Independent School District #271
Jefferson High School Stadium Technology SD Narrative
August 16, 2023

Civil

A. Narrative / Scope:
   1. Concessions building with building services.
   2. Ticketing Plaza.
   3. Lighting and Sound Systems.
   4. Home and Grandstand Bleachers and Press Box.
   5. Visitor Bleachers.
   6. ADA Routes.
   7. Turf Replacement.

B. We have researched and discovered a 50' setback for non-residential structures along streets - we're proposing to keep the proposed concessions building outside of that. Any concerns or other setbacks we should be aware of?

C. There is a desire for a drive entrance apron to the south of the site for their television crews during games. This will be gated off and only utilized by district staff during events. Is there a City Standard Detail we should use for the apron, curb and gutter, or sidewalk?
   1. There is an existing one further east that is hardly used and we envision this one to replicate it.

D. How many ADA parking stalls would be required to serve the field? Currently, there are none in the adjacent parking lots. City code is one standard parking space per three seats.

E. The site is located in a wellhead protection zone. Underground retention system and bioretention will likely be utilized for stormwater management. Disturbance will be over one acre and there the NPDES permit and SWPPP requirements apply:
   1. Lower Minnesota River Watershed District:
      a. Runoff rates shall not exceed existing for 1- or 2-, 10-, and 100- year 24 hour events using NOAA Atlas 14.
      b. Runoff volume to achieve a net reduction from existing.
      c. Projects that create 1 acre or more of new impervious surface shall have no net increase from existing TP and TSS.
   2. It is our understanding that The City of Bloomington issues permits and acts as the primary permitting authority to the Watershed District, are there other city stormwater requirements that we need to comply to?

F. Does this project require Planning Commission or City Council? What should we expect for the review process? Do you expect a Conditional Use Permit be needed for any improvements?

G. Are there neighborhood concerns that we should be aware of or need to mitigate?

H. Are we required to use any City Standard Specifications - utility related?

Architectural

Scope includes a 1,000sf concessions and toilet facility. 3 toilets/urinals and 2 sinks per gender are planned. The concessions area shall include equipment for warming food and a hand washing sink. Wall construction shall comprise of masonry backup with brick to match the existing High School. Wall finishes to include paint; ceiling finishes to include painted gyp bd. The building will be designed to meet both current life safety and accessibility code requirements.
The bleachers will be a prefabricated assembly with 2,000 seats on the home side and 500 seats on the opposite visitor side. It is planned to move existing Kennedy bleachers to Jefferson to be used on the visitor side. A pre-fabricated press box is planned for the home side and integrated within the bleachers. Bleachers will be designed to meet both current life safety and accessibility code requirements.

Structural

The concessions building roof will be framed with conventional pitched wood trusses with flat bottom chords spaced at 24"oc max, spanning between exterior CMU bearing walls. The exterior CMU walls will also act as shear walls, and will be supported on conventional strip footings. The floor slab will be a non-structural slab on grade.

Mechanical

New water and sanitary sewer services will be provided for concessions and toilet plumbing fixtures. New water service will have shutoff, drain, and blowout provisions for winterization. Electric water heater will provide hot water to hand sinks. Code required exhaust and makeup air will be provided for toilets and concessions. Electric heaters will provide heat during shoulder seasons when plumbing systems are not winterized.

Electrical

A. General Work Scopes:
   1. The design will comply with the current versions of the following codes and standards:
      a. 26 05 00 Common Work Results for Electrical
      b. 26 05 03 Electrical Demolition
      c. 26 05 19 Electrical Power Conductors
      d. 26 05 26 Grounding and Bonding for Electrical Systems
      e. 26 05 29 Hangers and Supports for Electrical Systems
      f. 26 05 33 Raceway and Boxes for Electrical Systems
      g. 26 05 53 Identification for Electrical Systems
      h. 26 09 23 Lighting Control Devices
      i. 26 22 00 Low-Voltage Transformers
      j. 26 24 16 Panelboards
      k. 26 27 26 Wiring Devices
      l. 26 28 16 Enclosed Switches and Circuit Breakers
      m. 26 51 00 Lighting
      n. 26 56 68 Exterior Athletic Lighting

B. Electrical Narrative:
   1. Electrical work will be provided for both Jefferson and Kennedy stadiums.

C. Electrical Distribution:
   1. A 200A, 480V/3-phase fusible switch and associated feeders will be provided out to site to power both the field lights, press box, scoreboard, and field outlets.

D. Lighting:
   1. Field lighting will be provided for the stadium.

E. Power Systems:
   1. A freestanding feed point with 480V panel, transformer, and 208/240V? panel enclosed will be provided on site for the stadium power requirements. The 480 V panel shall feed field lighting and associated Musco controls, and the lower voltage panel shall feed the press box and field outlets. The feed point will be NEMA 3R rated and mounted on a concrete pad with lockable doors. Field lighting will be controlled via this feed point.
   2. Existing power to the scoreboard will be rerouted to the feed point.

Technology

A. Technology Narrative Based on Each of the Following Systems:
   1. General:
      a. The system below will be provided at both Jefferson and Kennedy stadiums.
   2. Stadium Audiovisual System:
      a. General: The stadium's audiovisual system will include loudspeakers hung from the lighting poles and press box to deliver a semi uniform coverage of 85dB +-10dB of audio to the home and away team bleachers and the sports field. The loudspeakers will receive wireless microphone audio from either the press box or the sidelines of the home team side of the sports field. The press box will also have a Bluetooth receiver accessible to play music over the loudspeaker system. The system will be controlled using a table-mounted touch panel to adjust volume levels and pairing capabilities. The headend components of the system will be mounted in a portable rack that can be removed when the stadium is not in use to help protect the longevity of the system.
   3. Stadium Structured Cabling System:
      a. General: Fiber optic cabling will connect the stadium press box to the school's main distribution frame using an owner-provided network switch. This switch will provide internet access to wireless access points near the bleachers. Additional cabling will be provided for the video surveillance system. The network switch will be co-located in the portable rack for the audiovisual to protect the system when not in use.
   4. Physical Security System:
      a. General: Leveraging the owner provided network switch one (1) video surveillance cameras will be placed in the interior of the press box capturing the entrance of the door and another camera will be placed on the exterior of the press box capturing the sports field. These cameras will be tied into an existing owner furnished video surveillance security camera system.
   5. Exclusions:
      a. All electrical races way, J-Box and power are provided by Division 26 Contractor.