                       | 100                    | 175                                | 194                        | 175                   | 10                               | 194                      | 145                        | 175                               | 194                        | 175  | 165                       | 1944   | 274                      | 294                        |
| ×     | l ngi dust                    |   | 14                                     | 1411 #                                 | 241  | 14                         | 1411.27                    | 245                        | 14                         | 1411 26                | 244                                | 141                        | 1411.87               | 1411 #                           | 14                       | 245                        | 1411 #                            | 14                         | 245  | 1411 #                    | 14   | 245                      | 245                        |
|       | -e no se "e 1                 | Citer M. Support<br>San                         | 154<br>24(5):30:00 - 2                 | 154<br>439 3 a Dú                      | <br>2459, 3 a. 2 c.  |                            | 174<br>24(3): 3 a . 0 C    |                            | 154<br>Altis 3 a D.C       | 174<br>24(5):3 a 0 0   | - 254<br>- 2459, 3 a 2 d           |                            |                       | - <u>1994</u><br>- 2456 3 a D.C. |                          | - 194<br>- 24(5) 3 a 0 0   | 1544155<br>2456-366-20            |                            | 154<br>24(5):3 a. 0 0                          | 154+155<br>24(5):3 (0.00) | 154<br>Adoption 200  | - 174<br>- Altin Bar D.C | 174+175<br>24(5):3 a. 0.0  |
|       | Tiar es                       | мен Тиш   |  | 45,36.00                               |  | Al 36 36 00                | AS 36.00                   | AQ: 30.00                  | Alg: 31.00                 | - MS( 311 DC           |                                    | AS 36.00                   |                       | Alg: 30.00                       | Alge Studio              |                            | - MS: 30.00                       | - Alg: 30.00               | - Alg: 30.00                                   | - Alg: 30-00              | Alge Sta DC  | AS 36.00                 | - Al\$( 30.00)             |
|       | Lottem<br>De númerner (       | Line Stars<br>Int Scars                         | <u></u>                                | 145                                    | 145  |                            | 145                        | 145                        | <u></u>                    | 274                    |                                    | 1454-30                    | 254                   | 254                              | 1451-26                  | 274                        | 274                               | 255                        | 16441 AL                                       | 174+174                   | 255  | 1644 A.<br>1641 - A      | 144+164                    |
|       |                               | Faler or Foop dis                               | 1#                                     | 145                                    | 145  | 14                         | 145                        | 145                        | 1#                         | 145                    | 145                                | 14                         |                       | 24                               | 14                       | 24                         | 24                                | 14                         | 24   | 24                        | 1#   | 24                       | 24                         |
|       |                               | Ind pulped                                      | 174                                    | 1544176                                | 174+175  | 174                        | 154+164                    | 174+174                    | 174                        | 35                     | 174+175                            | 174                        | 35                    | 35                               | 174                      | 1754170                    | 35                                | 174                        | 175+170  | 35                        | 174  | 1754170                  | 175+170                    |
|       | 20.000-00-0-1                 | Ciliar Et Sapare                                | 14)<br>MQ106107 - A                    | 14)<br>442(Jin ())                     | 240<br>1940-00   | 141<br>MQ106.00            | 141<br>MQ106100            | 249<br>2450 0.00           | 141<br>MQ(Un (00           | 141<br>MQ106100        | 1411 26<br>242213 6 30             | 141<br>MQ106100            | 141<br>MQ106100       | 1411 AF<br>MC213 n 301           | 141<br>MQ10600           | 141<br>MQ106100            | 1411 M<br>MQ136 00                | 141<br>MQ106100            | 141<br>MQ106100                                | 245<br>7402101000         | 1#<br>#Q106.00   | 141<br>MQ(Un U)          | 245<br>- 200 0.00 (2014)   |
|       | Fa.195                        | ve bei Heim.                                    |  | 400000                                 | 1400 Un 00   | MQ106.00                   | MQ10600                    | MQ106.00                   | MQ106.00                   | MQ106.00               | MOUNDE                             | MQ136.00                   | MQ106.00              | MQ1Jn DT                         | MQ106.00                 | MQ10600                    | MQ106.00                          | MQ106.00                   | MOULDE   | MQ106.00                  | ALC: UNITED TO THE PARTY OF THE | MQ10600                  | MQ106.00                   |
|       | =                             | Fur Scars                                       | 145 i Af                               | 241                                    | 244  | 1451.46                    | 245                        | 741                        | 1451 #                     | 1411 #                 | 1411 #                             | 245                        | 1411                  | 1411 #                           | 245                      | 1411 24                    | 1411 22                           | 1451 22                    | 1411 #   | 1411 22                   | 1451 22  | 245                      | 245                        |
|       | He mo be ment                 | Lefe of Butports                                | 155+150                                | -72-                                   | _344<br>_344   | 155+150                    | 244                        | -54                        | 154180                     | 1744174                | - 254                              | 289                        | 1744174               | 254                              | 289                      | 1744174.<br>1744174        | 1444174                           | 14941741                   | 1944年1月21<br>1954年1月22                         | 144-125                   | 145+164  | 175<br>17541 (*          | 1744174                    |
| 24    | l ngi dust                    | f a faca a                                      | 1#                                     | 245                                    | 245  | 141                        | 245                        | 245                        | 141                        | 1451 #                 | 245                                | 141                        | 1451 #F               | 1451 #                           | 14                       | 245                        | 1451.26                           | 14                         | 245  | 1451 AF                   | 14   | 245                      | 245                        |
|       | se mo perre il                | Citer H. Supton                                 | 194<br>24(5) 3 a 0.0 - 2               | 154<br>4(5) 3 a 00                     | 154+155<br>Adds 3 a 0 0  | 174<br>Adds 3 a 00         | 174<br>A4(5) 3 n 0 0       | 154+164<br>A4(5) 3 a (00)  | 154<br>Altis: 3 a 0 0      | 154<br>Altin 3 a 0 0   | - 255<br>- 2455 3 a 20             | 174<br>Adop Sin OC         | 154<br>Adol: 3 a. 0 0 | 255<br>2459; 3 a 2 c             | 154<br>Adds 3 a 00       | 174<br>Ado: 3 a 0 0        | <del>255</del><br>- 2459; 356-355 | 154<br>Adol: 3 a. 0 0      | 154<br>AltSt Stir 20                           | 150+150<br>24(5):3 n.0 0  | 154<br>A456 Bin DC   | 174<br>24(5):3 n.0 0     | 145+180<br>2456-36-20      |
|       | Tiar as                       | verse Telli                                     |  | 45,36.00                               |  | MS: 36.00                  | - MS: 34-00                | H2: 30.00                  | H2: 30.00                  | H2: 30.00              | H2: 31.00                          | HS: 30.00                  | - HS: 30.00           |                                  | Alg: 31.00               |                            |                                   | - Alg: 31-00               | - Hg: 30.00                                    | Al 5: 30.00               | H2: 31.00  | Mg 36.00                 | - MS(30.00                 |
|       | _ottem                        | Line Scaro                                      | 369                                    | 154+164                                | 174+175  | - 259                      | 154+164                    | 174+175                    | - 269                      | 154+154                | 174+174                            | 175+174                    | <br>                  | 85                               | 2%                       | <br>                       | - X5                              | 257                        | <u> </u>                                       | <u> </u>                  | <br>   | 175+170                  | 175+170                    |
|       | Centre en en en               | Fater or Focults                                | 243                                    | 141 H<br>24                            | 24   | 245                        | 141.8                      | 241                        | 245                        | 141 第<br>141 第         | 141 第<br>141 第                     | 1451 22                    | 248<br>141 #          | 141 年<br>141 年                   | 247                      | 245<br>141 #               | 141 H                             | 247                        | 245  | 245                       | 247  | 1451 AF<br>245           | 248                        |
| 1     | Lon: rudinel                  |   | 174                                    | 175+170                                | 175+170  | 174                        | 175+170                    | 175+170                    | 174                        | 355                    | 175+170                            | 174                        | 246                   | 175+170                          | 174                      | 145+141                    | 249                               | 174                        | 145+144  | 255                       | 144  | 250                      | 145+144                    |
|       | Centre en en en el            | Ciliar Et Sipore                                | 14)<br>MQ10500 - M                     | 14)<br>400 Jin 00                      | 245<br>24210 n 00  | 14)<br>MQ106100            | 14)<br>MQ106100            | 245                        | 141<br>MQ106100            | 14)<br>MQ10600         | 245                                | 14                         | 141<br>MQ136100       | 145) #<br>MQ13500                | 14                       | 14)<br>MQ106100            | 1451 26                           | 141<br>MQ136-301           | 141<br>MQ106100                                | 245<br>#40213.6100        | 14   | 14)<br>MQ(Un 00)         | 245<br>74021016-001        |
|       | Fa.'%                         | ijo ac<br>ve ce weint                           |  | 42/JNJ/<br>42/JNJ/                     | MQ(060).   | M2210600                   | M201000                    | MQ(JAD);                   | MQ13630                    | MQ136.00               | M2/06.00                           | M201600                    | MQ(J60).              | MQ(J60).                         | - MQ(060).<br>MQ(060)    | - MQ(0600)                 | - MQ(0600)                        | - MQ(060).<br>- MQ(060)    | MQ(J60).                                       | M2010000                  | MQ(060).<br>MQ(060)  | M22136-30                | MQ136.30                   |
|       | =                             | For Scars                                       | 1451 22                                | 245                                    | 245  | 1451 22                    | 245                        | 245                        | 247                        | 245                    | 245                                | 247                        | 245                   | 245                              | 247                      | 1451.26                    | 1451 26                           | 247                        | 1451-26  | 145 L #                   | 247  | 245                      | 245                        |
|       | He mo be the fi               | I Int. Scars                                    | 149+144                                | 20                                     | 1744176  | 149+164                    | 250                        | 1744174                    | 237                        | 252                    | 1744174                            | 257                        | 30                    | 30                               | 257                      | 1704170                    |                                   | 247                        | 170+170  |                           | 257  | 275                      | 170+170                    |
| *     | I ngi dust                    | Lefe o Europado<br>1° o Focund                  | 144                                    | 245                                    | 14441 (A.<br>1451 - Afr  | 174                        | 144+160<br>245             | 1444 A.<br>1451 A          | 14                         | 1444 AL<br>1451 - 22   | 245                                | 144                        | - 265<br>1451 22      | 245                              | 14                       | <br>247                    | - 355<br>1451 2                   | 14                         | <br>247  | - 355<br>1451 22          | 14   | 247                      | 170+170<br>247             |
|       |                               | Ciliar Int. Supro t                             | 154                                    | 184                                    | 170+170  | 174                        | 174                        | 170+170                    | 154                        | 174                    | 170+180                            | 174                        | 174                   | 39                               | 175                      | 174                        | .59                               | 194                        | 154  | 149+144                   | 174  | 174                      | 145+144                    |
|       |                               | Sar<br>Mare Tello                               | - 245: 3 a 0 a - 2<br>245: 3 a 0 a - 2 | મછું, કે <i>ત છે.</i><br>મછું, કેત છે. | - Mg 36.00<br>- Mg 36.00   | - MS: 36.00<br>- MS: 36.00 | - MS: 36.00<br>- MS: 36.00 | - MS: 36.00<br>- MS: 36.00 | - MS: 36-00<br>- MS: 36-00 | MS: 36.00<br>MS: 36.00 | <u>सिंह 3600</u><br>संक्षेत्र 3600 | - MS: 36.00<br>- MS: 36.00 |                       | 245: 3 a 0 a<br>245: 3 a 0 a     | - MS(30.00<br>- MS(30.00 | - MS: 36.00<br>- MS: 36.00 | - Mg 3600<br>- Mg 3600            | - Mg: 36-00<br>- Mg: 36-00 | - 24 <u>5:</u> 3 a 00<br>- 24 <u>5:</u> 3 a 00 | MS: 36.00<br>MS: 36.00    | MS: 36.00<br>MS: 36.00   | MS: 36.00<br>MS: 36.00   | - MS(30.00)<br>- MS(30.00) |
| 1     | Lottem                        | Ling Stars                                      |  | 30                                     | 2000 - 200 - | 25                         | 30                         |                            |                            | 175+170                | 175+170                            |                            | 175+170               | 175+170                          | 2009 State 10            | 249                        | -39                               |                            |  | .79                       |  | 259                      | 255                        |
|       | Tenin eren                    | H Scars   | 247                                    | 245                                    | 245  | 247                        | 245                        | 275                        | 247                        | 1451 #                 | 245                                | 247                        | 1451 #                | 245                              | 247                      | 245                        | 1451 #                            | 247                        | 245  | 1451 #                    | 247  | 245                      | 245                        |
| 1.    | Lan: rud nat                  | Fater or Fropoils<br>1 <sup>45</sup> no Bulgori | 14-                                    | 245<br>15941251                        | 245  | 14                         | 245<br>15941551            | 245                        | 14                         | 245                    | 245<br>15941 551                   | 14)<br>154                 | 245                   | 245<br>1554155                   | 14                       | 1451 #                     | 1451 #                            | 14                         | 145 i #  | 1451 #                    | 14   | 245                      | 245                        |
| l î   |                               | Cither Fit Signar                               | 141                                    | 14                                     | 245  | 14                         | 14                         | 245                        | 14                         | 14                     | 245                                | 14                         | 14                    | 1451 22                          | 14                       | 14                         | 1451 27                           | 14                         | 14   | 247                       | 14   | 14                       | 247                        |
|       |                               | Sac   |  | 400.000                                | MQ106.00   | 740210 n 00                | 2402136-00                 | 24021Un 100                | MQ106.00                   | 74021Un 00             | 74 Q1 J 6 Q2                       | 24021U6-00                 | MQ106.00              | 74 Q1 J 6 D7                     | 24021Un 00               |                            | 24021Un 00                        | 24021316-001               |  | 240210 n 00               | 24:02:06:00  | 74021Un 00               | 24:00 UN 00                |
|       | Fa.19.                        | ve se Heim.                                     | MQ10600 A                              | 400 J n DC                             | 24/2010/00   | 2422-01-00                 | - 24 Q, UN () ()           | 5422° J N D.               | 9927 J N D.                | 14.20 D. 0.            | - 20 JU 20                         | - 40,000.                  | 2422,010,00           | 14/2/ 01/ 02                     | - 9476, D.B. (C.         | - MQ(Jn 00                 | 5422(UN U)                        | 5422, D.R. D.C.            | MO(Un 00                                       | MQ(Un 00                  | 2422 J 1 1 0 1   | 1402 UN UN               | - 242( JE J.               |

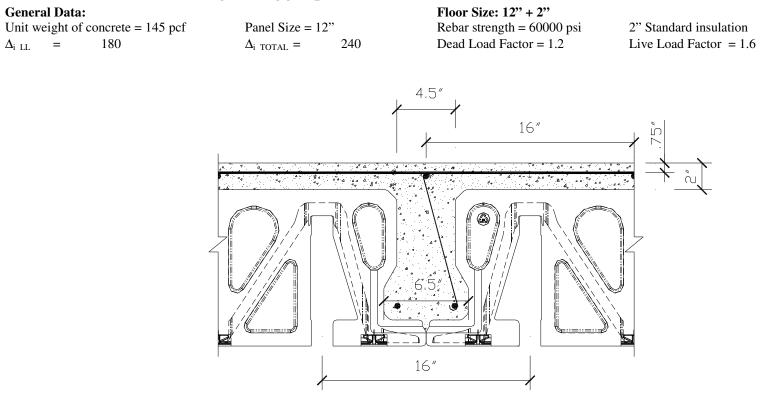
### Notes

- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.
- Blank Cells indicates that the joists are failing in deflection.

Ι

| Project: AmDeck Design Guide | Prepared by: Kapil     | Date: 12/07/2007 |
|------------------------------|------------------------|------------------|
| Client: Amvic, Inc.          | Checked by: Andy / Raj | Date: 12/07/2007 |

## 9.7 Table G: f'c = 4000 psi, Topping Thickness = 2.0"



| Project: | AmDeck Design Guide |  |
|----------|---------------------|--|
| Client:  | Amvic. Inc.         |  |

Prepared by: Kapil Checked by: Andy / Raj

Date: 12/07/2007 Date: 12/07/2007

10 psf Dead Load = 1-90 1 - SCD - 1 - YCD L = 70 D = 10 1-300 1 - 30 D - 1 1, -100 01-1 - 2 22 1# 1# 14 14 14 Line State The Scate 1# 1# 174 174 14 14 He mo perre 14 den on Focus o 14 IU. Lon: rud nel no participant 15 15% H II II that by Suc 14 14 420100 MQ106.00 MQ106.00 MQ106.00 MQ106.00 MQUM00 MQUADE MQ106.00 MQ106.00 MQ106.00 MQ106.00 MOUNDE MQ106.00 MQUAD: MQ106.00 MQ106.00 MQUAD: MQUAD: MQ106.00 MQ1Un D0 AQUAD. 14. Star 174 174 174 174 175 174 174 155 174 155 154 175 174 174 174 174 175 174 174 175 175 ne mo pe 158 174 174 15% 175 15% 174 174 15 174 174 174 17 174 15% 15% 179 179 15 15% -le o Eutport 4.7 l ngi dusl ս քուրմ 14 14 14 14 14 14 14 14 145 14 14 14 14 se tro perient (Ciher In, Suppo 174 158 158 174 174 174 174 15% 174 174 MS: Do D MS: Do D MS: Do J MS: Do D. Alter Du Di Alg: Do. Alte Du D ძვი მი მ Altin Du D Addin David Adds Due D Adds Due D Alter David Altin Du D. Alter David Alte Du D Alfe Du J Alte Du D Alte Du D Alte Du D Addin David MS: Do DC Hği tu tu MS DOD. HS DOD Mỹ hước HS DOC HS DOD HS: DO D HS DOOD HS DOD Mỹ tu đã AS DOC HS DOC HS DOC ਮਤਿੰਗ ਹੈ ਹੈ MS DOC MS DOC MS DOD MEDILO <u>พรียาแวะ</u> MS: Do 2 Line Stars The Scars 145 175 175 145 158 Cerentine -14 14 14 den on Fina p 14 the state no parport 145 14 нийс не Cilier Fit Shiel 14 14 14 14 1.1 14 14 14 14 14 MQ(Un 00 MQ(Un 00 MQ10600 4000000 MQ(06.00 MQ(06.00 MQ(06.00 MQUAD: MQUAD: MQ(0600 MQUAD: 400000 MQ(Un 00 MQ10600 MQ(Un 00 ACC NUMBER MQ106.00 MQ106.00 MQ(06.00 MQ106.00 MQ106.0 eò: Jin 1 MQ<sup>1</sup>Un 145 En: Sea 145 1史 145 1史 145 14 14 14 1# 145 24 145 145 1安日 湯 145 145 175 174 174 175 174 174 175 174 34 174 174 54 175 174 54 175 114.4176 175 175 TH, Spark 174 ne mo pe 14 144 145 145 174 ⇒le o ⊇utpor 17 175 145 17% 174 174 158 17 16 l ngi dust ս Բարմ 145 14 1# 145 145 1# 145 1# 145 14 241 145 14 244 14 ι<del>ς</del>, ve mo perrie Jher H. Suppo 156 174 174 172 172 174 170 15% 174 156 172 <u>মন্ত্রান্ডের</u> মন্ত্রান্ডের <u>- MS: 160.0</u> - MS: 160.0 MS: Do D. MS: Do D. - MS: 16-20 - MS: 16-20 સંકુરાત MS 1600 MS 1600 <u>মন্ত্র ১৯০০</u> মন্ত্র ১৯০০ <u>মন্ত্রা ২০০০</u> মন্ত্রা ২০০০ <u> #9,000</u> #9,000 พริการร พริการ พริการร พริการ - MS: 000 - MS: 000 მევეთ. <u> អង្គ 1620</u> អង្គ 1620 <u>- MS: 06.00</u> - MS: 06.00 Դու 43,00.00 HS DOC HS DOC Ağı na ba Ağı na Dü Hỹ nước Hği nu ba HS DUDG Line Spark Hit Spark 175 1441 145 145 1441 17. 14 145 ottem Hulleri ter or Foco 145 145 145 1.5 IC. Lon: rud nel n na Brutpan 144+17 144 144+16 144 174+174 244 114 174+175 14 120 15 174 144 120 175 145 <u>-75</u> 175 <u>-54</u> 145 HIND HT միս Իլ Տրո MQ106.00 MQ106.00 MQ10600 MQ106.00 MQUAD: MODING MQUAD: MQ106.00 MQ(06.00 44000.00 MQ106.00 MOVID NOT MQ106.00 MQ1UN DC MQ106.00 MQ106.00 MQ106.00 MQ106.00 MQ106.00 MQ106-00 74021Um D ເຊິ່ງປະກ Un D ສະນັບຄະ aru n tu 14日 新 1544 色 1411 145 L A 1451-2 14112 1... 145 174417 175 175 175 1744176 30 150+180 175+170 ve mo perr TH, Star 175 172 172 152 30 152 172 254 25% 175 175 170 174 174 172 le o Euspar 172 172 172 175  $\mathbf{x}$ l usi dust ս Բայլ մ 1# 744 744 1# 245 24 1# 1#11 # 245 1# 1411 8 1411 2 14 245 1# i à 144 1安日 湯 245 e mo perrent Ciliar Ini, Supp 174 174 172 174 174 17. 174 15% 15% 158 1754+10 174+12 174+13 - <u>MS(1000</u> - MS(1000 - MS(10.00 - MS(10.00 Mg Du J - MS(16.20 - MS(16.20 მევი ის მ ძვები. <u>მწემი</u>ნ მევეთ. Alg: Do. Alte Do J მევეთ მ સંદર્ભ ગયા. MS: Du DO MS: Do DC MS: Do DO MS: Do D MS: DO.D. MS: DO.D. 2450 Do D1 HS: DOD. MS: Do DC Alter Du D. Alfe Du J Alter Du D. HS: DOD MSCHOOL HS: 10.0. MS: Do 2 Line State Hit Scate 1441A 1441 A 120 120 175 145 145 145 <u>-7.</u> 24 1451 A 156+16 176+12 174+12 \*\* \*\*\* HINT I 1411 8 14 145 145 14 145 145 14 145 141 8 denor Foco 115 142 1 2 4 1<del>14+17</del> 241 Longer doct no parpart 174 174+17 174+17 174+17 174 144 174+17 15 175+170 175+18 175+180 245 175+190 н ийс не н absolution and 14 14 1411 22 14° L A 14 NO NUMBER MQ/UNDC MQUADE. MQ106.00 MQ106.00 MOUNDE MQ DN DC MOUNDS MQC06 DC MQ106-00 MQ106.00 MQ106-001 ALC A C Q M MQ106-00 MQ106-00 MQ106-00 AQUAD: MQ106.00 MQ106.00 MQ106.00 74021Un U ບັບກ່ວ MQ"Un 1451 AF 15541 AL 1年1日 1年4日 1日 En - Sea 1451-26  $2u^{2}$ λu' 1451-26 1# L A 1451 # 1411 8 1451 22 145 i 22 245 15.418 175 144+164 15541751 TH, Stars 254 254 175 175+170 -55 39 115+175 174+174 175+1 174+174 1544124 30 30 e mo pe -35 174 174 158 174+175 le o Euspari 175 245 15 174+17 174+17 174+17 175 17. 175 <u>\_94</u> 1451 # 24 l ngi dust ս Բայրմ 14 1411 # 14 245 1411 # 1451-26 1451 # 145 i A 145.1 ve mo perrienti Cihor Ini, Šupija <u>। १६</u> अञ्चलकार 174+17 <u>। १९</u> . महि<u>र</u>ीक व 174+12 l⊀2+18 175+18 175+17 ժինը Դասն Altin Dur Altin Du . Addin Date անը Դուն Altin Du J ժինը Դու Alge Dis DC Mg Du D Alge Die De HS DOC Mg Du Di AS DOC HS: DO.D. AS DOC AS DOD HS DOC HS DOC Algena Di Mgi Du Du Mgi Du Du Mgi na Da Mgi tu D Mgenuos HS: Do J મહેલ્લા ગ MS: Do D HS: DOD 154+12 245 Line Stark The Scark 174+175 174+175 154+12 175+17 1451-2 175+17 Lottom Territorie 1<del>41 |</del> A 1411.4 14° 1 é den on Fina p 14 14 1# 1 A 1# i A 1# i A 141 8 1# i A 1# i A 745 745 n in Luipon 245 л Lon: rud nel 174 175+18 174 175+17 175+1 175+180 1451 # 149+1 179+17 179+12 179+17 <u>- 255</u> 1451 # dhacht Sho 145 L # MQ106.00 MQ<sup>1</sup>Un DC MQUADE MQ106.00 MOUNDE MQ10h00 MQ106.00 MQ106.00 MODINE 74021Un 00 74021Un 00 MQ106-00 74021Un 00 AND NOT MQ106.00 MQ106.00 MQ106.00 MQ10h D0 MOUTING MOUTING 74021Jn D daý Un MQ<sup>i</sup>Un ( ₩¢junt ЧQ<sup>°</sup>Un ' 4¢junt ACC'UN MQ<sup>r</sup>Un D чфunu isy' Uni U MQ(Unit ACC'SE 1451 (# 1454) # 1451 2 1451 2 1411 1411.4 1411 1411.8 145.1 2 145.1 2 145.1 2 145 i A 1451 22 1451-2 1451 # 145 ( 2 R 17541AL 17541AL Th. Stars 1544126 1544176 1944年1月 1944年1月 1794175 174+174 179+17 35  $\mathcal{H}_{\mathcal{F}}$ 1754170  $\mathcal{H}_{\mathcal{F}}$ 1754175 175+170 175+186 179+17 259 He mo be " 175+175 174+174 1594175 174+17 174+175 ele o Eutport 155 174413 174417 158 175 174+17 15 - 255 1451 - 24 178 145+18 1451-2 175418 175+11 1451 22 1451 22 28 ngi dusl ս քարմ 145 i la 145 L A 1451.2 1451 22 145 i 22 145 i 14 ve mo perrenti Ciher Ini, Supre 175+18 175+170 154 (45): 160 175+18 - 259 2459: 0 m 2 179+17 179+13 Alte Du J Adds Durit Adds Doub Addin David Altin David Adds Dur Alte Du . Alte Data Alte Du . etti da i Alte Du . Addin David Adds Dia J Adds David Alte Du સંજી તેમ ક Alte Du-Altin Du J Alfa Du. HS: To His In Hỹ Du 45; Du Algi Du Algi Du મેટુંકુ ૧૫. HS: Dol MS: Do Adde Du Hie Do Alg: Do MS: Do. MS: Do MS: Do dife Dan J dist Du સંઈ, ઉપ Und Stars Hit Scars 1451.2 1451-22 1451.8 175+170 1451-22 175+18 1451 # 175+176 179+11 <u>곳</u>, - 25) 141 # 159412 1694176 1451-22 245 <u>-70</u> 245 <u>\_\_\_\_\_</u> 1451\_# 245 <u>\_\_\_\_\_</u> 1451\_# 1421 145.1 2 145.1 2 145.1 22 le núm i 145.1 22 1# i à 1451.2 1451 2 1451 - 2 145 L A den on Focia 141 - 33 141 1 2 1年 日 л Lon: rud nel In a putper 15 175+175 159 175+17 15% 1494175 1494175 1494175 1494175 155 1594175 1454176 1451-22 155 175+17 145+175 1451 - 22 1554175 175+16 <u>\_355</u> 1451 # <u>\_\_\_\_\_</u> 1451\_# ......... 1451 # 451 2 discht Sau 24021376-001 NO NUMBER 7402136-001 7402136-001 MQ106.001 7402136-001 MQ106-00 7402101000 74021U 6-001 7402106-001 7402136-001 740210 h 001 MQ106.00 74021U 6 001 MQ106.00 MQ106-001 74021Un 001 74021Un 001 MQ106-001 74021316-001 740213.6.3 MQC In C MQ1Up D ranste de Helm おいじゅつ 74 Q10 h 00 - MQ1Un 00 村公(しかつ) MQ106-00 おないかい 7400°U n (0) 74021Un (0) MQ(Un 0) MQ106.00 MQ106.00 MQ106.00 7400°U n 00 7402°U n (0) 7402°U n (0) 74021U n U 2400°U n D1 74021U n 100 7402°U n D

| Project: | AmDeck Design Guide | Prep |
|----------|---------------------|------|
| Client:  | Amvic, Inc.         | Chec |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea   | l Load                    | =   | 1                                  | 5 psf  |                           |                            |                            |                               |                            |                          |                            |                         |                            |                          |                                    |                          |  |                             |                            |                          |                         |                            |                            |
|-------|---------------------------|---|------------------------------------|--|---------------------------|----------------------------|----------------------------|-------------------------------|----------------------------|--------------------------|----------------------------|-------------------------|----------------------------|--------------------------|------------------------------------|--------------------------|--|-----------------------------|----------------------------|--------------------------|-------------------------|----------------------------|----------------------------|
| s     |                           | <u>36</u> (C)                                     |                                    | 1 - STD - 1:<br>DZ                           |                           | 07                         | 1 - 50 D - 16              | -<br>~8                       | 07                         | 1 - V D - 18             | ¥8                         | 07                      | 1 - 70 D - 16              | :<br>                    | 07                                 | 1 -30 D - 18             | -<br>  | 07                          | 1 -00 D -15                | ¥8                       | 07                      | 1 -100 04- 5               |                            |
| 20.00 | =                         | Ln: Stars   | 1 14                               | 174  | 174                       | 14                         | 174                        | 174                           | 14                         | 174                      | 174                        | 14                      | 174                        | 174                      | 1#                                 | 174                      | 174  | 1#                          | 174                        | 174                      | 14                      | 174                        | 154                        |
|       | He mo be the              | Fater on Foculars                                 | 14 <sup>1</sup><br>14 <sup>1</sup> | 14<br>14                                     | 14)<br>14)                | 14                         | 14                         | 14<br>14                      | 14                         | 14<br>14                 | 14:<br>14:                 | · 14·<br>14·            | 14<br>14                   | 14<br>14                 | 14 <sup>-</sup><br>14 <sup>-</sup> | 14                       | 14:<br>14:                                   | 1+<br>1+                    | 14<br>14                   | 14:<br>14:               | 14                      | 14                         | 14<br>14                   |
| IC.   | Lon: r.d no               | d 15 m Buspan<br>et Ciliar Fri Signar             | 114                                | 174  | 174                       | 114                        | 174                        | 174<br>144                    | 114                        | 174                      | 174                        | 114                     | 174                        | 144                      | 174                                | 144                      | 174  | 144                         | 174                        | 174                      | 114                     | 174                        | 114                        |
|       |                           | S a:  | MQ106.00                           | MQ106.00                                     | MQ106.00                  | MQ10h 00                   | MOUNDE                     | 400,0 m 00.                   | MQCUNDO                    | MOUNDE                   | M201000                    | MQC0600                 | M2016.00                   | MQ(Jn 00                 | M2010.00                           | MQ106.00                 | MQ106.00                                     | 4475, 1 M D.C.              | MQ106.00                   | MQ106.00                 | 74021Un 00              | M2(10.00                   | MQ(0600                    |
|       | Fa                        | reter e e ent.<br>Foir Scaria                     | MQ106.00<br>442                    | MQ106.00<br>445                              | - MQ10600<br>141          | - MQ(Un 00<br>141          | MQ10600<br>14              | 4000n00<br>14                 | - MQ10600<br>141           | 7402101000<br>145        | 14021Um 100<br>140         | NQ10600<br>14           | MQ106.00<br>442            | 4000000<br>140           | 44Q106-00<br>145                   | - MQ106-00<br>145        | MQ10m00<br>144                               | 44Q1Um100<br>145            | 14000 m 000                | 4021Un 00<br>442         | MQ10600<br>145          | MQ106.00<br>144            | MQ106.00<br>141            |
|       | He mo serre               | ert 14. Stars                                     | 175                                | 174  | 174                       | 174                        | 174                        | 174                           | 174                        | 174                      | 174                        | 174                     | 174                        | 174                      | 175                                | 174                      | 174  | 155                         | 174                        | 174                      | 145                     | 174                        | 174                        |
| 1-    | L ngi alas                |   | 114                                | 144  | 144                       | 14                         | 144                        | 144                           | 144                        | 144                      | 144                        | 144                     | 144                        | 14                       | 144                                | 144                      | 144  | 144                         | 14                         | 144                      | 144                     | 145                        | 144                        |
|       | He mo se tre              | Cifer Int. Support<br>Star                        | 154                                | 154<br>24(5):00:00                           | 174                       | 154<br>24(5): 0 a .00      | 154<br>24(5): 0 a 20       | 154<br>24(5):00:00            | 154<br>2459,000,00         | 154<br>2459 Da 20        | 154<br>24(5):00:00         | 154<br>2456 Doi 20      | 154<br>2459, 0 a 20        | 154<br>24(5): 0 a 20     | 154<br>24(5):00:00                 | 154<br>24(5):00:00       | 154<br>2459 Doi 20                           | 154<br>24(5): 0 a .0 0      | 154<br>24(5):00:00         | 154<br>2459, Doi 20      | 154<br>24(5):00:00      | 174<br>2450 Dat 20         | 154<br>Addie Die Die       |
|       |                           | жи-н Тни  | MS: Do DO                          | - MSCOUDE                                    | MS 16.20                  | Mgr Du Dù                  | - MS(1)(20                 | - MSCONDS                     | MS: 00.00                  | Marchine                 | Marchine                   | MS: Do DO               | - MSCOUDE                  | - MSCONDC                | Mg Du Dù                           | - MS 00.00               | - MSC DU DU                                  | MS: DUDC                    | - MS DUDG                  | - MS 00.00               | - MS(1)(1)              | MS 2020                    | Mgr Du Dù                  |
|       | Lottem<br>Te n'interne    | et hi Scars                                       | 145                                | 144  | 14                        | 145                        | 14                         | 14                            | 145                        | 144                      | 14                         | 145                     | 144                        | 14                       | 145                                | 144                      | 144  | 145                         | 14                         | 144                      | <br>74                  | 14                         | 144                        |
| 14    | 1                         | Folenor Focipida<br>1 Pinti Superi                | 14                                 | 141  | 14                        | 14:                        | 14                         | 14                            | 14                         | 14                       | 14                         | 14                      | 14                         | 14                       | 14                                 | 14                       | 14   | 14                          | 14                         | 14                       | 14                      | 14                         | 14                         |
|       | Tenin ere                 | et Ciliertet Sijone                               | 14                                 | 14   | 14                        | 14                         | 14                         | 14                            | 14                         | 145                      | 14                         | 144                     | 14                         | 14                       | 14                                 | 14                       | 145  | 14                          | 145                        | 145                      | 14                      | 14                         | 145                        |
|       | F9.                       | ISI ac<br>receive no                              | MQ10600<br>MQ10600                 | - MQ(UND)<br>- MQ(UND)                       | - MQ10600<br>- MQ10600    | MQ(Uni0)<br>MQ(Uni0)       | MQ(Uni0)<br>MQ(Uni0)       | <ul> <li>村公(16.00)</li> </ul> | MQ10600<br>MQ10600         | MQ(Un 00<br>MQ(Un 00     | MQ(UniO)<br>MQ(UniO)       | MQ(0600)<br>MQ(0600)    | MQ136.00<br>MQ136.00       | AQ(0600)<br>AQ(0600)     | 村公(Ja 0)<br>村公(Ja 0)               | - MQ(0600)<br>- MQ(0600) | - MQ(Uni0)<br>- MQ(Uni0)                     | 村公(Jin 00)<br>村公(Jin 00)    | 料の(Ja 00)<br>料の(Ja 00)     | MQ(Uni0)<br>MQ(Uni0)     | 村公(Ja 00)<br>村公(Ja 00)  | 料公(Ja 00)<br>料公(Ja 00)     | MQ(0600)<br>MQ(0600)       |
|       | =                         | For Scars   | 145                                | 14   | 14                        | 145                        | 141                        | 14                            | 24°<br>34                  | 14                       | 14                         | 74°<br>3%               | 141                        | 141                      | 244<br>146                         | 145                      | 145  | 141 F                       | 145                        | 145                      | 1411 24                 | 145                        | 145                        |
|       | He mo de tre              | Lefe o Europario                                  | 165                                | 144  | 144                       | 175<br>174                 | 144                        | 144                           | -75-                       | 145                      | 144                        | 144                     | 144                        | 144                      | 146                                | 170<br>174               | 144  | 145                         | 142                        | 174                      | 174+174<br>174          | 145                        | 16<br>16                   |
| 1F    | l ngi dus<br>se mo se rre | al fini Encipia<br>Sti Cihorini, Support          | 141                                | 145  | 145                       | 141                        | 145                        | 145                           | 141                        | 145                      | 145                        | 141                     | 145                        | 145                      | 14                                 | 241                      | 145  | 141                         | 24°<br>156                 | 249<br>150               | 141                     | 24°<br>176                 | 245                        |
|       |                           | Sat   | MS: Do DC                          | - Mg( 00.00                                  | MSCHOOL                   | MS: 00.00                  | Algebrach                  | MS(Dub)                       | MS: 10.20                  | Martinos                 | Martinos                   | A8.000                  | A8.000                     | 45,0000                  | M2: 00.00                          | - MS( 00.00              | - MS: 00.00                                  | Algebrach.                  | Mg(00.00                   | ASCHOLDS.                | MS: 10.00               | Martinac                   | Mg Du Dù                   |
| ł     | Lottem                    | und Stars   | - Mgi Du Du<br>- 34                | মগ্র ১৯০০<br>চে                              | মন্ত্র ২০০০০<br>দেহ       | - अर्थुः २७,२७<br>- २९     | MS: 00.00<br>150           | মন্ত্র ২০০০<br>দেহ            | 24(3): Dia 20.<br>1524175  | - अर्थुः २७ २०<br>१९२    | - अर्थुः २७,२७<br>। इट     | 843; 0 a 00.<br>174+174 | - अर्थुः २७,२२<br>१९२      | 145                      | 245; 0 a 00<br>159405              | মন্ত্রি ৭৯.৫৫<br>প্রহ    | MS: Do DO<br>INC                             | 20                          | 155                        | - अङ्गि २०.२३<br>१९२     | 20                      | 2429 To 202<br>244         | 274                        |
|       | THOM: HTH                 | et ht Scars<br>Faterior Frografis                 | 24 <sup>0</sup>                    | 145  | 14<br>14                  | 74°<br>14°                 | 145                        | 14<br>14                      | 141 #                      | 145                      | 14<br>14                   | 141 14                  | 145                        | 145                      | 141 14                             | 145                      | 145  | 245                         | 145                        | 145                      | 245                     | 24                         | 145                        |
| IL.   |                           | hogene on The Is                                  | 154                                | 274  | 175                       | 174                        | -34                        | 175                           | 174                        | 254                      | 274                        | 174                     | 274                        | -74                      | 175                                | 174+17                   | 274  | 174                         | 174+174                    | 174+174                  | 154                     | 174+174                    | 174+174                    |
|       | 28.000.8008               | Ciliarity Space<br>Sac                            | 144<br>M-2010-000                  | 14/<br>MQ1Un 00                              | 145<br>MQ136100           | 14*<br>#12*3.50            | 1#<br>MQ1Jn 00             | 145<br>MQ106100               | 141<br>MQ106-00            | 144<br>745210 n 100      | 145<br>M 2010 n 001        | 144<br>MQ106100         | 1#<br>MQ10600              | 241<br>7421Un 00         | 141<br>MQ106100                    | 144<br>1442(Uni 00)      | 242<br>1741200-00                            | 14 <sup>0</sup><br>#1200.00 | 1#<br>MQ10n001             | 244<br>MIQ1Un UC         | 144<br>#4021016-001     | 144<br>#12010.000          | 144 1 #<br>#4021Un 1001    |
|       | - FA -                    | rste pe ve m                                      | MOTONOC                            | MQ(UnIO)<br>145                              | MQ106100<br>145           | MOTING                     | MQ106.00<br>145            | MQ106100<br>145               | MOTONOC                    | MQ106.00<br>145          | 740210 n 00<br>145         | 740213.6-00<br>245      | 44021Un 00<br>145          | MQ106.00<br>145          | 74021Un 00<br>240                  | MQ10600                  | 74021Un 00                                   | MOTINIC                     | 74021016-000<br>244        | 74021316-001<br>244      | MOTORIO                 | MQ106.00                   | 740210 n 00                |
|       | He mo perre               |   | 1411年<br>1444年8月                   | 145  | 140                       | 1年11年<br>1444年2月           | 145                        | 140                           | 141 H<br>1544 M            | 145                      | 145                        | ÷.                      | 145                        | 145                      | ÷.                                 | 34                       | 175  | 1451 AF<br>15541 AL         | 254                        | 254                      | 1451 AF<br>1554 N       | 34                         | 344                        |
| x     | L usi dus                 | Leic o Euspario<br>d' n Enspai                    | 144                                | 141.2  | 24                        | 144                        | 140                        | 145                           | 144                        | 141 8                    | 24                         | 144                     | 141.26                     | 14118                    | 194                                | 245                      | 140<br>1401 #                                | 194                         | 245                        | 245                      | 144                     | - 1451 AF                  | 244                        |
|       |                           | Charlet, Support                                  | 154                                | 154  | 254<br>254<br>255 Do Do   | 154                        | 154                        |                               | 154<br>245:00:00           | 154<br>2455 Da DO        |                            | 175                     | 154<br>2459: 0 a 20        | 284<br>285, 0 a 20       | 154<br>245: 0 a 00                 | 154<br>265 Da 20         | 154+155<br>Alg: 0 a 20                       | 174<br>275 Da 20            | 154<br>2456 Doi 20         | 154+155                  | 154<br>- Afric Dia Dia  | 174                        | 154+164<br>Alter Die 20    |
|       |                           | istari<br>Stati - En of                           | MS: 00.00                          | - 24 <u>56 00000</u><br>- 24 <u>56 00000</u> | - MS 0000                 | - MS: 00.00                | - MS(10000                 | - MS(10.00                    | - MS(10000                 | - HS 16.20               |                            | Algebrack               |                            | - MS(10000               | - Alg: 10.00                       | - MS(10.00               | - Aligo (10.00)<br>- Aligo (10.00)           | - MS: 00.00                 | - MS 10.00                 | - MS(0)(0)<br>- MS(0)(0) | MS DOD                  | - MS 16.00                 | - A429 00 00               |
|       | Lottem<br>De númeroe      | Lini Stats<br>et El Stats                         | - 25                               | 145  | 145                       | 275<br>245                 | 145                        | 145                           | 1451 #                     | 244                      | 252                        | 1451 26                 | 244                        | 244                      | 249                                | 1644 AL                  | 174+174                                      | 245                         | 1441 A                     | 144+175                  | 1454122                 | 1441 A                     | 1444184                    |
|       |                           | Faler or Focipiels                                | 14                                 | 145  | 145                       | 14                         | 145                        | 145                           | 14                         | 145                      | 145                        | 141                     | 245                        | 24                       | 14                                 | 245                      | 244  | 14                          | 245                        | 244                      | 141                     | 1411 26                    | 1411 86                    |
|       | Lon: r. din:              | ti 1º no Buspari<br>et Citiva Et Signari          | 114                                | 14416  | 144+164                   | 144                        | 144174                     | 174+174<br>244                | 144                        |                          | 14418                      | 144                     | 14                         | 255<br>1411 #            | 144                                | 145+190                  | <br>245                                      | 174                         | 1454130                    | 175+170<br>245           | 174                     |                            | 145+180<br>1451-24         |
|       | -                         | Siac  | MQ106.00<br>MQ106.00               | <ul> <li>MQCUNDC</li> <li>MQCUNDC</li> </ul> | MQ10600<br>MQ10600        | MQ106.00<br>MQ106.00       | MQ13630<br>MQ13630         | MQ10600<br>MQ10600            | MQ10600<br>MQ10600         | MQ(0600)<br>MQ(0600)     | 74021016-00<br>74021016-00 | MQ136.00<br>MQ136.00    | MQ106.00<br>MQ106.00       | MQ10600<br>MQ10600       | 740210 n 00<br>740210 n 00         | - MQ10600<br>- MQ10600   | <ul> <li>MQCUNDC</li> <li>MQCUNDC</li> </ul> | MQ2Un 00<br>MQ2Un 00        | MQ106.00<br>MQ106.00       | MQ106.00<br>MQ106.00     | MQ136.00                | MQ106.00<br>MQ106.00       | #4021Un 001<br>#4021Un 001 |
|       | =                         | FurState  | 1451.46                            | 74   | 241                       | 1451.46                    | 741                        | 244                           | 245                        | 1411 26                  | 1411 #                     | 245                     | 1411 22                    | 1411 #                   | 1451 22                            | 1411 #                   | 1411 #                                       | 1451 22                     | 245                        | 245                      | 1451 22                 | 245                        | 245                        |
|       | He mo be the              | Enterior Bulgorio                                 | 175+190                            | -944<br>-944                                 | 274<br>274                | 175+170                    | -74<br>-74                 | 274<br>274                    | 255<br>154                 | 1754175.<br>276          | 1994<br>1994               | 249<br>144              | 1724175                    | 1994<br>1994             | 145+174<br>144                     | 1744174                  | 1994年1995<br>1994年1995                       | 14541741                    | 175<br>1764175             | 1994年1月2日<br>1994年1月2日   | 14941741                | 275<br>17641 (5.           | 1544154                    |
| 24    | I ngi dus                 |   | 14                                 | 245  | 245<br>154+155            | 14                         | 245                        | 245<br>154+15                 | 141                        | 1451 AF                  | 245                        | 14                      | 1451 #                     | 1451.26                  | 14:                                | 245                      | 145 i #                                      | 14                          | 245<br>174                 | 245                      | 141                     | 1451-22                    | 245                        |
|       |                           | San Cihor H. Support                              | Alg: Du DU                         | MSCHOOL                                      | Alg: Do DO                | Alg: Du DC                 | Martine                    | Algebracht                    | Alg: Du DU                 | Alg: Do DO               | - Mg( 00.00                | Alg: Du DU              | Mg Du Du                   | - MS(10.00               | - MS- 20-20                        | - MSI 00.00              | 1594180<br>- Algenninne                      | Algebra Di                  | Mg Du DU                   | 1554180<br>2455:00:00    | Alg: Du Dù              | Mg Du Du                   | - 200<br>- Mg: Du DU       |
|       | Lottem                    | und Stars   | - MS: 06-00<br>                    | - 24(5): Dia 20.<br>15541 (5):               | - A459 Dia 200<br>1564 CM | - Algebrack<br>Re          | - Mg; Du Dù<br>15441 (5    | - 2459 Dia 201<br>1564 Dia    | - Alge Dia 20.<br>1594155  | - MS: 06.00<br>159405    | - MS: 06-00<br>154405      | 2439 Doi 201<br>1594155 | - Mgi Du Du<br>Mgi Du Du   | - MS: 06.00<br>- MS:     | - 서영: 0 a 00<br>15941년             | - MS: 06.00<br>- MS:     | - মন্ত্রা ১৯০০<br>- ১৯০                      | - 24일: Dia 20<br>15941년(    | - MS: 16-20<br>1554180     | - MS: 06.00<br>1554180   | - MS: 06.00<br>1594155  | କାର୍ଥ୍ୟ ମହାଯାଇ<br>କାରକାର୍ଷ | - Alge Dia 201<br>1954180  |
|       | THO'D' H''H               | et ht Scars                                       | 245                                | 1411.47                                      | 241                       | 245                        | 1411.45                    | 241                           | 1451 #                     | 141 F                    | 141 F                      | 1451 #                  | 245                        | 14118                    | 1451 #                             | 245<br>141 #             | 141 F  | 1451 #                      | 1451 AF<br>245             | 245                      | 1451 22                 | 1451 245                   | 245                        |
| ٤.    | Loninidan                 | Faterior Focipiets<br>1 1 <sup>45</sup> no Gaupan | 144                                | 170+170                                      | 170+170                   | 144                        | 744<br>1754-176            | 740<br>17041 M                | 144                        | 141 AF<br>259            | 175+170                    | 174                     | 255                        | 289                      | 144                                | 1491.04                  | 14114  | 144                         | 740<br>14941 #1            | 790<br>1759-1751         | 144                     | 14541.04                   | 175+175                    |
|       | Tenin ere                 | Clineth Spore                                     | 141<br>MQ106100                    | 14)<br>MQCUNDC                               | 245<br>MQ10600            | 141<br>5100106-00          | 14)<br>MQ106-00            | 245<br>242136-00              | 141<br>MQ136-301           | 14)<br>MQ106-00          | 1451 #<br>MQ106100         | 14)<br>5100106-00       | 14)<br>MQ106100            | 145) #<br>MQ10n00        | 14)<br>MQ106-00                    | 141<br>MQ136100          | 245<br>245 (10 00)                           | 141<br>MQ106000             | 14)<br>MQ106101            | 245<br>740(10)00         | 141<br>MQ136100         | 144<br>M-2010-000          | 1451 #2<br>MQ136 00        |
|       | ra '                      | rste pe veint.                                    | MQ106.00                           | MQ10600                                      | A4021076-001              | MQ106.00                   | MQUADT.                    | - MQ106-00                    | MQ106.00                   | - MQ106.00               | M200000                    | MQ106.00                | - 74 QCU 6 DC              | MO(UND)                  | MOTON OT                           | - MQ106-00               | MOTON DC                                     | - 7400 Uni00                | - MQ106.00                 | M2(16.00                 | - 74 Q U 6 D 7          | MQ106.00                   | M201000                    |
|       | He mo per te              | For Scars<br>21 14, Scars                         | 1451 AF<br>15541 M                 | 245<br>370                                   | 245<br>15441 M            | 145 (1727)<br>1559 (187    | 245<br>370                 | 245<br>15441 M                | 145 C 22<br>159 C 25       | 245<br>370               | 245<br>154+165             | 145 L 22<br>145 H 24    | 1451 AF<br>15041 M         | 145) #<br>               | 145 (172)<br>1554 (151             | 1451 AF<br>15541 AL      | 1451 X<br>372                                | 1451 (#<br>1554) M          | 245<br>255                 | 245<br>155+160           | 145 (1927)<br>155 - 155 | 245<br>376                 | 245                        |
| ~     |                           | Lefe o Eutporto                                   | 174                                | 171+17                                       | 15441.54                  | 154                        | 174+175                    | 1544154                       | 154                        | 174+174                  | 1744175                    | 174                     | 30                         | 35                       | 154                                | 35                       | 36   | 174                         | 175+170                    | 175+170                  | 154                     | 175+170                    | 175+170                    |
| ~     | l ngi dha<br>se mo ce rre | al 1° n Encµnt<br>S1 Cihorin, Supcor              | 14)<br>174                         | 245<br>174                                   | 1451 AF<br>15041 N        | 14)<br>174                 | 245<br>174                 | 1451 AF<br>17541 AL           | 14)<br>174                 | 145 i 147<br>146         | 245<br>175+170             | 144                     | 145 (172<br>174            | 145 (1727)<br>259        | 14)<br>174                         | 145 i 147<br>146         | 145 (1927)<br>145 - 176                      | 14)<br>174                  | 145 i 22<br>174            | 145 (1927)<br>1759 - 175 | 144<br>174              | 145 i 22<br>174            | 145 (1927)<br>1759 - 175   |
| 1     |                           | Sar<br>Sar  | - MS(00.00)<br>- MS(00.00)         | - MS(0)+00<br>- MS(0)+00                     | - MS(00.00<br>- MS(00.00  | - MS(0)(00)<br>- MS(0)(00) | - MS(00.00)<br>- MS(00.00) | - MS(00.00<br>- MS(00.00      | - MS(00.00)<br>- MS(00.00) | - MS(00000<br>- MS(00000 | MS(00.00)<br>MS(00.00)     | MS(DalD)<br>MS(DalD)    | - MS(00.00)<br>- MS(00.00) | - MS(00.00<br>- MS(00.00 | - MS(00.00<br>- MS(00.00           | - MS(1)+20<br>- MS(1)+20 | - MS(00.00<br>- MS(00.00                     | - MS(00.00<br>- MS(00.00    | - MS(00.00)<br>- MS(00.00) | MS: Do DC<br>MS: Do DC   | MS(DalD)<br>MS(DalD)    | MS(1)+20<br>MS(1)+20       | MSC 10.00                  |
| 1     | Lottom                    | Line State  | 1554155                            |  | 30                        | 145+144                    | - <del>3</del> 5           | - 350                         | 145+144                    | 175+170                  | 175+170                    | 149+144                 | 175+170                    | 175+170                  | 149+144                            |                          | - 249  | 149+144                     | 245<br>245                 |                          | 175+174                 | 175+174                    | 149+141                    |
| 1     | Tenin ere                 | et Int Scars<br>Faterior Focipiets                | 1451 22<br>142                     | 245  | 245                       | 1451 22<br>145             | 245<br>245                 | 245<br>245                    | 1451 22<br>145             | 1451 #<br>245            | 245                        | 1451 22<br>145          | 1451 #<br>1451 #           | 145) #<br>145) #         | 1451 22<br>145                     | 245<br>1451 #            | 145) #<br>145) #                             | 1451 22<br>142              | 245                        | 245                      | 1451 22<br>145          | 145 i 22<br>245            | 245                        |
| 1 ×   | Lon: r.d no               | hogene on <sup>th</sup> i It                      | 114                                | 1494124                                      |                           | 11%                        | 175+175                    |                               | 174                        | 1494124                  | 145+144                    | 114                     | 149+164                    | 1451-22                  | 154                                | 149+144                  | 1454176                                      | 11%                         | 145+164                    | 14541761                 | 174                     | 145+154                    | 149+161                    |
| 1     |                           | et Ciliar Et Sapore<br>Sac                        | 149<br>MQ106-00                    | 149<br>- MaQ1Um D0                           | 245<br>7452136-00         |                            | 141<br>MQ106-00            | 245<br>1410/00                | 144<br>74521016-00         | 149<br>74021016-00       |                            | 144<br>MAQ106-00        |                            |                          |                                    |                          |  |                             |                            |                          | 144<br>Magrum 00        | 144<br>MaQ106-00           | 1451 #2<br>#40213.6.00     |
|       | 19.                       | rste pe Heint.                                    | - MQ106-00                         | - MQCUNDO                                    | - MQ106.00                | MQ106.00                   | - MQUADT                   | - MQ106.00                    | - MQ106.00                 | MQ106.00                 | MQ10h 00                   | MQ10600                 | MQ106100                   | AND DO                   | MQ106.00                           | - MQ10600                | - MQ(Un 00                                   | MQ106.00                    | MQ10h 00                   | MQ10h00                  | MQ106.00                | - MQ106.00                 | MQ106.00                   |

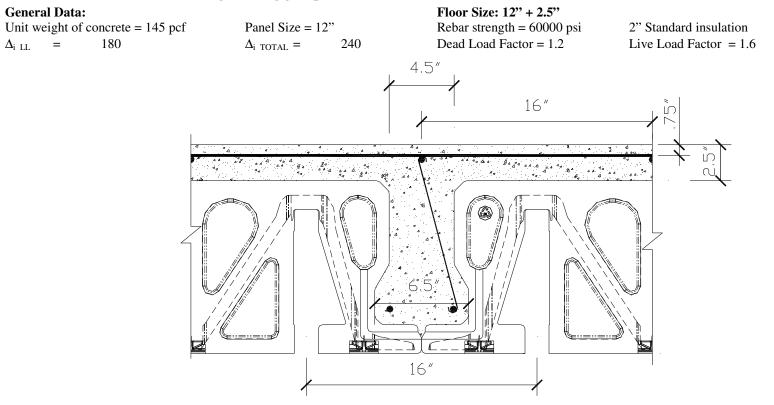
### Notes

- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.
- Blank Cells indicates that the joists are failing in deflection.

 $\Delta_{i \ LL}$ 

| Project: AmDeck Design Guide | Prepared by: Kapil     | Date: 12/07/2007 |
|------------------------------|------------------------|------------------|
| Client: Amvic, Inc.          | Checked by: Andy / Raj | Date: 12/07/2007 |

## 9.8 Table H: f'c = 4000 psi, Topping Thickness = 2.5"



**Consulting Engineers, Corp** Project: AmDeck Design Guide Client: Amvic, Inc.

Prepared by: Kapil Checked by: Andy / Raj

Date: 12/07/2007 Date: 12/07/2007

| Dead | Load                          | =  | 10                           | ) psf                        |                            |                       |                                |                                |                       |                                  |                           |                              |                              |                              |                              |                              |                              |                              |                              |                              |                              |                              |                            |
|------|-------------------------------|--|------------------------------|------------------------------|----------------------------|-----------------------|--------------------------------|--------------------------------|-----------------------|----------------------------------|---------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------------------|
|      | fc                            | 4000   |                              | LL = 50 DL = 10              | 0                          |                       | LL = 50 DL = 1                 |                                | 1                     | LL = 60 DL = 1                   |                           |                              | LL = 70 DL = 1               |                              |                              | LL=80 DL = 10                |                              |                              | LL=90 DL=10                  |                              |                              | LL=100 DL=10                 |                            |
| Span | t<br>Bottom                   | f 2.5  | SS<br>1#4                    | DS 1#4                       | MS<br>1#4                  | SS1#4                 | DS<br>1#4                      | MS<br>1#4                      | SS 1#4                | DL<br>1#4                        | MS<br>1#4                 | SS 1#4                       | DS 1#4                       | MS<br>1#4                    | SS 1#4                       | DS<br>1#4                    | MS<br>1#4                    | SS 1#4                       | DS<br>1#4                    | MS<br>1#4                    | SS 1#4                       | DS<br>1#4                    | MS<br>1#4                  |
|      | Reinforcement                 | End Spans  | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        |
|      |                               | Exterior Supports                                  | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        |
| 10   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        |
|      | Reinforcement                 | Other Int. Support                                 | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in O         | 1#4<br>C #4@12.5in.0C | 1#4<br>#4@12.5in O             | 1#4<br>C #4@12.5in O           | 1#4<br>C #4@12.5in OC | 1#4<br>#@12.5in 00               | 1#4<br>C #4@12.5in OC     | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in 00          | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in O         |
|      | Transv                        | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                | C #4@12.5in OC        | #4@12.5in O                    |                                |                       | #4@12.5in OC                     |                           | #4@12.5in OC                 | #4@12.5in 0                |
|      | Bottom                        | End Spans  | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                        |
|      | Reinforcement                 | t Int. Spans<br>Exterior Supports                  | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#4                          | 1#4                          | 1#4<br>1#4                   | 1#4                          | 1#4                          | 1#5<br>1#4                   | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                        |
| 12   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        |
|      |                               | Slab   | #4@12.5in OC                 | #4@12.5in OC                 |                            |                       |                                |                                |                       |                                  |                           | #4@12.5in OC                 | #4@12.5in OC                 |                              | #4@12.5in OC                 | #4@12.5in 0                |
|      | Bottom                        | verse Reinf.<br>End Spans                          | #4@12.5in OC<br>1#5          | #4@12.5in OC<br>1#4          | #4@12.5in O<br>1#4         | C #4@12.5in OC        | 2 #4@12.5in O<br>1#4           | C #4@12.5in O<br>1#4           | C #4@12.5in OC        | #4@12.5in OC                     | 2 #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC<br>1#5          | #4@12.5in OC<br>1#4          | #4@12.5in OC                 | #4@12.5in OC<br>1#5          | #4@12.5in OC<br>1#4          | #4@12.5in OC<br>1#4          | #4@12.5in OC<br>2#4          | #4@12.5in OC<br>1#4          | #4@12.5in O<br>1#4         |
|      | Reinforcement                 | Int. Spans   | 1#5                          | 1#4                          | 1#4                        | 1#5                   | 1#4                            | 1#4                            | 1#5                   | 1#4                              | 1#4                       | 1#5                          | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 2#4                          | 1#4                          | 1#4                        |
|      |                               | Exterior Supports                                  | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        |
| 14   | Longitudinal<br>Reinforcement | 1 <sup>st</sup> Int. Support<br>Other Int. Support | 1#4<br>1#4                   | 1#4<br>1#4                   | 1#4                        | 1#1                   | 1#1                            | 1#4                            | 1#1<br>1#4            | 1#5                              | 1#1                       | 1#1                          | 1#6<br>1#4                   | 1#1<br>1#4                   | 1#1<br>1#4                   | 1#6<br>1#4                   | 1#6                          | 1#1<br>1#4                   | 1#5<br>1#4                   | 1#5<br>1#5                   | 1#1<br>1#4                   | 1#6<br>1#4                   | 1#6<br>1#5                 |
|      | T Connor Connorn              | Slab   | #4@12.5in OC                 | #4@12.5in OC                 |                            |                       |                                |                                |                       |                                  |                           |                              | #4@12.5in OC                 |                              |                              | #4@12.5in OC                 | #4@12.5in O                |
|      |                               | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                | C #4@12.5in OC        | #4@12.5in O                    | C #4@12.5in O                  | C #4@12.5in OC        | #4@12.5in OC                     | C #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                            | 1#5<br>1#5                   | 1#4                          | 1#4                        | 1#5                   | 1#4                            | 1#4                            | 1#5<br>1#5            | 1#4                              | 1#4                       | 2#4                          | 1#4                          | 1#4                          | 2#4<br>2#4                   | 1#5<br>1#5                   | 1#5                          | 2#4<br>2#4                   | 1#5<br>1#5                   | 1#5                          | 1#4+1#5                      | 1#5                          | 1#5                        |
|      | Reinforcement                 | Exterior Supports                                  | 1#5                          | 1#4                          | 1#4                        | 1#5                   | 1#4                            | 1#4                            | 1#5                   | 1#4                              | 1#4                       | 2#4                          | 1#4                          | 1#4                          | 2#4                          | 1#5                          | 1#4                          | 2#4                          | 1#5                          | 1#4                          | 1#4+1#0                      | 1#6                          | 1#6                        |
| 16   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#5                          | 1#5                        | 1#4                   | 1#5                            | 1#5                            | 1#4                   | 1#5                              | 1#5                       | 1#4                          | 1#5                          | 1#5                          | 1#4                          | 2#4                          | 1#5                          | 1#4                          | 2#4                          | 1#5                          | 1#4                          | 2#4                          | 2#4                        |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#5                       | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 1#5                        |
|      | Transy                        | verse Reinf.                                       | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in O                | C #4@12.5in OC        | 2 #4@12.5in O<br>2 #4@12.5in O | C #4@12.5in O<br>C #4@12.5in O |                       |                                  |                           | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in 00<br>#4@12.5in 00 | #4@12.5in OC                 |                              | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in O<br>#4@12.5in O |
|      | Bottom                        | End Spans  | 2#4                          | 1#4                          | 1#4                        | 2#4                   | 1#4                            | 1#4                            | 2#4                   | 1#5                              | 1#5                       | 1#4+1#5                      | 1#5                          | 1#5                          | 1#4+1#5                      | 1#5                          | 1#5                          | 1#4+1#5                      | 1#5                          | 1#5                          | 2#5                          | 1#5                          | 1#5                        |
|      | Reinforcement                 | t Int. Spans                                       | 2#4                          | 1#4                          | 1#4                        | 2#4                   | 1#4                            | 1#4                            | 2#4                   | 1#5                              | 1#4                       | 1#4+1#5                      | 1#5                          | 1#5                          | 1#4+1#5                      | 1#5                          | 1#5                          | 1#4+1#6                      | 1#6                          | 1#5                          | 2#6                          | 1#6                          | 1#6                        |
| 18   | Longitudinal                  | Exterior Supports<br>1 <sup>st</sup> Int. Support  | 1#4                          | 1#4                          | 1#4                        | 1#4                   | 1#4                            | 1#4                            | 1#4                   | 1#4                              | 1#4                       | 1#4                          | 1#5<br>2#4                   | 1#5<br>2#4                   | 1#4                          | 1#5<br>1#4+1#5               | 1#5<br>2#4                   | 1#4                          | 1#5<br>1#4+1#5               | 1#5<br>2#4                   | 1#4                          | 1#5<br>1#4+1#5               | 1#5<br>1#4+1#5             |
| 10   | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#6                          | 1#5                        | 1#4                   | 1#6                            | 1#6                            | 1#4                   | 2#4                              | 1#6                       | 1#4                          | 2#4                          | 2#4                          | 1#4                          | 1#4                          | 2#4                          | 1#4                          | 1#4+1#0                      | 2#4                          | 1#4                          | 1#4+1#0                      | 2#4                        |
|      |                               | Slab   | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                |                       | #4@12.5in O                    | C #4@12.5in O                  |                       |                                  |                           | #4@12.5in OC                 | #4@12.5in OC                 |                              | #4@12.5in OC                 | #4@12.5in 0                |
|      |                               | verse Reinf.                                       | #4@12.5in OC<br>1#4+1#5      | #4@12.5in OC<br>1#5          | #4@12.5in O                | C #4@12.5in OC        | 2 #4@12.5in O<br>1#5           | C #4@12.5in O<br>1#5           | C #4@12.5in OC        | #4@12.5in OC                     | 2 #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 |                              | #4@12.5in OC<br>2#4          | #4@12.5in OC<br>2#4          | #4@12.5in OC<br>1#5+1#6      | #4@12.5in OC<br>2#4          | #4@12.5in OC<br>2#4          | #4@12.5in OC<br>1#5+1#6      | #4@12.5in OC                 | #4@12.5in O                |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                            | 1#4+1#5                      | 1#5                          | 1#6                        | 1#4+1#5               | 1#5                            | 1#5                            | 1#4+1#5               | 1#5                              | 1#5                       | 2#5<br>2#5                   | 1#5                          | 1#5                          | 2#5<br>2#5                   | 2#4                          | 2#4                          | 1#5+1#6                      | 2#4                          | 2#4                          | 1#5+1#6                      | 2#4                          | 2#4                        |
|      |                               | Exterior Supports                                  | 1#4                          | 1#5                          | 1#5                        | 1#4                   | 1#5                            | 1#5                            | 1#4                   | 1#5                              | 1#5                       | 1#4                          | 1#5                          | 1#5                          | 1#4                          | 1#5                          | 1#5                          | 1#4                          | 1#5                          | 1#5                          | 1#4                          | 2#4                          | 2#4                        |
| 20   | Longitudinal<br>Reinforcement | 1 <sup>st</sup> Int. Support<br>Other Int. Support | 1#4                          | 2#4                          | 2#4                        | 1#4                   | 2#4                            | 2#4                            | 1#4                   | 1#4+1#5                          | 2#4                       | 1#4                          | 1#4+1#5<br>1#4               | 1#4+1#5<br>2#4               | 1#4                          | 2#5                          | 1#4+1#5                      | 1#4                          | 2#5<br>1#4                   | 1#4+1#5                      | 1#4                          | 2#5                          | 2#5<br>1#4+1#5             |
|      | i territor cerrieri           | Slab   | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                |                       |                                |                                |                       |                                  |                           | #4@12.5in OC                 | #4@12.5in OC                 | ∠#4<br>#4@12.5in OC          | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                |
|      | Transv                        | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                |                       | #4@12.5in O                    | C #4@12.5in O                  |                       | #4@12.5in OC                     |                           | #4@12.5in OC                 | #4@12.5in O                |
|      | Bottom<br>Reinforcement       | End Spans  | 2#5<br>2#5                   | 1#5<br>1#5                   | 1#5                        | 2#5                   | 1#5                            | 1#5                            | 2#5<br>2#5            | 2#4                              | 2#4                       | 1#5+1#6<br>1#5+1#6           | 2#4<br>2#4                   | 2#4 2#4                      | 1#5+1#6<br>1#5+1#6           | 2#4                          | 2#4                          | 2#6                          | 1#4+1#5<br>1#4+1#5           | 1#4+1#5<br>2#4               | 2#6<br>2#6                   | 1#4+1#5<br>1#4+1#5           | 1#4+1#5<br>2#4             |
|      | Reinforcement                 | t Int. Spans<br>Exterior Supports                  | 2#0                          | 1#5                          | 1#5                        | 2#0                   | 1#5                            | 1#5                            | 2#0                   | 2#4                              | 1#5                       | 1#0+1#0                      | 2#4                          | 2#4                          | 1#0+1#0                      | 2#4                          | 2#4                          | 2#0                          | 2#4                          | 2#4                          | 2#0                          | 2#4                          | 2#4                        |
| 22   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#4+1#5                      | 1#4+1#5                    | 1#4                   | 1#4+1#5                        | 1#4+1#5                        | 1#4                   | 2#5                              | 1#4+1#5                   | 1#4                          | 2#5                          | 2#5                          | 1#4                          | 1#5+1#6                      | 2#5                          | 1#4                          | 1#5+1#6                      | 2#5                          | 1#4                          | 1#5+1#6                      | 1#5+1#6                    |
|      | Reinforcement                 | Other Int. Support                                 | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in OC          | 2#4<br>#4@12.5in O         | 1#4<br>C #4@12.5in OC | 1#4                            | 2#4                            | 1#4<br>C #4@12.5in OC | 1#4<br>#@12.5in 00               | 1#4+1#5<br>2 #4@12.5in.00 | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in 00          | 1#4+1#5<br>#4@12.5in OC      | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in.OC          | 1#4+1#5<br>#4@12.5in.OC      | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in OC          | 2#5<br>#4@12.5in OC          | 1#4<br>#4@12.5in.OC          | 1#4<br>#4@12.5in OC          | 2#5<br>#4@12.5in O         |
|      | Transy                        | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in 0                |                       | #4@12.5in 0                    |                                |                       |                                  |                           | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC                 | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in 0<br>#4@12.5in 0 |
|      | Bottom                        | End Spans  | 1#5+1#6                      | 2#4                          | 2#4                        | 1#5+1#6               | 2#4                            | 2#4                            | 1#5+1#6               | 2#4                              | 2#4                       | 2#6                          | 1#4+1#5                      | 1#4+1#5                      | 2#6                          | 1#4+1#5                      | 1#4+1#5                      | 1#6+1#7                      | 2#5                          | 2#5                          | 2#7                          | 2#5                          | 2#5                        |
|      | Reinforcement                 | t Int. Spans                                       | 1#5+1#6                      | 2#4                          | 1#5                        | 1#5+1#6               | 2#4                            | 1#5                            | 1#5+1#6               | 2#4                              | 2#4                       | 2#6                          | 1#4+1#5                      | 2#4                          | 2#6                          | 1#4+1#5                      | 1#4+1#5                      | 1#6+1#7                      | 2#5                          | 1#4+1#5                      | 2#7                          | 2#6                          | 1#4+1#6                    |
| 24   | Longitudinal                  | Exterior Supports<br>1 <sup>st</sup> Int. Support  | 1#4                          | 1#5<br>2#5                   | 1#5<br>1#4+1#5             | 1#4                   | 1#5<br>2#5                     | 1#5                            | 1#4                   | 2#4<br>1#5+1#6                   | 2#4                       | 1#4                          | 2#4                          | 2#4<br>1#5+1#6               | 1#4                          | 1#4+1#5<br>2#6               | 1#4+1#5<br>1#5+1#6           | 1#4                          | 1#4+1#5<br>2#6               | 1#4+1#5<br>1#5+1#6           | 1#4                          | 1#4+1#5<br>1#6+1#7           | 1#4+1#5<br>2#6             |
|      |                               |  | 1#4                          | 1#4                          | 1#4+1#5                    | 1#4                   | 1#4                            | 1#4+1#5                        | 1#4                   | 1#4                              | 1#4+1#5                   | 1#4                          | 1#4                          | 2#5                          | 1#4                          | 1#4                          | 2#5                          | 1#4                          | 1#4                          | 1#5+1#6                      | 1#4                          | 1#4                          | 1#5+1#6                    |
|      | Ta                            | Slab   | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                | C #4@12.5in OC        | #4@12.5in O                    |                                |                       | #4@12.5in 00                     | C #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in 00<br>#4@12.5in 00 | #4@12.5in OC                 |                              | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC                 | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in 0                |
|      | Bottom                        | verse Reinf.<br>End Spans                          | #4@12.5in OC<br>2#6          | #4@12.5in OC<br>1#4+1#5      | #4@12.5in O<br>1#4+1#5     | 2#6                   | 7 #4@12.5in U<br>1#4+1#5       | C #4@12.5in O<br>1#4+1#5       | 2#6                   | 2 #4@12.5in OC<br>1#4+1#6        | 2 #4@12.5in OC<br>1#4+1#5 | #4@12.5in OC                 | 2#5                          | #4@12.5in OC                 | #4@12.5in OC                 | -#4@72.5in UC<br>2#5         | #4@12.5in OC<br>2#5          | 2#7                          | 2#5                          | -#4@/12.5in/UC<br>2#5        | 2#7                          | #4@12.5in OC<br>1#5+1#6      | #4@12.5in O<br>1#5+1#6     |
|      | Reinforcement                 | t Int. Spans                                       | 2#6                          | 1#4+1#5                      | 2#4                        | 2#6                   | 1#4+1#5                        | 2#4                            | 2#6                   | 1#4+1#5                          | 1#4+1#5                   | 1#6+1#7                      | 2#5                          | 1#4+1#5                      | 2#7                          | 2#5                          | 1#4+1#5                      | 2#7                          | 2#5                          | 2#5                          | 2#7                          | 1#5+1#6                      | 2#6                        |
| 26   | Langitudia                    | Exterior Supports                                  | 1#4                          | 2#4                          | 2#4                        | 1#4                   | 2#4                            | 2#4                            | 1#4                   | 1#4+1#5                          | 1#4+1#5                   | 1#4                          | 1#4+1#5                      | 1#4+1#5                      | 1#4                          | 1#4+1#5                      | 1#4+1#5                      | 1#4                          | 2#5                          | 2#5                          | 1#4                          | 2#5                          | 2#5                        |
| 20   | Longitudinal<br>Reinforcement | 1 <sup>st</sup> Int. Support<br>Other Int. Support | 1#4                          | 1#5+1#6<br>1#4               | 2#5<br>2#5                 | 1#4                   | 1#5+1#6                        | 2#5                            | 1#4                   | 1#5+1#6                          | 1#5+1#6<br>2#5            | 1#4                          | 2#6<br>1#4                   | 1#5+1#6<br>1#5+1#6           | 1#4                          | 1#6+1#7                      | 2#6<br>1#5+1#6               | 1#4                          | 1#6+1#7<br>1#4               | 1#6+1#7<br>2#6               | 1#4                          | 2#7                          | 1#6+1#7<br>2#6             |
|      |                               | Slab   | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                | C #4@12.5in OC        | #4@12.5in O                    | C #4@12.5in O                  | C #4@12.5in OC        | #4@12.5in OC                     | C #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                |
|      | 114110                        | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                | C #4@12.5in OC        | #4@12.5in O                    | C #4@12.5in O                  | o I in log ration o o | In the resources                 |                           | #4@12.5in OC                 | #4@12.5in O                |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                            | 1#6+1#7<br>1#6+1#7           | 1#4+1#5                      | 1#4+1#5                    | 1#6+1#7               | 1#4+1#5                        | 1#4+1#5                        | 1#6+1#7               | 2#5                              | 2#5                       | 2#7                          | 2#5<br>2#5                   | 2#5                          | 2#7<br>2#7                   | 1#5+1#6<br>1#5+1#6           | 1#5+1#6<br>2#5               | 2#7                          | 1#5+1#6<br>1#5+1#6           | 1#5+1#6<br>1#5+1#6           | 2#7                          | 2#6<br>2#6                   | 2#6<br>1#6+1#6             |
|      | rkennorcement                 | Exterior Supports                                  | 1#0+1#/                      | 1#4+1#6                      | 1#4+1#6                    | 1#0+1#/               | 1#4+1#6                        | 1#4+1#6                        | 1#0+1#/               | 2#6                              | 1#4+1#5                   | 2#/                          | 2#6                          | 2#6                          | 2#/                          | 2#5                          | 2#6                          | 2#/                          | 1#0+1#0                      | 1#6+1#6                      | 2#/                          | 2#0<br>1#5+1#6               | 1#6+1#6                    |
| 28   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 2#6                          | 1#5+1#6                    | 1#4                   | 2#6                            | 1#5+1#6                        | 1#4                   | 1#6+1#7                          | 2#6                       | 1#4                          | 1#6+1#7                      | 2#6                          | 1#4                          | 2#7                          | 1#6+1#7                      | 1#4                          | 2#7                          | 2#7                          | 1#4                          | 2#7                          | 2#7                        |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4                          | 1#5+1#6<br>#4@12.5in.0     | 1#4<br>C #4@12.5in.0C | 1#4<br>#4@12.5in.0             | 1#5+1#6                        | 1#4                   | 1#4                              | 1#5+1#6                   | 1#4                          | 1#4                          | 2#6                          | 1#4<br>##@12.5in.OC          | 1#4<br>#4@12.5in.OC          | 2#6                          | 1#4<br>#4@12.5in.OC          | 1#4<br>#4@12.5in.OC          | 1#6+1#7                      | 1#4                          | 1#4                          | 1#6+1#7                    |
|      | Transs                        | Verse Reinf.                                       | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in 0<br>#4@12.5in 0 |                       | 2 #4@12.5in 0<br>#4@12.5in 0   | C #4@12.5in O<br>C #4@12.5in O |                       | 2 #4@12.5in OC<br>2 #4@12.5in OC | C #4@12.5in OC            | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in 00<br>#4@12.5in 00 | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in O<br>#4@12.5in O |
|      | Bottom                        | End Spans  | 2#7                          | 2#5                          | 2#5                        | 2#7                   | 2#5                            | 2#5                            | 2#7                   | 1#5+1#6                          | 1#5+1#6                   | 2#7                          | 1#5+1#6                      | 1#5+1#6                      | 2#7                          | 2#6                          | 2#6                          | 2#7                          | 2#6                          | 2#6                          | 2#7                          | 1#6+1#7                      | 1#6+1#7                    |
|      | Reinforcement                 | t Int. Spans                                       | 2#7                          | 2#5                          | 1#4+1#5                    | 2#7                   | 2#5                            | 1#4+1#5                        | 2#7                   | 1#5+1#6                          | 2#5                       | 2#7                          | 1#5+1#6                      | 2#5                          | 2#7                          | 2#6                          | 1#5+1#6                      | 2#7                          | 2#6                          | 1#5+1#6                      | 2#7                          | 1#6+1#7                      | 2#6                        |
| 30   | Longitudinal                  | Exterior Supports<br>1 <sup>st</sup> Int. Support  | 1#4                          | 1#4+1#5<br>1#6+1#7           | 1#4+1#5<br>2#6             | 1#4                   | 1#4+1#5                        | 1#4+1#5<br>2#6                 | 1#4                   | 2#5                              | 2#5                       | 1#4                          | 2#5                          | 2#5<br>1#6+1#7               | 1#4                          | 1#5+1#6<br>2#7               | 1#5+1#6<br>2#7               | 1#4                          | 1#5+1#6<br>2#7               | 1#5+1#6<br>2#7               | 1#4                          | 2#6<br>2#7                   | 2#6<br>2#7                 |
| 50   | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#0+1#/                      | 2#0<br>1#5+1#6             | 1#4                   | 1#6+1#/                        | 2#0<br>1#5+1#6                 | 1#4                   | 2#/                              | 2#6                       | 1#4                          | 2#/                          | 1#6+1#/                      | 1#4                          | 2#/                          | 2#/                          | 1#4                          | 2#/                          | 2#/<br>2#7                   | 1#4                          | 2#/                          | 2#/                        |
|      |                               | Slab   | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                | C #4@12.5in OC        | #4@12.5in O                    | C #4@12.5in O                  | C #4@12.5in OC        | #4@12.5in OC                     |                           | #4@12.5in OC                 | #4@12.5in O                |
|      | Transv                        | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                | C   #4@12.5in OC      | )   #4@12.5in O                | C #4@12.5in O                  | C   #4@12.5in OC      | ) #4@12.5in OC                   | C   #4@12.5in OC          | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in O                |
|      |                               |  |                              |                              |                            |                       |                                |                                |                       |                                  |                           |                              |                              |                              |                              |                              |                              |                              |                              |                              |                              |                              |                            |

Project: AmDeck Design Guide Client: Amvic, Inc.

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

15 nsf

| Dead | Load                          | =  | 14                           | 5 psf               |                              |                         |                              |                         |                     |                                |                       |                     |                     |                         |                                  |                     |                         |                              |                              |                              |                     |                      |                              |
|------|-------------------------------|--|------------------------------|---------------------|------------------------------|-------------------------|------------------------------|-------------------------|---------------------|--------------------------------|-----------------------|---------------------|---------------------|-------------------------|----------------------------------|---------------------|-------------------------|------------------------------|------------------------------|------------------------------|---------------------|----------------------|------------------------------|
|      | fc                            | 4000   |                              | LL = 50 DL = 15     |                              |                         | L = 50 DL = 15               |                         | I                   | LL = 60 DL = 1                 | 15                    | 1                   | LL = 70 DL = 1      |                         |                                  | LL=80 DL = 15       |                         |                              | LL=90 DL=15                  |                              |                     | LL=100 DL=15         |                              |
| Span | ti                            | f 2.5  | SS                           | DS                  | MS                           | SS                      | DS                           | MS                      | SS                  | DL                             | MS                    | SS                  | DS                  | MS                      | SS                               | DS                  | MS                      | SS                           | DS                           | MS                           | SS                  | DS                   | MS                           |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                            | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4<br>1#4                   | 1#4<br>1#4                   | 1#4                          | 1#4                 | 1#4                  | 1#4<br>1#4                   |
|      | rteiniorcentent               | Exterior Supports                                  | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4                          | 1#4                          | 1#4                          | 1#4                 | 1#4                  | 1#4                          |
| 10   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4                          | 1#4                          | 1#4                          | 1#4                 | 1#4                  | 1#4                          |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4                          | 1#4                          | 1#4                          | 1#4                 | 1#4                  | 1#4                          |
|      |                               | Slab   | #4@12.5in OC                 |                     | #4@12.5in O                  | C #4@12.5in OC ;        | #4@12.5in OC                 |                         |                     |                                |                       | #4@12.5in OC        |                     |                         | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      |                               | verse Reinf.                                       | #4@12.5in OC<br>1#4          | #4@12.5in OC        | #4@12.5in O                  | C #4@12.5in OC :<br>1#4 | #4@12.5in OC<br>1#4          | #4@12.5in OC            | #4@12.5in O         | C #4@12.5in O(<br>1#4          | C #4@12.5in OC        |                     | #4@12.5in O0        |                         |                                  | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC<br>1#4          | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC<br>1#4          |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                            | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#5                              | 1#4                 | 1#4                     | 1#5                          | 1#4                          | 1#4                          | 1#5                 | 1#4                  | 1#4                          |
|      | Reinforcentent                | Exterior Supports                                  | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4                          | 1#4                          | 1#4                          | 1#4                 | 1#4                  | 1#4                          |
| 12   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4                          | 1#4                          | 1#4                          | 1#4                 | 1#5                  | 1#4                          |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4                          | 1#4                          | 1#4                          | 1#4                 | 1#4                  | 1#4                          |
|      |                               | Slab   | #4@12.5in OC                 |                     | #4@12.5in O                  |                         |                              | #4@12.5in OC            |                     |                                |                       |                     |                     |                         |                                  | #4@12.5in OC        | #4@12.5in OC            |                              | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      | Bottom                        | verse Reinf.<br>End Spans                          | #4@12.5in OC<br>1#5          | #4@12.5in OC        | #4@12.5in O                  | C #4@12.5in OC ;        | #4@12.5in OC                 | #4@12.5in OC            | #4@12.5in O         | C #4@12.5in O                  | C #4@12.5in OC        | #4@12.5in OC        | #4@12.5in O         | 2 #4@12.5in OC          | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC<br>1#4          | #4@12.5in OC<br>1#4          | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      | Reinforcement                 | Int. Spans   | 1#5                          | 1#4                 | 1#4                          | 1#5                     | 1#4                          | 1#4                     | 1#5                 | 1#4                            | 1#4                   | 1#5                 | 1#4                 | 1#4                     | 1#5                              | 1#4                 | 1#4                     | 1#5                          | 1#4                          | 1#4                          | 2#4                 | 1#4                  | 1#4                          |
|      |                               | Exterior Supports                                  | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4                          | 1#4                          | 1#4                          | 1#4                 | 1#4                  | 1#4                          |
| 14   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#1                          | 1#1                 | 1#1                          | 1#1                     | 1#1                          | 1#1                     | 1#1                 | 1#6                            | 1#1                   | 1#1                 | 1#6                 | 1#6                     | 1#1                              | 1#6                 | 1#5                     | 1#1                          | 1#5                          | 1#5                          | 1#4                 | 1#6                  | 1#6                          |
|      | Reinforcement                 | Other Int. Support                                 | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in.OC | 1#4<br>#4@12.5in 00          | 1#4<br>C #4@125inOC :   | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in OC     | 1#4                 | 1#4                            | 1#4<br>C #4@12.5in.00 | 1#4<br>#4@12.5in OC | 1#4<br>#4@12.5in 00 | 1#4                     | 1#4                              | 1#4<br>#4@12.5in OC | 1#5<br>#4@12.5in OC     | 1#4<br>#4@12.5in OC          | 1#4<br>#4/0/12.5in.OC        | 1#5                          | 1#4                 | 1#4<br>#4@125in.OC   | 1#5<br>#4@12.5in OC          |
|      | Tranes                        | verse Reinf.                                       | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC        | #4@12.5in U                  |                         | #4@12.5in UC<br>#4@12.5in OC | #4@12.5in UC            | #4@12.5in O         |                                |                       | #4@12.5in UC        | #4@12.5in U         | #4@12.5in OC            | #4@12.5in OC                     | #4@12.5in UC        | #4@12.5in OC            | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in UC                 | #4@12.5in UC        | #4@12.5in UC         | #4@12.5in OC<br>#4@12.5in OC |
|      | Bottom                        | End Spans  | 1#5                          | 1#4                 | 1#4                          | 1#5                     | 1#4                          | 1#4                     | 2#4                 | 1#4                            | 1#4                   | 2#4                 | 1#4                 | 1#4                     | 2#4                              | 1#5                 | 1#5                     | 1#4+1#5                      | 1#5                          | 1#5                          | 1#4+1#5             | 1#5                  | 1#5                          |
|      | Reinforcement                 | Int. Spans   | 1#6                          | 1#4                 | 1#4                          | 1#6                     | 1#4                          | 1#4                     | 2#4                 | 1#4                            | 1#4                   | 2#4                 | 1#4                 | 1#4                     | 2#4                              | 1#5                 | 1#4                     | 1#4+1#5                      | 1#5                          | 1#4                          | 1#4+1#5             | 1#6                  | 1#6                          |
| 16   |                               | Exterior Supports                                  | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4                          | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#4                 | 1#4                     | 1#4                              | 1#4                 | 1#4                     | 1#4                          | 1#4                          | 1#4                          | 1#4                 | 1#6                  | 1#6                          |
| 16   | Longitudinal<br>Reinforcement | 1 <sup>st</sup> Int. Support<br>Other Int. Support | 1#4                          | 1#5                 | 1#5                          | 1#4                     | 1#6                          | 1#5                     | 1#4                 | 1#5                            | 1#5                   | 1#4                 | 1#5                 | 1#5                     | 1#4                              | 2#4                 | 1#5<br>1#5              | 1#4                          | 2#4                          | 2#4                          | 1#4                 | 2#4                  | 2#4                          |
|      | Reinforcement                 | Slah   | #4@12.5in OC                 |                     | #4@12.5in O                  |                         | #4@12.5in OC                 |                         |                     |                                |                       |                     |                     |                         |                                  | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | 1#4<br>#4@12.5in OC          | #4@12.5in OC                 | #4@12.5in OC        | 1#4<br>#4@012.5in OC | #4@12.5in OC                 |
|      | Transv                        | verse Reinf.                                       | #4@12.5in OC                 |                     |                              |                         |                              | #4@12.5in OC            |                     |                                |                       |                     |                     |                         |                                  |                     | #4@12.5in OC            |                              |                              | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      | Bottom                        | End Spans  | 2#4                          | 1#5                 | 1#5                          | 2#4                     | 1#5                          | 1#5                     | 1#4+1#5             | 1#5                            | 1#5                   | 1#4+1#5             | 1#5                 | 1#5                     | 1#4+1#5                          | 1#5                 | 1#5                     | 2#5                          | 1#5                          | 1#5                          | 2#5                 | 1#5                  | 1#5                          |
|      | Reinforcement                 | Int. Spans   | 2#4                          | 1#6                 | 1#4                          | 2#4                     | 1#6                          | 1#4                     | 1#4+1#5             | 1#6                            | 1#4                   | 1#4+1#5             | 1#5                 | 1#6                     | 1#4+1#5                          | 1#6                 | 1#5                     | 2#6                          | 1#5                          | 1#6                          | 2#6                 | 1#6                  | 1#6                          |
| 18   | Longitudinal                  | Exterior Supports<br>1 <sup>st</sup> Int. Support  | 1#4                          | 1#4                 | 1#4                          | 1#4                     | 1#4<br>2#4                   | 1#4                     | 1#4                 | 1#4                            | 1#4                   | 1#4                 | 1#5<br>2#4          | 1#5                     | 1#4                              | 1#5<br>1#4+1#5      | 1#5<br>2#4              | 1#4                          | 1#6<br>1#4+1#6               | 1#5<br>1#4+1#5               | 1#4                 | 1#6<br>1#4+1#6       | 1#5<br>1#4+1#5               |
| 10   |                               | Other Int. Support                                 | 1#4                          | 2#4                 | 1#6                          | 1#4                     | 2#4                          | 1#6                     | 1#4                 | 2#4                            | 2#4                   | 1#4                 | 2#4                 | 2#4                     | 1#4                              | 1#4+1#6             | 2#4                     | 1#4                          | 1#4+1#6                      | 2#4                          | 1#4                 | 1#4+1#6              | 2#4                          |
|      |                               | Slab   | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in O                  |                         | #4@12.5in OC                 | #4@12.5in OC            | #4@12.5in O         |                                | C #4@12.5in OC        |                     | #4@12.5in O         |                         | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      |                               | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in O                  |                         | #4@12.5in OC                 | #4@12.5in OC            | #4@12.5in O         |                                | C #4@12.5in OC        | #4@12.5in OC        | #4@12.5in O         |                         | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      | Bottom                        | End Spans  | 1#4+1#5                      | 1#5                 | 1#5                          | 1#4+1#5                 | 1#5                          | 1#5                     | 1#4+1#5             | 1#5                            | 1#5                   | 2#5                 | 1#5                 | 1#5                     | 2#5                              | 2#4                 | 2#4                     | 1#5+1#6                      | 2#4                          | 2#4                          | 1#5+1#6             | 2#4                  | 2#4                          |
|      | Reinforcement                 | Int. Spans<br>Exterior Supports                    | 1#4+1#5                      | 1#5                 | 1#5                          | 1#4+1#5                 | 1#5                          | 1#6                     | 1#4+1#5             | 1#5                            | 1#5                   | 2#5                 | 1#5                 | 1#5                     | 2#5                              | 2#4                 | 1#5                     | 1#5+1#6                      | 2#4                          | 1#6                          | 1#5+1#6             | 2#4                  | 2#4                          |
| 20   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#4+1#6             | 2#4                          | 1#4                     | 1#4+1#5                      | 2#4                     | 1#4                 | 1#4+1#5                        | 2#4                   | 1#4                 | 1#4+1#5             | 1#4+1#5                 | 1#4                              | 2#5                 | 1#4+1#6                 | 1#4                          | 2#6                          | 2#6                          | 1#4                 | 2#5                  | 2#6                          |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4                 | 2#4                          | 1#4                     | 1#4                          | 2#4                     | 1#4                 | 1#4                            | 2#4                   | 1#4                 | 1#4                 | 2#4                     | 1#4                              | 1#4                 | 1#4+1#5                 | 1#4                          | 1#4                          | 1#4+1#5                      | 1#4                 | 1#4                  | 1#4+1#5                      |
|      |                               | Slab   | #4@12.5in OC                 |                     | #4@12.5in O                  |                         |                              | #4@12.5in OC            |                     |                                |                       |                     | #4@12.5in O         |                         | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      | Transv<br>Bottom              | verse Reinf.                                       | #4@12.5in OC<br>2#5          | #4@12.5in OC        | #4@12.5in O0<br>1#5          | C #4@12.5in OC :<br>2#5 | #4@12.5in OC<br>1#5          | #4@12.5in OC            | 2#5                 | C #4@12.5in O<br>2#4           | C #4@12.5in OC<br>2#4 | #4@12.5in OC        | #4@12.5in O0        | 2 #4@12.5in OC          | 2 #4@12.5in OC<br>1#5+1#6        | 1#4@12.5in OC       | #4@12.5in OC<br>1#4+1#5 | #4@212.5in OC                | #4@12.5in OC<br>1#4+1#5      | #4@12.5in OC<br>1#4+1#5      | #4@12.5in OC        | 1#4@12.5in OC        | 1#4@12.5in OC                |
|      | Reinforcement                 | End Spans<br>Int. Spans                            | 2#6                          | 1#5                 | 1#5                          | 2#5                     | 1#5                          | 1#5                     | 2#6                 | 2#4                            | 2#4                   | 1#5+1#6             | 2#4                 | 2#4                     | 1#5+1#6                          | 1#4+1#5             | 2#4                     | 2#6                          | 1#4+1#5                      | 2#4                          | 2#6                 | 1#4+1#5              | 1#4+1#6                      |
|      |                               | Exterior Supports                                  | 1#4                          | 1#5                 | 1#5                          | 1#4                     | 1#5                          | 1#5                     | 1#4                 | 1#5                            | 1#5                   | 1#4                 | 2#4                 | 2#4                     | 1#4                              | 2#4                 | 2#4                     | 1#4                          | 2#4                          | 2#4                          | 1#4                 | 1#4+1#6              | 1#4+1#5                      |
| 22   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#4+1#5             | 1#4+1#5                      | 1#4                     | 1#4+1#5                      | 1#4+1#5                 | 1#4                 | 2#5                            | 1#4+1#5               | 1#4                 | 2#5                 | 2#5                     | 1#4                              | 1#5+1#6             | 2#5                     | 1#4                          | 1#5+1#6                      | 1#5+1#6                      | 1#4                 | 2#6                  | 1#5+1#6                      |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4<br>#4@12.5in OC | 2#4                          | 1#4<br>C #4@12.5in OC a | 1#4<br>#4@12.5in.OC          | 2#4<br>#4@12.5in.00     | 1#4<br>#4@12.5in 00 | 1#4                            | 1#4+1#5               | 1#4<br>#4@12.5in.OC | 1#4<br>#4@12.5in.00 | 1#4+1#5<br>#4@12.5in.00 | 1#4<br>#4@12.5in.OC              | 1#4<br>#4@12.5in.OC | 2#5<br>#4@12.5in.OC     | 1#4<br>#4@12.5in.OC          | 1#4<br>#4@12.5in.OC          | 2#5<br>#4@12.5in.OC          | 1#4<br>#4@12.5in.OC | 1#4<br>#4@12.5in.OC  | 2#5<br>#4@12.5in OC          |
|      | Tranes                        | verse Reinf.                                       | #4@12.5in OC<br>#4@12.5in OC | #4@12.5in UC        | #4@12.5in 00<br>#4@12.5in 00 | C #4@12.5in UC =        | #4@12.5in UC<br>#4@12.5in OC | #4@12.5in UC            | #4@12.5in U         | C #4@12.5in O<br>C #4@12.5in O | C #4@12.5in OC        | #4@12.5in UU        | #4@12.5in UU        | 2 #4@12.5in UU          | 2 #4@12.5in UC<br>2 #4@12.5in OC | #4@12.5in UC        | #4@12.5in UC            | #4@12.5in UC                 | #4@12.5in UC                 | #4@12.5in UC<br>#4@12.5in OC | #4@12.5in UC        | #4@12.5in UC         | #4@12.5in UC<br>#4@12.5in OC |
|      | Bottom                        | End Spans  | 1#5+1#6                      | 2#4                 | 2#4                          | 1#5+1#6                 | 2#4                          | 2#4                     | 1#5+1#6             | 1#4+1#5                        | 1#4+1#5               | 2#6                 | 1#4+1#5             | 1#4+1#5                 | 1#6+1#7                          | 1#4+1#5             | 1#4+1#5                 | 1#6+1#7                      | 2#5                          | 2#5                          | 2#7                 | 2#5                  | 2#5                          |
|      | Reinforcement                 | Int. Spans   | 1#5+1#6                      | 2#4                 | 2#4                          | 1#5+1#6                 | 2#4                          | 2#4                     | 1#5+1#6             | 1#4+1#5                        | 2#4                   | 2#6                 | 1#4+1#5             | 2#4                     | 1#6+1#7                          | 1#4+1#5             | 1#4+1#5                 | 1#6+1#7                      | 2#5                          | 1#4+1#6                      | 2#7                 | 2#5                  | 1#4+1#6                      |
|      |                               | Exterior Supports                                  | 1#4                          | 2#4                 | 2#4                          | 1#4                     | 2#4                          | 2#4                     | 1#4                 | 2#4                            | 2#4                   | 1#4                 | 2#4                 | 2#4                     | 1#4                              | 1#4+1#5             | 1#4+1#5                 | 1#4                          | 1#4+1#5                      | 1#4+1#5                      | 1#4                 | 1#4+1#5              | 1#4+1#5                      |
| 24   | Longitudinal<br>Reinforcement | 1 <sup>st</sup> Int. Support<br>Other Int. Support | 1#4                          | 2#5                 | 2#5<br>1#4+1#5               | 1#4                     | 2#5                          | 2#5<br>1#4+1#5          | 1#4                 | 1#5+1#6                        | 2#5                   | 1#4                 | 1#5+1#6<br>1#4      | 1#5+1#6<br>2#5          | 1#4                              | 2#6                 | 1#5+1#6<br>1#5+1#6      | 1#4                          | 2#6<br>1#4                   | 2#6<br>1#5+1#6               | 1#4                 | 1#6+1#7              | 2#6<br>1#5+1#6               |
|      | - Combroenlent                | Slab   | 1#4<br>#4@12.5in OC          | #4@12.5in OC        | #4@12.5in O                  | 1#4<br>C #4@12.5in OC ; | 1#4<br>#4@12.5in OC          | 1#4+1#5<br>#4@12.5in OC | 1#4<br>#4@12.5in O  | C #4@12.5in O                  | C #4@12.5in OC        | 1#4<br>#4@12.5in OC | #4@12.5in O         | <br>2 #4@12.5in OC      | 1#4<br>#4@12.5in OC              | 1#4<br>#4@12.5in OC | #4@12.5in OC            | 1#4<br>#4@12.5in OC          | 1#4<br>#4@12.5in OC          | #4@12.5in OC                 | #4@12.5in OC        | 1#4<br>#4@12.5in OC  | #4@12.5in OC                 |
|      | Transv                        | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in 00                 |                         | #4@12.5in OC                 | #4@12.5in OC            |                     |                                | C #4@12.5in OC        | #4@12.5in OC        | #4@12.5in O         | #4@12.5in OC            | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      | Bottom                        | End Spans  | 2#6                          | 1#4+1#6             | 1#4+1#6                      | 2#6                     | 1#4+1#6                      | 1#4+1#6                 | 1#6+1#7             | 1#4+1#6                        | 1#4+1#6               | 1#6+1#7             | 2#6                 | 2#6                     | 2#7                              | 2#6                 | 2#6                     | 2#7                          | 1#5+1#6                      | 1#5+1#6                      | 2#7                 | 1#5+1#6              | 1#6+1#6                      |
|      | Reinforcement                 | Int. Spans   | 2#6                          | 1#4+1#5             | 2#4                          | 2#6                     | 1#4+1#5                      | 2#4                     | 1#6+1#7             | 1#4+1#5                        | 1#4+1#5               | 1#6+1#7             | 2#5                 | 1#4+1#5                 | 2#7                              | 2#5                 | 1#4+1#5                 | 2#7                          | 1#5+1#6                      | 2#5                          | 2#7                 | 1#5+1#6              | 2#5                          |
| 26   | Longitudinal                  | Exterior Supports<br>1 <sup>st</sup> Int. Support  | 1#4                          | 2#4 1#5+1#6         | 2#4                          | 1#4                     | 2#4 1#5+1#6                  | 2#4<br>1#5+1#6          | 1#4                 | 1#4+1#5<br>2#6                 | 1#4+1#5<br>1#5+1#6    | 1#4                 | 1#4+1#5<br>2#6      | 1#4+1#5<br>2#6          | 1#4                              | 1#4+1#5<br>1#6+1#7  | 1#4+1#5<br>2#6          | 1#4                          | 2#5<br>1#6+1#7               | 2#5<br>1#6+1#7               | 1#4                 | 2#5                  | 2#5<br>1#6+1#7               |
|      |                               |  | 1#4                          | 1#4                 | 2#6                          | 1#4                     | 1#4                          | 2#5                     | 1#4                 | 1#4                            | 1#5+1#6               | 1#4                 | 1#4                 | 1#6+1#6                 | 1#4                              | 1#4                 | 2#6                     | 1#4                          | 1#4                          | 2#6                          | 1#4                 | 1#4                  | 1#6+1#7                      |
|      |                               | Slab   | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in O                  | C #4@12.5in OC ;        | #4@12.5in OC                 | #4@12.5in OC            | #4@12.5in O         | C #4@12.5in O                  | C #4@12.5in OC        | #4@12.5in OC        | #4@12.5in O         | C #4@12.5in OC          | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      |                               | verse Reinf.                                       | #4@12.5in OC                 |                     | #4@12.5in O                  |                         | #4@12.5in OC                 | #4@12.5in OC            | #4@12.5in O         |                                | o I n log i zioni o o | #4@12.5in OC        | 1.100.1210.11.0.1   |                         | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                            | 1#6+1#7                      | 2#5                 | 2#5                          | 1#6+1#7                 | 2#5                          | 2#5                     | 2#7                 | 2#5                            | 2#5                   | 2#7                 | 1#5+1#6<br>1#5+1#6  | 1#5+1#6                 | 2#7                              | 1#5+1#6<br>1#5+1#6  | 1#5+1#6<br>2#5          | 2#7                          | 1#5+1#6<br>1#5+1#6           | 1#5+1#6<br>1#5+1#6           | 2#7                 | 2#6                  | 2#6<br>1#6+1#6               |
|      | Reinforcement                 | Exterior Supports                                  | 1#6+1#/                      | 2#6                 | 1#4+1#6                      | 1#6+1#/                 | 2#6                          | 1#4+1#5                 | 1#4                 | 2#6                            | 1#4+1#5               | 2#/                 | 2#5                 | 2#6                     | 2#/                              | 2#5                 | 2#6                     | 2#/                          | 1#6+1#6                      | 1#6+1#6                      | 2#/                 | 2#0<br>1#5+1#6       | 1#6+1#6                      |
| 28   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 2#6                 | 1#5+1#6                      | 1#4                     | 2#6                          | 1#6+1#6                 | 1#4                 | 1#6+1#7                        | 2#6                   | 1#4                 | 1#6+1#7             | 1#6+1#7                 | 1#4                              | 2#0                 | 1#6+1#7                 | 1#4                          | 2#7                          | 2#7                          | 1#4                 | 2#7                  | 2#7                          |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4                 | 1#5+1#6                      | 1#4                     | 1#4                          | 1#5+1#6                 | 1#4                 | 1#4                            | 1#5+1#6               | 1#4                 | 1#4                 | 2#6                     | 1#4                              | 1#4                 | 1#6+1#7                 | 1#4                          | 1#4                          | 1#6+1#7                      | 1#4                 | 1#4                  | 2#7                          |
|      |                               | Slab   | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in O                  |                         | #4@12.5in OC                 | #4@12.5in OC            |                     |                                | C #4@12.5in OC        | #4@12.5in OC        | #4@12.5in O         | #4@12.5in OC            | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      |                               | verse Reinf.                                       | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in O                  | C #4@12.5in OC ;        | #4@12.5in OC                 | #4@12.5in OC            | #4@12.5in O         |                                |                       | #4@12.5in OC        | #4@12.5in O         | 2 #4@12.5in OC          | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC<br>2#6          | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                            | 2#/                          | 2#6                 | 2#6                          | 2#/                     | 2#6                          | 2#6                     | 2#/                 | 1#6+1#6<br>1#5+1#6             | 1#5+1#6               | 2#/                 | 1#5+1#6<br>1#5+1#6  | 1#5+1#6<br>1#5+1#6      | 2#/                              | 2#6                 | 2#6<br>1#5+1#6          | 2#/                          | 2#6<br>2#6                   | 2#6<br>1#5+1#6               | 2#/                 | 1#6+1#7<br>1#6+1#7   | 1#6+1#7<br>2#6               |
|      |                               | Exterior Supports                                  | 1#4                          | 2#5                 | 2#5                          | 1#4                     | 2#5                          | 2#5                     | 1#4                 | 2#5                            | 2#5                   | 1#4                 | 1#5+1#6             | 1#5+1#6                 | 1#4                              | 1#5+1#6             | 1#5+1#6                 | 1#4                          | 1#5+1#6                      | 1#5+1#6                      | 1#4                 | 2#6                  | 2#6                          |
| 30   | Longitudinal                  | 1 <sup>st</sup> Int. Support                       | 1#4                          | 1#6+1#7             | 2#6                          | 1#4                     | 1#6+1#7                      | 2#6                     | 1#4                 | 2#7                            | 1#6+1#7               | 1#4                 | 2#7                 | 2#7                     | 1#4                              | 2#7                 | 2#7                     | 1#4                          | 2#7                          | 2#7                          | 1#4                 | 2#7                  | 2#7                          |
|      | Reinforcement                 | Other Int. Support                                 | 1#4                          | 1#4                 | 2#6                          | 1#4                     | 1#4                          | 2#6                     | 1#4                 | 1#4                            | 2#6                   | 1#4                 | 1#4                 | 1#6+1#7                 | 1#4                              | 1#4                 | 2#7                     | 1#4                          | 1#4                          | 2#7                          | 1#4                 | 1#4                  | 2#7                          |
|      | Trana                         | Slab<br>verse Reinf                                | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in 00                 |                         | #4@12.5in OC<br>#4@12.5in OC |                         | #4@12.5in 00        |                                |                       |                     | #4@12.5in 00        |                         | #4@12.5in OC                     | #4@12.5in OC        | #4@12.5in OC            | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC                 | #4@12.5in OC        | #4@12.5in OC         | #4@12.5in OC                 |
| L    | i i afiss                     | verse Neilli.                                      | 12.0m 00                     | 1.40012.00100       | 1.40612.001.00               |                         |                              | 1                       | - m-+@rz.on 00      | 0 1 mm 0 g 12.0 m 0 0          | → 1 ***(@12.5m UC     | 1.40212.00100       | 1                   | 2 1 m-acter 2:0m1 OC    | 1.40212.011100                   | 1.40212.011 00      | 1.40012.001.00          | 140212.011/00                | 1.40012.011-00               |                              | 1.40212.011/00      | 14-0012.0m/0C        |                              |

### Notes

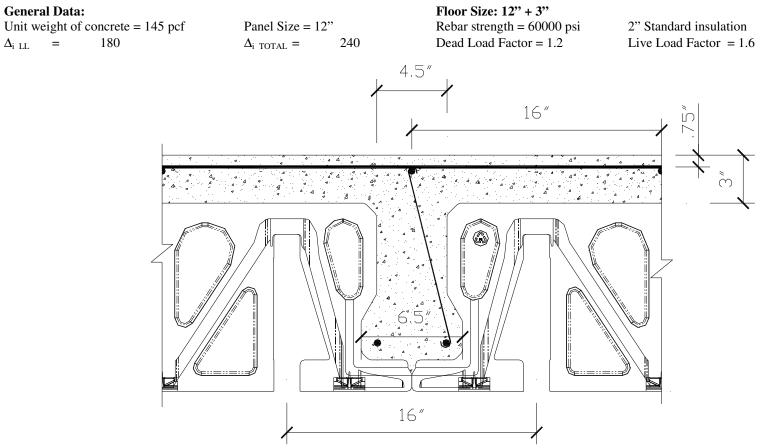
- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C. ٠
- Blank Cells indicates that the joists are failing in deflection. ٠

Project: AmDeck Design Guide Client: Amvic, Inc.

 $\Delta_{i \ LL}$ 

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

## 9.9 Table I: f'c = 4000 psi, Topping Thickness = 3.0"



| Project: | AmDeck Design Guide |  |
|----------|---------------------|--|
| Client:  | Amvic. Inc.         |  |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea | d Loa              | ad =   | 10 psf                                     |   |                            |                              |                            |                            |  |                          |                        |                            |                                 |                           |  |  |                              |                            |                            |                              |                            |                            |
|-----|--------------------|--|--|---|----------------------------|------------------------------|----------------------------|----------------------------|--|--------------------------|------------------------|----------------------------|---------------------------------|---------------------------|--|--|------------------------------|----------------------------|----------------------------|------------------------------|----------------------------|----------------------------|
| Sca |                    | 16 - 2000<br>103                                   | 1 - 97 D -<br>SF DF                        | 10<br>128                                     | 87                         | I – 90 D – 10<br>D7          | ¥8                         | 87                         | <u>1 - V D - 10</u><br>U                   | ~8                       | 87                     | 1 - 70 D - 10<br>DF        | VS                              | 87                        | 1 -31 D - 10<br>D7                           | VS   | 87                           | 1 -00 D -10<br>DF          | ¥8                         | 87                           | 1 -10101-0<br>DF           | V2                         |
|     | =                  | Lni Stars  | 14 174                                     | 144   | 14-<br>14-                 | 144                          | 144                        | 14:<br>14:                 | 174  | 144                      | 14                     | 1*                         | 144                             | 14<br>14                  | 174  | 144  | 14<br>14                     | 174                        | 174                        | 145                          | 174                        | 174                        |
|     | He mo pe           | Fater or Foc pode                                  | 14 <u>14</u><br>14 14                      | 14  | 14                         | 14                           | 14                         | 14                         | 14   | 14                       | - 14:<br>14:           | 14                         | 14                              | 14                        | 14   | 14   | 14                           | 14                         | 14<br>14                   | 145                          | 14                         | 14                         |
| IL. | Lon: n. (          | dinati (A na Buspan)<br>en ent Cabler (Fri Silpan) | 174 174<br>144 144                         | 114   | 144                        | 144                          | 114                        | 114                        | 114  | 174                      | 144<br>144             | 144                        | 144                             | 114                       | 174  | 174  | 144                          | 14                         | 144                        | 144                          | 114                        | 144                        |
|     |                    | Sia:   | MQCADE MQCADE                              | - MQ106.00                                    | MQ106.00                   | MQ106.00                     | MQ106.00                   | 740210 n 00                | MQ106.00                                   | MQ106.00                 | MQ106.00               | MORDADE                    | MQCADE                          | MQ106.00                  | MQ106.00                                     | MOTONOC                                      | MQ106.00                     | MQCADE                     | MQ156.00                   | MOTONIC                      | MQCADD                     | MQC0600                    |
|     | =                  | For Spark  | 14 14                                      | 14 <u>010600</u>                              | - MQ10m00<br>141           | MQ10in 00<br>141             | 14910 n 001                | 44Q10 n 00<br>145          | 14000 n 00                                 | - MQ106-00<br>141        | 4900n00<br>145         | MQ10m00<br>1#              | MQ10m00<br>1#                   | MQ106.00<br>145           | 4000000<br>14                                | 4000000<br>14                                | MQ10m00<br>145               | #\$210 n 00<br>1#          | - MQ10in 00<br>141         | MQ15.6.00<br>145             | 4000000<br>14              | #Q15m00<br>1#              |
|     | he mo pe           | errent Int. Spans<br>Lete of Bulgoris              | 144 144<br>144 144                         | 174   | 144                        | 174                          | 174                        | 175<br>174                 | 144  | 144                      | 175                    | 144                        | 144                             | 175                       | 174  | 174  | 175                          | 144                        | 144                        | 145                          | 174                        | 174                        |
| 1-  | 1 1 1 1            | dust from Forgent                                  | 14 14                                      | 14  | 14                         | 14                           | 14                         | 14                         | 14   | 14                       | 14                     | 145                        | 14                              | 14                        | 145  | 145  | 14                           | 145                        | 145                        | 14                           | 145                        | 145                        |
|     | he mo po           | eneri Cihorini, Support<br>Star                    | ាស ក្រ<br>សម្ភៈសាល សម្ភៈសាល                | 154<br>- 2459 5 a 20                          | 154<br>245: 5 a 20         | 154<br>2459 5 a 20           | 154<br>2459 5 n 2 0        | 154<br>24(5):50(00)        | 154<br>2459 5 n 2 0                        | 154<br>2459: 5 a 2 a     | 154<br>2459: 5 a 2 d   | 144<br>2456 5 a 20         | 154<br>245: 5 a 2 a             | 154<br>2459: 5 a 2 c      | 154<br>2459 5 n.20                           | 154<br>2459, 5 a 2 c                         | 154<br>2459: 5 a 2 c         | 154<br>2459 5 n 20         | 150<br>2459,5 n.20         | 154<br>2459 5 n.20           | 154<br>2459 5 n.20         | 155<br>2456 5 n.20         |
|     |                    | Тагалаг-а Таш                                      | HS SHOL HS SHOL                            | <ol> <li>MS(5)(0);</li> </ol>                 | - MS: 54-00                | HS: 51.00                    | - MS: 50.00                | Alge Sur Du                | HS: 50.00                                  | - HS: 50.00              | - MS: 51-00            | - HS: 54.00                | - HS: 50.00                     | - MS: 54.00               | - M <u>B</u> (56.00                          | - MS( 50.00                                  | HS: SHOL                     | - HS: 50.00                | HS: SHOL                   | HS: SHOC                     | HS SHOL                    | MS: 50.00                  |
|     | Lottem<br>Terringe | unt Stars<br>errent int Stars                      | 10 14<br>14 14                             | 14  | 145                        | 144                          | 14                         | 145                        | 14   | 114                      | 145                    | 144                        | 14                              | 145                       | 145  | 14   | 145                          | 145                        | 14                         | 244                          | 145                        | 145                        |
| 14  | 1.0010             | Felerur Fucpula<br>dinti i≦inc ∋sispari            | * *<br>*                                   | 14  | 14)<br>154                 | 14                           | 14<br>15                   | 14 <sup>.</sup>            | 14 <sup>4</sup>                            | 14                       | 14                     | 14<br>15                   | 14                              | 14                        | 14   | 14   | 14 <sup>.</sup>              | 14<br>150                  | 14                         | 14                           | 145<br>150                 | 145                        |
|     | Tenin e            | enert Ciliar Et Supor                              | 14 14                                      | 14  | 14                         | 14                           | 14                         | 14                         | 14   | 145                      | 14                     | 14                         | 145                             | 14                        | 14   | 145  | 14                           | 14                         | 145                        | 14                           | 14                         | 145                        |
|     |                    | IS as<br>ranste pe weint                           | MQ10600 MQ10600<br>MQ10600 MQ10600         | <ul> <li>MQC00000</li> <li>MQC0000</li> </ul> | MQ156.00<br>MQ156.00       | MQ156.00<br>MQ156.00         | MQ156.00<br>MQ156.00       | MQ156.00<br>MQ156.00       | MQ156.00<br>MQ156.00                       | MQ106.00<br>MQ106.00     | MQ156.00<br>MQ156.00   | MQ106.00<br>MQ106.00       | MQ156.00<br>MQ156.00            | MQ120.00<br>MQ120.00      | MQ156.00<br>MQ156.00                         | MQ156.00<br>MQ156.00                         | MQ106.00<br>MQ106.00         | MQ106.00<br>MQ106.00       | MQ106.00<br>MQ106.00       | MQ156.00<br>MQ156.00         | MQ156.00<br>MQ156.00       | MQ156,00<br>MQ156,00       |
|     | =0 00<br>re mo ce  | For Stars<br>enerty 14, Stars                      | 145 145<br>15 15                           | 145   | 145<br>170                 | 145<br>175                   | 145                        | 145<br>150                 | 145<br>150                                 | 145                      | 24<br>25               | 145<br>170                 | 145<br>175                      | 74<br>74                  | 145<br>150                                   | 145<br>150                                   | 74<br>74                     | 145<br>175                 | 145<br>150                 | 1411 新<br>1544 色             | 145<br>150                 | 145                        |
|     |                    | Lefe o Butparto                                    | 174 174                                    | 174   | 174                        | 174                          | 174                        | 174                        | 174  | 174                      | 174                    | 175                        | 175                             | 174                       | 175  | 175  | 174                          | 175                        | 15                         | 174                          | 10                         | 175                        |
| 16  |                    | dast film Encold<br>effective Charlet, Support     | 14 145<br>156 156                          | 145<br>155                                    | 141                        | 145                          | 145<br>155                 | 14)<br>154                 | 145  | 145<br>155               | 14)<br>174             | 145                        | 145<br>150                      | 14)<br>154                | 244<br>156                                   | 145<br>155                                   | 141                          | 24)<br>174                 | 145<br>150                 | 141                          | 244<br>156                 | 244<br>155                 |
|     | <u> </u>           | Sa   | - Mg(5000 - Mg(5000<br>- Mg(5000 - Mg(5000 |   | Alg: 50.00                 | 245:50.00<br>145:50.00       | Alg: 50.00                 | Alg: 56.00                 | Alge Su Do                                 | Alg: 50.00               | Alg: 50.00             | Alg: 50.00                 | Alg: 50.00                      | Alg: 50.00                | Alg: 51.00                                   | Alg: 50.00                                   | Alg: 50.00                   | Alg: 50.00                 | Alg: 50.00                 | Alg: 50.00                   | Hg: 50.00                  | Alg: 56.00                 |
|     | Lottem             | Transverve Deloi<br>Lint Strans                    | - Mg 50.00 - Mg 50.00<br>                  | 140   | Mg: 56.00<br>.34           | 2455 Sta 20<br>192           | સઉદ્ધ કલાગલ<br>મુજ         | સ્લ્લું: ૬૫.૨૦<br>ઝર       | ମହିତ ଅବସ୍ଥି<br>ଅବସ୍ଥି                      | মন্ত্র হয় ৫৫<br>প্রত    | 24년: 56.00<br>1744년:   | Mg(55-00)<br>150           | মন্ত্র হয় ৫৫<br>মন্ত           | 245: 5 a 0 a<br>174+175   | સંકુ ૬૫.૦૦<br>મુજ                            | - MS: 56-20<br>- 152                         | 24년: 5 a 20<br>15441년:       | અંગુ ૬૫.૦૦<br>મજ           | মন্ত্রি হয় ০০<br>দেহ      | - MS: 56-00<br>- MS          | କାର୍ଥ୍ୟ କଳାହାଇ<br>କାର୍ଷ    | - Alg: 56.00<br>170        |
|     | Tenin e            | enent Int Scars<br>Folerun Fucpults                | 74 145<br>14 145                           | 145   | 241                        | 145                          | 145                        | 24 <sup>5</sup><br>145     | 145  | 145                      | 141 H<br>14            | 145                        | 145                             | 141 #                     | 145  | 145  | 141 H<br>14                  | 145                        | 145                        | 245                          | 145                        | 145                        |
| ĸ   | Longitud           | dinal (Fine Buspart                                | 194 I 194                                  | 155   | 154                        | 10                           | 155                        | 174                        | 254  | 175                      | 174                    | 254                        | 254                             | 174                       | 174+174                                      | 254  | 174                          | 174+174                    | 284                        | 154                          | 174+174                    | 174+174                    |
|     |                    | enert Ciharter Supor<br>Sia:                       | 14 14<br>Mayonot Mayonot                   | 145<br>: MQ106.00                             | 14<br>MQ156.00             | 141<br>MQ106-00              | 145<br>MQ106-00            | 14)<br>MQ156.00            | 14)<br>MQ156 50                            | 145<br>MQ106-00          | 141<br>MQ156.00        | 14<br>MQ106-00             | 145<br>MQ10m00                  | 141<br>MQ156.00           | 14<br>MQ156.00                               | 240<br>7402101000                            | 1∉<br>MQ15n-00               | 1#<br>#Q15n-00             | 249<br>- 749(10)n 00       | 144<br>74021016-001          | 141<br>MQ156.00            | 244<br>#4021016-001        |
|     | -                  | ranste pelikeint.<br>For Scars                     | MQ15n 01 MQ15n 01<br>1411 # 145            | MQ106.00<br>145                               | NO106-00<br>1411-24        | #145                         | #1010100<br>145            | 14006-00<br>1411-24        | #12106-00<br>145                           | #1210.000<br>145         | #100000<br>245         | MQ106.00<br>145            | #40210 m 000<br>145             | 74021016-000<br>245       | #10/10/100<br>24/                            | #10/10/6-00<br>244                           | #4021016-000<br>1451 #E      | #4021016-000<br>244        | - MQ106-00<br>249          | 1451 #                       | #0106.00<br>24             | #4021016-000<br>244        |
|     | -e mo co           | ement Int. Scars                                   | 1544100 150                                | 175   | 174+17                     | 10                           | 175                        | 174+175                    | 175  | 5                        | 30                     | 175                        | 145                             | 35                        | 274  | 155  | 175+170                      | 284                        | 155                        | 175+170                      | 14<br>14                   | - An                       |
| x   | 1 1 1 1            | Lete o Busperio<br>dust 1° a Facp d                | 174 175<br>144 744                         | 175<br>745                                    | 14                         | 74                           | 175<br>74                  | 14                         | 175<br>141 #                               | 24                       | 14                     | 16<br>14 ( #               | 14117                           | 174<br>144                |  | 110<br>141 新                                 | 144                          | 245                        | 141 F                      | 114                          | 245                        | 244                        |
|     | he mo pe           | eneri Ciharini, Support<br>Star                    | 154 154<br>2459 5 n 20 - 2459 5 n 20       | 175<br>- 2456 50-20                           | 154<br>2456 5 n 20         | 154<br>2459: 5 n. 2 0        | 150<br>2459: 50-20         | 154<br>Atte 5 a 20         | 174<br>2010 5 n 20                         | <br>- Alg: 50.00         | 174<br>2010 5 a - 20   | 154<br>2459, 5 a 2 a       | 254                             | 154<br>Altis 5 a 0.0      | 174<br>2459 5 n.00                           | 154+16.<br>Alg: 50.00                        | 154<br>2459: 5 a 20          | 154<br>2459: 5 a 2 a       | 154+155<br>Addit 5 a.00    | 154<br>2459, 5 n.00          | 174<br>2450 Str. 20        | 174+175<br>Adds 5 a.00     |
|     |                    | Таталат-а Тапі                                     | - MSI 50 00 - MSI 50 00                    | - Mg 50.00                                    | MS: 50.00                  | - Mg 56.00                   | AS 50.00                   | - Mg: 56.00                | - Hg: 511.00                               | - MS 50.00               |                        |                            | - Mg 56.00                      | - Mg: 56.00               |  |  | - HS: 50.00                  | - Mg Subb                  | - HS: 50.00                | - Hg: 511.00                 | - Hig Su Di                | MS: 50.00                  |
|     | Lottem<br>Tenún e  | un: Stars<br>ement int Spars                       | - XX IX<br>245 145                         | 145   |                            | 145                          | 145                        | <br>245                    | 24   | <br>145                  | 145+140<br>1451 #      | <br>74                     | <br>145                         | 1451 #                    | <br>74                                       | 244  | 245                          | 144 A.<br>144 F.           | 1%+1%<br>2#                | 245                          | 1441A<br>1441 A            | 244                        |
|     |                    | Faterior Focipiets                                 | 14: 145                                    | 145   | 14                         | 145                          | 145                        | 14                         | 145  | 145                      | 14                     | 145                        | 145                             | 14:                       | 245  | 245  | 14.                          | 245                        | 245                        | 14                           | 241                        | 242                        |
|     | Territe e          | dinct (Find Busport)<br>entert Cathor Finis (pour  | 144 1444 M<br>144 144                      | 144+174<br>244                                | 14                         | 144175                       | 144+174<br>244             | 14                         | 14   | 1441 AL                  | 194<br>145             | 14                         | 1441 AL                         | 144                       | 145+130<br>144                               | 141 F  | 14                           | 1454180                    | 245                        | 144                          | 145+130<br>145             | 175+170<br>245             |
|     |                    | Siac<br>ransce beine mi                            | MQ10n00 MQ10n00<br>MQ10n00 MQ10n00         |   | MQ156.00<br>MQ156.00       | MQ106.00<br>MQ106.00         | MQ156.00<br>MQ156.00       | 村公(0m/00)<br>村公(0m/00)     | 料Q(0m00)<br>料Q(0m00)                       | - MQ156-50<br>- MQ156-50 | MQ156.00<br>MQ156.00   | MQ106.00<br>MQ106.00       | - MQC0n00<br>- MQC0n00          | MQ156.00<br>MQ156.00      | - MQ156.00<br>- MQ156.00                     | MQ156.00<br>MQ156.00                         | - MQ106.00<br>- MQ106.00     | 전(210 n 00<br>전(210 n 00   | MQ10n-00<br>MQ10n-00       | MQ156,00<br>MQ156,00         | MQ156.00<br>MQ156.00       | MQ156,001<br>MQ156,001     |
|     | =0 00              | Fur Scars  | 145) # 241                                 | 244   | 1451.26                    | 741                          | 241                        | 1451 #                     | 24   | 24                       | 245                    | 1411 22                    | 1411 #                          | 245                       | 1411 22                                      | 1411 22                                      | 1451-22                      | 1411 22                    | 1411 #                     | 1451 22                      | 245                        | 245                        |
|     | he mo pe           | Lefe o Europario                                   | 175+176 574<br>174 175                     | 175<br>175                                    | 175+19L<br>174             | 54<br>170                    | 175<br>175                 | 175+170<br>174             | -74-<br>-74-                               |                          | 289<br>194             | 174+175.<br>274            | 292<br>292                      | 289<br>194                | 1944年代<br>1944年代                             | 1994年1月2日<br>1994年1月2日                       | 149+144<br>144               | 1744) A.<br>1744) A.       | 14441年。<br>1944年年初         | 149+144<br>144               | 275<br>1764 (M             | 1994年1月2日<br>1994年1月2日     |
| 24  |                    | dust from Encipation<br>effect Citizenti, Support  | 14 245<br>15 15                            | - 1411 新<br>1544 和                            | 14<br>15                   | 245<br>154                   | - 14日 新<br>1444 年          | 14)<br>154                 | 145) #<br>154                              | 245<br>154+16            | 14)<br>154             | 145 i Af<br>154            | 245                             | 14                        | 245  | 145 i #                                      | 14                           | 245<br>154                 | 145) #<br>1504181          | 14                           | 145 i 22<br>145            | 245<br>155+160             |
|     |                    | Sar  | MS SHOL MS SHOL                            | - Alg: 50.00                                  | Alg: 51.00                 | Alg: 51.00                   | - HS: 50.00                | Alg: 51.00                 | Alg: 50.00                                 | - Alg: 50.00             | Alg: 50.00             | Alg: Su DO                 | - Mg( 50.00                     |                           | - HS: 51.00                                  |  | - HS: 51.00                  | Alg: Su DO                 | Alg: 50.00                 | - Alg: 511.00                | HS SHOL                    | - Alg: 5 a 201             |
|     | - 0752m            | Tiansver-e Delui<br>Lino Spark                     | - Mg(50.00 - Mg(50.00<br>                  | · - 24일: 56-00<br>- 154+185                   | - अर्डु: 55 00<br>         | 24년: 56.00<br>1544년: 15      | - 24년: 56-20<br>- 1594년 전  | - Mg: 55-00<br>- 29        | - Alg: 56.00<br>15941 (5                   | - 24년: 56-20<br>1544년 전  | 유민왕: 5 a 20.<br>15941년 | - Alg: 56.00<br>154418     | - Alg: 56.00<br>154418          | - 24년: 5 a 20<br>15년:41년: | - সন্থ্য Suites<br>- সম                      | - মগ্র ১৯০০<br>- ১৯                          | - Mg: 56.00<br>- 25          | - MS: 56-00<br>- 350       | - মন্ত্রি হয় ০০<br>- সম   | - AS: 50.00<br>-57           | સ્લિક કેલાગલ<br>(જીન્નોઝ)  | - A439,5 a.0.0.<br>1⊀5+1%  |
|     | Tenin e            | Folence Folge data                                 | 245 14114<br>142 24                        | 244<br>244                                    | 245                        | 14 1 4                       | 244<br>244                 | 245                        | 141 F                                      | 141 8                    | 1451 #<br>145          | 141 8                      | 141 8                           | 1451 #                    | 245<br>141 - 26                              | 141 F  | 247                          | 245                        | 245                        | 247                          | 1451 AF<br>245             | 245                        |
| ٤.  |                    | dinal (Principul)part                              | 174 175+°A                                 | - A   | 154                        | 170+170.                     | 35                         | 174                        | 150+150                                    | 175+170                  | 174                    | .55                        | 175+170                         | 144                       | 149+164                                      | 255  | 144                          | (***)<br>[1594] 전(         |                            | 144                          |                            | 7990<br>1959+1951          |
|     | THUN P             | enert Cihacht Siport<br>Sia:                       | 14 14<br>Magion 00 Magion 00               | 245<br>(#0210.n.00)                           | 1#<br>MQ15n-00             | 14)<br>MQ156.00              | 245<br>MQ10600             | 144<br>M-2010 n 00         | 14)<br>MQ156.00                            | 245<br>- #1210 n.00      | 141<br>MQ101000        | 1#<br>₩©10n-00             | 145) #<br>#1210 n 00            | 141<br>M-2010 n 001       | 14)<br>MQ156.00                              | 145) #<br>#Q155.00                           | 1#<br>MQ10n 00               | 1#<br>#Q10n.00             | 245<br>100 100 100         | 141<br>MQ106-00              | 141<br>MQ156.00            | 245<br>740210 n 001        |
|     | -                  | ranste pelleem.                                    | MQCDDC MQCDDC                              | 149210 n 00                                   | MQ106.00                   | MQ106.00                     | MQ10m00                    | MQ10 n 00                  | MQCDD0                                     | - MQ106-00               | MQC0000                | - MQ106-00                 | - MQ106-00                      |                           | - MQ106-00                                   | - MQ106-00                                   | MQ106.00                     | - MQ106-00                 | - MQ106-00                 | MQC0nOC                      | MQ106.00                   | MQ106.00                   |
|     | =0 00<br>>0 mo co  | For Scars<br>enert 14, Scars                       | 1451 第 - 141 年<br>1454 第 - 1444 年          | 14日 新<br>1544 元                               | 145 (1921)<br>145 - 175    | 1年11年<br>1444年年              | 1年11年<br>14年1年             | 145 i 22<br>15541か         | 745<br>50                                  | 245<br>15441 (S.         | 247<br>241             | 245<br>370                 | 245<br>370                      | 247<br>251                | 1451 AF<br>15541 AL                          | 145) #<br>.Sto                               | 247<br>251                   | 1451 AF<br>15541 AL        | 145) #<br>.50              | 247<br>251                   | 245<br>355                 | 245<br>175+170             |
|     |                    | Lele o Butparis<br>dust 1° o Encipat               | 174 174+174<br>144 245                     | 145+165<br>1451-26                            | 114                        | 144+16.<br>245               | 14441 AL<br>1451 - AF      | 114                        | 144+16.<br>245                             | 144+164                  | 11%                    | - 26)<br>1451 #            | 245                             | 11%                       | 26<br>247                                    | 26)<br>1450 #                                | 11%                          | - 265<br>247               | - 25)<br>1451 22           | 154                          | 145+160                    | 175+170<br>247             |
|     |                    | effect Cihar Ini, Support                          | 174 174                                    | 175+170                                       | 154                        | 154                          | 175+170                    | 174                        | 1754                                       | 175+170                  | 174                    | 174                        | 259                             | 174                       | 175  | 289  | 174                          | 174                        | 15941251                   | 175                          | 174                        | 155+155                    |
|     |                    | Siar<br>Таламан Беші                               | អន្លទោល អន្លទាល<br>អន្លទាល់ អន្លទាល់       |   | - Mg: 56.00<br>- Mg: 56.00 | <u> 서영 56.00</u><br>서영 56.00 | - 서영: 56-00<br>- 서영: 56-00 | - Mg: 56.00<br>- Mg: 56.00 | - M <u>S</u> (50.00<br>- M <u>S</u> (50.00 | - 서영 56.00<br>- 서영 56.00 |                        | - MS: 56-20<br>- MS: 56-20 | - <u>Hộ Sa Độ</u><br>- Hộ Sa Độ | 24% 5 a 20<br>24% 5 a 20  | - 24 <u>56 56 20</u><br>- 24 <u>56 56 20</u> | - 24 <u>5: 50.00</u><br>- 24 <u>5: 50.00</u> | - Higi Su Di.<br>Higi Su Di. | - Mỹ: 56 00<br>- Mỹ: 56 00 | - HS: 50.00<br>- HS: 50.00 | - Alg: 56.00<br>- Alg: 56.00 | - Mg: 56.00<br>- Mg: 56.00 | - MS: 56.00<br>- MS: 56.00 |
| i   | _ottem             | Line Sparks  | 24 25                                      | X   |                            | 30                           | 30                         |                            | 175+170                                    | 175+170                  | 24                     | 145+140                    | 140+140                         | - 24                      |  | 249  |                              | 349                        | 249                        | 24                           | 149+144                    | 1594125                    |
|     | Tenin e            | enent i ht Scans<br>Faterior Focpula               | 245 245<br>141 141 14                      |   | 247                        | 245<br>141 #                 | 14(1)第<br>14(1)第           | 247                        | 1451 #<br>245                              | 245<br>245               | <u>247</u><br>141      | 1451 #<br>245              | 245<br>245                      | 247<br>141                | 245<br>1451 #                                | 145) #<br>145) #                             | <u>247</u><br>141            | 245<br>1451 #              | 145) #<br>145) #           | 247                          | 145 i 245<br>245           | 245                        |
| 1   |                    | dinal (Principulport                               | 174 175+175<br>145 145                     | 245<br>1451 #                                 | 174                        | 149+176<br>145               | 249<br>1451 26             | 174                        | 149+144                                    | 145+144                  | - 175                  | 257                        | 14541761                        | 144                       | 247  | 257  | 172                          | 2%                         | 257                        | 174                          | 247                        | 257                        |
|     |                    | enent Ciharlet, Sippre<br>Siap                     | 140 140<br>MQ10600 MQ10600                 |   | 147<br>MQ106.00            | 140<br>MQ156-00              | 1451 AF<br>24021016-00     |                            | 140<br>MQ156-50                            | - MO21210-202            | 140<br>140             | 140<br>1400 00             |                                 | 140<br>1400 00            | 140<br>1400 00                               | 1401 AF<br>1407 0 6 0 7                      | 140<br>1400 00               | 140<br>1400 00             | 240<br>100 000             | 140<br>1400 00               | 140<br>74021016-00         | 740/00/00<br>70/00/00      |
|     |                    | ranste pelikeim.                                   | MQ10600 MQ10600                            | <ul> <li>MQ106.00</li> </ul>                  | MQ10h 00                   | MQ106.00                     | MQ156.00                   | MQ106.00                   | MQ(06.00                                   | - MQ106-00               | MQ106.00               | MQ106.00                   | - MQ106.00                      | MQ106.00                  | - MQ106.00                                   | - MQ156.00                                   | MQ106.00                     | MQ106.00                   | MQ106.00                   | MQ106.00                     | MQ156.00                   | - MQC56-00                 |

Project: AmDeck Design Guide Client: Amvic, Inc.

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Dead Load

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

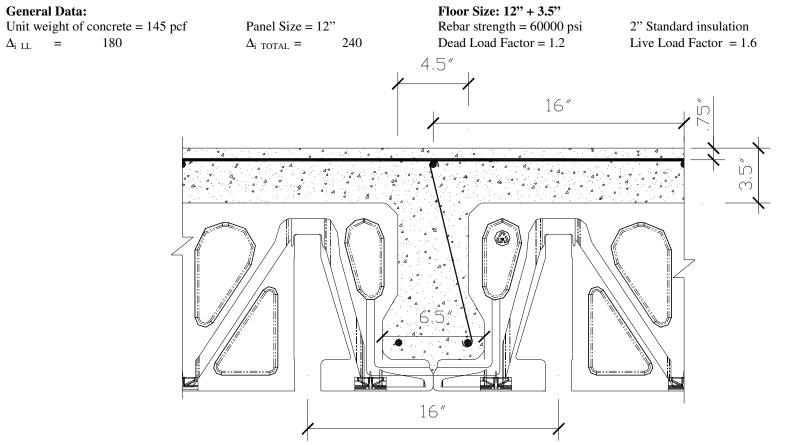
15 psf 400 50 C Spar End Spans 1#/ 1#/ 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1*#4* 1#4 1#4 1#4 1#4 1#4 1#4 Reinfor Int. Spans 1#4 1#4 1# 1#4 1#4 1#4 1#4 1#C 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 10 Longitudinal Reinforcemer Int. Support 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 her Int. Suppo 1#4 #44 1#4 1#4 1#4 1#4 #4@15in 4@15in C #4@15in #4@15in #4@15in C #4@15in #4@15in #4@15in @ #4@15in O #4@15in C #4@15in #4@15in #4@15in #4@15in #4@15i #4@15i #@15in C #4@15in 4@15in C 4@15in #4@15in C 4@15in O 4@15in ( #4@15ir #4@15i #4@15in 0 #4@15i 4@15 End Spans 1#4 1#4 1#4 1#4 1#4 Reinforcem Int. Spans 1# 1# 1# 1#4 1#4 1#4 1#4 1#4 1#5 1#4 1#4 1#4 1#4 1#5 1#4 1#4 1#4 1#4 1#4 #4 1#6 1#4 1#4 1#5 1#4 1#4 1#4 1# 1#4 1#4 1# 1# 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#5 1#4 1#4 1#4 # 1#4 1#4 1#4 1#4 Longitudina einforceme 12 Int. Support 1#4 1#4 1#4 1#4 1#4 1#4 1#5 1#4 1#4 1#5 1#5 1#5 1#4 1#4 1#4 #4 1#5 1#4 1#6 her Int. Suppo 1#4 #@15in #4@15in #4@15in O #4@15ir #4@15in #4@15in #4@15in #4@15in #4@15in #4@15in #4@15in #4@15in O #4@15in 0 #4@15in #4@15in #4@15in O #4@15in O #4@15in #4@15in #4@15in #4@15in 4@15ir #4@15i #4@1 #4@15in #4@15i #4@15in #4@1 #4@15 #4@15in ( #4@15in Reinf 1#6 1#4 1#4 1# 1# End Spans Int. Spans 1#4 1#4 1#4 1#4 1# 1# 1# |# 1# 1# 1#4 1#4 1# 1# Reinfor 1#4 1#4 1#4 1#4 1#4@15in 1#4 1#6 1#4 #4@15in 0 #4@15in 0 1#4 1#6 1#5 #4@15in 1#4 1#6 1#4 1#4@15in 0 1#4 1#6 1#5 #4@15in O( 1#6 1#4 1#4 1#4 #4@15in 00 #4@15in 00 1#0 1#4 1#4 1#4 #4@15in 0 1#4 1#4 1#4 #4@15in O 2#4 1#4 1#4 1#4 #4@15in 1#5 1#5 1#4 1#4 1#4
1#5 terior Supp 1#4 1#4 1#4 1#1 1#4 1#4 1#4 1#6 1#4 1#4 1#6 1#4 1#4 14 ongitudina <sup>st</sup> Int. Support her Int. Support 1#6 1#4 #4@15in C #4@15in #4@15in O 4@15in C 4@15in #4@15in OC #4@15in 15in O #4@15in O #4@15in 0 #4@15in O #4@15in #4@15in O #4@15in O #4@15in O #4@15in OC #4@15in O #4@15in O #4@15in O #4@15in #4@ End Spans Int. Spans 1#5 1#5 1#4 1# 1#4 1#5 1#4 1#4 1#5 1#5 1#5 1#5 1#4 1#5 1#5 1#4 1#5 1#4 1#4 1#5 1#5 1#4 1#5 1#5 1#5 2#4 2#4 1#4 1#5 1#5 1#5 1#5 1#6 1#5 2#4 2#4 1#4 2#4 2#4 1#4 1#5 1#5 1#5 2#4 1#4 1#4+ 1#4+1 1#4 1#5 1#5 1#5 xterior Suppor 1#5 1#4 #4@15in 0 #4@15in 0 1#4 1#4 #4@15in 00 #4@15in 00 16 Longitudina einforceme <sup>st</sup> Int. Support Other Int. Suppo 1#4 1# 1#4 1#4 1#5 1#5 1#4 1#4 1#5 1#4 1#5 1#5 1#4 1#5 1#5 1#4 1#4 2#4 1#4 1#4 1#4 2#4 1#4 #4@15in #4@15in #4@15in 15in O( 215in OC #4@ #4@15in 00 4@15in O #4@15in 0 #4@15in C #4@15in C 1#4+1#5 1#4+1#5 1#4 1#4 1#4 1#4 1#4 1#4 1#4 0#4@15in 0 #4@15in 0 1#5 1#6 1#6 1#6 1#6 #4@15in End Spans Int. Spans 1#5 1#5 1#5 1#5 1#5 15in 1#4+1#5 1#4+1#5 1#4 2#4 2#4 1#4 2#4 2#4 1#4 2#4 2#4 1#4 1#5 1#5 1#5 1#5 1#5 1#5 1#5 1#5 1#5 1#5 1#5 1#5 1#5 1#5 1#5 2#5 2#5 1#4 1#5 1#5 1#5 xterior Supports <sup>at</sup> Int. Support Other Int. Suppor 18 2#4 1#4 #4@15in OC #4@15in OC 1#4 1#4 #4@15in 00 #4@15in 00 2#4 1#4 15in C 1#4+1#5 1#4 #4@15in 00 #4@15in 00 .ongitudin einforcem 1#4 2#4 1#4 1#4 #4@15in 2#4 2#4 2#4 1#5 1#4 1#4 #4@15in O 1#4 1#4+1#5 1#4 #4@15in O 1#4+1#5 1#4+1# 1#4+1# 1#4 #400 #4@15in OC 1#5 1#5 1#5 2#4 2#4 #4@15in OC 1#5 1#5 1#5 2#4 1#4 #4@15in OC 2#6 2#6 1#4 1#4 1#4 #4@15in OC End Spans Int. Spans 1#4+1#5 1#4+1#5 1#4+1# 1#4+1# 1#4+1#5 1#5 1#5 1#6 1#6 2#4 1#4 1#6 1#6 2#4 2#4 #4@15in OC 1#6 1#6 1#4+1#6 1#4 ainforc 1#5+1# 1#4 1#4 1#4 1#5 2#4 2#4 #4@15in OC 1#4 1#4 1#4 1#4 1#4 1#4 1#5 20 Longitudinal einforcemer <sup>st</sup> Int. Support Other Int. Suppo 1#4+1#5 1#4+1#5 2#4 1#4+1#5 1#4+1#5 #4@15in OC #4@15in OC #4@15in O #4@15in OC #4@15in OC #4@15in OC #4@15in OC #4@15in O #4@15in OC .-4@1 <u>\$4@15</u> <u>2#5</u> <u>2</u>#6 <u>1</u>#4 #4@ 1#4 1#4+ #4@15in C 2#5 2#5 1#4 #4@15in | 2#4 2#4 1#5 #4@15in O0 1#5 1#6 #4@15in ( 1#5+1#6 1#5+1#6 e Rein End Spans Int. Spans xterior Suppor 2# 2# 1# 1#6 1#6 Reinforcer 1#5 1#4 2#4 2#4 2#4 1卅1+1 1#4+1; 22 <sup>st</sup> Int. Support ther Int. Support 1#4 1#4 #4@15in OC 1#4+1#5 1#4 #4@15in OC 2#5 1#4 #4@15in O Longitudina einforceme 1#4 1#4 1#4+1#5 1#4 1#4+1#5 2#4 #4@15in OC 1#4+1#5 1#4 1#4 1#4+1#5 1#4+1#5 1#4 1#4 1#5+1#6 1#4 1#5+1 1#4 1#5+ #4@15in O #4@15in O 4@15in O #4@15in OC #4@15in OC 4@15in O #4@15in OI #4@15in O #4@15ir #4@15in 0 1#5+1#6 1#5+1#6 1#4 #4@15in O #4@15in OC 2#4 #4@15in OC 2#4 2#4 2#4 #4@15in 1#5+1# #4@15in End Spans Int. Spans 1#4+ 1#4+ 1#4+ 1#4+1#6 2#0 1#4+1# 1#4+1# einforce 1#5+1# 1#4+ 1#4+ #6+1 2#4 2#4 1#4+1#6 1#4+1# terior Supp 1#4 1#4+1 24 Lonaitudina <sup>st</sup> Int. Support Other Int. Suppo 1#4 1#4 2#2 1#4 1#4 1#4 #4@15in O 2#5 1#4 #4@15in ( 1#5+1#6 1#4 1#5+1#6 1#4 1#5+1#5 2#5 1#5+ 1#5+ 2#6 1#4 1#5+1 1#5+1 1#6+1# 1#4 einforceme #4@15in O #4@15in O #4@15in #4@15in #4@15in OI #4@15 #4@15in OI #4@21 se Rein End Spans Int. Spans (terior Suppor 1#4+1 1#4+1# 1#4+1# 1#4+1# 1#4+1# 1#4+1# 1#4+ 2#4 1#4+1#6 1#4+ Longitudin einforcem 26 Int. Support 1#5+1#6 1#4 #4@15in 0 1#6+1# 1#5+1#6 1#5+1#6 1#4 1#5+1# 2#6 1#5+1#6 2#6 1#5+1#6 1#6+1#7 1#4 1#6+1#7 1#6+1# ther Int. Suppo #4@15in C #4@15in O #4@15in O #4@15in O End Spans Int. Spans Atterior Suppo 1#6+1# 1#4+1# 1#4+1#5 1#5+1#6 1#5+1#6 1#5+1#6 1#5+1#6 1#5+1#6 2#5 1#4+1#6 1#6+1#7 1#4+1# 1#5+1#6 1#5+1#6 Reinfor 2#5 2#5 1#6+1#7 |#5+' |#6+' 2#6 1#5+1#6 2#7 1#4 1#4 1#4+1#5 1#5+1#6 1#5+1#6 1#4+1#6 1#4+ 1#4 1#4+1#5 1#4+1#5 Longitudin einforcem 28 <sup>t</sup> Int. Support ther Int. Suppo 1#6+1#7 1#6+1#7 2#6 2#6 #5+1# 2#7 #6+1#7 #4@15in O0 #4@15in O #4@15in #4@15in OC 1#5+1#6 1#5+1#6 1#5+1#6 End Spans #5+1#6 2#5 2#6 ottom #5+1#6 2#6 1#5+1#6 1#5+1#6 1#6+1# 1#6+1# 1#5+1#6 Reinforcer Int. Spans xterior Suppo 2#5 2#5 1#5+1#6 1#5+1#6 245 1#4 2#5 1#6+1#6 2#6 Longitudina Reinforceme 30 # Int. Support Other Int. Suppo

#### Notes

- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C. .
- Blank Cells indicates that the joists are failing in deflection. .

Project: AmDeck Design Guide Client: Amvic, Inc. Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

## 9.10 Table J: f'c = 4000 psi, Topping Thickness = 3.5"



| Project: | AmDeck Design Guide |  |
|----------|---------------------|--|
| Client:  | Amvic, Inc.         |  |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea  | d Load                          | =   | 10 ps                                       | sf                                     |   |  |                                     |                             |                                 |                                      |                            |                          |                        |                          |                         |                               |                      |                                      |                               |                                |                                      |                               |
|------|---------------------------------|---|---|--|---|--|-------------------------------------|-----------------------------|---------------------------------|--------------------------------------|----------------------------|--------------------------|------------------------|--------------------------|-------------------------|-------------------------------|----------------------|--------------------------------------|-------------------------------|--------------------------------|--------------------------------------|-------------------------------|
| Scar |                                 | 6 /m<br>1132  | 1 - 9<br>SF                                 | CD - 10<br>DF - 1                      | v9 5  | 1–900–<br>97 D7                                    | - 16<br>\_\S                        | 57                          | I - XCD -<br>Cl                 | 10<br>                               | 25                         | I - 70 D<br>D7           | - 10<br>VS             | 37                       | 1-30 P -<br>P7          | - 10<br>\                     | 37                   | L - 30 D - 1<br>D7                   | r<br>VS                       | 27                             | L -100 M-<br>DF                      | ା<br>୪୫                       |
|      | Fill int                        | Line Stats<br>1 Hill Scats                            |   |  | 174 1<br>144 1  | 4 <u>14</u><br>4 14                                | 174                                 | 1#                          | 174                             | 144                                  | - 14                       | 174                      | 14                     | 14                       | 144                     | 144                           | 1#                   | 114                                  | 144                           | 145                            | 144                                  | 144                           |
|      |                                 | Fater or Foculty                                      | 14  |  | 14 1.<br>14 1.  | + 1+<br>+ 1+                                       | 14                                  | 14                          | 14                              | 14                                   | 14                         | 14                       | 14                     | 14                       | 14                      | 14                            | 14                   | 14                                   | 14                            | 14                             | 14                                   | 14                            |
| IL.  | Lon: rud nel<br>Te ofortierter  | 1 <sup>45</sup> no Europort<br>1 Cither Fill Stipping | 174<br>144                                  | 14 I                                   | 14 1<br>14 1  | <u> 14</u><br>14                                   | 14                                  | 14                          | 14                              | 14                                   | 144                        | 14<br>14                 | 14                     | 144<br>144               | 114<br>14               | 14                            | 14<br>14             | 14                                   | 114                           | 14                             | 14                                   | 14                            |
|      |                                 | Siac<br>we be we mu                                   |   |  |   | արվել <b>հ</b> գիկար<br>արվել <b>հ</b> գիկար       |                                     |                             |                                 |                                      |                            |                          |                        |                          |                         |                               |                      |                                      |                               |                                |                                      |                               |
|      | =                               | For Scars   | 145 I                                       | /thtt://www.<br>14/ 1                  | /thtt://www.r<br>14/ 1  | 45 14  | 141                                 | 145                         | 1#                              | 1#                                   | <u>0 745</u> 707<br>145    | 14°                      | 144                    | <u>CC NG/70</u><br>145   | 14°                     | 14                            | 145                  | 14                                   | <u>u wy7thu</u><br>1#         | 145                            | <u>cu wy7tht</u><br>1#               | 14°                           |
|      | He mo be the t                  | 1 11. Stars<br>Lefe o Butparis                        | 175   | 174                                    |   | ち ば  | 144                                 | 175<br>176                  | 144                             | 144                                  | 14                         | 145                      | 144                    | 175<br>176               | 174                     | 144                           | 175                  | 144                                  | 144                           | 175                            | 144                                  | 142                           |
| 17   | l ngi dusl                      | ք ո քայր մ  |   | 14 <sup>.</sup> 1                      | 14 <sup>1</sup> 1   | + 1+   | 14                                  | 14:                         | 14                              | 14                                   | 14                         | 145                      | 14                     | 14:                      | 145                     | 145                           | 14:                  | 145                                  | 145                           | 14                             | 145                                  | 145                           |
|      | He ho server                    | 1 Cihor Ini, Support<br>Star                          | । <del>१</del> २<br>अञ्च ७२२ ०० अञ्च        | 194<br>7년: CO - 세종( )                  | 174 - 11<br>7년: CO 관광, 7  | <u>주요 (주요)</u><br>7년년 6년 14월 7년년 1                 | <u>. 174</u><br>이 사망 759 이          |                             | <u>। १९</u><br>२०१२ अञ्चल २२१ २ | <u>। १९२</u><br>२० : सन्द्रा, 7 सः २ | <u>। २२</u><br>०. मधुः १२२ | - 00 원망 7원<br>- 00 원망 7원 | - CO 관광 785            | 00 MS(75)                | 00 MS 755               | CO M3:755                     | 00 MS 755            | <u>। १९</u><br>२०१२ अञ्चल २३१२       | <u>ाक</u><br>जनसङ्ख्यान्त्र व | <u>। १९२</u><br>२० मधुः २३२०   |                                      | 175<br>20 MS(75):00           |
|      | Lottem                          | carte Celoi<br>I - Englistars                         | ମହାମଳାରେ ମହା<br>ଅନ                          | ren de Maria<br>Ha                     | 786 CO MS67<br>193  | କୋରମାନାର୍ଥ୍ୟ ମହା ।<br>କାର୍ଯ୍ୟ                      | CC 243:758-0<br>154                 | 10 24년:738<br>186           | CO 2459 759 C<br>150            | 2012년(1월) 7년(10)<br>1991             | 이 24일:739-<br>199-         | · CC 24명: 7위·<br>194     | · CC 24명: 78년<br>15일   | CO 2459,759-<br>149-     | CO MS:785               | १९२१ मध्य २३२<br>१९२१         | CO 245,759<br>145    | CO MS(75) C<br>150                   | .이 24일: 759-0<br>199          | 2011년(27년)<br>1841년            | იი აფიული<br>ალი                     | COLANGE 7.49 C.CO.<br>Letter  |
|      | Tenin ener                      | <ol> <li>FL Scars</li> </ol>                          | 141   |  |   | 45 14 <sup>-</sup>                                 | 14                                  | 145                         | 14                              | 14                                   | 145                        | 14                       | 14                     | 145                      | 145                     | 14                            | 145                  | 145                                  | 14                            | 145                            | 145                                  | 145                           |
| 14   | Lon: r. doci                    |   | 141   | l∉ 1<br>R≎ 1                           | 142 1.<br>143 1.  | 4 14<br>4 16                                       | 14)<br>14)                          | 14:                         | 14)<br>170                      | 14)<br>170                           | 14                         | 14)<br>170               | 14)<br>140             | 14                       | 14)<br>170              | 14)<br>145                    | 14:<br>14:           | 14)<br>150                           | 14)<br>140                    | 14-                            | 145<br>175                           | 15 E                          |
|      | Tenjo ener                      | Ciliar Et Signar<br>Stat                              | 1⊈<br>#1217.0000 #121                       | 空                                      | 学   1-<br>  | # 1#<br>nandu Ma©7ann                              | 1∉<br>0. 81277000                   | 14)<br>11. 1412(17.11)      | 1#<br>10. #1217.000             | 145<br>1. 5100 / 1110 /              | 14)<br>U 2400 / 111        | 1#<br>10. #1217.0        | 145<br>110 - 5122 - 11 | 14)<br>Du 1400 / Du      | 14)<br>11日 - 新公子 11日    | 145<br>110 - 5122 - 11        | 1#<br>10. #1917.00   | 1年<br>11日 - 新空について                   | 145<br>1 5102 (2010)          | 1∉<br>1. #1217.000             | 1空<br>ロー 対象(アロロー                     | 145<br>1. 81227 - 1110        |
|      | -                               | we be Helm.   | MOLAU CO MOL                                | ranca Main                             | randa Maja  | anco Mgiran  | cu Mgʻruru                          | cu Maĝirun                  | CO MOVIER                       | o Moʻrure                            | u Moʻru                    | reu Márru                | rcu Mgʻrun             | cu Migʻiyan              | CU MQ170                | CU MQ'7 UP                    | CU MQ17 U            | CU MQ17 UNC                          | u Mgʻruru                     | u Mgʻrun                       | cu Majiyara                          | tu Mgʻruncu                   |
|      | He mo perfer                    | For Scars<br>1 14, Scars                              | 145   |  |   | あ 155<br>も 15                                      | 145                                 | 145<br>170                  | 145<br>150                      | 145                                  | 24)<br>274                 | 145<br>175               | 145<br>175             | 24)<br>274               | 145<br>175              | 145<br>175                    | 240<br>274           | 145<br>150                           | 145<br>150                    | 141 F<br>1744 A                |                                      | 145                           |
| 16   | L usi dual                      | Lefe o Busparis<br>11 o Face d                        |   |  |   | <u>ポートポー</u><br>サート145                             | 145                                 | 144                         | 145                             | 145                                  | 114                        | 145                      | 145                    | 114                      | 170<br>240              | 145                           | 144                  | 150                                  | 145                           | 144                            | 175                                  | 175                           |
|      | He mo server                    | Ciber Fil. Supro t                                    | 174   | 174 1                                  | 15 F  | 74 174   | 155                                 | 174                         | 174                             | 155                                  | 174                        | 174                      | 155                    | 154                      | 154                     | 155                           | 174                  | 174                                  | 155                           | 174                            | 174                                  | 175                           |
|      | Tara                            | (Sar<br>см:-н Тиш)                                    |   |  |   | 7 <del>8) CO - M일 78) (</del><br>78) CO - M일 78) ( |                                     |                             |                                 |                                      |                            |                          |                        |                          |                         |                               |                      |                                      |                               |                                |                                      |                               |
| Í    | Lottem<br>De númeroer           | Line Sears<br>In Die Sears                            | 254   | 175 I                                  | 170 <u>-</u><br>201   | <u>* 175</u><br>w 145                              | 175                                 |                             | 15                              | 145                                  | 14447                      | N 10-                    | 145                    | 14417                    | <ul> <li>150</li> </ul> | 145                           | 14417                | - 175 -                              | 175                           | 20                             | 15                                   | 145                           |
|      |                                 | Faler or Focipiets                                    | 14  |  | 145 1-  | <u>+ 145</u><br>+÷ 145                             | 145                                 | 14                          | 145                             | 145                                  | 14                         | 145                      | 145                    | 14                       | 145                     | 145                           | 14                   | 145                                  | 145                           | 14                             | 145                                  | 145                           |
| IL.  | Lon: rud nel<br>Te oùr ier er   | 1 <sup>45</sup> milliousport<br>Cither Fith Stipport  | 174   | 1つ I<br>1中 1                           | 175  *<br>145  *  | <u>が 1で</u><br>よ 14                                | 145                                 | 144                         |                                 | 145                                  | 14                         |                          | <br>145                | 14                       | 14417                   | 244                           | 14                   | 144176                               | 254                           | 144                            | 1544155.<br>145                      | 144+164                       |
|      |                                 | Sia:  |   |  |   | ance Mayrian                                       | cu Mayrzana                         |                             |                                 | o May Vene                           | u Maya ar                  |                          | reu Mayyur             | cu Mayyur                |                         |                               |                      |                                      |                               |                                |                                      |                               |
|      | =0 00                           | Reibe Heim.<br>For Scars                              | 141 A                                       | 145 1                                  |   | <u>randa марлан</u><br>1981 - 145                  | 145                                 | <u>.u wa⊈70</u> n<br>1#11 A |                                 | 145                                  | 0 745/707<br>245           | 145                      | 145                    | 245                      | -00 אין אין אין<br>אין  | 24                            | 245<br>245           | 244 000 <u>1400 000</u><br>140       | <u>ю мортини</u><br>241       | 01 MQ17 010<br>1451 #          |                                      | 2011 MIQ17 CHICC.<br>244      |
|      | He mo be the t                  | 1 11. Stars<br>Lefe o Eutports                        | 172+174                                     |  |   | *** 15<br>** 15                                    | マン                                  | 174+17<br>174               | • 15<br>15                      | に                                    | 25)<br>174                 | に                        | 175<br>175             | 20<br>19                 | 24<br>12                | 15                            | 275                  | 274                                  | 175                           | 175+170<br>174                 | _7%<br>                              | 274                           |
| ж    | l ngi dusl                      | ք ո քարմ  | 14  |  |   | 4 74   | 24                                  | 14                          | 1411.26                         | 24                                   | 14:                        | 1411                     |                        | 14                       | 141.4                   | é 14-i a                      |                      | 245                                  | 141.4                         | 14                             | 245                                  | 245                           |
|      | He fro de rier                  | 1 Ciher Ini, Support<br>Star                          | <u>।स्</u><br>अनुराहसः ६० - अनुर            | 174<br>7년: CO 원왕()                     | 150 - 11<br>7.59: CO - MS: 7  | <u>주요 (주요)</u><br>7년(10년) 2년(17년)                  | <u>। १२</u><br>२०१४ - सञ्चर २२१ - २ |                             | <u>। १९</u><br>२०१२ अञ्चल २२१ २ |                                      |                            |                          | - 00 MS 755            |                          |                         |                               | COL MS( 75)          |                                      |                               | <u>। १९२</u><br>२० : मधुः २३२० | <u>। १९२</u><br>२०११ - सुकु र २१ - २ | 1744176.<br>2011-0456-756-001 |
|      | Lottem                          | carte Telof<br>Ling Spark                             |   |  | ମେଲାରେ କାର୍ଥ୍ୟ ମ<br>ଅଭ  | ମେଲାରେ କାର୍ଥ୍ୟ ମହା ।<br>କାର୍ଯ୍ୟ                    | ୧୯ କାର୍ଥ୍ୟ ୧୫୦<br>୧୯୦               | CO HE TH                    | CO 26,759 C<br>50               | 20 M (8 7 8 1 0<br>M                 | େ କରି⊧ ମେଳ<br>1≮ଜୋ         |                          | 0.00 MS(7.89)<br>W     | 00 अर्थुः 7.89<br>१९७२ ह |                         | CC 243:739                    | CO - Mỹ: 785<br>     | 00 전철 759 0<br>17441년                | 20 अफ़ि 759 Q<br>1944 के      | ମ କରିମେକ<br>କର                 | 이 사망 관람<br>1944년                     | 10 14월 759 60<br>1594년 전      |
|      | Tenjo ener                      | <ol> <li>FLScars</li> </ol>                           |   | 145 1                                  | 45 2  | 45 145   | 145                                 | 245                         | 24                              | 145                                  | 145 L A                    | # 24                     | 145                    | 145 i A                  |                         | 24                            | 245                  | 1411 第                               | 24                            | 245                            | 1411 22                              | 245                           |
| -    | Lon: rud nel                    | Foller on Folge dis<br>1 <sup>45</sup> no less port   |   |  | 145 1.<br>1475 1.   | 4 145<br>16 1641 16                                | 145<br>15441 M                      | 14-                         | 145<br>30                       | 145<br>15441 (t.                     | 141<br>141                 | 145                      | 145<br>154+15          | 14)<br>. 154             | 74<br>30                | 744<br>250                    | 14:                  | 24)<br>150+160                       | 740<br>250                    | 14                             | 24)<br>17541 M                       | 24<br>15541 M                 |
|      | CHINIC HOLES                    | Ciliar Et Sipport                                     | 141   | 14 <sup>2</sup> 2                      | 145 1-<br>1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-  | ¢ 1¢<br>nandu <del>N</del> Qʻ∕an                   | 745<br>                             | 1#<br>5 #65.00              | 14                              | 141 A                                | 14                         | 141<br>                  | 1411 #<br>             |                          | 14                      | 141 A                         |                      | 14                                   | 245                           | 14                             | 1#<br>                               | 245                           |
|      | ra re                           | ve se keint   | MOTO CO MOT                                 |  |   | arco Maran<br>arco Maran                           | CC MQ77070                          | cu Maĝirun                  | CO MOVIER                       |                                      |                            | reu Máyyu                | reu Márzur             | co Mayrar<br>co Mayrar   | icu Mayrur              | CU MQ'7 UN                    | cu Maja u            | CO MOVIER                            |                               | u Mgʻrun                       | CC MQ17010<br>CC MQ17010             | te Magnande<br>te Magnatice   |
|      | Full million                    | For Scars<br>1 14, Scars                              | 145) #<br>1554180                           | 24 D<br>254 D                          | ゆ 145<br>175 175  | 1124 - 244<br>a+181 - 254                          | 244<br>150                          | 145 i A<br>150+18           |                                 | 244<br>274                           | 245.<br>259                | 144 1 4<br>1744 1        |                        | : 245<br>353             | 141 ) A<br>1544 (*      |                               |                      | 2 1411)<br>2 1541)                   | 14日 新<br>1544 色。              | 145 i 22<br>1594 151           | 245<br>250                           | 245<br>(544) 2.               |
| м    | I usi dusi                      | Lefe o Europaris                                      | 174   |  |   | * 15   | 175                                 | 175                         |                                 |                                      | 174                        | 292                      |                        | 154                      | 174+17                  |                               |                      | 144+16                               | 154+154                       | 174                            | 154+155                              | 174+174                       |
| 1    |                                 | 1' o Fospot<br>1 Cihar H. Support                     | 174   | 174 174                                | + *   | 4 245<br>14 14                                     | 14日 新<br>1444 年                     | 14)<br>174                  | 145 i AF<br>174                 | 245<br>174+174                       | 14)<br>174                 | 145 i 2<br>174           | 35                     | 14)<br>174               | 145 i A<br>174          | 35                            | 174                  | 245<br>174                           | 1451 AF<br>15041 AL           | 14)<br>174                     | 245<br>174                           | 245<br>155+180                |
|      |                                 | Sar<br>Sar-e De di                                    | <u>- M3: 75: 00, M3:</u><br>M3: 75: 00, M3: | 786-00 분원)<br>786-00 분위) (             | 786-00 원왕(7<br>786-00 원왕(7  | 785-00 씨왕(785)<br>785-00 씨왕(785)                   | CC 24월 789 C<br>CC 24월 789 C        | 10 년월 789<br>10 년월 789      | 00 MS(75) 0<br>00 MS(75) 0      |                                      |                            |                          |                        |                          |                         |                               |                      | <u>ରେ ଲକ୍ତିମନ୍ତର</u><br>ରୋଲକ୍ତିମନ୍ତର |                               |                                |                                      |                               |
| i    | Lottom                          | Line Stars  | 255 17                                      | 441 AL 144                             | • •   | 55 (***).  | 154412                              |                             | 174+175                         | 174+175                              | 175+17                     | M (M44)                  | 5 144-17A              | . 155+16                 | *                       |                               | 257                  |                                      | 30                            |                                | 175+18                               | 155+18                        |
|      | THOTO HOLD                      | Faterian Facility dist                                |   | 11 AF 2<br>244 - 2                     | ver ><br>ver 1.   | 47 14 1 <i>4</i><br>94                             | 74                                  | 14                          | 141 H                           | 141 F<br>141 F                       | 1450 A<br>145              | 2 1417<br>1417           |                        | · 1451 A<br>· 145        | <u>∈ 248</u><br>14≐⊺à   |                               |                      | 245                                  | 245                           | 14                             | 245                                  | 248                           |
| 2    | Lon: rud nel<br>Genúr: en er    | 1 <sup>45</sup> m Laupon<br>UCth-r FT Silpone         | 174 17                                      | 0+140 2<br>025 2                       | <u>50  </u><br>105 1  | ≪ 150+130<br>20 120                                | <u></u>                             | 174                         | 175+170                         | 175+170<br>245                       | 174                        | <br>145                  | 145+180<br>1451 - 26   | . 174                    | 149+16                  | ~<br>1451 #                   | 174<br>6 144         | 149+144                              | 255                           | 174                            | <br>144                              | 145+144                       |
|      |                                 | Sia:  | MOLAU CO MOL                                | nancu Mari                             |   | กันกระ мญากันก                                     |                                     |                             | ree May/Yere                    | o May Vere                           |                            |                          | CO MOVIEL              | CU MQ17 CF               | CU MQ17 UP              | CO MOVIO                      | CU MQ77 O            |                                      |                               |                                |                                      |                               |
|      | Fars                            | ze belle <b>n</b> .<br>For Scark                      |   | zende 構築的<br>注意 - 14                   |   | nandu 网络汉语的<br>近望 ——14年1月                          | <u>CU 料菓(Zunu</u><br>1411 新         | <u>ru Migʻrun</u><br>1451 A |                                 | <u>.u. Magʻrichici</u><br>245        | <u>u Mayaran</u><br>247    | <u>100 MQ170</u><br>245  | 100 MQ1701<br>245      | <u>CU MQ17 UN</u><br>247 | 1451 A 1451 A           |                               |                      | 1451 812 1451 81                     | <u>iu Magʻrand</u><br>1451-26 | <u>(이 제작)((이))</u><br>247      | <u>CU MQ17 CH C</u><br>1451 #        | 1451 26                       |
|      | He mo server                    | 1 In Stars  | 1594155 15                                  |  |   | +171 (M+174  |                                     | 175+17                      |                                 | 174+174                              | 34                         | 35                       | 35                     | 24                       | 170+17                  |                               | 54                   | 170+170                              | 255                           | 24                             | 175+170                              | 140+140                       |
| *    | Lugi dust                       | Lefe or Bulports<br>1° or Focipiet                    |   |  | ini Africa de la composición de la comp<br>Se composición de la c | <u>42 (42+16)</u><br>42 - 245                      | 1444 A.<br>1451 A.                  | 14                          | 144+164<br>245                  | 144+174<br>245                       | 144                        | <br>1451 2               | <u>275</u><br>27 245   | 144                      | <u></u>                 |                               | 2 14:<br>2 14:       |                                      |                               | 14                             | 145+140<br>247                       | 145+140<br>247                |
|      | He mo serrer                    | Ciher H. Supro-t                                      | 174<br>2450 7.50 0.01 2450                  | N N                                    | /+1%L P   | <u>सः ।सः</u><br>सः ०० अशुः ७२२ ।                  | 150+160                             | 174                         | 174                             | 150+160                              | 174                        | 174                      | 265                    | 174                      | 144                     | 255<br>275 (204, 202          | 144                  | 174                                  | 15941551                      | 174<br>174 - 1744 - 17         | 174                                  | 149+164<br>101-1456-756-00    |
|      |                                 | сясні Гелі  | M3(78) CO M3(                               |  |   |  |                                     |                             | COL MS: 75H C                   |                                      |                            | - CO (MS) 749            | COLMSIZER              |                          | 00 MS(75)               | CO MB 755                     |                      |                                      |                               |                                |                                      |                               |
|      | Lottom<br>Tembri errer          | Lind Stars<br>I Hill Scars                            | 247<br>247                                  | 55 1<br>95 14                          | <u>30 5</u><br>178 2  | <u>** **</u><br>** **                              |                                     | 247                         | 145+130<br>1451 #               | 145+140                              | 247                        | 145+17<br>1451-2         |                        | . <u>24</u> 7<br>247     | 175418<br>1451-2        | <u>C 145+140</u><br>F 1451-24 | <u>C 2%</u><br>6 247 | <br>245                              | <br>1451 #                    | 247                            | 245                                  | 249<br>1451 #                 |
| Ι.   |                                 | Faler or Focipiels                                    |   | 11 <del>26</del> - 149                 | 1.87 1.   | ÷ 1÷1 ÷  | 1411 #                              | 14                          | 245                             | 245                                  | 14                         | 245                      | 245                    | 14                       | 1451 4                  |                               |                      | 1451.26                              | 1451.26                       | 14                             | 1451 #                               | 1451 #                        |
| 1.1  | Centradinal<br>Centrality enter | 1 <sup>45</sup> no Bulgori<br>1 Cili-cil-1 Si pore    | 174 17                                      | (************************************* | <u>55 1</u><br>1126 1   | 42 1494120<br>42 14                                |                                     | 144                         | 1594155<br>145                  | 145+144<br>245                       | 144                        |                          | 14941 M<br>1451 - A    |                          | 2%<br>14                |                               | - 144<br>2 144       | 14                                   | 247                           | 144                            | 2%<br>1#                             | 2%                            |
| 1    |                                 | Siaci<br>Xeloe Helm                                   | MQ17 CHOOL MQ1<br>MQ17 CHOOL MQ1            |  |   | nen du Magʻ∕rani<br>Son du Magʻrani                |                                     |                             |                                 |                                      |                            |                          |                        |                          |                         |                               |                      |                                      |                               |                                |                                      |                               |
| L    | 1 14 5                          |   |   |  |   |  |                                     |                             |                                 |                                      | - 194 1 51                 |                          |                        |                          |                         |                               |                      |                                      | - 194 - 11 -                  |                                |                                      |                               |

Project: AmDeck Design Guide Client: Amvic, Inc. Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

Inent. Anivic, Inc.

| Span | fc 4000   | = 50                                     |                                |              | LL = 50 DL                               |                              |                            |                       |                              |                              |                              |                              |                            |                                    |                            |                                  |                              |                              |                              |                              |                            |
|------|---|--|--------------------------------|--------------|--|------------------------------|----------------------------|-----------------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------------------|------------------------------------|----------------------------|----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------------------|
|      | #35   |  | S M                            | < · ·        |  | MS                           |                            | LL = 60 DL = 15<br>DL | MS                           | SS                           | LL = 70 DL = 15<br>DS        | MS                           |                            | LL=80 DL = 15                      | MS                         | SS                               | LL=90 DL=15                  | MS                           |                              | LL=100 DL=15                 | MS                         |
|      | Bottom End Spans  |  | 4 1#                           |              | #4 1#4                                   | 1#4                          | 1#4                        | 1#4                   | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        | 1#4                                | 1#4                        | 1#4                              | 1#4                          | 1#4                          | 1#6                          | 1#4                          | 1#4                        |
| ļ    | Reinforcement Int. Spans  |  | 4 1#                           |              | #4 1#4                                   | 1#4                          | 1#4                        | 1#4                   | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        | 1#4                                | 1#4                        | 1#4                              | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                        |
| 10   | Exterior Supports   |  | 4 1#                           |              | #4 1#4                                   | 1#4                          | 1#4                        | 1#4                   | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        | 1#4                                | 1#4                        | 1#4                              | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        |
| 10   | Longitudinal 1 <sup>st</sup> Int. Support<br>Reinforcement Other Int. Support | 1#4 1:                                   | 44 1#<br>44 1#                 |              | #4 1#4                                   | 1#4                          | 1#4                        | 1#4                   | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        | 1#4                                | 1#4                        | 1#4                              | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        |
| ļ    | Slab  | #4@17.5in OC #4@17                       |                                | 5in OC #4@17 | 7.5in OC #4@17.5ir                       |                              |                            | #4@17.5in OC          |                              |                              | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                |                                    | #4@17.5in O                |                                  | #4@17.5in OC                 | #4@17.5in OC                 |                              | #4@17.5in OC                 |                            |
|      | Transverse Reinf.   | #4@17.5in OC #4@17                       | 5in OC #4@17.                  | 5in OC #4@17 | 7.5in OC #4@17.5ir                       | OC #4@17.5in                 | OC #4@17.5in OC            | #4@17.5in OC          | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                | IC #4@17.5in OC                    | #4@17.5in O                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Bottom End Spans  |  | 4 1#                           |              | #5 1#4                                   | 1#4                          | 1#5                        | 1#4                   | 1#4                          | 1#5                          | 1#4<br>1#4                   | 1#4                          | 1#5                        | 1#4                                | 1#4                        | 1#5                              | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                        |
| ļ    | Reinforcement Int. Spans<br>Exterior Supports                                 |  | 4 1#                           |              | #5 1#4<br>#4 1#4                         | 1#4                          | 1#6                        | 1#4                   | 1#4                          | 1#5<br>1#4                   | 1#4                          | 1#4                          | 1#5                        | 1#4                                | 1#4                        | 1#5                              | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4<br>1#4                 |
| 12   | Longitudinal 1 <sup>st</sup> Int. Support                                     | 1#4 1;                                   |                                |              | #4 1#4                                   | 1#4                          | 1#4                        | 1#5                   | 1#4                          | 1#4                          | 1#5                          | 1#4                          | 1#4                        | 1#5                                | 1#5                        | 1#4                              | 1#5                          | 1#5                          | 1#4                          | 1#5                          | 1#5                        |
| ļ    | Reinforcement Other Int. Support  |  | 44 1#                          | 4 1          | #4 1#4                                   | 1#4                          | 1#4                        | 1#4                   | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        | 1#4                                | 1#4                        | 1#4                              | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 1#5                        |
| ļ    | Slab<br>Transverse Reinf.   | #4@17.5in OC #4@17<br>#4@17.5in OC #4@17 |                                |              | 7.5in OC #4@17.5ir<br>7.5in OC #4@17.5ir |                              |                            | #4@17.5in OC          | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in C<br>#4@17.5in C |                                    | #4@17.5in O<br>#4@17.5in O | C #4@17.5in OC<br>C #4@17.5in OC | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC                 | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in 0                |
|      | Bottom End Spans  | 1#5 1;                                   | 5in UC #4@17.3                 |              | #5 1#4                                   | UC #4@17.5in                 | 00 #4@17.5in 00            | 1#4@17.5in UC         | 1#4@/17.5in UC               | #4@17.5in UC<br>1#5          | #4@17.5in UC                 | #4@17.5in UC                 | 1#5                        | 1#5                                | 1#5                        | 1#5                              | 1#5                          | 1#5                          | 7#4@17.5in UC                | 1#5                          | 1#4@17.5in U               |
| ļ    | Reinforcement Int. Spans  | 1#5 1:                                   | 4 1#                           |              | #5 1#4                                   | 1#4                          | 1#5                        | 1#4                   | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 1#5                        | 1#5                                | 1#4                        | 1#5                              | 1#5                          | 1#4                          | 2#4                          | 1#5                          | 1#5                        |
|      | Exterior Supports   |  | 44 1#                          |              | #4 1#4                                   | 1#4                          | 1#4                        | 1#4                   | 1#4                          | 1#4                          | 1#4                          | 1#4                          | 1#4                        | 1#4                                | 1#4                        | 1#4                              | 1#4                          | 1#4                          | 1#4                          | 1#5                          | 1#5                        |
| 14   | Longitudinal 1 <sup>st</sup> Int. Support<br>Reinforcement Other Int. Support |  | 45 1#<br>44 1#                 |              | #1 1#5<br>#4 1#4                         | 1#5                          | 1#4                        | 1#6                   | 1#5<br>1#5                   | 1#1<br>1#4                   | 1#5                          | 1#6<br>1#5                   | 1#1                        | 1#5                                | 1#5                        | 1#4                              | 1#6                          | 1#5                          | 1#1                          | 1#5                          | 1#5                        |
|      | Slab  | #4@17.5in OC #4@17                       |                                |              | 7.5in OC #4@17.5ir                       | OC #4@17.5in                 |                            | #4@17.5in OC          | #4@17.5in OC                 |                              | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                |                                    | #4@17.5in O                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Transverse Reinf.   | #4@17.5in OC #4@17                       |                                |              | 7.5in OC #4@17.5ir                       |                              |                            | 1.100                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                |                                    | #4@17.5in O                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Bottom End Spans<br>Reinforcement Int. Spans                                  |  | 6 1#<br>6 1#                   |              | #5 1#5<br>#5 1#5                         | 1#5                          | 1#5                        | 1#5                   | 1#5<br>1#5                   | 2#4<br>2#4                   | 1#5<br>1#5                   | 1#5<br>1#5                   | 2#4                        | 1#5                                | 1#5<br>1#5                 | 2#4                              | 1#5<br>1#5                   | 1#5<br>1#5                   | 1#4+1#5                      | 1#5                          | 1#5<br>1#5                 |
| ļ    | Exterior Supports   |  | 4 1#                           |              | #0 1#0                                   | 1#4                          | 1#5                        | 1#5                   | 1#5                          | 2#4                          | 1#5                          | 1#5                          | 2#4                        | 1#5                                | 1#5                        | 2#4                              | 1#5                          | 1#5                          | 1#4+1#5                      | 1#5                          | 1#5                        |
| 16   | Longitudinal 1st Int. Support   | 1#4 1;                                   | 6 1#                           | 5 1          | #4 1#5                                   | 1#5                          | 1#4                        | 1#5                   | 1#5                          | 1#4                          | 1#5                          | 1#5                          | 1#4                        | 2#4                                | 1#5                        | 1#4                              | 2#4                          | 1#5                          | 1#4                          | 2#4                          | 2#4                        |
| ļ    | Reinforcement Other Int. Support  |  | 4 1#                           |              | #4 1#4                                   | 1#6                          | 1#4                        | 1#4                   | 1#5                          | 1#4                          | 1#4                          | 1#5                          | 1#4                        | 1#4                                | 1#5                        | 1#4                              | 1#4                          | 1#5                          | 1#4                          | 1#4                          | 1#5<br>#4@17.5in.0         |
| ļ    | Slab<br>Transverse Reinf  | #4@17.5in OC #4@17<br>#4@17.5in OC #4@17 |                                |              | 7.5in OC #4@17.5ir<br>7.5in OC #4@17.5ir |                              |                            |                       | #4@17.5in OC<br>#4@17.5in OC |                              | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in C<br>#4@17.5in C |                                    | #4@17.5in O<br>#4@17.5in O |                                  | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC                 | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in 0                |
|      | Bottom End Spans  |  | 6 1#                           |              | #4 1#5                                   | 1#5                          | 2#4                        | 1#5                   | 1#6                          | 1#4+1#5                      | 1#5                          | 1#6                          | 1#4+1#5                    | 1#5                                | 1#5                        | 1#4+1#5                          | 1#5                          | 1#5                          | 2#6                          | 1#5                          | 1#6                        |
| ļ    | Reinforcement Int. Spans  | 2#4 1:                                   |                                |              | #4 1#5                                   | 1#5                          | 2#4                        | 1#6                   | 1#6                          | 1#4+1#5                      | 1#6                          | 1#5                          | 1#4+1#5                    | 1#5                                | 1#6                        | 1#4+1#5                          | 1#6                          | 1#6                          | 2#6                          | 1#6                          | 1#6                        |
| 18   | Exterior Supports   |  | 6 1#                           |              | #4 1#5                                   | 1#5                          | 1#4                        | 1#5                   | 1#5                          | 1#4                          | 1#5                          | 1#5                          | 1#4                        | 1#5                                | 1#5                        | 1#4                              | 1#5                          | 1#5                          | 1#4                          | 1#5                          | 1#5                        |
| 18   | Longitudinal 1 <sup>st</sup> Int. Support<br>Reinforcement Other Int. Support |  | 44 1#<br>44 1#                 |              | #4 2#4<br>#4 1#4                         | 1#5                          | 1#4                        | 2#4                   | 2#4                          | 1#4                          | 2#4                          | 2#4                          | 1#4                        | 1#4+1#5                            | 2#4                        | 1#4                              | 1#4+1#5<br>1#4               | 2#4                          | 1#4                          | 1#4+1#5                      | 1#4+1#5<br>2#4             |
|      | Slab  |  |                                |              | 7.5in OC #4@17.5ir                       |                              |                            | #4@17.5in OC          | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                |                                    | #4@17.5in O                |                                  | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Transverse Reinf.   | #4@17.5in OC #4@17                       |                                |              | 7.5in OC #4@17.5ir                       | 00 11-00 11:011              |                            | #4@17.5in OC          | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                |                                    | #4@17.5in O                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Bottom End Spans<br>Reinforcement Int. Spans                                  |  | 6 <u>1</u> #<br>6 1#           |              | +1#5 1#5                                 | 1#5                          | 1#4+1#5                    | 1#5                   | 1#5                          | 2#5<br>2#5                   | 1#5                          | 1#5                          | 2#5                        | 2#4                                | 2#4 1#5                    | 1#5+1#6<br>1#5+1#6               | 2#4                          | 2#4                          | 1#5+1#6<br>1#5+1#6           | 2#4                          | 2#4                        |
|      | Exterior Supports   |  |                                |              | #4 1#5                                   | 1#5                          | 1#4                        | 1#5                   | 1#5                          | 1#4                          | 1#5                          | 1#5                          | 1#4                        | 1#6                                | 1#5                        | 1#4                              | 1#5                          | 1#5                          | 1#4                          | 2#4                          | 2#4                        |
| 20   | Longitudinal 1 <sup>st</sup> Int. Support                                     |  | 4 2#                           |              | #4 2#4                                   | 2#4                          | 1#4                        | 1#4+1#5               | 2#4                          | 1#4                          | 1#4+1#5                      | 1#4+1#5                      | 1#4                        | 2#5                                | 1#4+1#5                    | 1#4                              | 2#5                          | 1#4+1#5                      | 1#4                          | 2#5                          | 2#5                        |
|      | Reinforcement Other Int. Support  | 1#4 11<br>#4@17.5in OC #4@17             | 4 2#<br>5in OC #4@17.          |              | #4 1#4<br>7.5in OC #4@17.5ir             | 2#4<br>OC #4@17.5in          | 1#4<br>OC #4@17.5in OC     | 1#4<br>#4@17.5in OC   | 2#4<br>#4@17.5in OC          | 1#4<br>#4@17.5in OC          | 1#4<br>#4@17.5in OC          | 2#4<br>#4@17.5in OC          | 1#4<br>#4@17.5in 0         | 1#4<br>IC #4@17.5in OC             | 1#4+1#5<br>#4@17.5in O     | 1#4<br>C #4@17.5in OC            | 1#4<br>#4@17.5in OC          | 1#4+1#5                      | 1#4<br>#4@17.5in OC          | 1#4<br>#4@17.5in.0C          | 1#4+1#5<br>#4@17.5in.0     |
|      | Transverse Reinf.   | #4@17.5in OC #4@17                       |                                |              | 7.5in OC #4@17.5in                       |                              |                            |                       | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                |                                    | #4@17.5in 0                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in 0                |
| -    | Bottom End Spans  | 2#5 1;                                   | 45 1#                          |              | #5 1#5                                   | 1#5                          | 2#5                        | 2#4                   | 2#4                          | 1#5+1#6                      | 2#4                          | 2#4                          | 1#5+1#6                    | 2#4                                | 2#4                        | 2#6                              | 1#4+1#5                      | 1#4+1#5                      | 2#6                          | 1#4+1#5                      | 1#4+1#5                    |
| ļ    | Reinforcement Int. Spans  |  | 45 1#<br>45 1#                 |              | #5 1#5<br>#4 1#5                         | 1#5                          | 2#5                        | 2#4                   | 1#5<br>1#5                   | 1#5+1#6<br>1#4               | 2#4                          | 2#4<br>2#4                   | 1#5+1#6<br>1#4             | 2#4                                | 2#4                        | 2#6                              | 1#4+1#5<br>2#4               | 2#4<br>2#4                   | 2#6                          | 1#4+1#5<br>2#4               | 2#4                        |
| 22   | Exterior Supports<br>Longitudinal 1 <sup>st</sup> Int. Support                |  | 1#5 1#4+                       |              | #4 1#4+1#                                |                              |                            | 2#5                   | 1#4+1#5                      | 1#4                          | 2#4                          | 2#4                          | 1#4                        | 1#5+1#6                            | 2#4                        | 1#4                              | 2#4                          | 2#4                          | 1#4                          | 2#4 1#5+1#6                  | 2#4                        |
|      | Reinforcement Other Int. Support  | 1#4 1;                                   | 4 2#                           | 4 1          | #4 1#4                                   | 2#4                          | 1#4                        | 1#4                   | 1#4+1#5                      | 1#4                          | 1#4                          | 1#4+1#5                      | 1#4                        | 1#4                                | 2#5                        | 1#4                              | 1#4                          | 2#5                          | 1#4                          | 1#4                          | 2#5                        |
| ļ    | Slab  | #4@17.5in OC #4@17                       | 5in OC #4@17.                  |              | 7.5in OC #4@17.5ir                       | OC #4@17.5in                 | OC #4@17.5in OC            | #4@17.5in OC          | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                | IC #4@17.5in OC                    | #4@17.5in O                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Transverse Reinf.<br>Bottom End Spans   | #4@17.5in OC #4@17<br>1#5+1#6 2;         | 5in UC #4@217.                 | 5in OC #4@17 | 7.5in OC #4@17.5ir<br>i+1#6 2#4          | 0C #4@17.5in<br>2#4          | UC #4@17.5in UC<br>1#5+1#6 | 1#4@17.5in UC         | 1#4(2)17.5in UC              | #4@17.5in UC                 | 1#4(@17.5in UC               | 1#4@17.5in UC                | 74(@17.5in U               | 1#4(@17.5in UC                     | 1#4(@17.5in U<br>1#4+1#5   | 1#6+1#7                          | 1#4(@17.5in UC               | #4@17.5in UU                 | 1#6+1#7                      | #4@17.5in UC                 | 1#4@17.5in U               |
| ļ    | Reinforcement Int. Spans  |  | 4 2#                           |              | +1#6 2#4                                 | 2#4                          | 1#5+1#6                    | 1#4+1#5               | 2#4                          | 2#6                          | 1#4+1#5                      | 2#4                          | 2#6                        | 1#4+1#5                            | 1#4+1#5                    | 1#6+1#7                          | 2#5                          | 2#5                          | 1#6+1#7                      | 2#5                          | 2#5                        |
| I    | Exterior Supports   |  | 4 2#                           | 4 1          | #4 2#4                                   | 2#4                          | 1#4                        | 2#4                   | 2#4                          | 1#4                          | 2#4                          | 2#4                          | 1#4                        | 1#4+1#5                            | 1#4+1#5                    | 1#4                              | 1#4+1#5                      | 1#4+1#5                      | 1#4                          | 1#4+1#5                      | 1#4+1#6                    |
| 24   | Longitudinal 1 <sup>st</sup> Int. Support<br>Reinforcement Other Int. Support |  | 45 2#                          |              | #4 2#5                                   | 2#5                          | 1#4<br>5 1#4               | 1#5+1#6<br>1#4        | 2#5                          | 1#4<br>1#4                   | 1#5+1#6<br>1#4               | 1#5+1#6                      | 1#4                        | 2#6                                | 1#5+1#6                    | 1#4                              | 2#6                          | 1#5+1#6<br>1#5+1#6           | 1#4                          | 1#6+1#7                      | 2#6                        |
| ļ    | Slab  | #4@17.5in OC #4@17                       |                                |              |  |                              |                            | #4@17.5in OC          | <br>#4@17.5in OC             | #4@17.5in OC                 | #4@17.5in OC                 | 2#5<br>#4@17.5in OC          | #4@17.5in C                |                                    |                            |                                  | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Transverse Reinf.   | #4@17.5in OC #4@17                       | 5in OC #4@17.                  | 5in OC #4@17 | 7.5in OC #4@17.5ir                       | OC #4@17.5in                 | OC #4@17.5in OC            |                       | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                | IC #4@17.5in OC                    | #4@17.5in O                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Bottom End Spans<br>Reinforcement Int. Spans                                  | 2#6 1#4<br>2#6 1#4                       | 1#5 1#4+                       |              | 1#4+1#<br>1#4+1#                         |                              | 5 2#6                      | 1#4+1#5               | 1#4+1#5<br>1#4+1#5           | 1#6+1#7<br>1#6+1#7           | 2#5<br>2#5                   | 2#5                          | 2#7                        | 2#5                                | 2#5                        | 2#7                              | 2#5                          | 2#5                          | 2#7                          | 1#5+1#6<br>1#5+1#6           | 1#5+1#6<br>2#5             |
| ļ    | Reinforcement Int. Spans<br>Exterior Supports                                 |  | +1#5 2#<br>4 2#                |              | #6 1#4+1#<br>#4 2#4                      | 2#4                          |                            | 1#4+1#5               | 1#4+1#5                      | 1#6+1#/                      | #5<br>1#4+1#5                | 1#4+1#5<br>1#4+1#5           | 2#/                        | 2#5<br>1#4+1#5                     | 1#4+1#5<br>1#4+1#5         | 2#/                              | 2#5                          | 2#5                          | 2#/                          | 2#5                          | 2#5                        |
| 26   | Longitudinal 1 <sup>st</sup> Int. Support                                     |  | 1#6 1#5+                       |              | #4 1#5+1#                                |                              |                            | 2#6                   | 1#5+1#6                      | 1#4                          | 2#6                          | 1#5+1#6                      | 1#4                        | 1#6+1#7                            | 2#6                        | 1#4                              | 1#6+1#7                      | 2#6                          | 1#4                          | 2#7                          | 1#6+1#7                    |
| ļ    | Reinforcement Other Int. Support  |  | 4 2#                           |              | #4 1#4                                   | 2#5                          | 1#4                        | 1#4                   | 2#5                          | 1#4                          | 1#4                          | 1#5+1#6                      | 1#4                        | 1#4                                | 1#5+1#6                    | 1#4                              | 1#4                          | 2#6                          | 1#4                          | 1#4                          | 2#6                        |
| ļ    | Slab<br>Transverse Reinf.   | #4@17.5in OC #4@17<br>#4@17.5in OC #4@17 | 5in OC #4@17.<br>5in OC #4@17. |              | 7.5in OC #4@17.5ir<br>7.5in OC #4@17.5ir | OC #4@17.5in<br>OC #4@17.5in |                            | #4@17.5in OC          | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C<br>#4@17.5in C | IC #4@17.5in OC<br>IC #4@17.5in OC | #4@17.5in O<br>#4@17.5in O | C #4@17.5in OC                   | #4@17.5in OC<br>#4@17.5in OC | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in 0<br>#1@17.5in 0 |
|      | Bottom End Spans  | 1#6+1#7 1#4                              |                                |              | i+1#7 1#4+1#                             |                              |                            | 2#5                   | 2#6                          | 2#7                          | 2#6                          | 2#5                          | 2#7                        | 1#5+1#6                            | 1#5+1#6                    | 2#7                              | 1#5+1#6                      | 1#5+1#6                      | 2#7                          | 2#6                          | 2#6                        |
| ļ    | Reinforcement Int. Spans  | 1#6+1#7 1#4                              | +1#5 1#4+                      | 1#5 1#6      | i+1#7 1#4+1#                             | 5 1#4+1#                     | 5 2#7                      | 2#6                   | 1#4+1#5                      | 2#7                          | 2#6                          | 2#6                          | 2#7                        | 1#5+1#6                            | 2#6                        | 2#7                              | 1#5+1#6                      | 2#5                          | 2#7                          | 2#6                          | 1#5+1#6                    |
| ~    | Exterior Supports   |  | 1#5 1#4+                       |              | #4 1#4+1#                                |                              |                            | 1#4+1#5               | 1#4+1#5                      | 1#4                          | 2#5                          | 2#5                          | 1#4                        | 2#5                                | 2#5                        | 1#4                              | 2#5                          | 2#5                          | 1#4                          | 1#5+1#6                      | 1#5+1#6                    |
| 28   | Longitudinal 1 <sup>st</sup> Int. Support<br>Reinforcement Other Int. Support |  | 46 1#5+<br>44 1#5+             |              | #4 2#6<br>#4 1#4                         | 1#5+1#                       |                            | 1#6+1#7               | 2#6                          | 1#4                          | 1#6+1#7                      | 2#6                          | 1#4                        | 2#7                                | 1#6+1#7<br>2#6             | 1#4                              | 2#7                          | 2#7<br>1#6+1#7               | 1#4                          | 2#7                          | 2#7                        |
| ļ    | Slab  | #4@17.5in OC #4@17                       | 5in OC #4@17.                  | 5in OC #4@17 | 7.5in OC #4@17.5ir                       | OC #4@17.5in                 | OC #4@17.5in OC            | #4@17.5in OC          | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                | IC #4@17.5in OC                    | #4@17.5in O                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Transverse Reinf.   | #4@17.5in OC #4@17                       | 5in OC #4@17.                  | 5in OC #4@17 | 7.5in OC #4@17.5ir                       | OC #4@17.5in                 | OC #4@17.5in OC            | #4@17.5in OC          | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in C                | IC #4@17.5in OC                    | #4@17.5in O                | C #4@17.5in OC                   | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in OC                 | #4@17.5in O                |
|      | Bottom End Spans  | 2#7 2:                                   | 5 2#                           | 5 2          | #7 2#5<br>#7 2#5                         | 2#5                          | 2#7                        | 1#5+1#6               | 1#5+1#6<br>2#5               | 2#7<br>2#7                   | 1#5+1#6<br>1#5+1#6           | 1#5+1#6<br>2#5               | 2#7<br>2#7                 | 2#6                                | 2#6<br>1#5+1#6             | 2#7                              | 2#6<br>2#6                   | 2#6                          | 2#7                          | 1#6+1#7<br>1#6+1#7           | 1#6+1#7<br>2#6             |
| ļ    | Reinforcement Int. Spans<br>Exterior Supports                                 |  | 45 2#<br>46 2#                 |              | #7 2#5<br>#4 2#5                         | 2#5                          | 2#/                        | 1#5+1#6<br>2#5        | 2#5                          | 2#/                          | 1#5+1#6                      | 2#5                          | 2#/                        | 2#6<br>1#5+1#6                     | 1#5+1#6                    | 2#/                              | 2#6                          | 1#5+1#6<br>1#5+1#6           | 2#/                          | 1#6+1#/                      | 2#6                        |
|      |   |  |                                |              |  |                              | 1#4                        | 2#3                   | 1#6+1#7                      | 1#4                          | 2#3                          | 1#6+1#7                      | 1#4                        | 2#7                                | 2#7                        | 1#4                              | 2#7                          | 2#7                          | 1#4                          | 2#7                          | 2#7                        |
| 30   | Longitudinal 1 <sup>st</sup> Int. Support                                     | 1#4 1#6                                  | -1#7 2#                        | 6 1          | #4 1#6+1#                                | / 2770                       | 1 ///4                     | 2.111                 | 140+144                      | 1#4                          | 2111                         |                              |                            | 2.111                              |                            | 1 1744                           |                              |                              |                              |                              |                            |
| 30   | Longitudinal 1 <sup>st</sup> Int. Support<br>Reinforcement Other Int. Support |  | 4 2#                           | 6 1          | #4 1#4                                   | 2#6                          | 1#4                        | 1#4<br>1#4            | 2#6                          | 1#4                          |                              | 1#6+1#7<br>#4/@17.5in.OC     | 1#4<br>1#4<br>#4@17.5in 0  | 1#4                                | 1#6+1#7<br>#4@17.5in O     | 1#4                              |                              | 2#7<br>2#7<br>#4@17.5in.00   | 1#4<br>1#4<br>: #4@17.5in.00 | 1#4                          | 2#7                        |

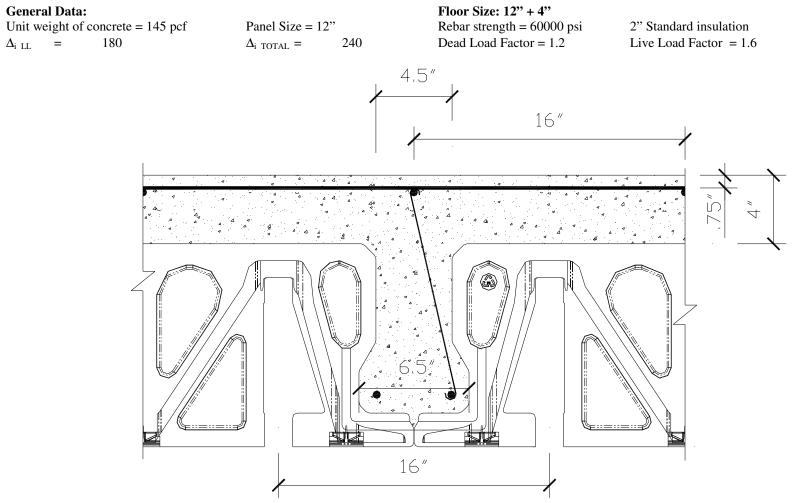
#### Notes

• Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.

• Blank Cells indicates that the joists are failing in deflection.

Project: AmDeck Design Guide Client: Amvic, Inc. Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

## 9.11 Table K: f'c = 4000 psi, Topping Thickness = 4.0"



| Project: | AmDeck Design Guide |  |
|----------|---------------------|--|
| Client:  | Amvic. Inc.         |  |

Prepared by: Kapil Checked by: Andy / Raj

Date: 12/07/2007 Date: 12/07/2007

10 psf

| Dead     | l Load                            | =  | 10                       | ) psf                    |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
|----------|-----------------------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|          | fc                                | 4000   |                          | LL = 50 DL = 10          |                          |                          | LL = 50 DL = 10          |                          |                          | LL = 60 DL = 10          |                          |                          | LL = 70 DL = 10          |                          |                          | LL=80 DL = 10            |                          |                          | LL=90 DL=10              |                          |                          | LL=100 DL=10             |                          |
| Span     | tf 4                              | 4  | SS                       | DS                       | MS                       | SS                       | DS                       | MS                       | SS                       | DL                       | MS                       | SS                       | DS                       | MS                       |
|          | Bottom<br>Reinforcement           | End Spans<br>Int. Spans                            | 1#4<br>1#4               | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4<br>1#4               | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#5<br>1#5               | 1#4                      | 1#4                      |
|          | Remorcement                       | Exterior Supports                                  | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      |
| 10       | Longitudinal 1                    | 1 <sup>st</sup> Int. Support                       | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      |
|          | Reinforcement (                   | Other Int. Support                                 | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      |
|          | !                                 | Slab   | #4@18in OC               |
| <u> </u> | Bottom                            | rse Reinf.<br>End Spans                            | #4@18in OC<br>1#5        | #4@18in OC<br>1#4        | #4@18in OC<br>1#4        | #4@18in OC<br>1#5        | #4@18in OC<br>1#4        | #4@18in OC<br>1#4        | #4@18in OC               | #4@18in OC<br>1#4        | #4@18in OC<br>1#4        | #4@18in OC<br>1#5        | #4@18in OC<br>1#4        | #4@18in OC<br>1#4        | #4@18in OC<br>1#5        | #4@18in OC<br>1#4        | #4@18in OC<br>1#4        | #4@18in OC<br>1#5        | #4@18in OC<br>1#4        | #4@18in OC<br>1#4        | #4@18in OC<br>1#5        | #4@18in OC<br>1#4        | #4@18in OC<br>1#4        |
|          | Reinforcement                     | Int. Spans   | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      |
|          | E                                 | Exterior Supports                                  | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      |
| 12       | Longitudinal 1                    | 1 <sup>st</sup> Int. Support                       | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      |
|          | Reinforcement (                   | Other Int. Support                                 | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#5                      |
|          | Trangua                           | Slab<br>irse Reinf.                                | #4@18in OC<br>#4@18in OC |
|          | Bottom                            | End Spans  | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      |
|          | Reinforcement                     | Int. Spans   | 1#5                      | 1#4                      | 1#4                      | 1#6                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      |
|          | E                                 | Exterior Supports                                  | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      |
| 14       | Longitudinal 1<br>Reinforcement ( | 1 <sup>st</sup> Int. Support                       | 1#1                      | 1#5                      | 1#5                      | 1#1                      | 1#5                      | 1#6                      | 1#4                      | 1#5                      | 1#5                      | 1#1<br>1#4               | 1#5<br>1#4               | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#1<br>1#4               | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      |
|          | Reinforcement                     | Other Int. Support                                 | 1#4<br>#4@18in OC        | 1#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#5<br>#4@18in OC        |
|          | Transve                           | erse Reinf.  | #4@18in OC               |
|          | Bottom                            | End Spans  | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      |
|          | Reinforcement                     | Int. Spans   | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 2#4                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 2#4                      | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      |
| 16       | Longitudinal 1                    | Exterior Supports                                  | 1#4                      | 1#4                      | 1#4<br>1#5               | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4                      | 1#4<br>1#5               | 1#4                      | 1#5                      | 1#5<br>1#6               | 1#4                      | 1#5<br>1#6               | 1#5                      | 1#4                      | 1#5<br>2#4               | 1#5<br>1#5               | 1#4                      | 1#5<br>2#4               | 1#5<br>2#4               |
|          | Reinforcement (                   | 1 <sup>st</sup> Int. Support<br>Other Int. Support | 1#4                      | 1#6                      | 1#5                      | 1#4                      | 1#6                      | 1#5                      | 1#4                      | 1#6                      | 1#6                      | 1#4                      | 1#5                      | 1#6                      | 1#4                      | 1#6                      | 1#6                      | 1#4                      | 2#4                      | 1#5                      | 1#4                      | 2#4                      | 2#4                      |
|          | 9                                 | Slab   | #4@18in OC               |
|          |                                   | rse Reinf.   | #4@18in OC               |
|          | Bottom<br>Reinforcement           | End Spans<br>Int. Spans                            | 2#4<br>2#4               | 1#5<br>1#5               | 1#5                      | 2#4 2#4                  | 1#5                      | 1#5<br>1#5               | 2#4                      | 1#5                      | 1#5<br>1#5               | 1#4+1#5<br>1#4+1#5       | 1#5<br>1#5               | 1#5<br>1#6               | 1#4+1#5<br>1#4+1#5       | 1#5<br>1#6               | 1#5<br>1#5               | 1#4+1#5<br>1#4+1#5       | 1#5<br>1#5               | 1#6                      | 2#5                      | 1#5<br>1#5               | 1#5                      |
|          | Remorcement                       | Exterior Supports                                  | 1#4                      | 1#6                      | 1#5                      | 1#4                      | 1#5                      | 1#6                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#6                      | 1#6                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#6                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      |
| 18       | Longitudinal 1                    | 1 <sup>st</sup> Int. Support                       | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 2#4                      | 1#5                      | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 1#4+1#5                  | 2#4                      | 1#4                      | 1#4+1#5                  | 1#4+1#5                  |
|          | Reinforcement (                   | Other Int. Support                                 | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 1#5                      | 1#4                      | 1#4                      | 2#4                      | 1#4                      | 1#4                      | 2#4                      | 1#4                      | 1#4                      | 2#4                      |
|          | S                                 | Slab   | #4@18in OC               | #4@18in OC<br>#4@18in OC | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC<br>#4@18in OC |
|          | Bottom                            | rse Reinf.<br>End Spans                            | #4@18in OC<br>1#4+1#5    | #4@18in OC<br>1#5        | #4@18in OC<br>1#5        | #4@18in OC<br>1#4+1#5    | #4@18in OC               | #4@18in OC<br>1#5        | #4@18in OC<br>1#4+1#5    | #4@18in OC<br>1#5        | #4@18in UC<br>1#5        | #4@18in OC<br>2#5        | #4@18in OC<br>1#5        | #4@18in OC               | #4@18in OC<br>2#5        | #4@18in OC<br>1#5        | #4@18in OC<br>1#5        | #4@18in OC               | #4@18in OC               | #4@18in OC<br>2#4        | #4@18in OC<br>1#5+1#6    | #4@18in OC<br>2#4        | #4(@18in UC<br>2#4       |
|          | Reinforcement                     | Int. Spans   | 1#4+1#5                  | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      | 1#4+1#5                  | 1#5                      | 1#5                      | 2#5                      | 1#5                      | 1#5                      | 2#5                      | 1#5                      | 1#5                      | 2#5                      | 2#4                      | 1#5                      | 1#5+1#6                  | 2#4                      | 2#4                      |
|          | E                                 | Exterior Supports                                  | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 1#5                      | 1#5                      | 1#4                      | 2#4                      | 2#4                      |
| 20       | Longitudinal 1                    | 1 <sup>st</sup> Int. Support                       | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 1#4+1#5                  | 2#4                      | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 2#5                      | 1#4+1#5                  | 1#4                      | 2#5                      | 2#5                      |
|          | Reinforcement (                   | Other Int. Support<br>Slah                         | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in.OC        | 2#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 2#4<br>#4@18in OC        | 1#4<br>#4@18in.OC        | 1#4<br>#4@18in OC        | 1#4+1#5<br>#4@18in.OC    | 1#4<br>#4@18in.OC        | 1#4<br>#4@18in OC        | 1#4+1#5<br>#4@18in.OC    | 1#4<br>#4@18in OC        | 1#4<br>#4@18in.OC        | 1#4+1#5<br>#4@18in.OC    |
|          | Transve                           | rse Reinf.   | #4@18in OC               |
|          | Bottom                            | End Spans  | 2#5                      | 1#5                      | 1#5                      | 2#6                      | 1#5                      | 1#6                      | 2#5                      | 2#4                      | 2#4                      | 1#6+1#6                  | 2#4                      | 2#4                      | 1#5+1#6                  | 2#4                      | 2#4                      | 1#5+1#6                  | 1#4+1#5                  | 1#4+1#5                  | 2#6                      | 1#4+1#5                  | 1#4+1#5                  |
|          | Reinforcement                     | Int. Spans   | 2#5                      | 1#5                      | 1#5                      | 2#5                      | 1#5                      | 1#5                      | 2#5                      | 2#4                      | 1#5                      | 1#5+1#6                  | 2#4                      | 1#5                      | 1#5+1#6                  | 2#4                      | 2#4                      | 1#5+1#6                  | 1#4+1#5                  | 2#4                      | 2#6                      | 1#4+1#5                  | 2#4                      |
| 22       | Longitudinal 1                    | Exterior Supports<br>1 <sup>st</sup> Int. Support  | 1#4                      | 1#5                      | 1#5<br>1#4+1#5           | 1#4                      | 1#5<br>1#4+1#5           | 1#5<br>1#4+1#6           | 1#4                      | 1#5<br>2#5               | 1#5<br>1#4+1#5           | 1#4                      | 1#5<br>2#5               | 1#5                      | 1#4                      | 2#4<br>2#6               | 2#4<br>2#5               | 1#4                      | 2#4<br>1#5+1#6           | 2#4                      | 1#4                      | 2#4<br>1#5+1#6           | 2#4 1#5+1#6              |
|          |                                   | Other Int. Support                                 | 1#4                      | 1#4+1#0                  | 2#4                      | 1#4                      | 1#4+1#0                  | 2#4                      | 1#4                      | 1#4                      | 1#4+1#5                  | 1#4                      | 1#4                      | 1#4+1#6                  | 1#4                      | 2#0                      | 2#0<br>1#4+1#5           | 1#4                      | 1#4                      | 2#6                      | 1#4                      | 1#0+1#0                  | 2#5                      |
|          | 5                                 | Slab   | #4@18in OC               |
|          | Transve                           | rse Reinf.   | #4@18in OC               |
|          | Bottom<br>Reinforcement           | End Spans<br>Int. Spans                            | 1#5+1#6<br>1#5+1#6       | 2#4                      | 2#4 1#6                  | 1#5+1#6                  | 2#4                      | 2#4                      | 1#5+1#6                  | 2#4                      | 2#4                      | 2#6<br>2#6               | 1#4+1#5<br>1#4+1#5       | 1#4+1#5<br>2#4           | 2#6                      | 1#4+1#5<br>1#4+1#5       | 1#4+1#5<br>2#4           | 1#6+1#7<br>1#6+1#7       | 1#4+1#5<br>1#4+1#5       | 1#4+1#5<br>1#4+1#5       | 1#6+1#7<br>1#6+1#7       | 2#5<br>2#5               | 2#5                      |
|          | Reiniorcement                     | Exterior Supports                                  | 1#0+1#0                  | 2#4                      | 1#5                      | 1#0+1#0                  | 1#5                      | 1#0                      | 1#0+1#0                  | 2#4                      | 2#4                      | 2#0                      | 2#4                      | 2#4                      | 2#0                      | 2#4                      | 2#4                      | 1#0+1#/                  | 1#4+1#6                  | 1#4+1#6                  | 1#0+1#/                  | 2#0                      | 1#4+1#6                  |
| 24       | Longitudinal 1                    | 1 <sup>st</sup> Int. Support                       | 1#4                      | 2#5                      | 1#4+1#5                  | 1#4                      | 2#5                      | 1#4+1#5                  | 1#4                      | 1#5+1#6                  | 2#5                      | 1#4                      | 1#5+1#6                  | 2#5                      | 1#4                      | 1#5+1#6                  | 1#5+1#6                  | 1#4                      | 2#6                      | 1#5+1#6                  | 1#4                      | 2#6                      | 2#6                      |
|          | Reinforcement (                   | Other Int. Support                                 | 1#4                      | 1#4                      | 1#4+1#5                  | 1#4                      | 1#4                      | 1#4+1#6                  | 1#4                      | 1#4                      | 1#4+1#5                  | 1#4                      | 1#4                      | 2#5                      | 1#4                      | 1#4                      | 2#5                      | 1#4                      | 1#4                      | 1#5+1#6                  | 1#4                      | 1#4                      | 1#5+1#6                  |
|          | T                                 | Slab<br>irse Reinf                                 | #4@18in OC<br>#4@18in OC | #4@18in OC               | #4@18in OC<br>#4@18in OC | #4@18in OC               | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC               |
|          | Bottom                            | erse Reint.<br>End Spans                           | #4@18in UC<br>2#6        | #4@18in UC<br>1#4+1#5    | #4@18in UC<br>1#4+1#5    | #4@18in UC<br>2#6        | #4@18in UC<br>1#4+1#5    | #4@18in UC<br>1#4+1#5    | #4@18in UC               | 1#4+1#5                  | #4@18in UC<br>1#4+1#5    | #4@18in UC<br>1#6+1#7    | #4@18in UC<br>1#4+1#5    | #4@18in UC<br>1#4+1#5    | #4@18in UC<br>1#6+1#7    | -#4@18in UC<br>2#5       | #4@18in UC<br>2#5        | #4@18in UC<br>2#7        | #4@18in UC<br>2#5        | #4@18in UC<br>2#5        | #4@18in UC               | #4@18in UC<br>1#5+1#6    | 1#5+1#6                  |
|          | Reinforcement                     | Int. Spans   | 2#6                      | 1#4+1#5                  | 2#4                      | 2#6                      | 1#4+1#6                  | 2#4                      | 2#6                      | 1#4+1#5                  | 1#4+1#5                  | 1#6+1#7                  | 1#4+1#6                  | 1#4+1#5                  | 1#6+1#7                  | 2#5                      | 1#4+1#6                  | 2#7                      | 2#5                      | 1#4+1#5                  | 2#7                      | 1#6+1#6                  | 2#5                      |
|          | E                                 | Exterior Supports                                  | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 2#4                      | 2#4                      | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 2#5                      | 2#5                      |
| 26       | Longitudinal 1<br>Reinforcement ( | 1 <sup>st</sup> Int. Support                       | 1#4                      | 1#5+1#6<br>1#4           | 2#5                      | 1#4                      | 1#5+1#6<br>1#4           | 2#5                      | 1#4                      | 1#5+1#6                  | 1#5+1#6                  | 1#4                      | 2#6<br>1#4               | 1#5+1#6<br>1#5+1#6       | 1#4                      | 2#6<br>1#4               | 2#6<br>1#5+1#6           | 1#4                      | 1#6+1#7<br>1#4           | 2#6                      | 1#4                      | 1#6+1#7<br>1#4           | 1#6+1#7                  |
|          | (annorcement                      | Other Int. Support<br>Slah                         | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 2#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 2#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 2#5<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#5+1#6<br>#4@18in OC    | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#5+1#6<br>#4@18in OC    | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 2#6<br>#4@18in OC        | 1#4<br>#4@18in OC        | 1#4<br>#4@18in OC        | 2#6<br>#4@18in.OC        |
|          | Transve                           | rse Reinf.   | #4@18in OC               |
|          | Bottom                            | End Spans  | 1#6+1#7                  | 1#4+1#5                  | 1#4+1#5                  | 1#6+1#7                  | 1#4+1#6                  | 1#4+1#5                  | 1#6+1#7                  | 2#6                      | 2#5                      | 2#7                      | 2#6                      | 2#5                      | 2#7                      | 1#5+1#6                  | 1#5+1#6                  | 2#7                      | 1#5+1#6                  | 1#5+1#6                  | 2#7                      | 1#5+1#6                  | 1#5+1#6                  |
|          | Reinforcement                     | Int. Spans   | 1#6+1#7                  | 1#4+1#5                  | 1#4+1#5                  | 1#6+1#7                  | 1#4+1#5                  | 1#4+1#5                  | 1#6+1#7                  | 2#5                      | 1#4+1#5                  | 2#7                      | 2#5                      | 1#4+1#5                  | 2#7                      | 1#5+1#6                  | 2#5                      | 2#7                      | 1#5+1#6                  | 2#5                      | 2#7                      | 1#5+1#6                  | 1#5+1#6                  |
| 28       | E<br>Longitudinal                 | Exterior Supports                                  | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 1#4+1#5                  | 1#4+1#5                  | 1#4                      | 1#4+1#5<br>1#6+1#7       | 1#4+1#5<br>2#6           | 1#4                      | 2#5                      | 2#5                      | 1#4                      | 2#5<br>2#7               | 2#5<br>1#6+1#7           | 1#4                      | 1#5+1#6                  | 1#5+1#6<br>2#7           |
| 20       |                                   | 1 <sup>st</sup> Int. Support<br>Other Int. Support | 1#4                      | 2#6                      | 1#5+1#6<br>1#5+1#6       | 1#4                      | 2#6                      | 1#5+1#6<br>1#5+1#6       | 1#4                      | 2#6                      | 2#6<br>1#5+1#6           | 1#4                      | 1#6+1#/                  | 2#6<br>2#6               | 1#4                      | 1#6+1#7<br>1#4           | 1#6+1#7<br>2#6           | 1#4                      | 2#/                      | 1#6+1#/<br>1#6+1#7       | 1#4                      | 2#7                      | 2#/                      |
|          |                                   | Slab   | #4@18in OC               |
|          |                                   | erse Reinf.  | #4@18in OC               |
|          | Bottom                            | End Spans  | 2#7                      | 2#5                      | 2#5                      | 2#7                      | 2#5                      | 2#5                      | 2#7                      | 1#5+1#6                  | 1#5+1#6                  | 2#7                      | 1#5+1#6                  | 1#5+1#6                  | 2#7                      | 1#5+1#6                  | 1#5+1#6                  | 2#7                      | 2#6                      | 2#6                      | 2#7                      | 2#6                      | 2#6                      |
|          | Reinforcement                     | Int. Spans   | 2#7                      | 2#5<br>1#4+1#5           | 1#4+1#5                  | 2#7                      | 2#5                      | 1#4+1#5                  | 2#7                      | 1#5+1#6<br>2#5           | 2#5<br>2#5               | 2#7                      | 1#5+1#6<br>2#5           | 2#5                      | 2#7                      | 1#5+1#6<br>1#5+1#6       | 1#5+1#6                  | 2#7                      | 2#6                      | 1#5+1#6                  | 2#7                      | 2#6<br>1#5+1#6           | 1#5+1#6<br>1#5+1#6       |
| 30       | Longitudinal 1                    | Exterior Supports<br>1 <sup>st</sup> Int. Support  | 1#4                      | 1#4+1#5                  | 2#6                      | 1#4                      | 1#4+1#5<br>1#6+1#7       | 1#4+1#5<br>2#6           | 1#4                      | 2#5                      | 2#5<br>1#6+1#7           | 1#4                      | 2#5                      | 2#5<br>1#6+1#7           | 1#4                      | 1#5+1#6<br>2#7           | 1#5+1#6<br>2#7           | 1#4                      | 1#5+1#6<br>2#7           | 1#5+1#6<br>2#7           | 1#4                      | 1#5+1#6<br>2#7           | 2#7                      |
| 1        |                                   | Other Int. Support                                 | 1#4                      | 1#4                      | 1#5+1#6                  | 1#4                      | 1#4                      | 1#5+1#6                  | 1#4                      | 1#4                      | 2#6                      | 1#4                      | 1#4                      | 1#6+1#7                  | 1#4                      | 1#4                      | 1#6+1#7                  | 1#4                      | 1#4                      | 2#7                      | 1#4                      | 1#4                      | 2#7                      |
|          |                                   |  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          | A second second second   |
|          |                                   | Slab<br>irse Reinf                                 | #4@18in OC<br>#4@18in OC | #4@18in OC<br>#4@18in OC | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC               | #4@18in OC<br>#4@18in OC | #4@18in OC               | #4@18in OC               | #4@18in OC               |

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Date: 12/07/2007 Date: 12/07/2007

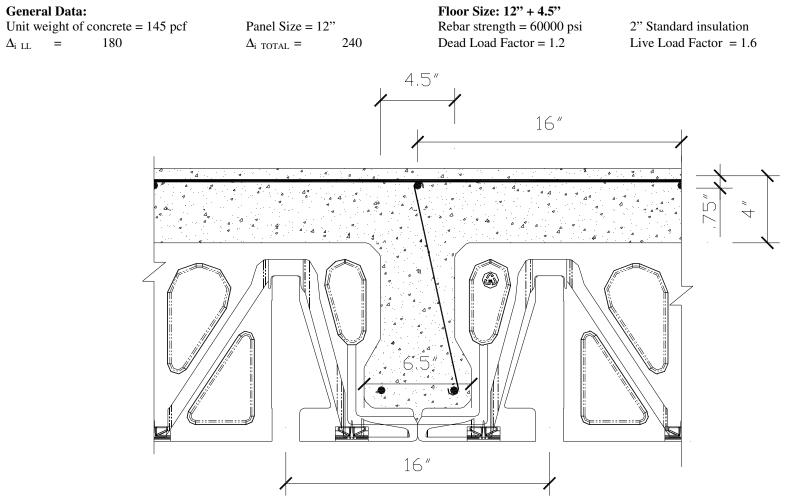
15 psf Dead Load = 400 = 50 C Span End Spans Int. Spans 1#4 #4 1#4 1#4 1#4 1#4 1#5 1#5 1#4 1#4 1#4 #4 xterior Suppor 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 #44 1#4 1#4 1#4 1#4 1#4 1#4 1#4 10 Longitudina einforceme Int. Support 1#4 #4 #4 1#4 1#4 1#4 1#4 1#4 ther Int. Suppo 1#4 #4@18in O( #4@18in OC #4@18in OC #4@18in #4@18in #4@18in #4@18in ( #4@18in 00 #4@18in 00 #4@18in O0 #4@ #4@18ir 1#4 1#4 1#4 1#4 1#4 44@18in 0 End Span 1#4 1#4 1#4 1#4 1#4 1#4 1#5 1#5 1#4 1#4 1#4 #4@18in 0 1#4 1#4 1#5 1#4 1#4 1#4 einford Int. Spans 146 1#4 1#6 1#4 1#5 1#4 1#4 1#4 1#44 1#5 1#4 1#4 1#6 1#4 1#4 1#4 4@18ir 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 1#4 xterior Support 12 Longitudina # Int. Support Other Int. Suppo 1#4 1#4 4@18in 1#4 1#4 1#4 1#4 #@18in 1#4 1#4 #4@18in 1#4 1#4 4@18in 1#5 1#4 #4@18in 1#4 1#4 #@18in • 1#5 1#4 1#4 1#4 4@18in 0 1#4 1#4 1#5 1#4 #4@18in 1# 1#4 1#4 #4@18in 1#5 1#5 #4@18in 1#4 1#4 #4@18in 1#5 1#4 4@18in Reinforcer #4@18in 00 1#5 1#5 1#4 1#4 1#4 4@18in C #4@18in #4@18in 4@18in 18in O #4@ 1#4 1#4 1#4 1#5 1#5 1#6 1#6 1# 1# End Spans 1#4 1#4 1#4 1#5 1#4 Int. Spans Exterior Support 1#4 1#4 1#5 1#5 1# Reinford 1# 1#4 2#4 1#4 1#1 1#4 1# 1# 1 #6 1#4 1#4 1#6 1#4 1#4 1 #44 1#4 14 Longitudir einforcem Int. Support 1#/ 1#/ 1#4 1#4 1#6 1#6 1#5 1#4 1#2 1#1 1#4 1#5 her Int. Suppo #4@18in #4@18in #4@18in 0 #4@18in 0 #4@18in #4@18in #4@18in 0 #4@18in 0 #4@18in O #4@18in O #16 #4@ End Spans 1#5 1#5 1#4 1#4 1#5 1#5 1#6 1#6 2#4 2#4 1#4 1#4+1# 1# ottom 1#6 1#6 1# 2#4 2#4 1#4 einfor Int. Span 1# 1# 1#5 1#5 1#4+1# 1# 1#4 1#4 1#5 cterior Suppor 1#4 1#4 1#4 1#4 1#5 1#5 1#5 #4 1#5 1#5 1# 1#4 1#5 16 Longitudin <sup>st</sup> Int. Support Other Int. Suppo 1#5 1#5 #4@18in OC #4@18in OC 1#4 1#4 #4@18in 00 #4@18in 00 1#4+1#5 1#4 1#4 1#5 1#5 1#4 1#4 1#5 1#4 1#4 1#4 1#5 1#4 1#5 1#5 1#5 1#4 1#6 1#6 1*#*4 1*#*4 1#4 1#4 2#4 1# 1# 1#4 1#4 2#4 1#4 2#4 1#4 einfor Slab #@18in O( #4@18in OC #4@18in OC #4@18in O #4@18in OC #4@18in OC #4@18in OC #4@18in 00 #4@18in 00 1#5 #4@18in O( #4@18in OC #4@18in OC #4@18in O( #4@18in O0 #4@18in OC #4@18in OC #4@18in O0 #4@18in OC #4@18in O #4@18in O #4@18in OC #4@18in OC #4@18in OC 2#4 #4@18in O #4@18in OC #4@18in OC #4@18in OC 1#4+1#5 #4@18in OC #4@18in OC 1#4+1#5 #4@18in O #4@18in O End Spans Int. Spans 2#4 1#4 1#4 1#4 1#4 1#4 1#6 18in 00 2#4 1#4 1#4 1#4 #4@18in 00 2#4 1#4 1#4 1#4 #4@18in OC 1# 1#4+1# einford 1#4+1#5 1#5 1#4+1# 1#5 1#5 1#5 #4@18in OC 1#5 2#4 1#4 #4@18in OC 1#5 1#5 1#5 #4@18in 00 1#5 2#4 1#4 #4@18in 00 1#4 1#4 1#4 1#4 #4@18in OC 1#5 2#4 1#4 #4@18in OC 1#5 1#5 2#4 1#5 #4@18in OC atterior Support atterior Support 1#4 1#4 1#4 #4@18in OC 1#4 1#4 18 ongitudin 2#4 1#5 #4@18in OC 1#4+1#5 1#4 #4@18in 00 1#4+1#5 1#4 #4@18in OC 1#4 #4@18in OC Reinforcen ther Int. Supp #4@18in OC #4@18in OC #4@18in OC #4@18in O #4@18in O #4@18in OC #4@18in I #4@18in O #4@18in O #4@18in OI #4@18in C #4@18in O #4@18in OC se Rein #4@18in O End Spans Int. Spans 1#4+1#5 1#4+1#5 1#4 1#4+1# 1#4+1# 1#4 1#5 1#5 1#5 1#C 1#C 1#4+1#5 1#4+1#5 1#6 1#6 2#0 2#0 1#4 20 Longitudina Reinforceme <sup>st</sup> Int. Support Other Int. Suppo 2#4 2#4 #4@18in 00 #4@18in 00 1#4+1#5 1#4 1#4+1#5 1#4 1#4 1#4 2#4 2#4 1#4 1#4 2#4 1#4 1#4 1#4 1#4 1#4 1#4+1#5 1#4+1#5 1#4+1#5 1#4+1#5 2# 1#4+1#5 2#4 #4@18in C #4@18in OC #4@18in OC #4@18in OC #4@18in #4@18in 0 #4@18in 0 #4@18in C #4@18in I #4@18in 0 #4@18in 0 #4@18in O #4@18in O #4@18in 00 #4@18in 00 #4@18in OC #4@18in OC #4@18in OC #4@18in OC #4@18in #4@18in O #4@18in 0 End Spans 2#5 2#5 2#5 2#5 2#5 2#4 2#4 Int. Spans 1# 1#5 1#5+1# 1#5+1# 1#4+1# 1#4+1# Reinfo 2#4 1#5 2#5 1#4 #4@18in 0 1#5 1#4+1#5 terior Suppo 1#4 1#5 1#4+1#5 1#5 1#4+1#5 1#4 1#4 1#4 1#4 1#4 2#4 1#5+1#6 2#4 1#5+1#6 22 Longitudina 1#4 1#4+1# 1#4+1#5 1#4+1#5 #4@18in O0 1#4 1#5+1#8 t Int. Support 1#5+1; 1#4 #4@18in 1#4 #4@18in 1#4 #4@18in OC einforcem her Int. Suppo 2#4 #4@18in OC 1#4 #4@18in OC 2#4 #4@18in OC 1#4 #4@18in OC 1#4+1#5 #4@18in OC #4@18in OC #4@18in 1#5+1# 1#6+1# 1#4 End Spans Int. Spans 1#4+1#6 1#4+1#6 1#4+1#6 2#4 2#4 2#5 1#4 #4@18in 00 2#4 2#4 2#5 1#4 1#4+1 1#4+1 2#4 2#4 2#5 2#5 2#4 2#4 Exterior Suppor 1#4 1#4 1#4 1#4 1#4+ 1#4-1#5+1#6 24 Longitudina einforceme 2#6 <sup>st</sup> Int. Support 1#4 1#4 2#5 1#4+1#5 1#4 1#4 1#5+1#6 1#4 1#4 1#4 1#5+1#6 1#4 1#5+1#6 2#6 1#4 1#4 2#6 1#4 1#5+1#6 1#5+1#6 2#5 1#4+1#5 2#6 ther Int. Suppl #4@18in O #4@18in C #4@18in O #4@18in OC #4@18in O #4@18in O #4@18in OC #4@18in O #4@18in OC #4@18in OC #4@18in 00 #4@18in OC #4@18in O #4@18in OC #4@18in O #4@18in O #4@18in O #4@18in 4@18in O End Spans Int. Spans 1#4+1#6 einforcem 1#4 1#4+ terior Suppo 2#4 2#4 #4+1# 26 Longitudina 1#6+1#7 1#4 #4@18in 0 # Int. Support 1#5+1#6 2#5 #4@18in OC 1#5+1#6 1#4 #4@18in O 1#5+1#6 2#5 #4@18in O 1#5+1#6 2#5 #4@18in OC 1#6+1#7 1#4 #4@18in 00 1#5+1#6 1#5+1# Reinforceme ther Int. Supp 1#4 #4@18in OC 1#4 #4@18in O0 1#4 #4@18in OC 1#5+1#6 #4@18in OC 2#6 #4@18in OC #4@18in OC End Spans Int. Spans Aterior Suppo 1#6+1#7 1#6+1#7 1#5+ 1#5+ 1#5+1#6 1#5+1#6 ottom 2#5 1#4+1# Reinforcer #6+1# 1#4 1#4+1#5 1#4+1#5 1#5+1#6 1#4 1#4+1#5 1#4+1# 1#4 1#4+1#5 1#6+1#7 1#4+1#5 1#4 2#5 2# 1#4 1#5+1# 1#5+1# 1#4 28 Longitudina Reinforceme tenor Support 1#5+1# 1#6+1# 1#6+1#7 1#6+1#7 2#6 2#6 |#5+1#6 1#4 1#4 ther Int. Suppl 1#5+1# 1#6+1#2 End Spans Int. Spans 1#5+1# 1#5+1#6 1#5+1#6 1#5+1#6 1#5+1#6 einforci 1#5+1#6 2#5 2#5 1#5+1#6 1#5+1#6 xterior Suppo 30 Longitudinal Reinforcemer <sup>st</sup> Int. Support 2#7 1#6+1#7 2#7 1#4 1#6+1#7 2#6 1#6+1#7 1#6+1#7 1#6+1#7 1#4 1#6+1# 1#4 2#7 2#7 ther Int. Suppo #4@018in ( #4@18in OC #4@18in O #4@18in O0

#### Notes

- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.
- Blank Cells indicates that the joists are failing in deflection.

Project: AmDeck Design Guide Client: Amvic, Inc. Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

## 9.12 Table L: f'c = 4000 psi, Topping Thickness = 4.5"



| Project: | AmDeck Design Guide |
|----------|---------------------|
| Client:  | Amvic, Inc.         |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea  | d Load                 | =   |                          | 10 psf                            |                             |  |  |                                       |                            |   |                                     |                            |                            |  |                              |                            |                                   |                                       |                                  |  |                              |                                   |                                 |
|------|------------------------|---|--------------------------|-----------------------------------|-----------------------------|--|--|---------------------------------------|----------------------------|---|-------------------------------------|----------------------------|----------------------------|--|------------------------------|----------------------------|-----------------------------------|---------------------------------------|----------------------------------|--|------------------------------|-----------------------------------|---------------------------------|
|      | ٦:                     | /m  |                          | 1 - 9 D - 1                       |                             |  | 1 - 90 D - 1                                   |                                       |                            | 1 - YCD - 1:                                  |                                     |                            | 1 - 20 D - 15              |  |                              | 1 -90 D - 15               |                                   |                                       | 1 -00 D -15                      |  |                              | 1, -100 04- 5                     |                                 |
| Scar | 1=0 00                 | V F<br>Lini Stark                                 | 87<br>1 140              | DF<br>156                         | 28<br>170                   | 14   | DF<br>156                                      | 28<br>176                             | 1#                         | 7.1<br>19%                                    | 28<br>176                           | 14                         | DF<br>150                  | 28<br>184                                    | l S∓<br>1#                   | DF<br>156                  | 28<br>179                         | 1# <sup>-</sup>                       | DF<br>15%                        | 28<br>159                                    | SF<br>145                    | DF<br>170                         | 28<br>176                       |
|      | He molte ment          | H1 Scars  | 14                       | 14                                | 14                          | 14   | 14   | 14                                    | 1#                         | 14  | 14                                  | 14                         | 14                         | 14   | 14                           | 14                         | 14                                | 14                                    | 14                               | 14   | 145                          | 14                                | 14                              |
| п    | Lon: rud net           | Faterior Focipiets<br>1 <sup>25</sup> no Buttoort | 14                       | 141                               | 14 <sup>4</sup>             | 14 <sup>4</sup>                                | 14-<br>14-                                     | 14<br>14                              | 14:                        | 14:<br>15:                                    | 14                                  | 141                        | 14                         | 14:<br>15:                                   | 14<br>14                     | 14<br>14                   | 144                               | 144                                   | 14<br>15                         | 14:<br>15:                                   | 14:<br>15:                   | 14                                | 14<br>14                        |
|      |                        | Ciliar Et Sippre                                  | 14                       | 14                                | 14                          | 14:  | 14   | 14                                    | 14                         | 14  | 14                                  | 14                         | 14                         | 14   | 14                           | 14                         | 14                                | 14                                    | 14                               | 14   | 14                           | 14                                | 14                              |
|      | TA 197                 | IS as<br>to be ments                              | MQ106.00<br>MQ106.00     | - MQ10600<br>- MQ10600            | MQ(Uni))<br>MQ(Uni))        | - MQ10600<br>- MQ10600                         | <ul> <li>MQCUNDC</li> </ul>                    | <b>対応:12.</b> 00<br>対応:12.00          | MQ10600<br>MQ10600         | MQ(UND)<br>MQ(UND)                            | - MQ(UniO)<br>- MQ(UniO)            | MQ13630<br>MQ13630         | MQ(UND)<br>MQ(UND)         | MQ13600<br>MQ13600                           | MQ(160)<br>MQ(160)           | MQ1Jn 00<br>MQ1Jn 00       | MQ(0600)<br>MQ(0600)              | <b>対応</b> (19.00<br>対応(19.00          | MQ136.00<br>MQ136.00             | MQ(UND)<br>MQ(UND)                           | MQ(Uni0)<br>MQ(Uni0)         | MQ10600<br>MQ10600                | MQ(0600)<br>MQ(0600)            |
|      | =                      | Fur Scars   | 145                      | 14                                | 14                          | 145  | 14   | 14                                    | 145                        | 14:   | 14                                  | 145                        | 14:                        | 14   | 145                          | 14                         | 141                               | 145                                   | 14                               | 14   | 145                          | 14                                | 14:                             |
|      | He mo be nert          | Tri, Scars<br>Lele o Bucports                     | 175                      | 172                               | 142                         | 175  | 144  | 142                                   | 175                        | 144   | 144                                 | 175                        | 174                        | 144  | 175                          | 174                        | 144                               | 142                                   | 174                              | 144  | 175<br>176                   | 144                               | 144                             |
| 17   | Lugi dust              | ք ո քոշր մ  | 14                       | 14                                | 14                          | 14   | 14   | 14                                    | 14                         | 145   | 14                                  | 14                         | 145                        | 14   | 14                           | 145                        | 145                               | 14                                    | 145                              | 145  | 14                           | 145                               | 145                             |
|      |                        | Cilher Ini, Support<br>Star                       | 154<br>2456 3 a 20       | 154<br>24(5):3 a. 0 0             | 154<br>Altis 3 a.00         | 154<br>- Adds 3 a 20                           | 154<br>24(5) 3 a 0 0                           | 154<br>Adds 3 a 00                    | 154<br>24(5): 3 a . 0 C    | 154   | 144                                 | 174<br>Adds 3 a 0 0        | 144                        | 154  | 174<br>Altis Bal DC          | 154<br>Altin Bar DC        | 154<br>24(5) 3 a 0 0              | 154<br>AdSt 3 a 0 0                   | 154<br>24(5):3 a .0 0            | 150<br>24(5):3 a 2 C                         | 154<br>24(5) 3 a 0 0         | 154<br>A456 3 a 20                | 175<br>2456 3 a 20              |
|      |                        | н-н Тип'  | HS 36.00                 | - Mg 36.00                        |                             |  | - Mg 36.00                                     |                                       | - MS(30.00                 | - MS( 36.00                                   |                                     |                            | - Hg 36.00                 | - MS( 36.00                                  | - MS: 311.00                 | - Mg 36.00                 | Mg 36.00                          | - Mg 36.00                            | Mg Sulto                         | - MS(36.00                                   | - MS( 36.00                  | Mg Su Di                          | MS(36.00                        |
|      | Lottem<br>De númernent | Uni Stats<br>Et Scats                             | 145                      | 154                               | 144                         | 145  | 154  | 144                                   | 145                        | 144   | 144                                 | 145                        | 144                        | 144  | 145                          | 145                        | 145                               | 145                                   | 145                              | 145  | 145                          | 145                               | 145                             |
|      |                        | Faler or Focipiels                                | 14                       | 14                                | 14                          | 14   | 14   | 14                                    | 14                         | 14  | 14                                  | 14                         | 14                         | 14   | 14                           | 14                         | 14                                | 14                                    | 14                               | 14   | 14                           | 145                               | 145                             |
| 14   |                        | 1 <sup>47</sup> no Buispórt<br>Oth-chit Signar    | 142                      | 175                               | 145                         | 144  | 145  | 145                                   | 144                        | 145   | 145                                 | 144                        | 145                        | 145  | 144                          | 145                        | 145                               | 144                                   | 145                              | 145  | 144                          | 175                               | 145                             |
|      |                        | Siac -  | AND DO DE                | MQ(0600                           |                             |  | MQ(0600)                                       |                                       |                            |   |                                     | M201000                    |                            |  |                              | MQ106.00                   | MQ106.00                          | MQ(JA00                               | MQ(06.00                         | M2010000                                     | MQ(Un 00                     | MQ(0600                           | MQ106.00                        |
|      | Fa 1920                | e belleent.<br>Fan Spans                          | MQ106.00<br>145          | - MQ1Un 00<br>145                 | #1021Un 00<br>145           | 145  | - MQ106.00<br>145                              | #1200.00<br>145                       | #4021Um 00<br>145          | MQ10600<br>145                                | 440000000<br>145                    | 74021Un 00                 | MQ10600<br>145             | MQ1Un 00<br>145                              | MQ10h00                      | MQ10600<br>145             | 74021Un 00<br>145                 | MQ(Un 00                              | MQ10600<br>145                   | MQ106.00                                     | MQ1Un D0<br>1411 26          | MQCUN DC                          | 84Q106-00<br>145                |
|      | He molecter (          | The Scars<br>The Scars                            | 145                      | 145                               | 145                         | 145  | 145  | 145                                   | 145                        | 145   | 145                                 |                            | 145                        | 145  | 344                          | 145                        | 145                               |                                       | 145                              | 145  | 1441.44                      | 145                               | 145                             |
|      |                        | Lete o purports                                   | 144                      | 174                               | 144                         | 144  | 174  | 144                                   | 144                        | 175   | 175                                 | 144                        | 175                        | 175  | 174                          | 175                        | 175                               | 144                                   | 175                              | 175  | 174                          | 175                               | 145                             |
|      |                        | 1' o Fospol<br>Ciharini, Support                  | 14                       | 145                               | 145<br>170                  | 14   | 145  | 145<br>170                            | 14)<br>154                 | 145   | 145<br>170                          | 141                        | 145                        | 145<br>170                                   | 14                           | 244<br>174                 | 145<br>170                        | 141                                   | 24°<br>144                       | 145<br>170                                   | 141                          | 244<br>174                        | 244<br>175                      |
|      |                        | Sat   | Alg: 30.00               | - Alg: 30.00                      | - Alg: 30.00                | - Alg: 31.00                                   | - Alg: 3 a 20                                  | - Alg: 3 a 00                         | - Alg: 30-00               | - Alg: 3 a DC                                 | Alge Bin DC                         | - MS: 31.00                | Alge Bar DC                | AS 36.00                                     | AS 36.00                     | AS 36.00                   | - Mg( 3 a 20                      | Alge Bar DC                           | AlS: 34.00                       | AlS: 34.00                                   | Al\$5, 30.00                 | Alg: 34.00                        | - Alg: 3 a 0.0                  |
|      | Lotten                 | нт-н Тної<br>  Lini Stark                         | - अशुः २७,२२<br>- अभ     | ାଇ କାର୍ଥ୍ୟ ଅନ୍ୟାରୀ<br>କାର୍ଯ୍ୟ     |                             |  | ার্থ্য সময়ে।<br>প্রার্থ্য                     | - MS: 36.00<br>।इट                    | - अनुसरक २०<br>- अप        | মন্ত্র ৪৯.০০<br>কি                            | মন্ত্র ৫০০০<br>দেহ                  | 서영: 36-20<br>(54+18)       | MS: 36.00<br>150           | মন্ত্র ৪৯০০<br>কি                            | 서영: 36.00<br>15441년          | মগ্র ৫৯০০<br>দেহ           | M(9) 36 00<br>(%)                 | MS: 36.00<br>154418                   | মন্ত্র ৪৯.০০<br>চেচ              | 245: 36.00<br>150                            |                              | MS: 36.00<br>150                  |                                 |
|      | Tenin enert            | Ft Scars  | 241                      | 145                               | 145                         | 244  | 145  | 145                                   | 244                        | 145   | 145                                 | 1411 #                     | 145                        | 145  | 1411.27                      | 145                        | 145                               | 1411                                  | 145                              | 145  | - 35)<br>245                 | 145                               | 145                             |
| п    | Lon: r. dnol           | Faterior Filopoits<br>1 <sup>27</sup> no Buttport | 14                       | 145<br>34                         | 145                         | 14   | 145<br>34                                      | 145<br>155                            | 14                         | 145   | 145<br>15                           | 141                        | 145<br>%                   | 145  | 14                           | 145<br>156+175             | 145                               | 14                                    | 145<br>156+155                   | 145  | 141                          | 145<br>15541 (5.                  | 145<br>15641 (S                 |
|      |                        | Obsets Spore                                      | 14                       | 14                                | 145                         | 14   | 14   | 145                                   | 14                         | 14  | 145                                 | 14                         | 14                         | 145  | 14                           | 14                         | 244                               | 14                                    | 14                               | 24   | 14                           | 14:                               | 244                             |
|      | Ta Ser                 | isia:<br>e se veint                               | MQ10600<br>MQ10600       | - MQ(UniO)<br>- MQ(UniO)          |                             | <ul> <li>MQUADE</li> <li>MQUADE</li> </ul>     | <ul> <li>MQ(UniO)</li> <li>MQ(UniO)</li> </ul> | <b>対応:19.0</b> 0<br>対応:19.00          | MQ(Uni0)<br>MQ(Uni0)       | MQ(UND)<br>MQ(UND)                            | - MQ(UniO)<br>- MQ(UniO)            | MQ(UND)<br>MQ(UND)         | MQ(Uni0)<br>MQ(Uni0)       | MQ10600<br>MQ10600                           | 村公(Ja 0)<br>村公(Ja 0)         | 村公(Jn 0)<br>村公(Jn 0)       | MQ(06.00<br>MQ(06.00              | MQ(0600)<br>MQ(0600)                  | MQ(Uni0)<br>MQ(Uni0)             | MQ136.00<br>MQ136.00                         | MQ(Uni0)<br>MQ(Uni0)         | MQ(06.00<br>MQ(06.00              | MQ106001<br>MQ106001            |
|      | =                      | Fur Scars   | 141.4                    | 145                               | 145                         | 141.4  | 145  | 145                                   | 141.4                      | 145   | 145                                 | 245                        | 145                        | 145  | 245                          | 24                         | 24                                | 245                                   | 24                               | 74   | 1451.45                      | 24                                | 24                              |
|      | He mo be the fi        | Th. Stars<br>Lefe o Busparia                      | 172.+175.                | 175                               | で                           | 174+175.<br>176                                | 175  | 175                                   | 1744) (M.<br>1744          | で   | 175                                 | 275<br>175                 | 175                        | 170<br>170                                   | 275<br>195                   | 254<br>152                 | 175<br>175                        | 255                                   | 254<br>155                       | 170<br>170                                   | 175+170                      | 274<br>274                        | 254<br>254                      |
| ж    | Lugi dust              | f a Faca d  | 14                       | 241                               | 24                          | 14   | 244  | 244                                   | 14                         | 141.14  | 244                                 | 14                         | 141.44                     | 141.14                                       | 14                           | 141.8                      | 1411 第                            | 14                                    | 245                              | 1411.8                                       | 14                           | 245                               | 245                             |
|      | He mo be nert          | Cilhar Iril, Support<br>Star                      | 154<br>2459 3 a 20       | 154<br>2459 3 a D C               | <br>254 - 254 - 254 - 255   | 154<br>- 245: 3 a 2 c                          | 154<br>2459 3 a 20                             | - <u>194</u><br>- 24 <u>56</u> 3 a 20 | 154<br>24(5):30(20)        | 154<br>24(5):3 a 2 C                          | - <u>- 194</u><br>- 1459: 3 a - 2 c | 144                        | 154<br>2459 3 a 2 c        | 254  | 174<br>245: 3 a 0 0          | 154<br>24(5): 3 a . 0 b    | 174+174<br>2459 3 a 20            | 174<br>2459 3 a D.C                   | 154<br>245: 36-00                | 1544175.<br>2459: 3 a 2 c                    | 144<br>24(5):30(00)          | 154<br>2456 3 n 2 0               | 174+175<br>Adds 3 a 00          |
|      | Tiar 20                | н-н Тиш   |                          |                                   | - Mg(3)(2)                  |  |  |                                       | - MS( 30.00                | - HS 36.00                                    |                                     | MS: 34.00                  |                            |  |                              | - Mg 36.00                 |                                   | - Mg(3)(00                            | Mg Su Du                         | HS SHOL                                      | Mg SulDi                     | Mg Su Di                          | Al 36 36 20                     |
|      | Lottem<br>De númernent | uni Stats<br>Hil Scats                            | - 20                     | 15                                | 145                         | 275<br>245                                     | 145  | 145                                   | 275<br>245                 | 284   | 254                                 | 1451-26                    | 254                        | 254  | 1454130                      | 254                        | 254                               | 249                                   | 1441 A.<br>1441 A.               | 174+175                                      | 245                          | 14412                             | 174+175                         |
|      |                        | Faler or Focipielix                               | 14                       | 145                               | 145                         | 14   | 145  | 145                                   | 14                         | 145   | 145                                 | 14                         | 24                         | 24   | 14                           | 24                         | 24                                | 14                                    | 24                               | 24   | 14                           | 24                                | 24                              |
|      |                        | Principulipent<br>Other Principulip               | 114                      | 144+174                           | 144+164                     | 11%  | 144+174  | 144+174                               | 144                        | 275<br>145                                    | 1644166                             | 144                        | 35                         | 275<br>1421 - 24                             | 174                          | 275<br>144                 | 275<br>141 1 26                   | 144                                   | 145+140                          | <u>- 30</u>                                  | 144                          | 145+140                           | 145+160                         |
|      |                        | Sacial Signation                                  | 140<br>1400 Jan DC       | 140<br>140                        |                             |  | 140<br>1400 Uni 00                             | - 74021Un 001                         | 140<br>1400 Jacob          | 140<br>7402101000                             | 1401 AF<br>14021 J n 001            |                            | 149<br>74120 J n D 0       | 1421 Jan 30                                  | 149<br>741200 00             | 149<br>7402101000          | 1401 AF<br>740210 n 001           |                                       | 140<br>7402101000                | 245<br>2010/02/24                            | 140<br>7402101000            | 149<br>74120 J n D 0              | 200 ALC: 2014                   |
|      | Fa.1970                | e ze heim.  | Alg: UniOC               | MQ106.00                          | #4001016100<br>244          | 1451.26  | MQ106.00                                       | AQ106.00                              | 1451 #                     | MQ10600<br>1411-26                            | 140106-00                           | 74021016-00<br>245         | MQ106.00<br>14/11/26       | MQ106100<br>1401-26                          | 74021016-000<br>245          | MQ106.00                   | 40000000<br>1400-26               | MQ106.00<br>1451.22                   | MQ106.00<br>1401.26              | MQ106100<br>1401-26                          | MQ106100<br>1451-22          | - 74021016-000<br>245             | 7402106-001<br>240              |
|      | He mo perrent          | For Scars<br>14. Scars                            | 1451 #<br>1504180        | 24-<br>24-                        |                             | 1451 #   | 740<br>174                                     | 244<br>274                            | 1451 #                     | 1411.44                                       | 1411.44                             | 245                        | 1411.44                    | 1411.24                                      | 245<br>255                   | 14日 新<br>1444 年            | 1411.44                           | 1491.04                               | 1411.44                          | 1411.44                                      | 1451 22                      | 745<br>375                        | 245<br>175+175                  |
|      |                        | Lete o purporte                                   | 154                      | 254                               | 284                         | 144  | 254  | 244                                   | 271                        | 284   | 254                                 | 174                        | 254                        | 254  | 174                          | 144+16                     | 144+164                           | 174                                   | 174+17                           | 174+175                                      | 174                          | 144+16                            | 174+175                         |
| 1    |                        | 1' o Focput<br>Ciher Iri, Support                 | 14                       | 245<br>154                        | 245<br>15441 M              | 14   | 245<br>154                                     | 245<br>1544150                        | 14)<br>154                 | 145) #<br>154                                 | 745<br>35                           | 14)<br>154                 | 145) #<br>154              | 245<br>25                                    | 14)<br>154                   | 145) #<br>145              | 1451 #<br>.50                     | 14)<br>154                            | 245<br>174                       | 1451 AF<br>1504170                           | 14)<br>154                   | 245<br>154                        | 245<br>155+160                  |
|      |                        | Sat   | Al\$(30.00               | Alg: Su Di                        | - Mg: 30-00                 | - AS(3)(0)                                     | Alge Bur Dü                                    | - MS( 3 a D).                         | - HS: 30.00                | MS(Bull)                                      |                                     | AS: 30.00                  | Alge Bar DC                | MS(BulDC                                     |                              | - Alg: 3 a 00              | - Alg: 3 a 00                     | Alg: Su DC                            | - Mg: 36-00                      | - Mg: 36-00                                  | MS(BulDC                     | Alg: Su DC                        | - MS(30.00)                     |
|      | Lotten                 | er-e Telli<br>Lini Stark                          | M(9) 30 00<br>           | - 2429, 5 n 7 0<br>15441 (5       | - 2429 Stat 20<br>15441 (St | ୍କ କାର୍ଥ୍ୟ 30.00<br>କ୍ୟ                        | - 245: 3 a 0 b<br>15441 M                      | - 243), 3 a 0 b<br>15440 M            | - MS: 36-00<br>- 99        | સ્ટ્રિંગ્સ્ટ્રિંગ્સ્ટ્રિંગ્<br>ક્લિમ્ટ્રેસ્ટ્ | - Mg: 36-00<br>154405               | સ્લિક સ્વાગ્ય<br>(જીમાં જ  | মন্ত্রি ৫৯.০০<br>মন        | মন্ত্র ৪৯.০০<br>১৯০                          | - Mg: 36-00<br>1594155       | - M(9, 3 a D))<br>         | - अक्ष २०००)<br>- अर्थ            | - अशुः ३७.२०<br>स्ट                   | MS: 36.00<br>Wi                  | - MS: 36.00<br>                              | અંધુ સ્વાગ્ય<br>જ            | માં છે. ઉપરાંગ છે.<br>મુજીના છે.  | ાન્દ્રક્રાય છે.<br>1ન્દ્ર+1ન્દ્ |
|      | Territor entern        | ht Scars  | 245                      | 1411 22                           | 24                          | 245  | 1年1 第  | 241                                   | 245                        | 1411  | 1年1 第                               | 1451 22                    | - <del></del>              | 1年1 第  | 1451-22                      | 275<br>245                 | 1411 8                            | 247                                   | - 35<br>245                      | 245  | 247                          | 1451.0                            | 245                             |
| 1    |                        | Foterior Focipiets<br>1 <sup>45</sup> m: Bulgori  | 1#<br>1%                 | 24)<br>150+160                    | 74°<br>                     | 14)<br>14)                                     | 24)<br>150+160                                 | 74°<br>74                             | 14)<br>154                 | 1#1 #<br>%                                    | 141 H<br>1641 M                     | 14<br>14                   | 141 F<br>56                | 1411 #<br>1504180                            | 174<br>144                   | 141 1 M<br>1594 M          | 141 F<br>259                      | 141                                   | 245<br>15941 201                 | 245  | 14                           | 245<br>15541 (*                   | 245<br>15941 (*)                |
|      | Tenin erent            | Ciliar Et Sippre                                  | 14                       | 14                                | 245                         | 14   | 141  | 245                                   | 14                         | 14  | 245                                 | 14                         | 14                         | 145) X                                       | 141                          | 14                         | 1451.26                           | 14                                    | 14                               | 245  | 14                           | 141                               | 245                             |
|      |                        | Mac<br>e celhe m                                  | MQCUNDC<br>MQCUNDC       | - MQ(UniO)<br>- MQ(UniO)          | - 村公(Jn 00<br>村公(Jn 00      | - MQ(Un 00)<br>- MQ(Un 00)                     | <ul> <li>MQCUNDC</li> <li>MQCUNDC</li> </ul>   | - MQ(0600)<br>- MQ(0600)              | MQ136.00<br>MQ136.00       | - MQ(UND)<br>- MQ(UND)                        | - MQ(UNO)<br>- MQ(UNO)              | MQ10600<br>MQ10600         | MQ(06.00<br>MQ(06.00       | MQ(Uni0)<br>MQ(Uni0)                         | MQ(UniO)<br>MQ(UniO)         | MQ(UniO)<br>MQ(UniO)       | MQ106.00<br>MQ106.00              | MQ(UniO)<br>MQ(UniO)                  | MQ136.00<br>MQ136.00             | MQ(UND)<br>MQ(UND)                           | MQ(UniO)<br>MQ(UniO)         | MQ(06.00<br>MQ(06.00              | MQ136.00<br>MQ136.00            |
|      | =                      | For Scars   | 1451 22                  | 1411 #                            | 1411 #                      | 1451 22  | 1411 #   | 1411 #                                | 1451-22                    | 245   | 245                                 | 247                        | 245                        | 245  | 1471-26                      | 1451 #                     | 1451 #                            | 1471-26                               | 1451.46                          | 1451.26                                      | 1471.26                      | 145 i #                           | 145) #                          |
|      | He mo be the fi        | 14. Stats<br>Late e automate                      | 149+144                  | 174+174                           | 174+174<br>1760-176         | 149+144  | 174+174<br>1951-51-51                          | 1744174                               | 149+144                    | 265<br>1952 - 195                             | 1744174                             | 2%                         | 30<br>20                   | 35   | 150 +150<br>160              | 170+170                    | 30 S                              | 142 +130                              | 170+170                          | 35   | 150 +150.<br>160             | 175+170                           | 170+170                         |
| *    | السابية ا              | Lele o Bulpario<br>1º la Faciplat                 | 144                      | 174+174<br>245                    | 144 M.<br>1451 - #          | 14   | 144+165<br>245                                 | 1444 M.<br>1451 - Afri                | 114                        | 1451 A  | 144+174<br>245                      | 144                        |                            | <br>245                                      | 114                          |                            | - 555<br>1451 #                   | 144                                   | <del></del>                      | - 25)<br>1451 #                              | 144                          | 14541 AL<br>1471 - AR             | 145+140<br>247                  |
|      | He mo serveri          | Clhar H. Support                                  | 194                      | 174                               | 175+170                     | 174  | 174  | 170+170                               | 174                        | 174   | 175+170                             | 174                        | 174                        | 249  | 174                          | 174                        | 349                               | 175                                   | 174                              | 149+144                                      | 174                          | 174                               | 149+144                         |
|      |                        | Sar<br>สา-ต โดยใ                                  | AlgeBuilde<br>AlgeBuilde | <u>. මිලි 36 වර</u><br>මේලි 36 වර |                             |  | - MS(36.00<br>- MS(36.00                       | - MS: 36.00<br>- MS: 36.00            | - MS: 36-00<br>- MS: 36-00 | - MS: 36-00<br>- MS: 36-00                    |                                     | - Mg(3)(00)<br>- Mg(3)(00) | - MS: 36.00<br>- MS: 36.00 | - 24 <u>9; 36.00</u><br>- 24 <u>9; 36.00</u> | - Alg: 36-00<br>- Alg: 36-00 | - Mg: 36-00<br>- Mg: 36-00 | - M <u>S</u> (36.00<br>- MS(36.00 | - <u>2459 3 n DC</u><br>- 2459 3 n DC | - MS: 36-00<br>- MS: 36-00       | - 24 <u>9; 36.00</u><br>- 24 <u>9; 36.00</u> | - Mg(30.00<br>- Mg(30.00     | - M <u>S</u> (36.00<br>- MS(36.00 | - MS: 36.00<br>- MS: 36.00      |
| 1    | Lottem                 | Line State  | 25                       | - 355                             | - H.                        | 27   | - 30   | - 350<br>- 350                        | 147+140                    | 175+170                                       | 175+170                             | 147+140                    | 175+170                    | 170+170                                      | 11/1 +11/1                   | 175+170                    | 175+170                           | 147+140                               | - 249                            | 389  | 147+140                      | - 249                             | 249                             |
|      | Centin errent          | Hill Scars<br>Fateror Foop dis                    | 247                      | 245<br>141 - 24                   | (学) 新<br>(学) 新              | 247  | 245<br>141 - 25                                | (学)第<br>(学)第                          | 147 ( 24<br>14)            | 145) #<br>245                                 | 245<br>245                          | 147 ( 24<br>14)            | 145) #<br>245              | 245  | 147 ( 24<br>14)              | 145) #<br>145) #           | 145) #<br>145) #                  | 1471 26                               | 245<br>1451 æ                    | 145) #<br>145) #                             | 147 ( 24<br>14)              | 245<br>1451 æ                     | 145) #<br>145) #                |
|      | Loninidadi             | Ind purport                                       | 174                      | 14541761                          |                             | 145  | 149+174  | 289                                   | 147                        | 20  | 149+144                             | 174                        | 24                         | 149+144                                      | 174                          | 11/1+11/1                  | 257                               | 174                                   | 11/1+11/0                        | 277  | 144                          | 1401.00                           | 1451-04                         |
|      | Centre en ent          | Ohartst Sijone<br>Maa                             | 141                      | 141                               | 245                         | 141  | 14   | 245                                   | 141                        | 141   | 245                                 | 141                        | 141                        | 1451 22                                      | 141                          | 14                         | 1451 22                           | 14                                    | 14                               | 247  | 14                           | 14                                | 247                             |
|      | Ta 1900                | e se Heint.                                       | MQ136.00<br>MQ136.00     | - 1475, 19, 00<br>- 1475, 19, 00  |                             | <ul> <li>MQ(0600)</li> <li>MQ(0600)</li> </ul> | - 1475, 19, 00<br>1475, 19, 00                 |                                       |                            |   |                                     |                            |                            |  | 4470,0000.<br>4475,0000      | 4475, 1 M 0.0              | 4470,00,00<br>4470,00,00          |                                       | 4475, 1 M D.C.<br>4475, 1 M D.C. |  | 4475,010,000<br>4475,010,000 | 4475, 1 M D.C.                    | MQ136.00                        |
| -    |                        |   |                          |                                   |                             |  |  |                                       |                            |   |                                     |                            |                            |  |                              |                            |                                   |                                       |                                  |  |                              |                                   |                                 |

| Project: | AmDeck Design Guide | e F |
|----------|---------------------|-----|
| Client:  | Amvic, Inc.         | С   |

Prepared by: Kapil Checked by: Andy / Raj Date: 12/07/2007 Date: 12/07/2007

| Dea      | d Load   | =  | 15 p                               | sf                             |  |  |                                 |                            |                                 |                                       |                            |                             |  |  |   |  |  |                                    |                          |                                |  |                            |
|----------|--|--|------------------------------------|--------------------------------|--|--|---------------------------------|----------------------------|---------------------------------|---------------------------------------|----------------------------|-----------------------------|--|--|---|--|--|------------------------------------|--------------------------|--------------------------------|--|----------------------------|
| ÷        | <u> </u>                                       | o  | 1-5                                | CD - 10<br>DZ - 1              |  | I - 97 D - 1                           | n<br>VS                         | 07                         | 1 - YOD - 10                    |                                       | 07                         | 1 - 70 D - 10<br>DZ         |  | 07   | 1 -30 D - 10<br>D2  | VS   | 07   | 1 -00 D -10                        |                          | 07                             | 1 -1010-0                                |                            |
|          | =  | Line Scars   | ) <sup>1</sup> *                   |                                | <u>14</u>  | 174                                    | 174                             | 14                         | 174                             | 174                                   | 1#                         | 174                         | 174  | 14   | 174   | 174  | 14   | 174                                | 174                      | 145                            | 174                                      | 174                        |
|          | He mo be nert                                  | Esteror Focular                                    |                                    |                                | + 1+<br>+ 1+   | 14                                     | 1#<br>1#                        | - 14:<br>14:               | 14                              | 14<br>14                              | 14                         | 14                          | 14-<br>14-                                       | - 14-<br>14-                                 | 14  | 14   | - 14·<br>14·                                 | 14 <sup>1</sup><br>14 <sup>1</sup> | 14                       | 145                            | 14                                       | 14                         |
| IL.      | Longinudinal                                   | Index up on The                                    | 174                                | 174 1                          | <u>e 14</u>  | 174                                    | 174                             | 174                        | 174                             | 174                                   | 154                        | 174                         | 174  | 154  | 175   | 174  | 154  | 154                                | 174                      | 174                            | 174                                      | 174                        |
|          | 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0       | Ciliar Et Sipone<br>Sia:                           |                                    | 141 - 1<br>10500 - MQ1         | ∉ 14:<br>სის: ₩ფესის                                     | 141<br>1421Jn 00                       | 141<br>MQ(Un 00                 | 141<br>MQ10600             | 14)<br>MQ10600                  | 14)<br>MQ106100                       | 14)<br>MQ1Jn 00            | 14)<br>MQ10600              | 14)<br>MQ106100                                  | 141<br>MQ106100                              | 141<br>MQ(Un 00)  | 14)<br>MQ106100  | 141<br>MQCUNDC                               | 141<br>MQ106100                    | 141<br>MQ(Un 00          | 14)<br>MQ106100                | 14)<br>MQCUNDC                           | 141<br>MQ106100            |
|          | Ta 19  | ce se ve m   | MOTING: NO                         |                                | ປກວດ ∧⊴ຊົບກວ   | <ol> <li>MQ10600</li> </ol>            | MQ106.00                        | MQ(Un 00                   | MQ106.00                        | 20 aC/204                             | MQ106.00                   | MQ106.00                    | MQ106.00   | MQUIN DC                                     |   | MQ(06.00   | MOUNDE                                       | MQ106.00                           | MODIFIC                  | MQ106.00                       | MODIO                                    | MQ106.00                   |
|          | He mo percent                                  | For Scars<br>111, Scars                            | 145<br>175                         | 147 1<br>176 1                 | 4 145<br>14 145  | 14                                     | 14-                             | 145                        | 144                             | 142                                   | 145<br>175                 | 142                         | 14   | 145<br>150                                   | 141   | 144  | 145<br>175                                   | 14                                 | 144                      | 145                            | 144                                      | 144                        |
|          | և որն ռեստե                                    | Lele o purports                                    | 175                                |                                | 144 174<br>114 114                                       | 144                                    | 175                             | 144                        | 174                             | 174                                   | 174                        | 144                         | 144  | 174  | 174   | 174  | 174  | 144                                | 174                      | 174                            | 174                                      | 144                        |
| '        |  | fin Facpid<br>Ciharini, Support                    | 141                                | 14° 1<br>174 1                 | 42 147<br>42 142   | 141                                    | 14)<br>144                      | 174                        | 144                             | 14                                    | 144                        | 145                         | 144  | 141  | 145   | 145  | 144  | 145                                | 145                      | 14                             | 145                                      | 145                        |
|          |  | Sar<br>Sar   |                                    | 30.00 MS<br>30.00 MS           |  |  | - MS(3)(0)                      | Alg: 31.00                 | HS(3)(0)                        | HS(30.00                              | HS 31.00                   | - HS(3)(0)                  | - MS( 30.00                                      | Alge Bin DC                                  |   | - Alg: 3 a D.  | - Alg: 31.00                                 | - Mg(3)(00)<br>- Mg(3)(00)         | AS 36.00<br>AS 36.00     | - MS(30.00<br>- MS(30.00       | MS: 36.00<br>MS: 36.00                   | 245; 3 a D.<br>245; 3 a D. |
|          | Lettern (ar. sc                                | Line Stars   |                                    |                                | ತಿಂದಿ ಚಿತ್ರತಿಂದ<br>≮ ಗಳು                                 | ं अध्यक्षित्र<br>।इन्द्र               | . महत्वता.<br>194               | MS: 36.00<br>150           | मध्र 36.00<br>154               | માં છે. ઉપ ગળવા<br>નાજ                | - MS: 36-20<br>150         |                             | - MS: 30-00<br>154                               | মন্ত্র ৫০.০০<br>দেহ                          | - मधुः ३०.२३<br>।इन   | - मधुः ३०.२०<br>।इम्   | સ્લિક સ્વાઈડ<br>નજ                           |                                    | - 150 K                  | - 150<br>150                   | - 150 M                                  | H129 50 1.0                |
|          | Tenin eren                                     | <ol> <li>FL Scars</li> </ol>                       | 145                                |                                | e 145<br>e 1e  | 14:<br>14:                             | 14:<br>14:                      | 145                        | 14)<br>14)                      | 14)<br>14)                            | 145                        | 14)<br>14)                  | 14:<br>14:                                       | 145  | 14  | 14   | 145<br>145                                   | 145<br>145                         | 14                       | 145<br>145                     | 145                                      | 14:<br>14:                 |
| 14       | Lon: cd.ncl                                    | Fater or Focipiets<br>1 <sup>45</sup> no parisport | 14                                 | 14° 1                          | 40 140<br>47 147   | 14                                     | 14                              | 14                         | 14                              | 142                                   | 142                        | 14                          | 14   | 14   | 14  | 14   | 142  | 14                                 | 140                      | 142                            | 142                                      | 14                         |
|          |  | Ciliar Et Sipore<br>Sian                           |                                    | 144 - 1<br>10 n 00 - 141921    | ⊈ 14≏<br>Jn 00 144Ω(Jn 0                                 | 141<br>7 - 14120-00                    | 141<br>MQ1Jn 00                 | 141<br>MQ106-00            | 14)<br>MQ106100                 | 145<br>MQ136100                       | 14)<br>MQ106100            | 14                          | 145<br>MQ10600                                   | 14   | 14)<br>MQ10600  | 145<br>MQ10600   | 14)<br>MQ10600                               | 141<br>MQ1Un 00                    | 145<br>MQ136-30          | 14)<br>MQ106100                | 14)<br>MQ(Un D)                          | 145<br>510210 0.00         |
|          | Fa.1%  | te se ve m   |                                    |                                | 1000 MeGinua<br>1000 MeGinua                             |  | - MG(10.00                      | M2(16.00                   | M2(16.00                        | M201000                               | M3.10.00                   | M201000                     | M201000  | - MQ10600                                    |   | M3(10.00   | M201000                                      | M201000                            | M2(16.00                 | M201000                        | M301000                                  | M2(16.00)                  |
|          | For the<br>remotioner                          | For Scars<br>111, Scars                            |                                    |                                | あ 145<br>だ 175   | 145 EC                                 | 145                             | 145                        | 14 P                            | 145<br>15                             | 1<br>1<br>1                | 145<br>145                  | 145<br>120                                       | ž ž  | 145   | 145<br>170   | 1<br>1<br>1<br>1                             | 145<br>120                         | 145                      | 141 F<br>144 A                 | 145<br>145                               | 145                        |
|          | Seno le le l                                   | Lele o pulporto                                    |                                    |                                | 76 175<br>76 176   | 145                                    | 174                             | 175                        | 175                             | 174                                   | 146                        | 165                         | 10   | 174  | 100<br>100  | 100  | 146  | 10                                 | 100                      | 174                            | 165                                      | 100                        |
| 1F       | l ngi dusi                                     | ff in Fach d<br>Ciliar Fill Support                | 14                                 | 145 1                          | 5 14<br>5 15   | 145<br>154                             | 145<br>150                      | 14                         | 145<br>15                       | 145                                   | 14                         | 145<br>154                  | 145  | 14   | 145   | 145<br>170   | 14   | 241                                | 145                      | 14                             | 24                                       | 244                        |
|          |  | Sar  | - MS(30.00 - MS)                   |                                | 30.00 Alg: 30.0  | <ol> <li>Alg: SuiD0</li> </ol>         | Alg: Su Dü                      | MS: Su Dú                  | - Alg: 30.00                    | Adde Bio DC                           | Alte Builde                | - Alg: 3 a 00               |  |  |   | Alg: Build:  | Alg: Su Dú                                   | - MS: 30.00                        | - Mg( 30.00              | Alg: 36.00                     | - MS: 30.00                              |                            |
|          |  | serve Telof<br> Stars                              | - Mg 36 00 - Mg                    | 3000 MS;<br>14                 | ვისა ოფივის<br>თ   | : ∺র্ভাষনামে:<br>আন                    | - MS: 30.00                     | Mg: 30.00                  | MS: 30.00                       | ANG SHOL                              | 24년: 3 a 0 î.<br>15941년:   | মন্ত্র ৫০.০০<br>চেচ         | - MS: 31-00                                      | - Alg: 3 a 0 5<br>15441 5                    | અનું ૧૦૦૦<br>પ્રસ   | અંગુ ૨૦૦૦<br>જ   | 24(5): 3 a .0 0<br>15241 (5):                | MS: Suite                          | Mgr Su Dù                | MS: Su DO                      | M(9) 3 a 2 c                             | - Mg(35.00)<br>            |
|          | Lottem<br>Telloùri er er t                     | <ol> <li>FL Scars</li> </ol>                       |                                    |                                | 45 <u>24</u><br>45 24                                    | 145                                    | 145                             | 244                        | 145                             | 145                                   | 1411.27                    | 145                         | 145  | 1411.27                                      | 145   | 145  | 1411   | 145                                | 145                      | 245                            | 145                                      | 145                        |
|          | Lon: rud nel                                   | Fater or Focipiets                                 | 14:                                | 145 1                          | 45 14-<br>52 156   | 145                                    | 145                             | 14                         | 145                             | 14<br>14<br>12                        | 14                         | 145                         | 145  | 14   | 145   | 145  | 14   | 145                                | 145                      | 14                             | 145                                      | 145                        |
|          |  |  | 14                                 |                                | 45 14°   | 145                                    | 145                             | 14                         | 14                              | 145                                   | 14                         | 14                          | 145  | 14   | 14  | 254  | 14   | 144+164                            | 244                      | 14                             | 144+162                                  | 174+174<br>244             |
|          | -  | Siac   |                                    | 10600 MQ1<br>10600 MQ1         | Jn 30、 村公(Jn 3)<br>Jn 30、 村公(Jn 3)                       |  | - MQ(UND)<br>- MQ(UND)          | MQ10600<br>MQ10600         | MQ(UND)<br>MQ(UND)              | MQ(Uni0)<br>MQ(Uni0)                  | MQ(J60)<br>MQ(J60)         | M201400<br>M201400          | MQ(UND)<br>MQ(UND)                               | <ul> <li>MQCUNDC</li> <li>MQCUNDC</li> </ul> | (4の) 0 0 0 (4の) (4の) (4の) (100) | - MQ(Un 00<br>- MQ(Un 00   | MQ(06.00<br>MQ(06.00                         | MQ(UND)<br>MQ(UND)                 | MQ10n00<br>MQ10n00       | 料公(Un 00)<br>料公(Un 00)         | MQ10600<br>MQ10600                       | MQ(06.00)<br>MQ(06.00)     |
|          | =  | For Scars  | 1411 22                            | 145 1                          | 45 14° 177   | 145                                    | 145                             | 1411 22                    | 145                             | 145                                   | 245                        | 145                         | 145  | 245  | 145   | 145  | 245  | 241                                | 241                      | 1451 26                        | 24                                       | 244                        |
|          | we mo be ment                                  | Lefe o Europario                                   | 172+175                            |                                | ち ボイた<br>ち した  | 10                                     | 15                              | 176.+176.                  | 175                             | 175                                   | 25                         | 175                         | 10   | 20   | に   | 175  | 255<br>155                                   | 274                                | 175                      | 175+170                        | 254                                      | 175                        |
| ж        | Lugi dust                                      | f a face of  |                                    |                                | 4 14   | 24                                     | 24                              | 14                         | 1411 #                          | 24                                    | 14                         | 141.14                      | 141.1  | 14   | 141.64  | 1411.44  | 14   | 245                                | 1411 #                   | 14                             | 245                                      | 1411 26                    |
|          | we mo be the fi                                | Ciber Int. Supro t                                 |                                    | <u>144  </u><br>3 a 2 a - Alfa | <u>ನ ಗಳ</u><br>ಕಾರ್ಯ ಚಿತ್ರಕಾರ                            | 174<br>0 2419: 3 a 2 0                 | 155<br>- 2459, 3 a 2 c          | 154<br>245: 3 a .0 c       | 154<br>24(5): 3 a .0 0          | - <u>194</u><br>- 2010 Stat 201       | 174<br>24(5): 3 a .0 0     | 154<br>24(5) 3 a 20         | 254<br>24(5):3 (r. 0.0)                          | 174  | 144<br>2450 Str. D.   | 284<br>24(5):3 a 2 0   | 154<br>2456 3 n 20                           | 154<br>24(5):3 (r. 0.)             | 154+175<br>24(5):3 n.00  | 174<br>2429: 3 n.2 0           | 174<br>2426 3 n 2 0                      | 174+175<br>2450-3 (r. 20)  |
|          | Tor a  | ан-н Тної  | MS(30.00 MS)                       | 30.00 - 24%                    |  |  |                                 |                            |                                 |                                       |                            |                             |  | - MS( 30.00                                  | - Mg 36.00  |  | - Mg( 30.00                                  | MS BUDD                            | Algebra DC               | Alge Sta DC                    | Alg: 30.00                               | Alg: 36-00                 |
|          | Lottem<br>De númerner (                        | Lint Stars<br>I Di Stars                           | 20                                 | 175 1                          | <u>ಗು ಸಂ</u><br>ಶ್ರಾಶ್ರಾಶ್ರಾಶ್ರಾಶ್ರಾಶ್ರಾಶ್ರಾಶ್ರಾಶ್ರಾಶ್ರಾ | 145                                    | 145                             |                            | 272                             | 145                                   | 1451 A                     | 242                         | 145  | 1451 AC                                      | 284   | 284  | 145+180                                      | 144416                             | 144+174                  | 245                            | 14416                                    | 172+175                    |
|          |  | Fater or Foc podia                                 | 14                                 | 145 1                          | 45 14°   | 145                                    | 145                             | 14                         | 145                             | 145                                   | 141                        | 145                         | 145  | 14   | 241   | 245  | 14   | 244                                | 245                      | 14                             | 245                                      | 245                        |
|          |  | 1 <sup>45</sup> no Bulgori<br>Cubar Et Signar      |                                    |                                | <u>***. 144</u><br>e 1e                                  | 14416                                  | 1144-116                        | 144                        | <u> </u>                        | 1444164                               | 154                        | <u></u>                     | 14416  | 144  |   | <br>141 1 22   | 144  | 145+180                            |                          | 174                            | 1454170                                  |                            |
|          |  | Siac   |                                    |                                | ມຄົວວິ 🖂 🖓 ນີ້ຄວ   |  |                                 | MOVUM DC                   | MQ106.00                        | 24021010-001                          | 24021Un 00                 |                             |  |  |   |  |  | MO206.00                           | MO106.00                 | 24021Un 00                     | MQ106.00                                 | MO21016-001                |
|          | Fa.192   | ce be Helm.<br>For Scars                           | MQ10600 MQ<br>1451-24              |                                | Jn 30 - M4Q1Jn 3<br>#                                    | 2000 000000000000000000000000000000000 | 240<br>240                      | 145) 26<br>1451 26         | MQ106.00                        | 745210 n.00                           | 200 00000                  | MQ106.00<br>1421-24         | - #40/10 6 00<br>14/11 26                        | 245  | - 村公(UniO))<br>14(1)ぞ   | - MQ(Un 00<br>14/1 26  | - MQ106-00<br>1451-22                        | - #40/10 6 00<br>14/11 26          | 1401 Jan 00              | MQ10600<br>1451 #              | 200 0000000000000000000000000000000000   | 7402106-00<br>200          |
|          | se mo perrent                                  | <ol> <li>Fit. Scars</li> </ol>                     |                                    |                                | 5 15+1X  | 254                                    | 185                             | 175+170                    | 254                             | 254                                   | 39                         | 1544                        | -344   | 35   | 1544174   | 254  | 1454144                                      | 154+175                            | 1994-100                 | 145+174                        | 36                                       | 175+175                    |
| 24       | I usi dust                                     | Lefe o Europario<br>1º la Facipiat                 |                                    | 175 145                        | わ <u>」作</u><br>」新 144                                    | 245                                    | 140                             | 154                        | 244                             | <br>245                               | 114                        | <br>1451 #                  | 244  | 174  | <br>1451 #  | <br>1451 #   | 154  | 245                                | 1451.26                  | 174                            | 245                                      | 1451.26                    |
|          |  | Ciber H. Support                                   | 154                                | 174 176                        | •16. ISA   | 154                                    | 174+175                         | 174                        | 174                             | 1744176                               | 174                        | 174                         | 365  | 174  | 174   | 32   | 174  | 174                                | 170+170                  | 174                            | 174                                      | 170+170                    |
|          |  | ู่เริ่ม<br>เพราะครีเคยใ                            | - MS(30.00 - MS<br>- MS(30.00 - MS | 30.00 A120<br>30.00 A120       | 3000 - Mg(300<br>3000 - Mg(300                           | <u> Mg 3600</u><br>Mg 3600             |                                 | - महा ३० ००<br>- महा ३० ०० | - 서영( 36 00<br>- 서영( 36 00      | - <u>2499 3 n 20</u><br>- 2499 3 n 20 | - MS: 36-20<br>- MS: 36-20 |                             | - Mg: 36-00<br>- Mg: 36-00                       |  |   |  | - Mg(36.00<br>- Mg(36.00                     | - Mg: 36-00<br>- Mg: 36-00         | - Mg(30.20<br>- Mg(30.20 | - सिंह, 3 a 00<br>सिंह, 3 a 00 | <u>. ජාති 3 කරය</u><br>ජාති 3 කරය        | - MS(30.00<br>- MS(30.00   |
| i        | Lottem<br>De númeroent                         | Line State   | - 350 IX                           | 41 A. 150                      | +170 2765  | 174+175                                | 174+174                         | <u> </u>                   | 154+164                         | 174+174                               | 15941251                   | 174+174                     | 144+124  | 175+174                                      | <br>245   | 35   |  | <br>                               |                          |                                | <br>                                     |                            |
|          | 2010/01/01                                     | Fater or Focus day                                 | 245 14                             | 21 <del>24</del> 2<br>24 2     | 4 741<br>4 14  | 14 i #<br>24                           | 244                             | 14                         | 141 H<br>24                     | 245                                   | 1451 22                    | 14118                       | 141 F  | 1451 M<br>145                                | 245<br>141 #  | 141 F  | 14   | 248<br>141 #                       | 141 24                   | 14                             | 245                                      | 248                        |
| 2        | Longinudinal                                   | Ind purport  |                                    | 5+1 <b>H</b> . 2               | 70 IN  | 155+170                                | 30                              | 154                        | 155+150                         | 175+170                               | 174                        | 246                         | 175+176  | 174  | 249   | - 555<br>1451 - 26   | 174  | 145+144                            | _5%5<br>1451 #           | 174                            | 145+144                                  | 145+144                    |
|          |  | Ciliar Et Sapore<br>Sac                            | 141<br>MQ10600 MQ                  | 149<br>(UniO): MAQ)            | 1000 MACIDO<br>M   | 149<br>1491-16-00                      | - MQ10600                       | 140<br>140                 | 149<br>74921016-00              | 200 aC (2014                          | 140<br>1400 Jan D0         | 140<br>140                  | 145) AF<br>MOVUMUU                               | 140<br>7402101000                            | 140<br>1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 - 1400 -  |  | - MOLOU DO                                   | 14)<br>MQ106100                    | 1451 AF<br>MIQCUN DC     | 140<br>74021Un UC              | 1400 D 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | MO2106-001                 |
|          | Fa.152   | ve se Helm.  | MQ10607 MQ                         | (UniO) - #4021                 | Jab) – MogʻJab)  | <ol> <li>MQCUND0</li> </ol>            | 20 a C (244)                    | MQ106.00                   | MQ106.00                        | MQ106.00                              | MQ106.00                   |                             | <ul> <li>MQCUND01</li> </ul>                     | MQ106.00                                     | <ul> <li>MQCUBDC</li> </ul>   | <ul> <li>MQCUBDC</li> </ul>  | - 74 QCU 6 DC                                | <ul> <li>MQCUND01</li> </ul>       | - 74 Q10 n 001           | MQ106.00                       | MQ106.00                                 | - 74 Q10 n 001             |
|          | He mo periert                                  | For Scars<br>1111 Scars                            |                                    |                                | 1997 - 1451 22<br>415 - 1554 55                          | 141 F<br>144 A                         | 141 1 A<br>1444 A               | 1451 AF<br>1454 M          | К K                             | 245<br>15441 A                        | 247                        | 245<br>375                  | 245<br>15441 (5.                                 | 247  | 1451 AF<br>1554 N   | 1451 #<br>.50  | 147日第<br>1414年後                              | 1451 #<br>1554180                  | 1451 #<br>               | 147日第<br>1414年後                | 1451 #<br>1554 %                         | 1451 #<br>155418           |
|          |  | Lefe o pulports                                    | 174 17                             | 441 A. 196                     | +16. IW  | 174+174                                | 174+175                         | 174                        | 154+154                         | 174+175                               | 174                        | 174+175                     | 154+155  | 174  | 20  | 35   | 174  | 20                                 | 35                       | 174                            | 175+170                                  | 175+170                    |
| *        | <ul> <li>Lingi dust<br/>se modement</li> </ul> | ff in Fach d<br>Cilher Fill Support                | 141                                |                                | 176 144<br>478, 174                                      | 245<br>154                             | 1451 AF<br>17541 AL             | 141                        | 245<br>154                      | 245<br>1554130                        | 141                        | 145 i 22<br>154             | 245<br>-59                                       | 141  | 145 i 22<br>155   | 145 i 27<br>259  | 142  | 247<br>154                         | 145 (1727)<br>1766       | 144                            | 247<br>174                               | 2457<br>1753+1751          |
|          |  | Sat  | Alg: 30.00 Alg:                    | 30.00 Mgr                      | მომბ — რწემომ  |  | <ul> <li>Alg: Su D0.</li> </ul> | A12: 30.00                 | Alg: 30.00                      | - Mg: 36.00                           | Alg: Su DC                 | Alg: Su DC                  | - MS(30.00                                       | Alg: Su Do                                   | - MS: 30.00   | - Mg(3)(0)   | Alg: Su Di                                   | Alg: 36.00                         | - Alg: 30.00             | Alg: Su Di                     | Mg: 30.00                                | Alg: 3 n.00                |
|          | Lottem   | oer-e Teloj<br>Ling Spark                          | - সমূহ ৫০০০ - সমূহ<br>- জ          | ওলাটে সন্থিয়<br>মন            | ვინა არეცვინ<br>ლი — ფი                                  | ∴ সন্ত্রায়⊪০০<br>জন                   | . अशुः ३७.२०<br>स्र             | MS: 36-00<br>फ             | ાન્દ્રકુ સંઘારત<br>નિર્દ્ધની સં | ાજીનાજી<br>અંગ્રે                     | ાજ માલ                     | ાજીનાજી<br>અનુસાર           | અંધુક ઉત્ત ગઇ.<br>નજીમાં શ                       | - मार्थ्य २०००)<br>। इ.स. १९४                | - અંધુન્ડના ગઇ<br>નજીન્ન સ  | ા સ્ટાન્ટ સ્ટાન્ટ છે.<br>મુજીન્સ સ્ટાન્ટ | ્રસ્ટિક ઉત્ત ગઇ<br>(જે મળે)                  | - MS: 36-00<br>- MS                | - अशुः ३७.२०<br>स्व      | ાજ માલ                         | Mg: 36.00<br>फा                          | - MS: 36-00  <br>          |
|          | Lottem<br>Territor en ent                      | <ol> <li>FL Scars</li> </ol>                       |                                    |                                | 10 20<br>127 247   | 245                                    | 14118                           | 247                        | 1451 #                          | 245                                   | 1471 26                    | 145 L #                     | 245  | 1471 86                                      | 145 i #   | 1451 #   | 1471.26                                      | 245                                | 1451 #                   | 1471-26                        | 245                                      | 1451 #                     |
|          | Lan: rud nel                                   | Faterior Focipiets<br>1 <sup>47</sup> no Bulgori   |                                    | (12월 14일)<br>(14일) 전 (14일)     | 177 147<br>Al 147  | 141 149<br>1494 M                      | 141 i 249<br>249                | 14                         | 245<br>14541 M                  | 245<br>Internet                       | 144                        | 245                         | 245  | 14   | 1451 AF<br>151 F N  | 145 i #  | 14   | 1451 AF<br>1454 AL                 | 145 i #                  | 14                             | 1451 AF<br>1754 M                        | 1451 AF<br>150 41 M        |
| <u>^</u> | Tenin enert                                    | Ciliar Fri Signar                                  | 141                                | 141 145                        | <u>∿ 1∿</u><br>⊺# 1#                                     | 141                                    | 145 L #                         | 14                         | 141                             | 145+144<br>245                        | 141                        | 14                          | 145+144<br>245                                   | 14   | 14  | 1451-27  | 141  | 141                                | 1450 AF                  | 141                            | 141                                      | 247                        |
|          | - D.22   | Sia:   |                                    | (1600 MQ)<br>(1600 MQ)         | Jn 301 - 村公(Jn 3)<br>Jn 301 - 村公(Jn 3)                   |  | 245210 6 001<br>245210 6 001    | 24021Un 001<br>24021Un 001 | MQ106.00<br>MQ106.00            | 24021Un 00<br>24021Un 00              | MQ106.00<br>MQ106.00       | <ul> <li>MQCUBUC</li> </ul> | <ul> <li>MQ206.00</li> <li>MQ20.06.00</li> </ul> | <ul> <li>MQCUNDC</li> <li>MCCUNDC</li> </ul> | <ul> <li>MQCUNDC</li> <li>MQCUNDC</li> </ul>  | - MQ(Un 00)<br>- MQ(Un 00)   | <ul> <li>MQCUBDC</li> <li>MCCUBDC</li> </ul> | - MQ106.00<br>MQ106.00             | 村公(Jn 00)<br>村公(Jn 00)   | MQ106.00<br>MQ106.00           | 745210 n 100<br>84621 ( n 100            | 6402106-001<br>6402106-001 |
| L        |  |  |                                    |                                |  |  |                                 |                            |                                 |                                       |                            |                             |  |  |   |  |  |                                    |                          |                                |  |                            |

#### Notes

- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.
- Blank Cells indicates that the joists are failing in deflection.

# **Shoring Design Calculation**

|   |           | ections supporting the flanges, between the joist is<br>d on moment, shear, deflection and crippling.<br>16" |
|---|-----------|--|
| Deflection Factor, D <sub>F</sub>                 | =         | 360 & 480  |
| Modulus of Elasticity of Steel, $E_S$             | =         | 29000 Ksi  |
| Steel Joist Type                                  | =         | 1000\$162-54   |
| Self weight of joist                              | =         | (Area of Joist/ 2 x Unit wt. of concrete)  |
| W <sub>DJ</sub>                                   | =         | (51.9888/2 x 145)/144  |
|   | =         | 26.18 plf  |
| Self weight of topping                            | =         | (16 x topping thickness x Unit wt. of concrete) /144   |
| W <sub>DT</sub>                                   | =         | 16 x 2 x 145/144   |
|   | =         | 32.22 plf  |
| Self weight of AmDeck Block                       | =         | 1.3 x 16/12  |
|   | =         | 1.73 plf   |
| Total dead load                                   | =         | Self weight of joist + Self weight of topping + Self weight  |
|   |           | of AmDeck Block  |
|   | =         | 26.18 + 32.22 + 1.73   |
|   | =         | 60.13 plf  |
| As per ACI 347-02, Construction lo                | bad to be | e taken as 50 psf.   |
| Construction load                                 | =         | Joist Spacing x $W_{LL}$ / 12  |
|   | =         | 16 x 50/12   |
|   | =         | 66.67 plf  |
| Self weight of steel joist                        | =         | W <sub>DL Steel</sub>  |
| For 1000S162-54 Joist                             |           |  |
| Self weight of steel joist, $W_{\text{DL Steel}}$ | =         | 2.66 plf   |
| Total Load, W                                     | =         | Total Dead Load + Live load + Self wt. of steel joist  |
|   | =         | 60.13 + 66.67 + 2.66   |
|   | =         | 129.46 plf   |
| Maximum Allowed span                              |           |  |

#### **Based on Allowable Moment**

| Allowable momer  | nt = | M <sub>Max</sub> from Amvic Steel joist chart |
|------------------|------|---|
| M <sub>Max</sub> | =    | $W \times L^2 / 8$                            |
| 70.7 x 1000/12   | =    | $W \times L^2 / 8$                            |
| 70.70            | =    | 129.46 x L <sup>2</sup> / 8                   |
| L                | =    | √ 70.70 x 8/129.46                            |
|                  | =    | 19.08 ft                                      |

#### **Based on Allowable shear**

| V <sub>X</sub> | = | W x L/2         |
|----------------|---|-----------------|
| 2.12 x 1000    | = | 129.46 x L/2    |
| L              | = | 2 x 2120/129.46 |
|                | = | 32.75 ft        |

#### **Based on Crippling**

| Web Crippling Load, Pr  | =   | W x L/2                                   |
|-------------------------|-----|---|
| 1.1 x 10 <sup>3</sup>   | =   | 129.46 x L/2                              |
| L                       | =   | 1.1 x 10 <sup>3</sup> x 2 / 129.46        |
|                         | =   | 16.99 ft                                  |
| Maximum Span of Shoring | 9 = | Minimum of (19.08, 32.75, 14.565 & 16.99) |
|                         | =   | 14.50 ft                                  |

#### **Based on Deflection factor**

| i. Deflection      | Factor, ADF = L/         | 360 |   |
|--------------------|--------------------------|-----|---|
| Allowa             | ble deflection, ADF      | =   | L/ Deflection factor (D <sub>F</sub> )  |
| L/ 360             |                          | =   | $\frac{5}{384} \times \frac{129.46 \times L^4}{29 \times 10^6 \times \frac{9.31}{144}}$ |
| L                  |                          | =   | 14.565 ft   |
| ii. Deflection Fac | tor, ADF= L/480          |     |   |
| Allowa             | ble deflection, ADF      | =   | L/ Deflection factor ( $D_F$ )  |
| L/ 480             |                          | =   | $\frac{5}{384} \times \frac{129.46 \times L^4}{29 \times 10^6 \times \frac{9.31}{144}}$ |
| L                  |                          | =   | 13.23 ft  |
| Maximum Span of S  | Shoring = Mini<br>= 13.0 |     | 9.08, 32.75, 13.23 & 16.99)   |

# 9.13 Shoring Span Table

| Allowable<br>Deflection<br>factor |             | L/360       |             |             | L/480       |             |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Topping<br>(in)                   | 1000S162-54 | 1000S162-68 | 1000S162-97 | 1000S162-54 | 1000S162-68 | 1000S162-97 |
| 2.0                               | 14.5        | 15.5        | 17.5        | 13.0        | 14.0        | 16.0        |
| 2.5                               | 14.0        | 15.0        | 17.0        | 12.5        | 14.0        | 15.5        |
| 3.0                               | 13.5        | 15.0        | 17.0        | 12.5        | 13.5        | 15.0        |
| 3.5                               | 13.5        | 14.5        | 16.5        | 12.0        | 13.5        | 15.0        |
| 4.0                               | 13.5        | 14.5        | 16.0        | 12.0        | 13.0        | 14.5        |
| 4.5                               | 12.5        | 14.0        | 16.0        | 12.0        | 13.0        | 14.5        |

## 10 Garage Deck Joist Design Criteria

| Panel Designation                          | = | 12" Pa            | anel section with 10" deep beam |
|--|---|-------------------|---------------------------------|
| Beam Depth                                 | = | d <sub>w</sub>    | in inches                       |
| Topping                                    | = | t <sub>f</sub>    | in inches                       |
| Minimum Beam Width, bottom                 | = | b <sub>w</sub>    | in inches                       |
| Average Joist Width                        | = | $\mathbf{b}_{wa}$ | in inches                       |
| Panel Span, Transverse                     | = | b                 | in inches                       |
| Maximum Span of the Deck                   | = | L                 | in feet & inches                |
| Number of Span                             | = | Single            | (SS) / Double (DS)              |
| Live load acting on the deck               | = | $\mathbf{W}_{LL}$ | in psf                          |
| Dead load acting on the deck               | = | $\mathbf{W}_{DL}$ | in psf                          |
| Wheel Load                                 | = | Р                 | in lb                           |
| Distance between Front & Rear Wheel        | = | х                 | in feet                         |
| Unit weight of concrete                    | = | γc                | in pcf                          |
| Specified compressive strength of concrete | = | f'c               | in psi                          |
| Yield strength of rebar                    | = | fy                | in psi                          |
| Rebar cover, Center of rebar (bottom)      | = | С                 | in inches                       |
| Rebar cover, Center of rebar (top)         | = | ď                 | in inches $(take as t_f/2)$     |
| Allowable Deflection factor, Total         | = | $\Delta_{Factor}$ | Total                           |
| Allowable Deflection factor, LL            | = | $\Delta_{Factor}$ | L                               |

## **10.1 Assumptions**

- i. Design criteria are based on IBC 2003 + ACI 318-02 codes.
- ii. Modulus of elasticity of rebar is assumed to be 29000 ksi for the design.
- iii. 'Normal weight concrete' is assumed to be used in wall construction and therefore  $\lambda$ = 1.0 corresponding to 'Normal weight concrete' has been use in design.
- iv. Factored load combination of 1.2DL + 1.6LL is used in strength calculation & service load DL + LL is used in deflection calculation.
- v. 'AmDeck floor system' is of type 'Concrete joist construction' as specified in code.
- vi. Vehicle point load is acting at equal distance from both support for the calculation of maximum moment & maximum deflection for Garage joist design.
- vii. One of the vehicle point load is taken @ support & other @ distance "X" from support in shear calculation for garage joist design.
- viii. The distance between vehicle front & rear wheel is taken as 8'-0".
- ix. Point load is assumed to act in middle of top slab for maximum moment calculation.

Dead Load factor =  $K_{DL}$ Live Load factor =  $K_{LL}$ 

## 10.2 Garage Slab Design

| Since, $L_Y/L_X$           | > 2    |  |
|----------------------------|--------|--|
| Slab is designed as one    | e way. |  |
| Assume width of slab       | =      | b in feet  |
| Self weight of slab        | =      | W <sub>slab</sub> in plf   |
| Imposed Dead Load          | =      | W <sub>DL</sub> x b in plf   |
| Imposed Live load          | =      | W <sub>LL</sub> x b in plf   |
| Total un-factored Dead     | load = | (Self weight of slab + Imposed Dead Load) in plf                       |
| Total un-factored Live lo  | pad =  | Imposed Live load in plf   |
| Total Factored Load, W     | Slab = | $K_{DL} x$ (Self weight of slab + $w_{DL}$ ) + $K_{LL} x w_{LL}$       |
| Effective span             | =      | L <sub>Slab</sub> in feet  |
| Maximum Moment, $M_{\cup}$ | =      | Moment due to Wheel Load + Moment due to $W_{\mbox{\scriptsize Slab}}$ |
|                            | =      | $(K_{LL} \times P) \times b / 4 + W_{Slab} \times b^2 / 12$            |
|                            |        | (Since slab is continuous over multiple supports)                      |

#### Determination of reinforcement

| Reinforcement ratio, $\rho = (0.85 \text{ x f'c} / \text{fy})$ | y) x {1 – | $[1 - 2 \times M_U / (\phi \times b \times d'^2 \times 0.85 \times f'c)]^{0.5}$ |
|--|-----------|---|
| Area of reinforcement required ( $A_{S req}$ )                 | =         | ρxbxd   |
| Area of rebar  | =         | $\pi$ / 4 x (# of rebar/8) <sup>2</sup> in in <sup>2</sup>                      |
| Spacing of rebar   | =         | (Area of rebar / $A_{Srequired}$ ) x width of slab                              |

### Punching Shear check for Garage Slab under Wheel Load

| Concentrated load for residential car   | =                    | $P_1$ in Ib                       |                                |                            |
|---|----------------------|-----------------------------------|--------------------------------|----------------------------|
| Length of bearing area                  | =                    | $L_1$ in ind                      | ches                           |                            |
| Bearing area, A <sub>1</sub>            | =                    | $L_1 \ge L_1$                     | in sq. inch                    |                            |
| Self weight of slab                     | =                    | A <sub>1</sub> x t <sub>f</sub> x | : 145/ (144 x 12)              |                            |
| Total Factored Load, Pu                 | =                    | 1.2 DL                            | + 1.6LL                        |                            |
| Perimeter of bearing area for two-way s | hear, b <sub>0</sub> | =                                 | $\{4 \times (L_1 + d')\}$      | in inches                  |
| Shear strength of concrete in two-way s | hear, <sub>¢</sub> , | V <sub>c</sub> =                  | [φ <sub>v</sub> x 4 x √f'c x b | o <sub>0</sub> x d'] in lb |

## 10.3 Garage Deck Joist

#### 10.3.1 Analysis

| Section Properties                                |   |                                   |
|---|---|-----------------------------------|
| Cross-section area of Combined Section (A)        | = | As Provided by Amvic (Refer Table |
|   |   | below)                            |
| Distance of CG from top $(CG_{Top})$              | = | As Provided by Amvic (Refer Table |
|   |   | below)                            |
| Moment of inertia about x-axis (I <sub>XX</sub> ) | = | As Provided by Amvic (Refer Table |

| <b>Consulting Engineers, Corp</b> | eers, Corp |
|-----------------------------------|------------|
|-----------------------------------|------------|

Project: AmDeck Design Guide Client: Amvic, Inc.

Live Load W<sub>LL</sub>

Total Unfactored UDL W<sub>P</sub>

Total factored UDL (W<sub>U</sub>)

Factored Point Load, Pu

Maximum Shear Force (V<sub>U</sub>)

Prepared by: Kapil Checked by: Andy / Raj

=

=

=

=

=

below)

w<sub>LL</sub> x b/12

 $K_{LL} \times P$ 

 $W_{D Total} + W_{LL}$ 

 $\{K_{DL} \times W_{D \text{ Total}} + K_{LL} \times W_{LL}\}$ 

For (x < L)

For (x > L)

Date: 12/07/2007 Date: 12/07/2007

Section Modulus about x-axis (S<sub>XX</sub>)

 $I_{XX} / (Max (CG_{Top}, (d_w + t_f - CG_{Top})))$ 

| Topping<br>(inch) | Area<br>(in <sup>2</sup> ) | Perimeter<br>(inch)       | lxx<br>(in <sup>4</sup> ) | lyy<br>(in <sup>4</sup> ) | Rx<br>(inch)          | Ry<br>(inch)           | Cg <sub>Top</sub><br>(inch) | Cg Bottom<br>(inch) |
|-------------------|----------------------------|---------------------------|---------------------------|---------------------------|-----------------------|------------------------|-----------------------------|---------------------|
| 2                 | 115.9922                   | 88.9652                   | 1632.1071                 | 5587.8915                 | 3.7511                | 6.941                  | 3.8451                      | 8.1549              |
| 2.5               | 131.9922                   | 89.9652                   | 1868.2302                 | 6953.2249                 | 3.7622                | 7.258                  | 3.8487                      | 8.6513              |
| 3.0               | 147.9922                   | 90.9652                   | 2108.2903                 | 8318.5582                 | 3.7744                | 7.497                  | 3.9056                      | 9.0944              |
| 3.5               | 163.9922                   | 91.9652                   | 2357.9644                 | 9683.8916                 | 3.7919                | 7.685                  | 4.001                       | 9.4999              |
| 4.0               | 179.9922                   | 92.9652                   | 2621.6218                 | 11049.2249                | 3.8164                | 7.835                  | 4.1223                      | 9.8777              |
| 4.5               | 195.9922                   | 93.9652                   | 2902.8583                 | 12414.558                 | 3.8485                | 7.959                  | 4.2654                      | 10.2346             |
| 5.0               | 211.9922                   | 94.9652                   | 3204.7879                 | 13779.8915                | 3.8881                | 8.062                  | 4.4246                      | 10.5754             |
| Eff               | ective depth               | (d)                       |                           | =                         | d <sub>w</sub> -c+    | · t <sub>f</sub>       |                             |                     |
| Se                | If weight of c             | deck (w <sub>Self</sub> ) |                           | =                         | w <sub>c</sub> x A/   | 144                    |                             |                     |
| To                | tal Dead Loa               | ad W <sub>DTotal</sub>    |                           | =                         | W <sub>Self</sub> + V | v <sub>DL</sub> x b /1 | 2                           |                     |

| a.  | For Single Span   |                   |
|---|---|-------------------|
| = (K <sub>DL</sub> x W <sub>D Total</sub> | x $L^2$ /8) + Maximum (K <sub>LL</sub> x W <sub>LL</sub> x $L^2$ /8, P <sub>U</sub> x L / 4)      | For $(x \ge L/2)$ |
| = (K <sub>DL</sub> x W <sub>D Total</sub> | x $L^2$ /8) + Maximum (K <sub>LL</sub> x W <sub>LL</sub> x $L^2$ /8, P <sub>U</sub> x (L-x) / 2)  | For (x < L/2)     |
| b.  | For Double Span   |                   |
| = (K <sub>DL</sub> x W <sub>D Total</sub> | x $L^2/14$ ) + Maximum (K <sub>LL</sub> x W <sub>LL</sub> x $L^2/8$ , P <sub>U</sub> x L / 4)     | For $(x \ge L/2)$ |
| = (K <sub>DL</sub> x W <sub>D Total</sub> | x $L^2/14$ ) + Maximum (K <sub>LL</sub> x W <sub>LL</sub> x $L^2/8$ , P <sub>U</sub> x (L-x) / 2) | For (x < L/2)     |

 $K_{DL} \times W_{D \text{ Total}} \times L / 2 + Maximum (K_{LL} \times W_{LL} \times L / 2, P_U \times (2 - x / L))$ 

K<sub>DL</sub> x W<sub>D Total</sub> x L / 2 + Maximum (K<sub>LL</sub> x W<sub>LL</sub> x L / 2, P<sub>U</sub>)

#### 10.3.2 Design

=

=

| <b>10.3.2.1 Shear Strength</b><br>Shear Strength of the section (φVc)     | =               | 1.1 x 0.75 x 2 x (f'c) <sup>0.5</sup> x bwa x d |
|---|-----------------|---|
| If $\phi$ Vc < V <sub>U</sub> , Provide Single leg stirrup rebarstirrups. | and provide     | e corresponding rebar at top to support         |
| $\{$<br>Area of single leg rebar stirrup = $A_V$                          | in <sup>2</sup> |   |

Spacing of stirrup rebar =  $S_s$  in Shear strength provided by shear reinforcement ( $\phi V_s$ ) = 0.75 x A<sub>V</sub> x fy x d / S<sub>s</sub>

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|---------|---|------------------------|-----------------------|-----------------------|------------------------|--|--|
|         |   |                        |                       |                       | 0                      |  |  |
|         | Total Shear strength $(\phi V_N)$   |                        |                       |                       | =                      | $\phi Vc + \phi V_S$                       |  |
| 10.0.0  | }   |                        |                       |                       |                        |  |  |
| 10.3.2. | <b>2 Moment Strength</b><br>Strength reduction factor (φ)                             | =                      | 0.9                   |                       |                        |  |  |
|         | β <sub>1</sub>  | =                      | 0.85                  | if (f'c ≤             | ≤ 4000 p               | si)  |  |
|         |   |                        | 0.80                  | •                     | •                      | 5000 psi)                                  |  |
|         |   |                        | 0.75                  | •                     |                        | 6000 psi)                                  |  |
|         |   |                        | 0.65                  | if (600               | 0 < f'c)               |  |  |
|         | Balanced reinforcement ratio ( $\rho_t$   | )                      |                       | =                     | 0.319                  | x β <sub>1</sub> x f'c/ fy                 |  |
|         | Maximum allowed reinforcement   | t ratio (p             | o <sub>Max</sub> )    | =                     | $ ho_t$                |  |  |
|         | Minimum reinforcement ratio (ρ  | <sub>Min</sub> )       |                       | =                     | Max (                  | 3 x (f'c) <sup>0.5</sup> , 200) / fy       |  |
|         | <b>Positive Reinforcement</b><br>Reinforcement ratio for +ive moment ( $\rho_{Pos}$ ) |                        |                       |                       |                        |  |  |
|         | = (0.85 x f'c / fy) x {1 − [1 − 2 x N   | M <sub>UP</sub> / (¢ x | k b <sub>wa</sub> x d | l <sup>2</sup> x 0.85 | x f'c)] <sup>0.</sup>  | <sup>5</sup> }                             |  |
|         | Area of reinforcement required (  | A <sub>S Pos</sub> re  | eq)                   | = $\rho_{Pos}$        | x bwa >                | α d  |  |
|         | $A_{S Pos}$ provided > $A_{S Pos}$ re   | equired                |                       |                       |                        |  |  |
|         | Negative Reinforcement (For S<br>Reinforcement ratio for -ive mon                     |                        |                       |                       |                        |  |  |
|         | = $(0.85 \text{ x f'c} / \text{fy}) \text{ x} \{1 - [1 - 2 \text{ x N})\}$            | M <sub>UN</sub> / (ф x | k bwa x               | d <sup>2</sup> x 0.8  | 5 x f'c)] <sup>(</sup> | <sup>0.5</sup> }                           |  |
|         | Area of reinforcement required (  | A <sub>S Neg</sub> re  | eq)                   | $= \rho_{\text{Neg}}$ | , x bwa >              | < d  |  |
|         | $A_{S Neg}$ provided > $A_{S Neg}$ re   | equired                |                       |                       |                        |  |  |
|         | Nominal moment strength   |                        |                       |                       |                        |  |  |
|         | Plain Concrete  |                        |                       |                       |                        |  |  |
|         | Nominal moment strength of the  | section                | ı (øMn)               | =                     | 0.65 ×                 | : 5 (f'c) <sup>0.5</sup> x S <sub>XX</sub> |  |
|         | Reinforced Concrete   |                        |                       |                       |                        |  |  |
|         | Nominal moment strength of the  | section                | ı (øMn)               |                       |                        |  |  |
|         | $= \phi A_{S Pos} provided$   | d x fy x [             | $d - (A_S)$           | <sub>Pos</sub> provi  | ided x fy              | / (0.85 x f'c x b))/2]                     |  |
| 10.3.2. | 3 Deflections   |                        |                       |                       |                        |  |  |
|         | Total depth of section (h)  |                        |                       | $d_w + t_f$           |                        | 4  |  |
|         | A <sub>LP</sub>   |                        | =                     |                       | provide                |  |  |
|         | A <sub>B</sub><br>R <sub>DS</sub>   |                        | =                     |                       | provide<br>eter of st  | near rebar                                 |  |
|         | R <sub>DLP</sub>  |                        | _                     |                       |                        | ingle rebar A <sub>S Neg</sub> provided    |  |
|         | Effective depth (d <sub>LP</sub> )  |                        | _                     |                       |                        | $_{\rm S} = 0.5 R_{\rm DLP}$               |  |
|         | Modulus of elasticity of concrete   | e (E)                  | _                     |                       | x (33 x                |  |  |
|         | Modular ratio (n)   | ()                     | =                     | E <sub>s</sub> / E    |                        |  |  |
|         |   |                        |                       |                       |                        |  |  |

| oject |  | ck Desig              | <b>ers, Corp</b><br>n Guide   |                      | repared by: Kapil<br>hecked by: Andy /    | Raj                   | Date: 12/07/2007<br>Date: 12/07/2007 |
|-------|--|-----------------------|-------------------------------|----------------------|---|-----------------------|--------------------------------------|
|       | Modu   | lus of ru             | pture of concrete             | e (fr)               | = 7.5 x                                   | (f'c) <sup>0.5</sup>  |                                      |
|       |  |                       | b                             |                      |   | b                     |                                      |
|       |  |                       | •                             |                      | (n- <u>1)A's</u>                          |                       |                                      |
|       | C  | G                     |                               |                      | NA  |                       | I                                    |
| dw    |  |                       |                               | h                    |   |                       |                                      |
|       |  |                       | yt                            |                      | nAs                                       |                       |                                      |
|       |  |                       |                               | Ţ                    |   |                       |                                      |
|       |  | I                     | w                             |                      |   |                       |                                      |
|       |  | Gross S               | Section                       |                      | с   | racked Transforme     | d Section                            |
|       | <b>y</b> t                                       | =                     | Cg Bottom                     | As Pi                | ovided by Amvic                           | (Refer Table abov     | /e)                                  |
|       | $lg = l_{XX}$ Cracking Moment (M <sub>CR</sub> ) |                       |                               | As Pi                | ovided by Amvic                           | (Refer Table abov     | ve)                                  |
|       |  |                       |                               | =                    | fr x lg / $y_t$                           |                       |                                      |
|       | С  | =                     | bwa / (n x A <sub>S F</sub>   | os provi             | ded)                                      |                       |                                      |
|       | f  | =                     | t <sub>f</sub> x (b-bwa) / (i | n x A <sub>S P</sub> | os provided)                              |                       |                                      |
|       | r  | =                     | (n-1) A <sub>S Neg</sub> pro  | vided /              | (n A <sub>S Pos</sub> provide             | d)                    |                                      |
|       | d'   | =                     | $h - d_{LP}$                  |                      |   |                       |                                      |
|       |  | $\sqrt{c}$            | $C(2d+t) \times f +$          | 2rd') +              | $\frac{1}{(f+r+1)^2} - ($                 | f + r + 1)            |                                      |
|       | kd   | $=\frac{\sqrt{2}}{2}$ | $C(2d + t_f \times f +$       |                      | () () () () () () () () () () () () () (  |                       |                                      |
|       | Mome   | ent of ine            | ertia of cracked s            | ection t             | ransformed to co                          | ncrete (Icr)          |                                      |
|       | = ( <i>b</i> -                                   | $(b_W)t_f^3$          | $/12 + b_W (kd)^3 / 3$        | +(b-b)               | $_{W})t_{f}(kd-t_{f}/2)^{2}$              | $+ nA_{Bi}(d-kd)^2 +$ | $(n-1)A_{LPi}(kd-d')^2$              |
|       | Servio   | ce Mome               | ent (M <sub>P</sub> )         |                      |   |                       |                                      |
|       | Dead   | Load m                | oment, M <sub>D</sub>         | =                    | W <sub>D Total</sub> x L <sup>2</sup> / 8 |                       |                                      |
|       | Live L   | .oad mo               | ment, M <sub>L1</sub>         | =                    | $W_{LL} \times L^2 / 8$                   | (Due to               | UDL)                                 |
|       | Live L   | .oad mo               | ment, M <sub>L2</sub>         | =                    | P x L/4                                   | $(x \ge L/2)$         |                                      |
|       |  |                       |                               | =                    | P x (L-x)/2                               | (x < L/2)             |                                      |
|       | Total Live Load Moment, $M_L$                    |                       |                               | =                    | $M_{L1} + M_{L2}$                         |                       |                                      |
|       | Total  | moment                | t, M <sub>D+L</sub>           | =                    | $M_{D} + M_{L}$                           |                       |                                      |
|       | Susta  | ined Mo               | ment, M <sub>SUS 1</sub>      | =                    | $M_{D} + 0.5 \times M_{L}$                | Assumi                | ng that 50% of live                  |
|       |  |                       |                               |                      |   | Load a                | s sustained load)                    |
|       |  |                       |                               |                      |   |                       |                                      |
|       | Susta  | ined Mo               | ment, M <sub>SUS 2</sub>      | =                    | $0.5 \times M_{L2}$                       | (Assumi               | ng that 50% of live                  |

Effective moment of inertia for deflection computation (Ie)

$$= I_{g} if M_{CR} > M_{P}$$
  
= Minimum of [{(M<sub>CR</sub> / M<sub>P</sub>)<sup>3</sup> Ig + [1 - (M<sub>CR</sub> / M<sub>P</sub>)<sup>3</sup>] I<sub>CR</sub>} and I<sub>g</sub>] if M<sub>CR</sub>  $\le M_{P}$ 

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|----------|---------------------|
| Client:  | Amvic, Inc.         |

#### 10.3.2.4 Short Term Deflection

| For Uniformly Distributed Load        |         |                    |  |  |  |  |  |  |  |
|---------------------------------------|---------|--------------------|--|--|--|--|--|--|--|
| Mid-span deflection is $\Delta_{I}$ = |         | A <sub>1</sub> =   | K (5/48) M <sub>P</sub> x L <sup>2</sup> / (Ec x le) |  |  |  |  |  |  |
| For Point                             | Load    |                    |  |  |  |  |  |  |  |
| Mid-span                              | deflec  | tion $\Delta_{ip}$ | =  | {P x L <sup>3</sup> } / (48 x Ec x le) (x $\ge$ L/2)<br>{P x (L - x)/2} x {3 x L <sup>2</sup> - 4 x ((L - x)/2) <sup>2</sup> }/ (24 x Ec x le) (x < L/2) |  |  |  |  |  |
| Where,                                |         |                    |  |  |  |  |  |  |  |
| K                                     |         | =                  | 1.0  | for Simple Beam  |  |  |  |  |  |
| $\Delta_{i}$                          | i D     | =                  | K (5/48  | B) $M_D \times L^2 / (Ec \times Ie)$   |  |  |  |  |  |
| $\Delta_{i}$                          | i Total | =                  | K (5/48  | ) M <sub>(D + L)</sub> UDI x L <sup>2</sup> / (Ec x le)  |  |  |  |  |  |
|                                       |         |                    | + {P x (   | $(L - x)/2$ x {3 x L2 - 4 x $((L - x)/2)^2$ / (24 x Ec x le) (x < L/2)   |  |  |  |  |  |
|                                       |         | =                  | K (5/48  | b) M <sub>(D+L) UDI</sub> x L <sup>2</sup> / (Ec x le) + {P x L <sup>3</sup> } / (48 x Ec x le) (x ≥ L/2)  |  |  |  |  |  |
| $\Delta_{i}$                          | i SUS   | =                  | K (5/48  | ) M <sub>SUS 1</sub> x L <sup>2</sup> / (Ec x le)  |  |  |  |  |  |
|                                       |         |                    | + {0.5 >   | $x P x (L - x)/2 x \{3 x L2 - 4 x ((L - x)/2)^2\} / (24 x Ec x le) (x < L/2)$  |  |  |  |  |  |
|                                       |         | =                  | K (5/48  | b) $M_{SUS 1} \times L^2 / (Ec \times Ie) + \{0.5 \times P \times L^3\} / (48 \times Ec \times Ie)$ (x ≥ L/2)  |  |  |  |  |  |
| $\Delta_{i}$                          | i LL    | =                  | $\Delta_{ m i \; Total}$ -                           | $\Delta_{i DL}$  |  |  |  |  |  |
|                                       |         |                    |  |  |  |  |  |  |  |

#### Allowable Short Term Deflections

 $\Delta_{i \text{ Allow LL}} = (L \times 12) / (180 \text{ or } 360)$ 

#### 10.3.2.5 Long Term Deflection

| Where | $\Delta_{({\rm CP+SH})}$ | = | $\lambda \ge \Delta_{i Sl}$                | JS                                       |  |  |  |  |
|-------|--------------------------|---|--|--|--|--|--|--|
| Where | λ                        | = | ξ/(1+5                                     | j0p')                                    |  |  |  |  |
|       | p'                       | = | Area of compression steel (A') / (bwa x d) |  |  |  |  |  |
|       | ξ                        | = | Time- dependent factor                     |  |  |  |  |  |
|       |                          | = | 2.0  | 5 years and more Sustained load duration |  |  |  |  |
|       |                          | = | 1.4  | 12 months                                |  |  |  |  |
|       |                          | = | 1.2  | 6 months                                 |  |  |  |  |
|       |                          | = | 1.0  | 3 months.                                |  |  |  |  |
|       | $\Delta_{\text{LT}}$     | = | $\Delta_{({\rm CP+SH})}$                   | $+\Delta_{i LL}$                         |  |  |  |  |

#### Allowable Long Term Deflection

 $\Delta_{i \text{ Allow LL}} = (L \times 12) / 240 \text{ or } 480$ 

# **11 Slab Reinforcement Design Criteria**

### **11.1 Transverse Reinforcement**

L<sub>Slab</sub> b/12 =  $P_u \mathrel{x} {L_{Slab}}^2 / 12$ M<sub>u Slab</sub> = Balanced reinforcement ratio  $(\rho_t)$  $0.319 \times \beta_1 \times f'c/fy$ (Per Section 7.1 = of Notes on ACI 318-02) Maximum allowed reinforcement ratio (p Max) =  $\rho_t$ Max (3 x (f'c) <sup>0.5</sup>, 200) / fy Minimum reinforcement ratio (p<sub>Min</sub>) (Per = Section 10.5.1 ACI 318-02) Reinforcement ratio for +ive moment ( $\rho_{Pos}$ )  $(0.85 \text{ x f'c} / \text{fy}) \times \{1 - [1 - 2 \times M_{UP} / (\phi \times b_w \times t_f / 2^2 \times 0.85 \times \text{f'c})\}^{0.5}\}$ = Area of reinforcement required (A<sub>S Pos</sub> req)  $= \rho_{Pos} x 12 x t_f / 2$ Area of reinforcement required (A<sub>S Pos</sub> req) (Minimum)  $= \rho_{Min} \times 12 \times t_f / 2$ Area of reinforcement required (A<sub>S Pos</sub> req) (Maximum) =  $\rho_{Max} x 12 x t_f / 2$ lf  $A_{S Pos}$  req (Minimum) >  $A_{S Pos}$  req Then Provided Area of Steel = Minimum of A<sub>S Pos</sub> req (Minimum) or 1.33 x A<sub>S Pos</sub> req lf  $A_{S Pos}$  req (Minimum)  $\leq A_{S Pos}$  req Then Provided Area of Steel A<sub>S Pos</sub> req = Minimum Spacing, S Calculated = (Arebar / Area of Steel Provided) x 12 However per section 7.12 of ACI 318-02, minimum spacing will be lesser of following three (1) S Calculated (2) 18" O.C.

(3)  $5 \times t_f$  ( $t_f$  is thickness of slab)

### **11.2 Longitudinal Reinforcement**

Minimum Longitudinal reinforcement as per section 7.12 of ACI 318-02 to be calculated by following equation.

| For Grade 60 rebar, As Minimum =                | 0.00 | 18 x Cross sectional Area                          |
|---|------|--|
| Spacing for As Minimum, S <sub>Calculated</sub> | =    | (A <sub>rebar</sub> / Area of Steel Provided) x 12 |

However per section 7.12 of ACI 318-02, minimum spacing will be lesser of following three

- (1) S <sub>Calculated</sub>
- (2) 18" O.C.
- (3)  $5 \times t_f$  ( $t_f$  is thickness of slab)

# 12 Garage Deck Joist Design Calculation

(12" Panel Size With 10" Deep Joist @ 32" O.C. And 4" Topping Slab)

### Single Span beam

Inputs

|  | -   |          |           |                      |                       |
|--|---|----------|-----------|----------------------|-----------------------|
|  | Panel Designation   | =        | 12" Pane  | el sectio            | on with 10" deep beam |
|  | Beam Depth (d <sub>w</sub> )                                | =        | 10"       |                      |                       |
|  | Topping (t <sub>f</sub> )                                   | =        | 4"        |                      |                       |
|  | Minimum Beam Width, bottom (b <sub>w</sub> )                | =        | 6.5"      |                      |                       |
|  | Average Joist Width (b <sub>wa)</sub>                       | =        | 5.2"      |                      |                       |
|  | Panel Span, Transverse (b)                                  | =        | 32"       |                      |                       |
|  | Maximum Span of the Deck (L)                                | =        | 15'-0"    |                      |                       |
|  | Number of Span  | =        | Single    |                      |                       |
|  | Live load acting on the deck $(w_{LL})$                     | =        | 50 psf    |                      |                       |
|  | Dead load acting on the deck $(w_{DL})$                     | =        | 10 psf    |                      |                       |
|  | Wheel Load (P)  | =        | 3000 lb   |                      |                       |
|  | Distance between Front & Rear Wheel (x)                     | =        | 8'-0"     |                      |                       |
| Unit weight of concrete (γc)                     |   |          | 145 pcf   |                      |                       |
| Specified compressive strength of concrete (f'c) |   |          | 3500 psi  |                      |                       |
|  | Yield strength of rebar (fy)                                | =        | 60000 ps  | si                   |                       |
|  | Rebar cover, Center of bottom rebar (c)                     | =        | 1.25"     |                      |                       |
|  | Rebar cover, clear of top rebar (d')                        | =        | 2" (      | (=t <sub>f</sub> /2) |                       |
|  | Allowable Deflection factor, Total ( $\Delta_{Factor LL}$ ) | =        | 180 or 36 | 30                   | (Short Term)          |
|  | Allowable Deflection factor, Total ( $\Delta_{Factor LL}$ ) | =        | 240 or 48 | 30                   | (Long Term)           |
|  | Dead Load factor $(K_{DL}) = 1.2$                           |          |           |                      |                       |
|  | Live Load factor ( $K_{LL}$ ) = 1.6                         |          |           |                      |                       |
|  | anaa Bravida #4 Babar @ 16" O.C. in Langitudir              | al dirad | ion       |                      |                       |

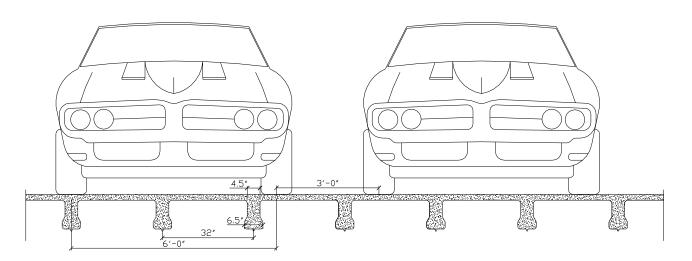
ence Provide #4 Rebar @ 16" O.C. in Longitudinal direction.

## 12.1 Garage Joist Design

## 12.1.1 Analysis

#### Section Properties

| Cross-section area A                      | = | 179.9888 in <sup>2</sup>                               |
|---|---|--|
| Distance of CG from top $(CG_{Top})$      | = | 4.1223 in from top                                     |
| Moment of inertia about x-axis $(I_{XX})$ | = | 2621.6 in <sup>4</sup>                                 |
| Section Modulus about x-axis ( $S_{XX}$ ) | = | 2621.6 / {Max [4.1223, (10 + 4 - 4.1223)]}             |
|   | = | 265.4 in <sup>3</sup>                                  |
| Effective depth (d)                       | = | $d_w - c + t_f$  |
|   | = | 10 - 1.25 + 4  |
|   | = | 12.75"   |
| Self weight of deck $(w_{Self})$          | = | $w_C \ge A_{Gross}$                                    |
|   | = | 145 x 179.9888/144                                     |
|   | = | 181.239 plf  |
| Total Dead Load W <sub>DTotal</sub>       | = | 181.239 + 10 x 32/12                                   |
|   | = | 207.91 plf   |
| Live Load $W_{LL}$                        | = | 50 x 32/12   |
|   | = | 133.33 plf   |
| Total Unfactored UDL ( $W_P$ )            | = | $W_{D Total} + W_{LL}$                                 |
|   | = | 207.91 + 133.33  |
|   | = | 341.24 plf   |
| Total factored UDL ( $W_U$ )              | = | $\{K_{DL} \ x \ w_{D \ Total} + K_{LL} \ x \ w_{LL}\}$ |
|   | = | 1.2 x 207.91 +1.6 x 133.33                             |
|   | = | 462.82 plf   |



|        | : AmDeck Design Guide<br>Amvic, Inc.                       | Prepared b<br>Checked by | y: Kapil<br>7: Andy / Raj                              | Date: 12/07/2007<br>Date: 12/07/2007           |
|--------|--|--------------------------|--|--|
|        | Factored Point load $(P_U)$                                | =                        | K <sub>LL</sub> x P                                    |  |
|        |  | =                        | 1.6 x 3000   |  |
|        |  | =                        | 4800 lb  |  |
|        | Maximum Shear Force ( $V_U$ )                              |                          |  |  |
|        | $= K_{DL} \times W_{D \text{ Total}} \times L / 2 + Ma$    | ximum (K <sub>LL</sub>   | $\times$ W <sub>LL</sub> x L / 2, P <sub>U</sub> x (2) | 2 - x / L)) For (x < L)                        |
|        | = 1.4 x 207.91 x 15 / 2 + M                                | aximum (1.               | 6 x 133.33 x 15 / 2, 4                                 | 4800 x (2 - 8 / 15))                           |
|        | = 9223.01 lb.  |                          |  |  |
|        | Maximum Positive Moment ( $M_{UP}$ )                       |                          |  |  |
|        | $= (K_{DL} \times W_{D \text{ Total}} \times L^2 / 8) + N$ |                          |  |  |
|        | = (1.4 x 207.91 x 15 <sup>2</sup> /8) +                    | Maximum (                | 1.6 x 133.33 x 15 <sup>2</sup> /8                      | , 4800 x 15 / 4)                               |
|        | = 23530.41 ft-lb = 282364.                                 | 9 in-lb.                 |  |  |
| 2.1.2  | 2 Shear Strength   |                          |  |  |
|        | Shear Strength of the section ( $\phi$ Vc)                 | ) =                      | 1.1 x 0.75 x 2 x (f                                    | c) <sup>0.5</sup> x b <sub>wa</sub> x d        |
|        |  | =                        | 1.1 x 0.75 x 2 x (3                                    | 500) <sup>0.5</sup> x <mark>5.2</mark> x 12.75 |
|        |  | =                        | <mark>6471.895</mark> lb. < V <sub>U</sub>             | (= 9223.01 lb.) (Not OK)                       |
|        | Hence Shear Stirrups provided                              |                          |  |  |
|        | Area of single leg of #3 rebar                             | =                        | $\pi/4 \times (3/8)^2$                                 |  |
|        |  | =                        | 0.110 in <sup>2</sup>                                  |  |
|        | Spacing of stirrup rebar                                   | =                        | 5 in   |  |
|        | Shear strength provided by shear r                         | einforceme               | nt (φV <sub>S</sub> )                                  |  |
|        |  | =                        | ~0.75 x 0.11x 6000                                     | 0 x 12.75 / 5                                  |
|        |  | =                        | 12622.5 lb   |  |
|        | Total Shear strength ( $\phi V_N$ )                        | =                        | $\phi Vc + \phi V_S$                                   |  |
|        |  | =                        | 6471.895 + 12622                                       | 2.5  |
|        |  | =                        | 19094.4 lb > V <sub>U</sub> (:                         | = 9223.01 lb.) (OK                             |
|        | Moment Strength  |                          |  |  |
| 2.1.3  | Moment Strength  |                          |  |  |
| 2.1.3  | Strength reduction factor (\u00f6)                         | =                        | 0.9  |  |
| 12.1.3 | -  |                          | 0.9<br>0.85 if (f'c ≤ 40                               | 00 psi)  |

 $\begin{array}{rcl} 0.80 & \mbox{if } (4000 < f'c \leq 5000 \mbox{ psi}) \\ 0.75 & \mbox{if } (5000 < f'c \leq 6000 \mbox{ psi}) \\ 0.65 & \mbox{if } (6000 < f'c) \\ \end{array}$   $\beta_1 & = & 0.85 & \mbox{since } (f'c \leq 4000 \mbox{ psi}) \\ \mbox{Tension controlled reinforcement ratio } (\rho_b) & = & 0.319 \ x \ 0.85 \ x \ 3500 \ / \ 60000 \\ & = & 0.0158 \end{array}$ 

|   | repared by:<br>necked by:   |                                  | aj   | Date: 12/07/2007<br>Date: 12/07/2007    |  |
|---|---|----------------------------------|--|---|--|
| Maximum allowed reinforcement ratio                 | (ρ <sub>Max</sub> )   | =                                | $\rho_t$                                   |   |  |
|   |   | =                                | 0.0158                                     |   |  |
| Minimum reinforcement ratio ( $\rho_{\text{Min}}$ ) |   | =                                | Max (3 x (f'c) <sup>0</sup>                | <sup>.5</sup> , 200) / fy               |  |
|   |   | =                                | Max (3 x (350                              | 0) <sup>0.5</sup> , 200) / 60000        |  |
|   |   | =                                | Max (177.5, 20                             | 00) / 60000                             |  |
|   |   | =                                | 200 / 60000                                |   |  |
|   |   | =                                | 0.0033                                     |   |  |
| Positive Reinforcement                              |   |                                  |  |   |  |
| Reinforcement ratio for +ive moment (               | ρ <sub>Pos</sub> )  |                                  |  |   |  |
| = (0.85 x f'c / fy) x {1 - [1 - 2 x                 | x M <sub>UP</sub> ∕ (ф x  | b <sub>wa</sub> x d <sup>2</sup> | <sup>2</sup> x 0.85 x f'c)] <sup>0.6</sup> | <sup>5</sup> }                          |  |
| = (0.85 x 3500 /60000) {1 - [1                      | $1 - [1 - 2 \times 282364.9 / (0.9 \times 5.2 \times 12.75^2 \times 0.85 \times 3500)]^{0.5}$ |                                  |  |   |  |
| $= 0.006629 > (\rho_{Min} = 0.00)$                  | 33)   |                                  |  |   |  |
| $< (\rho_{Max} = 0.01)$                             | 58)   | ОК                               |  |   |  |
| Area of reinforcement required ( $A_{S}$ rec        | q) =  | ρ <sub>Pos</sub> x ხ             | owa x d                                    |   |  |
|   | =   | 0.0066                           | <mark>29 x 5.2</mark> x 12.75              | 5                                       |  |
|   | =   | 0.4395                           | in <sup>2</sup>                            |   |  |
| $A_{\rm S}$ provided = 2 #5 (Area = 0               | 0.6136 in <sup>2</sup>  | > 0.439                          | 5 in <sup>2</sup> ) <b>OK</b>              |   |  |
| Nominal moment strength                             |   |                                  |  |   |  |
| Plain Concrete                                      |   |                                  |  |   |  |
| Nominal moment strength of the section              | on (øMn)  | =                                | 0.65 x 5 (f'c) <sup>0.</sup>               | <sup>5</sup> x S <sub>XX</sub>          |  |
|   |   | =                                | 0.65 x 5 x (350                            | 00) <sup>0.5</sup> x <mark>265.4</mark> |  |
|   |   | =                                | 51029.15 in-lt                             | ).                                      |  |

#### **Reinforced Concrete**

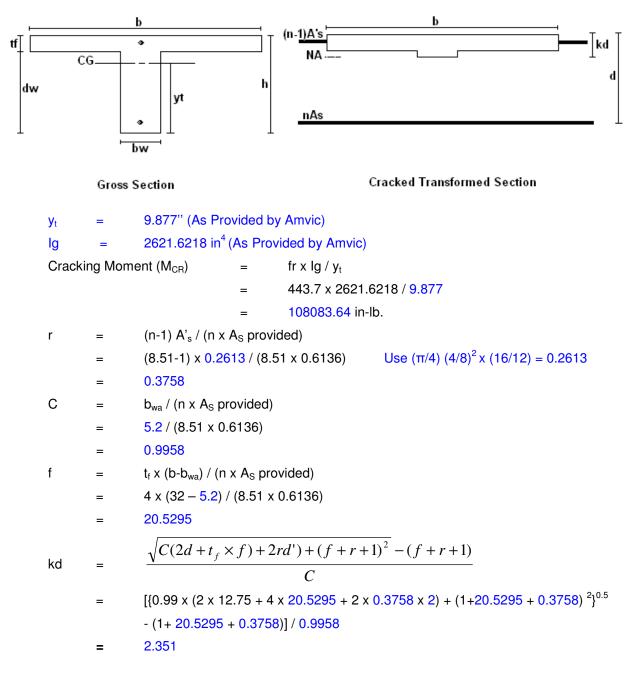
Nominal moment strength of the section ( $\phi$ Mn)

- =  $\phi A_{S Pos}$  provided x fy x [d ( $A_{S Pos}$  provided x fy / (0.85 x f'c x b))/2]
- = 0.9 x 0.6136 x 60000 x [12.75 (0.6136 x 60000 / (0.85 x 3500 x 32))/2]
- = 416056 in-lb.

### **12.1.4 Deflections**

| Dead Load moment, M <sub>D</sub>     | =                   | 207.91 x 15 <sup>2</sup> / 8 x 12                               |
|--------------------------------------|---------------------|---|
|                                      | =                   | 70170 lb-in   |
| Live Load (UDL) moment, $M_{L1}$     | =                   | 133.33 x 15 <sup>2</sup> / 8 x 12                               |
|                                      | =                   | 45000 lb-in   |
| Live Load (Point) moment, $M_{L2}$   | =                   | 3000 x 15 /4 x 12 since (x > L/2)                               |
|                                      | =                   | 135000 lb-in  |
| Total moment, M <sub>D+L (UDL)</sub> | =                   | 70170 + 45000   |
|                                      | =                   | 115171 lb- in   |
| Sustained Moment, M <sub>SUS 1</sub> | =                   | $M_D$ + 0.5 x $M_L$ (Assume that 50% Load as sustained)         |
|                                      | =                   | 70170 + 0.5 x 45000   |
|                                      | =                   | 92670 lb-in   |
| Sustained Moment, M <sub>SUS 2</sub> | =                   | 0.5 x 135000 (Assume that 50% Load as sustained)                |
|                                      | =                   | 67500 lb-in   |
| Total depth of section (h)           | =                   | d <sub>w</sub> + t <sub>f</sub>                                 |
|                                      | =                   | 10 + 4  |
|                                      | =                   | 14"   |
| Modulus of elasticity of concrete    | e (E <sub>c</sub> ) | $= (\gamma_{\rm C})^{1.5} \times (33 \times ({\rm f'c})^{0.5})$ |
|                                      |                     | $= (145)^{1.5} \times (33 \times (3500)^{0.5})$                 |
|                                      |                     | = 3408788 psi   |
| Modulus of elasticity of steel (Es   | s)                  | = 29000000 psi  |
| Modular ratio (n)                    |                     | = E <sub>s</sub> / E <sub>c</sub>                               |
|                                      |                     | = 29000000 / 3408788  |
|                                      |                     | = 8.51  |
| Modulus of rupture of concrete       | (fr)                | = 7.5 x (f'c) <sup>0.5</sup>                                    |
|                                      |                     | $= 7.5 \times (3500)^{0.5}$                                     |
|                                      |                     | = 443.7 psi   |

Project: AmDeck Design Guide Client: Amvic, Inc.



Moment of inertia of cracked section transformed to concrete (Icr)

$$= (b - b_W)t_f^3 / 12 + b_W (kd)^3 / 3 + (b - b_W)t_f (kd - t_f / 2)^2 + nA_{Bi} (d - kd)^2 + (n - 1)A_{LPi} (kd - d')^2$$
  
= (32-5.2) x 4<sup>3</sup> / 12 + 5.2 x (2.351)<sup>3</sup> / 3 + (32-5.2) (4) (2.351-4/2)<sup>2</sup> + 8.51 (0.6136) (12.75 - 2.351)<sup>2</sup> + (8.51 - 1) (0.196) (2.351 - 2)<sup>2</sup>  
= 743.519 in<sup>4</sup>

Effective moment of inertia for deflection computation (le)

A. Under Dead Load

Mcr / Md = 108083.64 / 70170

Client: Amvic, Inc.

= 1.54

Hence  $(Ie)_d = I_g$ 

### B. Under Sustained Load

| $Mcr / M_{SUS}$         | = | 108083.64 / (92670 + 67500)   |
|-------------------------|---|---|
|                         | = | 0.674   |
| Hence (le) <sub>d</sub> | = | Minimum of [{( $M_{CR} / M_P$ ) $^3$ lg + [1 - ( $M_{CR} / M_P$ ) $^3$ ] l <sub>CR</sub> } and l <sub>g</sub> ] |
|                         | = | Min [{(108083.64 / 160170) <sup>3</sup> x 2621.6218 + [1 - (108083.64 /   |
|                         |   | 160170) <sup>3</sup> ] x 743.519} and 2621.6218]  |
|                         | = | Min {(1320.625, 2621.6218}  |
|                         | = | 1320.625 in <sup>4</sup>  |

### C. Under Dead + Live Load

| Mcr / $M_{D + L}$       | = | 108083.64/ (115171 + 135000)  |
|-------------------------|---|---|
|                         | = | 0.432   |
| Hence (le) <sub>d</sub> | = | Minimum of [{(M_{CR} / M_P) $^3$ lg + [1 - (M_{CR} / M_P) $^3$ ] l <sub>CR</sub> } and l <sub>g</sub> ] |
|                         | = | Min [{(108083.64 / 250171) <sup>3</sup> x 2621.6218 + [1 - (108083.64 /                                 |
|                         |   | 250171) <sup>3</sup> ] x 743.519} and 2621.6218]  |
|                         | = | Min {894.9757, 2621.6218}   |
|                         | = | 894.9757 in <sup>4</sup>  |

#### 12.1.4.1 Short Term Deflection

| For Un   | iformly  | Distributed Load  |  |  |  |
|--|----------|---|--|--|--|
| Mid-span deflection is $\Delta I$ = K (5/48) MP x L2 / (Ec x le) |          |   |  |  |  |
| For Po   | int Loac | i   |  |  |  |
| Mid-sp   | an defle | action ∆ip  |  |  |  |
|  | =        | ${2 \times P \times (L - x)/2} \times {3 \times L2 - 4 \times ((L - x)/2)2} / (24 \times Ec \times Ie)$ (x < L/2)   |  |  |  |
|  | =        | $\{2 \times P \times L3\} / (48 \times Ec \times Ie)$ (x \ge L/2)   |  |  |  |
| Where  | ,        |   |  |  |  |
| K = 1.0  | for Sin  | nple Beam   |  |  |  |
| $\Delta_{\!iD}$  | =        | K (5/48) M <sub>D</sub> x L <sup>2</sup> / (Ec x le)  |  |  |  |
|  | =        | 1.0 x (5/48) x 70170x (15 x12) <sup>2</sup> / (3408788 x 2621.6218)   |  |  |  |
|  | =        | 0.02650"  |  |  |  |
| $\Delta_{\rm i\;SUS}$  | =        | K (5/48) M <sub>SUS 1</sub> x L <sup>2</sup> / (Ec x le) + {0.5 x P x L <sup>3</sup> } / (48 x Ec x le)   |  |  |  |
|  | =        | $1.0 \times (5/48) \times 92670 \times (15 \times 12)^2 / (3408788 \times 1320.625) + \{0.5 \times 3000 \times (15 \times 10^2 \times 10^2$ |  |  |  |
|  |          | 12) <sup>3</sup> }/ {48 x 3408788 x 1320.625)   |  |  |  |
|  | =        | 0.10996"  |  |  |  |
| $\Delta_{ m i \; Total}$   | =        | K (5/48) M $_{(D + L) UDI} x L^2 / (Ec x le) + {P x L^3} / (48 x Ec x le)$  |  |  |  |

- $= 1.0 \times (5/48) \times 115171 \times (15 \times 12)^2 / (3408788 \times 894.9757) + \{3000 \times (15 \times 12)^3\} / \{48 \times 3408788 \times 894.9757) \\ = 0.2468''$
- = 0.2468
- $\Delta_{i \text{ LL}}$  =  $\Delta_{i \text{ Total}} \Delta_{i \text{ DL}}$ 
  - = 0.2468- 0.10996
  - = 0.13684"

#### Allowable Short Term Deflections

| For $\Delta_{Factor LL}$ =     | = 180 |                                   |
|--------------------------------|-------|-----------------------------------|
| $\Delta_{\rm i~Allow~LL}$      | =     | (L x 12) / $\Delta_{Factor LL}$   |
|                                | =     | (15 x 12) / 180                   |
|                                | =     | 1.000"                            |
|                                | >     | ∆ <sub>i LL</sub> = 0.13684" (OK) |
| For ∆ <sub>Factor LL</sub> =   | = 360 |                                   |
| $\Delta_{ m i \; Allow \; LL}$ | =     | (L x 12) / $\Delta_{Factor LL}$   |
|                                | =     | (15 x 12) / <mark>360</mark>      |
|                                | =     | 0.5000"                           |
|                                |       |                                   |

>  $\Delta_{i \text{ LL}} = 0.13684" (OK)$ 

#### For $\Delta_{\text{Factor Total}} = 240$

| $\Delta_{\text{i Allow Total}}$ | =                | (L x 12) / $\Delta_{Factor Total}$         |
|---------------------------------|------------------|--|
|                                 | =                | (15 x 12) / 240                            |
|                                 | =                | 0.75"                                      |
|                                 | >                | $\Delta_{i \text{ Total}}$ = 0.13684" (OK) |
| For A <sub>Factor Tot</sub>     | tal <b>= 480</b> |  |
| $\Delta_{\text{i Allow Total}}$ | =                | (L x 12) / $\Delta_{Factor Total}$         |
|                                 | =                | (15 x 12) / 480                            |
|                                 | =                | 0.3750"                                    |
|                                 | >                | $\Delta_{i \text{ Total}}$ = 0.13684" (OK) |

#### 12.1.4.2 Long term Deflection

i. Sustained load duration of 3 Months

| λ                    | =   | ξ/ (1 + 50 x p')                      |
|----------------------|-----|---------------------------------------|
| p'                   | =   | A' <sub>S</sub> / bwa x d             |
|                      | =   | 0.196 / (5.17 x 12.75)                |
|                      | =   | 2.973 x 10 <sup>-3</sup>              |
| λ                    | =   | 1.0 / (1 + 2.973 x 10 <sup>-3</sup> ) |
|                      | =   | 0.997                                 |
| $\Delta_{(CP+SH)} =$ | λχΔ | N SUS                                 |

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|   | = | 0.997 x 0.10996  |
|---|---|------------------|
|   | = | 0.1096 in        |
| $\Delta_{({\sf CP+SH})}$ + $\Delta_{\sf i\;LL}$ | = | 0.1096 + 0.13684 |
|   | = | 0.246 in         |

#### Allowable Deflections

| Allowable D             | enections | )                            |
|-------------------------|-----------|------------------------------|
| $\Delta_{\rm i\;Allow}$ | =         | (L x 12) / $\Delta_{Factor}$ |
|                         | =         | (15 x 12) / 240              |
|                         | =         | 0.75"                        |
|                         | >         | 0.246" (OK)                  |
|                         |           |                              |

### ii. Sustained load duration of 5 years & more

| Sustained Moment, M <sub>SUS 1</sub> |   | =    | $M_D$ + 0.3 x $M_L$   | (Assume that 30% Load as sustained) |  |  |
|--------------------------------------|---|------|---|-------------------------------------|--|--|
|                                      |   | =    | 70170 + 0.3 x 45  | 000                                 |  |  |
|                                      |   |      | =   | 83670 lb-in                         |  |  |
| Sustair                              | ned Moment, M <sub>S</sub>                      | US 2 | =   | 0.3 x 135000                        | (Assume that 30% Load as sustained)              |  |
|                                      |   |      | =   | 40500 lb-in                         |  |  |
| Under Sustained Load                 |   |      |   |                                     |  |  |
|                                      | Mcr / M <sub>SUS</sub>                          | =    | 108083.64 / (83670 + 40500)   |                                     |  |  |
|                                      |   | =    | 0.87  |                                     |  |  |
|                                      | Hence (Ie) <sub>d</sub>                         | =    |   |                                     | $Ig + [1 - (M_{CR} / M_P)^3] I_{CR}$ and $I_g$ ] |  |
|                                      |   | =    | Min [{(108083.64 / 124170) <sup>3</sup> x 2621.6218 + [1 - (108083.64 /                                   |                                     |  |  |
|                                      |   |      | 124170  | 0) <sup>3</sup> ] x 743.519} and    | 2621.6218]                                       |  |
|                                      |   | =    | Min {1982.17, 2621.6218}  |                                     |  |  |
|                                      |   | =    | 1982.17 in <sup>4</sup>   |                                     |  |  |
|                                      | $\Delta_{i SUS}$                                | =    | K (5/48) $M_{SUS 1} \times L^2 / (Ec \times Ie) + \{0.3 \times P \times L^3\} / (48 \times Ec \times Ie)$ |                                     |  |  |
|                                      |   | =    | 1.0 x (5/48) x 83670x (15 x12) <sup>2</sup> / (3408788 x 1982.17) + {0.3 x                                |                                     |  |  |
|                                      |   |      | 3000 x (15 x12) <sup>3</sup> }/ {48 x 3408788 x 1982.17)  |                                     |  |  |
|                                      |   | =    | 0.0579  | 7                                   |  |  |
|                                      | λ   | =    | ξ/ (1 +   | 50 x p')                            |  |  |
|                                      | p'  | =    | A' <sub>S</sub> / by  | wa x d                              |  |  |
|                                      |   | =    | 0.196 / (5.17 x 12.75)  |                                     |  |  |
|                                      |   | =    | 2.973 x 10 <sup>-3</sup>  |                                     |  |  |
|                                      |   | =    | 2.0 / (1  | + 2.973 x 10 <sup>-3</sup> )        |  |  |
|                                      |   | =    | 1.994   |                                     |  |  |
|                                      | $\Delta_{({\sf CP+SH})}$                        | =    | $\lambda \ x \ \Delta_{i \ S}$  | US                                  |  |  |
|                                      |   | =    | 1.994 x 0.05797   |                                     |  |  |
|                                      |   | =    | 0.1156  | in                                  |  |  |
|                                      | $\Delta_{({\sf CP+SH})}$ + $\Delta_{\sf i\;LL}$ | =    | 0.1156  | + 0.13684                           |  |  |
|                                      |   |      |   |                                     |  |  |

0.2524 in

=

#### Allowable Deflections

| For $\Delta_{Factor} = 24$                               | 40      |   |
|--|---------|---|
| $\Delta_{\sf i\;Allow}$                                  | =       | (L x 12) / $\Delta_{Factor}$                      |
|  | =       | (15 x 12) / 240                                   |
|  | =       | 0.75"   |
|  | >       | 0.2524" (OK)                                      |
|  |         |   |
| For $\Delta_{Factor} = 48$                               | 80      |   |
| For $\Delta_{Factor} = 44$<br>$\Delta_{i \text{ Allow}}$ | 80<br>= | (L x 12) / Δ <sub>Factor</sub>                    |
|  |         | (L x 12) / Δ <sub>Factor</sub><br>(15 x 12) / 480 |
|  | =       |   |

### 12.1.5 Calculation for Transverse Slab Reinforcement

| Conside           | r 12" wi        | dth of sl     | ab,        |                    |                        |  |   |  |  |
|-------------------|-----------------|---------------|------------|--------------------|------------------------|--|---|--|--|
| L <sub>Slab</sub> | =               | 27.5/1        | 2          |                    |                        |  |   |  |  |
| Salf wai          | =               | 2.29 ft       |            | _                  | 145 (                  | (1 / 12) -   | 1   |  |  |
| Self wei          | gnt of d        | eck           |            | =                  | 48.33 t                | (4 / 12) x (<br>http://www.contentional.com/second | 1   |  |  |
| Total fac         | ctored lo       | bad, $P_{II}$ |            | =                  | 1                      |  | 2 + 1.2 x 48.33 + 1.6 x 40 x 12/12            |  |  |
|                   |                 | , 0           |            | =                  | 133.9 p                | 133.9 plf  |   |  |  |
| Total fa          | ctored          | point loa     | ad         | =                  | 1.6 x 3                |  |   |  |  |
| Manimu            |                 |               |            | =                  | 4800 l                 |  | 2 + 4800 x 2.29 / 4                           |  |  |
| Maximu            | Im Mom          | ient          |            | =                  | 2806.5                 |  | 2 + 4800 x 2.2974                             |  |  |
|                   |                 |               |            | =                  | 33678                  |  |   |  |  |
|                   |                 |               |            |                    |                        |  |   |  |  |
| Tensio            | on contr        | olled rei     | nforcem    | ent ratio          | (p <sub>t</sub> )      | =  | 0.319 x 0.85 x 3500 / 60000                   |  |  |
|                   |                 |               |            |                    |                        | =  | 0.0158  |  |  |
| Maxim             | um allo         | wed rei       | nforceme   | ent ratio          | (ρ <sub>Max</sub> )    | =  | ρ <sub>t</sub>                                |  |  |
|                   |                 |               |            |                    |                        | =  | 0.0158  |  |  |
| Minimu            | um reint        | forceme       | nt ratio ( | ρ <sub>Min</sub> ) |                        | =  | Max (3 x (f'c) <sup>0.5</sup> , 200) / fy     |  |  |
|                   |                 |               |            |                    |                        | =  | Max (3 x (3500) <sup>0.5</sup> , 200) / 60000 |  |  |
|                   |                 |               |            |                    |                        | =  | Max (177.5, 200) / 60000                      |  |  |
|                   |                 |               |            |                    |                        | =  | 200 / 60000                                   |  |  |
|                   |                 |               |            |                    |                        | =  | 0.0033  |  |  |
| Reinfor           | cement          | ratio fo      | r +ive mo  | oment (ρ           | Pos)                   |  |   |  |  |
| =                 | (0.85<br>0.0159 | -             | ) x {1 - [ | 1 – 2 x N          | l <sub>UP</sub> / (φ x | b <sub>w</sub> x t <sub>f</sub> /2                 | <sup>2</sup> x 0.85 x f'c)] <sup>0.5</sup> }  |  |  |
| =                 | 0.0159          |               | >          |                    | (ρ <sub>Min</sub> =    | = 0.0033)  |   |  |  |

#### **Consulting Engineers, Corp** Project: AmDeck Design Guide Prepared by: Kapil Date: 12/07/2007 Client: Amvic, Inc. Checked by: Andy / Raj Date: 12/07/2007 Area of Reinforcement Required 0.0158 x 12 x 4/2 = 0.3792 in<sup>2</sup> = Rebar Used #4 rebar = 0.1963 in<sup>2</sup> Area of Rebar = Spacing (0.1963 / 0.3792) x 12 = 6.29 in = Per Section 7.12 of ACI-318-02 Spacing of rebar will be Minimum of the following three (1) Calculated spacing as above = 6.29 in (1) Calculated spacing as above = (2) 5 times of thickness of slab = (2) 10 in 5 x 4 = 20 in (3) 18 in Provide #4 rebar @ 6" O.C.

#### 12.1.6 Calculation for Longitudinal Slab Reinforcement

Consider 12" width of slab,

| Per Section 7.12 of ACI-318-02 Minimum reinforcement = |   |                        |   | 0.0018 x area of cross section |
|--|---|------------------------|---|--------------------------------|
|  |   |                        | = | 0.0018 x 4 x 12                |
|  |   |                        | = | 0.0864 in                      |
| Spacing  | = | (0.1963 / 0.0864) x 12 |   |                                |
|  | = | 27.26 in               |   |                                |
|  |   |                        |   |                                |

Per Section 7.12 of ACI-318-02 Spacing of rebar will be Minimum of the following three

| <ol><li>Calculated spacing as above =</li></ol> | 27.26 in      |
|---|---------------|
| (2) 5 times of thickness of slab =              | 5 x 4 = 20 in |
| (3) 18 in                                       |               |

Provide #4 rebar @ 18" O.C.

#### Punching Shear check for Garage Slab under Wheel Load

| Concentrated load for residential car   | =                     | 3000 ll  | C        |  |
|---|-----------------------|----------|----------|--|
| Length of bearing area, L               | =                     | 4.5 in   |          |  |
| Self weight of 4" thick slab            | =                     | (4.5 x 4 | 4.5/144) | x (4/12) x 145   |
|   | =                     | 6.797    | b        |  |
| Total Factored Load, Pu                 | =                     | 1.2 DL   | + 1.6LL  | -  |
|   | =                     | 1.2 x 6  | .797 + 1 | I.6 x 3000   |
|   | =                     | 4808 ll  | C        |  |
| Perimeter of bearing area for two-way s | shear, b <sub>o</sub> | =        | {4 x (L  | . + d')}   |
|   |                       | =        | {4 x (4  | .5 + <mark>2</mark> )}                                     |
|   |                       | =        | 26 in    |  |
| Shear strength of concrete in two-way s | shear, $\phi_v$       | Vc       | =        | $[\phi_v \times 4 \times \sqrt{f'c} \times b_0 \times d']$ |
|   |                       |          | =        | 0.75 x 4 x √3500 x 26 x <mark>2</mark>                     |
|   |                       |          | =        | 9229.1 lb  |
|   |                       |          | >        | 4808 lb  |

# **13 Garage Deck Joist Design Chart**

# 13.1 f'c = 3500 psi, Topping Thickness = 4.0"

| General Data:                     | Wheel Data:                                      |
|-----------------------------------|--|
| Unit weight of concrete = 145 pcf | Wheel Load = $3000 \text{ lb}$                   |
| Rebar strength = 60000 psi        | Wheel distance $= 8$ ft                          |
| Dead Load Factor = $1.2$          | Deflection Factor, $\Delta_{i \text{ LL}} = 180$ |

Floor Size: 12" Panel Size = 12" Live Load Factor = 1.6  $\Delta_{i \text{ TOTAL}} = 240$ 

Dead Load = 10 psf

|      | f'c                           | 3500 psi                     | LL = 50 DL = 10 |            |  |
|------|-------------------------------|------------------------------|-----------------|------------|--|
| Span | tf                            | 4                            | SS              | DS         |  |
|      | Bottom                        | End Spans                    | 1#4+1#5         | 1#4+1#5    |  |
|      | Reinforcement                 | Int. Spans                   | 1#4+1#5         | 1#4+1#5    |  |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4             | 1#4        |  |
|      | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4             | 1#5        |  |
|      | Transverse                    | e Reinf.                     | #4@6in OC       | #4@6in OC  |  |
|      | Longitud                      | dinal                        | #4@18in OC      | #4@18in OC |  |
|      | Bottom                        | End Spans                    | 2#5             | 1#4+1#5    |  |
|      | Reinforcement                 | Int. Spans                   | 2#5             | 1#4+1#5    |  |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4             | 1#4        |  |
|      | heimorcement                  | 1 <sup>st</sup> Int. Support | 1#4             | 1#5        |  |
|      | Transverse                    | e Reinf.                     | #4@6in OC       | #4@6in OC  |  |
|      | Longitud                      | dinal                        | #4@18in OC      | #4@18in OC |  |
| 17   | Bottom                        | End Spans                    | 2#7             | 2#7        |  |
|      | Reinforcement                 | Int. Spans                   | 2#7             | 2#7        |  |
|      | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4             | 1#5        |  |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4             | 1#5        |  |
|      | Transverse                    | e Reinf.                     | #4@6in OC       | #4@6in OC  |  |
|      | Longitud                      | dinal                        | #4@18in OC      | #4@18in OC |  |

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | ricimoreement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 22 | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 23 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 24 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 25 | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

| Dead Load | = 15 psf                      |                              |                 |            |
|-----------|-------------------------------|------------------------------|-----------------|------------|
|           | f'c                           | 3500 psi                     | LL = 50 DL = 15 |            |
| Span      | tf                            | 4                            | SS              | DS         |
|           | Bottom                        | End Spans                    | 1#4+1#5         | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 1#4+1#5         | 1#4+1#5    |
| 15        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4             | 1#4        |
|           | riemoreement                  | 1 <sup>st</sup> Int. Support | 1#4             | 1#5        |
|           | Transverse                    | e Reinf.                     | #4@6in OC       | #4@6in OC  |
|           | Longitud                      | dinal                        | #4@18in OC      | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#5             | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 2#5             | 1#4+1#5    |
| 16        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4             | 1#4        |
|           | ricimoreement                 | 1 <sup>st</sup> Int. Support | 1#4             | 1#5        |
|           | Transverse                    | e Reinf.                     | #4@6in OC       | #4@6in OC  |
|           | Longitud                      | dinal                        | #4@18in OC      | #4@18in OC |
|           | Bottom<br>Reinforcement       | End Spans                    | 2#7             | 2#7        |
|           |                               | Int. Spans                   | 2#7             | 2#7        |
| 17        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4             | 1#5        |
|           | Ttermorcement                 | 1 <sup>st</sup> Int. Support | 1#4             | 1#5        |
|           | Transverse                    | e Reinf.                     | #4@6in OC       | #4@6in OC  |
|           | Longitud                      | dinal                        | #4@18in OC      | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#7             | 2#7        |
| 18        | Reinforcement                 | Int. Spans                   | 2#7             | 2#7        |
|           | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4             | 1#5        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4             | 2#4        |
|           | Transverse                    |                              | #4@6in OC       | #4@6in OC  |
|           | Longitud                      | dinal                        | #4@18in OC      | #4@18in OC |

Dead Load = 15 psf

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Heimoreement                  | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Heimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 22 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 23 | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | nemorcement                   | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
| 24 | Bottom<br>Reinforcement       | End Spans<br>Int. Spans      |            |            |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

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| General Data:                        | Wheel Data:                                      | Floor Size: 12"                  |
|--------------------------------------|--|----------------------------------|
| Unit weight of concrete = 145 pcf    | Wheel Load = $3000 \text{ lb}$                   | Panel Size = $12$ "              |
| Rebar strength = $60000 \text{ psi}$ | Wheel distance $= 8$ ft                          | Live Load Factor $= 1.6$         |
| Dead Load Factor = 1.2               | Deflection Factor, $\Delta_{i \text{ LL}} = 360$ | $\Delta_{i \text{ TOTAL}} = 480$ |

Dead Load =

10 psf

|      | f'c                           | 3500 psi                     | LL = 50    | DL = 10    |
|------|-------------------------------|------------------------------|------------|------------|
| Span | tf                            | 4                            | SS         | DS         |
|      | Bottom                        | End Spans                    | 1#4+1#5    | 1#4+1#5    |
|      | Reinforcement                 | Int. Spans                   | 1#4+1#5    | 1#4+1#5    |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|      | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|      | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|      | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|      | Bottom                        | End Spans                    | 2#5        | 1#4+1#5    |
|      | Reinforcement                 | Int. Spans                   | 2#5        | 1#4+1#5    |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|      | Termorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|      | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |
|      | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|      | Bottom                        | End Spans                    | 2#7        | 2#7        |
|      | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 17   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|      | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|      | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | ricimoreement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 22 | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 23 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Remorcement                   | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal<br>Reinforcement | Exterior                     |            |            |
| 24 |                               | Supports                     | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | Remorcement                   | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse                    |                              | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

| Dead Load | = 15 psf                      |                              |            |            |
|-----------|-------------------------------|------------------------------|------------|------------|
|           | f'c                           | 3500 psi                     | LL = 50    | DL = 15    |
| Span      | tf                            | 4                            | SS         | DS         |
|           | Bottom                        | End Spans                    | 1#4+1#5    | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 1#4+1#5    | 1#4+1#5    |
| 15        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           | riemoreement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#5        | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 2#5        | 1#4+1#5    |
| 16        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |
|           | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#7        | 2#7        |
|           | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 17        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           | Telliloicement                | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#7        | 2#7        |
|           | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|           | Transverse                    |                              | #4@6in OC  | #4@6in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

Dead Load = 15 psf

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | ricimoreement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 22 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 23 | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal                  | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    |                              | #4@6in OC  | #4@6in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
| 24 | Bottom<br>Reinforcement       | End Spans<br>Int. Spans      |            |            |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | nemiorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse Reinf.             |                              | #4@6in OC  | #4@6in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

# 13.2 f'c = 3500 psi, Topping Thickness = 4.5"

| General Data:                     | Wheel Data:                                     | Floor Size: 12"                  |
|-----------------------------------|---|----------------------------------|
| Unit weight of concrete = 145 pcf | Wheel Load = 3000 lb                            | Panel Size = 12"                 |
| Rebar strength = 60000 psi        | Wheel distance = 8 ft                           | Live Load Factor = 1.6           |
| Dead Load Factor = 1.2            | Deflection Factor, $\Delta_{i \text{ LL}}$ =180 | $\Delta_{i \text{ TOTAL}} = 240$ |

Dead Load 10 psf =

|      | f'c                           | 3500 psi                     | LL = 50            | DL = 10            |
|------|-------------------------------|------------------------------|--------------------|--------------------|
| Span | tf                            | 4.5                          | SS                 | DS                 |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans      | 1#4+1#5<br>1#4+1#5 | 1#4+1#5<br>1#4+1#5 |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#4                |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4                | 1#5                |
|      | Transverse                    | e Reinf.                     | #4@5in OC          | #4@5in OC          |
|      | Longitud                      | dinal                        | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans                    | 2#5                | 1#4+1#5            |
|      | Reinforcement                 | Int. Spans                   | 2#5                | 1#4+1#5            |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#4                |
|      | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4                | 1#5                |
|      | Transverse Reinf.             |                              | #4@5in OC          | #4@5in OC          |
|      | Longitudinal                  |                              | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans                    | 2#7                | 2#7                |
|      | Reinforcement                 | Int. Spans                   | 2#7                | 2#7                |
| 17   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#5                |
|      | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4                | 1#5                |
|      | Transverse                    |                              | #4@5in OC          | #4@5in OC          |
|      | Longitud                      | dinal                        | #4@18in OC         | #4@18in OC         |

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Theimoroement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 22 | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 23 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 24 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

| Dead Load | = 15 psf                      |                              | -          |            |
|-----------|-------------------------------|------------------------------|------------|------------|
|           | f'c                           | 3500 psi                     | LL = 50    | DL = 15    |
| Span      | tf                            | 4.5                          | SS         | DS         |
|           | Bottom                        | End Spans                    | 1#4+1#5    | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 1#4+1#5    | 1#4+1#5    |
| 15        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#5        | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 2#5        | 1#4+1#5    |
| 16        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|           | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#7        | 2#7        |
|           | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 17        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#7        | 2#7        |
|           | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|           | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

Dead Load = 15 psf

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
| 19 | Reinioicemeni                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 22 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 23 | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal                  | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
| 24 | Bottom<br>Reinforcement       | End Spans<br>Int. Spans      |            |            |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | neinioicemeni                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

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| General Data:                        | Wheel Data:                                      | Floor Size: 12"                  |
|--------------------------------------|--|----------------------------------|
| Unit weight of concrete = 145 pcf    | Wheel Load = $3000 \text{ lb}$                   | Panel Size = 12"                 |
| Rebar strength = $60000 \text{ psi}$ | Wheel distance $= 8$ ft                          | Live Load Factor $= 1.6$         |
| Dead Load Factor = 1.2               | Deflection Factor, $\Delta_{i \text{ LL}} = 360$ | $\Delta_{i \text{ TOTAL}} = 480$ |

Dead Load =

10 psf

|      | f'c                           | 3500 psi   | LL = 50            | DL = 10            |
|------|-------------------------------|--|--------------------|--------------------|
| Span | tf                            | 4.5  | SS                 | DS                 |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                              | 1#4+1#5<br>1#4+1#5 | 1#4+1#5<br>1#4+1#5 |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports<br>1 <sup>st</sup> Int. Support | 1#4                | 1#4                |
|      | Transverse                    |  | #4@5in OC          | #4@5in OC          |
|      | Longitud                      |  | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans  | 2#5                | 1#4+1#5            |
|      | Reinforcement                 | Int. Spans   | 2#5                | 1#4+1#5            |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports<br>1 <sup>st</sup> Int. Support | <u>1#4</u><br>1#4  | 1#4<br>1#5         |
|      | Transverse Reinf.             |  | #4@5in OC          | #4@5in OC          |
|      | Longitudinal                  |  | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans  | 2#7                | 2#7                |
|      | Reinforcement                 | Int. Spans   | 2#7                | 2#7                |
| 17   | Longitudinal<br>Reinforcement | Exterior<br>Supports<br>1 <sup>st</sup> Int. Support | <u>1#4</u><br>1#4  | 1#5<br>1#5         |
|      | Transverse                    |  | #4@5in OC          | #4@5in OC          |
|      | Longitud                      | dinal  | #4@18in OC         | #4@18in OC         |

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 22 | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |

IF.

|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|----|-------------------------------|------------------------------|------------|------------|
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 23 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 24 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

### Dead Load = 15 psf

|      | f'c                           | 3500 psi                     | LL = 50            | DL = 15            |
|------|-------------------------------|------------------------------|--------------------|--------------------|
| Span | tf                            | 4.5                          | SS                 | DS                 |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans      | 1#4+1#5<br>1#4+1#5 | 1#4+1#5<br>1#4+1#5 |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#4                |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4                | 1#5                |
|      | Transverse                    |                              | #4@5in OC          | #4@5in OC          |
|      | Longitud                      | dinal                        | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans                    | 2#5                | 1#4+1#5            |
|      | Reinforcement                 | Int. Spans                   | 2#5                | 1#4+1#5            |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#4                |
|      | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4                | 1#5                |
|      | Transverse Reinf.             |                              | #4@5in OC          | #4@5in OC          |
|      | Longitudinal                  |                              | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans                    | 2#7                | 2#7                |
|      | Reinforcement                 | Int. Spans                   | 2#7                | 2#7                |
| 17   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#5                |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4                | 1#5                |
|      | Transverse Reinf.             |                              | #4@5in OC          | #4@5in OC          |
|      | Longitud                      | dinal                        | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans                    | 2#7                | 2#7                |
|      | Reinforcement                 | Int. Spans                   | 2#7                | 2#7                |
| 18   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#5                |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4                | 2#4                |
|      | Transverse                    |                              | #4@5in OC          | #4@5in OC          |
|      | Longitud                      | dinal                        | #4@18in OC         | #4@18in OC         |

| l  |                               | -                            |            |            |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 22 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | 1 <sup>st</sup> Int. Support  |                              | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 23 | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |

|    | Transverse        | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|----|-------------------|------------------------------|------------|------------|
|    | Longitud          | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom            | End Spans                    |            |            |
|    | Reinforcement     | Int. Spans                   |            |            |
| 24 | Longitudinal      | Exterior<br>Supports         | 1#4        | 2#4        |
|    | Reinforcement     | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf. |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal      |                              | #4@18in OC | #4@18in OC |
|    | Bottom            | End Spans                    |            |            |
|    | Reinforcement     | Int. Spans                   |            |            |
| 25 | Longitudinal      | Exterior<br>Supports         | 1#4        | 2#4        |
|    | Reinforcement     | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse        | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud          | dinal                        | #4@18in OC | #4@18in OC |

## 13.3 f'c = 4000 psi, Topping Thickness = 4.0"

#### **General Data:**

Unit weight of concrete = 145 pcf Rebar strength = 60000 psi Dead Load Factor = 1.2 **Wheel Data:** Wheel Load = 3000 lb Wheel distance = 8 ft Deflection Factor,  $\Delta_{i LL} = 180$  Floor Size: 12" Panel Size = 12" Live Load Factor = 1.6  $\Delta_{i \text{ TOTAL}} = 240$ 

Dead Load = 10 psf

|      | f'c                           | 4000 psi                     | LL = 50            | DL = 10                 |
|------|-------------------------------|------------------------------|--------------------|-------------------------|
| Span | tf                            | 4                            | SS                 | DS                      |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans      | 1#4+1#5<br>1#4+1#5 | 1#4+1#5<br>1#4+1#5      |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#4                     |
|      | Transverse                    | 1 <sup>st</sup> Int. Support | 1#4<br>#4@5in OC   | 1#5<br>#4@5in OC        |
|      | Longitud                      |                              | #4@18in OC         | #4@3in OC<br>#4@18in OC |
|      | Bottom                        | End Spans                    | 2#5                | 1#4+1#5                 |
|      | Reinforcement                 | Int. Spans                   | 2#5                | 1#4+1#5                 |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4                | 1#4                     |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4                | 1#5                     |
|      | Transverse Reinf.             |                              | #4@5in OC          | #4@5in OC               |
|      | Longitudinal                  |                              | #4@18in OC         | #4@18in OC              |
|      | Bottom                        | End Spans                    | 2#7                | 2#7                     |
|      | Reinforcement                 | Int. Spans                   | 2#7                | 2#7                     |
| 17   | Longitudinal                  | Exterior<br>Supports         | 1#4                | 1#5                     |
|      | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4                | 1#5                     |
|      | Transverse                    | e Reinf.                     | #4@5in OC          | #4@5in OC               |
|      | Longitud                      | linal                        | #4@18in OC         | #4@18in OC              |

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18 | Longitudinal                  | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      |                              | #4@18in OC | #4@18in OC |
|    |                               |                              |            |            |
|    | Bottom<br>Reinforcement       | End Spans                    | 2#7<br>2#7 | 2#7<br>2#7 |
|    |                               | Int. Spans<br>Exterior       | 2#1        | 2#1        |
| 19 | Longitudinal                  | Supports                     | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 22 | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 23 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Remorcement                   | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 24 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

| Dead Load | = 15 psf                      |                              |            |            |
|-----------|-------------------------------|------------------------------|------------|------------|
|           | f'c                           | 4000 psi                     | LL = 50    | DL = 15    |
| Span      | tf                            | 4                            | SS         | DS         |
|           | Bottom                        | End Spans                    | 1#4+1#5    | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 1#4+1#5    | 1#4+1#5    |
| 15        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           | riemoreement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#5        | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 2#5        | 1#4+1#5    |
| 16        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|           | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#7        | 2#7        |
|           | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 17        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#7        | 2#7        |
|           | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|           | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

Dead Load = 15 psf

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 22 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 23 | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
|    | Longitudinal                  | Exterior                     |            | 0.11.4     |
| 24 | Reinforcement                 | Supports                     | 1#4        | 2#4        |
|    | riciniorecinent               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
|    | Longitudinal<br>Reinforcement | Exterior                     |            |            |
| 25 |                               | Supports                     | 1#4        | 2#4        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

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| General Data:                        | Wheel Data:                                      | Floor Size: 12"                  |
|--------------------------------------|--|----------------------------------|
| Unit weight of concrete = 145 pcf    | Wheel Load = $3000 \text{ lb}$                   | Panel Size = $12$ "              |
| Rebar strength = $60000 \text{ psi}$ | Wheel distance $= 8$ ft                          | Live Load Factor $= 1.6$         |
| Dead Load Factor = 1.2               | Deflection Factor, $\Delta_{i \text{ LL}} = 360$ | $\Delta_{i \text{ TOTAL}} = 480$ |

Dead Load =

10 psf

|      | f'c                           | 4000 psi   | LL = 50            | DL = 10            |
|------|-------------------------------|--|--------------------|--------------------|
| Span | tf                            | 4  | SS                 | DS                 |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                              | 1#4+1#5<br>1#4+1#5 | 1#4+1#5<br>1#4+1#5 |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports<br>1 <sup>st</sup> Int. Support | 1#4                | 1#4<br>1#5         |
|      | Transverse                    |  | #4@5in OC          | #4@5in OC          |
|      | Longitud                      | dinal  | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans  | 2#5                | 1#4+1#5            |
|      | Reinforcement                 | Int. Spans   | 2#5                | 1#4+1#5            |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports<br>1 <sup>st</sup> Int. Support | <u>1#4</u><br>1#4  | 1#4                |
|      | Transverse Reinf.             |  | #4@5in OC          | #4@5in OC          |
|      | Longitudinal                  |  | #4@18in OC         | #4@18in OC         |
|      | Bottom                        | End Spans  | 2#7                | 2#7                |
|      | Reinforcement                 | Int. Spans   | 2#7                | 2#7                |
| 17   | Longitudinal<br>Reinforcement | Exterior<br>Supports                                 | 1#4                | 1#5                |
|      |                               | 1 <sup>st</sup> Int. Support                         | 1#4                | 1#5                |
|      | Transverse                    | e Reinf.   | #4@5in OC          | #4@5in OC          |
|      | Longitud                      | dinal  | #4@18in OC         | #4@18in OC         |

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 22 | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 23 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | rteiniorcement                | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 24 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | nemiorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

#### Dead Load

= 15 psf

|      |                               |                              | h          |            |
|------|-------------------------------|------------------------------|------------|------------|
|      | f'c                           | 4000 psi                     | LL = 50    | DL = 15    |
| Span | tf                            | 4                            | SS         | DS         |
|      | Bottom                        | End Spans                    | 1#4+1#5    | 1#4+1#5    |
|      | Reinforcement                 | Int. Spans                   | 1#4+1#5    | 1#4+1#5    |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|      | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|      | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|      | Bottom                        | End Spans                    | 2#5        | 1#4+1#5    |
|      | Reinforcement                 | Int. Spans                   | 2#5        | 1#4+1#5    |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|      | Heimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|      | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|      | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|      | Bottom                        | End Spans                    | 2#7        | 2#7        |
|      | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 17   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|      | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|      | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|      | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|      | Bottom                        | End Spans                    | 2#7        | 2#7        |
|      | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 18   | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|      |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|      | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|      | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | linal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | linal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | linal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 2#7        | 2#7        |
|    | Reinforcement                 | Int. Spans                   | 2#7        | 2#7        |
| 22 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | linal                        | #4@18in OC | #4@18in OC |
| 23 | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
|    | Longitudinal                  | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |

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|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|----|-------------------------------|------------------------------|------------|------------|
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 2#7        |
|    | Reinforcement                 | Int. Spans                   |            | 2#7        |
| 24 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    | Remorcement                   | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            |            |
|    | Reinforcement                 | Int. Spans                   |            |            |
| 25 | Longitudinal                  | Exterior<br>Supports         | 1#4        | 2#4        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

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## 13.4 f'c = 4000 psi, Topping Thickness = 4.5"

#### **General Data:**

Unit weight of concrete = 145 pcf Rebar strength = 60000 psi Dead Load Factor = 1.2 **Wheel Data:** Wheel Load = 3000 lb Wheel distance = 8 ft Deflection Factor,  $\Delta_{i LL} = 180$  Floor Size: 12" Panel Size = 12" Live Load Factor = 1.6  $\Delta_{i \text{ TOTAL}} = 240$ 

Dead Load = 10 psf

|      | f'c                           | 4000 psi   | LL = 50                 | DL = 10                 |
|------|-------------------------------|--|-------------------------|-------------------------|
| Span | tf                            | 4.5  | SS                      | DS                      |
|      | Bottom<br>Reinforcement       | End Spans<br>Int. Spans                              | 1#4+1#5<br>1#4+1#5      | 1#4+1#5<br>1#4+1#5      |
| 15   | Longitudinal<br>Reinforcement | Exterior<br>Supports<br>1 <sup>st</sup> Int. Support | 1#4                     | 1#4<br>1#5              |
|      | Transverse                    |  | #4@5in OC               | #4@5in OC               |
|      | Longitud                      |  | #4@18in OC              | #4@18in OC              |
|      | Bottom                        | End Spans  | 1#4+1#5                 | 1#4+1#5                 |
|      | Reinforcement                 | Int. Spans   | 1#4+1#5                 | 1#4+1#5                 |
| 16   | Longitudinal<br>Reinforcement | Exterior<br>Supports<br>1 <sup>st</sup> Int. Support | 1#4                     | 1#4                     |
|      | Transverse Reinf.             |  | 1#4<br>#4@5in OC        | 1#5                     |
|      | Longitudinal                  |  | #4@3in OC<br>#4@18in OC | #4@5in OC<br>#4@18in OC |
|      | Bottom                        | End Spans  | 1#7+1#8                 | 1#7+1#8                 |
|      | Reinforcement                 | Int. Spans   | 1#7+1#8                 | 1#7+1#8                 |
| 17   | Longitudinal<br>Reinforcement | Exterior<br>Supports<br>1 <sup>st</sup> Int. Support | 1#4<br>1#4              | 1#5<br>1#5              |
|      | Transverse                    |  | #4@5in OC               | #4@5in OC               |
|      | Longitud                      | dinal  | #4@18in OC              | #4@18in OC              |

|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 18 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reinforcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 22 | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 23 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | rteiniorcement                | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 24 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   |            | 1#7+1#8    |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

| Dead Load | = 15 psf                      |                              | -          |            |
|-----------|-------------------------------|------------------------------|------------|------------|
|           | f'c                           | 4000 psi                     | LL = 50    | DL = 15    |
| Span      | tf                            | 4.5                          | SS         | DS         |
|           | Bottom                        | End Spans                    | 1#4+1#5    | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 1#4+1#5    | 1#4+1#5    |
| 15        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#5        | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 2#5        | 1#4+1#5    |
| 16        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|           | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|           | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 17        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           | Ternorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|           | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 18        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|           | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

Dead Load = 15 psf

|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 22 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 23 | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |

|    | Longitud          | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------|------------------------------|------------|------------|
|    | Bottom            | End Spans                    |            | 1#7+1#8    |
|    | Reinforcement     | Int. Spans                   |            | 1#7+1#8    |
| 24 | Longitudinal      | Exterior<br>Supports         | 1#4        | 2#4        |
| 24 | Reinforcement     |                              |            |            |
|    |                   | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf. |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal      |                              | #4@18in OC | #4@18in OC |
|    | Bottom            | End Spans                    |            | 1#7+1#8    |
|    | Reinforcement     | Int. Spans                   |            | 1#7+1#8    |
|    | Longitudinal      | Exterior                     |            |            |
| 25 |                   | Supports                     | 1#4        | 2#4        |
|    | Reinforcement     | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse        | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud          | dinal                        | #4@18in OC | #4@18in OC |

| General Data:                        | Wheel Data:                                      | Floor Size: 12"                  |
|--------------------------------------|--|----------------------------------|
| Unit weight of concrete = 145 pcf    | Wheel Load = $3000 \text{ lb}$                   | Panel Size = 12"                 |
| Rebar strength = $60000 \text{ psi}$ | Wheel distance $= 8$ ft                          | Live Load Factor $= 1.6$         |
| Dead Load Factor = 1.2               | Deflection Factor, $\Delta_{i \text{ LL}} = 360$ | $\Delta_{i \text{ TOTAL}} = 480$ |

Dead Load = 10 psf

| f'c               | 4000 psi   | LL = 50  | DL = 10   |
|-------------------|--|--|---|
| tf                | 4.5  | SS   | DS  |
| Bottom            | End Spans  | 1#4+1#5  | 1#4+1#5   |
| Reinforcement     | Int. Spans   | 1#4+1#5  | 1#4+1#5   |
| Longitudinal      | Exterior<br>Supports   | 1#4  | 1#4   |
| Reiniorcement     | 1 <sup>st</sup> Int. Support   | 1#4  | 1#5   |
| Transverse        |  | #4@5in OC  | #4@5in OC   |
| Longitud          | dinal  | #4@18in OC   | #4@18in OC  |
| Bottom            | End Spans  | 1#4+1#5  | 1#4+1#5   |
| Reinforcement     | Int. Spans   | 1#4+1#5  | 1#4+1#5   |
| Longitudinal      | Exterior<br>Supports   | 1#4  | 1#4   |
| neimorcement      | 1 <sup>st</sup> Int. Support   | 1#4  | 1#5   |
| Transverse Reinf. |  | #4@5in OC  | #4@5in OC   |
| Longitudinal      |  | #4@18in OC   | #4@18in OC  |
| Bottom            | End Spans  | 1#7+1#8  | 1#7+1#8   |
| Reinforcement     | Int. Spans   | 1#7+1#8  | 1#7+1#8   |
| Longitudinal      | Exterior<br>Supports   | 1#4  | 1#5   |
| Reiniorcement     | 1 <sup>st</sup> Int. Support   | 1#4  | 1#5   |
| Transverse        |  | #4@5in OC  | #4@5in OC   |
| Longitud          | dinal  | #4@18in OC   | #4@18in OC  |
|                   | tf<br>Bottom<br>Reinforcement<br>Longitudinal<br>Reinforcement<br>Dongitudinal<br>Reinforcement<br>Longitudinal<br>Reinforcement<br>Longitudinal<br>Reinforcement<br>Longitudinal<br>Reinforcement<br>Longitudinal<br>Reinforcement<br>Congitudinal<br>Reinforcement | tf4.5Bottom<br>ReinforcementEnd Spans<br>Int. SpansLongitudinal<br>ReinforcementExterior<br>Supports<br>1st Int. SupportTransverse Reinf.Longitudinal<br>Int. SpansBottom<br>ReinforcementEnd Spans<br>Int. SpansLongitudinal<br>ReinforcementEnd Spans<br>Int. SpansLongitudinal<br>ReinforcementExterior<br>Supports<br>1st Int. SupportLongitudinal<br>ReinforcementExterior<br>Supports<br>1st Int. SupportBottom<br>ReinforcementEnd Spans<br>Int. SpansLongitudinal<br>ReinforcementEnd Spans<br>Supports<br>SupportsLongitudinal<br>ReinforcementEnd Spans<br>Int. SpansBottom<br>ReinforcementEnd Spans<br>Int. SpansLongitudinal<br>BeinforcementExterior<br>Supports | tf         4.5         SS           Bottom         End Spans         1#4+1#5           Reinforcement         Int. Spans         1#4+1#5           Longitudinal         Exterior         1#4           Reinforcement         Supports         1#4           It st Int. Support         1#4           Transverse Reinf.         #4@5in OC           Longitudinal         #4@18in OC           Bottom         End Spans           Reinforcement         Int. Spans           Bottom         End Spans           Reinforcement         Int. Spans           Longitudinal         End Spans           Reinforcement         Int. Spans           Longitudinal         Exterior           Supports         1#4           1st Int. Support         1#4           Transverse Reinf.         #4@5in OC           Longitudinal         Supports         1#4           Reinforcement         Int. Support         1#4           Ist Int. Support         #4@18in OC           Bottom         End Spans         1#7+1#8           Reinforcement         Int. Spans         1#7+1#8           Reinforcement         Int. Support         1#4 |

|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 18 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 22 | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 23 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | rteiniorcement                | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 24 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   |            | 1#7+1#8    |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

| Dead Load | = 15 psf                      |                              | -          |            |
|-----------|-------------------------------|------------------------------|------------|------------|
|           | f'c                           | 4000 psi                     | LL = 50    | DL = 15    |
| Span      | tf                            | 4.5                          | SS         | DS         |
|           | Bottom                        | End Spans                    | 1#4+1#5    | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 1#4+1#5    | 1#4+1#5    |
| 15        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 2#5        | 1#4+1#5    |
|           | Reinforcement                 | Int. Spans                   | 2#5        | 1#4+1#5    |
| 16        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#4        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|           | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|           | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 17        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           | Ternorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#5        |
|           | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|           | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|           | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 18        | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|           |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|           | Transverse                    |                              | #4@5in OC  | #4@5in OC  |
|           | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

Dead Load = 15 psf

|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|----|-------------------------------|------------------------------|------------|------------|
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 19 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 20 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#4        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 21 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
| 22 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    | neimorcement                  | 1 <sup>st</sup> Int. Support | 1#4        | 1#4+1#5    |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
| 23 | Bottom                        | End Spans                    | 1#7+1#8    | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   | 1#7+1#8    | 1#7+1#8    |
|    | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 1#5        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse                    | e Reinf.                     | #4@5in OC  | #4@5in OC  |

|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |
|----|-------------------------------|------------------------------|------------|------------|
|    | Bottom                        | End Spans                    |            | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   |            | 1#7+1#8    |
|    | Longitudinal                  | Exterior                     |            |            |
| 24 | Longitudinal<br>Reinforcement | Supports                     | 1#4        | 2#4        |
|    | Reiniorcement                 | 1 <sup>st</sup> Int. Support | 1#4        | 2#5        |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitudinal                  |                              | #4@18in OC | #4@18in OC |
|    | Bottom                        | End Spans                    |            | 1#7+1#8    |
|    | Reinforcement                 | Int. Spans                   |            | 1#7+1#8    |
| 25 | Longitudinal<br>Reinforcement | Exterior<br>Supports         | 1#4        | 2#4        |
|    |                               | 1 <sup>st</sup> Int. Support | 1#4        | 1#5+1#6    |
|    | Transverse Reinf.             |                              | #4@5in OC  | #4@5in OC  |
|    | Longitud                      | dinal                        | #4@18in OC | #4@18in OC |

Notes

- Shaded portion value shows that joists are provide with shear reinforcement w/ #3 rebar single leg @ 5" O.C.
- Blank Cells indicates that the joists are failing in deflection.