

NOTE:
 1. GEOTHERMAL WELLS PRESENT UNDER FIELD. APPROXIMATE DEPTH IS 4'±. CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION.

ALL WORK SHALL MEET THE CURRENT KANSAS CITY METROPOLITAN CHAPTER OF APWA TECHNICAL SPECIFICATIONS (ADOPTED FEBRUARY 15, 2017) UNLESS NOTED OTHERWISE.

FINISH GRADING

A. THIS SECTION COVERS PREPARING THE GROUND SURFACE AND FURNISHING AND APPLYING FERTILIZER AND OTHER ADDITIVES TO ALL DISTURBED AREAS TO BE SEEDED OR SODDED AT THE LOCATIONS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE SCHOOL DISTRICT. ALL AREAS ARE TO BE FINAL GRADED BY THE CONTRACTOR. THIS OPERATION SHALL BE COMPLETED AND ACCEPTABLE TO THE SCHOOL DISTRICT. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF DAMAGED FINISH GRADED AREAS UNTIL SEEDING OPERATIONS BEGIN.

B. FINE GRADING AND FERTILIZING INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
 a. REMOVAL OF ALL WEED GROWTH.
 b. THOROUGH CULTIVATION OF THE SOIL TO A WEED FREE CONDITION.
 c. RE-ESTABLISHMENT OF FINAL GRADE, AND ADJUST SPRINKLER HEAD ELEVATION AND PLUMBNESS IF PRESENT.
 d. PERFORMANCE OF FINE GRADING AS HEREIN SPECIFIED.

C. DEFINITION
 1. THE WORDS "FINISH GRADING," AS USED HEREIN, MEAN THE ESTABLISHMENT OF THE REQUIRED FINAL GRADE ELEVATIONS INDICATED ON THE DRAWINGS.
 2. ALL SURFACES SHALL BE BROUGHT TO THE INDICATED GRADES AND CONTOURS, AND LEFT IN A "FINISH-GRADED" CONDITION, FREE OF ALL CLODS, STONES LARGER THAN 1/4 -INCH OR WEEDS AND OTHER DEBRIS, READY FOR SEEDING AND/OR SODDING.

D. GRADING TOLERANCES
 1. PLAYING FIELD AREAS SHALL BE GRADED TO A TOLERANCE OF +/- 0.04' (0.50-INCHES) AS MEASURED WITH A 25' STRING LINE.
 2. ALL AREAS ARE TO BE LASER GRADED USING DUAL PLANE LASER TECHNOLOGY AND MACHINERY EQUIPPED WITH FLOTATION TYPE TURF TIRES. THIS OPERATION SHALL BE COMPLETED AND ACCEPTABLE TO THE SCHOOL DISTRICT PRIOR TO GRASSING. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF DAMAGED, FINISHED GRADED AREAS UNTIL GRASSING OPERATIONS BEGIN. CONTRACTOR IS ALSO RESPONSIBLE FOR PROTECTING AND RE-ALIGNING IRRIGATION HEADS AND VALVE BOXES IF PRESENT.

F. UPON COMPLETION OF SURFACE PREPARATION, AND IMMEDIATELY PRIOR TO SODDING, THE AREAS SHALL BE GIVEN A FINAL GRADING AS NEEDED TO CORRECT IRREGULARITIES IN THE SURFACE, DUE TO THE ABOVE OPERATIONS OR OTHER CAUSES, AND TO RESTORE THE PRESCRIBED GRADES.

G. PORTIONS NOT READILY WORKED BY MACHINE SHALL BE WORKED BY HAND. AREAS ADJACENT TO CURBS, WALKS, SIGNS, EXISTING TREES, LIGHT POLES AND OTHER SITE ITEMS SHALL BE HAND WORKED AND BLENDED INTO ADJACENT GRADES.

H. NO FINE GRADING SHALL BE DONE WHEN THE SOIL IS IN A MUDDY OR FROZEN CONDITION.

PREPARATION OF UNCHANGED GRADES
 A. WHERE SEEDING IS TO BE DONE IN AREAS THAT HAVE NOT BEEN ALTERED OR DISTURBED BY EXCAVATING, GRADING, OR STRIPPING OPERATIONS, PREPARE SOIL FOR LAWN PLANTING AS FOLLOWS:
 1. TILL TO A DEPTH OF NOT LESS THAN 6 INCHES.
 2. APPLY FERTILIZERS AS REQUIRED FOR SURFACE CONDITIONS.
 3. REMOVE HIGH AREAS AND FILL IN DEPRESSIONS.
 4. TILL SOIL TO A FINE TEXTURE, FREE OF LUMPS, CLODS, STONES, ROOTS AND OTHER EXTRANEIOUS MATTER.

B. PRIOR TO PREPARATION OF UNCHANGED AREAS, REMOVE EXISTING GRASS, VEGETATION AND TURF. DISPOSE OF SUCH MATERIAL OUTSIDE OF OWNER'S PROPERTY. DO NOT TURN EXISTING VEGETATION OVER INTO SOIL BEING PREPARED FOR LAWNS.

C. FINE GRADE AREA TO SMOOTH, EVEN SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE. REMOVE RIDGES AND DEPRESSIONS.

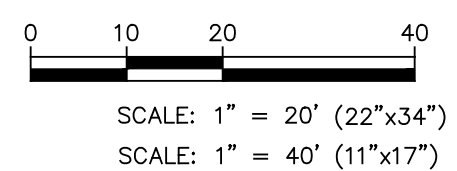
D. RESTORE AREA TO SPECIFIED CONDITION, IF ERODED OR OTHERWISE DISTURBED, AFTER FINE GRADING AND PRIOR TO PLANTING.

CLEANING UP
 A. ANY TOPSOIL OR OTHER DIRT WHICH MAY BE BROUGHT ON TO PAVEMENTS AS A RESULT OF GRADING SHALL BE REMOVED FROM THE PAVEMENT PROMPTLY.

SEEDING AND SODDING
 A. DISTURBED AREAS TO BE SEEDED OR SODDED AS NOTED WITH TALL TURF TYPE FESCUE. SEEDING AND SODDING SHALL BE COMPLETED IN ACCORDANCE WITH THE FEBRUARY 2017 KANSAS CITY METROPOLITAN CHAPTER OF APWA, TECHNICAL SPECIFICATION SECTIONS 2401 AND 2402, RESPECTIVELY. SOD SHALL BE WATERED IMMEDIATELY AND WATERED TWICE A DAY FOR A MINIMUM OF 21 DAYS.

EROSION CONTROL
 A. CONTRACTOR SHALL PROVIDE AND MAINTAIN SILT FENCE (APWA DETAIL ESC-03) OR WATTLE (APWA DETAIL ESC-04) AROUND DISTURBANCE PERIMETER UNTIL SITE IS STABILIZED AND GROUND COVER IS ACHIEVED OVER 70% OF THE DISTURBED AREA.

NOTES
 21 MATCH EXISTING ELEVATION

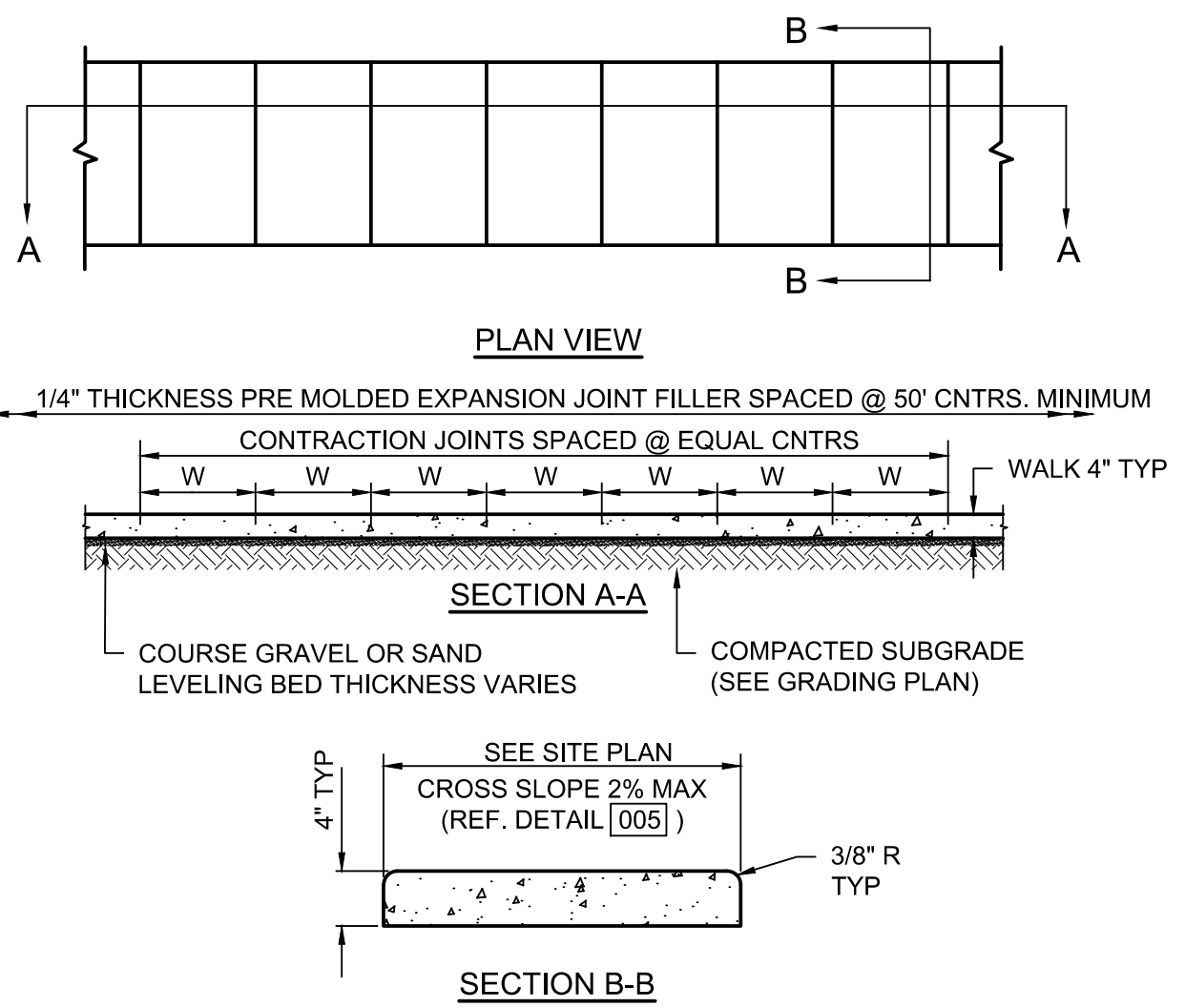


IRRIGATION PERFORMANCE SPECIFICATION (SPORTS FIELDS):
 THE FOLLOWING CRITERIA SHALL BE CONSIDERED MINIMUM STANDARDS FOR DESIGN AND INSTALLATION OF LANDSCAPE IRRIGATION SYSTEM:

- GENERAL - IRRIGATION SYSTEM TO IRRIGATION OF PLAYING FIELDS AS NOTED ON THE PLANS. HEADS SHALL CONSIST OF RAINBIRD SERIES 8005 ROTORS. MADE SPECIFICALLY FOR SPORTS FIELD APPLICATIONS.
- IRRIGATION SYSTEM SHALL CONFORM TO ALL INDUSTRY STANDARDS AND ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING DESIGN AND INSTALLATION.
- WATER LINE TYPE, SIZE LOCATION, PRESSURE AND FLOW SHALL BE FIELD VERIFIED PRIOR TO SYSTEM DESIGN AND INSTALLATION.
- ALL MATERIALS SHALL BE FROM NEW STOCK FREE OF DEFECTS AND CARRY A MINIMUM ONE YEAR WARRANTY FROM THE DATE OF SUBSTANTIAL COMPLETION.
- THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED IN SUCH A WAY THAT ALL SYSTEM COMPONENTS OPERATE WITHIN THE GUIDELINES ESTABLISHED BY THE MANUFACTURER.
- THE IRRIGATION SYSTEM SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. THE SYSTEM WATER SUPPLY IS FROM AN EXISTING IRRIGATION SYSTEM LOCATED WEST OF THE BUILDING. METER AND BACKFLOW PREVENTER ARE EXISTING.
- IRRIGATION CONTROLLER SHALL BE LOCATED EAST OF THE BUILDING. REPLACE THE EXISTING HUNTER CONTROLLER WITH RAINBIRD MODEL THAT IS COMPATIBLE WITH ETHERNET CARD FOR FUTURE CENTRAL CONTROL.
- IRRIGATION CONTROLLER STATIONS SHALL BE LABELED TO CORRESPOND WITH THE CIRCUIT IT CONTROLS.
- CONTRACTOR SHALL PROVIDE TO THE OWNER WRITTEN OPERATION INFORMATION FOR ALL SYSTEM COMPONENTS.
- CONTRACTOR SHALL PROVIDE TO THE OWNER ALL KEYS, ACCESS TOOLS, WRENCHES AND ADJUSTING TOOLS NECESSARY TO GAIN ACCESS, ADJUST AND CONTROL THE SYSTEM.
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- AN AUTOMATIC RAIN SHUT-OFF OR MOISTURE DEVICE SHALL BE INSTALLED.
- ALL R.C.V. CONTROLLER WIRES ARE TO BE IN CONDUIT WHILE UNDER PAVING. ROUTING OF R.C.V. WIRES TO CONTROL VALVES SHALL BE BY THE IRRIGATION CONTRACTOR.
- INSTALL SCHEDULE 40 PVC SLEEVES UNDER ALL CURBS, PAVING AND SIDEWALKS. SLEEVES TO BE TWICE THE SIZE OF THE LINE IT HOUSES.
- INSTALL MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN TO ALLOW GRAVITY DRAINING OF MAIN DURING WINTER MONTHS. ZONES OR NOZZLES SHALL BE DESIGNED WITH MATCHED PRECIPITATION RATES.
- MINIMUM LATERAL DEPTH IS 15" AND MAIN DEPTH IS 18". (DEPTH IS TO TOP OF PIPE)
- SUBMIT DESIGN DRAWING WITH BID TO ALLOW OWNER TO EVALUATE SYSTEM. INCLUDE CUT SHEETS OF ALL COMPONENTS AND ZONE TABLE ILLUSTRATING FLOWS AND ANTICIPATED PRESSURE AT FURTHEST HEAD.
- AN "AS-BUILT" SCALED DRAWING SHALL BE PROVIDED TO THE OWNER BY THE CONTRACTOR AND SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
 - AS CONSTRUCTED LOCATION OF ALL COMPONENTS
 - COMPONENT NAME, MANUFACTURER, MODEL INFORMATION, SIZE AND QUANTITY
 - PIPE SIZE AND QUANTITY
 - INDICATION OF SPRINKLER HEAD SPRAY PATTERN
 - CIRCUIT IDENTIFICATION SYSTEM
 - DETAILED METHOD OF WINTERIZING SYSTEM
 - SUBMIT AS-BUILT DRAWING IN FULL SIZE DRAWING FORM AS WELL AS PDF ELECTRONIC FORMAT. (SCANNING FULL SIZE COPY OF PLAN IS ACCEPTABLE IF IT CAN BE PRINTED TO SCALE)
- PROVIDE "ATTIC STOCK" AS FOLLOWS"
 - ONE IRRIGATION HEAD OF EACH TYPE
 - ONE REMOTE CONTROL VALVE OF EACH SIZE

- CONCRETE AND SIDEWALK NOTES:**
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AND COMPLY WITH KCMMB SPECIFICATIONS. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH APWA SECTION 2200.
 - REINFORCING STEEL SHALL BE GRADE 60 EPOXY COATED AND COMPLY WITH ASTM A615. ALL CUT ENDS OR DAMAGED AREAS SHALL BE FIELD REPAIRED WITH EPOXY COATING.
 - SIDEWALKS TO BE BROOM FINISHED.
 - SUBGRADE TO BE COMPACTED TO 90% MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. MOISTURE CONTENT TO BE WITHIN A RANGE OF 2% BELOW TO 2% ABOVE OPTIMUM MOISTURE AS DEFINED BY ASTM D698.
 - SIDEWALK JOINTS MAY BE SAWN UNLESS NOTED OTHERWISE.

NOTE:
 1. CONTRACTOR SHALL BACKFILL SIDEWALKS WITH TOPSOIL AND SEED/SOD IN ACCORDANCE WITH LANDSCAPE PLAN AND PROJECT SPECIFICATIONS.



CONCRETE SIDEWALK 055

PROJ. NO.	C17-9424
DESIGNER	DRAWN BY
CFN	9424EXBA
SHEET	REV
C100	1

DDW	NUN	DDW	NUN
2/19/18	INITIAL ISSUE	2/13/18	CLIENT REVIEW
1	0	2/13/18	REV DATE
			DESCRIPTION
			DSN
			DWN
			CHK

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PLAYFIELD RENOVATIONS