

# **Addendum No. 1**

## **City of Kerrville Athletic Complex Field House**

**City of Kerrville**

**Kerrville, Texas**

November 21, 2016



**PETER LEWIS**  
ARCHITECT + ASSOCIATES





# Addendum 1

## Addendum No. 1 Narrative

November 21, 2016

**Project:** City of Kerrville Athletic Complex Field House  
**Project No.:** 20-1605

**To:** City of Kerrville / Bidders

**From:** Peter W. Lewis Architect + Associates

This addendum shall be included in and be considered part of the plans and specifications for the above named project. The Contractor shall be required to sign and acknowledge of the receipt of this addendum at the time she/he receives it.

This addendum contains changes to the requirements of the Contract Drawings and Specifications. Such changes shall be incorporated in the Contract Documents and shall apply to the work with the same meaning and force as if they had been included in the original Documents. Whenever this Addendum modifies a portion of a paragraph of the Specifications, or any portion of any Drawing, the remainder of the paragraph or drawings affected shall remain in force.

The conditions and terms of the basic specifications shall govern work described in this Addendum. Whenever performance and the quality or quantity of materials, or workmanship are not fully described in this Addendum, the PERFORMANCE REQUIREMENTS of the Specifications shall apply to the work described in this Addendum.

If no similar items of work are included in the basic specifications, the best quality of material and workmanship standards shall apply and all work shall be subject to the written approval of the Architect.

### QUESTIONS

**Item No. A1: QUESTION: Is there a budget for the project?**

**RESPONSE:** The estimated construction cost for this project is \$1,500,000.00.

**Item No. A2: QUESTION: We noticed there is not SWPPP plan in the documents, will it be provided?**

**RESPONSE:** No. Erosion Control Devices and SWPPP have been installed and maintained by others, prior to any soil disturbing activities at the project site.

**QUESTION: Is there a soils report available?**

**RESPONSE:** The soils report can be found within the Project Manual, Dated 10/21/16.

**Item No. A3: QUESTION: There is a detail for water meters but none are shown on the Utility Plans.**

**REPOSNE:** Water Meter Detail not required under this contract, as domestic water utility will connect to an existing meter that will be provided as part of the Kerrville Sports Complex Project. Disregard Detail 4 Sheet C9.

**Item No. A4: QUESTION: There is a sidewalk covered flume detail on sheet 7/C8 there are no location shown on the drawings.**

**RESPONSE:** Refer to sheet A1.1 and C4. The southwest sidewalk connecting the parking lot sidewalk with the concession side of the building. Key Note 24.

**Item No. A5: QUESTION: There is a Back-Flow Preventer detail showing, but none shown on the utility plan, is there one?**

**RESPONSE:** Back-Flow Preventer detail not required under this contract. A Back-Flow Preventer will be

provided as part of the Kerrville Sports Complex Project. Disregard Detail 1 Sheet C10.

- Item No. A6:** **QUESTION: If the field is an alternate, how are the utilities to be handled? What is the separation or cut off for future if the alternate is not selected?**  
**RESPONSE:** Refer to revised “Base Bid and Alternate” description on G1.1.
- Item No. A7:** **QUESTION: Is the City of Kerrville license required to bid the job? Or, is it required of awarded the job?**  
**RESPONSE:** It is not required, until after the project has been awarded.
- Item No. A8:** **QUESTION: Sheet A2.2 Floor Plan Note 13 discusses Splash blocks and refers to sheet A1.0. No sheet 1.0 or other reference to splash blocks that we could find.**  
**RESPONSE:** Refer to 3/A1.1.
- Item No. A9:** **QUESTION: Sheet A4.2 Note 21 says the concession counter top is Plam. Sheet A8.2 shows all tops as stainless steel; also please clarify all these tops are provided in the contract.**  
**RESPONSE:** Countertop to be Stainless Steel, and to be provided within contract.
- Item No. A10:** **QUESTION: Specification section 07130 Self Adhering Sheet Waterproofing. Where does this occur on the project cannot find a detail.**  
**RESPONSE:** Delete Specification section 07130, Self Adhered Sheet Waterproofing. Does not occur on this project.
- Item No. A11:** **QUESTION: Referring to the 2 mechanical areas on the south side of the building; are these areas concrete?**  
**RESPONSE:** Provide 3 ½” Concrete Housekeeping Pad, under each mechanical unit. Provide pea-gravel over weed screen around perimeter of mechanical units, to edge of perimeter fencing.
- Item No. A12:** **QUESTION: A1.2 Note 10 shows field lighting and states refer to Electrical; Note on sheet MEPl.1 Says relocated 4 head pole Typ. Please clarify field lighting.**  
**RESPONSE:** Refer to Sheet A1.2, General Note G3.
- Item No. A13:** **QUESTION: Project has a signage specification; where does this occur?**  
**RESPONSE:** Refer to sheet A2.3, Detail 1.
- Item No. A14:** **QUESTION: Are there any allowances on the project?**  
**RESPONSE:** No.
- Item No. A15:** **QUESTION: Note W on G1.1 states Contractor pays for permit. Specs say project is exempt. Please clarify.**
- Item No. A16:** **RESPONSE:** Refer to Specification Section, “Instructions to Bidders”, item BB. Building Permit fees for city owned projects are waived. Also, refer to item CC. Water and sewer tap fees are NOT waved.
- Item No. A17:** **QUESTION: Sheet 8.1 General note speaks of Millwork and species. We do not see any millwork in the project.**
- Item No. A18:** **RESPONSE:** There is no millwork on this project. Delete General Note W, from sheet G1.1.
- Item No. A19:** **QUESTION: Sheet P3.1. - #9 “provide local code approved stainless steel backflow preventers”. Backflow preventers are typically brass. Requesting permission to use brass.**  
**RESPONSE:** Brass backflow preventers are not acceptable for use with Beverage Dispensing equipment as it leaves a metallic aftertaste from leeching metals with the carbonation.
- Item No. A20:** **QUESTION: Sheet P3.1: #16 – “All interior condensate piping shall be insulated schedule 40 pvc.” Please confirm as copper is normally used.**  
**RESPONSE:** Insulated schedule 40 PVC is our office standard for this application and listed for cost savings. If the contractor chooses, they may use an insulated Type ‘L’ hard copper.
- Item No. A21:** **QUESTION: Sheet P3.1: #17 - “All exterior condensate piping shall be type L hard copper.” Please confirm that Type L is correct.**

**RESPONSE:** Yes, this is correct. Type 'L' hard copper is our office standard for this application.

**Item No. A22: QUESTION: Are toilet compartments HDPE or Stainless Steel?**

**RESPONSE:** Toilet Compartments are Solid Color Reinforced Composite. Refer to Special Accessory Legend, sheet A2.3.

**Item No. A23: QUESTION: Who's responsibility is it to make the utility connections, specific to sheet MEP 1.1?**

**RESPONSE:** It will be the responsibility of the General Contractor, under this contract, to make all final connections to the utilities. Refer to Civil drawings for additional information.

**Item No. A24: QUESTION: P3.1 Fixture Schedule; Water Closets, Note 1 (Provide trip lever etc.) are these not central Sloan type flush valves?**

**RESPONSE:** Flush controls shall be located on the open side of the water closet for wheelchair accessible and ambulatory stalls. Sloan Flush Valves can be installed for left or right hand use where needed.

**Item No. A25: QUESTION: P3.2 Text overlaps at details 4, 7 and 8. Provide pipe size at P- trap in detail 9.**

**RESPONSE:** Trap size for detail #9 shall be 2" to maintain full-size pipe from 2" continuous waste below sink.

**Item No. A26: QUESTION: The exterior elevations show some Pre-Fab shade awnings. Will a spec be provided for these units?**

**RESPONSE:** Refer to Architectural and Structural drawings for information on Pre-Fabricated Awnings.

**Item No. A27: QUESTION: Will all the special system cabling be by others, i.e. phone, data, communication, sound, security, access control, etc.?**

**RESPONSE:** All the special system cabling will be provided under a separate contract, except for any communication items required for the Fire Alarm, and Fire Alarm Systems. See drawings for additional information.

**Item No. A28: QUESTION: DIVISION 09260 PARA. 2.6B.1: Specifies GP-Densglass gold. Do not find exterior gypsum board sheathing shown on the drawings. Is it required?**

**RESPONSE:** No.

**Item No. A29: QUESTION: Specification Division 01410 Testing lab services, PAGE 1, PARA. 1.2A, states that all testing will be paid for by the owner. SHEET C2 General Note 3 states that the testing laboratory will be retained by the General Contractor. Please clarify.**

**RESPONSE:** The City will be paying for densities cylinders etc. for quality assurance, but the contractor will be paying for items listed in 01410 section 1.5, which will be for quality control; i.e. proctors, mix designs etc. and any re-testing for failed tests.

## SPECIFICATIONS

**Item No. A30: TABLE OF CONTENTS:** Delete section 07130 – SELF ADHERING SHEET WATERPROOFING. Revise Specification section "METAL BUILDING SYSTEMS" number to 13340. Add Specification Sections "02820 CHAIN LINK FENCING AND GATES" and "PRE-ENGINEERED SHADE STRUCTURES."

**Item No. A31: SECTION 070 – CITY OF KERRVILLE CONSTRUCTION CONTRACT:** Modify Summary of work and Contract Sum sections as shown.

**Item No. A32: SECTION 090 – DESCRIPTION OF WORK:** Revise Summary of Work as indicated.

**Item No. A33: SECTION 01100 – SUMMARY:** Update 1.2 WORK COVERED BY CONTRACT DOCUMENTS, SECTION C as shown.

**Item No. A34: SECTION 01410 – TESTING LAB SERVICES:** Modify Specification as indicated. Refer to drawings for additional project testing requirements.

**Item No. A35: SECTION 02820 – CHAIN LINK FENCING AND GATES:** Add section in its entirety.

- Item No. A36:** SECTION 07130 – SELF ADHERING SHEET WATERPROOFING: Delete this section in its entirety.
- Item No. A37:** SECTION 13333 – PRE-ENGINEERED SHADE STRUCTURES: Add section in its entirety.
- Item No. A38:** SECTION 13340 – METAL BUILDING SYSTEMS: Clarify United Structures of America as an approved Metal Building System manufacturer.
- Item No. A39:** SECTION 15500 – FIRE PROTECTION SYSTEMS: Add information on Vertical Backflow Preventer as shown.

## **DRAWINGS**

- Item No. A40:** SHEET G1.1:
- a. Revise Sheet Index and Dates as shown.
  - b. Revise/Add “Base Bid & Alternates Description”
  - c. Revise “!!Note to Bidders!!
  - d. Add City of Kerrville project number “PW16-001.”
- Item No. A41:** SHEET G1.3:
- a. Modify “Code Legend (Floor Plan) line types as shown.
  - b. Add Occupancy note as shown.
  - c. Add alternate assembly key to Batting Cage #107.
- Item No. A42:** SHEET A1.1:
- a. Revise limits of construction as shown. (Refer to Civil for additional information)
  - b. Clarify east side, 6’ wide interceptor channel. (Refer to Civil for additional information)
  - c. Clarify additional sidewalk on ease side of project. Not in Contract, for coordination purposes only. (Refer to Civil for additional information)
  - d. Add concrete housekeeping pad at exterior mechanical units.
  - e. Add “Pea Gravel” over weed screen at mechanical yards as shown.
  - f. Clarify extents of northern sidewalk. (Refer to Civil for additional information)
- Item No. A43:** SHEET A1.2:
- a. Provide concrete stoop in base bid at exterior exit door as shown.
- Item No. A44:** SHEET A1.3:
- a. Detail 3, revise anchor condition to be a weld plate. (Refer to Structural for additional information)
  - b. Detail 6, revise depth of pole from 11” to 11’.
- Item No. A45:** SHEET A2.1:
- a. Remove “Soda Tanks” from background as shown.
- Item No. A46:** SHEET A2.2:
- a. Provide vertical backflow preventer on fire riser as shown. (Refer to Sprinkler drawings and specifications for additional information.)
  - b. Modify Key Note # 13 as shown.
- Item No. A47:** SHEET A2.3:
- a. Add surface mounted paper towel dispensers as shown.
- Item No. A48:** SHEET A3.1:
- a. Provided top of ridge elevations as shown.
- Item No. A49:** SHEET A4.2:
- a. Detail 1: Delete key note as indicated.
  - b. Revise Key Note 21 as indicated.
- Item No. A50:** SHEET A4.3:

- a. Add section detail 7.

**Item No. A51: SHEET A8.2:**

- a. Add paper towel dispensers as shown.

**Item No. A52: SHEET FS1.1:**

- a. Add vertical backflow preventer to fire sprinkler riser as shown.

**Item No. A53: SHEET C4:**

- a. Revised existing sidewalk limits and 12" HDPE connection based on changes during construction on the Kerrville Sports Complex Project.
- b. Modify catch basin to 2' x 2'.

**Item No. A54: SHEET C5:**

- a. Revised existing sidewalk limits and existing sanitary sewer based on changes during construction on the Kerrville Sports Complex Project.
- b. Modify proposed 4" sanitary sewer notes as shown.

**Item No. A55: SHEET C6:**

- a. Revised 12" HDPE connection based on changes during construction on the Kerrville Sports Complex Project.
- b. Modify Detail 3 as shown.

**Item No. A56: SHEET C8:**

- a. Revise toe-down depth to 8-inches. Revised toe-down based on changes during construction of the Kerrville Sports Complex Project.

**Item No. A57: SHEET C11:**

- a. Revise limits of construction as shown

**LIST OF ATTACHMENTS**

Narrative (8 ½" X 11")

Table of Contents (8 ½" X 11")

Section 070 – City of Kerrville Construction Contract (8 ½" X 11")

Section 090 – Description of Work (8 ½" X 11")

Section 01100 – Summary (8 ½" X 11")

Section 01410 – Testing Laboratory Services (8 ½" X 11")

Section 02820 – Chain Link Fencing and Gates (8 ½" X 11")

Section 13333 – Pre-Engineered Shade Structures (8 ½" X 11")

Section 13340 – Metal Building Systems (8 ½" X 11")

Section 15500 – Fire Protection Systems (8 ½" X 11")

G1.1 Cover Sheet (24x36)

G1.3 Code Compliance (24x36)

A1.1 Site Plan (24x36)

A1.2 Field Plans (Add Alternate #1) (24x36)

A1.3 Site Details (Add Alternate #1) (24x36)

A2.1 Foundation Dimensional Control Plan (24x36)

A2.2 Floor Plan (24x36)

A2.3 Enlarged Plan (24x36)

A3.1 Exterior Elevations (24x36)

A4.2 Wall Section (24x36)

A4.3 Wall Sections (24x36)

A8.2 Interior Elevations (24x36)

FS1.1 Fire Sprinkler Plan (24x36)

C4 Grading, Drainage, and Paving Plan (24x36)

C5 Utility Plan (24x36)

C6 Field Layout (24x36)

C11 Contractor Staging Area Map (24x36)

END OF Addendum No. 1

**PROJECT MANUAL**

**MEP SIGNATURE PAGE**

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	Instructions to Bidders
070	City of Kerrville Construction Contract
075	Payment Bond
080	Performance Bond
090	Description of Work

**INDEX TO DRAWINGS**

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01400	QUALITY REQUIREMENTS
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01500	TEMPORARY FACILITIES AND CONTROLS
01600	PRODUCT REQUIREMENTS
01700	EXECUTION REQUIREMENTS
01710	CLEANING UP
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01770	CLOSEOUT PROCEDURES

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02890	SYNTHETIC TURF SYSTEM

**DIVISION THREE – CONCRETE - REFER TO STRUCTURAL**

**DIVISION FOUR – MASONRY – NOTE USED**

**DIVISION FIVE – METALS**

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**DIVISION SIX - WOOD AND PLASTICS**

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**COMCHECK COMPLIANCE CERTIFICATES**

**HVAC LOAD CALCULATIONS**



**Section 070**

**CITY OF KERRVILLE**

**CONSTRUCTION CONTRACT**

This agreement made this day by and between the City of Kerrville, Texas, called "City," and the undersigned "Contractor" as follows:

1. THE WORK

The Contractor shall perform all the work as required by this contract for:

**City of Kerrville Athletic Complex Field House**

**Reference Construction Plans signed and sealed by Peter Lewis Architect + Associates, PLLC dated [October 21, 2016](#) and approved by City of Kerrville on [December 13, 2016](#).**

**Summary of Work**

**BASE BID:**

Description: execution of all civil, structural, MEP and architectural items within this set of contract, as it pertains to the building and adjacent paving. Provide seeded hydromulch in lieu of add alternate no. 1, "exterior baseball field" location. Coordinate seed mix with owner prior to installation. Final grading and surface drainage of add alternate no. 1, "exterior baseball field", to match civil drawings as shown. Provide empty conduit for add alternate no. 1, "exterior baseball field," utilities to include, but not limited to power and lighting. Refer to sheet a1.1 for delineation of base bid, versus add alternate.

**ADD ALTERNATE NO. 1: EXTERIOR BASEBALL FIELD**

Description: execution of all civil, structural, MEP and architectural items as described within this set of construction documents as it pertains to the exterior baseball field. This is to include, but is not limited to paving, utilities, foundations, artificial turf, subgrade and field drainage, fencing, dugouts, baseball equipment and field lighting. Refer to sheet a1.1 for delineation of base bid, versus add alternate.

The following are incorporated herein:

- a. General Provisions
- b. Technical Specifications
- c. Addenda issued prior to receipt of Bid
- d. Plans
- e. Instructions to Bidders
- f. Proposal

Some of such documents may not be physically attached hereto but are on file at City Hall, and copies may be obtained upon request.

## 2. TIME

Construction substantial completion time will be **210** calendar days and 30 calendar days after for final completion from the date of written notice to proceed. Working days are defined in specification section 123.20. The project shall not be considered complete until all construction has been accepted and is operational and performing to its intended purpose. The Contractor's obligations to the project however, are not complete and retainage will not be released until all construction items are 100% complete to the satisfaction of local City of Kerrville officials.

## 3. LIQUIDATED DAMAGES

Liquidated damages are hereby established for work which is not substantially complete in the amount of Three Hundred Dollars (\$300.00) per working day for each working day after the date established in the Notice to Proceed. The City may offset any such liquidated damages against any sums from time to time due by the City to Contractor.

The completion time assumes that fifteen percent of the working days are "bad weather days," days on which the work cannot proceed; therefore, the time for completion shall not be extended on account of bad weather until the said number of assumed "bad weather days" has been exceeded.

The time for completion shall not be extended except by written memorandum executed by the Contractor and the City Engineer. Contractor shall make written application to the City not later than ten (10) days after the day, event, or cause claimed by Contractor to be a delay. Failure to make such written claim within such time shall result in a waiver by Contractor of an extension based on those particular days, events, or causes. If, for example, this contract assumes twenty **(20)** bad weather days and Contractor desired a one-day extension for the twenty-first day of rain, Contractor shall make a written claim not later than ten (10) days after the occurrence of such twenty-first day.

The said amount per day is not a penalty but an agreed amount of actual damages which are difficult to calculate. Such damages include loss of staff time, answering complaints by citizens who have been inconvenienced by the work, City Council time, loss of use, and other damages difficult to reasonably anticipate or calculate.

## 4. PAYMENTS

The City shall pay the Contractor ninety percent (**90%**) of the portion of Contract Sum properly allocable to labor, materials, and equipment incorporated in the Work and ninety-percent (**90%**) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site or at some other location agreed upon in writing, less the aggregate of previous payments made by the City, and, upon substantial completion of the entire Work, a sum sufficient to increase the total payments to ninety percent (**90%**) of the Contract Sum. All retainages from progress payments shall be withheld without liability for interest. Upon acceptance, the City shall make payment to Contractor such that one hundred percent (100%) of the Contract Sum has been paid.

The City may choose to award a contract for the amount of the base bid plus no or any combination of additive alternates.

5. LIABILITY INDEMNITY

THE CONTRACTOR AGREES TO INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CITY OF KERRVILLE, TEXAS, AND ALL OF THEIR RESPECTIVE OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, LOSSES, PROPERTY DAMAGES, AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OF DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PROPERTY ON ACCOUNT OF ANY NEGLIGENT ACT OF THE CONTRACTOR, THE CITY OF KERRVILLE, TEXAS, OR ANY OF THEIR RESPECTIVE OFFICERS, EMPLOYEES, AGENTS, REPRESENTATIVES, OR SUBCONTRACTORS IN THE EXECUTION, SUPERVISION, AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS AGREEMENT, WHETHER OR NOT THE ACT OR OMISSION OF THE CITY OR ANY OF THEIR RESPECTIVE OFFICERS, EMPLOYEES, OR AGENTS WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH THE NEGLIGENCE OF THE CONTRACTOR OR ITS OFFICERS, EMPLOYEES, AGENTS, CONTRACTORS, OR SUBCONTRACTORS, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS AGREEMENT.

6. LIABILITY INSURANCE

Prior to the commencement of any work and not later than fifteen (15) days following the execution of this contract, the Contractor shall furnish the City copies of paid-up policies (to the City Risk Manager/City Hall) providing Liability and Workman's Compensation Coverage as follows minimum limits):

TYPE OF INSURANCE	LIMITS
a. Workman's Compensation covering all employees	Statutory
b. Employer's Liability	<u>\$100,000.00</u>
c. Comprehensive General Liability	
Bodily Injury & Property Damage (per occurrence)	<u>\$1,000,000.00</u>
Aggregate	<u>\$1,000,000.00</u>
(Premises/Operations Products/Completed Operations/Independent Contractors/Contractual Liability/Coverages may not be excluded). XCU must be supplied if any exposure.	
d. Business Automobile Liability covering owned vehicles, rented and non-owned vehicles and employee non-ownership	
Bodily Injury Property Damage (per occurrence)	<u>\$1,000,000.00</u>

Aggregate

\$1,000,000.00

The Commercial General Liability and the Automobile Liability policies shall name the City of Kerrville, Texas, as additional insured and all policies shall provide for a waiver of subrogation in favor of the City of Kerrville. The policy and any renewal certificate shall provide that the City be notified thirty (30) days prior to cancellation or modification of any coverage. Language to the effect that the company will "Endeavor" or "Attempt" to so notify the City of Kerrville is not sufficient. Renewal certificates must be received by the City at least ten (10) days prior to any cancellation date. Policies will be in effect until final acceptance or cancellation of this contract, unless otherwise specified. The City may, at its sole option, terminate this agreement and file a claim on the Contractor's bid bond if the Contractor fails to deliver the required policies and certificates within 15 days after execution of this contract.

It shall be the responsibility of the Contractor to insure that all Subcontractors comply with the same insurance requirements as the said Contractor.

7. CASUALTY INSURANCE

In the event the work includes structures or buildings susceptible to damage by fire, windstorm, or other casualty, then the Contractor before being authorized to begin work shall furnish the City a duplicate original of an insurance policy naming the City of Kerrville as an additionally insured. Such insurance shall insure both the City of Kerrville and Contractor, during the term of the work, against loss by fire, windstorm, vandalism, theft, or other casualty. Such policy shall be in the total amount of this contract.

8. QUALITY OF WORK

All work shall be of good workmanship. Contractor shall comply with all applicable City of Kerrville Codes as well as all applicable professional and technical standards. Materials shall be of first quality.

9. CHANGES AND EXTRAS

No change of this Contract, whether for additional work, additional compensation, or other, shall be effective unless prior thereto a written change order has been authorized by the City Engineer. Employees of the City other than the City Engineer or Public Works Director do not have the authority to issue change orders.

10. ADDENDA

Contractor acknowledges the receipt of the following addenda:

- 1. Dated: \_\_\_\_\_ Acknowledged by: \_\_\_\_\_
- 2. Dated: \_\_\_\_\_ Acknowledged by: \_\_\_\_\_

3. Dated: \_\_\_\_\_ Acknowledged by: \_\_\_\_\_

11. CONTRACT SUM

Proposal: Contractor agrees to provide all labor, materials, and all incidentals necessary to complete "The Work" for the following Unit Prices:

**TOTAL BASE BID:**

\_\_\_\_\_  
\_\_\_\_\_  
(use words) (\$ \_\_\_\_\_)  
(figures)

**ADDITIVE ALTERNATE NO. 1:**

\_\_\_\_\_  
\_\_\_\_\_  
(use words) (\$ \_\_\_\_\_)  
(figures)

COMPLETED BY

DATE

\_\_\_\_\_  
(printed name)

\_\_\_\_\_  
(date)

\_\_\_\_\_  
(title)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(company name)

**SUBCONTRACTORS:**

NAME	ADDRESS	PHONE	WORK TO BE PERFORMED
AIRCONDITIONING			
1.			
ELECTRICAL			
2.			
PLUMBING			
3.			

(Attach additional sheet if required)

**INSURANCE AGENT**

NAME	ADDRESS	PHONE	POLICY
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

**BONDING AGENT**

NAME	ADDRESS	PHONE	POLICY
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2016

Signature: \_\_\_\_\_

Attest: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Secretary (if by Corporation)

Firm Name: \_\_\_\_\_

SEAL

Title: \_\_\_\_\_

Business Address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

FAX: \_\_\_\_\_

ACCEPTED THIS \_\_\_\_\_

day of \_\_\_\_\_, 2016

By: \_\_\_\_\_

E.A. Hoppe, Deputy City Manager  
City of Kerrville, Texas.

ATTEST: \_\_\_\_\_

Brenda G. Craig, City Secretary

CITY SEAL

APPROVED AS TO FORM:

\_\_\_\_\_  
Michael C. Hayes, City Attorney



**Section 090****DESCRIPTION OF WORK**

The project is located in Kerrville, Texas.

Following is a summary of work items included in the bid schedule:

**City of Kerrville Athletic Complex Field House**

**Reference Construction Plans signed and sealed by Peter Lewis Architect + Associates, PLLC dated [October 21, 2016](#) and approved by City of Kerrville on [December 13, 2016](#).**

**Summary of work****BASE BID:**

Description: execution of all civil, structural, MEP and architectural items within this set of contract, as it pertains to the building and adjacent paving. Provide seeded hydromulch in lieu of add alternate no. 1, "exterior baseball field" location. Coordinate seed mix with owner prior to installation. Final grading and surface drainage of add alternate no. 1, "exterior baseball field", to match civil drawings as shown. Provide empty conduit for add alternate no. 1, "exterior baseball field," utilities to include, but not limited to power and lighting. Refer to sheet a1.1 for delineation of base bid, versus add alternate.

**ADD ALTERNATE NO. 1: EXTERIOR BASEBALL FIELD**

Description: execution of all civil, structural, MEP and architectural items as described within this set of construction documents as it pertains to the exterior baseball field. This is to include, but is not limited to paving, utilities, foundations, artificial turf, subgrade and field drainage, fencing, dugouts, baseball equipment and field lighting. Refer to sheet a1.1 for delineation of base bid, versus add alternate.



**SECTION 01100 - SUMMARY****PART 1 - GENERAL**

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

## 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of a new City of Kerrville Athletic Complex Field House.
  - A. Project Location: The project is located in Kerrville, Texas, 78028
  - B. Owner: City of Kerrville
- B. Architect Identification: The Contract Documents, dated **October 21, 2016** were prepared by Peter Lewis Architect + Associates, 334 West Water Street, Kerrville, Texas 78028.
- C. The Work includes:
  - A. Base Bid Description: Execution of all civil, structural, MEP and architectural items within this set of contract, as it pertains to the building and adjacent paving. Provide seeded hydromulch in lieu of add alternate no. 1, "exterior baseball field" location. Coordinate seed mix with owner prior to installation. Final grading and surface drainage of add alternate no. 1, "exterior baseball field", to match civil drawings as shown. Provide empty conduit for add alternate no. 1, "exterior baseball field," utilities to include, but not limited to power and lighting. Refer to sheet a1.1 for delineation of base bid, versus add alternate.
  - B. Add Alternate No. 1: Exterior Baseball Field Description: Execution of all civil, structural, MEP and architectural items as described within this set of construction documents as it pertains to the exterior baseball field. This is to include, but is not limited to paving, utilities, foundations, artificial turf, subgrade and field drainage, fencing, dugouts, baseball equipment and field lighting. Refer to sheet a1.1 for delineation of base bid, versus add alternate.

## 1.3 CONTRACT

- A. Project will be constructed under a general construction contract.

## 1.4 USE OF PREMISES

- A. General: Contractor shall have partial use of premises for construction operations. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

## 1.5 WORK UNDER OTHER CONTRACTS

- A. Separate Contract: Owner may award a separate contract for performance of certain construction operations at Project site. Those operations will be conducted simultaneously with work under this Contract.

- B. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

#### 1.6 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish:
  - B. Owner will arrange for and deliver Shop Drawings, Product Data, and Samples to Contractor.
  - C. Owner will arrange and pay for delivery of Owner-furnished items according to Contractor's Construction Schedule, unless otherwise noted.
  - D. After delivery, Owner will inspect delivered items for damage. Contractor shall be present for and assist in Owner's inspection.
  - E. If Owner-furnished items are damaged, defective, or missing, Owner will arrange for replacement.
  - F. Owner will arrange for manufacturer's field services and for delivery of manufacturer's warranties to Contractor.
  - G. Owner will furnish Contractor the earliest possible delivery date for Owner-furnished products. Using Owner-furnished earliest possible delivery dates, Contractor shall designate delivery dates of Owner-furnished items in Contractor's Construction Schedule.
  - H. Contractor shall review Shop Drawings, Product Data, and Samples and return them to Architect noting discrepancies or anticipated problems in use of product.
  - I. Contractor is responsible for receiving, unloading, and handling Owner-furnished items at Project site.
  - J. Contractor is responsible for protecting Owner-furnished items from damage during storage and handling, including damage from exposure to the elements.
  - K. If Owner-furnished items are damaged as a result of Contractor's operations, Contractor shall repair or replace them.

#### SPECIFICATION FORMATS AND CONVENTIONS

- B. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "MasterFormat" numbering system.
  - A. Section Identification: The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.
- C. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - A. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
  - B. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for

clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

- a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.7 MISCELLANEOUS PROVISIONS

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

END OF SECTION 01100



**SECTION 01410 - TESTING LABORATORY SERVICES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections apply to work specified in this Section.

**1.2 PROCEDURE****A. Owner's Testing Laboratory:**

An independent testing laboratory will be selected and furnished by the Owner to inspect and test the materials and methods of construction as hereinafter specified for compliance with the specification requirements of the Contract Documents and to perform such other specialized technical services as required by the Owner or his representative. All testing lab services shall be paid for by the owner.

**1.3 QUALIFICATIONS OF TESTING LABORATORY**

- A. The Testing Laboratory selected shall meet the basic requirements of ASTM E329 "Standard of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction", and shall submit to the Contractor, Owner, Architect, and Engineer, a copy of the report of inspection of their facilities made by the Materials Reference Laboratory of the National Bureau of Standards during the most recent tour of such inspections, and shall submit a memorandum stating steps taken to remedy all deficiencies reported by this inspection.
- B. The Testing Laboratory selected shall meet "Recommended Requirements for Independent Laboratory Qualification", latest edition, as published by the American Council of Independent Laboratories.
- C. Testing machines shall be calibrated at intervals not exceeding 12 months by devices of accuracy traceable to the National Bureau of Standards or accepted values of natural physical constants. The Testing Laboratory shall submit a copy of certificate of calibration made by an accredited calibration agency.
- D. Tests and inspections shall be conducted in accordance with specified requirements, and if not specified, in accordance with the applicable standards of the American Society for Testing and Materials or other recognized and accepted authorities in the field.

**1.4 AUTHORITIES AND DUTIES OF THE LABORATORY****A. Attending Preconstruction Conferences:**

The Owner's Testing Laboratory shall obtain and review the project plans and specifications with the Architect and Engineer as soon as possible prior to the start of

construction. The Owner's Laboratory shall attend preconstruction conferences with the Architect, Engineer, Project Manager, General Contractor, and Material Suppliers as required to coordinate materials inspection and testing requirements with the planned construction schedule. The Owner's Laboratory will participate in such conferences throughout the course of the project.

B. Outline Testing Program:

The Owner's Testing Laboratory shall be responsible for outlining a written detailed testing program conforming to the requirements as specified in the Contract Documents and in consultation with the Owner, Contractor, Architect, and Engineer. The testing program shall contain an outline of inspections and tests to be performed with reference to applicable sections of the specifications or drawings and a list of personnel assigned to each portion of the work. Such testing program shall be submitted to the Owner, Contractor, Architect, and Engineer five weeks in advance of the start of construction so as not to delay the start of construction. It shall be the Testing Laboratory's responsibility that such program conforms to the requirements of the Specifications and drawings and falls within the budget for testing laboratory services. If the allocated budget is not sufficient to cover the services as outlined in the Specifications, it shall be the responsibility of the Laboratory to notify the Contractor, Architect, Engineer, and Owner so that the Laboratory services can be modified accordingly prior to the start of construction. Furthermore, the Testing Laboratory shall monitor its expenditures throughout the course of the job and notify immediately the Owner, Contractor, Architect, and Engineer, of any significant deviation from the planned testing program and budget.

C. Cost Proposal:

The Testing Laboratory's proposal to the Owner shall contain the outlined testing program based on a unit price basis for tests and inspections and on an hourly basis for personnel. A total estimated price shall also be submitted.

D. Cooperation with Design Team:

The Laboratory shall cooperate with the Architect, Engineer, and Contractor and provide qualified personnel promptly on notice.

E. The Laboratory shall perform the required inspections, sampling, and testing of materials as specified under each section and observe methods of construction for compliance with the requirements of the Contract Documents.

F. Inspections Required by Government Agencies:

The Testing Laboratory shall perform all inspections and submit all reports and certifications as required by all government agencies.

G. Notification of Deficiencies in the Work:

The Laboratory shall notify the Architect, Engineer, and Contractor first by telephone and then in writing of observed irregularities and deficiencies of the work and other conditions not in compliance with the requirements of the Contract Documents.

H. Reports:

1. Information on Reports:

The Laboratory shall submit copies of all reports of inspections and tests promptly and directly to the parties named below. All reports shall contain at least the following information:

- a. Project Name
- b. Date report issued
- c. Testing Laboratory name and address
- d. Name and signature of inspector
- e. Date of inspection and sampling
- f. Date of test
- g. Identification of product and Specification section
- h. Location in the project
- i. Identification of inspection or test
- j. Record of weather conditions and temperature (if applicable)
- k. Results of test regarding compliance with Contract Documents.

2. Copies:

The Laboratory shall send certified copies of test and inspection reports to the following parties:

- a. 2 copies to the Owner or his representative
- b. 2 copies to the General Contractor
- c. 1 copy to the Architect
- d. 1 copy to the Engineer of responsibility
- e. 1 copy to the Supplier of the material tested
- f. 1 copy to the Mechanical Engineer

I. Accounting:

The Testing Laboratory shall be responsible for separating and billing costs attributed to the Owner and cost attributed to the Contractor.

J. Obtaining Product and Material Certifications:

The contractor shall be responsible for obtaining and providing to the testing laboratory all product and material certifications from manufacturers and suppliers as specified in the Specifications.

K. Limitations of Authority:

The Testing Laboratory is not authorized to revoke, alter, relax, enlarge upon, or release any requirements of the Specifications or to approve or accept any portion of the work or to perform any duties of the General Contractor and his Subcontractors.

#### 1.5 CONTRACTORS RESPONSIBILITY

##### A. Cooperation with Design Team:

Except as noted below the owner shall pay for all testing lab services. The Contractor shall cooperate with laboratory personnel, provide access to the work, and to manufacturers operations.

##### B. Furnishing Samples:

The Contractor shall provide to the laboratory representative, samples of materials proposed for use in the work in quantities sufficient for accurate testing as specified.

##### C. Furnishing Casual Labor, Equipment and Facilities:

The Contractor shall furnish casual labor, equipment, and facilities as required for sampling and testing by the Laboratory and otherwise facilitate all required inspections and tests.

##### D. Advance Notice:

The Contractor shall be responsible for notifying the Testing Laboratory sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.

##### E. Payment for Substitution Testing:

The Contractor shall arrange with the Testing Laboratory and pay for any additional samples and tests above those required by the Contract Documents as requested by the Contractor for his convenience in performing the work.

##### F. Payment for Retesting:

The Contractor shall pay for any additional inspections, sampling, testing, and retesting as required when initial tests indicate work does not comply with the requirements of the Contract Documents.

##### G. Payment by Contractor:

The Contractor shall furnish and pay for the following items:

1. Soil survey of the locations of borrow soil materials, samples of existing soil materials, and delivery to the Testing Laboratory.
2. Concrete mix designs as prepared by his concrete supplier.

3. Concrete coring, tests of below strength concrete, and load tests, if ordered by the Owner, Architect, or Engineer.
3. Certification of reinforcing steel mill order.
4. Certification of structural steel mill order.
5. Certification of Portland cement, lime, and flyash.
6. Certification of welders.
8. Tests, samples and mock-ups of substitute material where the substitution is requested by the Contractor and the tests are necessary in the opinion of the Owner, Architect, or Engineer to establish equality with specified items.
9. Any other tests when such cost are required by the Contract Documents to be paid by the Contractor.

H. Notification of Source Change:

The Contractor shall be responsible for notifying the Owner, Architect, Engineer, and Testing Laboratory when the source of any material is changed after the original tests or inspections have been made.

I. Tests for Suspected Deficient Work:

If in the opinion of the Owner, Architect, or Engineer any of the work of the Contractor is not satisfactory, the Contractor shall make all tests that the Owner, Architect, or Engineer deem advisable to determine its proper construction. The owner shall pay all costs if the tests prove the questioned work to be satisfactory.

## 1.6 PAYMENT OF TESTING LABORATORY

The Owner will pay for all Laboratory services for testing of materials for compliance with the requirements of the Contract Documents. The Contractor will pay for testing and retesting of materials that do not comply with the requirements of the Contract Documents and all other items as specified in these Specifications.

## **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION**

### 3.1 SCOPE OF WORK

The work to be performed by the Testing Laboratory shall be as specified in this Section of the Specification and the contract drawings, and as determined in meetings with the Contractor, Owner, Architect, and Engineer.

### 3.2 EARTHWORK

#### A. Tests of Proposed Fill Material:

The Testing Laboratory shall conduct a survey of the Contractor's proposed location of borrow soil materials and shall establish the suitability of any proposed fill material by determining the required engineering properties. See General Notes on drawings for specific testing requirements.

#### B. Moisture Density Relationship for Natural and Fill Materials:

The Testing Laboratory shall provide one optimum moisture density curve for each type of soil, natural, imported fill, or on-site fill, encountered in subgrade and fills under building slabs and paved areas. See General Notes on drawings for specific testing requirements.

#### C. Quality Control Testing Required During Construction:

1. See General Notes on drawings for specific testing requirements and acceptance criteria.

#### 2. Report Copies:

The Testing Laboratory shall submit all moisture density curves and results of field density tests to the parties specified earlier in this section.

#### 3. Additional Testing:

If reports by the Owner's Testing Laboratory indicate field densities lower than specified above, additional tests will be run by the Owner's Testing Laboratory with at least the frequencies scheduled above on recompacted fill and/or natural subgrade. The Testing Laboratory shall notify the Contractor on a timely basis for any required retesting so as not to delay the work. The costs of such tests shall be borne by the Contractor.

### 3.4 CONCRETE MATERIALS AND POURED IN PLACE CONCRETE

#### A. Concrete Mix Designs:

The Contractor shall submit for approval by the Engineer and Owner's Testing Laboratory at least 15 days prior to the start of construction, concrete mix designs for each class of concrete indicated on the structural drawings and in the Specifications. The Contractor shall not begin work until the applicable mix design has been approved.

1. The Contractor acting in conjunction with his Concrete Supplier and the Testing Laboratory shall submit in writing with his mix designs, whether the concrete is to be proportioned by either of the following methods as outlined in ACI 318:

a. Field Experience Method

b. Laboratory Trial Batch Method

When field experience methods are used to select concrete proportions, establish proportions as specified in ACI 301 and ACI 211. When Laboratory trial batches are used to select concrete proportions, the procedure as outlined in ACI 318 shall be followed. Prepare test specimens in accordance with ASTM C192 and conduct strength tests in accordance with ASTM C39.

2. Required types of concrete and compressive strengths shall be as indicated on the Structural Drawings and as specified in the various sections of the Specifications.
3. All mix designs shall state the following information:
  - a. Mix design number or code designation by which the Contractor shall order the concrete from the Supplier
  - b. Structural member for which the concrete is designed (i.e. columns, shear walls, footings, etc.)
  - c. Type of concrete whether normal weight or lightweight
  - d. 28 day compressive strength
  - e. Aggregate type, source, size, gradation, fineness modulus
  - f. Cement type and brand
  - g. Fly ash type and brand (if any)
  - h. Admixtures including air entrainment, water reducers, accelerators, and retarders
  - i. Slump
  - j. Proportions of each material used
  - k. Water cement ratio and maximum allowable water content
  - l. Method by which the concrete is intended to be placed (bucket, chute, or pump)
4. Concrete Suppliers Record of Quality Control:

The concrete supplier's past record of quality control shall be used in the design of the concrete mixes to determine the amount by which the average concrete strength  $f_{cr}$  should exceed the specified strength  $f'_c$  as outlined in ACI 318. If a suitable record of test results is not available, the average strength must exceed the design strength by 1200 PSI as specified in ACI 318. After sufficient data becomes available from the job, the statistical methods of ACI 214 may be used to reduce the amount by which the average strength must exceed  $f'_c$  as outlined in ACI 318.
5. Admixtures:
  - a. Admixtures to be used in concrete shall be subject to the approval of the Engineer and Testing Laboratory.
  - b. Quantities of admixtures to be used shall be in strict accordance with the manufacturers instructions.

- c. Admixtures containing chloride ions shall not be used in prestressed concrete, in concrete containing galvanized or aluminum embedments, or in metal deck floors or roofs.
- d. Air entraining admixtures shall conform to "Specification for Air Entraining Admixtures for Concrete" ASTM C260.
- e. Water reducing admixtures, retarding admixtures, accelerating admixtures, water reducing and retarding admixtures, and water reducing and accelerating admixtures shall conform to "Specification for Chemical Admixtures for Concrete" ASTM C494.
- f. Fly ash or other pozzolons, used as admixtures, shall conform to "Specification for Fly Ash and Raw or Calcined Natural Pozzolons for use in Portland Cement Concrete" ASTM C618. Obtain mill test reports for approval. Maximum flyash content shall be 20%.
- g. Use amounts of admixtures as recommended by the manufacturer for climatic conditions prevailing at the time of placing. Adjust quantities of admixtures as required to maintain quality control.

6. Slump Limits:

Unless shown otherwise on the structural drawings, proportion and design mixes to result in concrete slump at the point of placement as follows:

- a. Ramps and Sloping surfaces -  $3" \pm 1"$
- b. Foundation concrete -  $4" \pm 1"$
- c. All other concrete -  $4" \pm 1"$

When increased workability, pumpability, lower water-cement ratio, shrinkage reduction, or permeability reduction is required, then a superplasticizer admixture shall be considered for use. The maximum slump with the use of superplasticizers shall be 8 inches unless approved otherwise by the Architect/Engineer and Testing Laboratory.

Any deviation from these values (such as concrete design to be pumped) shall be submitted to the Engineer and Testing Laboratory for approval.

7. Adjustments of Concrete Mixes:

Mix design adjustments may be requested by the Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant. Such mix design adjustments shall be provided at no additional cost to the Owner. Any adjustments in approved mix designs including changes in admixtures shall be submitted in writing to the Engineer and Testing Laboratory for approval prior to field use.

8. Shrinkage:

All concrete shall be proportioned for a maximum allowable unit shrinkage of 0.03% at 28 days as determined by ASTM C 157.

9. Chloride Ion Content:

A written submittal shall be made with each mix design proposed for use on the project that the chloride ion content from all ingredients including admixtures will not exceed the limits specified in the Cast-In-Place section of the Specifications.

B. Concrete Test Cylinders by the Testing Laboratory:

1. Molding and Testing:

Cylinders for strength tests shall be molded and Laboratory cured in accordance with ASTM C31 "Method of Making and Curing Concrete Test Cylinders in the Field" and tested in accordance with ASTM C39 "Method of Testing for Compressive Strength of Cylindrical Concrete Specimens".

2. Field Samples:

Field samples for strength tests shall be taken in accordance with ASTM C172 "Method of Sampling Fresh Concrete".

3. Frequency of Testing:

Each set of test cylinders shall consist of a minimum of five test cylinders. A set of test cylinders shall be made according to the following frequency guidelines:

- a. One set for each class of concrete taken not less than once a day.
- b. Mat Foundation: One set for each 100 cubic yards or fraction thereof.
- c. Floors: One set for each 100 cubic yards or fraction thereof but not less than one set for each 3500 square foot of floor area.
- d. All Other Concrete: A minimum of one set for each 100 cubic yards or fraction thereof.
- e. No more than one set of cylinders at a time shall be made from any single truck.
- f. If the total volume of concrete is such that the frequency of testing as specified above would provide less than five strength tests for a given class of concrete, tests shall be made from at least five randomly selected batches or from each batch if fewer than five batches are used.
- g. The above frequencies assume that one batch plant will be used for each pour. If more than one batch plant is used, the frequencies cited above shall apply for each plant used.

The cylinders shall be numbered, dated, and the point of concrete placement in the building recorded. Of the five cylinders per set break one at three days, one at seven days, two at 28 days, and one automatically at 56 days only if either 28 day cylinder break is below required strength.

4. Cylinder Storage Box:

The Contractor shall be responsible for providing a protected concrete cylinder storage box at a point on the jobsite mutually agreeable with the Testing Laboratory for the purpose of storing concrete cylinders until they are transported to the Laboratory.

5. Transporting Cylinders:

The Testing Laboratory shall be responsible for transporting the cylinders to the Laboratory in a protected environment such that no damage or ill effect will occur to the concrete cylinders.

6. Information on Concrete Test Reports:

The Testing Laboratory shall make and distribute concrete test reports after each job cylinder is broken. Such reports shall contain the following information:

- a. Truck number and ticket number
- b. Concrete Batch Plant
- c. Mix design number
- d. Accurate location of pour in the structure
- e. Strength requirement
- f. Date cylinders made and broken
- g. Technician making cylinders
- h. Concrete temperature at placing
- i. Air temperature at point of placement in the structure
- j. Amount of water added to the truck at the batch plant and at the site and whether it exceeds the amount allowed by the mix design
- k. Slump
- l. Unit weight
- m. Air content
- n. Cylinder compressive strengths with type of failure if concrete does not meet Specification requirements. Seven day breaks are to be flagged if they are less than 60% of the required 28 day strength. 28 day breaks are to be flagged if either cylinder fails to meet Specification requirements.

C. Other Required Tests of Concrete by the Testing Laboratory (unless noted otherwise):

1. Slump Tests:

Slump Tests (ASTM C143) shall be made at the beginning of concrete placement for each batch plant and for each set of test cylinders made.

2. Concrete Temperature:

Concrete temperature at placement shall be measured at the same time slump tests are made as cited above.

3. Chloride Ions:

The Contractor shall have the laboratory verify in a written submittal with the mix designs that the chloride ion concentration will not exceed the limits specified.

D. Evaluation and Acceptance of Concrete:

1. Strength Test:

A strength test shall be defined as the average strength of two 28 day cylinder breaks from each set of cylinders.

2. Quality Control Charts and Logs:

The Owner's Testing Laboratory shall keep the following quality control logs and charts for each class of concrete containing more than 2,000 cubic yards. The records shall be kept for each batch plant and submitted on a weekly basis with cylinder test reports:

- a. Number of 28 day strength tests made to date.
- b. 28 day strength test results containing the average of all strength tests to date, the high test result, the low test result, the standard deviation, and the coefficient of variation.
- c. Number of tests under specified 28 day strength.
- d. A histogram plotting the number of 28 day cylinders versus compressive strength.
- e. Quality control chart plotting compressive strength test results for each test.
- f. Quality control chart plotting moving average for strength where each point plotted is the average strength of three previous test results.
- g. Quality control chart plotting moving average for range where each point plotted is the average of 10 previous ranges.

3. Acceptance Criteria:

The strength level of an individual class of concrete shall be considered satisfactory if both of the following requirements are met:

- a. The average of all sets of three consecutive strength tests equal or exceed the required  $f'_c$ .
- b. No individual strength test (average of two 28 day cylinder breaks) falls below the required  $f'_c$  by more than 500 PSI.

If either of the above requirements is not met, the Testing Laboratory shall immediately notify the Engineer by telephone. Steps shall immediately be taken to increase the average of subsequent strength tests.

E. Investigation of Low Strength Concrete Test Results:

1. Contractor Responsibility for Low Strength Concrete:

If any strength test of Laboratory cured cylinders falls below the required  $f'_c$  by more than 500 psi, the Contractor shall take steps immediately to assure that the load carrying capacity of the structure is not jeopardized.

2. Nondestructive Field Tests:

The Testing Laboratory shall under the direction of the Engineer perform nondestructive field tests of the concrete in question using Swiss Hammer, Windsor Probe, or other appropriate methods as approved by the Engineer and report the results in the same manner as for cylinder test reports.

3. Core Tests:

If the likelihood of low strength concrete is confirmed and computations indicate that the load carrying capacity of the structure has been significantly reduced, tests of cores by the Testing Laboratory, drilled from the area in question under the direction of the Engineer, will be required in accordance with ASTM C42 "Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete". In such case, three cores shall be taken for each strength test more than 500 PSI below required  $f'_c$ . If concrete in the structure will be dry under service conditions, cores shall be air dried (temperature 60° to 80°F, relative humidity less than 60 percent) for 7 days before test and shall be tested dry. If concrete in the structure will be more than superficially wet under service conditions, cores shall be immersed in water for at least 48 hours and tested wet. The Contractor shall fill all holes made by drilling cores with an approved drypack concrete.

4. Acceptance Criteria for Core Tests:

Concrete in an area represented by core tests shall be considered structurally adequate if the average of three cores is equal to at least 85% of  $f'_c$  and if no single core is less than 75% of  $f'_c$ . If approved by the Engineer, locations of erratic core strengths may be retested to check testing accuracy.

5. Load Test:

If the above criteria are not met and the structural adequacy remains in doubt, the Engineer may order a load test as specified in ACI 318 for the questionable portion of the structure.

6. Strengthening of the Structure or Demolition:

If the structural adequacy of the affected portion of the structure remains in doubt, the Engineer may order the structure to be strengthened by an appropriate means or demolished and rebuilt.

7. Cost of Investigations for Low Strength Concrete:

The costs of all investigations of low strength concrete shall be borne by the Contractor.

F. Jobsite Inspection:

The scope of the work to be performed by the inspector on the jobsite shall be as follows:

1. Verify that air temperatures at the point of placement in the structure are within acceptable limits defined above prior to ordering of concrete by the Contractor.
2. Inspect concrete upon arrival to verify that the proper concrete mix number, type of concrete, and concrete strength is being placed at the proper location.
3. Inspect plastic concrete upon arrival at the jobsite to verify proper batching. Observe mix consistency and adding of water as required to achieve target slumps in mix designs. Record the amount of water added and note if it exceeds that allowed in the mix design. The responsibility for adding water to trucks at the jobsite shall rest only with the Contractor's designated representative. The Contractor is responsible that all concrete placed in the field is in conformance to the Contract Documents.
4. Obtain concrete test cylinders.
5. Perform slump tests.
6. Record information for concrete test reports.
7. Verify that all concrete being placed meets job Specifications. Report concrete not meeting the specified requirements and immediately notify the Contractor, Batch Plant Inspector, Contractor, Architect, Engineer, and Owner.
8. Pick up and transport to Laboratory, cylinders cast the previous day.
9. Check concrete placing techniques to determine that concrete deposited is uniform and that vertical drop does not exceed six feet.
10. The jobsite inspector shall report any irregularities that occur in the concrete at the jobsite or test results to the Contractor, Architect, Owner, and Engineer.

G. Causes for Rejection of Concrete:

The Contractor shall reject all concrete delivered to the site for any of the following reasons:

1. Wrong class of concrete (incorrect mix design number).
2. Air temperature:

Air temperature limits shall be as follows:

- a. Cold Weather: Air temperature must be 40°F and rising
- b. Hot Weather: Air temperature must be cooler than 100°.

Concrete may be placed at other air temperature ranges only with approval of the job inspector for the Testing Laboratory or other duly appointed representative.

- 3. Concrete with temperatures exceeding 95°F may not be placed in the structure.
- 4. Slumps outside the limits specified in the mix designs.
- 5. Excessive Age:  
See General Notes on drawings for maximum time between concrete batching and placement.

The Contractor is responsible that all concrete placed in the field is in conformance to the Contract Documents.

H. Concrete Batch Trip Tickets:

All concrete batch trip tickets shall be collected and retained by the Contractor. Compressive strength, slump, air, and temperature tests shall be identified by reference to a particular trip ticket. All tickets shall contain the information specified in ASTM C 94. Each ticket shall also show the amount of water that may be added in the field for the entire batch that will not exceed the specified water cement ratio for the design mix. The Contractor and Testing Laboratory shall immediately notify the Architect/Engineer and each other of tickets not meeting the criteria specified.

### 3.5 STRUCTURAL STEEL

- A. See General Notes on drawings for PEMB manufacturer's inspection requirements.
- B. Rejection of Material or Workmanship:

The Owner, Architect, Engineer, and Testing Laboratory reserve the right to reject any material or workmanship not in conformance with the Contract Documents at any time during the progress of the work. However, this provision does not allow waiving the obligation for timely, in sequence inspections.

END OF SECTION 01410

**SECTION 02820 CHAIN LINK FENCING AND GATES****PART 1 - GENERAL**

## 1.1 SCOPE

A. This work consists of all labor, materials, and equipment necessary for furnishing and installing chain link fence, gates and accessories in conformance with the lines, grades, and details as shown.

## 1.2 REFERENCES

- A. ANSI/ASTM A123 – Zinc (Hot Dip galvanized) Coatings on Iron and Steel Products
- B. ASTM A153 – Zinc Coating (Hot Dip) on Iron and Steel Hardware
- C. ASTM A392 – Zinc Coated Steel Chain Link Fence Fabric.
- D. Chain Link Fence Manufacturer’s Institute (CLFMI) – Product Manual.

## 1.3 MANUFACTURER’S QUALIFICATIONS

A. Fence, gates and accessories shall be products of manufacturers’ regularly engaged in manufacturing items of type specified.

## 1.4 SUBMITTALS

A. Conform to the requirements of Section 115.01 – Submittals in Section 100 of The City of Kerrville General Requirements and furnish the following:

- 1. Manufacturer’s Literature and Data: Chain link fencing, gates and all accessories
- 2. Manufacturer’s Certificates: Zinc-coating complies with complies and specifications
- B. Provide Shop Drawings for gates or other specialties required
- C. Certification that fence alignment meets requirements of contract documents.

## 1.5 SYSTEM DESCRIPTION

- A. Fence Height: 6' and 8'-Refer to Drawings
- B. Line Post Spacing: at intervals not exceeding 10 feet.
- C. Refer to drawings for location, gate sizes and details.

## 1.6 QUALITY ASSURANCE

- A. Perform all work in accordance with CLFMI – Product Manual manufacturer’s instructions.

**PART 2- PRODUCTS**

## 2.1 MATERIALS

- A. Materials shall conform to ASTM F1083 and ASTM A392 ferrous metals, zinc-coated: and detailed specifications forming the various parts thereto; and other requirements specified herein. Zinc-coat metal members (including fabric, gates, posts, rails, hardware and other ferrous metal items) after fabrication shall be reasonably free of excessive roughness, blisters and sal-ammoniac spots
- B. Framing Steel: ASTM A120; Schedule 40 steel pipe, standard weight, one piece without joints
- C. Fabric Wire Steel: FS RR-F-191 Type 1 – zinc coated steel.

## 2.2 COMPONENTS

- A. Line Posts: 2-inch diameter
- B. Corner and Guard Terminal Posts: 3.0 inch
- C. Gate Posts: 3-inch diameter
- D. Top and Brace Rail: 1.66-inch diameter, plain end, sleeve coupled
- E. Gate Frame: 2 inch diameter for welded fittings and truss rod fabrication
- F. Fabric: 2" diamond mesh interwoven wire, 9 ga. thick, top selvage closed tight, bottom selvage knuckle end closed.

### 2.3 GATES

- A. ASTM F900, type as shown. Gate framing, bracing, latches, and other hardware zinc-coating weight shall be the same as the FABRIC
- B. Gate leaves more than 8 feet wide shall have both intermediate members and diagonal truss rods, or shall have tubular members as necessary to provide rigid construction, free from sag or twist. Rolling gate at Ag Facility noted on C-2 should have rolling wheels and track rollers.
- C. Gates less than 8 feet wide shall have truss rods or intermediate braces. Attach gate fabric to the gate frame by method standard with the manufacturer, except that welding will not be permitted.
- D. Arrange latched for padlocking so that padlock will be accessible from both sides of the gate regardless of the latching arrangement.

### 2.4 GATE HARDWARE

- A. Manufacturer's standard products, installed complete. The type of hinges shall allow gates to swing through 180 degrees, from closed to open position. Hang and secure gates in such a manner that, when locked, they cannot be lifted off hinges.
- B. Provide stops and keepers for all double gates. Latches shall have a plunger-bar arranged to engage the center stop. Arrange latches for locking. Center stops shall consist of a device arranged to be set in concrete and to engage a plunger bar. Keepers shall consist of a mechanical device for securing the free end of the gate when in full open position.

### 2.5 ACCESSORIES

- A. Caps: Cast steel or malleable iron, galvanized, sized to post diameter, set screw retainer.
- B. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings – steel.

END OF SECTION

**SECTION 13333  
PRE-ENGINEERED SHADE STRUCTURES****PART 1 – GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections, apply to this section.

**1.02 SUMMARY**

- A. The shade structure contractor shall be responsible for the design, engineering, fabrication, supply and installation of the work specified herein. The intent of this specification is to have only one single contractor be responsible for all the above functions.

**1.03 REFERENCES**

- A. Shade structures must comply with the latest revision of applicable codes and regulations including IBC 2006.

**1.04 SUBMITTALS**

- A. Provide proof of installed reference sites with five structures for similar scope of project and installation that are engineered to IBC 2006 specifications. Include in reference list sizes and design style of structures with install dates and project locations.
- B. Provide product data and a minimum of 10 fabric samples to demonstrate fabric color range and powder coat color selections.
- C. Provide proof of all quality assurance items including:
  - 1. A list of at least three reference projects that have been installed a minimum of 10 years.
  - 2. Proof of General liability insurance as per section 1.05 B.
- D. Shop Drawings: Indicate Dimensions, Materials, Bolted Connections. Shop drawings will be certified, stamped and sealed by a structural engineer registered in Texas.

**1.05 QUALITY ASSURANCE**

- A. Design, Fabrication and erection are limited to fabric architecture firms with proven experience in design and construction of fabric shade structures and such firms shall meet the following minimum requirements. No Substitutions shall be allowed for the following:
- B. A single shade contractor shall design, engineer, manufacture and erect the fabric shade structures including the foundations.
- C. All bidders shall have at least 10 years' experience in the design, engineering, manufacture, and installation of structures, engineered with similar scope and a successful construction record of in-service performance.
- D. All bidders shall be able to provide proof with bid submittal of a minimum of \$1,000,000 general/public liability insurance.
- E. All bidders must have an in-house warranty & service department and local office to assist in repairs and service calls.

**1.06 PROJECT CONDITIONS**

- A. Field Measurements: Verify layout information for shade structures shown on the Drawings in relation to the property survey and existing structures, and verify locations by field measurements prior to construction for shade structures.

**1.07 WARRANTY**

- A. The successful bidder shall provide a 12-month warranty on all labor and materials.

- B. A supplemental warranty from the manufacturer shall be provided for a period of 10 years (prorated) on fabric and 10 years on the structural integrity of the steel from date of Substantial Completion.
- C. The warranty shall not deprive the Owner of other rights under the provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

## PART 2 – PRODUCTS

### 2.01 GENERAL

- A. A. Scope of Work: Scope: The fabric project shall consist of eleven (11) Custom Wrap Around Bleacher Shade Structures:
1. The Custom Wrap Around Bleacher Shade consist of the structures listed below:  
  
Shade Structures “A” and “B”: custom joined hip structure, with entry height of 12’, with indicated dimensions and quantities as indicated on drawings A1.0, A1.1, and A1.2.
- B. Shade Structures shall be manufactured by one the companies listed below or approved equivalent and include the structural steel frame, fabric roof, steel cables, all fasteners, and installation of structure(s) including project management and foundations.
- Contact : TensoShade, LLC.  
16719 Huebner Rd. Bldg. 5  
San Antonio, Texas. 78248  
Attn: Irving Allande  
(210) 888-0128, [Info@TensoShade.com](mailto:Info@TensoShade.com)  
[www.TensoShade.com](http://www.TensoShade.com)
- Contact: USA SHADE & Fabric Structures  
Shade Structures, Inc.  
8505 Chancellor Row  
Dallas, Texas 75247  
Contact Name: Aileen Dryden – Cell Phone: 512-937-6430
- C. To qualify as an additional approved equivalent, submit product documentation and all quality assurance criteria as per section 1.4.
- D. The shade structure shall conform to the current adopted version of the International Building Code 2006 and local agency additions and amendments.
- E. All shade structures are to be engineered and designed to meet a minimum of 90 mph wind load, Exposure C and a live load of 5 lbs./sf<sup>2</sup>. All shade structures shall be engineered with a zero wind pass-through factor on the fabric. When ASD Steel Design Method is used based on IBC 2012 Section 1605.3.1 the Dead + 0.75 of Live + 0.75 of Wind Load cases must be combined.
- F. Steel:
1. All steel members of the shade structure shall be designed conforming to the current adopted version of the International Building Code 2006 and local agency additions and amendments.
  2. All connections shall have a maximum internal sleeves tolerance of .0625 inches using high tensile strength steel sections with a minimum sleeve length of 6 inches.
  3. All galvanized steel tubing shall be triple coated for rust protection using an in-line electro plating coat process. All galvanized steel tubing shall be internally coated with zinc and organic coatings to prevent corrosion.
- G. Bolts:

1. All structural field connections of the shade structure shall be designed and made with high strength bolted connections.

#### H. Welding:

1. All shop-welded connections of the shade structure shall be designed conforming to the current adopted version of the International Building Code 2006 and local agency additions and amendments.  
Structural welds shall be made in compliance with the requirements of the "Prequalified" welded joints where applicable and by certified welders. No onsite or field welding shall be permitted.
2. All full penetration welds shall be continuously inspected by an independent inspection agency and shall be design conforming to the current adopted version of the International Building Code 2006 and local agency additions and amendments.

#### I. Powder coating:

1. Galvanized steel tubing preparation prior to powder coating shall be executed in accordance to solvent cleaning SSPC-SP1. Solvent such as water, mineral spirits, xylol, toluol, which are to be used to remove foreign matter from the surface. A mechanical method prior to solvent cleaning prior to surface preparation shall be executed according to Power Tool Cleaning SSPC-SP3 and utilizing wire brushes abrasive wheels and needle gun, etc.
2. Carbon structural steel tubing preparation prior to powder coating shall be executed in accordance to commercial blast cleaning SSPC-SP6 or NACE #3. A commercial blast cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, mill scale, rust, coating, oxides, corrosion, products and other foreign material.
3. Powder coating shall be sufficiently applied, with a minimum three mils thickness and cured at the recommended temperature to provide proper adhesion and stability to meet salt spray and adhesion tests as defined by the American Society of Testing Materials.
4. Powder used in the powder coat process shall have the following characteristics:
  - a. Specific Gravity: 1.68 +/- 0.05
  - b. Theoretical coverage: 114 +/- 4ft<sup>2</sup>/lb/mil
  - c. Mass loss during cure: <1%
  - d. Maximum storage temperature: 75oF
5. Rust Protection Powder Under Coat Primer will be required on all structures. Epoxy Powder Coating shall be applied in accordance with the manufacturers' specifications. Primer should be fused only and then top coated with the selected powder coat to ensure proper intercoat adhesion.

#### J. Tension Cable: Steel cable is determined based on calculated engineering load.

1. For light and medium loads, 1/4" (nominal) galvanized 7x19 strand cable to be used.
2. For heavy loads, 3/8" (nominal) galvanized 7 x 19 cable to be used.

#### K. Fabric Roof Systems

1. UV Shade Fabric
  - a. UV shade fabric is made of a UV stabilized Synthesis® Commercial 95 Shade cloth HDPE high-density polyethylene mesh. Mesh shall be lock-stitch knitted with monofilament and tape yarn filler to ensure that material will not unravel if cut. Panels to be at least 9ft wide.
  - b. Fire Testing: Fabric shall conform and pass the ASTM E-84 testing standard.
  - c. The fabric knot is to be made using monofilament and tape filler, which has a weight of 340g per square meter.
  - d. Approved Fire Rating as a result of the ASTM E-84 (Class A), California Fire Marshall and NFPA No. 225, and UBC No. 8-1.
  - e. Shade cloth designed to provide UV block ranging from 91% to 98% creating

safer outdoor daytime environments which can be utilized for longer periods.

2. Fabric Properties:

- a. Life Expectancy: A minimum of 8 years continuous exposure to the sun
- b. Fading: Minimum fading after 5 years (3 years for red and yellow)
- c. Fabric Mass: 10 1/2 oz/sqft (340g/sm)
- d. Fabric Width: 9.8425 (3m)
- e. Roll Length: 164.04 (50m)
- f. Roll Dimensions: 62.99"x16.5354" (160 cm x 42 cm)
- g. Roll Weight: +/- 122 lbs
- h. Minimum Temperature: -22°F
- i. Maximum Temperature: +167°F

3. Stitching & Thread:

- a. All sewing threads are to be double stitched.
- b. Thread shall be GORE Tenara Sewing Thread manufactured from 100% expanded PTFE (Teflon); mildew resistant exterior approved thread. Thread shall meet or exceed the following:
  - 1) Flexible temperature range
  - 2) Very low shrinkage factor
  - 3) Extremely high strength, durable in outdoor climates
  - 4) Resists flex and abrasion of fabric
  - 5) Unaffected by cleaning agents; acid rain, mildew, salt water and rot resistant, unaffected by most industrial pollutants
  - 6) Treated for prolonged exposure to the sun

## 2.02 SHIPPING AND HANDLING

- A. All steel surfaces touched by tie down straps are to be padded before final clinching. This can be accomplished by using carpet pads or factory manufactured padding.
- B. All dunnage must be padded before painted products are set in place. Smaller and loose pieces must be padded and totally separate from paint padding.
- C. Unloading: Lift forks to be covered with properly fitted padding. All dunnage must be padded vertically and horizontally to prevent damage to painted surfaces. When unloading, take care to prevent tools and other hard surface items from making contact with painted items.

## PART 3 – EXECUTION

### 3.01 INSTALLATION

- A. Installations of shade structures shall be by the approved manufacturers shown on 2.01.B
- B. The contractor installing the structure shall comply with manufactures instructions for assembly, installation, and erection per approved drawings. Sealed engineered drawings are to be submitted for review prior to installation.
- C. Concrete
  1. Unless noted otherwise for footing and piers by the approved manufacturer or General Contractor's Engineer, concrete specification for footings, piers, slabs, curbs and walkways shall meet a minimum 3,000 psi with an appropriate finished weight of 183 lbs. per cu. ft.
  2. Concrete work is executed in strict accordance with the latest American Concrete Institute Building Code (ACI 318-99).
  3. Slump 4" maximum.
  4. Whenever daily ambient temperatures are below 80 degrees Fahrenheit, the contractor may have mix accelerators and hot water added at the batch plant.
    - a. temperature range between 75-80 degrees, 1% accelerator High Early (non-calcium)

- b. temperature range between 70-75 degrees, 2% accelerator High Early (non-calcium)
- c. temperature range below 70 degrees, 3% accelerator High Early (non-calcium)
- 5. The contractor shall not pour any concrete when daily ambient temperature is below 55 degrees Fahrenheit.
- 6. Concrete will be left to set up a minimum of 24 hours before any load bearing member shall be attached to the structure.

D. Foundations:

- 1. All Anchor Bolts set in new concrete shall be ASTM A-325.
- 2. All Anchor Bolts shall be Hot Dipped Galvanized.
- 3. Footings shall be a minimum as listed below:
  - a. The minimum footing size for the shade structure is in accordance with and conform to manufactures engineered specifications and drawings

### **3.02 SAFETY PROCEDURES**

- A. The Contractor is responsible for the coordination of work with other trades.
- B. All staff personnel are to be dressed and conduct themselves in accordance with OSHA standards. All staff must be properly trained for equipment that they might use. Safety is a top priority.
- C. All vehicles and machinery are to be properly licensed and insured and must be operated by licensed operators in accordance with OSHA standards. All cranes and lifts must be operated in accordance with manufacturer's guidelines.
- D. The handling of steel during installation is critical. Exercise care when lifting items so that it does not come into contact with other surfaces. Clean sand and other deleterious material from structural items before moving or lifting. Before installation, all items are to be washed with soap and water and dried with cloths. All grease, dust, oils, and other latent materials are to be removed during this washing. When pouring concrete pour backs at columns, protect paint by using plastic and tape to prevent concrete from splashing on finish surfaces.
- E. All concrete must be cut with a wet diamond blade to ensure that it leaves a clean finish. If at any stage the existing remaining surface lifts, creating a tripping hazard, additional saw cutting will be required so as to leave a neat and uniform joint.
- F. Cover all open holes at all times with solid plywood and spoils to prevent access until concrete is poured.
- G. All equipment and/or product must be stored inside the fenced area.

**END OF SECTION 13 33 33**



**SECTION 13340 – METAL BUILDING SYSTEMS****PART 1 - GENERAL**

## 1.1 SECTION INCLUDES

- A. Metal Building System as indicated on the drawings and specified herein.
- B. Include components and parts of the building consisting of primary structural steel framing, purlins, girts, necessary bracing, struts and connecting members, gutters and downspouts, canopies and necessary closures and fasteners.
- C. Section 07210 Insulation

## 1.2 GENERAL REQUIREMENTS

- A. Cooperation and coordination with other trades is mandatory, so that each phase of work will be properly coordinated without delays or damage to any parts of any work.

## 1.3 RELATED SECTIONS

- A. Structural Drawings – Cast-In-Place Concrete: Foundations and anchor bolts.
- B. Section 055000 - Metal Fabrications
- C. Section 081100 - Metal Doors and Frames
- D. Section 083600 – Sectional Overhead Doors
- E. Section 099000 - Painting

## 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer and member of MBMA,
  - 1. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified Professional Engineer licensed to practice in the state having jurisdiction.
- B. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this project and who is acceptable to the manufacturer.
- C. Welding Qualifications: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1/D1.1M, “Structural Welding Code – Steel.”
  - 2. AWS D1.3, “Structural Welding Code – Sheet Steel.”
- D. Structural Steel: Comply with AISC 360, “Specification for Structural Steel Buildings,” for design requirements and allowable stresses.
- E. Cold-Formed Steel: Comply with AISI’s “North American Specification for the Design of Cold-Formed Steel Structural Members” for design requirements and allowable stresses.

## 1.5 DEFINITIONS

- A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in referenced standards.

#### 1.6 BUILDING NOMENCLATURE

- A. The building "Width" and "Length" shall be measured from inside to inside face of wall covering.
- B. The building "Eave Height" shall be measured from main building finish floor elevation to the intersection of lines representing the inside of the wall covering and the inside of the roof covering.
- C. The "Roof Slope" shall be as indicated on the drawings.
- D. The "Bay Spacing" between frame center lines shall be as shown on drawings.
- E. The "Wind Bracing" locations shall be as indicated

#### 1.7 DESIGN AND LOADS

- A. Structural steel sections and welded plate members shall be designed in accordance with the latest edition of AISC, "Specifications for Design, Fabrication, and erection of Steel for Buildings" previous to the year of the building code as indicated on the drawings.
- B. Cold formed structural members and exterior covering shall be designed in accordance with the AISI, "Specification for the Design of Cold-Formed Steel Structural Members".
- C. Design Loads shall be in accordance with IBC or ASCE 7. The relevant year of the code shall be as indicated on the drawings. Loads shall include:
  - 1. Basic design loads, as well as collateral loads shall be as specified.
    - a. Basic design loads in addition to dead load; include live load, wind load, snow load, and seismic load.
    - b. Collateral loads include dead loads over and above weight of the metal building system, such as mechanical systems, ceiling systems, and sprinklers. Insulation weight is considered part of the metal building system. Collateral loads shall be as specified in the drawings.
    - c. Design each member to withstand stresses resulting from combinations of loads that produce maximum stresses in that member. Load combinations shall be based on ASCE 7.
  - 2. Roof Live Load: (20) PSF basic live load, reducible per the building code specified on the drawings.
  - 3. Dead Load: Withstand weight of metal building system as determined by actual weight of all roofing materials.
  - 4. Collateral Load: As specified on the drawings.
  - 5. Thermal Load: Withstand movement caused by ambient temperature range of 100 degrees F and surface temperature range of 120 degrees F.
  - 6. Special Loads: Concentrated Loads less than 250 pounds need not be considered in the design of the structure. Investigate structure for all loadings above 250 pounds and provide support beams where purlins or joists cannot support the load.

- a. Concentrated loads on purlins shall be hung from the purlin web. Connections shall be screwed or bolted, bolts shall be set in drilled holes; torch cutting of bolt holes shall not be allowed. Field welding to the purlins shall not be allowed unless approved by the metal building system manufacturer. Attachments to the purlin bottom flange shall not be allowed unless specifically approved by the metal building system manufacturer. Reference MBMA Manual section A6 Hanging Loads on Purlins.
7. Wind Load: For design of primary members, secondary members, and cladding, calculate wind pressures in accordance with ASCE 7. Use wind speed, exposure, and importance factor as indicated on the drawings. Wind pressures for deflection calculations shall be based on recurrence interval called for in the building code indicated on the drawings.
8. Seismic Load: Design primary and bracing members for seismic loads in accordance with ASCE 7. Use importance factor, spectral response accelerations, and soil site class as indicated on the drawings. In the absence of listed spectral accelerations, determine in accordance with USGS. In the absence of a listed site class, assume site class D.
9. Crane Loads: Not necessary for this project.
10. Drift and Deflection Criteria: As indicated on drawings.

#### 1.8 ROOF PANEL SYSTEM PERFORMANCE

- A. Panel system shall have a UL 2218, Class 4 Impact Resistance Rating.
- B. Metal roof system must be tested in accordance with UL Test Method 580, Tests for Uplift Resistance of Roof Assemblies. UL Class 90 uplift rating.
- C. Resist the roof design pressures calculated in accordance with ASCE 7 for the year as indicated on the drawings. Determine panel bending and clip-to-clip strength by testing in accordance with ASTM E1592. Capacity for gauge, span or loading other than those tested may be determined by interpolating test results.
- D. Metal roof system must meet the air infiltration requirements of ASTM E1680 when tested with a 6.24 PSF pressure differential with resulting air infiltration of 0.0071 cfm/sq. ft.
- E. Metal roof system must meet the water penetration requirements of ASTM E1646 when tested with a 12.00 PSF pressure differential with no uncontrollable water leakage when five (5) gallons per hour of water is sprayed per square foot of roof area.

#### 1.9 SUBMITTALS

- A. Delegated-Design Submittal: For metal building systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by a qualified Professional Engineer licensed to practice in the state having jurisdiction.
- B. Certification: Letter of Design Certification: Signed and Sealed by a qualified Professional Engineer licensed to practice in the state having jurisdiction. Include the following:
  1. Name and location of project.
  2. Order Number
  3. Name of Manufacturer
  4. Name of Contractor
  5. Building dimensions including width, length, height, and roof slope

6. Indicate compliance with AISC standards for hot-rolled and plate steel and NAUS standards for cold-rolled steel, including editions of each standard.
  7. Governing building code and year of edition
  8. Design Loads: Include dead load, roof live load, floor live loads, collateral loads, roof snow load, deflection criteria, wind loads/speeds and exposure, seismic design category, importance factors, and any auxiliary loads (i.e. cranes)
- C. Shop Drawings: Show building layout, primary and secondary framing member sizes and locations, cross-sections, and product and connection details.
1. Show Roof, fascia, gutter, downspouts, siding and soffit panel layout and connection details.
  2. Show Stair plans, sections and details where applicable.
- D. Product Data: Information on manufactured products to be incorporated into the project.
- E. Color Charts: For selection of colors.
- F. Anchor Bolt Installation Drawings: Layouts with bolt diameters.
- G. Anchor Bolt Setting Templates: To assist with setting of anchor bolts.

#### 1.10 WARRANTY

- A. Warrant the work specified herein against becoming unserviceable or causing an objectionable appearance resulting from either defective or non-conforming materials or workmanship. Warranty shall be a “Weather tightness” Warranty. Field Reports are required throughout Project and are to be supplied by a Manufacturer's Approved Technical Inspector.
1. Roof Panels and Finish: Section 07400 – Preformed Metal Roofing
  2. Weathertightness (optional, only applies to standing seam roofs):
    - a. The roof system including roof panels, flashings, curbs, interior gutters, etc. shall be warranted by the manufacturer against leaks for a period of 20 years.
    - b. The warranty shall be issued to the Owner by the Manufacturer at time of Project Substantial Completion.
    - c. The warranty shall guarantee the entire roof system and associated work against defective materials and workmanship of installation.
    - d. The roof system shall include roof insulation, flashing, metal work, labor, and material shall be guaranteed against failure of workmanship and materials. Repair of the system by the manufacturer, including materials and labor, shall be done at no cost to the Owner.
    - e. Curbs shall be approved by roofing manufacturer.
  3. Roofing Contractor: Jointly with any subcontractors employed by him, shall guarantee the work required and performed under this contract will be free from defects in workmanship and materials, and that the building will be and remain waterproof for a five (5) year warranty period, after the Architect accepts the work as substantially complete. The warranty shall be in approved notarized written form, to obligate the Contractor, and subcontractors, to make good the requirements of the warranty.

## PART 2 - PRODUCTS

### 2.1 APPROVED MANUFACTURERS

- A. Specifications are based on products listed below as “Basis of Specification”, except where specified otherwise. Manufacturers named below whose product meets or exceeds the specifications are approved for use on the Project. Other manufacturers must have a minimum of five (5) years experience manufacturing products meeting or exceeding the specifications and comply with Division 1 requirements regarding substitutions to be considered.
1. Metal Building System:
    - a. Red Dot Building Systems, Athens, TX (800) 657-2234
    - b. Alliance Steel, Oklahoma City, OK (800) 624-1579
    - c. Mueller Inc. Ballinger, TX; (800) 527-1087
    - d. United Structures of America, Houston, TX; (281) 442-8247
    - e. Horizon Structural Systems, New Braunfels, TX; (830) 629-8000
    - f. Architect approved equal.
  2. Metal Roof, Wall, and Roof Liner Panels:
    - a. MBCI, Houston, TX; (281) 847-8044 (Basis of Specification)
    - b. Architect approved equal from Metal Building Manufacturer

## 2.2 METAL MATERIALS

- A. Select materials and material yield strengths based on building design requirements; use the following unless required otherwise.
1. Structural Steel Plate, Bar, Sheet, and Strip for Use in Bolted and Welded Constructions: ASTM A572, A570, A529, or A36, with minimum yield strength of 50,000 psi.
  2. Structural Steel Material for Use in Roll Formed or Press Broken Secondary Structural Members: ASTM A570, or A607 with minimum yield strength of 55,000 psi.
  3. Galvanized Steel Sheet for Roll Formed or Press Broken Roof and Wall Coverings, Trim and Flashing: ASTM A653, with minimum yield strength of 50,000 psi.
  4. Galvalume Steel Sheet Used in Roll Formed or Press Broken Roof Covering: Aluminum-zinc alloy-coated steel sheet, ASTM A792, with minimum yield strength of 50,000 psi; nominal coating weight of 0.5 oz. per sq. ft. both sides, equivalent to an approximate coating thickness of 0.0018 inch both sides.
  5. Hot Rolled Steel Shapes: W, M and S shapes, angles, rods, channels and other shapes; ASTM A572, or ASTM A3 as applicable; with minimum yield strengths required for the design.
  6. Structural Bolts and Nuts Used with Primary Framing: High strength, ASTM A325.
  7. Bolts and Nuts Used with Secondary Framing Members: ASTM A307.
  8. Anchor Bolts: ASTM A307 or A325.
- B. Finish:
1. Primary and secondary Structural Members: if no finish is noted on drawings, use manufacturer's standard GREY rust-inhibitive primer paint in manufacturer's standard color.
    - a. If drawings call for galvanized primary or secondary members: hot-dip galvanize, G-60.
  2. Prefinished Materials: Thermoset Silicone Polyester Coating System (25 year warranty) as selected by Architect from manufacturer's full line.

## 2.3 FRAMING COMPONENTS

- A. Primary Framing: Rigid Frame (RF Series) solid web framing consisting of tapered depth rafters rigidly connected to tapered depth columns. Provide interior column spacing's as indicated on drawings.
- B. Endwall Framing: Corner posts, endposts and rake beams.
- C. Purlins: Zee-shaped; depth as required; with minimum yield strength of 55,000 psi; simple span or continuous span as required for design.
- D. Girts: Zee- or Cee-shaped; depth as required, with minimum yield strength of 55,000 psi; simple span or continuous span as required for design.
- E. Transbay Members: Open web, parallel chord, secondary joists; simple span, utilizing materials, sizes and yield strength as required.
- F. Wind Bracing: Portal, torsional, diagonal bracing or diaphragm in accordance with manufacturer's standard design practices; utilizing rods, angles, and other members, with minimum yield strengths as required for design.
- G. Primary Frame Flange Bracing: Attached from purlins or girts to the primary framing, minimum yield strength as required for design.
- H. Base Angles: 2 inch by 4 inch by 0.059 inch steel angles, with minimum yield strength of 55,000 psi, anchored to the floor slab or grade beam with power driven fasteners or equivalent at a maximum spacing of 2 feet on center and not more than six (6) inches from the end of any angle member.
- I. Sag Strapping and Bridging: 22 gauge strapping and/or steel angles, with minimum yield strength of 36,000 psi. as required by design.
- J. Fabrication: Fabricate according to manufacturer's standard practice.
  - 1. Fabricate structural members made of welded plate sections by jointing the flanges and webs by continuous automatic submerged arc welding process.
  - 2. All welding operators and processes shall be qualified in accordance with AWS D1.1.
  - 3. Field connections. Prepare members for bolted field connections by making punched, drilled, or reamed holes in the shop.
- K. Component Identification: Mark all fabricated parts, either individually or by lot or group, using an identification marking corresponding to the marking shown on the shop drawings, using a method that remains visible after shop painting.
- L. Shop Coating: Finish enclosed structural steel members using one (1) coat of manufacturer's standard shop coat, after cleaning of oil, dirt, loose scale and foreign matter.
- M. Anchor Bolts: Hooked or Headed anchor bolts in quantities and spacing's as required by the metal building system design. Anchor bolts to be provided by metal building manufacturer.

## 2.4 ROOF AND WALL PANEL COMPONENTS

- A. Metal Roof Panels: MBCI PBR Panel
  - 1. Panel Profile: 36" wide x 1-1/4" inch high, with 12" on center rib spacing.
  - 2. Panel attachment: exposed fastening system.

3. Gauge: Minimum 26 gauge (UL 90 rated)
  4. Finish: Signature 300 (Kynar 500) – color to be selected
  5. Ridge Vent: Manufacturer’s standard to match roof panel in color and finish
- B. Gutters, downspouts, fascias, soffits, and flashings:
  1. All exposed gutters, downspouts, fascias, soffits and flashings shall be provided by roof panel manufacturer and shall match roof panel finish and color. Soffit to be MBCI FlexLoc system.
- C. Metal Wall Panels: MBCI PBC Panel
  1. Panel Profile: 32” wide x 7/8” inch high, with 2.67” on center rib spacing.
  2. Panel attachment: exposed fastening system.
  3. Gauge: Minimum 26 gauge (UL 90 rated).
  4. Finish: Prefinished per ASTM 792-86 with Thermoset Silicone Polyester Coating System (25 year warranty) in color selected by Architect from manufacturer's available colors.
- D. Interior Metal Liner Panel (Where indicated on plans): MCBI IL-240-0 24” x 1 ½”, 24 GA.
- E. Panel Fasteners: Carbon steel zinc-aluminum hex head complete with integrated metal and neoprene sealing washer. Color of exposed fastener heads to match the panel finish. Fastener type shall not void warranty of panel finish.
  1. “Long Life” fasteners for attachment of roof panels to secondary framing members, attachment to adjoining panels, and attachment of trim to the panels: Self-drilling type, of size required by the manufacturer.
  2. Standard fasteners for attachment of wall panels to secondary framing members, attachment to adjoining panels, and attachment of trim to the panels: Self-drilling type, of size required by the manufacturer.
  3. Provide fasteners in quantities and location as required by the manufacturer.
  4. Fasteners for trim splices: 1/8 inch by 3/16 inch stainless steel blind rivet. Head shall be color coated to match trim colors.
- F. Flashing and Trim: Match material and color of adjacent components. Provide trim at rakes, including peak and corner assemblies, high and low eaves, corners, bases, framed openings and as required or specified to provide weathertightness and a finished appearance.
- G. Sealants, Mastics and Closures: Manufacturer's standard type.
  1. Provide at roof panel endlaps, sidelaps, rake, eave, transitions and accessories as required to provide a weather resistant roof system; use tape mastic or gunnable sealant at sidelaps and endlaps.
  2. Provide at wall panel rakes, eaves, transitions and accessories.
  3. Closures: Formed to match panel profiles; closed cell elastic material, manufacturer's standard color.
  4. Tape Mastic: Pre-formed butyl rubber-based, non-hardening, non-corrosive to metal; white or light gray.

5. Gunnable Sealant: Non-skinning synthetic elastomer based material; gray or bronze.

## 2.5 ROOF ACCESSORIES

- A. Eave Gutters: Press-broke 26 gauge steel sheet in 20 foot or longest practical length, with gutter straps, fasteners and joint sealant. Gutter shall screen the eave ends of roof sheets from view. Color shall be as selected by Architect from manufacturer's full line.
- B. Downspouts: Shall be 26 gauge steel sheet in 10 foot or longest practical length, rectangular shaped. Downspouts shall be supported by attachment to the wall covering at 10 feet maximum spacing to 4" above grade. Color shall be as selected by Architect from manufacturer's full line.

## 2.6 INSULATION SYSTEM – REFER TO SECTION 072100 INSULATION

- A. Insulation:
  1. Fiberglass shall be as outlined in the North American Insulation Manufacturers Association (NAIMA 202-96) and ASTM C 991-03 Type 1, or equal with an R-value AS INDICATED when not compressed.
  2. The fiberglass shall be Polypropylene-Scrim-Kraft faced blankets.
  3. The composite of fiberglass and facing shall have surface burning characteristics not to exceed 25 flame spread and 50 smoke developed when tested in accordance with ASTM E 84 or Underwriters Laboratories 723 test method.
- B. Facing:
  1. Facing shall be composed of Polypropylene/ Scrim/ Core/ Metalized Polyester.
  2. The resulting facing shall have:
    - a. A water vapor transmission rate of .02 US Perm (ASTM E 96 Procedure A)
    - b. A mullen burst of 120 psi.
  3. Tensile strength shall be:
    - a. 65 lbs in the machine direction.
    - b. 60 lbs in the cross-machine direction.
  4. Vinyl Color white – refer to architectural plans
  5. Installation:
    - a. To be draped over purlins.
    - b. Should be in lengths that will cover the distance from eave to eave plus an extra 12" on each end to overhang each side of the building.
      - i. If more than one roll is required to span the roof, a ridge pan will be utilized.
    - c. The width of the first run of insulation to be 1'-0" wider than the width of the roofing panel. Succeeding runs to be either the same width or twice the width of the roof panels.
    - d. Tab fastening to utilize two (2) 3" tabs

6. Approved Manufacturers:
  - a. Bay Insulation of South Texas
  - b. PBI Supply
  - c. Therm-All

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Assist in placement of anchor bolts using robotic total station device. Verify that anchor bolts are installed as indicated on anchor bolt shop drawings.
- B. Following erection, PEMB manufacturer shall inspect (and reinspect following corrective work, as needed) the building and provide engineer with documentation that the building has been erected in accordance with the construction documents and PEMB manufacturer's recommendations.

#### **3.2 ERECTION**

- A. Provide temporary bracing, shoring, blocking, bridging and securing of components as required during the erection process.
- B. Erection must be performed by an erector acceptable to the metal building system manufacturer.
- C. Erect building system in accordance manufacturer's instructions, erection drawings, and other erection documents.
- D. Install roof panels, wall panels, and roof liner panels straight and true, free from defects in accordance manufacturer's instructions.
- E. Paint burns, scars, welds, and damaged and rusted surfaces with cold galvanizing paint in accordance with ASTM A780.
- F. Isolate dissimilar metal contact with proper taping and/or coatings.
- G. Install flashings and accessories to provide a watertight system.
- H. Cut and install insulation at in accordance with manufacturer's printed instructions and sealed to ensure continuity of building envelope, whether indicated or not.
- I. Provide accessories recommended by manufacturer for a complete installation.

END OF SECTION 033400



**SECTION 15500 – FIRE PROTECTION SYSTEMS****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

**1.2 DESCRIPTION OF WORK**

- A. The work includes designing and providing new automatic wet pipe fire extinguishing sprinkler systems for Light Hazard Occupancy throughout the facility (including lobby, offices, conference rooms, break room, work rooms, viewing rooms, and reception areas) and an Ordinary Hazard Group 1 occupancy for mechanical room, storage room, and janitor room. Provide uniform distribution of water by hydraulic design to afford complete fire protection coverage throughout the facility. Contractor shall study the floor plans to determine the specific hazard occupancy for each room of the facility, and design accordingly. Contractor shall study the architectural, structural, mechanical, and electrical plans to determine available space, conflicts, etc. Especially critical are the various changes in ceiling height, changes in ceiling type, sloped ceilings, open structures, and special ceiling finishes in lobby and teller areas. The design, equipment, materials, installation, and workmanship shall be in strict accordance with the required and advisory provisions of NFPA 13, except as modified herein. System shall include all materials, accessories, and equipment necessary to be complete and ready for use. Design and install each system to give full consideration to blind spaces, piping, electrical equipment, ductwork, and all other construction and equipment to afford complete coverage in accordance with detailed drawings to be submitted for approval. Devices and equipment for fire protection service shall be listed by the Underwriters' Laboratories, Inc, and approved by the Factory Mutual System. In the NFPA publications referred to herein, the advisory provisions shall be considered to be mandatory, as though the word "shall" had been substituted for "should" wherever it appears.
  - 1. Sprinkler system is not required under exterior open shade canopies.
  - 2. Available space above ceiling is limited. Coordinate with other trades.
  - 3. Plastic piping is not acceptable.
  - 4. Install guards on all heads subject to physical damage.
  - 5. Full consideration shall be give to aesthetic considerations of facility. Heads shall be symmetrically located in rooms or areas served. Finished heads shall be installed in all finished areas. Heads shall be located in the center of all ceiling tiles.
  - 6. Architect reserves the right to adjust head locations, and if necessary, head quantities during submittal phase.
- B. Trenching and backfill required in conjunction with fire protection piping is specified in applicable Division-2 sections, and is included as work of this section, as noted herein.

### 1.3 QUALITY ASSURANCE

- A. Manufacturers: Firms regularly engaged in manufacture of fire protection piping systems products, of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer: A firm with at least 3 years of successful installation experience on projects with fire protection piping systems work similar to that required for project.
- C. NFPA Code: Comply with ANSI/NFPA 13, "Installation of Sprinkler Systems".
- D. FM Compliance: Comply with Factory Mutual "Approval Guide".
- E. FM Labels: Provide sprinkler products bearing FM approval labels.
- F. UL Labels: Provide fire sprinkler piping products which have been approved and labeled by Underwriters Laboratories.
- G. Local Fire Department/Marshall Regulations: Comply with governing regulations pertaining to fire sprinkler piping.

### 1.4 SUBMITTALS

- A. Partial submittals will not be acceptable. Annotate descriptive data to show the specific model, type, and size of each item the Contractor proposes to furnish. Prepare working drawings in accordance with the requirements of "Working Drawings (Plans)" as specified in NFPA 13, and include data essential to the proper installation of each system. Do not commence work until the design of each system and the various components have been approved. Before any work is commenced, submit for approval complete sets of working drawings and calculations for each sprinkler system.
- B. Manufacturer's Data:
  - 1. Pipe, fittings, and mechanical couplings
  - 2. Alarm valves
  - 3. Valves, including gate, check, and globe
  - 4. Water-motor alarms
  - 5. Sprinkler heads
  - 6. Pipe hangers
  - 7. Pressure switch
  - 8. Fire department siamese connection
  - 9. Vertical backflow preventer
- C. Shop Drawings:
  - 1. Sprinkler system layout
  - 2. Hydraulic calculations
  - 3. Contractor's material and test certificate
- D. Operation and Maintenance Manuals:
  - 1. Alarm valves

## 1.5 AS-BUILT (RECORD) WORKING DRAWINGS

- A. After completion, but before final acceptance of the work, furnish a complete set of drawings of each sprinkler system for record purposes. The drawings shall be reproducible.

## PART 2 - PRODUCTS

### 2.1 FIRE PROTECTION DESIGN, PIPING MATERIALS, AND PRODUCTS

- A. Design of Sprinkler Systems: Design of wet pipe fire extinguishing sprinkler systems shall be by hydraulic calculations for uniform distribution of water over the design area and shall conform to NFPA 13 and to the requirements as specified herein.
- B. Distribution of Water: Distribution shall be essentially uniform throughout the area in which it is assumed the sprinkler heads will open. Variation in discharge from individual heads in the hydraulically most remote area shall be between 100 and 120 percent of the specified density.
- C. Density of Application of Water: Size pipe to provide the specified density when the system is discharging the specified total maximum required flow.
- D. Sprinkler Discharge Area: Area shall be the hydraulically most remote area as defined in NFPA 13.
- E. Outside Hose Allowances: Hydraulic calculations shall include hose allowances as required by NFPA 13.
- F. Location of Sprinkler Heads: Heads in relation to the ceiling and the spacing of sprinkler heads shall not exceed that permitted by NFPA 13. The spacing of sprinklers on the branch lines shall be essentially uniform.
- G. Water Supply: Base hydraulic calculations on flow data shown on plans. Contractor shall verify flow data before starting work.

### 2.2 EQUIPMENT

- A. Sprinkler Heads-General: Heads shall have nominal 1/2-inch, 17/32-inch, or 0.64-inch orifice as specified. Release element of each head shall be of the intermediate temperature rating or higher as suitable for the individual location where it is installed. Provide fully recessed pendent sprinklers with white cover plates in gypboard and lay-in ceilings. Provide fully recessed pendent sprinklers with cover plates (color to be coordinated with architect) for wood ceilings. Provide brass finish for upright heads.
- B. Cabinet: Provide extra sprinkler heads and sprinkler head wrench in a metal cabinet adjacent to the alarm valve within the building. The number and types of extra sprinkler heads shall be as specified in NFPA 13.
- C. Alarm Valve: Provide variable pressure type alarm valve complete with retarding chamber, alarm test valve, alarm shutoff valve, drain valve, pressure gauges, accessories, and appurtenances necessary for the proper operation of the system.

- D. Water Flow Alarm: Alarm shall be through the fire alarm system; coordinate with fire alarm contractor.
- E. Pressure Switch: Provide switch with circuit opener or closer for the automatic transmittal of an alarm over the facility fire alarm system and connect into the fire alarm system. Alarm actuating device shall be of the mechanical diaphragm controlled water pressure type with retard device adjustable from 10 to 60 seconds and shall be of a type which instantly recycles when pressure is released on the diaphragm. Install the switch in the alarm valve trim ahead of all valves so that the switch cannot be shut off.

### 2.3 ABOVE GROUND PIPING SYSTEMS

- A. Inspect, test, and approve piping before burying, covering, or concealing. Provide fittings for changes in direction of piping and for all connections. Make changes in piping sizes through tapered reducing pipe fittings; the use of bushings will not be permitted. Welding shall be performed in the shop; field welding will not be permitted.
- B. Sprinkler Pipe and Fittings: Provide and install in accordance with NFPA 13. Fittings into which sprinkler heads, sprinkler head riser nipples, or drop nipples are threaded shall be welded, threaded, or grooved-end type. Use of plain-end fittings with mechanical couplings (which utilize steel gripping devices to bite into the pipe when pressure is applied) will not be permitted. Rubber gasketed grooved-end pipe and fittings with mechanical couplings shall be permitted in pipe sizes 1.25 inches and larger; fittings shall be UL Listed or FM approved for use in sprinkler systems.
- C. Pipe Hangers: Provide and install in accordance with NFPA 13.
- D. Valves: Provide valves as required by NFPA 13 and of types approved for fire service. Gate valves shall open by counterclockwise rotation. Check valves shall be flanged clear opening swing check type with flanged inspection and access cover plate for sizes 4 inches and larger. Provide an OS&Y valve beneath each alarm valve in each riser when more than one alarm valve is supplied from the same water supply pipe.
- E. Identification Signs: Attach properly lettered approved metal signs conforming to NFPA 13 to each valve and alarm device. Permanently affix hydraulic design data nameplates to the riser of each system.
- F. Inspectors' Test Connections: Provide test connections about 6 feet above the floor for each sprinkler system or portion of each sprinkler system equipped with an alarm device and locate at the hydraulically most remote part of each system. Provide test connection piping to a location where the discharge will be readily visible and where water may be discharged without damage.
- G. Main Drains: Provide drain piping to discharge at safe points outside each building or to sight cones attached to drains of adequate size to readily receive the full flow from each drain under maximum pressure. Provide auxiliary drains as required by NFPA 13.
- H. Vertical Backflow Preventer: Galvanized cast-iron or 304 stainless steel body, bolted cover with air-bleed device for access to internal parts, and flanged ends. Include one-piece bronze disc with bronze bushings, pivot, and replaceable seat. Unit shall be compact to fit in-line with the fire sprinkler riser. Backflow preventer shall be FM approved.

- I. Pipe Sleeves: Provide where piping passes through walls, floors, roofs, and partitions. Secure sleeves in proper position and location. Provide sleeves of sufficient length to pass through entire thickness of walls, floors, roofs, and partitions. Provide not less than 0.25-inch space between exterior of piping or pipe insulation and interior of sleeve. Firmly pack space with insulation and caulk at both ends of the sleeve with plastic waterproof cement which will dry to a firm but pliable mass, or provide a segmented elastomeric seal.
  1. Sleeves in Masonry and Concrete Walls, Floors, and Roofs: Provide ASTM A 53 or ASTM A 120, Schedule 40 or Standard Weight, zinc-coated steel pipe sleeves. Extend sleeves in floor slabs 3 inches above the finished floor.
  2. Sleeves in Partitions and Other Than Masonry and Concrete Walls, Floors, and Roofs: Provide zinc-coated steel sheet having a nominal weight of not less than 0.90 pounds per square foot.
  3. Escutcheon Plates: Provide one piece or split hinge type metal plates for piping passing through floors, walls, and ceilings in exposed areas. Provide chromium-plated finish on plates in finished areas. Provide paint finish on plates in unfinished areas. Securely anchor plates in place with set screws or other approved positive means.
  4. Fire Department Inlet Connections: Provide inlet connections about 3 feet above grade, City of Kerrville approved 5-inch Storz, National Standard female hose threads with plug and chain.

## 2.4 BURIED WATER PIPING SYSTEMS

- A. Pipe and Fittings: Provide outside coated, cement mortar lined, ductile-iron pipe and fittings conforming to NFPA 24 for piping under the building and less than 5 feet outside of the building walls. Anchor the joints in accordance with NFPA 24; provide concrete thrust block at the elbow where the pipe turns up toward the floor, and restrain the pipe riser with steel rods from the elbow to the flange above the floor. Minimum depth of cover shall be 3 feet. Piping more than 5 feet outside of the building walls shall be PVC plastic pressure pipe, AWWA C900, 200 psi pressure class, with rubber gasket push on joints.
- B. Valves: Provide as required by NFPA 24. Gate valves shall conform to AWWA C500 or UL 262 with cast-iron body and bronze trim and shall open by counterclockwise rotation.
- C. Buried Utility Warning and Identification Tape: Provide detectable aluminum foil plastic backed tape or detectable magnetic plastic tape manufactured specifically for warning and identification of buried piping. Tape shall be detectable by an electronic detection instrument. Provide tape in rolls, 3 inches minimum width, color coded for the utility involved with warning and identification imprinted in bold black letters continuously and repeatedly over entire tape length. Warning and identification shall be CAUTION BURIED WATER PIPING BELOW or similar. Use permanent code and letter coloring unaffected by moisture and other substances contained in trench backfill material. Bury tape with the printed side up at a depth of 6 inches below the top surface of earth or the top surface of the subgrade under pavements.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Equipment, materials, installation, and workmanship shall be in accordance with NFPA 13, except as modified herein. Install piping straight and true to bear evenly on hangers. Keep the interior and ends of new piping affected by the Contractor's operations thoroughly cleaned of

water and foreign matter. Keep piping systems clean during installation by means of plugs or other approved methods. When work is not in progress, securely close open ends of piping and fittings so that water and foreign matter will not enter the pipes or fittings. Inspect piping before placing into position.

### **3.2 DISINFECTION**

- A. Disinfect the new water piping in accordance with AWWA C601. Fill the piping systems with solution containing minimum of 50 parts per million of available chlorine and allow solution to stand for minimum of 24 hours. Flush the solution from the systems with clean water until maximum residual chlorine content is not greater than 0.2 parts per million.

3.3 FIELD PAINTING: See Division 9.

### **3.4 FIELD TESTING AND FLUSHING**

- A. Hydrostatically test each system at 200 psig for a period of 2 hours. Flush piping in accordance with NFPA 13. Piping above suspended ceilings shall be tested, inspected, and approved before installation of ceilings. Test the alarms and other devices. Test the water flow alarms by flowing water through the inspector's test connection. When tests have been completed and corrections made, submit a signed and dated certificate, similar to that specified in NFPA 13, with a request for a formal inspection and tests.

END OF SECTION 23821

### Standard Abbreviations

@	AT	LAM	LAMINATE(D)
ABV	ABOVE	LAV	LAVATORY
AFF	ABOVE FINISHED FLOOR	LH	LEFT HAND
ACoust	ACOUSTICAL	L	LENGTH
ACT	ACOUSTICAL TILE	LI	LIGHT
ADA	AMERICANS WITH DISABILITIES	LF	LINEAR FEET
ADJ	ADJUSTABLE	LL	LINE LOAD
AGG	AGGREGATE	MH	MANHOLE
AC	AIR CONDITIONING	MFR	MANUFACTURE(R)
ALT	ALTERNATE	MRE	MARBLE
ALUM	ALUMINUM	MRS	MASONRY
AB	ANCHOR BOLT	MO	MASONRY OPENING
ANOD	ANODIZED	MATL	MATERIAL(S)
APX	APPROXIMATE	MAX	MAXIMUM
ARCH	ARCHITECTURAL	MECH	MECHANICAL
ASPH	ASPHALT	MC	MEDICINE CABINET
AUTO	AUTOMATIC	MD	MEDICUM
		MTL	METAL
		MIN	MINIMUM
BSMT	BASEMENT	MIR	MIRROR
BRG	BEARING	MIS	MISCELLANEOUS
BM	BENCH MARK	MISC	MOLDING, MOULDING
BTWN	BETWEEN	MT(ED)	MOUNT(ED), MOUNTING
BVL	BEVELED	MULL	MULLION
BLK	BLOCK		
BLKG	BLOCKING	NAT	NATURAL
BD	BOARD	NIC	NOT IN CONTRACT
BW	BOTH WAYS	NOM	NOMINAL
BOTT	BOTTOM	NR	NOISE REDUCTION
BRK	BRICK	NTS	NOT TO SCALE
BRZ	BRONZE	OC	ON CENTER(S)
BLDG	BUILDING	OD	OUTSIDE DIAMETER
BL	BUILDING LINE	OH	OVERHEAD
BUR	BUILT UP ROOF	OPG	OPENING
		OPP	OPPOSITE
CAB	CABINET(S)	OPP HND	OPPOSITE HAND
CO	CASED OPENING		
CSMT	CASEMENT	PCF	POUNDS / CUBIC FOOT
CL	CENTER LINE	PE	PEDESTAL
CLG	CEILING	PED	PRE-ENGINEERED METAL BUILDING
CEM	CEMENT	PH	PHONE
CER	CERAMIC	P	PROPERTY LINE
CT	CERAMIC TILE	PL	PLATE
CIRCLE	CIRCLE	PLM	PLASTIC LAMINATE
CLR	CLEAR(ANCE)	PLAS	PLASTER
CR	COLD ROLLED	PLF	POUNDS / LINEAL FOOT
COL	COLUMN	PSF	POUNDS / SQUARE FOOT
COMP	COMPOSITE, COMPOSITION	PSI	POUNDS / SQUARE INCH
CNC	CNC	PT	POINT
CMU	CONCRETE MASONRY UNIT	PT. GD.	PAINT GRADE
CONST	CONSTRUCTION	PTC	POST-TENSIONED CONC.
CONT	CONTINUOUS, CONTINUE	PTD	PAINTED
CJ	CONTROL JOINT	PUE	PUBLIC UTILITY EASEMENT
CG	CORNER GUARD	PVC	POLYVINYL CHLORIDE
CTR	COUNTER	QTM	QUARRY TILE
CRS	COURSE(S)		
CF	CUBIC FOOT PER MINUTE	RA	RETURN AIR
CFM	CUBIC FOOT PER MINUTE	RAD	RADIUS
CY	CUBIC YARD	RE	REFER
		REF	REFRIGERATOR
D	DEPTH, DEEP	REG	REGISTER
DEM	DEMOLISH, DEMOLITION	RENF	REINFORCE(D)
DIA	DIAMETER	REIN	REINFORCEMENT
DIA	DIAMETER	REO	REQUIRED
DISP	DISPOSAL	RES	RESILIENT
DIV	DIVISION	REV	REVISION(S)
DR	DOOR	RFG	REVISOR'S SIGNATURE
DH	DOUBLE HUNG	RH	RIGHT HAND
DS	DOWNSPOUT	RM	ROOM
DWR	DRAWER	RO	ROUGH OPENING
DWG	DRAWING	ROW	RIGHT OF WAY
DF	DRAINING FOUNTAIN	RSC	ROUGH SAW CEDAR RISER
DW	DISHWASHER	RZ	RISER
		SCHED	SCHEDULE
EA	EACH	SCWD	SOLID CORE WOOD DOOR
EW	EACH WAY	SD	SMOKE DETECTOR
EF	EACH FACE	SECT	SECTION
ELEC	ELECTRIC(AL)	SF	SQUARE FEET
EW	ELECTRIC WATER COOLER	SH	SHELF
EL	ELEVATION	SHT	SHELVES, SHELVING
ELEV	ELEVATOR	SH	SHEET
EMER	EMERGENCY	SHT	SHEET
ENG	ENGINEERING	SIM	SIMILAR
EQ	EQUAL	SK. LT.	SKYLIGHT
EQPT	EQUIPMENT	SPEC	SPECIFICATION(S)
EST	ESTIMATE(D)	SQ	SQUARE
EST	ESTIMATED	SS	STAINLESS STEEL
EXIST	EXISTING	STD	STANDARD
EJ	EXPANSION JOINT	STG.	STORAGE
EXP	EXPOSED	ST. GD.	STAIN GRADE
EXT	EXTERIOR	STL	STEEL
		STRUC	STRUCTURAL
FOW	FACE OF WALL	STSM	STANDING SEAM
FOS	FACE OF STUD(S)	SUSP.	SUSPENDED
FR	FIBERGLASS REINFORCED	SYM	SYMMETRY, SYMMETRICAL
FN	FINISH(D)	SYP	SOUTHERN YELLOW PINE
FF	FINISHED FLOOR		
FE	FIRE EXTINGUISHER	TR	TREAD
FLR	FLOORING	T&G	TONGUE & GROOVE
FD	FLOOR DRAIN	TAS	TEXAS ACCESSIBILITY STANDARDS
FLUOR	FLUORESCENT	TEL	TELEPHONE
FTG	FOOTING	THK	THICKNESS
FDN	FOUNDATION	THR	THRESHOLD
		TMP.	TEMPERED
GA	GAGE, GAUGE	TOB	TOP OF BEAM
GALV	GALVANIZED	TOS	TOP OF STEEL
GI	GALVANIZED IRON	TOW	TOP OF WALL
GC	GENERAL CONTRACTOR	TSI	TOP OF SLAB
GL	GLASS, GLAZING	TV	TELEVISION
GD	GRADE(ING)	TYP	TYPICAL
GYP BD	GYP(SUM) BOARD		
HC	HANDICAPPED	UNF	UNFINISHED
HDW	HARDWARE	UNO	UNLESS NOTED OTHERWISE
HTG	HEATING	UR	URNAL
HVAC	HEATING/VENTILATING AIR CONDITIONING	VB	VAPOR BARRIER
HT	HEIGHT, HIGH	VC	VINYL COMPOSITION
HC	HOLLOW CORE	VERT	VERTICAL
HCWD	HOLLOW CORE WOOD DOOR	VT	VINYL TILE
HDF	HIGH DENSITY FIBER BOARD	VTR	VENT THROUGH ROOF
HM	HOLLOW METAL		
HORIZ	HORIZONTAL	W	WIDTH, WIDE
HOSE BIB	HOSE BIB	W	WITH
INCAND	INCANDESCENT	WC	WATER CLOSET
INCL	INCLUDE(D), INCLUDING	WD	WOOD
INSUL	INSULATE(D), INSULATION	WH	WATER HEATER
INT	INTERIOR	WI	WROUGHT IRON
INT	INTERIOR	WIN	WINDOW
INV	INVERT	W/O	WITHOUT
		WOLM	WOLMANIZED
JT	JOINT	WP	WATER PROOF(ING)
JST	JOIST	WWF	WELDED WIRE FABRIC

### Project General Notes

A. THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIAL INCLUDING THOSE FURNISHED BY SUBCONTRACTORS.

B. ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE BUILDING CODES AND ALL LOCAL CODES.

C. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT ANY ERROR, INCONSISTENCIES OR OMISSION HE/SHE MAY DISCOVER. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY ERROR AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT. THE MEANS OF CORRECTING ANY ERROR SHALL FIRST BE APPROVED BY THE ARCHITECT.

D. THE ARCHITECT WILL REVIEW AND APPROVE SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT. THE ARCHITECT'S APPROVAL OF A SEPARATE ITEM SHALL NOT INDICATE APPROVAL OF AN ASSEMBLY IN WHICH THE ITEM FUNCTIONS.

E. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF WORK.

F. EXISTING ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE DRAWINGS THE CONTRACTOR SHALL NOTIFY THE ARCHITECT SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH WORK.

G. CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER, AND TOILET FACILITIES AS REQUIRED BY THE CITY OR GOVERNING AGENCIES.

H. CITY APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, A COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS, ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT.

I. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE JOB IS IN PROGRESS AND UNTIL JOB IS COMPLETED.

J. ALL DEBRIS SHALL BE REMOVED FROM PREMISES AND ALL AREAS BE LEFT IN A CLEAN BROOM CONDITION AT ALL TIMES.

K. FIRE EXTINGUISHERS, VERIFY REQUIREMENTS AND LOCATIONS WITH FIRE MARSHALL.

L. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE OR REMEDY ANY FAULTY, IMPROPER OR INFERIOR MATERIAL OR WORKMANSHIP OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE (1) YEAR AFTER COMPLETION AND ACCEPTANCE OF THE WORK UNDER THIS CONTRACT. EXCEPTION: THE ROOFING SUBCONTRACTOR SHALL FURNISH A MAINTENANCE AGREEMENT COSIGNED BY THE GENERAL CONTRACTOR TO MAINTAIN THE ROOFING IN A WATERTIGHT CONDITION FOR A PERIOD OF TWO (2) YEARS STARTING AFTER DATE OF SUBSTANTIAL COMPLETION, UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS.

M. CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODE REGULATIONS AND STATE DEPARTMENT OF INDUSTRIAL REGULATIONS, DIVISION OF INDUSTRIAL SAFETY (O.S.H.A.) REGULATIONS.

N. REFERENCES OF DRAWINGS IS FOR CONVENIENCE ONLY AND DOES NOT LIMIT APPLICATION OF ANY DRAWINGS OR DETAIL.

O. CONTRACTOR SHALL REFER TO AND CROSS-CHECK DETAILS, DIMENSIONS, NOTES, AND ALL REQUIREMENTS ON THE ARCHITECTURAL DRAWINGS WITH RELATED REQUIREMENTS ON THE STRUCTURAL, MECHANICAL, ELECTRICAL, AND/OR CIVIL DRAWINGS.

P. THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION FOR THE SAFETY OF THE OWNER'S EMPLOYEES, WORKMEN, AND ALL OTHERS, AT LEAST DURING PROJECT CONSTRUCTION.

Q. THE CONTRACTOR SHALL SAFEGUARD THE OWNER'S PROPERTY DURING CONSTRUCTION AND SHALL REPAIR ANY DAMAGES TO PROPERTY OF THE OWNER TO ORIGINAL CONDITION OR BETTER.

R. THE STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING/SHORING AS REQUIRED OR PORTION THEREOF DURING CONSTRUCTION.

S. PROVIDE ALL NECESSARY BLOCKING, BACKING, SLEEVES, AND FRAMING FOR LIGHT FIXTURES, ELECTRICAL UNITS, A/C EQUIPMENT, COUNTERS, HANDRAILS, RAILS, AND ALL OTHER ITEMS REQUIRING SAME.

T. THE ARCHITECT MAKES NO GUARANTEE FOR PRODUCTS NAMED BY TRADE OR MANUFACTURER.

U. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE BUILDING LINES AND LEVELS. THE CONTRACTOR SHALL COMPARE CAREFULLY THE LINES AND LEVELS SHOWN ON THE DRAWING WITH THE EXISTING LEVELS FOR THE LOCATION AND CONSTRUCTION OF THE WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

V. ALL TRADES SHALL DO THEIR OWN CUTTING, FITTING, PATCHING, ETC., TO MAKE THE SEVERAL COME TOGETHER PROPERLY AND FIT AND TO BE RECEIVED BY THE WORK OF THE OTHER TRADES.

W. NOT USED.

X. DO NOT SCALE DRAWINGS. NOTIFY ARCHITECT OF ANY DIMENSIONAL DISCREPANCIES FOR CLARIFICATION.

Y. DIMENSIONS, UNLESS OTHERWISE NOTED: TO FACE OF CONCRETE OR MASONRY WORK; TO CENTERLINE OF COLUMNS OR OTHER GRID POINTS; TO FACE OF STUDS AND FRAMED WINDOW OR DOOR OPENINGS; TO FINISH FACE OF CLEAR WIDTHS.

# 100% Construction Documents

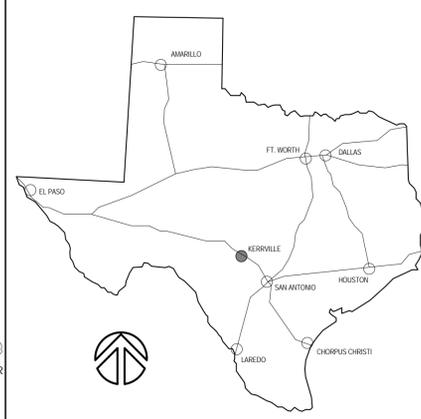
## City of Kerrville

### Athletic Complex Field House

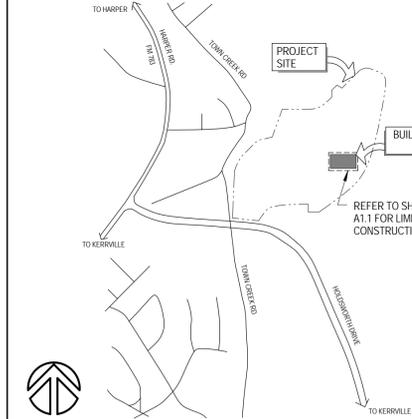
#### PW16-001 - October 21, 2016



### Location Map



### Vicinity Map



### Contact Information

**Owner/Client**  
City of Kerrville  
701 Main St.  
Kerrville, TX 78028  
Phone: 830-257-8000

**Electric**  
Kerrville Public Utility Board  
220 Memorial Blvd.  
Kerrville, TX 78028  
Phone: 830-257-3550

**Telephone**  
Hill Country Telephone Cooperative  
220 Carolyn St. W.  
Kerrville, TX 78025  
Phone: 830-367-5333

**Water/Waste Water**  
City of Kerrville  
701 Main St.  
Kerrville, TX 78028  
Phone: 830-792-8336

**Architect**  
Peter W. Lewis Architect + Associates  
334 West Water Street  
Kerrville, TX 78028  
Phone: 830-896-4220, Fax: 830-896-4226

**Structural Engineer**  
Maxwell Engineering, PLLC  
911 Panorama Dr.  
Kerrville, TX 78028  
Phone: 830-895-0032, Fax: 830-895-0033

**MEP Engineer**  
ESA Mechanical & Electrical Engineering, Inc.  
1100 NW Loop 410, Ste. 460  
San Antonio, TX 78213  
Phone: 210-342-3483, Fax: 210-342-3641

**Civil Engineer**  
Howitt Engineering, Inc.  
716 Barnett Street  
Kerrville, TX 78028  
Phone: 830-315-8800

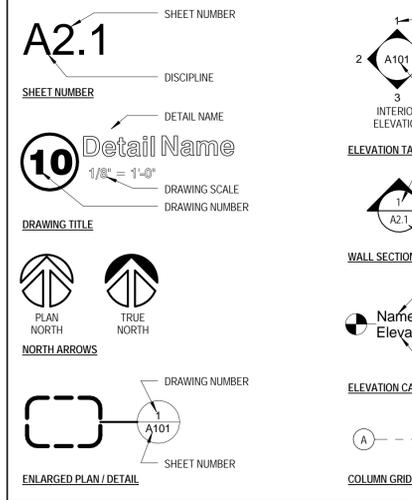
### Applicable Codes

2006 INTERNATIONAL BUILDING CODE  
2008 NATIONAL ELECTRIC CODE  
2006 INTERNATIONAL PLUMBING CODE  
2006 INTERNATIONAL MECHANICAL CODE  
2006 INTERNATIONAL ENERGY CONSERVATION CODE  
2006 INTERNATIONAL FIRE CODE

TEXAS ACCESSIBILITY STANDARDS, CURRENT EDITION AMERICANS WITH DISABILITIES ACT

REFER TO SHEET G1.3 FOR ADDITIONAL INFORMATION

### Symbol Legend



### !!NOTE TO BIDDERS!!

THE "CITY OF KERRVILLE ATHLETIC COMPLEX FIELD HOUSE" IS BEING DESIGNED AND CONSTRUCTED WITHIN AN EXISTING AND ONGOING CONSTRUCTION PROJECT, THE "KERRVILLE SPORTS COMPLEX", WITH LIMITED ACCESS POINTS AND CONSTRUCTION LIMITS. THE AWARDED GENERAL CONTRACTOR FOR THE "CITY OF KERRVILLE ATHLETIC COMPLEX FIELD HOUSE" WILL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH OWNER (CITY OF KERRVILLE), PRIOR TO AND DURING THE CONSTRUCTION OF THIS FACILITY. ANY DAMAGE DONE TO ANY COMPLETED AREAS OF CONSTRUCTION ON THE "KERRVILLE SPORTS COMPLEX" WILL BE BROUGHT TO THE OWNERS ATTENTION IMMEDIATELY, AND THE AWARDED GENERAL CONTRACTOR FOR THE "CITY OF KERRVILLE ATHLETIC COMPLEX FIELD HOUSE" WILL BE RESPONSIBLE FOR ALL REPAIRS AT THEIR OWN COST. THE "KERRVILLE SPORTS COMPLEX" CONTRACTOR WILL REQUIRE ACCESS TO FIELDS 1-4 THROUGH THIS PROJECT CONSTRUCTION SITE FOR DELIVERY OF MATERIALS SUCH AS SOIL AND INFILL MIX.

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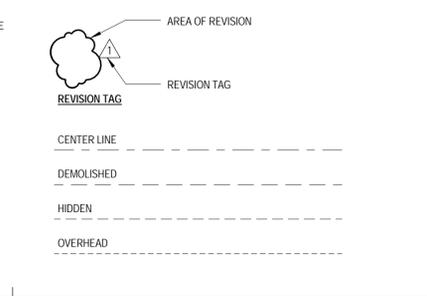
### Base Bid & Alternate Description

**BASE BID:** EXECUTION OF ALL CIVIL, STRUCTURAL, MEP AND ARCHITECTURAL ITEMS WITHIN THIS SET OF CONTRACT, AS IT PERTAINS TO THE BUILDING AND ADJACENT PAVING. PROVIDE SEEDED HYDROMULCH IN LIEU OF ADD ALTERNATE NO. 1, "EXTERIOR BASEBALL FIELD" LOCATION. COORDINATE SEED MIX WITH OWNER PRIOR TO INSTALLATION. FINAL GRADING AND SURFACE DRAINAGE OF ADD ALTERNATE NO. 1, "EXTERIOR BASEBALL FIELD," TO MATCH CIVIL DRAWINGS AS SHOWN. PROVIDE EMPTY CONDUIT FOR ADD ALTERNATE NO. 1, "EXTERIOR BASEBALL FIELD," UTILITIES TO INCLUDE, BUT NOT LIMITED TO POWER AND LIGHTING. REFER TO SHEET A1.1 FOR DELINEATION OF BASE BID, VERSUS ADD ALTERNATE.

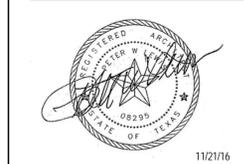
**ADD ALTERNATE NO. 1: EXTERIOR BASEBALL FIELD**  
DESCRIPTION: EXECUTION OF ALL CIVIL, STRUCTURAL, MEP AND ARCHITECTURAL ITEMS AS DESCRIBED WITHIN THIS SET OF CONSTRUCTION DOCUMENTS AS IT PERTAINS TO THE EXTERIOR BASEBALL FIELD. THIS IS TO INCLUDE, BUT IS NOT LIMITED TO PAVING, UTILITIES, FOUNDATIONS, ARTIFICIAL TURF, SUBGRADE AND FIELD DRAINAGE, FENCING, DUGOUTS, BASEBALL EQUIPMENT AND FIELD LIGHTING. REFER TO SHEET A1.1 FOR DELINEATION OF BASE BID, VERSUS ADD ALTERNATE.

### !!NOTE TO BIDDERS!!

THE "CITY OF KERRVILLE ATHLETIC COMPLEX FIELD HOUSE" IS BEING DESIGNED AND CONSTRUCTED WITHIN AN EXISTING AND ONGOING CONSTRUCTION PROJECT, THE "KERRVILLE SPORTS COMPLEX", WITH LIMITED ACCESS POINTS AND CONSTRUCTION LIMITS. THE AWARDED GENERAL CONTRACTOR FOR THE "CITY OF KERRVILLE ATHLETIC COMPLEX FIELD HOUSE" WILL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH OWNER (CITY OF KERRVILLE), PRIOR TO AND DURING THE CONSTRUCTION OF THIS FACILITY. ANY DAMAGE DONE TO ANY COMPLETED AREAS OF CONSTRUCTION ON THE "KERRVILLE SPORTS COMPLEX" WILL BE BROUGHT TO THE OWNERS ATTENTION IMMEDIATELY, AND THE AWARDED GENERAL CONTRACTOR FOR THE "CITY OF KERRVILLE ATHLETIC COMPLEX FIELD HOUSE" WILL BE RESPONSIBLE FOR ALL REPAIRS AT THEIR OWN COST. THE "KERRVILLE SPORTS COMPLEX" CONTRACTOR WILL REQUIRE ACCESS TO FIELDS 1-4 THROUGH THIS PROJECT CONSTRUCTION SITE FOR DELIVERY OF MATERIALS SUCH AS SOIL AND INFILL MIX.



NO.	DESCRIPTION	DATE
1	Addendum 1	11/21/2016



334 West Water Street (830) 896-4220	Kerrville, TX 78028 (830) 896-4226
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## City of Kerrville Athletic Complex Field House

Kerrville, Texas

PROJECT NO.	DATE
20-1605	11/21/16

## Cover Sheet

SHEET NUMBER

# G1.1

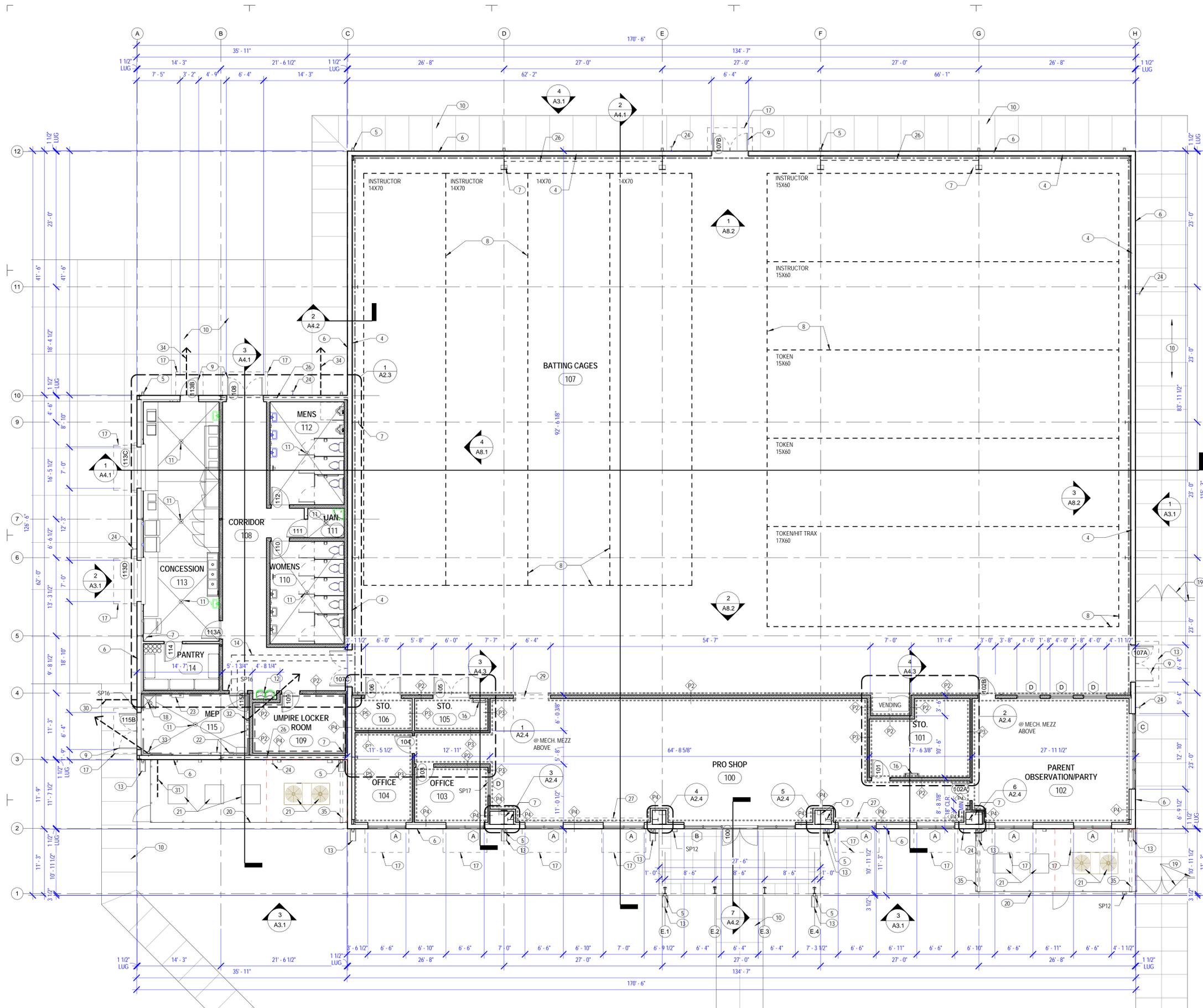












**FLOOR PLAN GENERAL NOTES:**

1. ALL DIMENSIONS ARE FROM CENTERLINE OF COLUMN, EDGE OF CONCRETE OR MASONRY, OR FACE OF STUD WALLS, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR IS TO PROVIDE TREATED WOOD BLOCKING AS NEEDED FOR ALL WALL MOUNTED ITEMS OR ACCESSORIES.
3. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, AND PLAN DIMENSIONS PRIOR TO THE START OF ANY CONSTRUCTION AND OR FABRICATION. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE ARCHITECT, IN WRITING OF ANY DISCREPANCIES FOUND.
4. ALL DOORS ARE TO BE 4" FROM FACE OF ADJACENT WALL FINISH OF PERPENDICULAR WALL TO THE EDGE OF THE DOOR FRAME, UNLESS OTHERWISE NOTED.
5. REFER TO TEXAS ACCESSIBILITY STANDARDS (T.A.S.) FOR ALL MOUNTING HEIGHTS, DOOR CLEARANCES, ETC.
6. PRIOR TO THE FABRICATION OF MILLWORK OR THE ORDERING OF ANY SPECIALTY ITEMS, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS TO ENSURE A PROPER FIT.
7. MINIMUM "R" RATING OF NEW CONSTRUCTION OF ENVELOPE SHALL COMPLY WITH THE FOLLOWING: ROOF: R-30. WALLS R-19.
8. REFER TO EXTERIOR FINISH SCHEDULE FOR IDENTIFICATION OF ALL EXTERIOR FINISH ITEMS.
9. REFER TO SHEETS A2.2 FOR WALL TYPES.
10. REFER TO SHEET A2.2 FOR ACCESSORY SCHEDULE (SP) LEGEND.

**WALL FINISH LEGEND:**

- INTERIOR METAL WALL LINER PANEL, MBCI IL-240 24" X 1 1/2" 24 GA. OR APPROVED EQ. EXTENDED TO 15'-0" A.F.F. RE: FINISH SCHEDULE.
- 5/8" TYPE "X" GYPSUM BOARD WALL TAPE AND FLOAT ONLY. FINAL TEXTURE, PRIME AND PAINT FINISH NOT IN CONTRACT
- - - - - 5/8" TYPE "X" GYPSUM BOARD TAPE, FLOAT, TEXTURE, PRIME & PAINT. REFER TO SPECIFICATIONS & FINISH SCHEDULE.
- - - - - 3/4" UNFINISHED FIRE RESISTANT PLYWOOD FROM F.F. TO 8'-0" A.F.F.
- ===== ACOUSTICAL BATT INSULATION.

**KEY NOTES:**

1. NOT USED.
2. EDGE OF CONCRETE FOUNDATION. RE: STRUCTURAL.
3. NOT USED.
4. PRE-FINISHED INTERIOR METAL PANEL. RE: FINISH SCHEDULE.
5. PRE-FINISHED METAL DOWNSPOUT. FINAL SIZE & GAUGE TO BE DETERMINED BY PEMB MANUFACTURER. (TYP.)
6. PRE-FINISHED EXTERIOR METAL WALL PANEL OVER 8" PRE-ENGINEERED METAL GIRTS. (TYP.)
7. PRE-ENGINEERED METAL COLUMN. RE: STRUCTURAL. (TYP.)
8. LOCATION OF BATTING CAGE/ NETTING, TYP. (NOT IN CONTRACT)
9. INSULATED HOLLOW METAL DOOR & FRAME. (PTD.)
10. CONCRETE PAVING. RE: CIVIL.
11. FLOOR DRAIN. RE: PLUMBING. SLOPE FLOOR 1/4" FT MAXIMUM (TYP.)
12. HI-LO HANDICAPPED ACCESSIBLE WATER COOLER. RE: MEP.
13. CONCRETE SPLASH BLOCK AT DOWNSPOUT. RE: 301.1.1.
14. PROVIDE CONDUIT FROM MEP 115 TO BATTING CAGES 107 W/ PULLSTRING. REFER TO ELECTRICAL FOR CONDUIT SIZE AND AMMOUNT.
15. NOT USED.
16. MECHANICAL MEZZANINE ACCESS LADDER.
17. LINE OF CANOPY/WINGS ABOVE. RE: ROOF PLAN
18. FIRE SPRINKLER RISER. PROVIDE VERTICAL BACKFLOW PREVENTER IN FIRE SPRINKLER RISER. BACK FLOW PREVENTER SHALL BE FIRE MARSHALL APPROVED. RE: SPECS RE-SPRINKLER
19. CHAINLINK FENCE & GATE. REFER TO A1.1
20. 4' HIGH CHAIN LINK FENCE, W/ FULL HEIGHT WIND SCREEN TO MATCH DUGOUTS. PROVIDE 3' WIDE GATE & LATCH W/ LOCK. REFER TO MECH. FOR REGD CLEARANCES.
21. CONDENSING UNIT. RE: MECH
22. ELEC. PANELS. RE: ELECTRICAL.
23. FIRE ALARM CONTROL PANEL. RE: ELEC.
24. HOSE BIBB. RE: PLUMBING.
25. NOT USED.
26. "X-BRACING" RE: STRUCTURAL.
27. PORTAL FRAME. RE: STRUCTURAL.
28. NOT USED.
29. 8' TALL CASED OPENING.
30. FIRE SPRINKLER SERVICE LINE. RE: CIVIL.
31. DOMESTIC WATER LINE. RE: CIVIL.
32. SECONDARY ELECTRICAL SERVICE. RE: ELECTRICAL.
33. COMMUNICATION SERVICE. RE: ELECTRICAL.
34. SANITARY SEWER SERVICE. RE: CIVIL.
35. PROVIDE DOWNSPOUT EXTENSION TO OUTSIDE OF MECHANICAL YARD SCREEN WALL.

NO.	DESCRIPTION	DATE
1	Addendum 1	11/21/2016



11/21/16



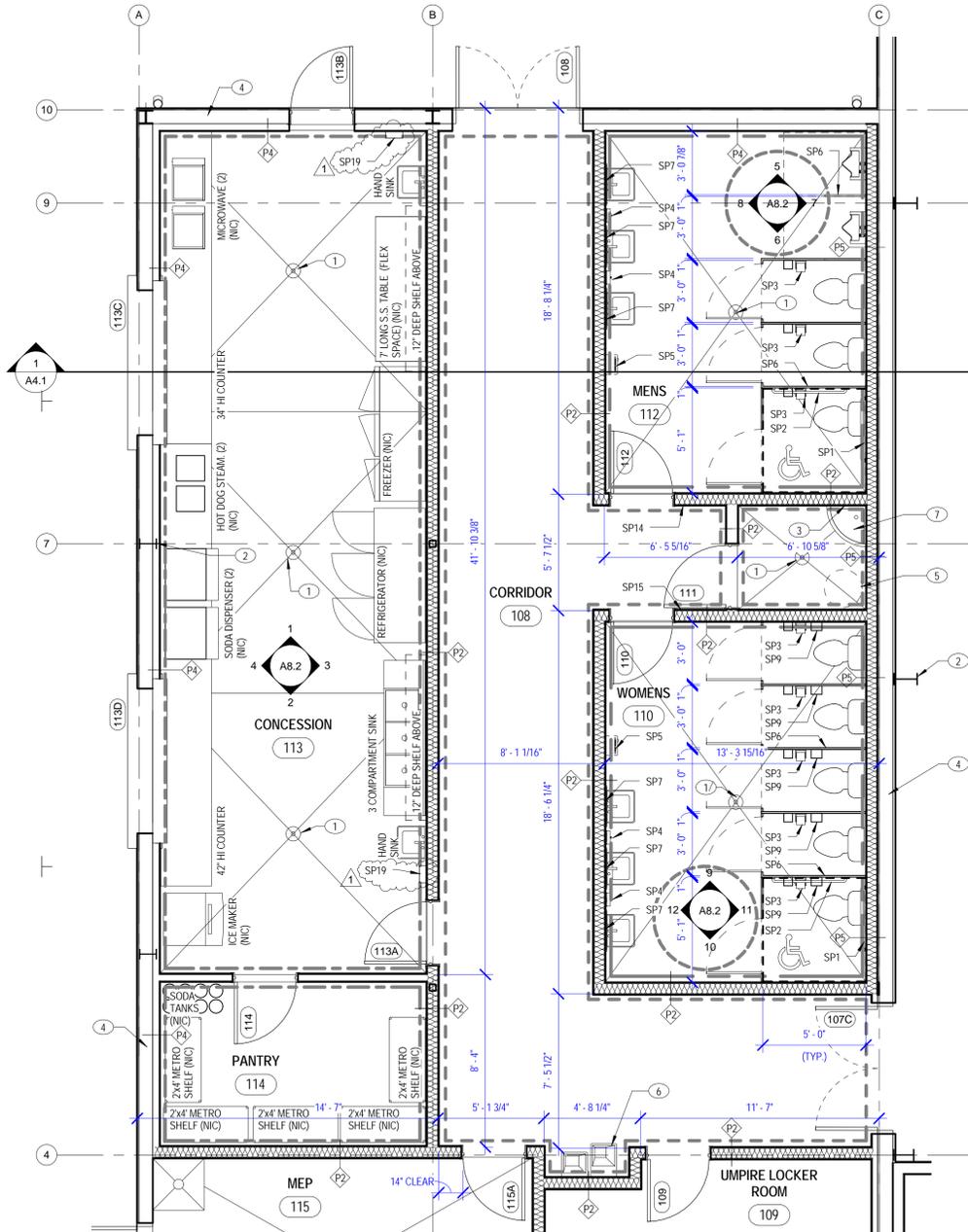
**City of Kerrville  
Athletic  
Complex  
Field House**  
Kerrville, Texas

PROJECT NO. 20-1605 DATE 11/21/16

Floor Plan

SHEET NUMBER  
**A2.2**

11/21/2016 10:19:46 AM



**1 Enlarged Plan**  
1/4" = 1'-0"

- FLOOR PLAN GENERAL NOTES:**
- ALL DIMENSIONS ARE FROM CENTERLINE OF COLUMN, EDGE OF CONCRETE OR MASONRY, OR FACE OF STUD WALLS, UNLESS OTHERWISE NOTED.
  - THE CONTRACTOR IS TO PROVIDE TREATED WOOD BLOCKING AS NEEDED FOR ALL WALL MOUNTED ITEMS OR ACCESSORIES.
  - PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, AND PLAN DIMENSIONS PRIOR TO THE START OF ANY CONSTRUCTION AND/OR FABRICATION. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE ARCHITECT, IN WRITING OF ANY DISCREPANCIES FOUND.
  - ALL DOORS ARE TO BE 4" FROM FACE OF ADJACENT WALL FINISH OF PERPENDICULAR WALL TO THE EDGE OF THE DOOR FRAME, UNLESS OTHERWISE NOTED.
  - REFER TO TEXAS ACCESSIBILITY STANDARDS (T.A.S.) FOR ALL MOUNTING HEIGHTS, DOOR CLEARANCES, ETC.
  - PRIOR TO THE FABRICATION OF MILLWORK OR THE ORDERING OF ANY SPECIALTY ITEMS, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS TO ENSURE A PROPER FIT.
  - MINIMUM "R" RATING OF NEW CONSTRUCTION OF ENVELOPE SHALL COMPLY WITH THE FOLLOWING: ROOF: R-30, WALLS R-19.
  - REFER TO EXTERIOR FINISH SCHEDULE FOR IDENTIFICATION OF ALL EXTERIOR FINISH ITEMS.

- WALL FINISH LEGEND:**
- 5/8" TYPE "X" GYPSUM BOARD, TAPE, FLOAT, TEXTURE, PRIME AND PAINT. REFER TO SPECIFICATIONS & FINISH SCHEDULE.
  - MARLITE BRAND F.R.P. (OR APPROVED EQUAL) w/ TRANSITION STRIPS OVER 5/8" MOISTURE RESISTANT GYPSUM BOARD
  - MARLITE BRAND F.R.P. (OR APPROVED EQUAL) w/ TRANSITION STRIPS OVER 5/8" MOISTURE RESISTANT GYPSUM BOARD FROM F.F. TO 4'-0". PROVIDE MOISTURE RESISTANT GYP. BOARD (PTD.) FROM 4'-0" A.F.F. TO 6' ABOVE CEILING. REFER TO FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
  - ACOUSTICAL BATT INSULATION

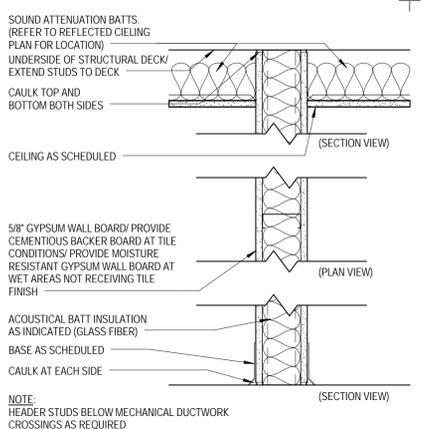
- KEY NOTES:**
- FLOOR DRAIN. RE: PLUMBING. SLOPE FLOOR TO DRAIN 1/4" FT. MAX.
  - PRE-ENGINEERED MTL. COLUMN. RE: STRUCTURAL (TYP.)
  - FULL HEIGHT FRP WALL FINISH SURROUND OVER GYP. BOARD BEHIND MOP SINK.
  - PRE-ENGINEERED MTL WALL GIRT. RE: STRUCTURAL (TYP.)
  - WATER HEATER ON SHELF ABOVE. RE: PLUMBING.
  - HI-LO WATER COOLER. RE: PLUMBING.
  - MOP SINK. RE: PLUMBING.

- INTERIOR PARTITION GENERAL NOTES:**
- REFER TO WALL PRIORITY LEGEND BELOW FOR CONDITIONS WHERE RATED PARTITIONS INTERSECT NON-RATED PARTITIONS.
  - "UNDERSIDE OF STRUCTURE" INDICATED AT THE HEAD CONDITIONS FOR EACH PARTITION TYPE IS DIAGRAMMATIC ONLY AND DOES NOT INDICATE EXACT CONSTRUCTION CONDITION.
- A. TERMINATE FIRE RATED PARTITIONS AT STRUCTURAL MEMBERS WITH A RATING GREATER THAN OR EQUAL TO THE PARTITION.**
- B. INSTALL FRAMING AND GYPSUM BOARD TO OFFSET AROUND STRUCTURAL MEMBERS OR OTHER OBSTRUCTIONS TO MAINTAIN THE FIRE RESISTANCE RATING.**
- C. TERMINATE NON-RATED PARTITIONS AT STRUCTURAL MEMBERS WITH A CONTINUOUS LAYER OF GYPSUM BOARD TO MAINTAIN ACOUSTICAL, SMOKE, OR OTHER BARRIERS.**
- 3. STOP STUDS AND GYPSUM BOARD 1/2" BELOW LINE OF STRUCTURE AND SEAL.**
- A. FIRE RESISTANCE RATED PARTITIONS SHALL BE INSTALLED WITH FIRE STOP SEALANT ALONG PERIMETER UNLESS NOTED OTHERWISE.**
- B. NON-RATED PARTITIONS SHALL BE INSTALLED WITH ACOUSTICAL SEALANT UNLESS NOTED OTHERWISE.**
- C. ALL OTHER PARTITIONS SHALL BE INSTALLED WITH SEALANT AS SCHEDULED.**
- 4. ACOUSTICAL NOTES:**
- A. PROVIDE TWO (2) STUDS BETWEEN PENETRATIONS (OUTLETS) ON OPPOSITE SIDES OF ACOUSTICALLY IMPROVED WALLS. SEAL PERIMETER OF EACH OUTLET WITH ACOUSTICAL SEALANT AND SEAL BACK OF OUTLET WITH OUTLET BOX PADS.**
- B. SEALING AT THE PIPE PENETRATION IN MASONRY WALL:**
- C. SEALING AT PIPE PENETRATION IN GYPSUM BOARD PARTITION:**
- 5. INSTALL BRACING AND FIRE RETARDANT TREATED WOOD BLOCKING FOR CASEWORK, EQUIPMENT, ETC., AT PARTITIONS AS REQUIRED.**
- 6. AT FULL HEIGHT WALLS, PROVIDE SLOTTED DEFLECTION TRACK SYSTEM (SLIP CONNECTION) WITH FASTENERS BETWEEN METAL STUDS AND UNDERSIDE OF STRUCTURE.**
- 7. REFER TO FINISH SCHEDULE FOR ALL CEILING AND WALL FINISHES.**

**SPECIAL ACCESSORY LEGEND**

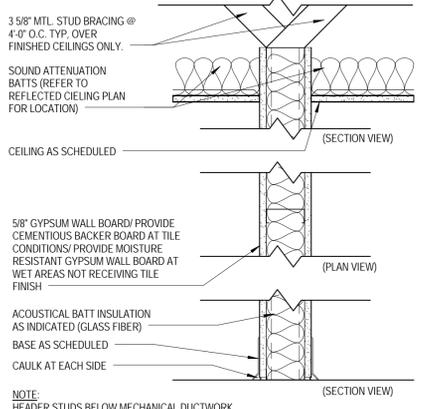
TAG	DESCRIPTION	MANUFACTURER	MODEL NO.	FINISH	REMARKS
SP1	GRAB BARS (BACK) 36" LONG	BOBRICK	B-6806-36	STAINLESS STEEL SATIN	-
SP2	GRAB BARS (SIDE) 42" LONG	BOBRICK	B-6806-42	STAINLESS STEEL SATIN	-
SP3	TOILET PAPER DISPENSER TWO ROLE SURFACE MOUNT	BOBRICK	B-2888	STAINLESS STEEL SATIN	2,3,4
SP4	SOAP DISPENSER - SURFACE MOUNTED ON WALL	BOBRICK	B-2111	STAINLESS STEEL SATIN	-
SP5	HAND DRYER	WORLD DRYER	MODEL A D45-974	-	-
SP6	TOILET PARTITIONS	BOBRICK	SCRC SIERRA - SERIES	SC03 TIERRA COTTA	1, 4, 8
SP7	MIRROR - 24"x36"	BOBRICK	B-290	-	-
SP8	NOT USED	-	-	-	-
SP9	SAN. NAPKIN DISPOSER	BOBRICK	B-270	-	SURFACE MOUNTED
SP10	MOP RACK	BOBRICK	B223-24	-	2, 3, 4
SP11	PAPER TOWEL DISPENSER	BOBRICK	B26-20	STAINLESS STEEL SATIN	-
SP12	RECESSED KNOX BOX	KNOX 3200	7"x7"x3 3/4"	ALUMINUM	-
SP13	FIRE EXTINGUISHER	HUNTER DOUGLAS MODERN PRECIOUS METALS	5"D x 20 1/2" H x 9"W	BAKED ENAMEL RED	3
SP14	MENS RESTROOM SIGN	INPRO SIGNSCAPE S320 ADA	6"x8"	BACKGROUND COLOR: LINEN 0232 TEXT COLOR: DARK BROWN 106	3
SP15	WOMENS RESTROOM SIGN	INPRO SIGNSCAPE S320 ADA	6"x8"	-	3
SP16	RISER ROOM SIGN	INPRO SIGNSCAPE S120 PERMANENT	6"x8"	-	5
SP17	NOT USED	-	-	-	-
SP18	FIRE EXTINGUISHER CABINET SEMI RECESSED	J.L. INDUSTRIES AMBASSADOR 1032 (w/ FIRE X OPTION IN "RATED" WALL)	11"x25" x 3 5/8"	WHITE POWDER COAT FINISH	-
SP19	SURFACE MOUNTED PAPER TOWEL DISPENSER	BOBRICK	B-262	STAINLESS STEEL SATIN	2, 3, 4

- NOTE:**
- USE STANDARD HARDWARE TYPE - CHROME ZAMACK - "S"
  - ALL STAINLESS STEEL ACCESSORIES TO HAVE A "SATIN FINISH"
  - MOUNT PER MFR. TO CONFORM TO ADAGTAS
  - PROVIDE BLOCKING IN WALL PER MANUFACTURERS INSTRUCTIONS
  - CONFIRM FINAL LOCATION WITH FIRE MARSHAL
  - REFER TO REFLECTED CEILING PLAN FOR ADDITIONAL INFORMATION.
  - DOOR GLAZING TO BE "CLEAR WIRE GLASS W/ SAFETY FILM."
  - PROVIDE DOOR HANDLES ON INTERIOR & EXTERIOR OF ALL H.C. ACCESSIBLE STALLS.



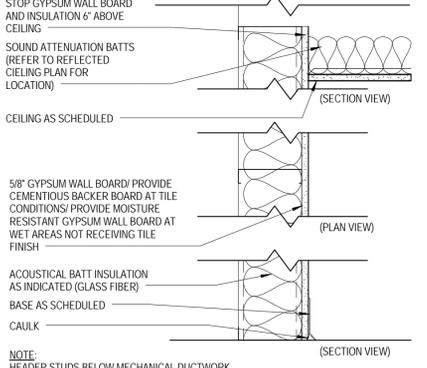
TYPE	STUD SIZE	WALL THICKNESS	INSUL.	STC RATING	RATING	UL NO.
P1	3 5/8"	4-7/8"	3-1/2"	48	N/A	N/A

**P1 Partition Type - P1**  
1 1/2" = 1'-0"



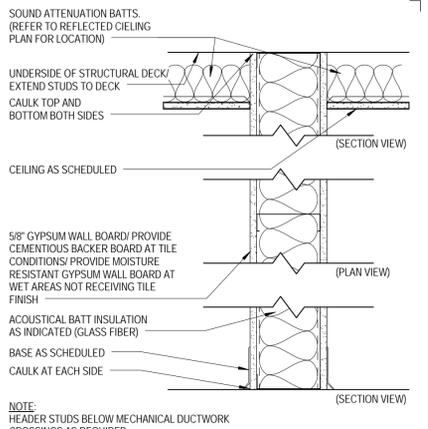
TYPE	STUD SIZE	WALL THICKNESS	INSUL.	STC RATING	RATING	UL NO.
P3	3 5/8"	4-7/8"	3-1/2"	48	N/A	N/A

**P3 Partition Type - P3**  
1 1/2" = 1'-0"



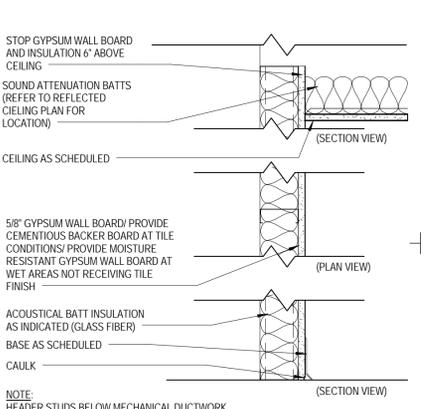
TYPE	STUD SIZE	WALL THICKNESS	INSUL.	STC RATING	RATING	UL NO.
P5	6"	6 5/8"	5-1/2"	45	N/A	N/A

**P5 Partition Type - P5**  
1 1/2" = 1'-0"



TYPE	STUD SIZE	WALL THICKNESS	INSUL.	STC RATING	RATING	UL NO.
P2	6"	7-1/4"	5-1/2"	48	N/A	N/A

**P2 Partition Type - P2**  
1 1/2" = 1'-0"



TYPE	STUD SIZE	WALL THICKNESS	INSUL.	STC RATING	RATING	UL NO.
P4	3 5/8"	4-1/4"	3-1/2"	45	N/A	N/A

**P4 Partition Type - P4**  
1 1/2" = 1'-0"

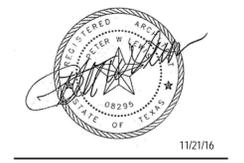
**REVISIONS**

NO.	DESCRIPTION	DATE
1	Addendum 1	11/21/2016

**PETER LEWIS ARCHITECT + ASSOCIATES**

334 West Water Street  
(830) 896-4200  
www.peterlewis.com

Kerrville, TX 78638  
(830) 896-4206



11/21/16

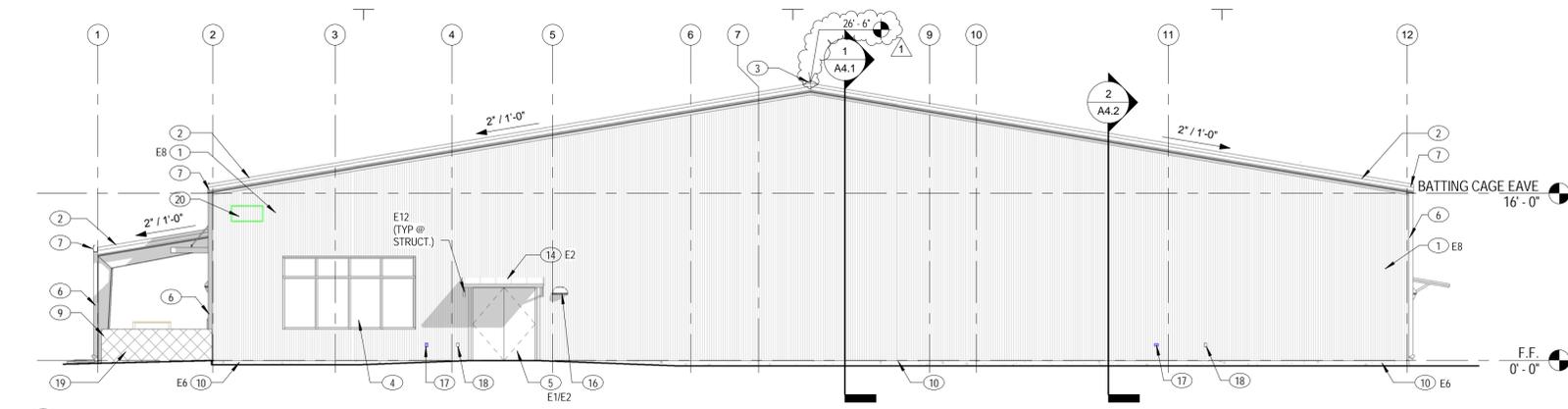


**City of Kerrville Athletic Complex Field House**  
Kerrville, Texas

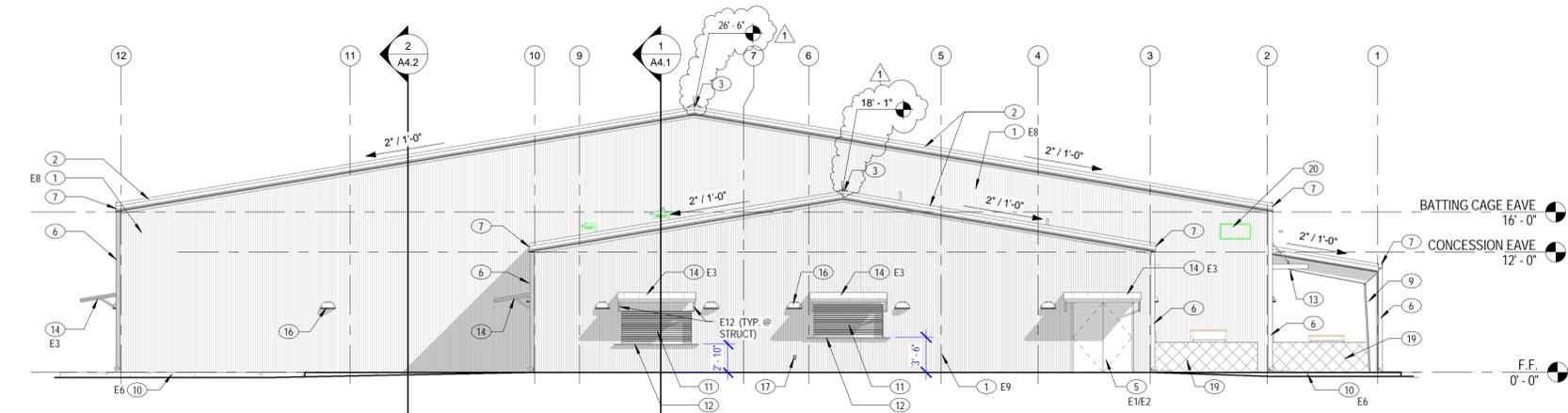
PROJECT NO. DATE  
20-1605 11/21/16

Enlarged Plan

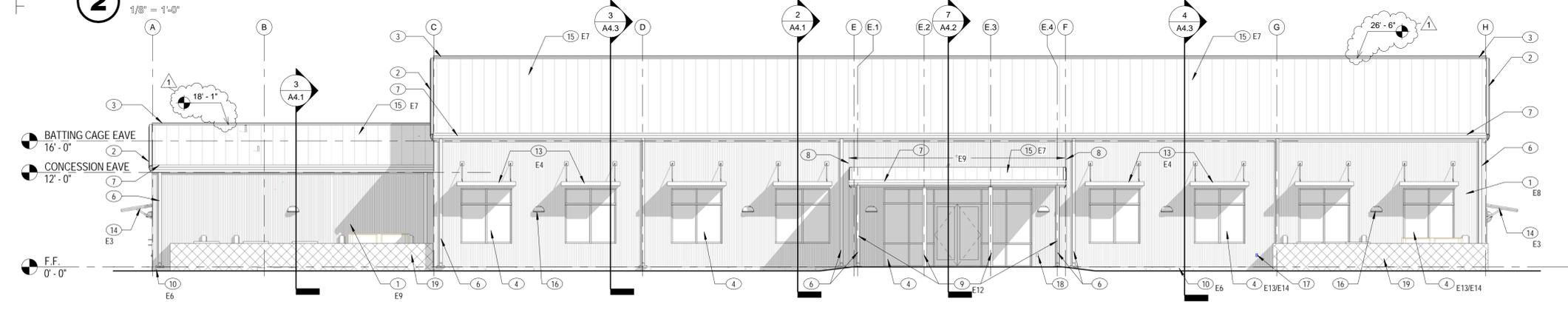
SHEET NUMBER  
**A2.3**



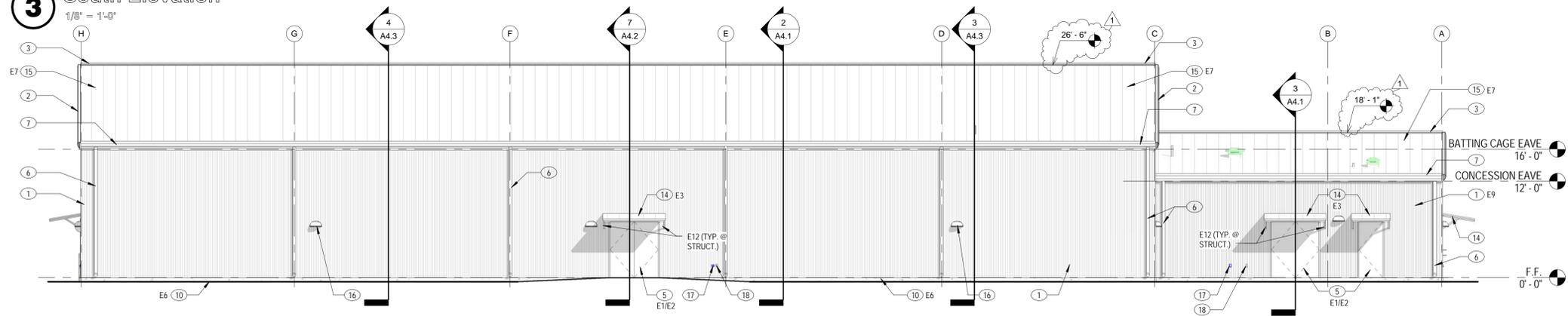
**1** East Elevation  
1/8" = 1'-0"



**2** West Elevation  
1/8" = 1'-0"



**3** South Elevation  
1/8" = 1'-0"



**4** North Elevation  
1/8" = 1'-0"

EXTERIOR FINISH SCHEDULE				
MARK	DESCRIPTION	MATERIAL	FINISH / COLOR	COMMENTS
E1	HOLLOW METAL FRAMES	METAL (PRE-PRIMED)	SHERWIN WILLIAMS "SW 6677" GOLDENROD	-
E2	HOLLOW METAL DOORS	METAL (PRE-PRIMED)	SHERWIN WILLIAMS "SW 6677" GOLDENROD	-
E3	STEEL AWNING FRAMING (OVER DOORS)	METAL (PRE-PRIMED)	SHERWIN WILLIAMS "SW 6635" DETERMINED ORANGE	-
E4	STEEL CANOPY (OVER WINDOWS)	METAL	POWDER COAT SHERWIN WILLIAMS "SW 6677" GOLDENROD	-
E5	CONCRETE FLOOR (AT ALL EXTERIOR CONDITIONS)	CONCRETE	LIGHT BROOM FINISH	-
E6	CONCRETE FOUNDATION (VERTICAL SURFACE)	CONCRETE	PROVIDE RUBBED FINISH WHERE EXPOSED TO VIEW. CONTRACTOR OPTION: PROVIDE SMOOTH SKIM COAT FINISH.	-
E7	PRE-FINISHED METAL ROOF	26 GA. PRE-FINISHED METAL	MBCI GALVALUME PLUS OR APPROVED EQUAL	BASIS OF DESIGN, MBCI PBR ROOF PANEL
E8	PRE-FINISHED METAL WALL PANEL & TRIM	26 GA. PRE-FINISHED METAL	MBCI GALVALUME PLUS OR APPROVED EQUAL	BASIS OF DESIGN, MBCI PBC WALL PANEL
E9	PRE-FINISHED METAL WALL PANEL & WALL TRIM	26 GA. PRE-FINISHED METAL	MBCI EVERGLADE OR APPROVED EQUAL	BASIS OF DESIGN, MBCI PBC WALL PANEL
E10	ROOF METAL FLASHING	26 GA. PRE-FINISHED METAL	MBCI GALVALUME PLUS OR APPROVED EQUAL	-
E11	ROOF METAL FLASHING - NOT EXPOSED TO VIEW	METAL	GALVANIZED	-
E12	EXPOSED STRUCTURE	PAINT	SHERWIN WILLIAMS "SW 6635" DETERMINED ORANGE	-
E13	STOREFRONT FRAMING	ALUMINUM	CLEAR ANODIZED	-
E14	GLAZING 1	1" INSULATED GLASS	MANUF: PPG COLOR: ATLANTICA	-

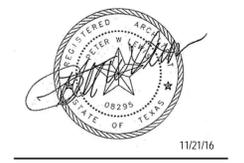
- KEY NOTES:**
- PRE-FINISHED METAL WALL PANEL.
  - PRE-FINISHED METAL FASCIA. MATCH ROOF COLOR.
  - CONTINUOUS PRE-FINISHED METAL RIDGE CAP. MATCH ROOF COLOR.
  - ALUM. STOREFRONT SYSTEM W/ 1" INSULATED GLAZING (TYP.)
  - HOLLOW METAL DOOR & FRAME. (PTD.)
  - PRE-FINISHED METAL DOWNSPOUT. MATCH ROOF COLOR.
  - PRE-FINISHED METAL GUTTER. MATCH ROOF COLOR.
  - METAL PANEL COLOR TRANSITION JOINT.
  - PRE-ENGINEERED METAL BUILDING FRAME (PTD.)
  - EXPOSED CONCRETE FOUNDATION. PROVIDE RUBBED FINISH (TYP.) RE: STRUCTURAL
  - OVERHEAD COILING COUNTER DOOR. RE: DOOR SCHEDULE.
  - S.S. COUNTER TOP.
  - STEEL SHADE AWNING (PTD.) RE: STRUCTURAL.
  - STEEL FRAMED AWNING W/ PRE-FINISHED METAL ROOF (PTD.) RE: STRUCTURAL
  - PRE-FINISHED METAL ROOF.
  - LIGHT FIXTURE. RE: ELEC. (TYP.)
  - HOSE BIBB. RE: PLUMBING
  - EXTERIOR GFCI ELECTRICAL OUTLET. RE: ELEC.
  - 4' HIGH CHAIN LINK FENCE W/ WIND SCREEN TO MATCH DUGOUT.
  - MECHANICAL LOUVER. RE: MEP

REVISIONS		
NO.	DESCRIPTION	DATE
1	Addendum 1	11/21/2016

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11/21/16



**City of Kerrville**  
**Athletic Complex**  
**Field House**  
Kerrville, Texas

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PROJECT NO. 20-1605  
DATE 11/21/16

Exterior Elevations

SHEET NUMBER  
**A3.1**

11/21/2016 10:21:24 AM









ADDENDUM 1  
11/21/16  
GRADING REVISIONS DUE TO  
KSC SIDEWALK EXTENSION  
AND SEWER REVISIONS  
REVISED GRATE INLET

Hewitt Engineering Inc.  
Consulting Engineering Services  
7111 Avenue Street # Kerrville, Texas 78628-8311.800  
TBBE Registration No. F-10739 www.hewitt-inc.com

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www.peterlewisarchitect.com



**City of Kerrville  
Athletic  
Complex  
Field House**

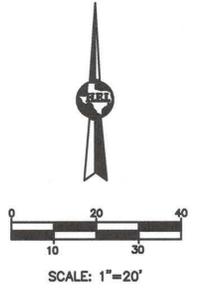
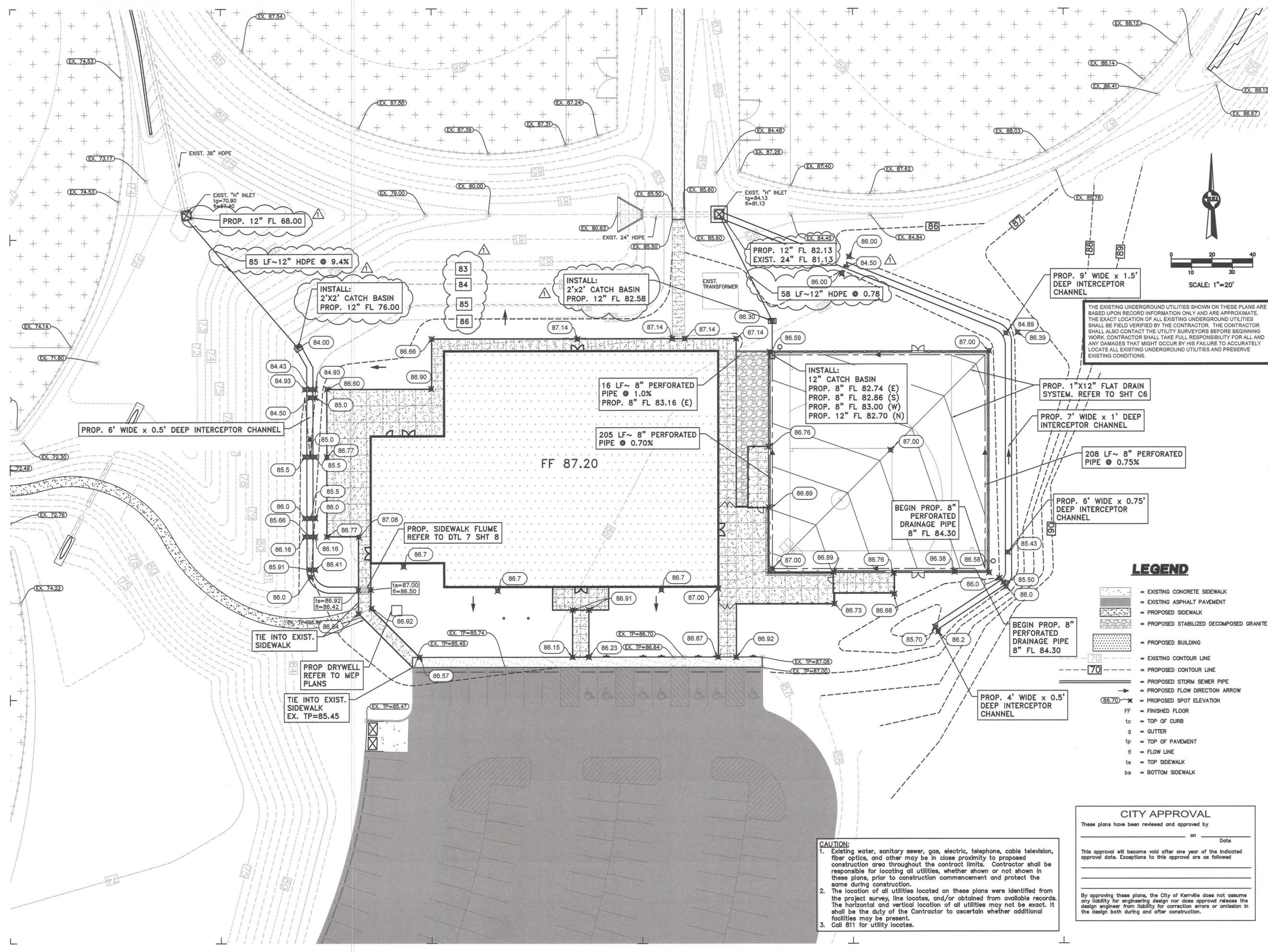
Kerrville, Texas

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PROJECT NO. \_\_\_\_\_ DATE  
11/20/16

**GRADING,  
DRAINAGE &  
PAVING PLAN**

SHEET NUMBER  
**C4**



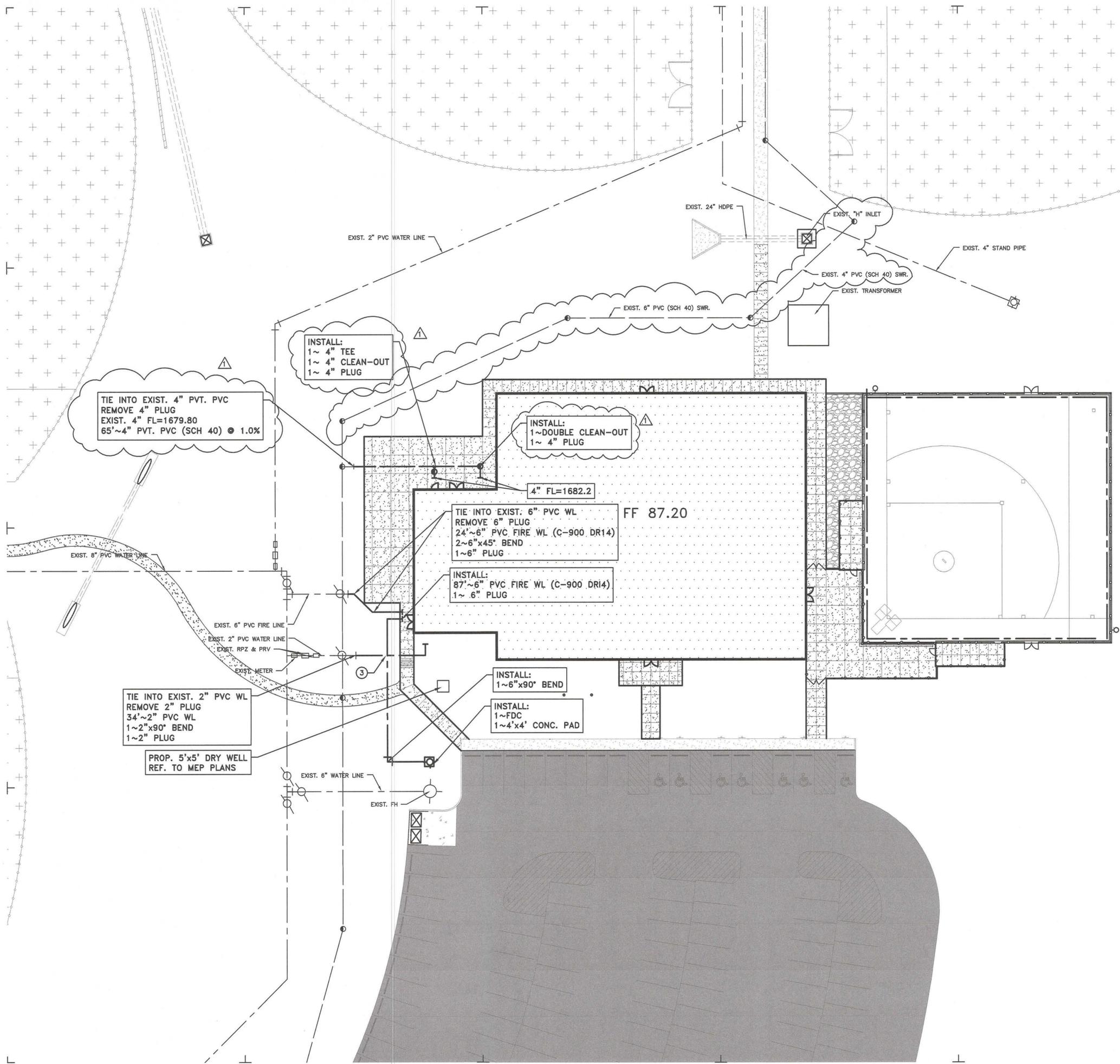
THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE BASED UPON RECORD INFORMATION ONLY AND ARE APPROXIMATE. THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL ALSO CONTACT THE UTILITY SURVEYORS BEFORE BEGINNING WORK. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL AND ANY DAMAGES THAT MIGHT OCCUR BY HIS FAILURE TO ACCURATELY LOCATE ALL EXISTING UNDERGROUND UTILITIES AND PRESERVE EXISTING CONDITIONS.

**LEGEND**

- = EXISTING CONCRETE SIDEWALK
- = EXISTING ASPHALT PAVEMENT
- = PROPOSED SIDEWALK
- = PROPOSED STABILIZED DECOMPOSED GRANITE
- = PROPOSED BUILDING
- = EXISTING CONTOUR LINE
- = PROPOSED CONTOUR LINE
- = PROPOSED STORM SEWER PIPE
- = PROPOSED FLOW DIRECTION ARROW
- = PROPOSED SPOT ELEVATION
- FF = FINISHED FLOOR
- tc = TOP OF CURB
- g = GUTTER
- tp = TOP OF PAVEMENT
- fl = FLOW LINE
- ts = TOP SIDEWALK
- bs = BOTTOM SIDEWALK

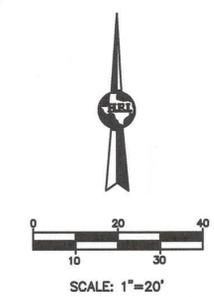
**CITY APPROVAL**  
These plans have been reviewed and approved by \_\_\_\_\_ on \_\_\_\_\_ Date  
This approval will become void after one year of the indicated approval date. Exceptions to this approval are as followed \_\_\_\_\_  
By approving these plans, the City of Kerrville does not assume any liability for engineering design nor does approval release the design engineer from liability for correction errors or omission in the design both during and after construction.

**CAUTION:**  
1. Existing water, sanitary sewer, gas, electric, telephone, cable television, fiber optics, and other may be in close proximity to proposed construction area throughout the contract limits. Contractor shall be responsible for locating all utilities, whether shown or not shown in these plans, prior to construction commencement and protect the same during construction.  
2. The location of all utilities located on these plans were identified from the project survey, line locates, and/or obtained from available records. The horizontal and vertical location of all utilities may not be exact. It shall be the duty of the Contractor to ascertain whether additional facilities may be present.  
3. Call 811 for utility locates.



REVISIONS
ITEM/DATE/DESCRIPTION

ADDENDUM 1  
11/21/16  
KSC SEWER REVISIONS AND  
UPDATED PROP. WATER LINE  
NOTES



**Hewitt Engineering Inc.**  
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710 Avenue Street # Kerrville, Texas 78021 #830.315.8800  
TBP# Registration No. F-10739 #www.hewitt-inc.com

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334 West Water Street Kerrville, TX 78028  
(830) 896-4220 Fax (830) 896-4226  
www.pwforchitect.com



- GENERAL NOTES:
- 1 CLEANOUTS REQUIRED EVERY 100 FEET ON 4-INCH SCHEDULE 40 PVC PRIVATE LINES.
  - 2 ALL SERVICE CONNECTION WORK AND TESTING SHALL BE IN ACCORDANCE WITH THE CITY OF KERRVILLE STANDARD SPECIFICATIONS AND CONTRACT DOCUMENTS. (REF C9 AND C10)
  - 3 MAINTAIN MINIMUM VERTICAL CLEARANCE OF 6 INCHES

THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE BASED UPON RECORD INFORMATION ONLY AND ARE APPROXIMATE. THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL ALSO CONTACT THE UTILITY SURVEYORS BEFORE BEGINNING WORK. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL AND ANY DAMAGES THAT MIGHT OCCUR BY HIS FAILURE TO ACCURATELY LOCATE ALL EXISTING UNDERGROUND UTILITIES AND PRESERVE EXISTING CONDITIONS.

**City of Kerrville  
Athletic Complex  
Field House**

Kerrville, Texas

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**CITY APPROVAL**

These plans have been reviewed and approved by \_\_\_\_\_ on \_\_\_\_\_ Date

This approval will become void after one year of the indicated approval date. Exceptions to this approval are as followed

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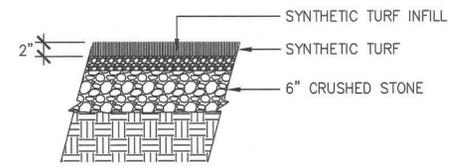
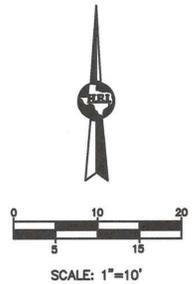
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PROJECT NO. \_\_\_\_\_ DATE  
11/20/16

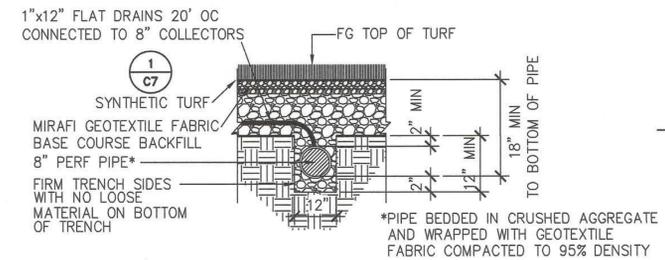
**UTILITY  
PLAN**

SHEET NUMBER  
**C5**

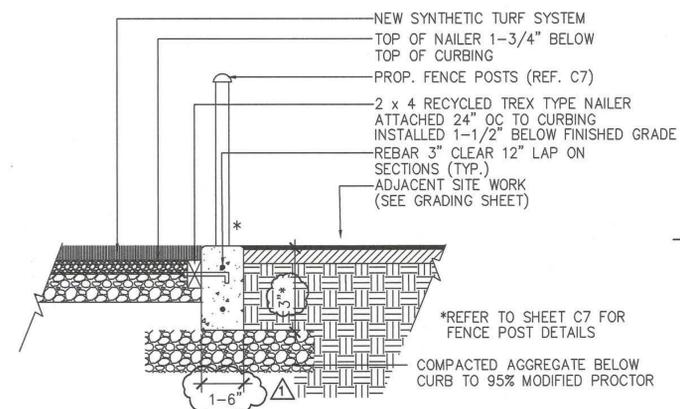
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1 SYNTHETIC TURF DETAIL  
C6 NTS



2 FIELD UNDERDRAIN  
C6 NTS



3 COMPACTED AGGREGATE BELOW  
C6 NTS

**GENERAL NOTES**

1. BASEBALL LINES AND MARKINGS SHALL BE WHITE IN COLOR AND 4" WIDTH.
2. ALL MARKINGS, LINES SHALL BE TUFTED OR INLAID ON THE FIELD.
3. ALL COLORS SHALL BE APPROVED BY THE OWNER PRIOR TO MANUFACTURE OF TURF PRODUCT.
4. HOME, FIRST, SECOND AND THIRD FOR ALL 90° BASES SHALL BE THE SAME ELEVATION IN GRADE.
5. SLOPES SHALL NOT EXCEED 0.5% SLOPE IN ANY DIRECTION.
6. ELECTRICAL LIGHTING CONDUIT AND CONDUCTORS SHALL BE KEPT OUT FROM UNDER THE SYNTHETIC TURF FIELD.
7. PROVIDE TWO PITCHERS RUBBERS. COORDINATE WITH CITY STAFF FOR FINAL LOCATIONS.

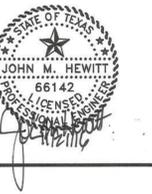
**CITY APPROVAL**  
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REVISIONS
ITEM/DATE/DESCRIPTION

ADDENDUM 1  
11/21/16  
UPDATED HATCH PATTERN COLOR ON PROPOSED TURF  
REVISED DETAIL 2  
REVISED PROPOSED CATCH BASIN

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**City of Kerrville Athletic Complex Field House**

Kerrville, Texas

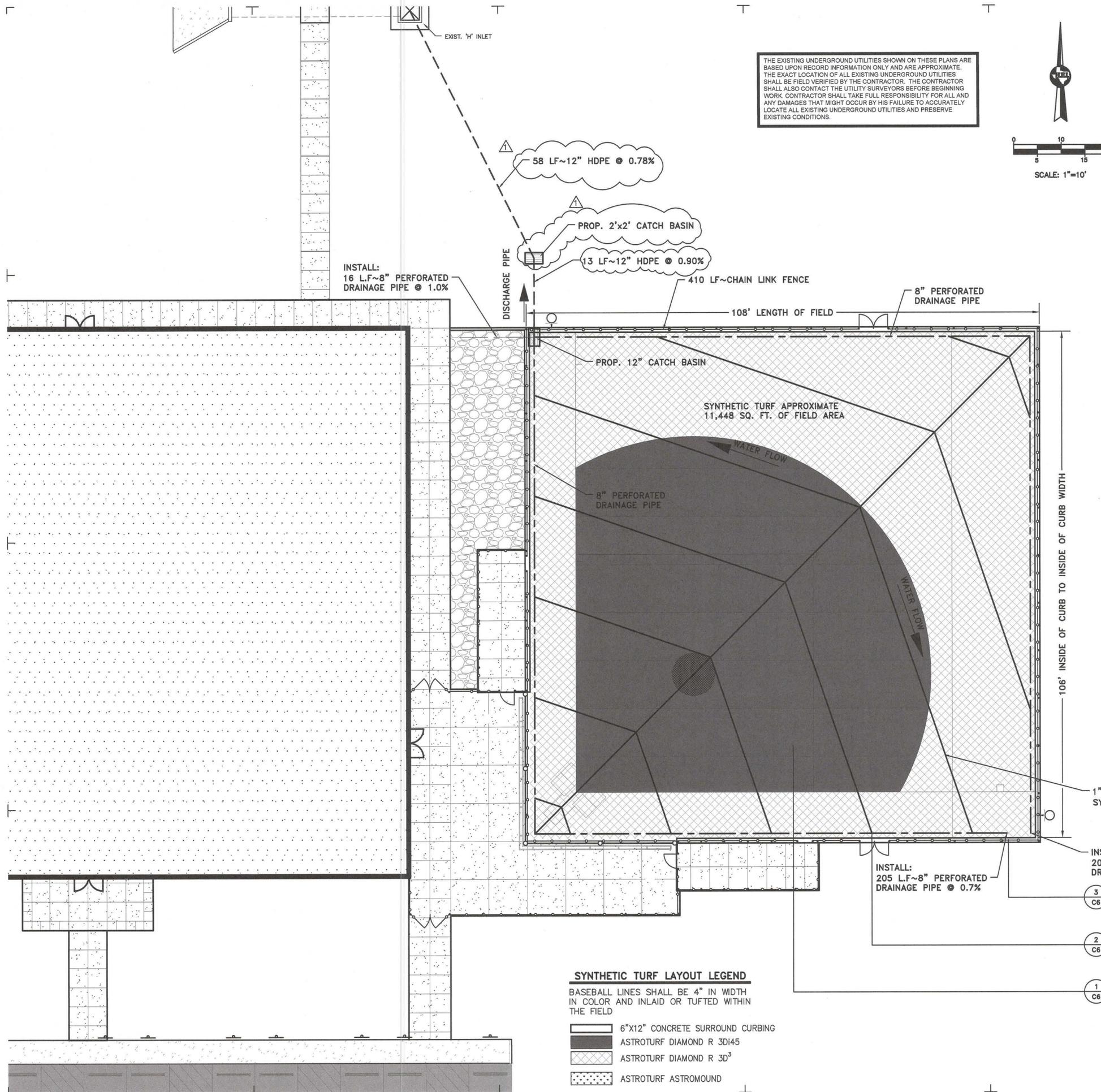
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PROJECT NO. \_\_\_\_\_ DATE 11/20/16

**FIELD LAYOUT**

SHEET NUMBER

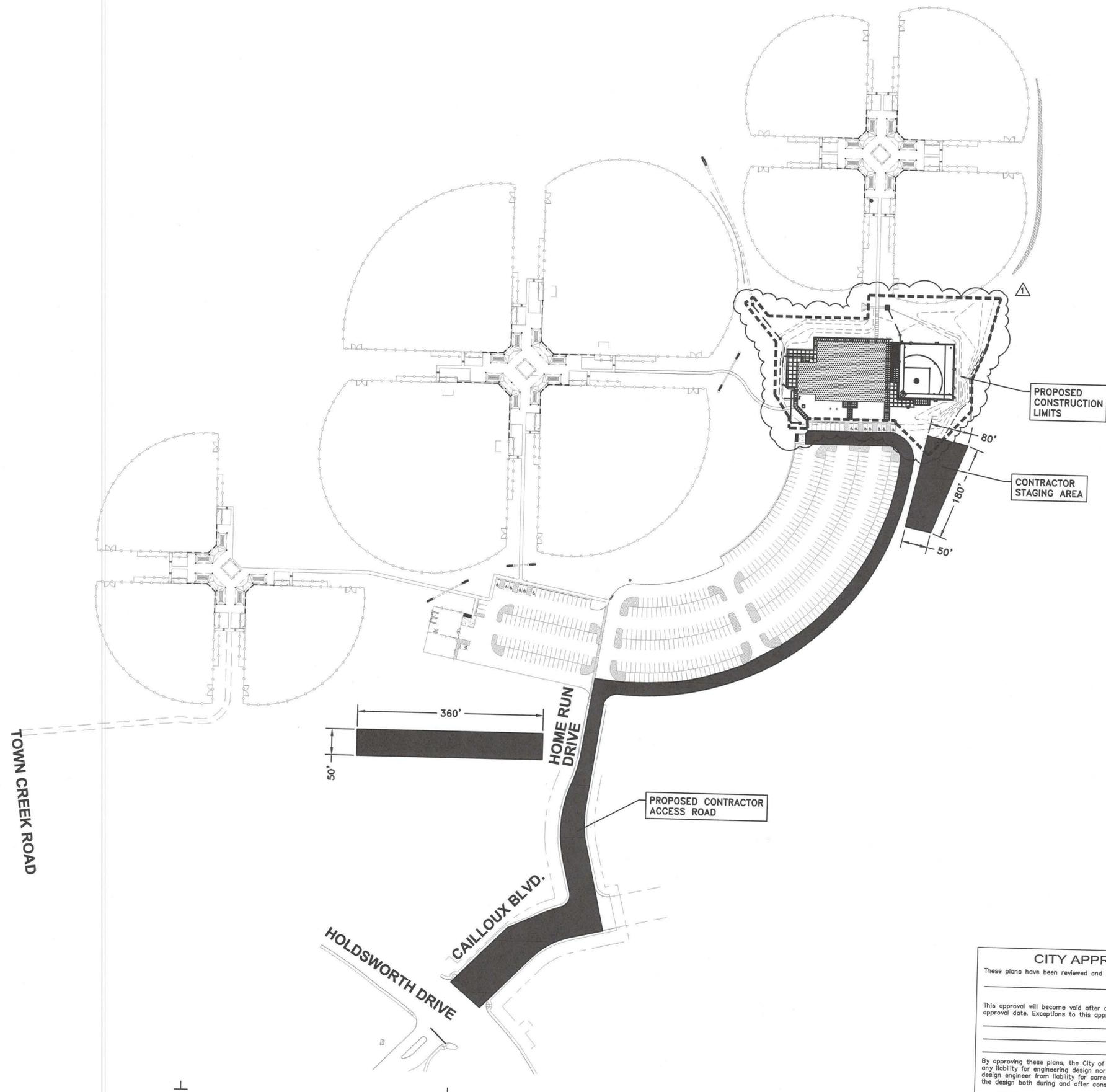
**C6**



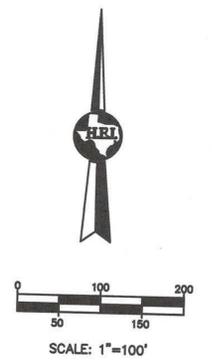
**SYNTHETIC TURF LAYOUT LEGEND**

BASEBALL LINES SHALL BE 4" IN WIDTH IN COLOR AND INLAID OR TUFTED WITHIN THE FIELD

- 6"x12" CONCRETE SURROUND CURBING
- ASTROTURF DIAMOND R 3Di45
- ASTROTURF DIAMOND R 3D<sup>3</sup>
- ASTROTURF ASTROMOUND

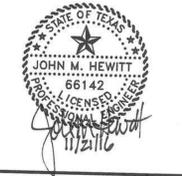


REVISIONS	
ITEM/DATE/DESCRIPTION	
1	ADDENDUM 1 11/21/16 UPDATED CONSTRUCTION LIMITS



**Hewitt Engineering Inc.**  
Consulting Engineering Services  
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TSPR Registration No. F-10739 • www.hewitt-ec.com

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(830) 896-4220 Fax (830) 896-4226  
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**City of  
Kerrville  
Athletic  
Complex  
Field House**

Kerrville, Texas

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**CITY APPROVAL**  
These plans have been reviewed and approved by \_\_\_\_\_ on \_\_\_\_\_ Date \_\_\_\_\_

This approval will become void after one year of the indicated approval date. Exceptions to this approval are as follows:  
\_\_\_\_\_  
\_\_\_\_\_

By approving these plans, the City of Kerrville does not assume any liability for engineering design nor does approval release the design engineer from liability for correction errors or omission in the design both during and after construction.

PROJECT NO. \_\_\_\_\_ DATE 11/21/16

**CONTRACTOR  
STAGING  
AREA MAP**

SHEET NUMBER

**C11**