

**ADDENDUM No. 1**

to the  
Construction Documents

for the

**Softball Field Improvements**

**ADDENDUM No. 1**

**Northern Kentucky University**

February 28, 2020

I. GENERAL

1. This Addendum shall supercede all previously issued Contract Documents wherein it modifies same. All other conditions remain unchanged. The following changes, additions, or deletions as set forth herein shall apply to the above documents and shall be made part thereof and shall be subject to all the requirements thereof as though originally shown and / or specified.
2. After receipt of bids and prior to execution of Agreement, Project Manual and Drawings will be revised and re-issued to incorporate modifications made by Addenda.
3. Acknowledge receipt of this Addendum on Bid Proposal

II. REVISIONS TO DOCUMENTS

A. **BIDDING REQUIREMENTS, CONTRACT FORMS, AND CONDITIONS OF THE CONTRACT**

1. None

B. **SPECIFICATIONS**

1. Section 328400 – Underground Irrigation Systems
  - a. Replace Paragraph 2.01.A with:

“A. Manufacturer: Subject to compliance with requirements, provide products of one of the following:

    1. Rain Bird Sprinkler Mfg. Corp.”
  - b. Replace Paragraph 2.02.G with:

“G. Valve Box: Valve Access Box: Tapered rib reinforced enclosure of rigid plastic material comprised of polyolefin fibrous components chemically inert and unaffected by moisture, ultraviolet light, corrosion and temperature changes. Provide lid of same material, green in color with light, corrosion and temperature changes. Provide lid of same material, green in color with snap lock cover. AMETEK or approved equal (10" round minimum size) allowed.”
  - c. Add Paragraph 2.02.I.2:

“Each lateral Line must also have a 14AWG Single strand wire attached for location purposes as required by the university.”
  - e. Remove Paragraph 3.03

C. **DRAWINGS**

CIVIL

1. Sheet C100 General Notes & Details
  - a. Geotextile Fabric was removed from the natural turf collector pipe detail.
  - b. Warning track detail was modified so that foundation depth is listed as varies. The depth will be 3' where there is a 4' fence and 4' when there is an 8' fence.
2. Sheet C120 Demolition Plan
  - a. Demolition keynote 4 was edited to read “remove clay infield full depth and haul off site.”
  - b. Demolition keynote added was revised to read “remove sod 1½” deep across the existing playing area.”
3. Sheet C130 Location Plan
  - a. Location keynote 4 was revised to read “New 1½ sand based low-cut sod.”
  - b. Project summary note 1 was revised to read “remove sod 1½” deep across the existing playing area.”
  - c. Project summary note 10 was added to read “Base Bid: Contractor to import soils from offsite in order to meet grades as shown and described in the contract documents. Bid Alternate 2: Contractor to use on-site

soils, stock-piled in gravel lay down/staging area located beyond center field wall. Contractor is to assume there will be up to 3,000 cubic yards of suitable soils to be used. As part of this alternate, contractor is to have equipment in place in order to seal up and protect stockpile from rain beginning April 27, 2020. Bid alternate 2: Contractor to use on-site soils, stock-piled in gravel lay down/staging area located beyond center field wall. Contractor is to assume there will be up to 3,000 cubic yards of suitable soils to be used. As part of this alternate, contractor is to have equipment in place in order to seal up and protect stockpile from rain beginning April 27, 2020.”

4. Sheet C150 Grading Plan
  - a. Project summary note 1 was revised to read “remove sod 1½” deep across the existing playing area.”
  - b. Project summary note 10 was added to read “Base Bid: Contractor to import soils from offsite in order to meet grades as shown and described in the contract documents. Bid Alternate 2: Contractor to use on-site soils, stock-piled in gravel lay down/staging area located beyond center field wall. Contractor is to assume there will be up to 3,000 cubic yards of suitable soils to be used. As part of this alternate, contractor is to have equipment in place in order to seal up and protect stockpile from rain beginning April 27, 2020. Bid alternate 2: Contractor to use on-site soils, stock-piled in gravel lay down/staging area located beyond center field wall. Contractor is to assume there will be up to 3,000 cubic yards of suitable soils to be used. As part of this alternate, contractor is to have equipment in place in order to seal up and protect stockpile from rain beginning April 27, 2020.”
  - c. Backstop elevation was revised to read 858.76

**D. CONTRACTOR QUESTIONS**

\*\*\* END OF ADDENDUM No. 1 \*\*\*

**NKU Softball Field Renovations  
Pre-Bid Meeting  
February 20, 2020**

I. Introductions

**NKU Team**

- Ryan Straus: Contracts & Bidding Procurement Services coordinator
- Liz Birkenhauer: Planning Design and Construction, assoc. director
- Chris Hafling: Associate Athletic Director for Operations and Event Management
- Dan McIver: Deputy Athletic Director
- Mary Paula Schuh: Planning Design and Construction, sr. director
- Bill Moulton: facility services, assistant director

**The Kleingers Group:**

- Brad D'Agnillo: Project manager
- Craig Honkomp:

II. Site Logistics Overview

- Staging area at adjacent access road
- Parking Permits still required, link included in bid docs.

III. Schedule Overview

- Ground breaking schedule for April 23, 2020
- Project Turn-Over no later than August 14, 2020.

IV. General Items

- Sign-in Sheet for Pre-Bid
- Project is not prevailing wage
- Project Is not Tax Exempt
- Addendum #1 will be released week of 2/28/2020
  - List of answers to any bidder questions issued by 12 pm 2/25
  - Revised Irrigation Section 328400 – Underground Irrigation System revised for NKU standards
  - Deduct alternate/price and spec for stockpile of soil materials and soil fill material to discuss with bidders
- Bids Due **11 am est 03/09/2020**

V. Questions

- Email any questions to [strausr2@nku.edu](mailto:strausr2@nku.edu)
- Q&A log will be recorded and distributed to all bidders up until 12 pm 2/25

		NKCC-03-2020		
		Softball Field Repairs		
		Pre-Bid Meeting Sign-In Sheet		
		2/20/2020 @ 2:30 PM		
PLEASE PRINT INFORMATION LEGIBLY. THANK YOU.				
	NAME	COMPANY	PHONE NUMBER	E-MAIL
1	RYAN MARGRAF	THE MOTE GROUP	513 533 6450	
2	ZAC HOWE	ASBURY SPORTS TURF	(859) 496-1141	
3	Ben Rogers	Team Allsports	513-241-6210	Team call sports@a-fuze.net
4	Jeff Heil	Oheil site solutions	737 673 3793	jeff@oheilsitesolutions.com
5	Dave Middendorf	Century Contractor	859.379.6626	dmiddendorf@centuryconstruction.com
6	Jason Schmehl	Site Scapes	513-314-1726	Jason@sitescapes.co.com
7				
8				
9				
10				



**GENERAL NOTES**

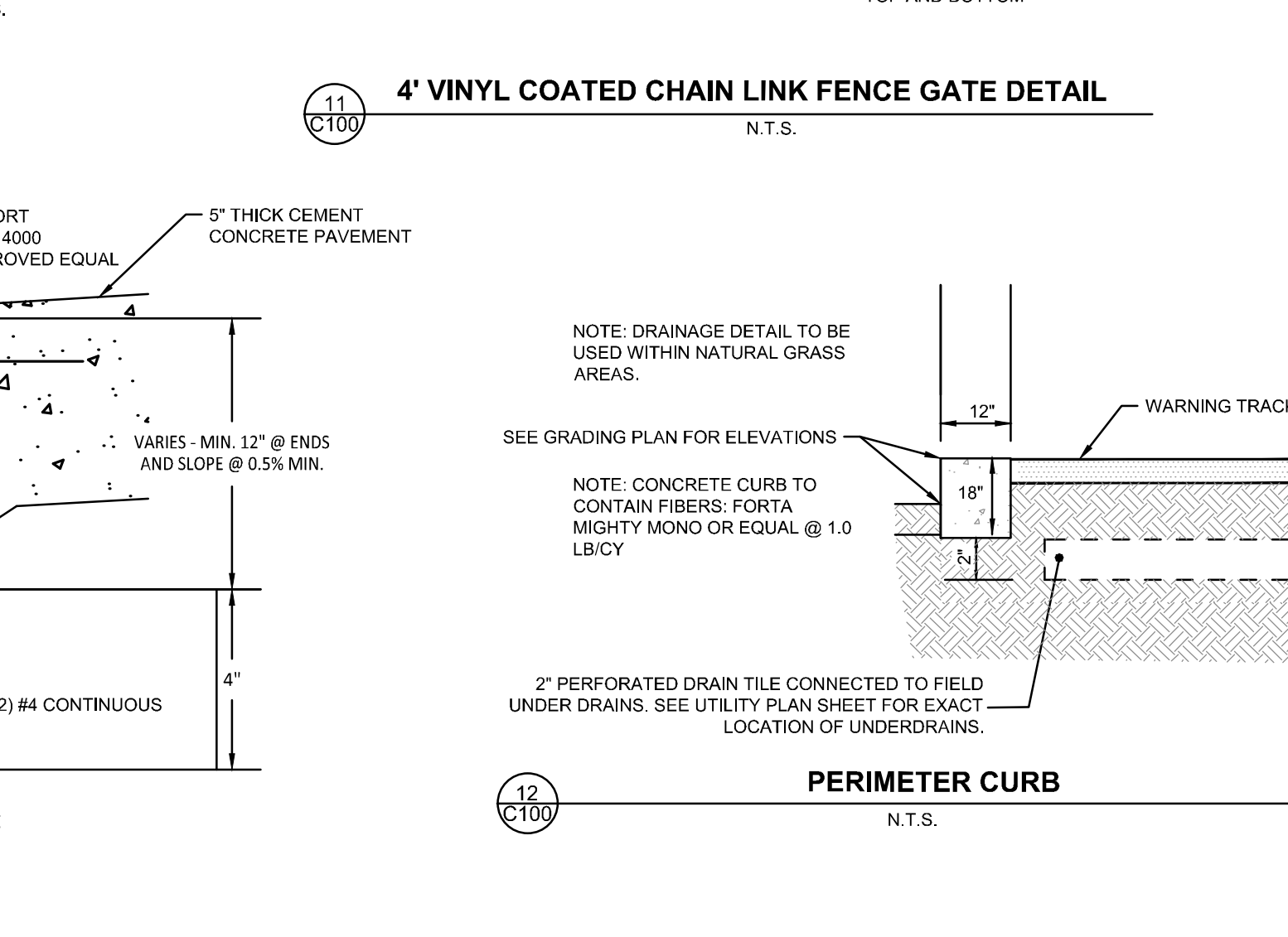
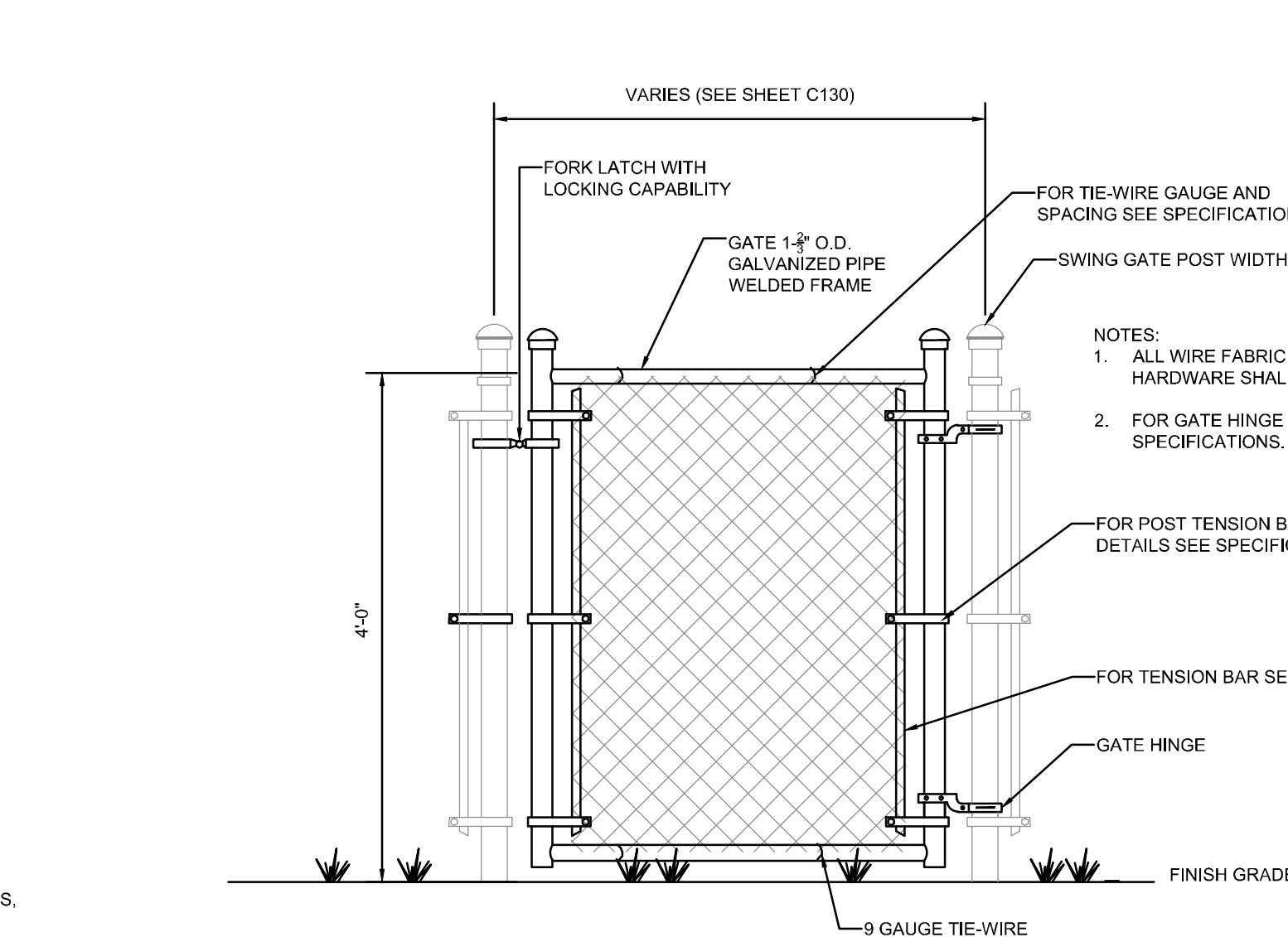
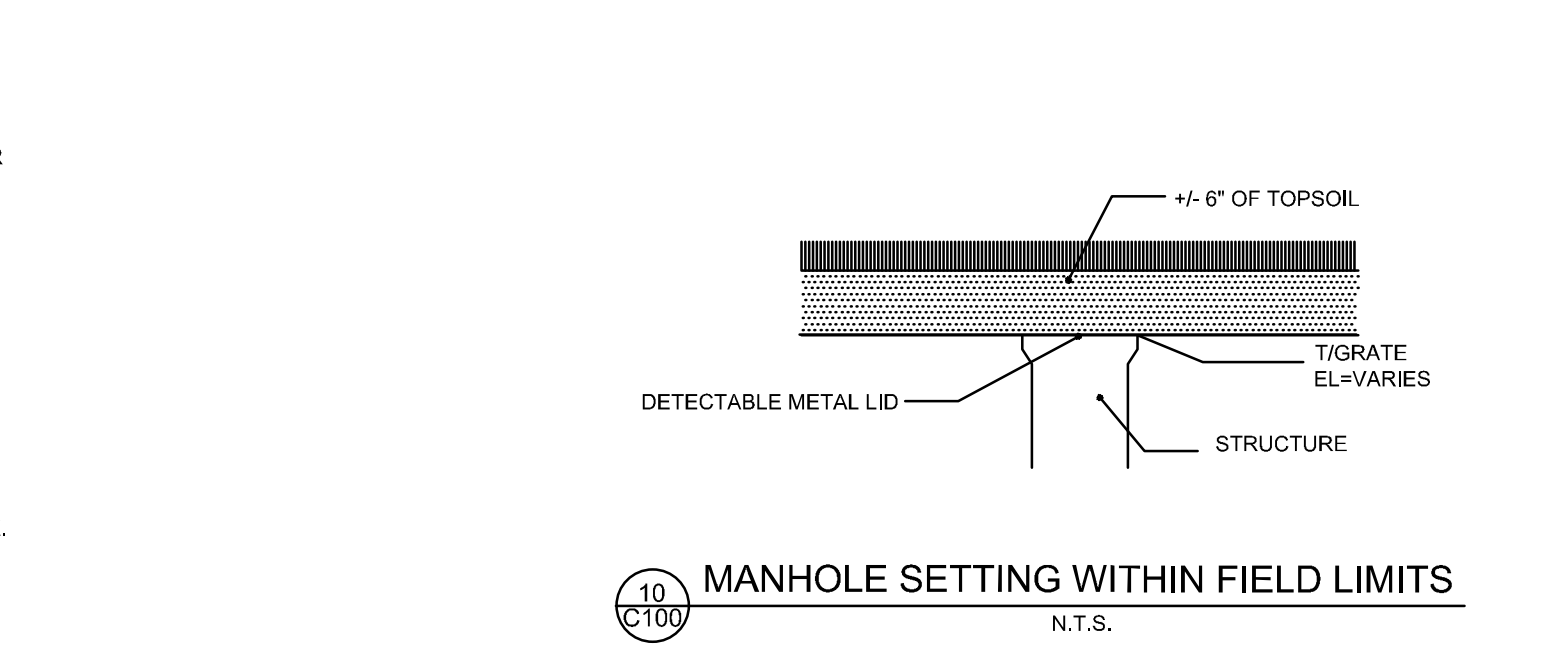
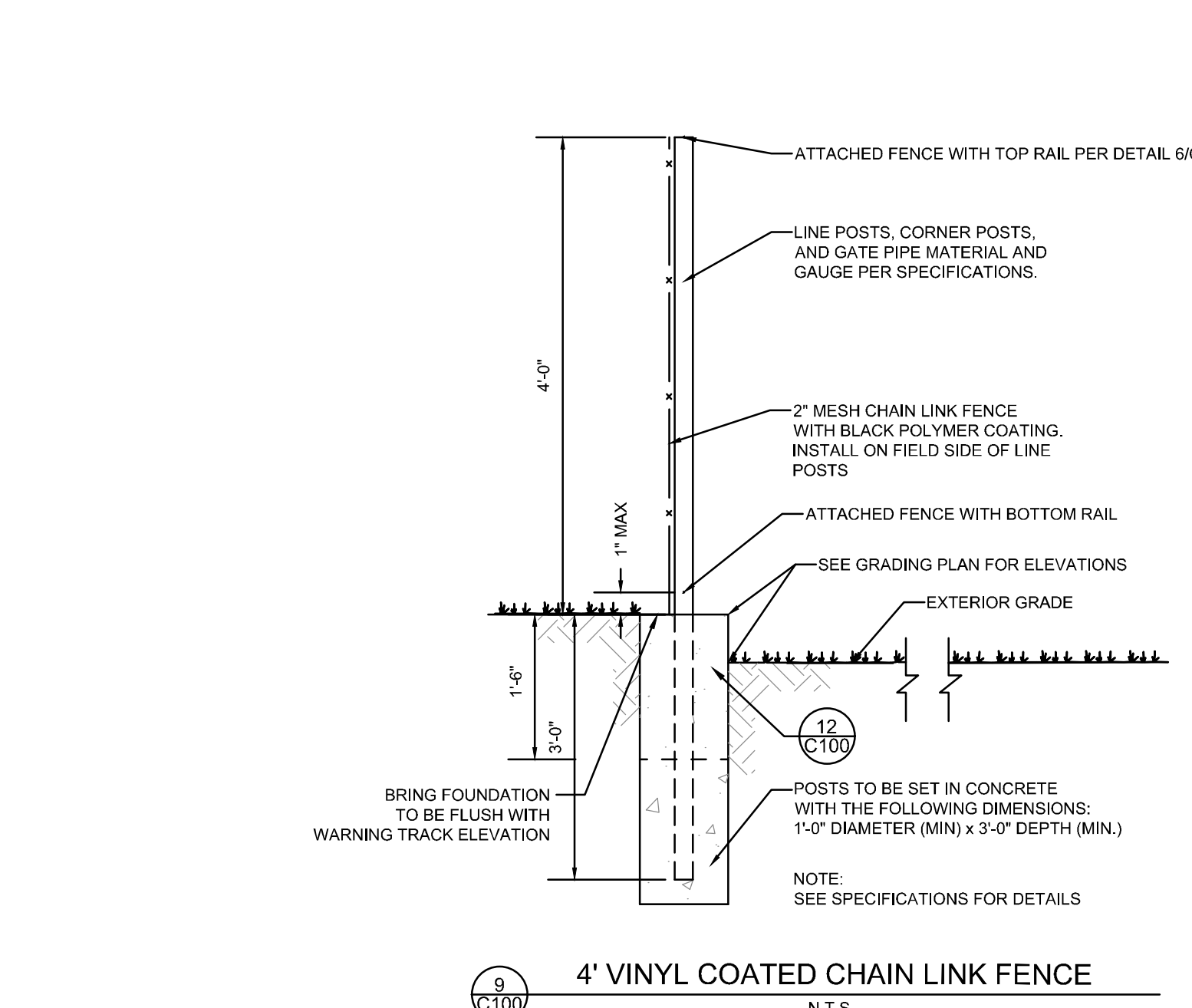
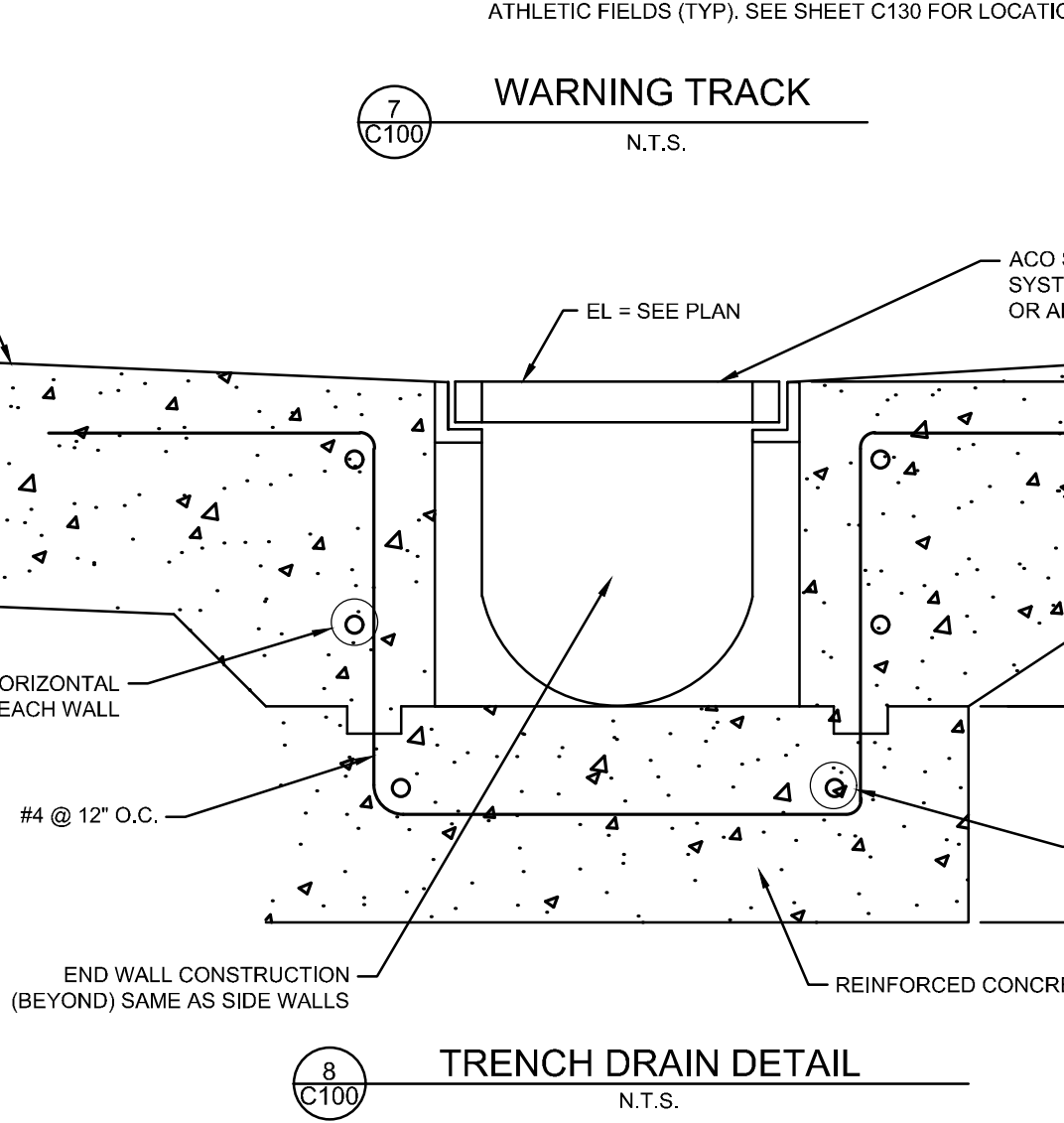
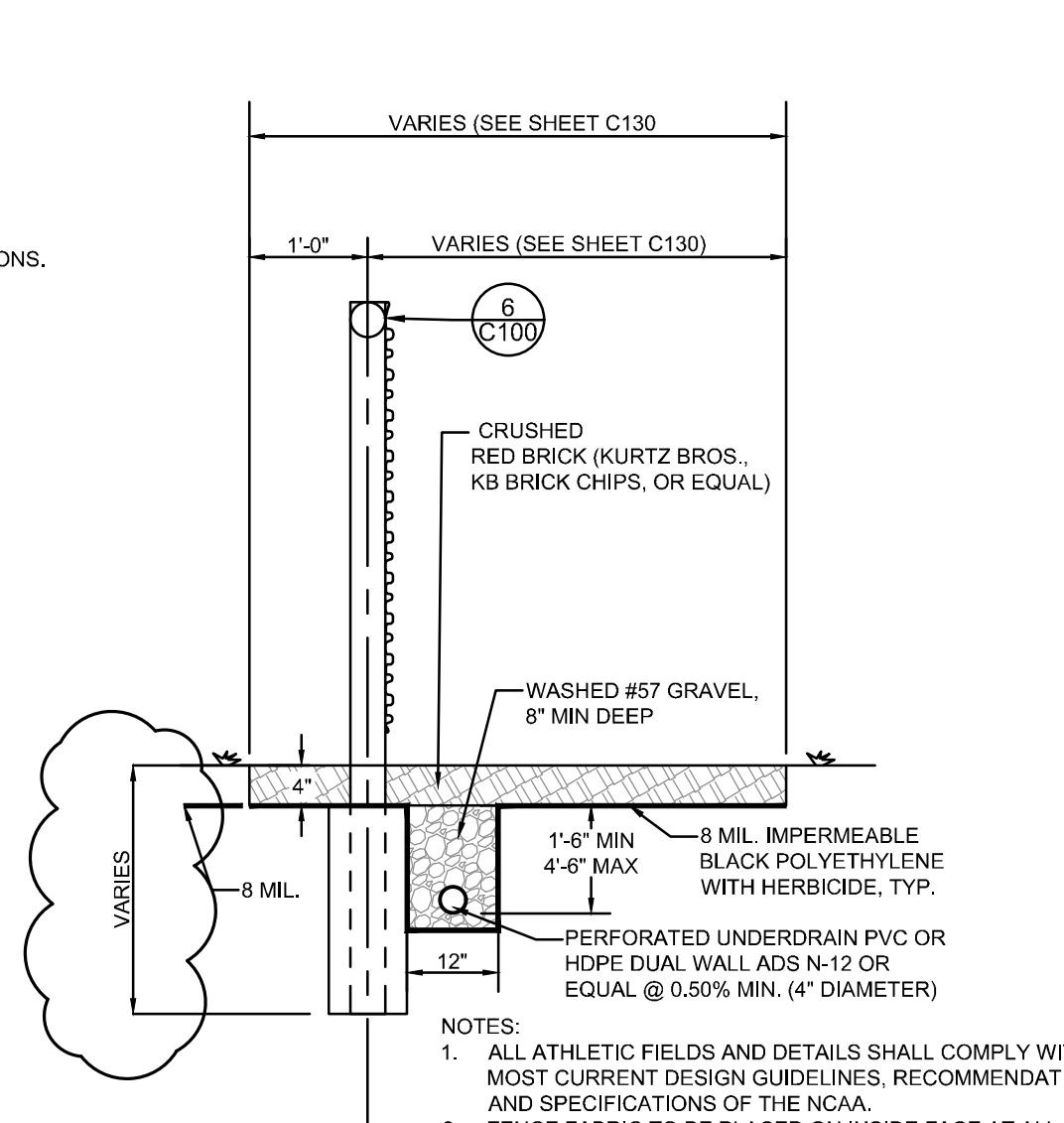
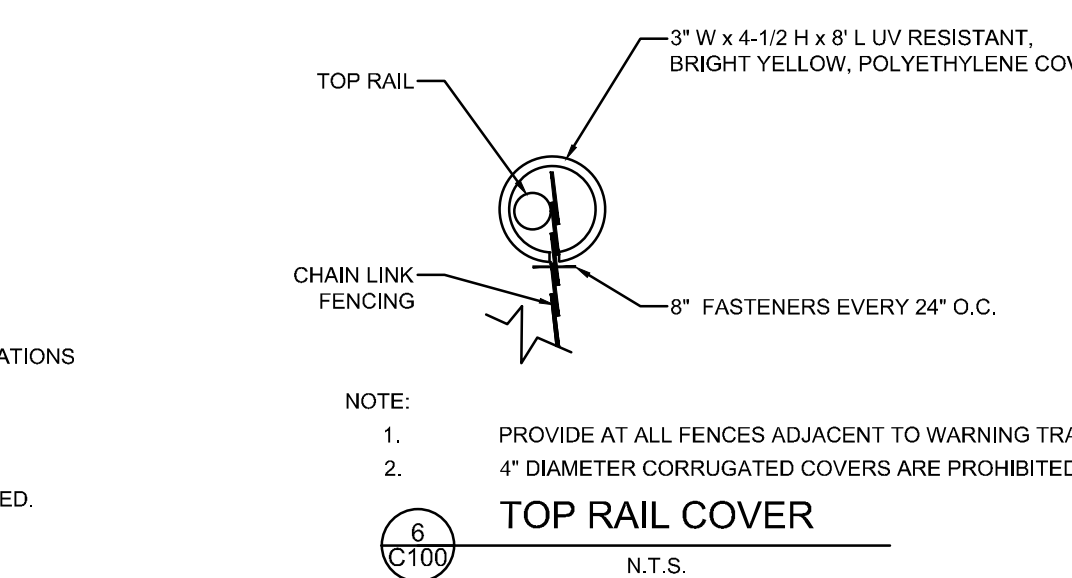
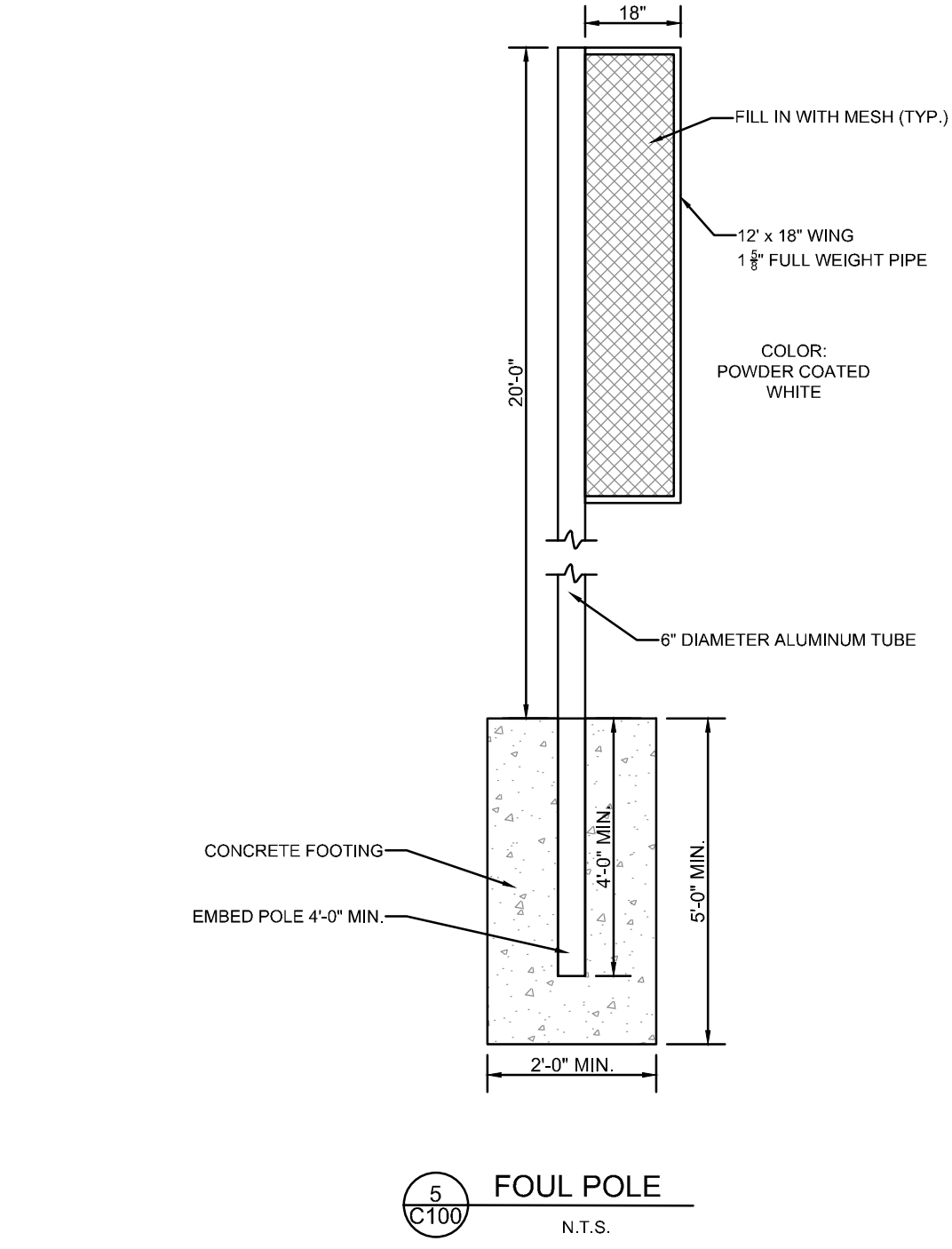
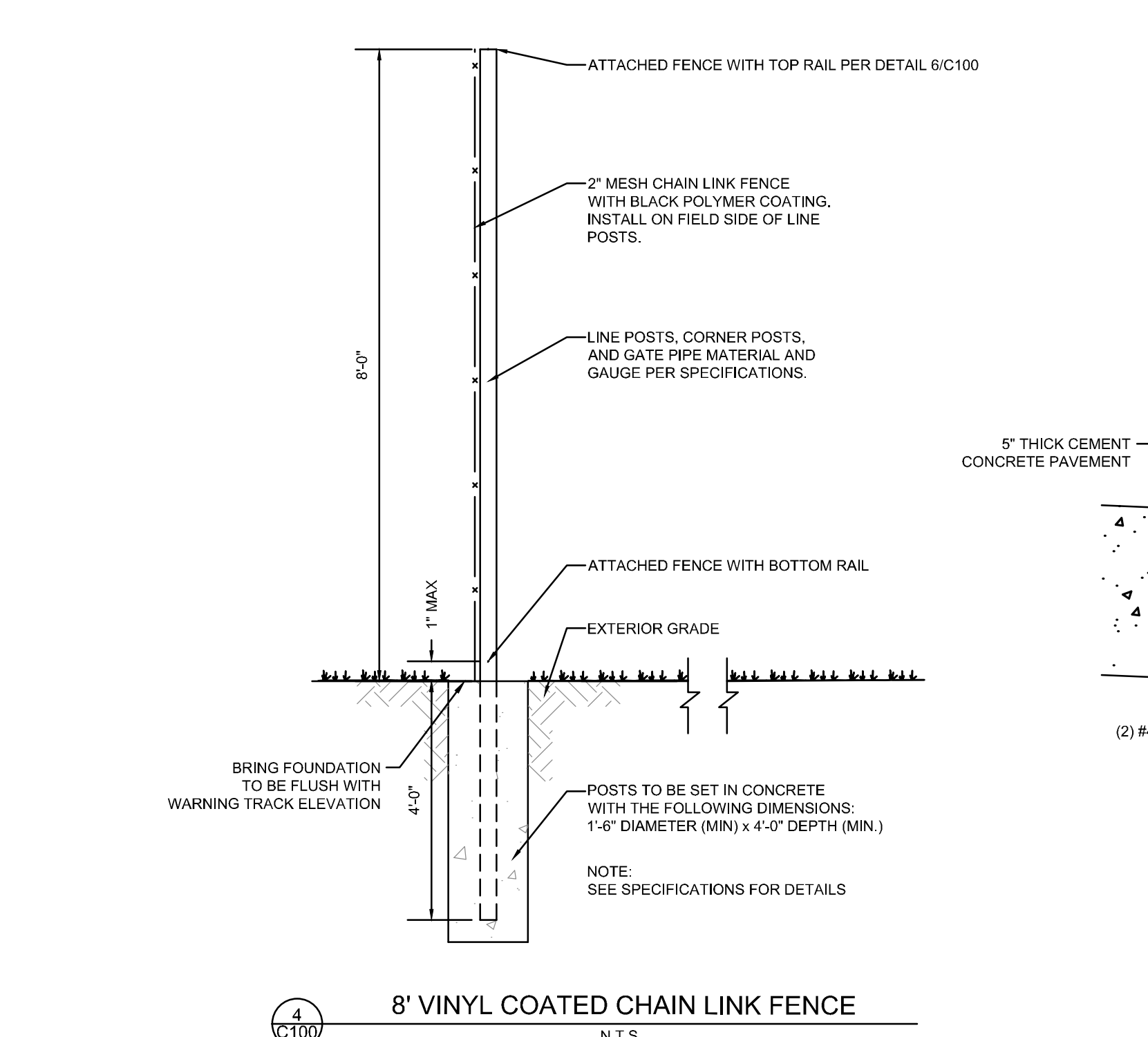
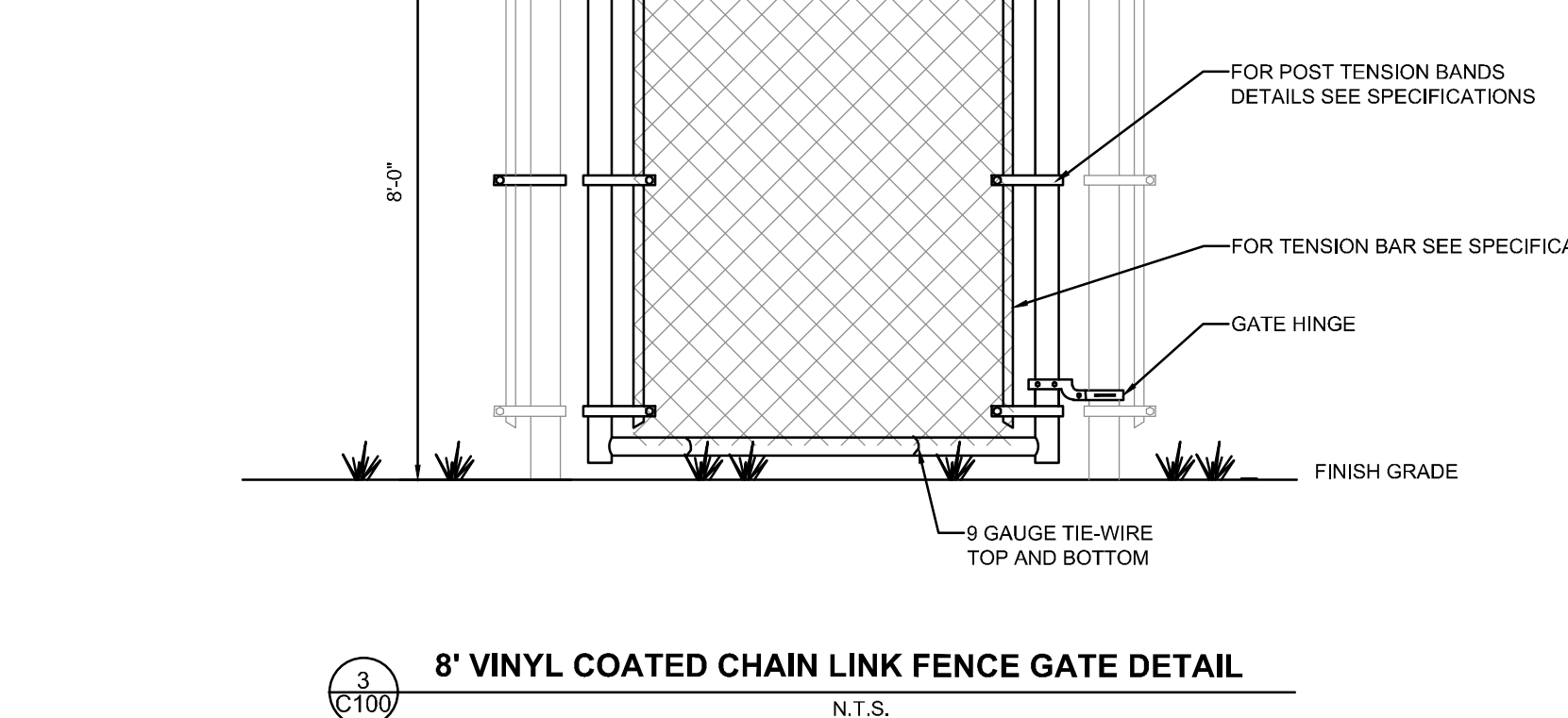
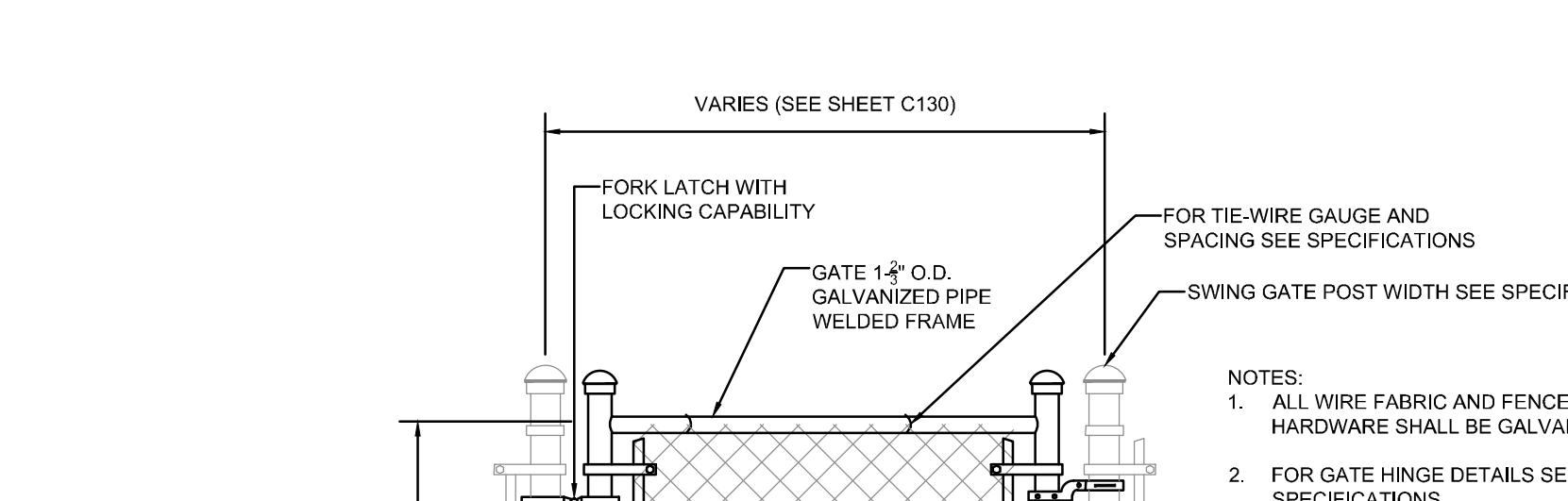
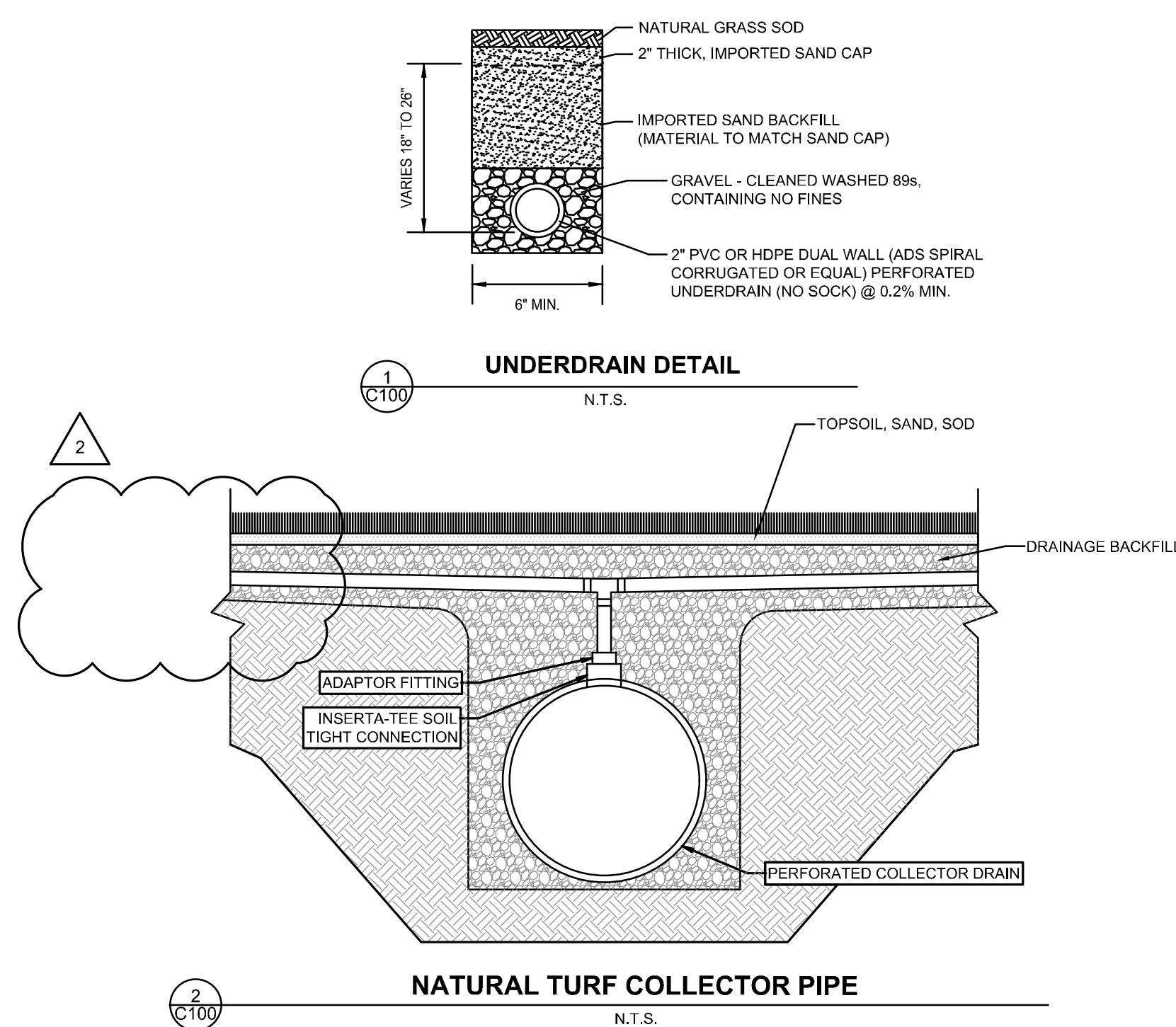
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.
- THE CONTRACTOR IS TO PERFORM ALL INSPECTIONS AS REQUIRED BY THE KENTUCKY EPA FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND FURNISH OWNERS REPRESENTATIVE WITH WRITTEN REPORTS. OWNER WILL OBTAIN PERMITS.
- ITEM NUMBERS REFER TO THE KENTUCKY TRANSPORTATION CABINET CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE CITY OF HIGHLAND HEIGHTS AND CAMPBELL COUNTY. WHEN IN CONFLICT, THE KYTC REQUIREMENTS SHALL PREVAIL.
- PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
- ALL ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
- SUBGRADE EXCAVATION AND CONSTRUCTION TO BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. SUBGRADE PREPARATION SHALL BEGIN BY CLEARING & STRIPPING UNSUITABLE MATERIAL FROM SITE, THEN PLACE & COMPACT BACKFILL MATERIAL AT GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. ALL BACKFILL MATERIAL MUST BE ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.
- COMPACTED FILLS ARE TO BE MADE TO A MINIMUM OF THREE FEET ABOVE THE CROWN OF ANY PROPOSED SEWER PRIOR TO CUTTING OF TRENCHES FOR PLACEMENT OF SAID SEWERS. ALL FILLS SHALL BE CONTROLLED, COMPACTED, AND INSPECTED BY AN APPROVED TESTING LABORATORY OR AN INSPECTOR FROM THE APPROPRIATE GOVERNMENTAL AGENCY.
- ADJUST ALL EXISTING CASTINGS AND CLEANOUTS WITHIN PROJECT AREA TO GRADE AS REQUIRED.
- CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL, PRACTICES REQUIRED BY CAMPBELL COUNTY AND SD1.
- ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION SHALL BE SEEDED AS SOON AS PRACTICAL IN ACCORDANCE WITH SPECIFICATIONS.
- ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES ARE PRIVATE AND MAINTAINED BY THE OWNER.
- THE CONTRACTOR IS TO CONSTRUCT CURBS, CATCH BASINS, DOWNSPOUTS, PIPING AND CONNECTION ETC. AS REQUIRED TO CONVEY THE PAVED SURFACE DRAINAGE TO THE EXISTING DRAINAGE SYSTEM.
- THE CONTRACTOR IS RESPONSIBLE FOR BALANCING THE SITE EARTHWORK BY IMPORTING OR EXPORTING AS NECESSARY TO ACHIEVE DESIGN GRADES AND SPECIFICATIONS.
- ANY FIELD TILE CUT MUST BE TIED INTO THE STORM DRAINAGE SYSTEM.
- THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS.
- ALL DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING, EDGE OF PAVEMENT AND/OR FACE OF CURB, UNLESS OTHERWISE NOTED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE DISPOSED OF AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES WILL BE PERMANENTLY REMOVED OR STABILIZED TO PREVENT EROSION AND SEDIMENTATION.
- ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES WILL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.
- DANDY BAGS TO BE USED AT ALL STORM INLETS FOR EROSION CONTROL.
- SANITATION DISTRICT NO. 1 IS TO BE CONTACTED 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY AT (859)79-6880.

**UTILITY NOTES**

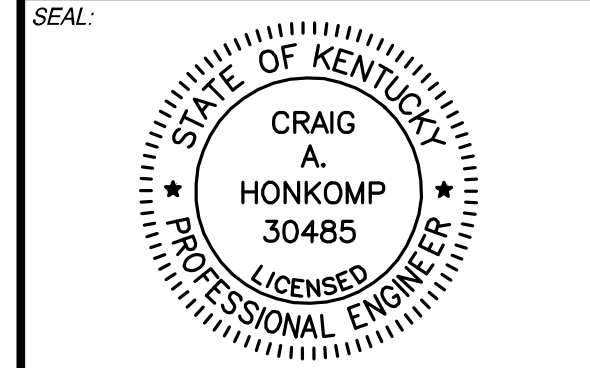
- ALL CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- ALL STORM STRUCTURES ARE KYTC TYPES UNLESS OTHERWISE INDICATED.
- STORM SEWER PIPE LABELED "STM" SHALL BE ONE OF THE FOLLOWING: PVC SDR-35, OR HIGH DENSITY POLYETHYLENE. STORM SEWER PIPE LABELED "RCP" SHALL BE REINFORCED CONCRETE PIPE. ALL STORM PIPE USED MUST HAVE A MANUFACTURER SPECIFIED FRICTION FACTOR OF 0.013 (H=0.013) OR LESS.
- STEPS SHALL BE PROVIDED IN ALL CATCH BASINS AND MANHOLES OVER 4' DEEP.
- CONTRACTOR SHALL SECURE ALL PERMITS AND FURNISH ALL DRAWINGS REQUIRED FOR UTILITY TAPS PRIOR TO STARTING CONSTRUCTION.
- PROVIDE MANUFACTURERS RECOMMENDED COVER OVER TOP OF STORM PIPE DURING CONSTRUCTION, UNTIL PAVING OPERATIONS BEGIN.
- SITE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REQUIRED VERTICAL SEPARATION BETWEEN UTILITIES BY VARYING DEPTH OF UNDERGROUND ELECTRIC, TELEPHONE, WATER AND GAS.
- A MINIMUM OF 1.5' OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN UTILITIES AT ALL TIMES.
- FORTY-EIGHT HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE KENTUCKY UNDERGROUND PROTECTION SERVICE, AND ALL OTHER AGENCIES WHICH MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF THE KENTUCKY UNDERGROUND PROTECTION SERVICE.
- EXISTING UNDERGROUND UTILITIES AND SERVICES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ACCORDING TO THE BEST INFORMATION AVAILABLE. THE LOCATIONS SHOWN ARE INTENDED ONLY AS A GUIDE AND CANNOT BE GUARANTEED ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
  - CONTACTING THE INDIVIDUAL UTILITY OWNERS TEN DAYS PRIOR TO CONSTRUCTION AND ADVISING THEM OF THE WORK TO TAKE PLACE.
  - SOLICITING THEIR AID IN LOCATING AND PROTECTING ANY UTILITY WHICH MAY INTERFERE WITH CONSTRUCTION.
  - EXCAVATING AND VERIFYING THE HORIZONTAL AND VERTICAL LOCATION OF EACH UTILITY.
  - ALL DAMAGE TO ANY EXISTING UTILITY.

**GRADING & EROSION CONTROL NOTES**

- THE NPDES PERMIT REQUIRES THAT ALL AREAS WHICH ARE AT OR NEAR FINAL GRADE, OR WHICH REMAIN DORMANT FOR MORE THAN 21 DAYS OR LONGER BE STABILIZED WITHIN 7 DAYS OF LAST ACTIVITY. VELOCITY DISSIPATION DEVICES SHOULD BE PLACED AT THE OUTFALL OF ALL DETENTION OR RETENTION STRUCTURES AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL AS NECESSARY TO PROVIDE A NON-EROSIVE FLOW VELOCITY FROM THE STRUCTURE TO THE WATER COURSE.
- THE NPDES PERMIT REQUIRES THAT SEDIMENT AND EROSION CONTROLS BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF 0.5" OR GREATER RAINFALL. A WRITTEN LOG SHOULD INDICATE THE DATE OF INSPECTION NAME OF INSPECTOR, WEATHER CONDITIONS, OBSERVATIONS, ACTIONS TAKEN TO CORRECT ANY PROBLEMS AND THE DATE ACTION WAS TAKEN.
- SOLID, SANITARY AND TOXIC WASTE MUST BE DISPOSED OF IN A PROPER MANNER IN ACCORDANCE WITH STATE, LOCAL AND FEDERAL REGULATIONS.
- TEMPORARY SEEDING TYPES:
  - TALL FESCUE-SEED AT A RATE OF 50 LBS./ACRE (1 LB./1000 SQ. FT.) AND MULCH WITH STRAW AT A RATE OF 2 TONS PER ACRE (80 LBS./1000 SQ. FT.). ESTABLISH BETWEEN MARCH 15 AND SEPTEMBER 30. COVER THE SEED 1/4-1/2 INCH BY RAKE OR SIMILAR TOOL. THIS IS THE MOST WIDELY USED AND BEST ADAPTED GRASS FOR STREAMBANK SEEDINGS. IT HAS GOOD TOLERANCE TO WET SOILS AND FLOODING. IT IS ALSO WELL ADAPTED TO WELL DRAINED SOILS.
  - REED CANARYGRASS (PHALARIS ARUNDINACEAE) PLUS TALL FESCUE-SEED THE REED CANARYGRASS AT A RATE OF 15 LBS./ACRE (1.5 LBS./1000 SQ. FT.) PLUS TALL FESCUE (1/2 LB./1000 SQ. FT.) OF TALL FESCUE. MULCH WITH STRAW AT A RATE OF 2 TONS/ACRE (80 LBS./1000 SQ. FT.). THIS MIXTURE SHOULD ONLY BE SEEDED FROM MARCH 1 TO MAY 15, OR AUGUST 1 TO SEPTEMBER 30. COVER THE SEED 1/4-1/2 INCH BY RAKE OR SIMILAR TOOL. THIS MIXTURE IS ADAPTABLE TO SOILS THAT ARE VERY WET AS WELL AS WELL DRAINED SOIL CONDITIONS. REED CANARYGRASS CAN WITHSTAND EXTENDED PERIODS OF FLOODING. IT IS EXCELLENT FOR EROSION CONTROL. REED CANARYGRASS CAN ALSO BE ESTABLISHED BY SOO STRIPS, USING RHIZOMES, OR FRESHLY CUT CULMS. THE LOCAL CONSERVATION SERVICE OFFICE CAN PROVIDE THE SPECIFIC DETAILS REQUIRED TO USE ONE OF THE ALTERNATIVE ESTABLISHMENT METHODS.



**NORTHERN KENTUCKY UNIVERSITY  
FRANK IGNATIUS GREIN SOFTBALL  
FIELD RENOVATIONS**



NO.	DATE	DESCRIPTION
1	02/11/2020	BID SET
2	02/28/2020	ADDENDUM 01

**NKU SOFTBALL FIELD RENOVATIONS**  
CITY OF HIGHLAND HEIGHTS  
CAMPBELL COUNTY  
COMMONWEALTH OF KENTUCKY

PROJECT NO: 080115.036  
DATE: FEBRUARY 2020

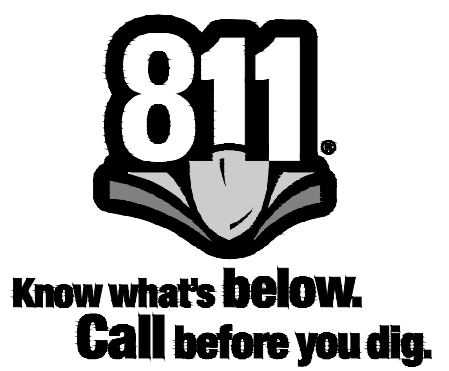
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**GENERAL NOTES & DETAILS**

SHEET NO.

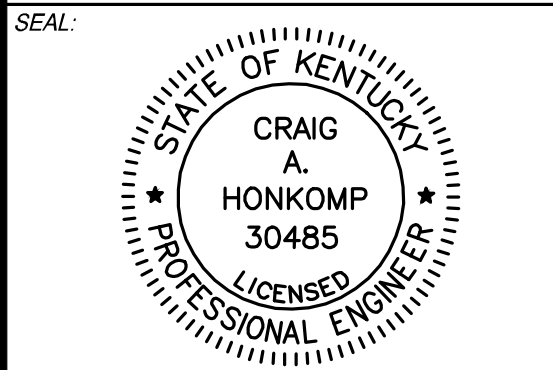
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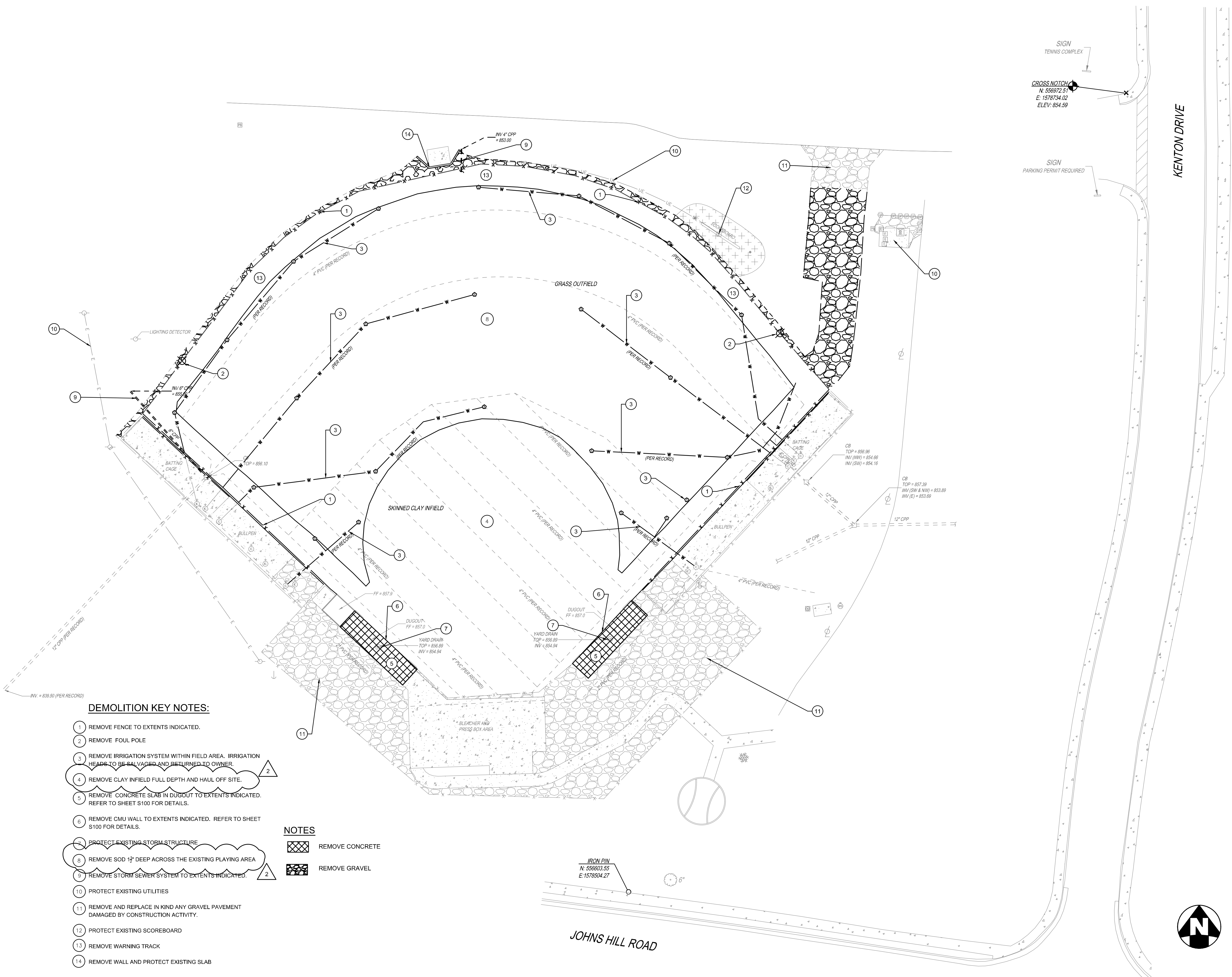


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**DEMOLITION PLAN**

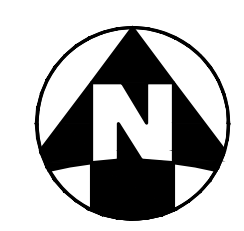
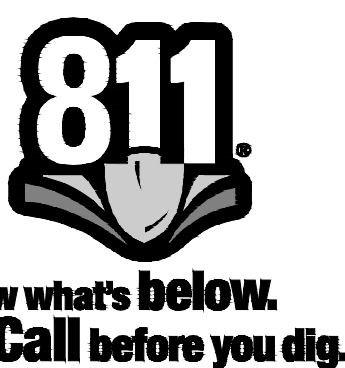
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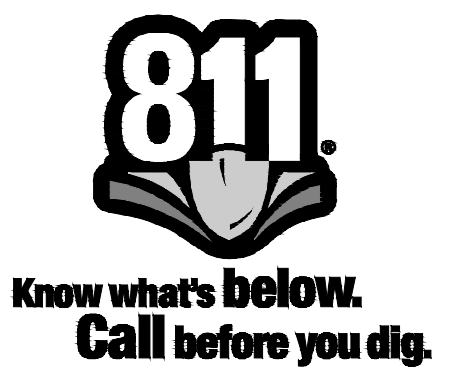


- DEMOLITION KEY NOTES:**
- 1 REMOVE FENCE TO EXTENTS INDICATED.
  - 2 REMOVE FOUL POLE
  - 3 REMOVE IRRIGATION SYSTEM WITHIN FIELD AREA. IRRIGATION HEADS TO BE SALVAGED AND RETURNED TO OWNER.
  - 4 REMOVE CLAY INFIELD FULL DEPTH AND HAUL OFF SITE.
  - 5 REMOVE CONCRETE SLAB IN DUGOUT TO EXTENTS INDICATED. REFER TO SHEET S100 FOR DETAILS.
  - 6 REMOVE CMU WALL TO EXTENTS INDICATED. REFER TO SHEET S100 FOR DETAILS.
  - 7 PROTECT EXISTING STORM STRUCTURE
  - 8 REMOVE SOD 1" DEEP ACROSS THE EXISTING PLAYING AREA
  - 9 REMOVE STORM SEWER SYSTEM TO EXTENTS INDICATED.
  - 10 PROTECT EXISTING UTILITIES
  - 11 REMOVE AND REPLACE IN KIND ANY GRAVEL PAVEMENT DAMAGED BY CONSTRUCTION ACTIVITY.
  - 12 PROTECT EXISTING SCOREBOARD
  - 13 REMOVE WARNING TRACK
  - 14 REMOVE WALL AND PROTECT EXISTING SLAB

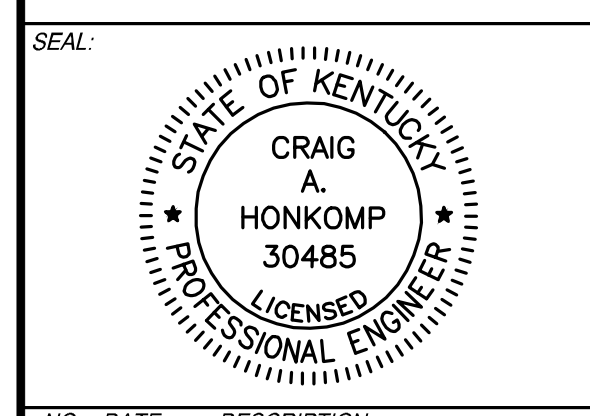
- NOTES**
- REMOVE CONCRETE
  - REMOVE GRAVEL







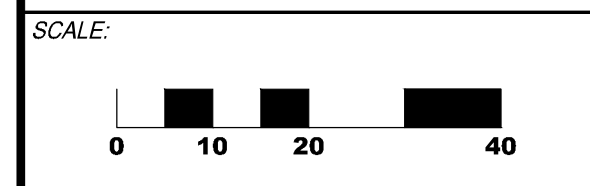
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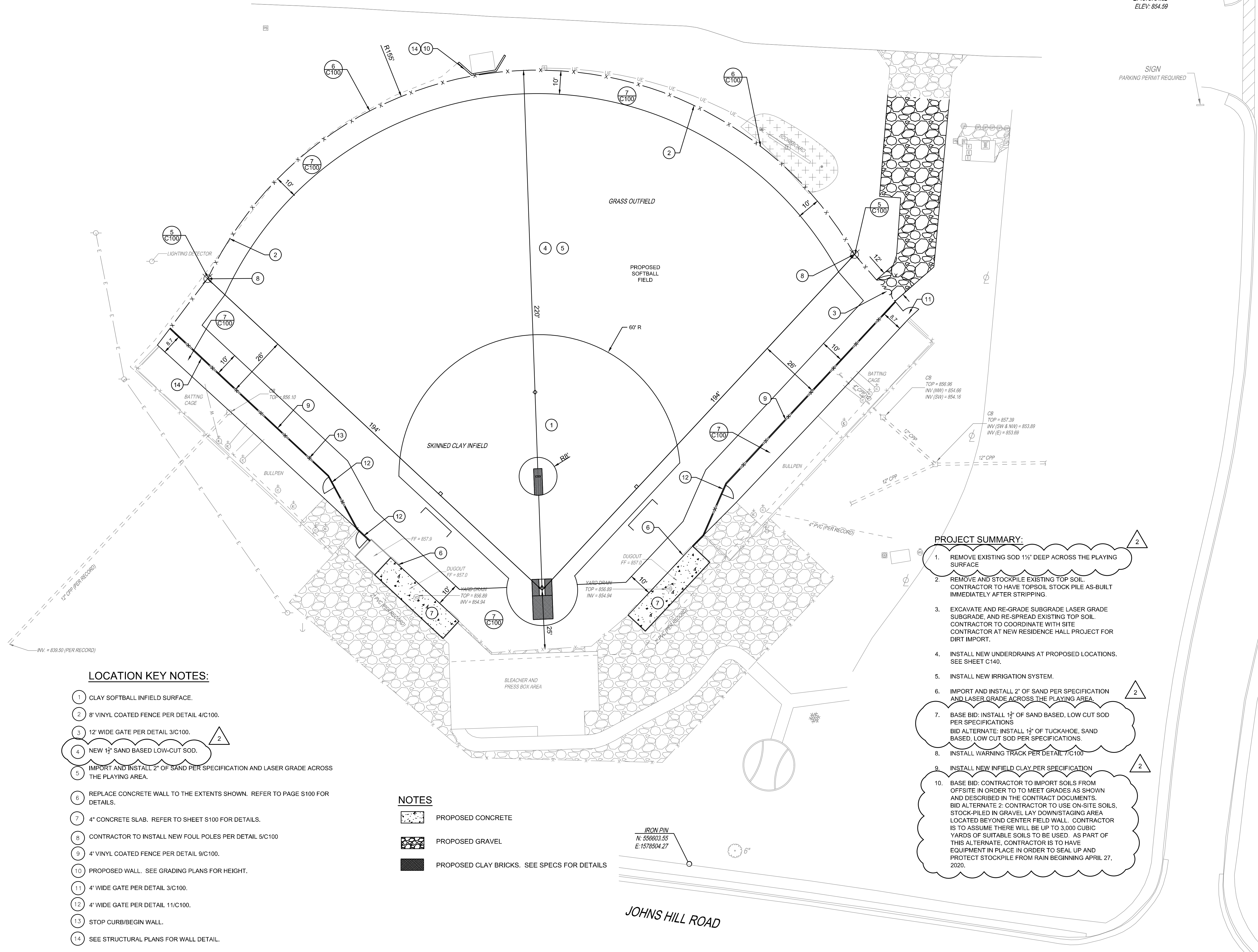


SHEET NAME:

**LOCATION PLAN**

SHEET NO.

**C130**



**LOCATION KEY NOTES:**

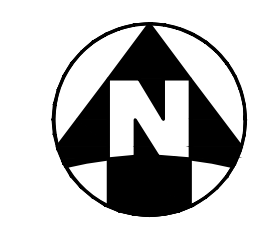
- 1 CLAY SOFTBALL INFIELD SURFACE.
- 2 8" VINYL COATED FENCE PER DETAIL 4/C100.
- 3 12" WIDE GATE PER DETAIL 3/C100.
- 4 NEW 1 1/2" SAND BASED LOW-CUT SOD.
- 5 IMPORT AND INSTALL 2" OF SAND PER SPECIFICATION AND LASER GRADE ACROSS THE PLAYING AREA.
- 6 REPLACE CONCRETE WALL TO THE EXTENTS SHOWN. REFER TO PAGE S100 FOR DETAILS.
- 7 4" CONCRETE SLAB. REFER TO SHEET S100 FOR DETAILS.
- 8 CONTRACTOR TO INSTALL NEW FOUL POLES PER DETAIL 5/C100.
- 9 4" VINYL COATED FENCE PER DETAIL 9/C100.
- 10 PROPOSED WALL. SEE GRADING PLANS FOR HEIGHT.
- 11 4" WIDE GATE PER DETAIL 3/C100.
- 12 4" WIDE GATE PER DETAIL 11/C100.
- 13 STOP CURB/BEGIN WALL.
- 14 SEE STRUCTURAL PLANS FOR WALL DETAIL.

**NOTES**

- PROPOSED CONCRETE
- PROPOSED GRAVEL
- PROPOSED CLAY BRICKS. SEE SPECS FOR DETAILS

**PROJECT SUMMARY:**

1. REMOVE EXISTING SOD 1 1/2" DEEP ACROSS THE PLAYING SURFACE.
2. REMOVE AND STOCKPILE EXISTING TOP SOIL. CONTRACTOR TO HAVE TOPSOIL STOCK PILE AS-BUILT IMMEDIATELY AFTER STRIPPING.
3. EXCAVATE AND RE-GRADE SUBGRADE LASER GRADE SUBGRADE, AND RE-SPREAD EXISTING TOP SOIL. CONTRACTOR TO COORDINATE WITH SITE CONTRACTOR AT NEW RESIDENCE HALL PROJECT FOR DIRT IMPORT.
4. INSTALL NEW UNDERDRAINS AT PROPOSED LOCATIONS. SEE SHEET C140.
5. INSTALL NEW IRRIGATION SYSTEM.
6. IMPORT AND INSTALL 2" OF SAND PER SPECIFICATION AND LASER GRADE ACROSS THE PLAYING AREA.
7. BASE BID: INSTALL 1 1/2" OF SAND BASED, LOW CUT SOD PER SPECIFICATIONS. BID ALTERNATE: INSTALL 1 1/2" OF TUCKAHOE, SAND BASED, LOW CUT SOD PER SPECIFICATIONS.
8. INSTALL WARNING TRACK PER DETAIL 7/C100.
9. INSTALL NEW INFIELD CLAY PER SPECIFICATION.
10. BASE BID: CONTRACTOR TO IMPORT SOILS FROM OFFSITE IN ORDER TO MEET GRADES AS SHOWN AND DESCRIBED IN THE CONTRACT DOCUMENTS. BID ALTERNATE 2: CONTRACTOR TO USE ON-SITE SOILS, STOCK-PILED IN GRAVEL LAY DOWN/STAGING AREA LOCATED BEYOND CENTER FIELD WALL. CONTRACTOR IS TO ASSUME THERE WILL BE UP TO 3,000 CUBIC YARDS OF SUITABLE SOILS TO BE USED. AS PART OF THIS ALTERNATE, CONTRACTOR IS TO HAVE EQUIPMENT IN PLACE IN ORDER TO SEAL UP AND PROTECT STOCKPILE FROM RAIN BEGINNING APRIL 27, 2020.



IRON PIN  
N: 556933.55  
E: 1578504.27

JOHNS HILL ROAD

KENTON DRIVE

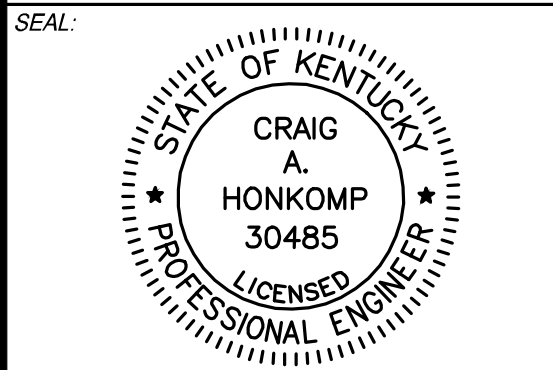
SIGN  
TENNIS COMPLEX

CROSS NOTCH  
N: 556972.51  
E: 1578734.02  
ELEV: 654.59

SIGN  
PARKING PERMIT REQUIRED



NORTHERN KENTUCKY UNIVERSITY  
FRANK IGNATIUS GREIN SOFTBALL  
FIELD RENOVATIONS



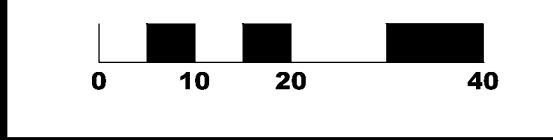
NO.	DATE	DESCRIPTION
1	02/11/2020	BID SET
2	02/28/2020	ADDENDUM 01

**NKU SOFTBALL  
FIELD  
RENOVATIONS**  
CITY OF HIGHLAND HEIGHTS  
CAMPBELL COUNTY  
COMMONWEALTH OF KENTUCKY

PROJECT NO: 080115.036

DATE: FEBRUARY 2020

SCALE:

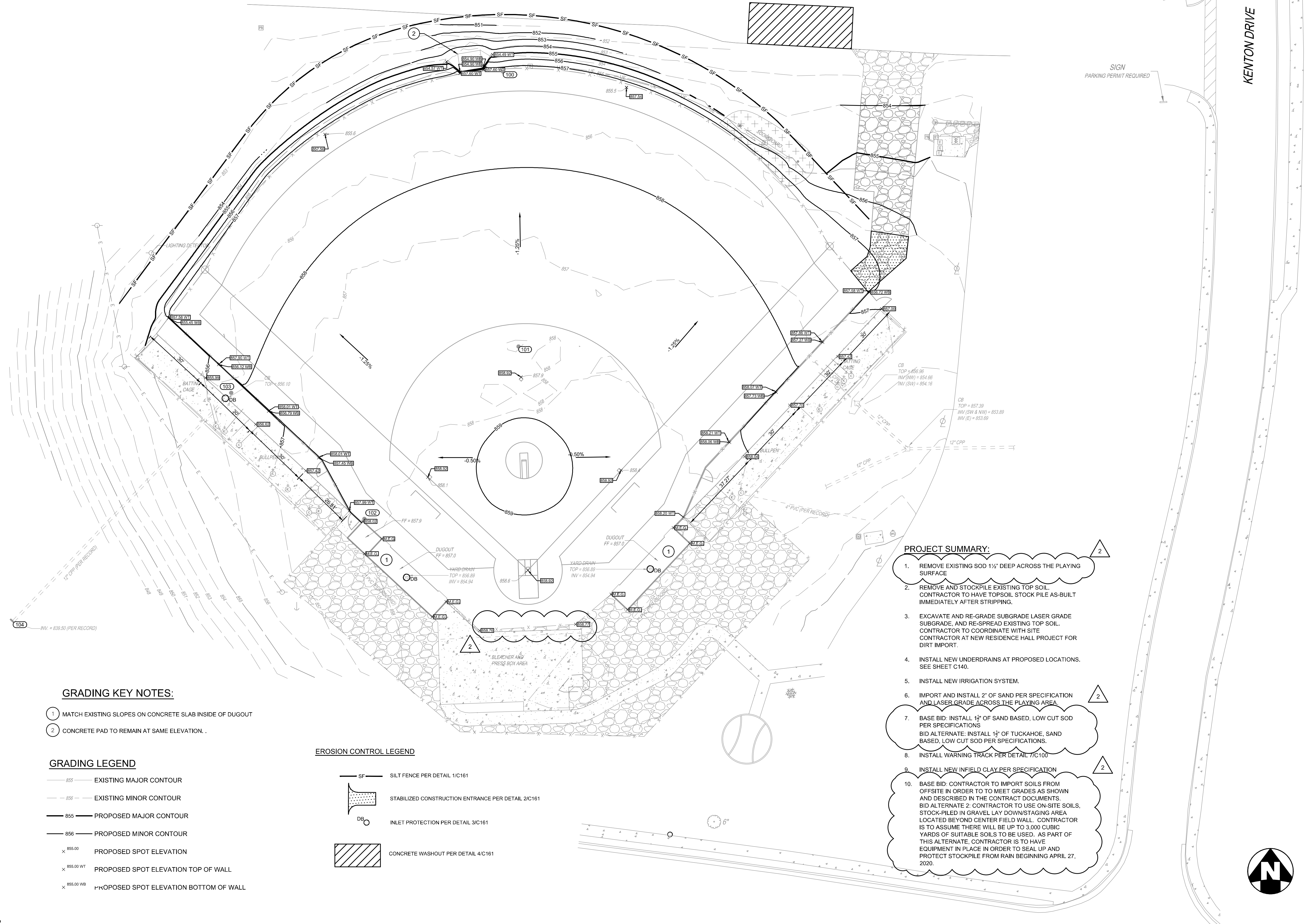


SHEET NAME:

**GRADING PLAN**

SHEET NO.

**C150**



Know what's below.  
Call before you dig.

## SECTION 328400 – UNDERGROUND IRRIGATION SYSTEM

### PART 1 – GENERAL

#### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and ITB sections, apply to work of this section.
  - 1. Division 32 Section 329300 “Exterior Plants”.
  - 2. Division 32 Section 329200 “Turf and Grasses”.

#### 1.02 DESCRIPTION OF WORK

General:

- A. The system shall provide 100% coverage and uniformly irrigate all zones and perform as required:
  - 1. The contractor shall provide an underground irrigation system drawing and adhere to these specifications.
    - a) Automatic irrigation system including piping, fittings, sprinkler heads, control wire, quick coupler valves, controllers, and accessories.
    - b) Excavating and backfilling irrigation system work.
    - c) Testing and adjusting of system.
    - d) “As – Built” drawings
    - e) Winterization – shutdown – spring start-up
  - 2. All work required by the contractor’s plans and these specifications shall be accomplished by the Irrigation Contractor even though minor items required may not be specifically mentioned in the above listing.
- B. Drawings: The irrigation layout is diagrammatic. Exact locations of piping, sprinkler heads, valves, and other components shall be by the Contractor. Modifications in the field at time of installation to allow for actual on site conditions are acceptable. Proper spacing of sprinkler heads will be required to obtain satisfactory coverage. Minor adjustments in the system layout will be permitted to clear fixed obstructions. Any major revisions to the irrigation system shall be submitted in writing to the owner for approval. The final system layout must be acceptable to the owner.
- C. Verification of Plans and Specifications: It shall be the responsibility of the Irrigation Contractor to carefully examine the irrigation zones and specifications relating to this work for completeness, accuracy, and clarity. Any conflict errors or clarifications request shall be immediately brought to the attention of the owner’s representative for written interpretation or instructions. No claim for increased compensation for additions, changes, or alterations will be considered unless written authorization is granted by Owner’s representative. Otherwise any additional materials and/or labor due to existing conditions shall be furnished under this contract.
- D. Irrigation Contractor is responsible for obtaining all permits required for installation of this work.
- E. Irrigation contractor to ensure that the general contractor provides required power to irrigation system.

#### 1.03 QUALITY ASSURANCE



- A. Manufacturer Qualifications: Provide underground irrigation system as a complete unit produced by a single acceptable manufacturer, including heads, valves, controls, and accessories.
- B. Work and materials shall be in accordance with the latest rules, and other applicable state or local laws. Nothing in the Contract Documents is to be construed to permit work not conforming to these codes.
- C. Contractors Qualifications: Bidding contractors shall have a minimum of three years experience in the construction of a job of similar size and complexity.
  - 1. Provide the General Contractor a list of five equivalent, irrigation system installations, performed in the last five years, incorporating the following information:
    - a) Name and address of product.
    - b) Name and address of Owner.
      - 1) Contact person
    - c) Name and address with whom contact was with.
      - 1) Contact person
- D. Requirements of regulatory agencies and utilities:
  - 1. System shall comply with the latest requirements of all state and local codes and ordinances.
  - 2. System shall comply with the latest rules and requirements by all utility companies involved.
  - 3. Nothing in the contract documents is to be constructed to permit work not conforming to these rules, codes and ordinances.
- E. Electrical devices shall carry Underwriter's Laboratory labels.

#### 1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data and installation instructions for underground irrigation system.
- B. Record Drawings: After completion of the work and before final acceptance, a set of scaled, reproducible record drawings, and two sets of prints showing the location of the complete work shall be submitted to the Owner. Final payment and any retainage will not be released until these drawings are submitted and accepted by the Owner.
- C. Submit a weekly irrigation schedule based on an annual evapotranspiration rate, average rainfall amounts etc.

#### 1.05 WARRANTY

- A. The contractor shall furnish a manufacturer's written warranty to the effect that all heads, valves, and controllers will be warranted for a period of no less than one year to be free from defects and faulty workmanship, and that any defective heads, valves, or controllers shall be promptly repaired or replaced without additional cost to the Owner in accordance with that warranty.
- B. All materials other than those referred to in Paragraph A above shall be warranted for a period of one full year from the date of final acceptance by the Owner.
- C. All installation labor used on this project will be warranted for one full year from date of final acceptance by the Owner.

## PART 2 – PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of one of the following:
1. Rain Bird Sprinkler Mfg. Corp.

### 2.02 MATERIALS

- A. Pressure Pipe: Comply with following:
1. Unplasticized PVC pipe, Class 200 SDR21, ASTM D 2241.
    - a) 3" and larger, may be installed with slip joint ring gasket seals.
    - b) 2-1/2" and smaller shall be installed using solvent weld joints.
  2. Dripper Tubing with Pressure Compensating Emitters
- B. Circuit Pipe (downstream from circuit valves): Comply with following:
1. Unplasticized PVC pipe, Class 200 SDR-21, ASTM D 2241.
  2. Virgin Polyethylene tubing, 80 pound minimum N.S.F. approved, ASTM D2239.
- C. Pipe Fittings: Comply with following:
1. For PVC plastic pipe, Approved socket fittings to be used with ASTM D2241 pipe and ASTM D2564 solvent cement.
  2. For polyethylene (PE) plastic pipe, plastic insert fittings, ASTM D2609.
- D. Valves: Manufacturer's standard, of type and size indicated, and as follows:
1. Provide PVC or cast bronze bodies, as called for on plans.
  2. Provide pressure regulating valves, if called for on plans.
  3. Manual Circuit Valves: Globe valves.
  4. Key Operated Valves: Manual valves, fitted for key operation.
    - a) Furnish 2 valve keys, 3 feet long with tee handles and key end to fit valves.
  5. Automatic Circuit valves Globe valves operated by low-power solenoid, normally closed, manual flow adjustment.
  6. Automatic Drain Valves: Designed to open for drainage when line pressure drops below 3 psi.
- E. Backflow Preventer: As required by governing code.
- F. Sprinkler Heads: Manufacturer's standard unit designed to provide uniform coverage over entire area of spray shown on drawings at available water pressure, as follows:
1. Bubbler: Fixed pattern, pressure compensating type.
  2. Shrubbery: Fixed pattern, pressure compensating type
  3. Pop-Up Spray: Fixed pattern, with screw-type flow adjustment or pressure regulating nozzle and stainless steel retraction spring.
  4. Pop-Up Rotary Spray: Gear drive, full circle and adjustable part circle type.
  5. Pop-Up Rotary Impact: Impact drive, full circle and part circle as indicated.
  6. Above Ground Rotary Impact: Impact drive, full circle and part circle as indicated.
- G. Valve Box: Valve Access Box: Tapered rib reinforced enclosure of rigid plastic material comprised of polyolefin fibrous components chemically inert and unaffected by moisture, ultraviolet light, corrosion and temperature changes. Provide lid of same material, green in color with light, corrosion and temperature changes. Provide lid of same material, green in color with snap lock cover. AMETEK or approved equal (10" round minimum size) allowed.



- H. Valve Cover and Frame: Industrial Grade Plastic.
- I. Wiring: UF type single strand wire #14 with white common ground and others color coded.
  - 1. Connections: Suitable moisture proof device; 3M pack or Rain Bird snap type connector.
  - 2. Each lateral Line must also have a 14AWG Single strand wire attached for location purposes as required by the university.
- J. Drainage Backfill: Cleaned gravel or crushed stone, graded from 3" maximum to ¾" minimum.

### 2.03 AUTOMATIC CONTROL SYSTEM

- A. General: Furnish low voltage system manufactured expressly for control of automatic circuit valves of underground irrigation systems. Provide unit of capacity to suit number of circuits as indicated.
- B. Exterior Control Enclosure: Manufacturer's standard weatherproof enclosure with locking cover, complying with NFPA 70 (National Electric Code).
- C. Interior Control Enclosure: Manufacturer's standard with locking cover, complying with NFPA 70.
- D. Transformer: To convert building service voltage to control voltage of 24 volts.
- E. Circuit Control: Each circuit variable from approximately 5 to 60 minutes. Include switch for manual or automatic operation of each circuit.
- F. Timing Device: Adjustable, 24-hour and 7 or 14 day clocks to operate any time of day and skip any day in a 7 or 14 day period.
  - 1. Allow for manual or semi-automatic operation without disturbing preset automatic operation.

## PART 3 – EXECUTION

### 3.01 SYSTEM DESIGN

- A. Design Pressures: As indicated on contractor's drawings, at connection to building system and at last head in circuit.
- B. Location of Heads: As indicated on drawings. Make minor adjustments as necessary to avoid plantings and other obstructions.
- C. Minimum Water Coverage:
  - 1. Turf areas, 100%
  - 2. Planting areas, 100%.
  - 3. Layout may be modified, if necessary to obtain coverage, to suit manufacturer's standard heads. Do not decrease number of heads indicated on contractor's drawings unless otherwise acceptable to Engineer/Owners Representative.

### 3.02 TRENCHING AND BACKFILLING

- A. General: Excavate straight and true with bottom uniformly sloped to low points.

1. Protect existing lawns and plantings. Remove and replant as necessary to complete installation. Replace damaged lawn areas plants and mulch with new to match existing.
- B. Trench Depth: Excavate trenches to a depth of 3" below invert of pipe, unless otherwise indicated.
- C. Minimum Cover: Provide following minimum cover over top of installed piping: A minimum of 18" cover shall be held over all main lines and lateral lines 1" thru 2" in diameter, and a minimum of 24" of cover for pipe sizes 2-1/2" thru 3" diameter. Pipe sizes between 4" and 6" in diameter should have a minimum of 30" of cover.
- D. Backfill: Backfill with clean material from excavation. Remove organic material as well as rocks and debris larger than 1" diameter. Place acceptable backfill material in 6" lifts, compacting each lift.
- E. Existing Lawns: Where trenching is required across existing lawns, uniformly cut strips of sod 6" wider than trench. Remove sod in rolls of suitable size for handling and keep moistened until replanted.
- F. Backfill trench to within 6" of finished grade. Continue fill with acceptable topsoil and compact to bring sod even with existing lawn.
- G. Replant or replace sod within 7 days after removal, roll and water generously.
- H. Reseed and restore to original condition any sod areas not in healthy condition equal to adjoining lawns 30 days after replanting.
- I. Pavements: Where existing pavements must be cut to install irrigation system, cut smoothly to straight lines 6" wider than trench.
  1. Excavate trench to required depth and width.
  2. Remove cut-out pavement and excavated material from site.
  3. At walkways, jack piping under paving material, if possible.
  4. Backfill with dry sand fill material, placing in 6-inch lifts.
  5. Repair or replace pavement cuts with equivalent materials and finishes.

3.03 NOT USED

3.04 INSTALLATION

- A. General: Unless otherwise indicated, comply with requirements of Uniform Plumbing Code.
- B. Connection to Main: Connect to existing building piping in location indicated.
  1. Install new tee, valve, and union.
  2. Connect to existing stub. Install new valve and union.
  3. Connect to existing stub with union.
- C. Maintain uninterrupted water service to building during normal working hours. Arrange for temporary water shut-off with Engineer.
- D. Backflow Preventer: Provide union on downstream side. Install approved back flow prevention device as directed by manufacturer and in a manner approved by state and local codes.



- E. Water Hammer Arrester: Install between connection to building main and circuit valves, inside building or in valve box as indicated.
- F. Circuit Valves: Install in valve box, arranged for easy adjustment and removal.
  - 1. Provide union on downstream side.
  - 2. Adjust automatic control valves to provide flow rate or rated operating pressure required for each sprinkler circuit. If an over pressure condition exists, contractor shall install, at his expense, such pressure compenstation devices as are necessary to bring the circuit or heads into proper operating range.
- G. Piping: Lay pipe on solid subbase, uniformly sloped without humps or depressions.
  - 1. For circuit piping, slope to drain valve at least  $\frac{1}{2}$ " in 10' or run.
  - 2. At wall penetrations, pack the opening around pipe with non-shrink grout. At exterior face, leave a perimeter slot approximately  $\frac{1}{2}$ " wide by  $\frac{3}{4}$ " deep. Fill this slot with backer rod and an acceptable elastomeric sealant. Repair below grade waterproofing disturbed by this wok and make penetration watertight.
  - 3. Install PVC pipe in dry weather when temperature is above 40 F (4 C) in strict accordance with manufacturer's instructions. Allow joints to cure at least 24 hours at temperature above 40 F (4 C) before testing, unless otherwise recommended by manufacturer.
    - a) Allow joints to cure at least 24 hours at temperature above 40 degrees F (4 degrees C) before testing, unless otherwise recommended by manufacturer.
- H. Drain Pockets: Excavate to sizes indicated. Backfill with acceptable drain material to 12" below grade. Cover drain material with a sheet of 30-pound Asphalt saturated felt and backfill remainder with excavated material.
  - 1. Restore lawns or plantings disturbed by this work.
- I. Sprinkler Heads: Flush circuit lines with full head of water and install heads after hydrostatic test is completed.
  - 1. Install lawn heads at manufacturer's recommended heights.
  - 2. Install shrubbery heads at heights indicated.
  - 3. Locate part-circle heads to maintain a minimum distance of 4" from walls and 2" from other boundaries, unless otherwise indicated.
- J. Wiring : Make all wire splices in valve boxes.
- K. Dielectric Protection: Use dielectric fittings at connection where pipes of dissimilar metal are joined.
- L. Closing of Pipe and Flushing Lines: Cap or plug all openings as soon as lines have been installed to prevent the entrance of materials that would obstruct the pipe. Leave in place until removal is necessary for completion of the installation. Thoroughly flush out all main water lines before installing valves. Thoroughly flush out all lateral lines after installation and before attaching heads.

### 3.05 TESTING AND TRAINING

- A. General: Notify Engineer in writing when testing will be conducted. Conduct tests in presence of Engineer.
- B. Hydrostatic Test: Test water piping and valves, before backfilling trenches, to a hydrostatic pressure of not less than 100 psi. Piping may be tested in sections to expedite work. Remove and repair piping, connections, valves which do not pass hydrostatic testing.

- C. Operational Testing: Perform operational testing after hydrostatic testing is completed, backfill is in place, and sprinkler heads adjusted to final position.
  - 1. Demonstrate to Engineer that system meets coverage requirements and that automatic controls function properly.
  - 2. Coverage requirements are based on operation of one circuit at a time.
- D. After completion of grading, seeding or sodding, and rolling of grass areas, carefully adjust lawn sprinkler heads so they will be flush with or not more than ½" above finish grade.
- E. Personnel training
  - 1. Contractor shall be responsible for the training of as many personnel as the Owner shall deem necessary.
  - 2. Contractor shall be responsible for one starting and one winterizing of the system during the appropriate times of the year after final acceptance by the Owner as part of the training of the Owner's personnel.
  - 3. Contractor shall include general troubleshooting and operation of the system with reference to head, valve, and controller operation.
  - 4. Contractor shall furnish a complete operation and maintenance manual to the Owner's personnel. This manual shall include repair parts lists, assembly instructions, troubleshooting guides, programming instructions, and recommended precipitation rates.

### 3.06 ADJUSTMENT

- A. After completion of grading, seeding or sodding, if applicable, Contractor shall return to the job site to perform any final adjustments to the system, which might be deemed necessary.
- B. The contractor will be responsible for any pressure testing and start up of the system when construction is complete. The contractor will also be responsible for the winterization of the system after the first season of operation.

**END SECTION 328400**

5.4 FORM OF PROPOSAL

**LUMP SUM BASE BID**

The Bidder agrees to furnish all labor, materials, supplies, supervision and services required to perform this contract in a workmanlike manner. These services to be provided in accordance with Specifications and Contract Documents, and any duly issued Addenda for the **LUMP SUM BASE BID** set forth below:

\_\_\_\_\_ Dollar \_\_\_\_\_ Cents  
 (USE WORDS) (USE WORDS)

\$ \_\_\_\_\_  
 (USE NUMBERS)

ADD – **Alternate 1** – (Tuckahoe Bluegrass Sod) \$ \_\_\_\_\_  
 Deduct – **Alternate 2** – (Spoils Hauling Number) \$ \_\_\_\_\_

**This offer is for, at minimum, \_\_\_\_\_ calendar days from the date this offer is opened. In submitting the above it is expressly agreed that upon proper acceptance by Northern Kentucky University of any or all items offered, a contract shall thereby be created with respect to the items accepted.**

THIS BID SUBMITTED BY:

\_\_\_\_\_  
 (Name and Address of Bidder)

DATE: \_\_\_\_\_ AUTHORIZED SIGNATURE: \_\_\_\_\_

**NOTE:** *The Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest must be properly executed for this Bid to be valid.*

*This Bidder, in compliance with this Request for Bid, and having carefully examined the complete contract documents, as well as the specifications for the work as prepared by Northern Kentucky University, hereby proposes to furnish all labor, supervision, materials, supplies and services required to perform the specifics of the Contract Documents, within the time set forth herein and for the final negotiated price.*

The Bidder, hereby acknowledges receipt of the following Addenda:

ADDENDUM NO. \_\_\_\_\_ DATED \_\_\_\_\_ ADDENDUM NO. \_\_\_\_\_ DATE \_\_\_\_\_