

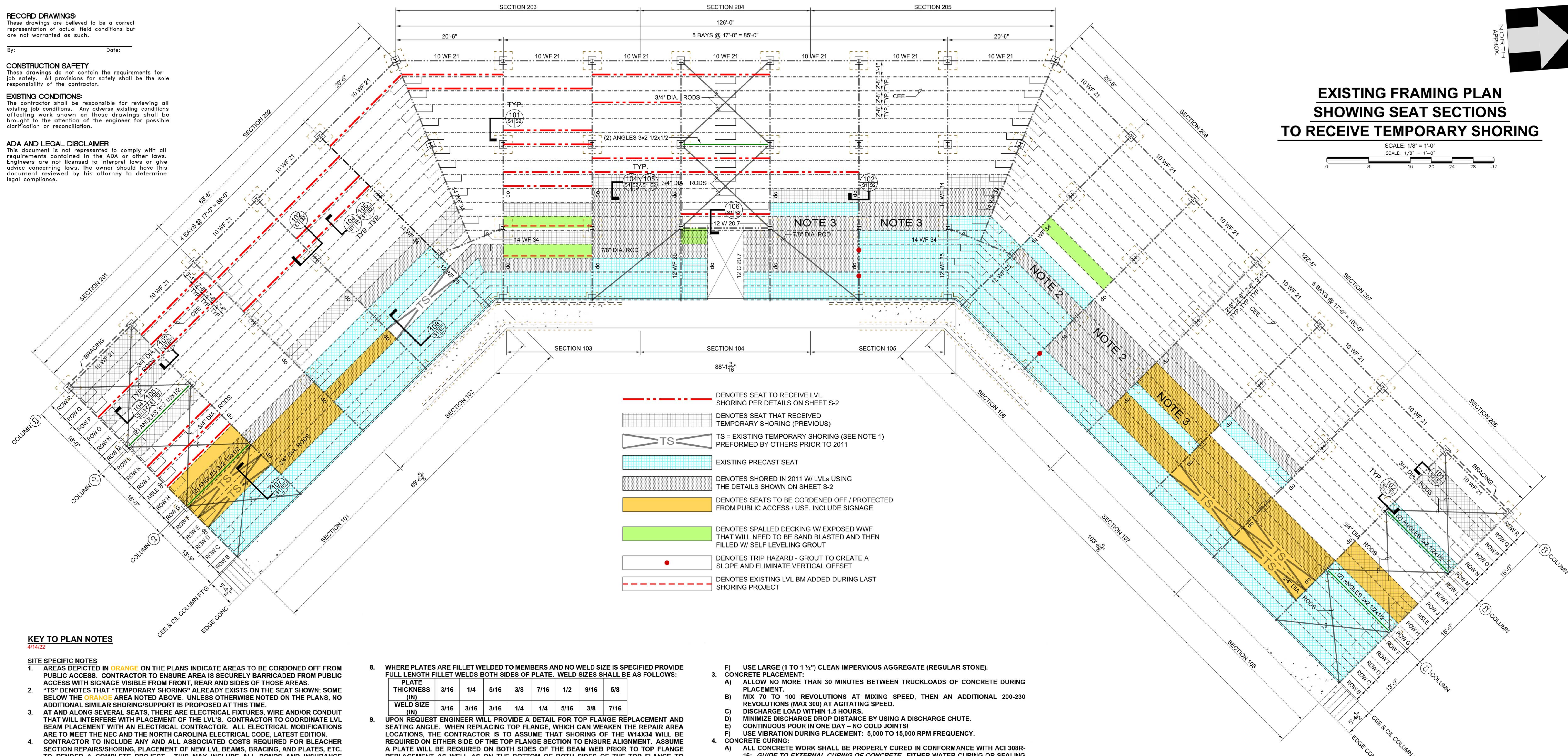
**RECORD DRAWINGS:**  
These drawings are believed to be a correct representation of actual field conditions but are not warranted as such.

By: \_\_\_\_\_ Date: \_\_\_\_\_

**CONSTRUCTION SAFETY**  
These drawings do not contain the requirements for job safety. All provisions for safety shall be the sole responsibility of the contractor.

**EXISTING CONDITIONS**  
The contractor shall be responsible for reviewing all existing job conditions. Any adverse existing conditions affecting work shown on these drawings shall be brought to the attention of the engineer for possible clarification or reconciliation.

**ADA AND LEGAL DISCLAIMER**  
This document is not represented to comply with all requirements contained in the ADA or other laws. Engineers are not licensed to interpret laws of live advice concerning laws, the owner should have this document reviewed by his attorney to determine legal compliance.



### EXISTING FRAMING PLAN SHOWING SEAT SECTIONS TO RECEIVE TEMPORARY SHORING

SCALE: 1/8" = 1'-0"  
SCALE: 1/8" = 1'-0"

NO.	DATE	AS NOTED	BY	DESCRIPTION



CONSULTING ENGINEERS, P.A.  
CIVIL, MUNICIPAL &  
STRUCTURAL ENGINEERS  
COMPREHENSIVE  
ENVIRONMENTAL SERVICES

154 Roundabout Ct.  
Rocky Mount, N.C. 27804  
Phone: (252) 972-7703  
Fax: (252) 972-7638

www.appianengineers.com  
admin@appianengineers.com

THESE PLANS WERE  
PRINTED USING COLOR  
IF THIS NOTE IS NOT SHOWN  
IN RED, PLEASE REFER TO  
ORIGINAL PLANS

- DENOTES SEAT TO RECEIVE LVL SHORING PER DETAILS ON SHEET S-2
- DENOTES SEAT THAT RECEIVED TEMPORARY SHORING (PREVIOUS)
- TS = EXISTING TEMPORARY SHORING (SEE NOTE 1) PERFORMED BY OTHERS PRIOR TO 2011
- EXISTING PRECAST SEAT
- DENOTES SHORED IN 2011 W/ LVLS USING THE DETAILS SHOWN ON SHEET S-2
- DENOTES SEATS TO BE CORDONED OFF / PROTECTED FROM PUBLIC ACCESS / USE. INCLUDE SIGNAGE
- DENOTES SPALLED DECKING W/ EXPOSED WWF THAT WILL NEED TO BE SAND BLASTED AND THEN FILLED W/ SELF LEVELING GROUT
- DENOTES TRIP HAZARD - GROUT TO CREATE A SLOPE AND ELIMINATE VERTICAL OFFSET
- DENOTES EXISTING LVL BM ADDED DURING LAST SHORING PROJECT

#### KEY TO PLAN NOTES

4/14/22

#### SITE SPECIFIC NOTES

1. AREAS DEPICTED IN ORANGE ON THE PLANS INDICATE AREAS TO BE CORDONED OFF FROM PUBLIC ACCESS. CONTRACTOR TO ENSURE AREA IS SECURELY BARRICADED FROM PUBLIC ACCESS WITH SIGNAGE VISIBLE FROM FRONT, REAR AND SIDES OF THOSE AREAS.
2. "TS" DENOTES THAT "TEMPORARY SHORING" ALREADY EXISTS ON THE SEAT SHOWN; SOME BELOW THE ORANGE AREA NOTED ABOVE. UNLESS OTHERWISE NOTED ON THE PLANS, NO ADDITIONAL SIMILAR SHORING/SUPPORT IS PROPOSED AT THIS TIME.
3. AT AND ALONG SEVERAL SEATS, THERE ARE ELECTRICAL FIXTURES, WIRE AND/OR CONDUIT THAT WILL INTERFERE WITH PLACEMENT OF THE LVLS. CONTRACTOR TO COORDINATE LVL BEAM PLACEMENT WITH AN ELECTRICAL CONTRACTOR. ALL ELECTRICAL MODIFICATIONS ARE TO MEET THE NEC AND THE NORTH CAROLINA ELECTRICAL CODE, LATEST EDITION. CONTRACTOR TO INCLUDE ANY AND ALL ASSOCIATED COSTS REQUIRED FOR BLEACHER SECTION REPAIRS/SHORING, PLACEMENT OF NEW LVL BEAMS, BRACING, AND PLATES, ETC. TO RENDER A COMPLETE PROJECT. THIS MAY INCLUDE ALL BONDS AND INSURANCE REQUIRED, BUILDING PERMITS, SAFETY MEASURES AND BARRICADES, ETC. CONTRACTOR IS ALSO TO PROVIDE AND INCLUDE IN HISHER BID ANY AND ALL TEMPORARY SHORING MEASURES (SHORING TO TEMPORARILY SUPPORT SEATING AND PROTECT WORKERS DURING INSTALLATION OF NEW BEAMS, BRACING, AND PLATES). DO NOT ATTEMPT TO WORK BENEATH ANY SEAT SECTION(S) PROPOSED TO BE SHUTTERED OFF ABOVE FROM PUBLIC ACCESS WITHOUT SUFFICIENT SHORING OR FALL PROTECTION IN PLACE TO PROTECT WORKERS. SHORED SECTIONS SHOULD INCLUDE NOT ONLY THE SECTION UNDER REPAIR BUT THE TWO ADJACENT SIDE SPANS AS WELL. IF UNSAFE CONDITIONS ARE FOUND TO EXIST, BACK OFF AND CALL ENGINEER BEFORE PROCEEDING!
5. WHERE INDICATED ON DRAWINGS, SOME ADJOINING SEATING SECTIONS HAVE A VERTICAL DISPLACEMENT CREATING A TRIP HAZARD. CONTRACTOR TO GROUT ADJOINING SEGMENT TO CREATE A SMALL TRANSITION RAMP BETWEEN ADJACENT SEGMENTS. CONSTRUCT A GROUT RAMP WITH A UNIFORM SURFACE. SURFACE TO BE STRIATED TRANSVERSE TO ELIMINATE A SLIPPERY SURFACE. GROUT SUCH THAT THERE IS NO VERTICAL RISE/OFFSET LEFT, BETWEEN ADJOINING SURFACES, GREATER THAN 1/4" INCH. SLOPE TO BE MINIMUM 1/12. SUBMIT SHOP DRAWING OR SUBMITTAL ON GROUT.
6. SPALLED SURFACES REPAIR: REPAIR SPALLED AREAS EITHER NOTED ON PLANS OR DESIGNATED ON PLANS TO ELIMINATE TRIP HAZARD AND PROTECT THE STEEL. CLEAN AND PLACE SELF-LEVELING GROUT IN SECTIONS OF BLEACHER SECTIONS WITH 1/2" IN DEPTH OR GREATER SPALLING AND/OR WITH EXPOSED REINFORCEMENT. INCLUDES SANDBLASTING AND/OR ETCHING FOR ADHERENCE OF GROUT. SUBMIT SHOP DRAWING OR SUBMITTAL ON SELF-LEVELING GROUT.
7. SPECIFICATIONS FOR STRUCTURAL STEEL, STEEL DECKING, STEEL REINFORCING, AND CONCRETE ARE INCLUDED BELOW IN THE EVENT THE ENGINEER DIRECTS NEW IMPROVEMENTS TO BE PERFORMED INVOLVING THESE MATERIALS OR IN THE EVENT LATENT CONDITIONS ARE DISCOVERED THAT WOULD ALSO RENDER THE USE OF THESE MATERIALS TO BE NECESSARY.

#### STRUCTURAL STEEL (AS APPLICABLE AND DIRECTED BY ENGINEER)

1. STEEL SHAPES SHALL CONFORM TO "STRUCTURAL STEEL" - DUAL CERTIFIED TO ASTM A36 AND ASTM A572.
  - STEEL PLATES, BARS, AND RODS - ASTM A36.
  - PIPE COLUMNS - ASTM A53.
  - BOLTS - ASTM A325.
  - WELDS - AWS CLASS E 70 LOW HYDROGEN ELECTRODES.
  - TUBE COLUMNS - ASTM A500, GRADE B.
2. ALL STEEL WORK SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN" AND THE AISI CODE OF STANDARD PRACTICE.
3. INSTALL A SUITABLE HARDENED WASHER UNDER THE HEAD OR NUT, WHICHEVER IS USED AS THE TURNED ELEMENT FOR TIGHTENING AND COVER ALL EXPOSED SLOTTED OR OVERSIZED HOLES. UNLESS OTHERWISE SHOWN, CONNECTIONS ARE BEARING TYPE WITH TREADS IN THE SHEAR PLANE.
4. WELDING SHALL BE DONE BY WELDING OPERATORS CERTIFIED WITH THE WELDING EQUIPMENT BEING USED FOR WELDING THIS JOB AS QUALIFIED ACCORDING TO AWS D1.
5. RETURN ALL WELDS AT CORNERS A MINIMUM OF TWICE THE NORMAL SIZE OF THE WELD.
6. STRUCTURAL STEEL SHALL RECEIVE ONE COAT OF RED OXIDE PAINT OF 2 MIL DFT. SURFACE PREPARATION SHALL BE POWER TOOL CLEANING CONFORMING TO SSPC-SP3.
7. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AND GUYING OF STEEL FRAMING AND PROVIDE FOR SAFETY OF THE STRUCTURE AND WORKMEN. BRACING TO REMAIN UNTIL NO LONGER REQUIRED FOR SAFE SUPPORT OF FRAME.

#### CONCRETE (AS APPLICABLE AND WHEN DIRECTED BY ENGINEER)

1. MIX DESIGNS, INCLUDING WATER/CEMENT RATIOS AND SLUMPS SHALL BE PREPARED IN ACCORDANCE WITH ACI 301-16. SPECIFICATIONS FOR STRUCTURAL CONCRETE. MIX DESIGN TO BE VERIFIED BY CONCRETE SUPPLIER!
  - A) CEMENT SHALL CONFORM FOR ASTM C150.
  - B) NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C33.
  - C) NO ADMIXTURE CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED IN ANY CONCRETE!
  - D) WATER REDUCING ADMIXTURE SHALL CONFORM TO ASTM C494.
  - E) AIR ENTRAINING AGENT SHALL CONFORM TO ASTM C260 AND SHALL BE BETWEEN 5.0%-7.0% AND SHALL BE USED IN ALL CONCRETE EXPOSED TO FREEZING AND THAWING (EXTERIOR CONCRETE). ENTRAPPED AIR SHALL NOT EXCEED 3%.
2. CONCRETE MINIMUM DESIGN SPECIFICATIONS: CONCRETE SHALL DEVELOP THE FOLLOWING MINIMUM COMpressive STRENGTHS AT 28 DAYS:
  - A) STRENGTH:
    - 1. CONCRETE ON DECKING - 4000 PSI
    - 2. ALL OTHER CONCRETE - 3000 PSI
  - B) WATER/CEMENT RATIO: 0.45 TO 0.40
  - C) MAXIMUM SLUMP: 3 INCHES (USE OF A WATER REDUCING ADMIXTURE IS RECOMMENDED TO ACHIEVE EASIER WORKABILITY AT PLACEMENT AND IMPROVE WATER TIGHTNESS AND STRENGTH OF LOW-SLUMP CONCRETE).
3. THE SLUMP OF CAST-IN-PLACE CONCRETE SHALL NOT EXCEED 4 INCHES WITHOUT A HIGH RANGE WATER REDUCING ADMIXTURE. THE SLUMP OF CAST-IN-PLACE CONCRETE WITH THE USE OF A HIGH RANGE WATER REDUCING ADMIXTURE SHALL NOT EXCEED 8 INCHES. ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED 5% (TO MAXIMUM OF 7%), ENTRAPPED AIR SHALL NOT EXCEED 3%.
- D) MINIMUM SLUMP: 1 INCH
- E) CLEAN DRINKABLE MIXING WATER AT A pH = 5.0 - 7.0

#### CONCRETE PLACEMENT:

- A) ALLOW NO MORE THAN 30 MINUTES BETWEEN TRUCKLOADS OF CONCRETE DURING PLACEMENT.
- B) MIX TO 100 REVOLUTIONS AT MIXING SPEED, THEN AN ADDITIONAL 200-230 REVOLUTIONS (MAX 300) AT AGITATING SPEED.
- C) DISCHARGE LOAD WITHIN 1.5 HOURS.
- D) MINIMIZE DISCHARGE DROP DISTANCE BY USING A DISCHARGE CHUTE.
- E) CONTINUOUS POUR IN ONE DAY - NO COLD JOINTS!
- F) USE VIBRATION DURING PLACEMENT. 5,000 TO 15,000 RPM FREQUENCY.
4. CONCRETE CURING:
  - A) ALL CONCRETE WORK SHALL BE PROPERLY CURED IN CONFORMANCE WITH ACI 308R-16. GUIDE TO EXTERNAL CURING OF CONCRETE. EITHER WATER CURING OR SEALING MATERIALS METHOD MAY BE USED PROVIDED THAT THE METHOD CHOSEN HAS NO DETRIMENTAL EFFECT ON THE FINAL FINISH SPECIFIED FOR THE RESPECTIVE AREAS.
    - 1. IF FILM-FORMING CURING COMPOUNDS ARE PERMITTED BY ENGINEER, CURE CONCRETE BY APPLICATION OF A DISSIPATING FILM-FORMING CURING COMPOUND MEETING THE REQUIREMENTS OF ASTM C309, TYPE 1 SUCH AS W. R. MEADOWS CS-309 OR APPROVED EQUAL. APPLY AS SOON AS ALL SURFACE WATER HAS DISAPPEARED AND THE CONCRETE SURFACE WILL NOT BE MARRED BY WALKING WORKERS. SURFACE TO RECEIVE SEALER MUST BE DRY AND FREE OF CONTAMINANTS OR DISCOLORATIONS. APPLY USING A LOW-PRESSURE SPRAYER. RESTRICT FOOT TRAFFIC FOR AT LEAST 4 HOURS (PREFERABLY 12 HOURS) AFTER APPLICATION.
    - B) COLD WEATHER CURING:
      - 1. WHEN TEMPERATURE DROPS BELOW 40 DEGREES FAHRENHEIT AT ANY TIME, DURING CONCRETE PLACING AND CURING, THE PROVISIONS OF ACI 308R-16: GUIDE TO COLD WEATHER CONCRETING SHALL BE FOLLOWED.
      - 2. ALL SNOW, ICE, AND FROST SHALL BE REMOVED SO THAT IT DOES NOT OCCUPY SPACED INTENDED TO BE FILLED BY CONCRETE.
      - 3. CONCRETE SHALL BE PLACED AT A TEMPERATURE NOT LESS THAN 55 DEGREES FAHRENHEIT.
      - 4. CONCRETE SHALL BE MAINTAINED AT A TEMPERATURE OF NOT LESS THAN 55 DEGREES FAHRENHEIT FOR THE DURATION OF THE CURING PERIOD.
    - C) HOT WEATHER CURING:
      - 1. WHEN TEMPERATURES ARE GENERALLY ABOVE 80 DEGREES FAHRENHEIT, WITH LOW RELATIVE HUMIDITY, THE RECOMMENDATIONS OF ACI 308R-10: GUIDE TO HOT WEATHER CONCRETING SHALL BE FOLLOWED.
      - 2. TO REDUCE THERMAL EFFECTS AND PLASTIC SHRINKAGE CRACKING, THE TEMPERATURE OF CONCRETE AT PLACEMENT SHALL NOT EXCEED 90 DEGREES FAHRENHEIT.
      - 3. CONCRETE SURFACES SHALL NOT BE ALLOWED TO DRY AFTER PLACEMENT AND DURING THE CURING PERIOD.
      - 4. START FINISHING AND CURING AS SOON AS POSSIBLE.
      - 5. WHEN NECESSARY, RESTRICT PLACEMENT TO LATE AFTERNOON OR EVENING.
5. WATCH OUT FOR WINDY DAYS! PLASTIC SHRINKAGE CRACKS ARE MUCH MORE LIKELY TO OCCUR ON WINDY DAYS WHEN THE HUMIDITY IS RELATIVELY LOW. REDUCE PLASTIC CRACKING BY ADDITION OF FIBERS, WINDSCREENS, FOG MISTERS, OR MONOMOLECULAR FILMS.
6. CONCRETE SHALL BE REGULAR STONE CONCRETE.
7. ALL CONCRETE WORK SHALL CONFORM TO ACI CODE-318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY.
8. JOINT SEALANT:
  - A) WHERE THE SLAB ABUTS THE 3/8" STEEL BACK PLATE, PLACE A NON-SAG SEALANT (FOR VERTICAL AND HORIZONTAL APPLICATION); USE A NON-SAG FLEXIBLE EXTERIOR GRADE POLYURETHANE SEALANT SUCH AS SIKAFLEX 2C NS MEETING ASTM C-920, TYPE M, GRADE NS, CLASS 25, OR APPROVED EQUAL.
9. CONCRETE REPAIR:
  - A) REPAIR CONCRETE AT SPALLS AND ERODED AREAS WITH SIKA QUIK 1000 EXTENDED WITH 3/8" COARSE AGGREGATE IN ACCORDANCE WITH SIKA'S RECOMMENDATIONS OR AN APPROVED EQUAL.
  - B) REPAIR WITH AND MIX REPAIR CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS.
  - C) IF THE CONCRETE IS TO BE EXTENDED WITH AGGREGATE, IF REQUIRED BY MANUFACTURER, USE AN AGGREGATE CERTIFIED TO BE NON-REACTIVE IN ACCORDANCE WITH ASTM C1288.
  - D) CURE REPAIR CONCRETE AS REQUIRED BY MANUFACTURER.
10. CONCRETE SURFACE FINISHES:
  - FLOOR TOP SURFACE: BROOM FINISH, CURING SEALANT.

#### REINFORCING STEEL (AS APPLICABLE AND WHEN DIRECTED BY ENGINEER)

1. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185. WWF SHEETS ARE REQUIRED AND ARE TO BE PROPERLY POSITIONED AS SHOWN ON THE PLANS AND SUPPORTED BY CHAIRS/SAND PLATES. USE OF ROLLS IS PROHIBITED.
2. REINFORCING STEEL SHALL BE IN PLACE AND REVIEWED BY THE ENGINEER PRIOR TO PLACING CONCRETE.
3. PLACE ONE LAYER OF 6 X 6 - W2.9 X W2.9 WWF SHEETS AT MIDDLEDEPTH OF SLAB (DEPTH IS DEFINED AS THE SLAB THICKNESS BETWEEN THE TOP FINISH SURFACE AND THE TOP OF THE 1" STEEL DECKING. LAP ALL WWF SPLICES TWO FULL MESHES AND ALL SIDE LAPS ONE FULL MESH AND TIE OFF WITH STANDARD WIRE TIES.

#### GROUT

1. PROVIDE NON-SHRINK, NON-METALLIC PRE-MIXED GROUT AT BEARING ENDS OF LVLS AND AT INTERMEDIATE LOCATIONS SHOWN ON PLANS. GROUT SHALL HAVE A COMPRESSIVE STRENGTH OF 7,000 PSI 7 DAYS.

#### DESIGN LIVE LOAD

1. FLOOR LIVE LOAD - 100 PSF

#### DIMENSIONS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL DIMENSIONS IN THE DRAWINGS AND ADVISING THE ENGINEER OF ANY DIFFERENCES IN THE DIMENSIONS ON THE DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.
2. VARIATIONS IN MEASUREMENTS MAY LIKELY OCCUR DUE TO DISTRESS IN SOME OF THE EXISTING STEEL MEMBERS. THIS VARIATION HAS BEEN ACCOUNTED FOR IN DESIGN.

#### EXISTING CONDITIONS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL EXISTING JOB CONDITIONS. ANY ADVERSE EXISTING CONDITIONS AFFECTING WORK SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR POSSIBLE CLARIFICATION OR RECONCILIATION.

#### CONSTRUCTION SAFETY

1. THESE DRAWINGS DO NOT CONTAIN THE REQUIREMENTS FOR JOB SAFETY. ALL PROVISIONS FOR SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
2. SEE SITE SPECIFIC NOTES, NOTE 4, ABOVE.

**P i P i P i**  
**EXISTING FRAMING PLAN**  
**Fleming Stadium**  
**Wilson, N.C.**