

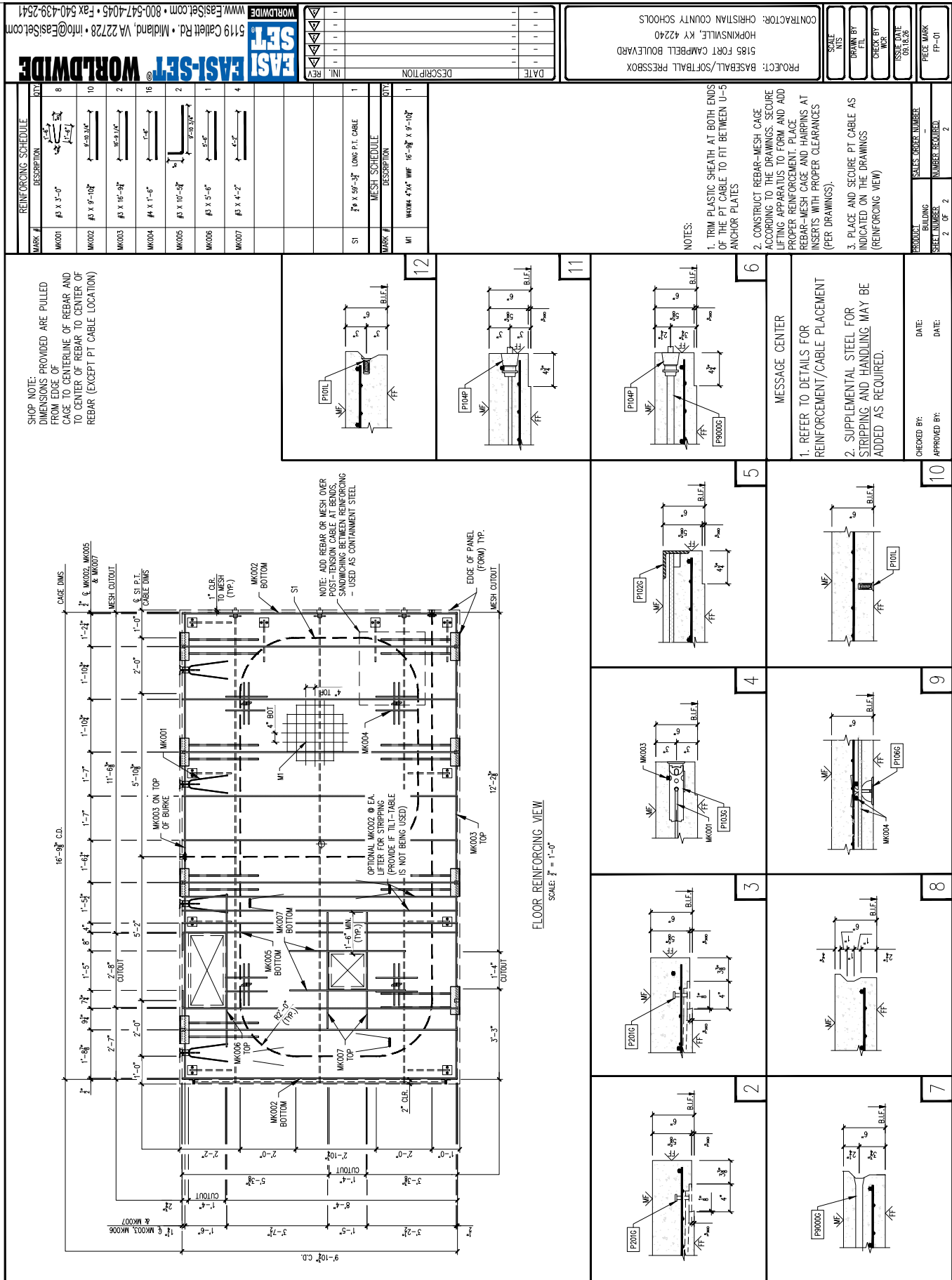
FLOOR - EASI-SET BUILDING - FP-01 - 120" x 204"

Plant: Beaver Dam

9/29/2026 2:19:00 PM

P1 CVBS

FLOOR - EASI-SET BUILDING - FP-01 - 120" x 204"



Job Name: 25-3470P9 CCHS Precast Building
Job Location: 5185 Fort Campbell BLVD
Contractor: Christian County Board of Education C/O A&K Construction

Plant: Beaver Dam
9/29/2026 2:19:00 PM

Tech: J. Coppage
PC: E. Bradley



Structure ID: FP-01 - Floor Panel 1

P1 CVBS

FLOOR - EASI-SET BUILDING - FP-01 - 120" x 204"



PT Check for Floor Panels FP-01 (PCI MNL - 116)

Material Data

(7) Wire lo-lax Strand - ASTM A416

Φ_{ps} 0.500 in,

A= 0.153 in²

E= 28500000 psi

fpu= 270 ksi

Strand Length 711 in

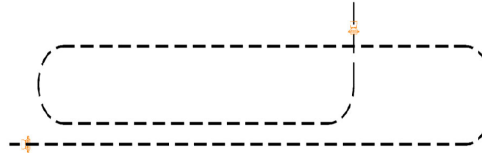
Assume (Info supplied by strand manufacturer)

k= 0.0007 Wobble Friction Coeff.

μ = 0.05 Curvature friction coeff. (Initial tension of 3,000 lbs)

Strand is to be stressed 70% of ultimate

= 28917 lbs



Cable Configuration

Adjustments to tensioning

1) Dead end anchor wedge seating loss

~ Expected to be 1/8 in

2) Live end anchor wedge seating loss

~ Expected to be 1/8 in, recommend over pull 1/8"

3) Elastic Shortening

Neglect for this pnl

4) Friction Loss

Additional force to overcome frictional forces between strand and sheathing

Tensioning Computations

Basic Elongation = $\frac{(\text{Force required beyond initial tension}) (\text{Length of strand between anchorages})}{(\text{Area of strand}) (\text{Modulus of Elasticity})}$

= 4.23 in

Adjustments

a) Dead end anchor wedge seating: Add 1/8" to elong. No force adjustment req'd

Add 1/8 in

b) Live end seating: over pull by 1/8"

1/8 in

Force adjustment t = 767 lbs lbs α = curvature = $\pi(2.5)$ 7.85 radians

c) Friction losses $\frac{PD}{PS} = e^{-(kL + \mu\alpha)}$

= 0.648

Avg. strand force = 0.824 17.61% Loss

Recommend sequential jacking at both ends of the tendon be used to reduce the overstressing the strand at the live end

Friction loss at mid-point of tendon

$\frac{PD}{PS} = e^{\frac{-(kL + \mu\alpha)}{2}}$

= 0.805

Avg. strand force over

half of tendon = 0.902 9.76% Loss

Total force and elongation at live end must be increased to compensate for friction losses

Elong. Adjustment = 0.412 in

Force Adjustment = 2821 lbs

Total Force Required = 32505 lbs OK

Elongation Summary:

Gross Theoretical Elongation	
Basic Elongation	4.23 in
Dead End Seating Loss	0.125 in
Live End Seating Loss	0.125 in
Friction Losses	0.412 in
Total Elongation	4.89 in
Rounded	4 14/16 in
Tolerance limits	-7.0% 4.55 in 4 9/16 in
	+7.0% 5.23 in 5 4/16 in