FABRICATION GENERAL NOTES

MATERIALS:

1. EPOXY COATED DOWEL BARS USED SHALL COMPLY WITH ASTM A 615 GRADE 60.

2. ALL EMBEDDED LIFTING HARDWARE USED SHALL BE GALVANIZED.

   A. FOR LIFTING INSERTS, INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION INCLUDING MINIMUM EDGE DISTANCE AND SPACING REQUIREMENTS. UNLESS THE CONTRACTOR AND FABRICATOR WILL BE USING A LIFTING BEAM OR ROLLING SHEAVE TO ENSURE THAT EACH OF THE FOUR INSERTS WILL SHARE THE LOAD EQUALLY, TWO OF THE FOUR INSERTS MUST BE CAPABLE OF CARRYING THE TOTAL LOAD WITH A 4:1 SAFETY FACTOR WHILE ADJUSTING FOR THE ANGLE OF THE CABLES AND THE STRENGTH OF THE CONCRETE OVER TIME. THE INSERT SHOULD BE RECESSED A MINIMUM OF 1½" UNLESS THE SLAB IS TO BE OVERLAID IMMEDIATELY AFTER PLACEMENT. THE INSERT SHALL LEAVE A MAXIMUM 1¼" DIAMETER THREADED HOLE TO BE GROUTED AFTER SLAB INSTALLATION. IF THE INSERT IS INSTALLED WITH A FULL SLAB PENETRATION, THE LIFTING INSERT CAN BE USED AS A BEDDING GROUT PORT AT THE CONTRACTOR'S DISCRETION.

   B. FOR LIFTING PLATES, INSTALLATION MUST BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND HAVE A STANDARD 5:1 SAFETY FACTOR FOR LIFTING HARDWARE. UNLESS A LIFTING BEAM IS USED TO SPACE THE FOUR PICK POINTS DIRECTLY ABOVE THE INSERTS, THE LIFTING HARDWARE MUST BE RATED FOR USE WITH CABLES AT AN ANGLE AND TWO OF THE FOUR DEVICES MUST BE CAPABLE OF LIFTING THE FULL LOAD AS WITH THE INSERTS REFERENCED IN THE PREVIOUS NOTE.

3. REINFORCEMENT USED SHALL BE EPOXY COATED, IN ACCORDANCE WITH ASTM A706 GRADE 60 AND IN COMPLIANCE WITH ARTICLE 1006.10 OF THE STANDARD SPECIFICATIONS.

4. CONCRETE COVER OVER REINFORCEMENT TO BE MAINTAINED USING WIRE OR THERMOPLASTIC CHAIRS OR SPACERS OR AN APPROVED EQUIVALENT.

5. CONCRETE USED SHALL MEET THE FOLLOWING REQUIREMENTS:

   A. CONCRETE USED SHALL BE CLASS PC (f'C = 4,500 PSI @ 28 DAYS) IN ACCORDANCE WITH SECTION 1020 OF THE STANDARD SPECIFICATIONS.

   B. MINIMUM STRIPPING STRENGTH OF CONCRETE SHALL BE 3,000 PSI.

   C. CONCRETE MIX DESIGN TO BE SUBMITTED AND APPROVED PRIOR TO FABRICATION.

   D. CURING OF CONCRETE SLABS TO BE IN ACCORDANCE WITH THE SPECIFIED METHODS OF SECTION 1020 OF THE STANDARD SPECIFICATIONS. THE CURING PROCEDURE TO BE USED SHALL BE SUBMITTED AND APPROVED PRIOR TO FABRICATION.

SLAB DESIGN:

6. FOR STANDARD SLABS:

   A. USE SLAB DIMENSIONS SHOWN ON THE DISTRICT STANDARD DRAWINGS FOR DESIGN SLAB THICKNESS, WIDTH, AND LENGTH. ACTUAL WIDTH TO BE MODIFIED WITH ON-SITE SAW CUTS TO FIT THE OPENING.

   B. USE TWO LAYERS OF REINFORCEMENT WITH A MINIMUM STEEL AREA RATIO OF 0.2%.

   C. SIZE ANY PREFORMED SLOTS THAT ARE DESIGNED FOR CONSECUTIVE STANDARD SLABS CONSISTENT WITH THE THICKNESS OF THE SLAB SUCH THAT THE BOTTOM OF THE OPENING IS AT LEAST 2½" (±¼") WIDE AND AT LEAST ½" OF GROUT COVER IS PROVIDED UNDER THE DOWEL.

   D. FOR STANDARD SLABS WITH WIDE OPEN SLOTS AND/OR EMBEDDED DOWEL BARS, IT SHALL BE THE CONTRACTOR'S OPTION TO EITHER PRE-INSTALL/EMBED THE DOWEL BARS INTO THE SLABS AT THE PRECAST PLANT AND PARTIALLY RETROFIT THE EMBEDDED DOWELS INTO ADJACENT PAVEMENT SLABS IN THE FIELD, OR TO FULLY RETROFIT THE DOWEL BARS INTO BOTH THE INSTALLED PRECAST SLAB AND ANY ADJACENT SLAB IN THE FIELD DURING PLACEMENT IN ACCORDANCE WITH CONTRACT SPECIFICATIONS AND THE GENERAL NOTES FOR INSTALLATION. THE LOCATIONS AND SPACING OF THE DOWEL BARS IN THE STANDARD SLABS SHALL BE SHOWN ON THE DISTRICT STANDARD DRAWINGS AND WITHIN THE SPECIFIED TOLERANCES FOR ALIGNMENT. FOR DOWEL BAR RETROFITTING WITH STANDARD SLAB INSTALLATION, A STANDARD TEMPLATE SHALL BE USED TO LOCATE THE CUTS AND POSITION THE DOWEL SLOTS CONSISTENTLY.

   E. FOR STANDARD ISOLATED SLABS WITH NARROW ELONGATED PREFORMED DOWEL SLOTS, THE CENTERPOINT BETWEEN THE WHEEL PATH SLOTS SHALL BE MARKED.

7. FOR CUSTOM SLABS:

   A. USE SLAB DIMENSIONS SHOWN ON THE DISTRICT STANDARD DRAWINGS FOR DESIGN SLAB THICKNESS. LENGTHS AND WIDTHS OF EACH CUSTOM SLAB SHALL BE ACCURATE DIMENSIONS BASED ON FIELD SURVEY DATA COLLECTED BY THE CONTRACTOR TO DEVELOP WORKING DRAWINGS FOR THE SLAB. MINIMUM AND MAXIMUM DIMENSIONS FOR LENGTHS AND WIDTHS ARE NOTED ON THE STANDARD DRAWINGS.

   B. FOR ANY CUSTOM SLAB FABRICATED TO REPLACE EXISTING WARPED PAVEMENT AT AN ISOLATED LOCATION, THE CUSTOM SLAB SHALL BE FABRICATED ON A SINGLE PLANE. THE SLAB THICKNESS OR BEDDING MATERIAL SHALL BE ADJUSTED TO ALLOW FOR THE ELEVATION OF ALL FOUR (4) CORNERS OF THE CUSTOM SLAB TO BE FLUSH OR HIGHER THAN THE EXISTING OR ADJOINING PAVEMENT WHEN INSTALLED. THE SURFACE OF ALL CUSTOM SLABS REPLACING WARPED PAVEMENT SHALL RECEIVE A COMPLETE PROFILE DIAMOND GRIND AFTER INSTALLATION AND GROUTING TO PROVIDE A SMOOTH SURFACE AND LEAVE ALL EDGES FLUSH WITH THE ADJOINING PAVEMENTS. THE PROFILE GRINDING OPERATION FOR CUSTOM SLABS REPLACING ANY WARPED PAVEMENTS, ON CURVED RAMPS OR SUPERELEVATED MAINLINE SECTIONS, SHALL BE IN ACCORDANCE WITH CONTRACT SPECIAL PROVISIONS FOR PROFILE DIAMOND GRINDING PRECAST CONCRETE PAVEMENT SLABS AND PAID FOR SEPARATELY. FOR CONSECUTIVELY PLACED CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT, FULL SURVEYS FOR X, Y, AND Z DIMENSIONS SHALL BE TAKEN BY THE CONTRACTOR BEFORE FABRICATION IN ORDER TO MATCH EXISTING GRADES AT ALL CORNERS DURING INSTALLATION.

   C. FOR ALL CUSTOM SLABS WITH WIDE OPEN SLOTS, THE DOWEL BARS SHALL BE FULLY RETROFITTED INTO ADJACENT PAVEMENT SLABS DURING FIELD INSTALLATION OF THE PRECAST SLAB IN ACCORDANCE WITH CONTRACT SPECIFICATIONS AND GENERAL NOTES FOR INSTALL-ATION.

   D. FOR ALL CUSTOMS SLABS WITH NARROW ELONGATED PREFORMED DOWEL SLOTS, THE DOWEL BARS SHALL BE SLID INTO PREDRILLED HOLES IN THE ADAJECENT PAVEMENT SLABS DURING FIELD INSTALLATION OF THE PRECAST SLAB IN ACCORDANCE WITH CONTRACT SPECIFICATIONS AND GENERAL NOTES FOR INSTALLATION.

8. ALL FABRICATED SLABS:

   A. THE MAXIMUM ALLOWABLE JOINT WIDTH CAN NOT BE LESS THAN THE TOTAL OF THE ALLOWABLE SLAB FABRICATION TOLERANCES.

   B. BEDDING GROUT PORT HOLES SHALL BE LOCATED ON TRANSVERSE LINES ACROSS THE SLAB THAT ARE PARALLEL WITH EXISTING TRANSVERSE JOINTS. EACH PORT HOLE SHALL BE EVENLY DISTRIBUTED ON EACH LINE. THE DISTANCE BETWEEN BEDDING GROUT PORT HOLES SHALL NOT EXCEED 4'-0", WITH THE PORT HOLES AT THE END OF THE TRANSVERSE LINES TO BE NO LESS THAN 1'-8" AND NO MORE THAN 3'-0" OFF A LONGITUDINAL JOINT. THE TRANSVERSE LINES FOR PORT HOLES SHALL BE NO MORE THAN 4'-0" APART, AND NO LESS THAN 1'-8" AND NO MORE THAN 2'-6" OFF OF A TRANSVERSE JOINT.

   C. RECESS LIFTING DEVICES 1" MINIMUM BELOW THE SURFACE OF THE SLAB TO ALLOW FOR A MINIMUM GROUT COVER OF 1" ON SLABS THAT WILL NOT BE OVERLAID.

FABRICATION:

9. PREPARE WORKING DRAWINGS THAT SHALL INCLUDE THE FOLLOWING INFORMATION:

   A. SLAB LAYOUT DRAWING FOR TYPICAL STANDARD SLABS AND FOR EACH CUSTOM SLAB TO BE FABRICATED, WITH ACCURATE DIMENSIONS CITED.

   B. REINFORCEMENT SIZES, SPACING, NUMBER OF MATS, AND METHOD OF MAINTAINING CONCRETE COVER.

   C. SIZES AND LOCATIONS FOR EMBEDDED DOWELS, OF DOWEL BARS TO BE RETROFITTED AFTER PLACEMENT OF THE SLAB, AND OF PREFORMED SLOTS AT THE FEMALE END OF STANDARD SLABS FOR CONSECUTIVE PLACEMENT.

   D. SIZE AND LOCATION OF GROUT PORTS, LIFTING ANCHORS, AND GROUT SEAL GASKETS.

   E. COMPRESSIVE STRENGTH AND AIR CONTENT OF CONCRETE.

   F. CONCRETE CURING METHOD TO BE USED.

   G. MARKING LEGEND FOR EACH SLAB TO INDICATE PRECAST MANUFACTURER, AND DATE OF PRODUCTION; AND FOR EACH CUSTOM SLAB TO INCLUDE CONTRACT NUMBER AND MARK NUMBER OF THE SLAB.

   H. WEIGHT OF EACH SLAB.

10. PERFORM A PRE-POUR INSPECTION OF THE FORMS TO CONFIRM THAT THEY ARE ASSEMBLED IN ACCORDANCE WITH THE FOLLOWING TOLERANCES:

LENGTH AND WIDTH	±⅛"
DIAGONALS	±3/16"
DOWEL VARIANCE FROM LEVEL, SQUARENESS TO EDGE OF SLAB, AND LOCATION.	±⅛"
EDGE SQUARENESS -⅛" IN 10" (IN RELATION TO TOP AND BOTTOM SURFACES).	

11. INCLUDE A 1 INCH CHAMFER ALONG ALL BOTTOM EDGES OF SLABS. AND A STONED EDGE TO ALL TOP EDGES OF THE SLAB.

12. THE EXPOSED SURFACES OF ALL PREFORMED SLOTS FOR DOWEL BARS SHALL BE SANDBLASTED.

13. ACCURATELY SCREED TOP OF SLAB TO MEET SURFACE AND THICKNESS TOLERANCES.

14. THE FINAL FINISH SHALL MATCH THE SURROUNDING PAVEMENT WITH EITHER AN ARTIFICIAL TURF DRAG FINISH TO TOP OF SLAB IN ACCORDANCE WITH ARTICLE 420.09(e)(2) OF THE STANDARD SPECIFICATIONS, OR A TINED FINISH IN ACCORDANCE WITH ARTICLE 420.09(e)(1) OF THE STANDARD SPECIFICATIONS.

15. AFTER REMOVAL OF FORMS AND ANY BLOCKOUTS, NO SPALLS OF THE FINISHED SURFACE WILL BE ALLOWED.