

SPECIFICATIONS

01015 - GENERAL CONDITIONS

- A. AIA DOCUMENT A201, "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," LATEST EDITION, SHALL APPLY TO ALL PHASES OF THE WORK AND SHALL BECOME A PART OF THE CONTRACT. COPIES ARE ON FILE IN THE ARCHITECT'S OFFICE.

01016 - SPECIAL CONDITIONS

- A. THE GENERAL CONTRACTOR SHALL INCLUDE ALL STATE AND LOCAL INSPECTIONS AS REQUIRED BY GOVERNING AGENCIES.
- B. THE GENERAL CONTRACTOR SHALL PROVIDE ALL TEMPORARY BARRICADES TO PROTECT THE PUBLIC, OWNERS EMPLOYEES, AND CONTRACTOR'S EMPLOYEES.
- C. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ADJACENT PROPERTIES AT THEIR ORIGINAL STATE THROUGHOUT THE ENTIRE CONSTRUCTION PHASE. IF SAID PROPERTIES ARE DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR/REPLACE WITH NO ADDITIONAL COSTS.
- D. CONTRACTOR IS RESPONSIBLE FOR CONTACTING A LOCAL COMPANY SPECIALIZED IN THE SERVICE OF VERIFYING LOCATIONS OF ALL UNDERGROUND UTILITIES 48 HOURS PRIOR TO START OF ALL CONSTRUCTION.
- E. DISCREPANCIES: SHOULD A CONTRACTOR FIND DISCREPANCIES IN OR OMISSIONS FROM THE DRAWINGS AND DOCUMENTS, OR SHOULD HE BE IN DOUBT AS TO THEIR MEANING, HE SHOULD AT ONCE NOTIFY THE ARCHITECT-ENGINEER WHO WILL SEND OUT WRITTEN INSTRUCTION.
- F. SITE VISITATION: PRIOR TO BIDDING THE WORK THE CONTRACTOR SHALL EXAMINE, INVESTIGATE AND INSPECT THE CONSTRUCTION SITE AS TO THE NATURE AND LOCATION OF THE WORK, AND THE GENERAL AND LOCAL CONDITIONS AT THE CONSTRUCTION SITE, INCLUDING WITHOUT LIMITATION, THE CHARACTER OF SURFACE OR SUBSURFACE CONDITIONS AND OBSTACLES TO BE ENFORCED ON AND AROUND THE CONSTRUCTION SITE.

01070 - CUTTING AND PATCHING

- A. IT IS INTENDED THAT THE GENERAL CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING FOR GENERAL CONSTRUCTION TRADES, MECHANICAL, ELECTRICAL, AND FIRE PROTECTION. PATCHING SHALL MEAN THE RESTORATION OF A SURFACE OR ITEM TO ITS ORIGINAL CONDITION TO MATCH THE EXISTING, UNLESS OTHERWISE INDICATED, NOTED, DETAILED, OR SPECIFIED. CUTTING AND PATCHING SHALL BE DONE BY THE PROPER TRADES AND CRAFTS NECESSARY FOR THE MATERIALS INVOLVED.

01081 - CODES AND PERMITS

- A. ALL MATERIALS, INCLUDING INTERIOR FINISHES AND TRIM AND THEIR INSTALLATION, SHALL COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE AND ALL APPLICABLE LOCAL GOVERNING CODES. ALL MATERIALS SHALL BE GUARANTEED FOR ONE YEAR AFTER COMPLETION DATE.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL LOCAL, STATE, AND FEDERAL PERMITS, INSPECTIONS, AND APPROVALS, AND SHALL ASSEMBLE ALL APPROVALS AND GUARANTEES AND SUBMIT THEM TO THE OWNER.

01040 - SUBMITTALS

- A. CONTRACTORS SHALL SUBMIT SIX(6) COPIES OF SHOP DRAWINGS, MATERIAL INFORMATION, CATALOG DATA, WIRING DIAGRAMS, INSTALLATION & MAINTENANCE INSTRUCTIONS, PERFORMANCE CURVES & DATA, SAMPLES, COLOR CHARTS, MIX DESIGNS, ETC. TO ARCHITECT FOR REVIEW.

01060 - LAYOUT

- A. THE CONTRACTOR SHALL PROVIDE COMPETENT ENGINEERING SERVICES TO LAYOUT THE WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS. HE SHALL VERIFY THE FIGURES ON THE DRAWINGS BEFORE UNDERTAKING CONSTRUCTION WORK AND SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE FINISHED WORK.

01400 - GUARANTEE

THE CONTRACTOR GUARANTEES FOR A PERIOD OF ONE (1) YEAR OR FOR LONGER PERIODS WHERE SO PROVIDED IN THE SPECIFICATIONS, FROM THE DATE OF FINAL CERTIFICATE ISSUED BY THE ARCHITECT-ENGINEER, ALL MATERIALS AND WORKMANSHIP INSTALLED UNDER HIS CONTRACT TO BE OF GOOD QUALITY IN EVERY RESPECT AND TO REMAIN SO FOR THE PERIODS DESCRIBED HEREIN. THE CONTRACTOR SHALL SECURE GUARANTEES FOR ALL WORK PERFORMED BY HIS SUBCONTRACTORS, WHERE GUARANTEES ARE REQUIRED, AND DELIVER COPIES OF SAME TO ARCHITECT-ENGINEER UPON COMPLETION OF WORK. SHOULD ANY DEFECTS DEVELOP IN AFORESAID WORK, WITHIN THE SPECIFIED PERIODS, DUE TO FAULTS IN MATERIALS OR WORKMANSHIP, THE CONTRACTOR HEREBY AGREES TO MAKE ALL NECESSARY WORK TO CORRECT THE DEFECTIVE WORK TO THE OWNER'S SATISFACTION. SUCH REPAIRS AND CORRECTIVE WORK, INCLUDING THE COST OF MAKING GOOD ALL OTHER WORK DAMAGED BY OTHERWISE AFFECTED BY MAKING OF REPAIRS OR CORRECTIVE WORK, SHALL BE DONE WITHOUT COST TO THE OWNER AND AT THE ENTIRE COST AND EXPENSE OF THE CONTRACTOR WITHIN FIVE (5) DAYS AFTER WRITTEN NOTICE TO THE CONTRACTOR BY THE OWNER. IN CASE THE CONTRACTOR FAILS TO DO WORK AS ORDERED, THE OWNER MAY HAVE SUCH WORK DONE AND CHARGE THE COST THEREOF AGAINST MONIES RETAINED AS PROVIDED FOR IN THE AGREEMENT. IF SAID RETAINED MONIES SHALL BE INSUFFICIENT TO PAY SUCH COST, OR IF NO MONEY IS AVAILABLE, THE CONTRACTOR AND HIS SURETIES AGREE TO PAY TO THE OWNER THE COST OF SUCH WORK, NOTHING HEREIN INTENDS OR IMPLIES THAT SUCH GUARANTY SHALL APPLY TO WORK WHICH HAS BEEN ABUSED OR NEGLECTED BY THE OWNER OR HIS SUCCESSOR IN INTEREST.

01710 - CLEANING

- A. THROUGHOUT THE CONSTRUCTION PERIOD, MAINTAIN THE BUILDING AND SITE IN A STANDARD OF CLEANLINESS AS DESCRIBED IN THIS SECTION.
- B. BUILDING SHALL BE BROOM CLEANED AT THE END OF EACH WORKING DAY. DIRT, DUST AND SCRAP WILL NOT BE TOLERATED. IN THE EVENT THAT THE CONTRACTOR DOES NOT CLEAN AT THE END OF DAY, THE OWNER WILL CLEAN AND COST WILL BE BILLED TO THE CONTRACTOR IF BUILDING IS NOT SUFFICIENTLY CLEAN, OWNER WILL CLEAN AND BILL COST TO THE CONTRACTOR.
- C. TURNOVER: ALL EQUIPMENT SHALL BE FREE OF ALL DUST, DIRT, GREASE, OIL, METAL SHAVINGS, ETC.

01720 - AS BUILT SET

- A. THE CONTRACTOR SHALL PROVIDE AN "AS BUILT SET" (RED LINE MARK UP) AT THE COMPLETION OF THE PROJECT TO THE ARCHITECT.

02010 - SITE WORK (GENERAL)

1. ALL WASTE MATERIAL AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. MATERIAL SHALL NOT BE ALLOWED TO ACCUMULATE OR BECOME A SAFETY/FIRE HAZARD. OPEN BURNING WILL NOT BE PERMITTED. ALL THE SALVAGED MATERIALS WILL BECOME THE CONTRACTOR'S PROPERTY UNLESS OTHERWISE NOTED.
2. DUST CONTROL: USE ALL MEANS NECESSARY TO CONTROL AIR POLLUTION AND OTHER ENVIRONMENTAL CONTAMINATION AS REQUIRED TO PREVENT DUST OR DEBRIS BEING A NUISANCE TO THE PUBLIC NEIGHBORS, AND CONCURRENT PERFORMANCE OF OTHER WORK ON THE SITE.
3. PROTECTION: INSTALL AND MAINTAIN BARRICADES, WARNING LIGHTS AND PEDESTRIAN/VEHICLE CAUTIONS IN ACCORDANCE WITH LOCAL SAFETY REGULATIONS AND ORDINANCES.
4. THE MINIMUM SOIL BEARING PRESSURE SHALL BE 2500 PSF.

02200 - EXCAVATING, FILLING AND GRADING

- A. WORK SHALL INCLUDE EXCAVATING FOR FOOTINGS AND FOUNDATIONS, FILLING AND BACKFILLING TO ATTAIN INDICATED GRADES, TRENCHING AND TRENCH BACKFILLING, ROUGH AND FINISH GRADING OF SITE, AND FURNISHING AND INSTALLING OF GRANULAR CUSHION UNDER ALL CONCRETE SLABS ON GRADE.
- B. STRIP THE BUILDING PAD AND ALL PAVED AREAS OF ALL TOPSOIL AND OTHER SOIL NOT SUITABLE OR OTHERWISE CAPABLE OF SUPPORTING A LOAD OF 2500 PSF. REFER TO TERRACON SOILS REPORT DATED 04/06/2000. COPY AVAILABLE UPON REQUEST.
- C. ON-SITE FILL MATERIAL: SOIL OF SOIL-ROCK MIXTURE, FREE FROM ORGANIC MATTER OR OTHER DELETERIOUS SUBSTANCE. NO ROCKS OR LUMPS 6" IN GREATEST DIMENSION, AND NOT MORE THAN 15% OF ROCKS OR LUMPS SHALL BE LARGER THAN 2 1/2" IN GREATEST DIMENSION.
- D. IMPORTED FILL MATERIAL: SHALL MEET DESCRIPTION OF PARAGRAPH 4 AND, IN ADDITION SHALL BE PREDOMINANTLY GRANULAR WITH A MIXTURE OF SAND AND GRAVEL MATERIAL OF 2" MAXIMUM PARTICLE SIZE.
- E. GRANULAR CUSHION: PASSING ONE INCH MESH: 100% NUMBER 4 SIEVE; MAX. 5% NUMBER 200 SIEVE; MAX. 1% SLAG OR FOUNDRY SAND WILL NOT BE PERMITTED.
- F. TRENCH AND STRUCTURAL BACKFILL: SHALL MEET DESCRIPTION OF PARAGRAPH A.
- G. OTHER MATERIALS: MATERIALS NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION SHALL BE SELECTED BY THE CONTRACTOR SUBJECT TO THE ARCHITECT-ENGINEER'S APPROVAL.
- H. COMPACTION: AFTER SUBGRADE COMPACTION HAS BEEN APPROVED BY THE ARCHITECT-ENGINEER, SPREAD APPROVED FILL MATERIAL IN LAYERS NOT EXCEEDING 8" IN UNCOMPACTED THICKNESS. REQUIRED COMPACTION: 95% OF MAX. DESIGN DENSITY.
- I. TOPSOIL: 4" MIN. THICKNESS REQUIRED FOR ALL SEEDED AND PLANTED AREAS. FINISH GRADE TO UNIFORM SLOPES TO MAINTAIN A MINIMUM OF A 2% SLOPE FROM THE BUILDING IN ALL DIRECTIONS AS INDICATED ON THE SITE PLAN. CHANGES IN SLOPE SHALL BE GENTLY ROUNDED AND ALL AREAS GRADE TO DRAIN. IF TOPSOIL IS REQUIRED IN ADDITION TO WHAT IS AVAILABLE ON THE SITE, IT SHALL BE INSTALLED BY THE CONTRACTOR AND CONFORM TO THE FOLLOWING SPECIFICATIONS. TOPSOIL SHALL BE NATURAL, FRIABLE, FERTILE SOIL POSSESSING CHARACTERISTICS OF PRODUCTIVE SOIL IN THE VICINITY. IT SHALL BE FREE OF STONES, CLAY LUMPS, ROOTS, AND OTHER FOREIGN MATTER. REMOVE ALL STONE AND ROCK APPEARING DURING GRADING OPERATIONS.
- J. ALL GRADING IS TO BE DONE AS REQUIRED TO MAINTAIN A 2% SLOPE FROM THE BUILDING IN ALL DIRECTIONS.
- K. PREPARE FINAL GRADE OF ENTIRE SITE, W/ 4" MIN. TOPSOIL AND SEED AND FERTILIZER AND MULCH.
- L. 4" CONCRETE SLAB AND CURB
- M. SOILS REPORT DATED APRIL 6, 2000 BY TERRACON IS AVAILABLE FOR REVIEW & GENERALLY STATES:
1. EXISTING SITE HAS FILL PRESENT & IS NOT SUITABLE FOR DIRECT SUPPORT OF FOUNDATIONS NOR SLABS AND THEREFORE ALL SURFACE VEGETATION AND 2.5 FEET OF EXISTING FILL MUST BE REMOVED FROM BUILDING AND PAVEMENT AREAS. IF ANY ADDITIONAL UNSUITABLE FILL IS OBSERVED IT SHOULD BE REMOVED AND REPLACED.
2. SCARIFY AND COMPACT REMAINING EXISTING FILL WITH MOISTURE AND DENSITY CONTROL.
3. FOLLOW RECOMMENDATIONS OF SOILS REPORT.

02612 - ASPHALT CONCRETE PAVING

- A. ASPHALT CONCRETE PAVING SHALL INCLUDE BUT SHALL NOT BE LIMITED TO FINAL GRADING OF SUBGRADE, MINERAL AGGREGATE BASE COURSE, ASPHALT SURFACING MATERIALS, AND PLACING OF THE ASPHALT CONCRETE SYSTEM. (SEE THE SCHEDULE AND DETAIL FOR ADDITIONAL SPECIFICATION INFORMATION).
- B. SITE CONDITIONS: PAVING SHALL BE PLACED UNDER THE FOLLOWING: PRIME COAT TO BE APPLIED WHEN THE AMBIENT TEMPERATURE IS ABOVE 50 DEG. F. FOR TWELVE (12) HOURS IMMEDIATELY PRIOR TO APPLICATION. BASE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 30 DEG. F. AND RISING. CONSTRUCT ASPHALTIC CONCRETE SURFACE WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40 DEG. F. AND WHEN BASE IS DRY.
- C. ASPHALT CEMENT: ASHTO M 228 (ASTM 3381) FOR VISCOSITY - GRADED MATERIAL AND ASHTO M 200 (ASTM D946) FOR PENETRATION - GRADED MATERIAL.
- D. PRIME COAT: CUT BACK ASPHALT TYPE: ASHTO M 82 (ASTM D2027) MC-30, MC-70, OR MC250 AT A RATE OF 0.20 GAL. TO 0.50 GAL. PER SQ. YARD.
- E. PROVIDE PLUG MIXED HOT LAID ASPHALT-AGGREGATE MIXTURE COMPLYING WITH ASTM D3515 AS SHOWN ON DETAIL.
- F. IT IS THE CONTRACTOR'S OPTION TO USE A 6" CONCRETE SLAB W/ 6X6 10X10 REINFORCING AND THE SAME 6" AGGREGATE COURSE IN LIEU OF THE 4" ASPHALT SECTION SPECIFIED.

02614 - CONCRETE PAVING, SIDEWALKS AND PADS

- A. CONTRACTORS TO USE A 6" CONCRETE SLAB W/ 6X6, W1.4 x W1.4 W.W.F. REINFORCING (UNLESS SHOWN OTHERWISE) ON 6"-1"Ø AGGREGATE DRAINAGE COURSE.
- B. MINERAL FILLER: ROCK OR SLAG DUST, HYDRAULIC CEMENT OR OTHER INERT MATERIAL COMPLYING WITH ASHTO M 17 (ASTM D242).
- C. OTHER MATERIALS NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR A PROPER AND COMPLETE INSTALLATION SHALL BE SELECTED BY THE CONTRACTOR SUBJECT TO APPROVAL BY THE ARCHITECT-ENGINEER.

02010 - SITE WORK (VINYL FENCING)

- 1.01 GENERAL:
- A. THIS SECTION INCLUDES THE FOLLOWING:
1. POLYVINYL CHLORIDE (PVC) FENCE AND GATE COMPONENTS.
 2. GATE HARDWARE.
 3. REINFORCING STEEL FOR CONCRETE-FILLED, REINFORCED FENCE POSTS.
 4. CONCRETE FOR POST FOOTINGS AND FOR CONCRETE FILLED REINFORCED FENCE POSTS.
- 1.02 SUBMITTALS:
- A. PRODUCT DATA : IN THE FORM OF MANUFACTURER'S TECHNICAL DATA, SPECIFICATIONS, AND ACCESSORIES.
- C. SHOP DRAWINGS SHOWING FENCE DESIGN.
- 1.03 QUALITY ASSURANCE:
- A. INSTALLER QUALIFICATIONS: ENGAGE AN EXPERIENCED INSTALLER WHO HAS AT LEAST THREE YEARS EXPERIENCE.
- 1.04 WARRANTY:
- A. MANUFACTURER'S WARRANTY: 30 YEAR NON-PRORATED LIMITED WARRANTY APPLIES TO COMMERCIAL APPLICATIONS.
- 2.01 FENCE MATERIALS:
- A. MANUFACTURER :
1. CERTAINTED CORPORATION, P.O. BOX 860, VALLEY FORGE, PA 19482 (800)233-8990
 2. STYLE: EVER NEW, BEL AIR
 3. COLOR: TAN
- 2.02 POLYVINYL CHLORIDE (PVC) FENCE COMPONENTS:
- A. GENERAL: POSTS, RAILS, PICKETS, GATE UPRIGHTS, POST CAPS, AND ACCESSORIES SHALL BE OF HIGH IMPACT, ULTRA VIOLET (U.V.) RESISTANT, RIGID PVC, AND SHALL COMPLY WITH ASTM D 1784, CLASS 14344B.
- B. FENCE POSTS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED AND PRE-ROUTED TO RECEIVE RAILS AT SPACING INDICATED.
- C. RAILS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED PRE-ROUTED TO RECEIVE PICKETS AT SPACING INDICATED.
- D. PICKETS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED.
- E. GATE UPRIGHTS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED.
- F. POST CAPS: MOLDED, ONE PIECE.
1. CROSS SECTION: MATCH POST OR GATE UPRIGHT CROSS SECTION.
2. THICKNESS: 0.095" MINIMUM
3. CONFIGURATION: FLAT OR FOUR-SIDED AS REQUIRED FOR INSTALLATION TO TOP OF POSTS AND GATE.
- G. ACCESSORIES: MANUFACTURERS' STANDARD GATE BRACE, SCREW CAPS, RAIL END REINFORCERS, AND OTHER ACCESSORIES AS REQUIRED.

02010 - SITE WORK (VINYL FENCING) CONT.

- 2.03 MISCELLANEOUS MATERIALS:
- A. GALVANIZED STEEL STRUCTURAL CHANNEL. CONFIGURE CHANNELS FOR CONCEALED INSTALLATION WITHIN PVC RAILS WITH PRE-DRILLED HOLES FOR DRAINAGE. ALUMINUM EXTRUDED CHANNEL AVAILABLE UPON REQUEST.
1. CROSS SECTION: 3.00" x 3.00" x 1.500" HOURGLASS SHAPE TO GRIP PICKET.
 2. THICKNESS: 0.040 GAUGE (MINIMUM)
- B. FASTENERS AND ANCHORAGE: STAINLESS STEEL ALL FASTENERS TO BE CONCEALED OR COLORED HEADS TO MATCH. PROVIDE SIZES AS RECOMMENDED BY FENCE MANUFACTURER.
- C. PVC CEMENT: AS RECOMMENDED BY FENCE MANUFACTURER.
- 2.04 GATE HARDWARE AND ACCESSORIES:
- A. HINGES: SIZE AND MATERIAL TO SUIT GATE SIZE, NON LIFT-OFF TYPE, SELF CLOSING, GLASS FILLED NYLON WITH STAINLESS STEEL ADJUSTER PLATE, OFFSET TO PERMIT 120 DEGREE GATE OPENING. PROVIDE ONE PAIR OF HINGES FOR EACH GATE.
1. STAINLESS STEEL, PAINTED WITH CARBO ZINC BASE.
 2. FINISH: PRE PAINTED, 2 COATS "POLAR"
 3. COLOR: BLACK GRAVITY LATCH OR DUAL ACCESS GRAVITY LATCH.
- B. LATCH: MANUFACTURERS' STANDARD SELF LATCHING, THUMB LATCH, PRE-FINISHED STEEL OR STAINLESS STEEL GRAVITY LATCH. PROVIDE ONE LATCH PER GATE.
- C. HARDWARE: STAINLESS STEEL. PROVIDE SIZES AS RECOMMENDED BY FENCE MANUFACTURER.
- 2.05 CONCRETE:
- A. CONCRETE: PROVIDE CEMENT CONSISTING OF PORTLAND CEMENT PER ASTM C 150, AGGREGATES PER ASTM C 33, AND POTABLE WATER. MIX MATERIALS TO OBTAIN CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI. USE AT LEAST FOUR SACKS OF CEMENT PER CUBIC YARD, 1-INCH MAXIMUM SIZE AGGREGATE, 3-INCH MAXIMUM SLUMP. USE 3/4 INCH MAXIMUM SIZE AGGREGATE IN POST WHERE REQUIRED.
- B. PACKAGES CONCRETE MIX MIX DRY-PACKAGED NORMAL-WEIGHT CONCRETE CONFORMING TO ASTM C 387 WITH CLEAN WATER TO OBTAIN A 2 TO 3 INCH SLUMP.
- 2.06 REINFORCEMENT FOR FILLED POSTS:
- A. REINFORCING STEEL: STEEL REINFORCING BARS: ASTM A 615, GRADE 60, DEFORMED (#4 OR 1/2").
- 3.01 INSTALLATION, GENERAL:
- A. INSTALL FENCE IN COMPLIANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

02900 - LANDSCAPING

- A. PROVIDE THE FOLLOWING SPECIES FOR LANDSCAPING AS INDICATED ON THE SITE PLAN.
- B. STANDARDS:
- PLANTS SHALL EQUAL OR EXCEED QUALITY AND SIZES SPECIFIED TO COMPLY WITH THE CURRENT EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" FOR NUMBER ONE NURSERY STOCK. BALL SIZES SHALL EQUAL OR EXCEED SIZES SPECIFIED. PLANTS SHALL BE NURSERY GROWN, SOUND, HEALTHY, FULL DEVELOPED, AND FREE FROM INSECT AND DISEASE DAMAGE TO MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL. NO HEELED-IN PLANTS, OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED. ALL PLANT MATERIAL SHALL BE CAREFULLY SELECTED FOR MATURE-LIKE APPEARANCE, HAVING FULL BUSHY CROWNS AND SHOWING PROPER BALANCE BETWEEN STEMS OR TRUNKS AND CROWNS. SHRUBS IN FORMAL ARRANGEMENT OR OCCURRING IN CONTINUOUS LINE SHALL BE CAREFULLY SELECTED FOR UNIFORM HEIGHT, SPREAD, AND HABIT. BALLED AND BURLEAPPED SHRUBS SHALL BE FIRMLY WRAPPED WITH BURLAP.

02900 - LANDSCAPING CONT.

- ALL PLANTS:
1. TRUE TO NAME, WITH ONE EACH BUNDLE OR LOT TAGGED WITH THE NAME AND SIZE OF THE PLANTS IN ACCORDANCE WITH STANDARDS OF PRACTICE OF AMERICAN ASSOCIATION OF NURSERYMEN.
 2. IN ALL CASES, BOTANICAL NAMES TAKE PRECEDENCE OVER COMMON NAMES.
- C. PLANT CARE:
- PROVIDE NECESSARY PRECAUTION, INCLUDING WATERING TO ESTABLISH UNIFORM AND HEALTHY GROWTH UNTIL THE END OF THE GUARANTEE PERIOD. PLANTS SHALL BE GUARANTEED 100% FOR ONE YEAR AFTER THE FINAL ACCEPTANCE OF ALL PLANTING OPERATIONS AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT END OF GUARANTEE PERIOD. UPON COMPLETION OF THE GUARANTEE PERIOD, THE CONTRACTOR WILL NOTIFY THE ENGINEER WHO WILL ARRANGE A FINAL INSPECTION DATE.
- UNSATISFACTORY PLANTS SHALL BE REMOVED AND REPLACED WITH PLANTS EQUAL TO AND INSTALLED AS THOSE ORIGINALLY SPECIFIED, DURING THE GUARANTEE PERIOD AT NO ADDITIONAL COST TO THE OWNER.
- D. PROVIDE A 2" DEEP BED (STRIP) OF WASHED RIVERBED STONE, EDGE WITH M.D. 1/8" ALUMINUM LANDSCAPE EDGING. SEE SITE PLAN FOR WIDTH.
- E. PROVIDE A WATER PERMEABLE FILTRATION/SEPARATION FABRIC OF FIBERGLASS OR POLYPROPYLENE FABRIC UNDER ALL STONE AREAS.
- 02821 - SEEDING
- A. REQUIRED AT ALL DISTURBED OR DEMOLISHED AREAS AND WHERE SHOWN ON THE SITE PLAN.
- B. SEED MIXTURE: 40% KENTUCKY BLUEGRASS (POA PRATENSIS), 20% CREEPING RED FESCUE (FESTUCA RUBRA), 40% PENNINE PERENNIAL RYE. SOWING 3#/1000 S.F.
- C. FERTILIZER: COMMERCIAL ORGANIC TYPE SLOW ACTING, CONTAINING 12-12-12 NITROGEN, PHOSPHORIC ACID, AND POTASH. APPLY 30#/1000 S.F.
- D. MULCHING: STRAW SHALL BE WHEAT OR OATS, FREE OF WEED SEED AND SUCH FOREIGN MATERIALS AS MAY DETRACT FROM THEIR EFFECTIVENESS AS MULCH OF INJURIOUS TO DESIRED PLANT GROWTH. APPLY 1.5 BALES/1000 S.F.
- E. LAWN CARE: PROVIDE NECESSARY CARE & MAINTENANCE, INCLUDING WATERING, TO ESTABLISH A SMOOTH, UNIFORM LAWN WITHIN ONE GROWING SEASON.

02910 - IRRIGATION SYSTEM

- A. MATERIALS AND PRODUCTS
1. SUBMITTALS:
- A. STANDARD PLANS & DETAILS OF:
1. CONTRACTOR / SUPPLIER SHALL DESIGN AND LAYOUT SYSTEM AND COORDINATE LOCATIONS, SIZES AND CONNECTIONS WITH GENERAL CONTRACTOR.
 2. PLAN OF IRRIGATION SYSTEM SHOWING LOCATIONS OF ALL HEADS, PIPING, VALVES, ETC.
 3. MANUFACTURER'S DATA: SUBMIT EACH MANUFACTURER'S CATALOG OF PARTS.
2. PRODUCTS
- A. PIPE AND FITTINGS SHALL BE TYPE "L" HARD COPPER OR POLYBUTYLENE TUBING MAY BE USED WHERE CODE PERMITS.
- B. CONTROL VALVES SHALL BE TORO, RAIN BIRD, OR APPROVED EQUAL:
1. MANUAL: BRONZE CONSTRUCTION, ANGLE PATTERN, FULL OPENING, FLOATING DISC, KEY OPERATED, WITH COMPLETE BONNET AND STEM ASSEMBLY CAPABLE OF BEING REMOVED FROM INSTALLED VALVE WITHOUT DISTURBING VALVE BODY.
 2. REMOTE ELECTRICALLY OPERATED: GLOBE VALVE, NORMALLY CLOSED, WITH BRONZE BODY AND TOP COVER, INTEGRALLY MOLDED SINGLE-SEAT, DIAPHRAGM - OPERATED, 24 VOLT ELECTRIC SOLENOID ACTUATED; AND WITH MANUALLY OPERATED ADJUSTING SYSTEM ENABLING VALVE TO BE PARTIALLY OR FULLY CLOSED.
- C. BACK FLOW PREVENTER:
1. ATMOSPHERE VACUUM BREAKER: BRONZE CONSTRUCTION CONSISTING OF AIR INLET EQUAL TO OR LARGER THAN AREA OF WATER INLET.
 2. PRESSURE TYPE VACUUM ASSEMBLY: RED BRASS CONSTRUCTION, WITH CHECK VALVE, VACUUM RELIEF, INLET AND DISCHARGE SHUT - OFFS, AND FIELD TEST COCKS, WITH RELIEF OPENING OF GREATER DIAMETER THAN THAT OF UNIT, AND WITH PROTECTIVE SCREEN. DEVISE AND INSTALLATION SHALL CONFORM TO LOCAL AND STATE REGULATIONS.
- D. LAWN IRRIGATION EQUIPMENT:
1. ROTARY POP - UP HEADS: SPRINKLER HEADS SHALL BE MANUFACTURED BY TORO, RAIN BIRD OR APPROVED EQUAL.

02910 - IRRIGATION SYSTEM (CONT.)

- B. EXECUTION AND WORKMANSHIP
1. INSTALLATION SHALL BE AS PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
 - A. INSPECTION: DO NOT ENCLOSE OR COVER ANY WORK UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED.
 - B. TESTING AND FLUSHING:
 1. FLUSHING: AFTER ALL PIPING, RISERS, AND VALVES ARE IN PLACE AND CONNECTED THOROUGHLY FLUSH PIPING SYSTEM UNDER A FULL HEAD OF WATER.
 2. TESTING: CONDUIT PRESSURE TEST:
 - A. HYDROSTATICALLY TEST THE PIPING SYSTEM IN PLACE BEFORE BACKFILLING.
 - B. MAINTAIN A MINIMUM TEST PRESSURE OF 100 PSI FOR A PERIOD OF NOT LESS THAN ONE HOUR.
 - C. TEST IS ACCEPTABLE IF NO LEAKAGE OR LOSS OF PRESSURE IS EVIDENT DURING TEST PERIOD.
 - D. DETECT AND REPAIR ALL LEAKS.
 - E. RETEST THE SYSTEM UNTIL TEST PRESSURE CAN BE MAINTAINED FOR DURATION OF THE TEST.
 3. OPERATION TEST:
 - A. AT CONCLUSION OF PRESSURE TEST, INSTALL SPRINKLER HEADS AND TEST ENTIRE SYSTEM FOR OPERATION UNDER NORMAL OPERATING PRESSURE.

03310 - CONCRETE WORK

- A. CODES AND STANDARDS: COMPLY WITH PROVISIONS OF THE FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS:
1. ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
 2. ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
 3. CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE"
- B. FURNISH COMPLETE TEST REPORTS FROM A LABORATORY ACCEPTABLE TO THE OWNER AND/OR ARCHITECT, INDICATING THAT ADMIXTURES PROPOSED FOR USE IN THE WORK HAVE NO DETRIMENTAL EFFECT ON CONCRETE MADE WITH CEMENT AND AGGREGATES TO BE USED. ADMIXTURES PROPOSED FOR USE MUST BE SUBMITTED FOR REVIEW AND APPROVAL BEFORE USE.
- C. OBTAIN FIELD SAMPLES (THREE CYLINDERS FOR TESTING) TESTS SHALL BE REQUIRED FOR EACH FIFTEEN (15) CUBIC YARDS MAXIMUM. TWO (2) COPIES OF TEST RESULTS SHALL BE SENT TO ARCHITECT'S OFFICE.
- D. REINFORCING BARS: ASTM A 615, GRADE 60, DEFORMED.
- E. WELDED WIRE FABRIC: ASTM 185, 6 X 6, W2.9 X W2.9, OR AS NOTED.
- F. PORTLAND CEMENT: ASTM C150, TYPE 1, NORMAL WEIGHT AGGREGATES: ASTM C260, AIR-ENTRAINING ADMIXTURE: ASTM C266.
- G. GRANULAR BASE: EVENLY GRADED MIXTURE OF FINE AND COARSE AGGREGATES UP TO 1".

03310 - CONCRETE WORK CONT.

- H. VAPOR BARRIER: POLYETHYLENE SHEET, 6 MILS THICK. LAP JOINTS 6" AND SEAL APPROPRIATE TAPE.
- I. LIQUID MEMBRANE FORMING CURING COMPOUND: LIQUID TYPE MEMBRANE-FORMING CURING COMPOUND WITH ASTM C309, TYPE I, CLASS A.
- J. 3000 PSI, 28 DAY COMPRESSIVE STRENGTH; W/C RATIO 0.58 MAXIMUM (NON AIR-ENTRAINED), 0.46 MAXIMUM (AIR-ENTRAINED).
- K. READY-MIX CONCRETE: COMPLY WITH REQUIREMENTS OF ASTM C94.
- L. VERTICAL CONCRETE SURFACES ABOVE GRADE SHALL BE FORMED.
- M. CONTRACTION (CONTROL) JOINTS IN SLABS-ON-GROUND: USE SAW CUT, 1/4" WIDE X 1/3" OF SLAB DEPTH. FILL JOINT WITH POURABLE SEALANT, COLOR TO MATCH CONCRETE.
- N. USE EXPANSION OR CONSTRUCTION JOINTS OF 1/2" X SLAB DEPTH ASPHALT IMPREGNATED STRIP WHERE SHOWN ON DRAWINGS.
- O. DO NOT USE CALCIUM CHLORIDE, SALT, OR OTHER MATERIALS CONTAINING ANTI-FREEZE AGENTS.
- P. INTERIOR FLOORS SHALL BE STEEL TROWEL FINISHED AND THE EXTERIOR CONCRETE SLABS SHALL BE TROWEL FINISHED AND THEN NON-SLIP BROOM FINISHED.
- Q. CONCRETE TOLERANCES MUST BE MAINTAINED AS FOLLOWS: ALL SLABS SHALL BE LEVEL WITH A MAXIMUM VARIANCE OF 1/8" IN TEN FEET.

03410 - STRUCTURAL PRECAST CONCRETE

- A. SHOP DRAWINGS: SUBMIT SHOP DRAWINGS SHOWING COMPLETE INFORMATION FOR FABRICATIONS AND INSTALLATION OF PRECAST CONCRETE UNITS.
- B. THE ROOF DECK SHALL BE 8" PLANK, 4 FT. WIDE, HOLLOW CORE SLABS 4 HCB WITH STRAND DESIGNATION 66-S, OR AS NOTED.
- C. QUALITY ASSURANCE: PRESTRESSED CONCRETE INSTITUTE MNL 116, (MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF PRECAST CONCRETE PRODUCTS).
- D. AFTER THE EXPOSED PRECAST CEILING IS WATERPROOFED, CAULK JOINTS WITH A SMOOTH CONCAVE GROOVE.
- E. FABRICATION: MANUFACTURE UNITS OF CONCRETE MATERIALS WHICH WILL SUPPORT A MINIMUM 3500 PSI COMPRESSIVE STRENGTH AT TIME OF INITIAL PRE-STRESS AND A 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI.
- F. LIVE LOAD DESIGN SHALL BE 30 #/S.F. AND INCORPORATE AN ADDITIONAL LOAD OF 400 LBS. LOCATED FOUR FOOT ON CENTER - SEE FLOOR PLAN FOR LOCATIONS. IN REGIONAL AREAS WHERE CODE LIVE LOAD REQUIREMENTS ARE GREATER THAN 30 #/S.F., THE DEPTH OF THE STRUCTURAL PRECAST CONCRETE MUST BE REDESIGNED ACCORDINGLY. THE NEW DESIGN SHALL BE CERTIFIED BY A REGISTERED STRUCTURAL ENGINEER.
- G. A36 MISC. SHAPES, A615 GR 60 REBAR, E70XX WELD.
- H. GROUT MIX MIN. 3000 PSI.

04210 - UNIT MASONRY (CONCRETE BRICK)

- A. CONCRETE BRICK SHALL BE AS FOLLOWS: PROVIDE AN ALLOWANCE OF \$500 PER THOUSAND BRICK ALLOWANCE. BRICK SHALL BE MIDWEST BLOCK & BRICK ST. LOUIS, MO 4"x8"x4" CONCRETE BRICK COLOR: "OCTOBER BLEND"
- B. MORTAR TESTS SHALL CONFORM TO ASTM C780.
- C. JOINT REINFORCING SHALL BE GALVANIZED TRUSS TYPE TRIPROD W1.7/W1.7 AT 16" O.C. PARAPET WALLS SHALL BE REINFORCED AT 16" O.C.
- D. USE TYPE N MORTAR FOR EXTERIOR, ABOVE-GROUND LOADBEARING AND NON-LOADBEARING WALLS.
- E. NYLON CORD WEEP HOLES: SASH CORD LENGTH REQUIRED TO PROVIDE 2" EXPOSURE ON EXTERIOR AND 18" IN CAVITY BETWEEN BOARD INSULATION.
- F. CAVITY WALL INSULATION SHALL BE 1-1/2" EXTRUDED POLYSTYRENE BOARD INSULATION, R VALUE 5.4 PER INCH.
- G. COPPER-FABRIC LAMINATE FLASHING, WEIGHT 3 OZ. WHERE INDICATED AS: "FABRIC FLASHING".
- H. INSTALL GALVANIZED STEEL Lintel ANGLES AS INDICATED.
- I. SEAL EXTERIOR CONCRETE BRICK WITH CLEAR SILICON SEALER IN ACCORDANCE WITH BRICK MANUFACTURERS SPECIFICATIONS & RECOMMENDATIONS OR AS IN #07175

Revision	Date	No.
REVISIONS PER CITY	09-08-00	△

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DRAWINGS SHALL NOT BE SCALED.

QUESTIONS ON DIMENSIONS SHALL BE REFERRED TO THE ARCHITECT'S OFFICE.

CONTRACTORS SHALL VERIFY AND COORDINATE ALL DIMENSIONS, DETAILS, AND JOB CONDITIONS.



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SPECIFICATIONS

Scale	AS NOTED	
Date	03-20-2000	Comm No. 000960
In Charge	DCM	
Drawn By	RLC/WHC	
Checked By	SSS	

SP1