

EARTH MOVING

- 1) PROJECT CONDITIONS
A. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE BEGINNING EARTH MOVING OPERATIONS.
B. DO NOT COMMENCE EARTH MOVING OPERATIONS UNTIL TEMPORARY EROSION- AND SEDIMENTATION-CONTROL MEASURES ARE IN PLACE.
C. DO NOT COMMENCE EARTH MOVING OPERATIONS UNTIL PLANT-PROTECTION MEASURES ARE IN PLACE.
D. DO NOT COMMENCE EARTH MOVING OPERATIONS WITHOUT REVIEWING AND MAKING PROVISIONS FOR ALL GEOTECHNICAL RECOMMENDATIONS MADE IN THE PROJECT GEOTECHNICAL REPORT.
E. RETAIN A COPY OF THE PROJECT GEOTECHNICAL REPORT AT THE WORK SITE AT ALL TIMES. ANY DISCREPANCIES BETWEEN THESE SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT SHALL BE RESOLVED IN FAVOR OF THE PROJECT GEOTECHNICAL REPORT.
F. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTH MOVING OPERATIONS.
G. PROTECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROLS DURING EARTH MOVING OPERATIONS.
2) DEWATERING
A. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.
B. PROTECT SUBGRADES FROM SOFTENING, UNDERMINING, WASHOUT, AND DAMAGE BY RAIN OR WATER ACCUMULATION.
C. DESIGN AND PROVIDE DEWATERING SYSTEM USING ACCEPTED AND PROFESSIONAL METHODS CONSISTENT WITH CURRENT INDUSTRY PRACTICE.
D. OPEN PUMPING WITH SUMPS AND DITCHES SHALL BE ALLOWED, PROVIDED IT DOES NOT RESULT IN BOILS, LOSS OF FINES, SOFTENING OF THE GROUND, OR INSTABILITY OF SLOPES.
E. WHEN CONSTRUCTION IS COMPLETE, PROMPTLY REMOVE ALL DEWATERING EQUIPMENT FROM THE SITE, INCLUDING WELLS AND RELATED TEMPORARY ELECTRICAL SERVICE.
3) SUBGRADE
A. NOTIFY PROJECT GEOTECHNICAL ENGINEER WHEN EXCAVATIONS HAVE REACHED REQUIRED SUBGRADE.
B. PROTECT GEOTECHNICAL ENGINEER DETERMINES THAT UNSATISFACTORY SOIL IS PRESENT, CONTINUE EXCAVATION AND REPLACE WITH COMPACTED BACKFILL OR FILL MATERIAL AS DIRECTED.
C. PROOF-ROLL SUBGRADE BELOW THE BUILDING SLABS AND PAVEMENTS WITH A PNEUMATIC-TIRED AND LOADED 10-WHEEL, TANDEM-AXLE DUMP TRUCK WEIGHING NOT LESS THAN 15 TONS TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING.
D. IN HEAVY DUTY PAVEMENT AREAS, THE GRAVEL AGGREGATE BASE SHALL BE EXTENDED UNDER THE CURB AND GUTTER SECTION TO PROVIDE ADDITIONAL STABILITY FOR TRUCK TRAVEL.
4) UTILITY TRENCH BEDDING AND BACKFILL
A. PLACE AND COMPACT BEDDING COURSE ON TRENCH BOTTOMS AND WHERE INDICATED, SHAPE BEDDING COURSE TO PROVIDE CONTINUOUS SUPPORT FOR BELLS, JOINTS, AND BARRELS OF PIPES AND FOR JOINTS, FITTINGS, AND BODIES OF CONDUITS.
B. USE CLASS B BEDDING UNDER ALL PVC PIPING.
C. CAREFULLY COMPACT INITIAL BACKFILL UNDER PIPE HAUNCHES AND COMPACT EVENLY UP ON BOTH SIDES AND ALONG THE FULL LENGTH OF PIPING OR CONDUIT TO AVOID DAMAGE OR DISPLACEMENT OF PIPING OR CONDUIT.
D. BACKFILL ALL UTILITIES UNDER ROADWAYS AND TRAFFIC AREAS WITH CRUSHED STONE.
5) COMPACTED SOIL BACKFILLS AND FILL
A. PLACE BACKFILL AND FILL SOIL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
B. PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.
C. PROVIDE CONSTRUCTION PHASE MONITORING AND TESTING AS RECOMMENDED IN THE PROJECT GEOTECHNICAL REPORT.
6) GRADING
A. GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES, COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED.
B. LANDSCAPE ISLANDS: FILL ALL CURBED ISLANDS TO TOP OF CURB WITH TOPSOIL, AND APPLY SEED AND MULCH UNLESS DRAWINGS INDICATE OTHERWISE.
C. SLOPES: DO NOT CREATE CUT OR FILL SLOPES STEEPER THAN 2H:1V WITHOUT OBTAINING SPECIAL WRITTEN PERMISSION FROM THE ENGINEER OF RECORD AND PROJECT GEOTECHNICAL ENGINEER.
7) PROTECTION
A. PROTECTING GRADED AREAS: PROTECT NEARLY GRADED AREAS FROM TRAFFIC, FREEZING, AND EROSION. KEEP FREE OF TRASH AND DEBRIS. SEE EROSION AND SEDIMENT CONTROL PLAN AND NOTES FOR FURTHER INFORMATION.

ASPHALT PAVING

- 1) FIELD CONDITIONS
A. ENVIRONMENTAL LIMITATIONS: DO NOT APPLY ASPHALT MATERIALS IF SUBGRADE IS WET OR EXCESSIVELY DAMP. IF RAIN IS IMMINENT OR EXPECTED BEFORE TIME REQUIRED FOR ADEQUATE CURE, OR IF THE FOLLOWING CONDITIONS ARE NOT MET:
1. PRIME COAT: MINIMUM SURFACE TEMPERATURE OF 60 DEG F.
2. TACK COAT: MINIMUM SURFACE TEMPERATURE OF 60 DEG F.
3. SLURRY COAT: COMPLY WITH WEATHER LIMITATIONS IN ASTM D 3910.
4. ASPHALT BASE COURSE: MINIMUM SURFACE TEMPERATURE OF 40 DEG F AND RISING AT TIME OF PLACEMENT.
5. ASPHALT SURFACE COURSE: MINIMUM SURFACE TEMPERATURE OF 60 DEG F AT TIME OF PLACEMENT.
2) ASPHALT MATERIALS
A. REFER TO PROJECT GEOTECHNICAL REPORT AND PROJECT DRAWINGS FOR REQUIRED ASPHALT MATERIAL DESIGN.
B. AGGREGATES SHALL MEET THE REQUIREMENTS OF THE LOCAL DEPARTMENT OF TRANSPORTATION.
C. RECLAIMED ASPHALT PAVEMENT (RAP) SHALL NOT BE USED IN THE MIX DESIGN.
3) PATCHING
A. ASPHALT PAVEMENT: SAW CUT PERIMETER OF PATCH AND EXCAVATE EXISTING PAVEMENT SECTION TO SOUND BASE. EXCAVATE RECTANGULAR OR TRAPEZOIDAL PATCHES, EXTENDING 12 INCHES INTO PERIMETER OF ADJACENT SOUND PAVEMENT, UNLESS OTHERWISE INDICATED. CUT EXCAVATION FACES VERTICALLY. REMOVE EXCAVATED MATERIAL. RECOMPACT EXISTING UNBOUND-AGGREGATE BASE COURSE TO FORM NEW SUBGRADE.
B. TACK COAT: BEFORE PLACING PATCH MATERIAL, APPLY TACK COAT UNIFORMLY TO VERTICAL ASPHALT SURFACES SURROUNDING THE PATCH. APPLY AT A RATE OF 0.06 TO 0.15 GAL./SQ. YD.
1. ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT-MIX ASPHALT PAVING.
2. AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.
C. PLACING PATCH MATERIAL: FILL EXCAVATED PAVEMENT AREAS WITH HOT-MIX ASPHALT BASE MIX OR FULL THICKNESS OF PATCH AND, WHILE STILL HOT, COMPACT FLUSH WITH ADJACENT SURFACE.
4) SURFACE PREPARATION
A. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.
B. STEEL REINFORCEMENT:
1. GENERAL: COMPLY WITH CRSIS' MANUAL OF STANDARD PRACTICE FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT.
2. CLEAN REINFORCEMENT OF LOOSE RUST AND MILL SCALE, EARTH, ICE, OR OTHER BOND-REDUCING MATERIALS.
3. CLEAN THE BARS AT REGULARLY THE BARS AND BAR SUPPORTS TO HOLD REINFORCEMENT IN POSITION DURING CONCRETE PLACEMENT. MAINTAIN MINIMUM COVER TO REINFORCEMENT.
4. INSTALL WELDED WIRE REINFORCEMENT IN LENGTHS AS LONG AS PRACTICABLE. LAP ADJOINING PIECES AT LEAST ONE FULL MESH, AND LAP SPLICES WITH WIRE. OFFSET LAPS OF ADJOINING WIDTHS TO PREVENT CONTINUOUS LAPS IN EITHER DIRECTION.
5. ZINC-COATED REINFORCEMENT: USE GALVANIZED-STEEL WIRE TIES TO FASTEN ZINC-COATED REINFORCEMENT. REPAIR CUT AND DAMAGED ZINC COATINGS WITH ZINC REPAIR MATERIAL.
6) JOINTS
A. GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGES TRUE TO LINE, WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE.
1. WHEN JOINING EXISTING PAVING, PLACE TRANSVERSE JOINTS TO ALIGN WITH PREVIOUSLY PLACED JOINTS UNLESS OTHERWISE INDICATED.
2. CONTINUE STEEL REINFORCEMENT ACROSS CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED.
3. KEYED JOINTS: PROVIDE PRE-FORMED KEYWAY-SECTION FORMS OR BULKHEAD FORMS WITH KEYS UNLESS OTHERWISE INDICATED.
4. SWIDELAPS: PROVIDE PRE-FORMED KEYWAY-SECTION FORMS OR BULKHEAD FORMS WITH KEYS UNLESS OTHERWISE INDICATED.
5. REGULATE THE BARS AT SIDES OF PAVING STRIPS WHERE INDICATED.
6. DURRING CONCRETE PLACEMENT, PROTECT TOP EDGE OF JOINT FILLER FROM CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT.
D. CONTRACTION JOINTS: FORM ISOLATION JOINTS OF PRE-FORMED JOINT-FILLER STRIPS ADJOINING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, OTHER FIXED OBJECTS, AND WHERE INDICATED.
1. LOCATE EXPANSION JOINTS AT INTERVALS OF 30 FEET UNLESS OTHERWISE INDICATED.
2. EXTEND JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT.
3. TERMINATE JOINT FILLER NOT LESS THAN 1/2 INCH FROM FINISHED SURFACE IF JOINT SEALANT IS INDICATED.
4. PLACE TOP OF JOINT FILLER FLUSH WITH FINISHED CONCRETE SURFACE IF JOINT SEALANT IS NOT INDICATED.
5. FURNISH JOINT FILLERS IN ONE-PIECE LENGTHS WHERE MORE THAN ONE LENGTH IS REQUIRED. LADE OR CLIP JOINT-FILLER SECTIONS TOGETHER.
6. DURING CONCRETE PLACEMENT, PROTECT TOP EDGE OF JOINT FILLER FROM CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT.
E. EDGING: AFTER INITIAL FLOATING, TOOL EDGES OF PAVING, GUTTERS, CURBS, AND JOINTS IN CONCRETE WITH AN EDGING TOOL TO A 1/4-INCH RADIUS. REPEAT TOOLING OF EDGES AFTER PAVING SURFACE FINISHES. ELIMINATE EDGING-TOOL MARKS ON CONCRETE SURFACES.

CONCRETE PAVING

- 1) PROJECT CONDITIONS
A. TRAFFIC CONTROL: MAINTAIN ACCESS FOR VEHICULAR AND PEDESTRIAN TRAFFIC AS REQUIRED FOR OTHER CONSTRUCTION ACTIVITIES.
2) STEEL REINFORCEMENT
A. PLAIN-STEEL WELDED WIRE REINFORCEMENT: ASTM A 185/A 185M, FABRICATED FROM AS-DRAWN WELDED WIRE INTO FLAT SHEETS.
B. REINFORCING BARS: ASTM A 615/A 615M, GRADE 60, DEFORMED.
C. JOINT DOWEL BARS: ASTM A 615/A 615M, GRADE 60 PLAIN-STEEL BARS. CUT BARS TRUE TO LENGTH AND END SQUARE AND FREE OF BURRS.
D. BAR SUPPORTS: BOLSTERS, CHAIRS, SPACERS, AND OTHER DEVICES FOR SPACING, SUPPORTING, AND FASTENING REINFORCING BARS, WELDED WIRE REINFORCEMENT, AND DOWELS IN PLACE. MANUFACTURE BAR SUPPORTS ACCORDING TO CRSIS' MANUAL OF STANDARD PRACTICE FOR STEEL WIRE, PLASTIC, OR PRECAST CONCRETE OF GREATER COMPRESSIVE STRENGTH THAN CONCRETE SPECIFIED, AND AS FOLLOWS:
3) CONCRETE MATERIALS
A. CEMENTITIOUS MATERIALS: USE CEMENTITIOUS MATERIALS, OF SAME TYPE, BRAND, AND SOURCE THROUGHOUT PROJECT.
B. NORMAL-WEIGHT AGGREGATES: ASTM C 33, UNIFORMLY GRADED. PROVIDE AGGREGATES FROM A SINGLE SOURCE.
1. MAXIMUM COARSE-AGGREGATE SIZE: 1 INCH NOMINAL.
2. FINE AGGREGATE: FREE OF MATERIALS WITH DELETERIOUS REACTIVITY TO ALKALI IN CEMENT.
4) RELATED MATERIALS
A. JOINT FILLERS: ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER IN PRE-FORMED STRIPS.
5) WHEELS
A. WHEELS: PRECAST, AIR-ENTRAINED CONCRETE, 2500-PSI MINIMUM COMPRESSIVE STRENGTH. PROVIDE CHAMFERED CORNERS AND DRAINAGE SLOTS ON UNDERSIDE AND HOLES FOR ANCHORING TO SUBSTRATE.
6) SIDEWALKS
A. SIDEWALKS: SLOPE SIDEWALKS AWAY FROM BUILDING WITH A 1.5% CROSS-SLOPE UNLESS DRAWINGS INDICATE OTHERWISE.
7) PREPARATION
A. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.
8) STEEL REINFORCEMENT
A. GENERAL: COMPLY WITH CRSIS' MANUAL OF STANDARD PRACTICE FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT.
B. CLEAN REINFORCEMENT OF LOOSE RUST AND MILL SCALE, EARTH, ICE, OR OTHER BOND-REDUCING MATERIALS.
C. CLEAN THE BARS AT REGULARLY THE BARS AND BAR SUPPORTS TO HOLD REINFORCEMENT IN POSITION DURING CONCRETE PLACEMENT. MAINTAIN MINIMUM COVER TO REINFORCEMENT.
D. INSTALL WELDED WIRE REINFORCEMENT IN LENGTHS AS LONG AS PRACTICABLE. LAP ADJOINING PIECES AT LEAST ONE FULL MESH, AND LAP SPLICES WITH WIRE. OFFSET LAPS OF ADJOINING WIDTHS TO PREVENT CONTINUOUS LAPS IN EITHER DIRECTION.
E. ZINC-COATED REINFORCEMENT: USE GALVANIZED-STEEL WIRE TIES TO FASTEN ZINC-COATED REINFORCEMENT. REPAIR CUT AND DAMAGED ZINC COATINGS WITH ZINC REPAIR MATERIAL.
9) GENERAL
A. GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGES TRUE TO LINE, WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE.
1. WHEN JOINING EXISTING PAVING, PLACE TRANSVERSE JOINTS TO ALIGN WITH PREVIOUSLY PLACED JOINTS UNLESS OTHERWISE INDICATED.
2. CONTINUE STEEL REINFORCEMENT ACROSS CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED.
3. KEYED JOINTS: PROVIDE PRE-FORMED KEYWAY-SECTION FORMS OR BULKHEAD FORMS WITH KEYS UNLESS OTHERWISE INDICATED.
4. SWIDELAPS: PROVIDE PRE-FORMED KEYWAY-SECTION FORMS OR BULKHEAD FORMS WITH KEYS UNLESS OTHERWISE INDICATED.
5. REGULATE THE BARS AT SIDES OF PAVING STRIPS WHERE INDICATED.
6. DURRING CONCRETE PLACEMENT, PROTECT TOP EDGE OF JOINT FILLER FROM CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT.
D. CONTRACTION JOINTS: FORM ISOLATION JOINTS OF PRE-FORMED JOINT-FILLER STRIPS ADJOINING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, OTHER FIXED OBJECTS, AND WHERE INDICATED.
1. LOCATE EXPANSION JOINTS AT INTERVALS OF 30 FEET UNLESS OTHERWISE INDICATED.
2. EXTEND JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT.
3. TERMINATE JOINT FILLER NOT LESS THAN 1/2 INCH FROM FINISHED SURFACE IF JOINT SEALANT IS INDICATED.
4. PLACE TOP OF JOINT FILLER FLUSH WITH FINISHED CONCRETE SURFACE IF JOINT SEALANT IS NOT INDICATED.
5. FURNISH JOINT FILLERS IN ONE-PIECE LENGTHS WHERE MORE THAN ONE LENGTH IS REQUIRED. LADE OR CLIP JOINT-FILLER SECTIONS TOGETHER.
6. DURING CONCRETE PLACEMENT, PROTECT TOP EDGE OF JOINT FILLER FROM CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT.
E. EDGING: AFTER INITIAL FLOATING, TOOL EDGES OF PAVING, GUTTERS, CURBS, AND JOINTS IN CONCRETE WITH AN EDGING TOOL TO A 1/4-INCH RADIUS. REPEAT TOOLING OF EDGES AFTER PAVING SURFACE FINISHES. ELIMINATE EDGING-TOOL MARKS ON CONCRETE SURFACES.

FIELD QUALITY CONTROL

- A. TESTING AGENCY: ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS.
B. PROMPTLY SEND TEST REPORTS TO THE ENGINEER FOR REVIEW AND APPROVAL.
C. TESTING SERVICES: TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C 172 SHALL BE PERFORMED BY THE GENERAL CONTRACTOR'S TESTING AGENCY ACCORDING TO THE FOLLOWING REQUIREMENTS:
1. TESTING FREQUENCY: OBTAIN AT LEAST ONE COMPOSITE SAMPLE FOR EACH 100 CU. YD. OR FRACTION THEREOF OF EACH CONCRETE MIXTURE PLACED EACH DAY. WHEN FREQUENCY OF TESTING WILL PROVIDE FEWER THAN FIVE COMPOSITE-TESTS FOR EACH CONCRETE MIXTURE, TESTING SHALL BE CONDUCTED FROM AT LEAST FIVE RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN FIVE ARE USED.
2. SLUMP: ASTM C 143C 143M; ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
3. AIR CONTENT: ASTM C 231, PRESSURE METHOD; ONE TEST FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE.
4. CONCRETE TEMPERATURE: ASTM C 1064C 1064M; ONE TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEG F AND BELOW AND WHEN IT IS 80 DEG F AND ABOVE, AND ONE TEST FOR EACH COMPOSITE SAMPLE.
5. COMPRESSION TEST SPECIMENS: ASTM C 31C 31M; CAST AND LABORATORY CURE ONE SET OF THREE STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
6. COMPRESSIVE-STRENGTHLY TESTS: ASTM C 39C 39M; TEST ONE SPECIMEN AT SEVEN DAYS AND TWO SPECIMENS AT 28 DAYS. A COMPRESSIVE-STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM TWO SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TESTED AT 28 DAYS.
7. STRENGTH OF EACH CONCRETE MIXTURE WILL BE SATISFACTORY IF AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE-STRENGTH TESTS EQUALS OR EXCEEDS SPECIFIED COMPRESSIVE STRENGTH AND NO COMPRESSIVE-STRENGTH TEST VALUE FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI.
8. TEST RESULTS SHALL BE REPORTED IN WRITING TO ENGINEER, CONCRETE MANUFACTURER, AND CONTRACTOR WITHIN 48 HOURS OF TESTING.
9. SPECIAL WARRANTY: MANUFACTURER AND CONTRACTOR SHALL MAKE ADDITIONAL TESTS SHALL CONTAIN PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONTRACTOR TESTING AND INSPECTING AGENCY, LOCATION OF CONCRETE BATCH IN WORK, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIXTURE PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7- AND 28-DAY TESTS.
10. ADDITIONAL TESTS: TESTING AND INSPECTING AGENCY SHALL MAKE ADDITIONAL TESTS CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS, OR OTHER REQUIREMENTS HAVE NOT BEEN MET, AS DIRECTED BY ENGINEER. CONCRETE PAVING WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS THESE TESTS AND INSPECTIONS.
11. REPAIRS AND PROTECTION
A. REMOVE AND REPLACE CONCRETE PAVING THAT IS BROKEN, DAMAGED, OR DEFECTIVE THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION. REPAIR WORK IN COMPLETE SECTIONS FROM JOINT TO JOINT UNLESS OTHERWISE APPROVED BY ENGINEER.
B. DRILL TEST CORES WHERE DIRECTED BY ENGINEER, WHEN NECESSARY TO DETERMINE MAGNITUDE OF CRACKS OR DEFECTS. FILL DRILLED CORES WITH SATISFACTORY PAVING AREAS WITH PORTLAND CEMENT CONCRETE BONDED TO PAVEMENT WITH EPOXY ADHESIVE.
C. PROTECT CONCRETE PAVING FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVING AT LEAST 14 DAYS AFTER PLACEMENT. WHEN CONSTRUCTION TRAFFIC IS PERMITTED, MAINTAIN PAVING AS CLEAN AS POSSIBLE BY REMOVING SURFACE STAINS AND SPILLAGES OF OIL OR GREASE AS THEY OCCUR.
D. MAINTAIN CONCRETE PAVING FREE OF STAINS, DISCOLORATION, AND OTHER FOREIGN MATERIAL. SWEEP PAVING NOT MORE THAN 72 HOURS BEFORE CONCRETE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.

PAVEMENT MARKINGS

- 1) QUALITY ASSURANCE
A. ENVIRONMENTAL LIMITATIONS: PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES AND AT A MINIMUM AMBIENT OR SURFACE TEMPERATURE OF 40 DEG F FOR ALKYD MATERIALS, 55 DEG F FOR WATER-BASED MATERIALS, AND NOT EXCEEDING 95 DEG F.
2) FIELD CONDITIONS
A. PAVEMENT-MARKING PAINT: ALKYD-RESIN TYPE, LEAD AND CHROMATE FREE, READY MIXED, COMPLYING WITH AASHTO M 248; COLORS COMPLYING WITH FS 11-P-1952. COLOR: AS INDICATED.
B. ALL PAVEMENT MARKING WITHIN D.O.T. RIGHT-OF-WAY SHALL BE THERMOPLASTIC AND IN ACCORDANCE WITH D.O.T. SPECIFICATIONS.
3) PAVEMENT MARKING
A. APPLY TEMPORARY PAVEMENT MARKING BEFORE TRAFFIC IS ALLOWED ON ANY NEWLY PAVED AREA OR AS SITE CONDITIONS DICTATE. ALLOW FINAL WEARING SURFACE TO AIR-CURE FOR A MINIMUM OF 30 DAYS BEFORE APPLYING FINAL PERMANENT PAVEMENT MARKING.
4) PAVEMENT MARKING
A. APPLY TEMPORARY PAVEMENT MARKING BEFORE TRAFFIC IS ALLOWED ON ANY NEWLY PAVED AREA OR AS SITE CONDITIONS DICTATE. ALLOW FINAL WEARING SURFACE TO AIR-CURE FOR A MINIMUM OF 30 DAYS BEFORE APPLYING FINAL PERMANENT PAVEMENT MARKING.
5) PROTECTING AND CLEANING
A. PROTECT PAVEMENT MARKINGS FROM DAMAGE AND WEAR DURING REMAINDER OF CONSTRUCTION PERIOD.
B. CLEAN SPILLAGE AND SOLING FROM ADJACENT CONSTRUCTION AREAS USING CLEANING AND PROCEDURES RECOMMENDED BY MANUFACTURER OF EFFECTIVE CLEANING.
CHAIN LINK FENCES AND GATES
1) PROJECT CONDITIONS
A. FIELD MEASUREMENTS: VERIFY LOCATION OF CHAIN LINK FENCES AND GATES SHOWN ON DRAWINGS IN RELATION TO PROPERTY SURVEY AND CONSTRUCTION STRUCTURES. VERIFY DIMENSIONS BY FIELD MEASUREMENT.
2) SPECIAL WARRANTY: MANUFACTURER AND INSTALLER SHALL MAKE ADDITIONAL TESTS SHALL CONTAIN PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONTRACTOR TESTING AND INSPECTING AGENCY, LOCATION OF CONCRETE BATCH IN WORK, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIXTURE PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7- AND 28-DAY TESTS.
10. ADDITIONAL TESTS: TESTING AND INSPECTING AGENCY SHALL MAKE ADDITIONAL TESTS CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS, OR OTHER REQUIREMENTS HAVE NOT BEEN MET, AS DIRECTED BY ENGINEER. CONCRETE PAVING WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS THESE TESTS AND INSPECTIONS.
11. REPAIRS AND PROTECTION
A. REMOVE AND REPLACE CONCRETE PAVING THAT IS BROKEN, DAMAGED, OR DEFECTIVE THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION. REPAIR WORK IN COMPLETE SECTIONS FROM JOINT TO JOINT UNLESS OTHERWISE APPROVED BY ENGINEER.
B. DRILL TEST CORES WHERE DIRECTED BY ENGINEER, WHEN NECESSARY TO DETERMINE MAGNITUDE OF CRACKS OR DEFECTS. FILL DRILLED CORES WITH SATISFACTORY PAVING AREAS WITH PORTLAND CEMENT CONCRETE BONDED TO PAVEMENT WITH EPOXY ADHESIVE.
C. PROTECT CONCRETE PAVING FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVING AT LEAST 14 DAYS AFTER PLACEMENT. WHEN CONSTRUCTION TRAFFIC IS PERMITTED, MAINTAIN PAVING AS CLEAN AS POSSIBLE BY REMOVING SURFACE STAINS AND SPILLAGES OF OIL OR GREASE AS THEY OCCUR.
D. MAINTAIN CONCRETE PAVING FREE OF STAINS, DISCOLORATION, AND OTHER FOREIGN MATERIAL. SWEEP PAVING NOT MORE THAN 72 HOURS BEFORE CONCRETE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.
1) CHAIN LINK FENCES AND GATES
A. GENERAL: COMPLY WITH ASTM F 626.
B. POST CAPS: PROVIDE FOR EACH POST. PROVIDE LINE POST CAPS WITH LOOP TO RECEIVE TENSION WIRE OR TOP RAIL.
C. RAIL AND BRACE ENDS: FOR EACH GATE, CORNER, PULL, AND END POST.
D. RAIL FITTINGS: PROVIDE THE FOLLOWING:
1. TOP RAIL SLEEVES: PRESSED-STEEL OR ROUND-STEEL TUBING NOT LESS THAN 6 INCHES LONG.
2. RAIL CLAMPS: LINE AND CORNER BOULEVARD CLAMPS FOR CONNECTING RAILS IN THE FENCE LINE-TO-LINE POSTS.
E. TENSION AND BRACE BANDS: PRESSED STEEL.
F. TENSION BARS: STEEL, LENGTH NOT LESS THAN 2 INCHES SHORTER THAN FULL HEIGHT OF CHAIN-LINK FABRIC. PROVIDE ONE BAR FOR EACH GATE AND END POST, AND TWO FOR EACH CORNER AND PULL POST, UNLESS FABRIC IS INTEGRALLY WOVEN INTO POST.
G. TRUSS ROD ASSEMBLIES: STEEL, HOT-DIP GALVANIZED AFTER THREADING ROD AND TURNBUCKLE OR OTHER MEANS OF ADJUSTMENT.
H. TIE WIRES, CLIPS, AND FASTENERS: ACCORDING TO ASTM F 626. STANDARD ROUND WIRE TIES: FOR ATTACHING CHAIN-LINK FABRIC TO POSTS, RAILS, AND FRAMES; COMPLYING WITH THE FOLLOWING: HOT-DIP GALVANIZED STEEL; 0.148-INCH- DIAMETER WIRE; GALVANIZED COATING THICKNESS MATCHING COATING THICKNESS OF CHAIN-LINK FENCE FABRIC.
I. GROUT AND ANCHORING CEMENT
A. NONSHRINK, NONMETALLIC GROUT: PREMIXED, FACTORY-PACKAGED, NONSTAINING, NONCORROSIVE, NONAGGREGIOUS GROUT COMPLYING WITH ASTM C 1107. PROVIDE GROUT, RECOMMENDED IN WRITING BY MANUFACTURER, FOR EXTERIOR APPLICATIONS.
B. EROSION-RESISTANT ANCHORING CEMENT: FACTORY-PACKAGED, NONSHRINK, NONSTAINING, HYDRAULIC-CONTROLLED EXPANSION CEMENT FORMULATION FOR MIXING WITH POTABLE WATER AT PROJECT SITE TO CREATE POURABLE ANCHORING, PATCHING, AND GROUTING COMPOUND. PROVIDE FORMULATION THAT IS RESISTANT TO EROSION FROM WATER EXPOSURE WITHOUT NEEDING PROTECTION BY A SEALER OR WATERPROOF COATING AND THAT IS RECOMMENDED IN WRITING BY MANUFACTURER, FOR EXTERIOR APPLICATIONS.
9) ADJUSTING
A. GATES: ADJUST GATES TO OPERATE SMOOTHLY, EASILY, AND QUIETLY, FREE OF BINDING, WARP, EXCESSIVE DEFLECTION, DISTORTION, NONALIGNMENT, MISPLACEMENT, DISRUPTION, OR MALFUNCTION, THROUGHOUT ENTIRE OPERATIONAL RANGE. CONFIRM THAT LATCHES AND LOCKS ENGAGE ACCURATELY AND SECURELY WITHOUT FORCING OR BINDING.

ENGINEER FORESTATE GROUP Inc. www.fg-inc.net 3705 Winding Road, Suite 100 Peachtree Corners, GA 30092 770.368.1399
PROJECT: 107-111 BRANNON DRIVE GREER, SC 29651 PARCEL # TO150003003000 & TO150003003001
SEAL: SOUTH CAROLINA PROFESSIONAL ENGINEER No. 34332 Brett C. Brannan 11/5/18



Table with 2 columns: REVISIONS and DATE. Includes rows for JURISDICTIONAL COMMENTS with dates 2018-11-02, 2018-11-09, 2018-11-14, 2018-11-19, and 2018-11-28.

PROJECT MANAGER: JMJ
DRAWING BY: JAM
JURISDICTION: GREER, SC
DATE: 2018-09-21
SCALE: AS SHOWN
TITLE:

GENERAL NOTES
SHEET NUMBER: G-2.1
COMMENTS: PERMIT SET
JOB/FILE NUMBER: 814.026