TOM GREEN COUNTY, TEXAS

REQUEST FOR PROPOSAL

GOODFELLOW AIR FORCE BASE DEAAG CONSTRUCTION –
CANOPY STRUCTURES & PT FIELD
RFP 21-005

Prepared By:

Tom Green County Auditor
113 West Beauregard
San Angelo, Texas 76903
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Release Date: 9/22/2020

Due Date: 11/13/2020

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I. INTRODUCTION

Proposals are being accepted for RFP 21-005: "GAFB DEAAG Construction: Canopy Structures & PT Field". This RFP is provided by Tom Green County (the County) for the purpose of soliciting proposals from prospective vendor(s) to provide construction of three projects at Goodfellow Air Force Base (GAFB), Texas: 1.) Physical Training Canopy (PT) and/or Military Working Dog Canopy (MWD); 2.) Overhead Protection at Fire Station; and 3.) Army Physical Training Field. Funding for this project has been provided by the Texas Military Preparedness Commission in the form of a Defense Economic Adjustment Assistance Grant (DEAAG) with State and local matching funds. There are multiple projects covered under this funding. The projected construction budget for these projects is approximately $2,855,000.

The selection process for this project will be accomplished by the Competitive Sealed Proposal process as provided in Texas Government Code Chapter 2269. Respondents are requested to provide qualification information and pricing information for this RFP.

The contractor shall furnish all labor, tools, equipment and materials in order to fulfill the obligations of this contract. Tom Green County reserves the right to reject any proposal which: fails to meet the mandatory requirements as stated; does not comply with the specification requirements of the RFP; or exceeds budgetary expectations. These are the only approved instructions for use on your proposal. Items contained herein apply to and become a part of Terms and Conditions of the proposal. Any exceptions thereto must be in writing.

SCHEDULE

Issue RFP	September 22, 2020
Site Visit	October 27, 2020
Written Inquiries must be received by	October 30, 2020
Responses to inquiries by	November 4, 2020
Proposals Due	November 13, 2020

Please be sure to submit all required forms and documentation.

Questions concerning this RFP should be directed in writing to **Tom Green County Auditor's Office, Darin Schell**. Email to purchasing@co.tom-green.tx.us

*Any catalog, brand name or manufacturer's reference used in a proposal invitation is descriptive-NOT restrictive-it is used only to indicate type and quality desired. Proposals on brand of like nature and quality will be considered. If the proposal is based on other than the reference specifications, the proposal must show the manufacturer, brand or trade name, lot number, etc., of the article offered. If other than the brands(s) specified is offered, illustrations and complete descriptions should be made part of the proposal. If the offeror takes no exception to specifications or reference data, he/she will be required to furnish brand names, numbers, etc. as specified.

II. REQUEST FOR PROPOSAL

1. PROPOSAL SUBMISSION

The offeror is expected to thoroughly examine the specifications and all instructions contained in this RFP.

PROVIDE ONE (1) ORIGINAL AND THREE (3) COPIES OF YOUR PROPOSAL (EACH SIGNED IN INK AND SEALED IN A MARKED ENVELOPE) TO:

TOM GREEN COUNTY AUDITOR

113 WEST BEAUREGARD

SAN ANGELO, TEXAS 76903-5834

325-659-6500

Sealed proposals shall be received no later than:

2:00 p.m. Friday, November 13, 2020

And will be publicly opened in the County Auditor's Conference Room located on the second floor of the Judge Edd B and Frances Frink Keyes Building at

113 W. Beauregard Ave., San Angelo, Texas

At 2:05 p.m.

MARK THE OUTSIDE OF EACH ENVELOPE:

"RFP 21-005: GAFB DEAAG CONSTRUCTION - CANOPY STRUCTURES & PT FIELD"

In the event that Tom Green County Offices are officially closed on a proposal opening day, proposals will be received until 2:00 p.m. on the next business day, at which time the proposals will be publicly opened.

If offeror does not wish to submit an offer at this time but desires to remain on the list for this service, please submit a "NO OFFER" by the same time and at the same location as stated above. If response is not received for three consecutive RFPs, offeror shall be removed from list. If however, you choose to "NO OFFER" this service and wish to remain on list for other services, please state the particular service under which you wish to be classified.

Tom Green County is always very conscious and extremely appreciative of the time and effort you must expend to submit an offer. We would appreciate your indicating on any "NO OFFER" response, the requirements of this RFP which may have influenced your decision to "NO OFFER".

2. LATE PROPOSALS

Proposals received after submission deadline shall be returned unopened and will be considered void and unacceptable and they will be returned unopened to the offeror. Offeror should allow

sufficient mailing time to ensure the timely receipt of their proposal or proposals may also be hand delivered prior to deadline. Tom Green County is not responsible for lateness of mail, carrier, etc., and time/date recorded by the County Auditor's Office shall be the official time of receipt.

3. ALTERING PROPOSALS

Any interlineations, alteration, or erasure made to the PROPOSAL must be initialed by the signer of the proposal prior to receiving time, guaranteeing authenticity.

4. WITHDRAWAL OF PROPOSAL

Proposals may be withdrawn at any time prior to the official opening. A proposal may not be withdrawn or cancelled by the offeror for a period of ninety (90) days following the date designated for the receipt of PROPOSAL, without prior approval by the Commissioners Court based on a written acceptable reason. Offeror so agrees upon submittal of their PROPOSAL.

5. PROPOSAL OPENING

Proposals will be received and publicly acknowledged at the location, date, and time stated above. Offerors, their representatives and interested persons may be present. Proposals shall be received and acknowledged only so as to avoid disclosure of the contents to competing offerors and kept secret during the negotiation/evaluation process.

NOTE: All proposals shall be open for public inspection after the contract is awarded, except for trade secrets and confidential information contained in the PROPOSAL so identified by offeror as such. Confidential information must be on a separate page and each page clearly marked as such.

6. AWARD OF PROPOSALS

Tom Green County will review all responses to assure compliance with the specifications. Vendor may be excluded from further consideration for failure to comply with the specifications of the RFP. The County reserves the right to reject in whole or in part any or all proposals, waive minor technicalities, informalities, or irregularities and award the proposal as it shall deem best serves the interest of Tom Green County. Award of contract will be executed by the Tom Green County Commissioners Court. However, any part of vendor's contract, which contradicts any part of the requirements of this Request for Proposals, shall be considered null and void. Receipt of any proposal shall under no circumstances obligate Tom Green County to accept the lowest proposal. The award of the contract shall be made to the responsible offeror whose proposal is determined to be the lowest and best evaluated offer resulting from negotiation, taking into consideration the relative importance of price and other evaluation factors set forth in the RFP.

7. SITE VISIT

An **optional** pre-proposal site visit will be held on location at GAFB. Meeting 8:30 a.m. on October 27, 2020 at the Visitor's Center located at the South Gate.

Pre-authorization for a security pass is required for any prospective vendor or representative wishing to attend the site visit. Site Visit Base Access Request Form must be filled out and submitted by October 2, 2020 (See SITE VISIT BASE ACCESS REQUEST FORM). Certain information is required ahead of the date in order to issue a security pass and ensure ease of access on the day of the site visit. Security passes will only be authorized for the day of the site visit.

8. FORMATION OF CONTRACT

A response to this solicitation is an offer to contract with Tom Green County based upon the terms, conditions, scope of work, and specifications contained in this request. A solicitation shall become a contract when awarded by the Tom Green County Commissioners Court and a purchase order or notice of award is mailed or otherwise furnished to the successful offeror.

9. CONTRACT TERM

Contract will be from award by the Tom Green County Commissioners Court until completion of project. Construction Substantial Completion Deadline: NOVEMBER 30, 2021
Complete Punch List And Submit Final Request For Payment: No Later Than DECEMBER 31, 2021.

10. TIME

The completion of this construction must be completed by DECEMBER 31, 2021. The parties expressly agree that time is of the essence of this Agreement.

11. LIQUIDATED DAMAGES

The parties agree that the actual damages that might be sustained by TGC by reason of the breach by proposer of its covenant to complete any part of awarded project: Physical Training Canopy and/or Military Working Dog Canopy; Overhead Protection at Fire Station; and/or Army Physical Training Field projects by December 31, 2021 are uncertain and would be difficult to ascertain, and that the sum of $1,000.00 for each day that the performance is not completed would be reasonable compensation for such breach. Obligor hereby promises to pay, and Obligee hereby agrees to accept, such sum as liquidated damages, and not as a penalty, in the event of such breach.

12. EVALUATION CRITERIA AND FACTORS

The award (if any) of contracts shall be made to the responsible offerors whose submittals are determined to be the most advantageous to, and in the best interest of Tom Green County while taking into consideration factors set forth in the Request for Proposal in accordance with the Texas Government Code, Chapter 2269.

NOTE: Best value shall be determined by any relevant criteria specifically listed in the solicitation and by considering all or part of the criteria listed below:

a. Reputation of the Vendor and of Vendor's goods and services.
b. The quality of the Vendor's goods or services.
c. The extent to which the goods or services meet the County's needs.
d. Vendor's past relationship with the County. All vendors shall be evaluated on their past performance and prior dealings with the County to include, but not limited to, failure to meet specifications, poor quality, poor workmanship, and late delivery.

The following criteria will be used to evaluate firms:

A. Experience and Qualifications	**Points Possible**
1. Staff Level / Experience of Staff	15
2. Has previous experience with similar types of construction	15
3. Has worked on Government funded construction projects	5
Possible Points Awarded for this Section	***35***

B. Prior Work Performance (references and prior experience)	**Points Possible**
1. Past projects completed on schedule	10
2. Manages projects within budgetary constraints	10
3. Work product is of high quality	10
Possible Points Awarded for this Section	***30***

C. Capacity to Perform	**Points Possible**
1. Proposed Construction Schedule	10
Possible Points Awarded for this Section	***10***

D. Pricing	**Points Possible**
1. Proposed Cost of Construction	25
Possible Points Awarded for this Section	***25***

TOTAL 100

The Tom Green County Auditor has prepared the RFP, and will provide resource information to the Tom Green County Commissioners Court, who will evaluate proposals. The Commissioners Court may designate a representative or a review committee for this purpose. Discussions may be conducted with reasonable proposers who submit proposals determined to be reasonably susceptible of being selected for award. All proposers will be accorded fair and equal treatment with respect to any opportunity for discussion and revision of proposals. Revision of proposals may be permitted after submission and before award for the purpose of obtaining best and final offers as determined to be in the best interest of the County.

13. REFERENCES

Offeror shall supply with this proposal a list of at least three (3) references where like services and/or products are provided in the public sector. Include name of entity, address, telephone number and name of representative. **Note:** See Exhibit A – Vendor Reference Form.

14. INSURANCE

The contractor shall provide Worker's Compensation coverage.

The contractor shall provide Comprehensive General (Public) Liability Insurance of $1,000,000 (combined single limit for bodily injury and property damage) to include (but not limited to) premises/operation, independent contractors, personal injury, products/completed operations and

contractual liability.

Comprehensive Automobile Liability insurance for owned/leased vehicles, non-owned vehicles or hired cars shall be provided in the minimum amount of $1,000,000 (combined single limit for bodily injury and property damage.) **The contractor shall provide the County with certificates of insurance evidencing the required insurances *within 10 calendar days of the Notice of Award.*** The contractor further agrees that with respect to the above required insurances, the County shall be named as an additional insured as its interest may appear; be provided with a waiver of subrogation; and be provided with thirty (30) days advance notice in writing, of cancellation or material change.

15. TERMINATION

The obligation to provide further service under the terms of the resulting agreement may be terminated by the either party upon sixty (60) days written notice. Tom Green County reserves the right to terminate upon breach of contract as allowed by law.

16. SEVERABILITY

If any part of this proposal is declared unenforceable or invalid, the remainder will continue to be valid and enforceable.

17. DUTY OF VENDOR

In order for proposals to be compared on an identical basis, it is necessary that all portions of the document, including requests for specific information about, services, reference forms and general information regarding the vendor be completed and adhered to.

18. PERFORMANCE OF CONTRACT

The contractor shall perform all work in a superior workmanlike manner and products shall be delivered in the condition requested, to the satisfaction of the Tom Green County Commissioners Court or designated representatives.

All items proposed shall be new, in first class condition, including containers suitable for shipment and storage, unless otherwise indicated in the proposal. Verbal agreements to the contrary will not be recognized. All materials and services shall be subject to County's approval. Unsatisfactory material will be returned at Seller's expense.

Tom Green County reserves the right to enforce the performance of this contract in any manner prescribed by law or deemed to be in the best interest of the County in the event of breach or default of resulting contract award.

19. CAVEAT

Although every effort has been made to provide accurate and up-to-date information, companies interested in supplying proposals should contact the County Auditor with any questions you may have (see "Introduction").

20. VARIATION IN QUANTITY

The County assumes no liability for commodities produced, processed or shipped in excess of the amount specified herein.

21. NON-EXCLUSIVE CONTRACT

It is expressly understood and agreed that in case Tom Green County should need any item(s) not available from the successful vendor during the term of this contract within the time frame requested, Tom Green County reserves the right to purchase these items from other than the successful vendor. This shall not be in violation of any terms or conditions of this contract. Further, Tom Green County reserves the right to purchase from or seek another vendor if, at any time, the vendor's prices do not conform to public pricing.

22. REQUIREMENTS OF SPECIFICATIONS

Each offeror shall be held to have examined the requirements of the RFP under consideration and confirm he fully understands the RFP and the County's needs and satisfies himself that he is cognizant of all factors relating to requirements contained in the RFP.

23. SILENCE OF SPECIFICATIONS

The apparent silence of the RFP as to any detail or to the apparent omission from it of a detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of the RFP shall be made on the basis of this statement.

24. CONFLICT OF INTEREST

No public official shall have interest in a contract, which results from this RFP, in accordance with Vernon's Texas Codes Annotated Local Government Code Title 5, Subtitled C, Chapter 171.

25. CONFIDENTIALITY

All information disclosed by Tom Green County to successful offeror for the purpose of the work to be done or information that comes to the attention of the successful offeror during the course of performing such work is to be kept strictly confidential.

26. ADDENDA

Only questions regarding clarification of instructions may be handled verbally. Any interpretations, corrections or changes to this RFP will be made by addenda. Sole issuing authority of addenda shall be vested in the Tom Green County Auditor. Any addendum will be sent via email to those companies known to be in possession of the proposal document. Offerors are responsible for ensuring that a correct email address is listed in the County's vendor database and may email purchasing@co.tom-green.tx.us to update this information or to specifically request copies of any

addenda issued. It is the responsibility of the Offeror to ensure that all addenda are received and included with their submission. Failure to submit all signed addenda may result in proposal being considered non-responsive.

27. CHANGE ORDERS

No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing.

28. ASSIGNMENT

The successful offeror shall not sell, assign, transfer or convey any contract resulting from this RFP, in whole or in part, without the prior written consent of the Tom Green County Commissioners Court.

29. VENUE

This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in Tom Green County, Texas.

30. SUBMITTAL OF CONFIDENTIAL MATERIAL

Any proposed material that is to be considered as confidential in nature must be on a separate page and clearly marked as such by the proposer and will be treated as confidential by Tom Green County to the extent allowed by law.

31. MINIMUM STANDARDS FOR RESPONSIBLE PROSPECTIVE OFFERORS

A prospective offeror must affirmatively demonstrate their responsibility and ability to meet the following requirements:

1. Has adequate financial resources, or the ability to obtain such resources as required;
2. Have a satisfactory record of performance;
3. Have a satisfactory record of integrity and ethics;
4. Be otherwise qualified and eligible to receive an award.

Tom Green County may request representation and other information sufficient to determine the offeror's ability to meet these minimum standards listed above.

32. INDEMNIFICATION

By entering into this contract, the successful offeror agrees to defend, indemnify and hold harmless Tom Green County and all its officers, agents, and employees from all suits, causes of actions, or other claims of any character, name and description brought for or on account of any injuries of

damages received or sustained by any person, persons, or property on account of any breach, negligent act or fault of the successful offeror, or of any agent, employee, subcontractor, invitee or supplier in the execution of, or performance under, any contract which may result from proposal award. Successful offeror shall pay judgments with costs, including attorney fees, expenses and costs of court, which may be obtained, against Tom Green County growing out of such injury or damages.

33. WARRANTY

The Vendor shall not limit or exclude any express, written, or implied warranties and any attempt to do so shall render this contract voidable at the option of Tom Green County. The offeror warrants that the goods furnished will conform to the specifications, drawings and descriptions listed in the proposal invitation, and to the sample(s) furnished by the offeror, if any. In the event of a conflict between the specifications, drawings, and descriptions, the specifications shall govern.

SAFETY WARRANTY: The vendor warrants that the product sold to the County shall conform to the standards promulgated by the U.S. Department of Labor under the Occupational Safety and Health Act of 1970. In the event the product does not conform to OSHA standards, the County may return the product for correction or replacement at the vendor's expense. In the event the vendor fails to make the appropriate correction within a reasonable time, the correction made by the County will be at the vendor's expense.

34. SALES TAX

Tom Green County is by statute exempt from the State Sales Tax and Federal Excise Tax; therefore, the proposed price shall not include such taxes.

35. DELIVERY

Proposal cost shall be F.O.B. Destination. If otherwise, show the exact cost to deliver by unit price, extend and show total. Actual costs will be based on quantities delivered.

If a delay is foreseen, the contractor shall give written notice to the County Auditor. The County has the right to extend the delivery date if the reason(s) appear valid. The Contractor must keep the County advised at all times on the order status. Default in promised delivery (without accepted reasons) or failure to meet specifications, authorizes the County to purchase supplies elsewhere and charge full increase in cost and handling to the defaulting contractor.

36. TITLE AND RISK OF LOSS

The title and risk of loss of goods shall not pass to the County until the County actually receives and takes possession of the goods at the point or points of delivery.

37. DESIGN, STANDARDS AND PRACTICES

Design, strength, quality of materials and workmanship must conform to the highest standards of engineering practices and/or professional services.

38. PATENTS/COPYRIGHTS

The successful offeror agrees to protect Tom Green County from claims involving infringements of patents and/or copyrights.

39. INVOICES AND POINT OF CONTACT AFTER RFP IS AWARDED

Invoices shall be mailed directly to:

Dianna Spieker
Tom Green County Treasurer
113 W. Beauregard
San Angelo, Texas 76903

The invoices shall show:

1. Name and address of successful offeror;

2. Detailed breakdown of all charges for the services or products delivered stating any applicable period of time

40. PAYMENT

Payment will be made upon receipt and acceptance by the County of all completed services and/or products ordered and receipt of a valid invoice, in accordance with the Texas Government Code, Chapter 2251. Successful offeror is required to pay subcontractors within ten (10) days.

41. FUNDING

Funding for this project has been provided by the Texas Military Preparedness Commission in the form of a Defense Economic Adjustment Assistance (DEAAG) Grant with State and local matching funds.. State of Texas statutes prohibit the obligations and expenditure of public funds beyond the fiscal year for which a budget has been approved. Therefore, anticipated orders or other obligations that may arise past the end of the current Tom Green County fiscal year shall be subject to continued funding availability.

In the event funds do not become available, the contract may be terminated or the scope amended. There shall be neither penalty nor any additional charges incurred by the County. The offeror, in accepting the contract, agrees that the County shall not be liable for damages in the event that the contract is terminated due to a lack of funding.

42. DISCOUNTS

Discounts for prompt payment offered may be taken into consideration during the proposal evaluation. Terms of payment offered will be reflected in the space provided on the proposal cost worksheet. All terms of payment (cash discount) will be taken and computed from the date of delivery of acceptable material or services, or the date of receipt of invoice, whichever is later.

43. DEBARMENT

Offeror certifies that at the time of submission of its proposal, Offeror was not on the federal government's list of suspended, ineligible or debarred contractors and that Offeror has not been placed on this list between the time of its submission and the time of execution of the Contract. If Offeror is placed on this list during the term of the Contract, Offeror shall notify the Tom Green County Auditor. False certification or failure to notify may result in termination of the Contract for default.

In accordance with Texas Local Government Code Chapter 154.045, if a seller is found to be indebted to Tom Green County by manner of delinquent taxes, fines, fees, or indebtedness arising

from other written agreements, then Tom Green County may offset payments under a contract to satisfy the outstanding debt and no payments will be made until the debt is paid in full.

44. CONFLICTS BETWEEN REQUEST FOR PROPOSAL AND PROPOSAL

Should a conflict arise between the terms and provisions of this RFP and the submission of the vendor, the terms and provisions of this RFP will prevail.

45. COMPLIANCE

All offerors will comply with all Federal, State and local laws relative to conducting business in Tom Green County including, but not limited to licensing, labor and health laws. The laws of the State of Texas will govern as to the interpretation, validity and effect of this proposal, its award, and any contract entered into.

46. DISCRIMINATION

During the performance of this contract, the successful offeror agrees as follows:

a. The successful offeror will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The successful offeror will take affirmative action to ensure that applicants are employed, and the employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

b. The successful offeror will, in all solicitations or advertisements for employees placed by or on behalf of the successful offeror, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

c. The successful offeror will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the successful offeror's commitments under this section.

47. CONFLICT OF INTEREST QUESTIONNAIRE (CIQ):

Chapter 176 of the Texas Local Government Code requires that any proposer or person considering doing business with a local government entity disclose in the Conflict of Interest Questionnaire the proposer's or person's affiliation or business relationship that might cause a conflict of interest with a local government entity. If applicable, this questionnaire, by law, must be filed with the records administrator of Tom Green County within seven (7) days of notice of potential award or within seven (7) days after submitting a proposal response. Additionally, a new form must be filed no later than the seventh (7th) business day after the person becomes aware of the facts that require the statement to be filed. The form can be found online at https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm. By submitting a response to this proposal, the offeror represents that it is in compliance with the requirements of Chapter 176 of the Texas Local Government Code. If required, send completed forms to the Tom Green County Clerk's

Office located at 124 West Beauregard Avenue, San Angelo, Texas 76903.

48. HB 1295

Offeror must complete a form 1295 filing, disclosure of interested parties, on the Texas Ethics Commission website. https://www.ethics.state.tx.us/tec/1295-Info.htm This filing shall be completed with the RFP, and prior to the issuance of any notice to proceed. For form item # 3 use "RFP # 21-005".

49. VENDOR RESTRICTIONS REGARDING BOYCOTTS OF ISRAEL

Government Code 2270 prohibits governmental entities (which include cities, counties, public school, special purpose districts, etc.) from contracting with companies who boycott Israel and from investing in companies that boycott Israel. This requires contracts to have written verification from the company that it does not boycott Israel and will not boycott Israel during the term of the contract.

50. PREVAILING WAGE RATES

The Davis-Bacon and related acts apply to contractors and subcontractors performing the construction of a public work, including a building, highway, road, excavation, and repair work or other project development or improvement, paid for in whole or in part from public funds, without regard to whether the work is done under public supervision or direction.

Sec. 2258.021. RIGHT TO BE PAID PREVAILING WAGE RATES. (a) A worker employed on a public work by or on behalf of the state or a political subdivision of the state shall be paid:

(1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and

(2) not less than the general prevailing rate of per diem wages for legal holiday and overtime work.

Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. Overtime pay at a rate not less than one and one-half times the regular rate of pay is required after 40 hours of work in a work week.

Penalty: If the selected respondent or any subcontractor fails to comply with the prevailing wage law, it shall forfeit to the County sixty dollars ($60.00) per calendar day or part of the day for each laborer, workman, or mechanic who is paid less than the specified rate, pursuant to §2258.023 of the Texas Government Code.

Refer to Attachment C. Wage Determination
TX20200282 "Construction Type: Building" will be used for this project.

51. PROPOSAL SECURITY

If the proposal exceeds $100,000, the submission must be accompanied by a Surety Bond, executed with a surety company authorized to do business in this state, drawn to the order of the

OWNER in the sum of not less than five per cent (5%) of the total amount of the proposal. The proposal bond must be executed by a surety meeting the requirements set forth in stated conditions.

The bond shall be made payable without condition to Tom Green County, Texas, hereinafter referred to as OWNER. The bond may be retained by and shall be forfeited to the OWNER as liquidated damages if the proposal is accepted and a contract based thereon is awarded and the Offeror should fail to fulfill contract in the form prescribed, with legally responsible sureties, within thirty (30) days after such award is made by OWNER.

52. RETURN OF PROPOSAL SECURITY

The proposal bond of the successful offeror will be retained until offeror has furnished the required Contract Security and Insurance, whereupon proposal bond will be returned. If offeror fails to furnish the required Contract Security and Insurance within thirty (30) days of the Notice of Award, OWNER may annul the Notice of Award and the proposal security of the Offeror will be forfeited. OWNER may retain the proposal security of any Offeror whom OWNER believes to have a reasonable chance of receiving the award until the day after the required documents are delivered by successful CONTRACTOR to OWNER but not to exceed 45 days after the initial notice of award by the Tom Green County Commissioners Court.

53. PERFORMANCE AND PAYMENT BONDS

1. Vendor shall comply with bond thresholds stated below:

a) Performance Bond: If the proposal exceeds $100,000, and having satisfied all Conditions of award as set forth elsewhere in these documents, the successful offeror shall, within 30 days of award notice and prior to commencement of work, furnish a performance bond(s) in a penal sum of at least the full amount of the contract as awarded, in the form included in the specifications, which secures the faithful performance of the contract.

b) Payment Bond: If the proposal exceeds $25,000, and having satisfied all Conditions of award as set forth elsewhere in these documents, the successful offeror shall, within 30 days of award notice and prior to commencement of work, furnish a payment bond (s) in a penal sum of at least the full amount of the contract as awarded which secures the payment of all persons, firms or corporations to whom the CONTRACTOR may become legally indebted for labor, materials, tools, equipment, or service, of any nature, employed or used by him in performing the work.

2. On each such bond the rate of premium shall be stated, together with the total amount of the premium charged. Bond(s) shall bear the date as a date subsequent to, the date of the contract, and not later than the 30th day after a contract is executed. The current power of attorney for the person who signs for any surety company shall be attached to such bond.

3. The failure of the Successful Offeror to supply the required bonds within thirty (30) days after the prescribed forms are presented for signature, or within such extended period as the COUNTY may grant based upon reasons determined adequate by the County, shall constitute a default, and the county may either award the contract to the next reasonable Offeror or re-advertise for proposals, and may charge against the Offeror the difference between the amount of the proposal and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the proposal guarantee.

54. WAIVER OF BONDS

The requirement for Performance bonds may be waived under the following conditions:

a) The total contract sum is one hundred thousand dollars ($100,000.00) or less.
b) The general contractor agrees to one lump sum payment at completion of the project in lieu of standard monthly progress payments. Both of the above requirements must be met for waiver of Performance Bonds to occur.

55. TEXAS STEEL RESOLUTION

On February 21, 2017 Tom Green County Commissioner's Court passed the Tom Green County Texas Steel Resolution stating that "The Tom Green County Commissioners Court believes domestic iron and steel should be given preference in all local projects over foreign imports to support a strong, sustainable Texas Iron and Steel Industry and to ensure the use of high quality products in our public works projects".

56. BUY AMERICAN – CONSTRUCTION MATERIALS

FAR 52.225-9 Buy American - Construction Materials. (MAY 2014)

(a) *Definitions*. As used in this clause-

Commercially available off-the-shelf (COTS) item- (1) Means any item of supply (including construction material) that is-

(i) A commercial item (as defined in paragraph (1) of the definition at FAR 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4), such as agricultural products and petroleum products.

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However,

emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means-

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

Domestic construction material means-

(1) An unmanufactured construction material mined or produced in the United States;

(2) A construction material manufactured in the United States, if-

(i) The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic; or

(ii) The construction material is a COTS item.

Foreign construction material means a construction material other than a domestic construction material.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) *Domestic preference.* (1) This clause implements 41 U.S.C. chapter 83, Buy American, by providing a preference for domestic construction material. In accordance with 41 U.S.C. 1907, the component test of the Buy American statute is waived for construction material that is a COTS item. (See FAR 12.505(a)(2)). The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to information technology that is a commercial item or to the construction materials or components listed by the Government as follows:

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that-

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American statute is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American statute to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) *Request for determination of inapplicability of the Buy American statute*. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including-

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate

may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American statute applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American statute applies, use of foreign construction material is noncompliant with the Buy American statute or Balance of Payments Program.

(d) *Data*. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Cost Comparison

Construction material description	Unit of measure	Quantity	Cost (dollars) *
Item 1:			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____
Item 2			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____

** Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).*

List *name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral,*
attach summary.

Include other applicable supporting information.

(End of clause)

SITE VISIT BASE ACCESS REQUEST FORM

TOM GREEN COUNTY
GAFB DEAAG CONSTRUCTION - CANOPY STRUCTURES & PT FIELD
RFP 21-005

Pre-bid conference date: October 27, 2020
Goodfellow AFB South Gate Visitor's Center: 8:30 a.m.

To obtain clearance to access GAFB on the date of the pre-bid conference, email the following information along with copies of driver's licenses to purchasing@co.tom-green.tx.us.

Information is due no later than October 2, 2020.

Company Name: _____

Individual's Name: _____

Date of Birth: _____

State/Driver's License Number: _____ / _____

III. QUALIFICATIONS

Each submitting company must include the following items in response to the RFP:

1. Cover letter for the primary company (respondent) containing a brief company history, the name, address, telephone number, email address, and main contact name. Include total number of company personnel by discipline or category, and proposed number of personnel to be assigned to this project. Also include a list of additional participating companies.

2. Cover letter(s) for each additional participating company.

3. Outline of specific areas of responsibility and key personnel / team leads for primary and each participating company (project oversight, scheduling, financial management, on-site supervision, labor standards, environmental review, etc.)

    a. Project Superintendent/Alternate: Project Superintendent shall have five years general construction experience, minimum; shall be a high school graduate or GED equivalent, minimum and having held the same position on 3 prior like projects of equal or greater complexity and construction costs, minimum. The Superintendent and/or the Alternate shall be available five [5] work days per week, eight [8] hours per work day. The Superintendent's approved alternate shall meet the same criteria as the superintendent, shall be present and able to respond on the Superintendent's behalf when the Superintendent is not available.

4. Brief resumes of key personnel, including name, title, experience, education, professional registration or licensure number, and any other relevant qualifications.

5. List of work completed by primary and participating companies in the past three years that may be relevant to the project, including name/location, project owner, owner's contact information/address/telephone/email, approximate completion date, estimated project cost, type of work, funding source if known, company's responsibilities and services provided.

6. Proposed construction schedule.

IV. CONSTRUCT CANOPY STRUCTURES: PHYSICAL TRAINING (PT) & MILITARY WORKING DOG (MWD)

STATEMENT OF WORK

Part 1 – Scope of Work

Part 2 – Products

Part 3 – Execution

Part 4 – Utility Outages and Special Conditions

Part 5 – Environmental Requirements

Part 6 – Site Maintenance and Cleanup

Part 7 – Energy Conservation

Part 8 – Responsibility

Part 9 – Storage and Parking

Part 10 – Completion of Work

Part II. - Technical Exhibits:

11a. Geotechnical Report – Proposed Shade Structure Beaver Fit Locker

11b. Geotechnical Report – Proposed Goodfellow Air Force Base Dog Training Area

11c. Drawings:

11.d Forms
AF Form 66

PART 1.0 – SCOPE OF WORK [SOW]:

1.1 **GENERAL:** The work to be performed under this contract and in accordance with this Statement of Work and Drawings shall consist of furnishing all necessary parts, labor, tools, transportation, supplies, supervision, equipment, materials, and incidentals necessary for providing all work shown on the Statement of Work, Drawings (Technical Exhibits), and in accordance with the latest edition of all applicable codes, regulations, standards and criteria in effect at the date of solicitation. The work outlined herein shall consist of, but not be limited to the construction of a new canopy structures at Goodfellow AFB PT Training Area and at the MWD Training Area.

1.2 **AGENCY RELATIONSHIP**: Tom Green County (TGC) has sole contract authority. 17th Civil Engineer Squadron (17 CES) Goodfellow AFB shall serve in the role of providing contract coordination/monitoring but shall not have any direct contract authority to approve or disapprove construction work. All contract correspondence shall be directly submitted to TGC contract representative.

1.3 **LOCATION**: Goodfellow Air Force Base is located in Tom Green County, on the southeast side of San Angelo, TX. and is bounded to the north by Highway #388 (Paint Rock Rd.), to the west by Fort McKavitt Rd and Bell Street/Christoval Road, to the south by Highway #1223 (San Antonio Hwy.) and to the east by the eastern city limits. Work locations are PT training area and MWD training area as described on the plans.

1.4 **PROJECT DESCRIPTION**: The Contractor shall construct a Physical Training [PT] Canopy Base Bid, or Bid Alternate and/or a Military Working Dog [MWD] Canopy as described in this Statement Of Work and the Drawings. The PT canopy shall include a synthetic running surface for the Base Bid and a synthetic basketball surface for the Bid Option. Both the Base Bid and the Bid Option shall be provided with lighting/electricity and site work, plus the dis-assembly, storage and re-assembly of the existing Alpha Warrior fitness unit. The canopy for the MWD shall include synthetic pet turf, with lighting/electricity and site work to include a fenced area with concrete slab for bleachers as part of the bid Option. If any departure from the SOW shall be deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted as soon as possible to the Contracting Officer, or designated representative for action. No such departures shall be made without prior approval of the Contracting Officer, or designated representative.

1.5 **SITE VISITS**: The Contractor shall visit the site to become thoroughly familiar with details of the work and working conditions, verify dimensions in the field, and shall advise the Contracting Officer of any discrepancies before starting the work.

1.6 **WORK AND MECHANICS**: The work for this project shall be executed in the best and most workmanlike manner, by qualified and efficient mechanics/tradesmen, skilled in their respective trades. Only certified journeymen in each respective trade, or apprentices under the direct supervision of certified journeymen, shall be permitted to install and/or supervise installation for this project. Individual trade work for this project shall be performed and quality maintained by the applicable trade, only. All trades shall coordinate their work with that of other trades. The Contractor shall coordinate and perform all operations in a manner that shall result in a professional and expeditiously completed project. The Contractor shall provide items of work not specifically indicated, but obviously and/or normally required to complete and properly execute the work. The work shall be in strict accordance with prevailing industry standards and manufacturer's instructions. Work and materials shall comply with this Statement of Work, the Drawings and the editions in effect at the time of this solicitation for all applicable codes, criteria, regulations and guidelines, all of which shall be made a part of this SOW.

1.6.1 **PROJECT SUPERINTENDENT/ALTERNATE**: Project Superintendent shall have five years general construction experience, minimum; shall be a high school graduate or GED equivalent, minimum and having held the same position on 3 prior like projects of equal or greater complexity and construction costs, minimum. The Superintendent and/or the Alternate shall be available five [5] work days per week, eight [8] hours per work day. The Superintendent's approved alternate shall meet the same criteria as the superintendent, shall be present and able to respond on the Superintendent's behalf when the Superintendent is not available.

1.6.2 **TESTING LABORATORY**: The Contractor shall employ and pay for services of an independent testing laboratory to perform specified services and testing. The testing laboratory shall meet "Recommended Requirements for Independent Laboratory Qualifications" published by the American Council of Independent Laboratories, meet basic requirements of ASTM E-329 and shall be currently licensed to operate in the State of Texas.

1.6.2.1 Specific tests and inspections shall be as indicated in this SOW and the drawings.

1.6.3 **GEOTECHNICAL ENGINEER**: Provide the services of an independent Geotechnical Engineer to monitor the earthwork and perform specified testing of the earthwork.

1.6.3.1 Specific testing shall be as follows:

1.6.3.1.1 A minimum of at least one laboratory test for moisture-density relationship of the subgrade material in accordance with Texas Hwy Dept. test procedure TEX 113E.

1.6.3.1.2 A minimum of at least one laboratory test for moisture-density relationship of the select fill per Texas Hwy Dept. test procedure TEX 113E.

1.6.3.1.3 A minimum of one field density test each 2000 SF for subgrade below Canopy Structure for "Density Control of Compaction" in accordance with latest ASTM D-2922 and ASTM D-3017.

1.6.3.1.4 A minimum of one field density test each 2000 SF for select fill below Canopy Structure for "Density Control of Compaction" in accordance with latest ASTM D-2922 and ASTM D-3017.

1.6.3.1.5 A minimum of one field density test per lift each 200 LF of select fill within trenches for "Density Control of Compaction" in accordance with latest ASTM D-2922 and ASTM D-3017.

1.6.3.1.6 Any other tests specifically required by other sections, herein.

1.6.4 **MANAGEMENT PLAN**: The Contractor shall submit a Management Work Plan that fully describes the means to perform all work including but not limited to providing all equipment, tools, materials, supplies, transportation, supervision, management,

proposed project schedules, work sequence plans, associated configurations for all demolition and new work including electrical, mechanical and communications infrastructure as described in this SOW and Drawings.

1.6.5 **TRAFFIC PLAN**: The Contractor shall submit a traffic and pedestrian plan showing pedestrian and traffic flow altered by construction/demolition and proposed alternate routing within 7 calendar days after Notice to Proceed [NTP] for approval by TGC. TGC must approve this management plan before the Contractor can commence any construction/demolition work.

1.6.6 **FIRST WORK**: The first work performed by the Contractor after the work area is vacated and prior to starting demolition/construction operations shall be to fence in and secure the Lay-Down area in accordance with Contractor's staging plan. The fence shall be maintained at all times during demolition/construction and only be removed, with the Contracting Officer's approval, at the conclusion of demolition/construction operations. Lay-Down Site shall be approved based on review of Contractor's proposed location. This fence shall be installed in accordance with 1.19 and 2.16, herein and the drawings.

1.6.7 **STORAGE AREAS:** There are no Goodfellow AFB furnished, covered or secure storage areas. Contractor's field office[s] and lay-down area[s] shall be at location[s] indicated on the drawings. Limited storage shall be permitted at the discretion of TGC and on a space-available basis. If the Contractor requires additional temporary field office, storage, and other construction buildings that are temporarily required in the performance of the work, the additional space shall require the written approval of the Contracting Officer. Plans showing temporary field office, Contractor and Contractor worker parking, storage, and other construction buildings shall be submitted by the Contractor for Government Approval (GA). Utilities at the PT and MWD areas shall be available for Contractor use. Coordinate utility connections with the Government. Utility connection shall be the responsibility of the Contractor. Goodfellow AFB assumes no responsibility for lost or stolen materials, equipment, or tools, the security of which lies solely with the Contractor. Contractor shall keep their storage areas clean, neat, and orderly. Contractor shall mow grass and weedy vegetation when it reaches a height of 6 inches, maximum. Mowing shall be to a height of 3 inches. Mowing shall be accomplished with a rotary mower that leaves the clippings evenly distributed on the soil surface.

Mowing shall be accomplished during periods and in a manner that the soil and grass shall not be damaged. Towed or self-propelled riding mowers shall not be operated within 3 feet of shrubs or trees. Contractor shall mow areas adjacent to shrubs and trees with hand propelled mowers. Temporary fencing used by the Contractor to delineate construction sites shall be securely anchored with tension wires and posts as required to prevent sagging and an unsightly appearance. Fencing shall be maintained by the Contractor in this manner throughout the duration of the contract. Due to high winds in west Texas, Contractor shall take every precaution to preclude trash and materials from blowing off site.

1.6.8 **SITE USAGE**: During the entire duration of this contract, Goodfellow AFB shall continue to use B140 and the PT Pad at the PT Canopy area plus B3329, B3340 and B3341 at the Canopy MWD area. Also, all adjacent facilities shall remain occupied and have (day-to-day) mission essential work. At all times, the Contractor shall exercise care to reduce noise and ensure safe construction activities while minimizing disturbances. The Contractor shall coordinate the work performance whereby both the Government and the Contractor shall continue operations with the least possible interference and inconvenience. The Contractor shall conduct all work such that means of facility ingress and egress fire response routes, etc., are open and maintained at all times. The Contractor shall be responsible for providing suitable, approved temporary barricades, roped barriers, warning tape etc., to warn occupants of hazardous areas at the job site for the entire duration of the contract at no additional cost to the Government. Under no circumstances shall the Contractor block road/rear access to the nearby facilities including Base Gymnasium B140, Security Forces Squadron Facilities B3329, B3340 & B3341.

1.6.9 **OUTAGES:** The Contractor, shall submit to 17 CES written notification regarding any and all utility outages 14 calendar days in advance of proposed outage. All water, power or communication outages must be scheduled for weekends only.

1.6.10 **CLEANING AND PROTECTION:**

1.6.10.1 All construction debris, trash, dirt, etc. shall be immediately removed, at a minimum daily and as required, at the Contractor's expense in accordance with all local, state and federal environmental laws and regulations.

1.6.10.2 All areas shall be cleaned on a daily basis, minimum and as required to maintain a professional appearance at all times.

1.6.11 The Contractor shall collect any and all trash, debris, refuse, garbage, etc., that is generated and place it in appropriate containers with lids or approved covers on a periodic basis or as directed by the Contracting Officer's representative. The aforementioned material shall be hauled from the site by appropriate means on a daily basis, unless otherwise approved by the Contracting Officer's representative. Disposal shall be outside the limits of Government property. Disposal shall be by sanitary landfill or other approved methods and shall conform to all local, state and Federal guidelines, criteria and regulations. Upon completion of the work, the Contractor shall leave the work site and storage area[s] in a clean, neat and workmanlike condition satisfactory to the Contracting Officer. Restoration to the original contours is required unless otherwise directed by this SOW, the Drawings, or by the Contracting Officer.

1.7 **PERFORMANCE PERIOD:** The Contractor shall have one hundred and twenty [120] calendar days to complete the MWD canopy; one hundred and eighty calendar days [180] to complete PT canopy – Base Bid. If the Bid Option for the PT Canopy is selected, the Contractor shall have two hundred and ten calendar days [210] to

complete that work. It is proposed that work for the PT canopy [Base Bid or Bid Option] and MWD Canopy be performed concurrently.

1.8 **WORK SCHEDULE:** Workdays shall be from 0730 to 1630, Monday thru Friday; no weekend work allowed unless approved by the Contracting Officer [Ref: 1.33].

1.9 **WORK AREA ACCESS:** Government escorts are not needed. The lowest level of security exists in general access areas and also applies to the PT and MWD areas.

1.10 **CONCRETE TRUCKS:** Cleaning out of concrete trucks on Goodfellow AFB is prohibited. Concrete truck chutes, only, may be rinsed at the construction site. Wastewater and concrete from this rinse shall be collected in a high-density polyethylene (HDPE) plastic-lined box or pit provided by the Contractor at the site. At the end of pouring operations, the Contractor shall excavate all the waste and liner and properly dispose of same. The Contractor shall dispose of all concrete debris to an authorized off base site and shall remove any and all concrete debris and residue at the end of the project at no additional cost to the Government. The pit shall be completely backfilled and the site restored to original conditions.

1.11 **REFERENCES:** All publications listed herein shall be the most current editions in effect at the time of solicitation and form a part of this Statement of Work. The publications are referred to in the text by basic designation only and include the following:

GAFB INSTRUCTION
GAFBI 32-2001 Goodfellow AFB Base Fire Protection Program GAFBI
31-102 Installation Security Instruction

INTERNATIONAL BUILDING CODE [IBC]

INTERNATIONAL FIRE CODE [IFC]

INTERNATIONAL ENERGY CONSERVATION CODE

NATIONAL ELECTRIC CODE [NEC]

US ARMY CORPS OF ENGINEERS HEALTH AND SAFETY MANUAL EM 385-1-1

OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA)
OSHA STD 29 CFR 1910 and 1926
OSHA STD 29 CFR 1910.252 Welding, Cutting and Brazing (General Requirements)

AMERICAN CONCRETE INSTITUTE [ACI]

AMERICAN COUNCIL OF INDEPENDENT LABORATORIES [ACIL]

AMERICAN INSTITUTE OF STEEL CONSTRUCTION [AISC]

AMERICAN IRON AND STEEL INSTITUTE [AISI]

AMERICAN SOCIETY FOR TESTING AND MATERIALS [ASTM]

AMERICAN SOCIETY OF CIVIL ENGINEERS [ASCE]

AMERICAN WELDING SOCIETY [AWS]

METAL BUILDING MANUFACTURES ASSOCIATION [MBMA]

MASTER PAINTER'S INSTITUTE [MPI]

SMACNA-02
Architectural Sheet Metal Manual

STEEL STRUCTURE PAINTING CODE [SSPC]

TEXAS DEPARTMENT OF TRANSPORTATION [TxDoT]

UNDERWRITERS LABORATORY [UL]
UL 580, Class90 Tests for Uplift Resistance of Roof Assemblies

1.13 **SUBMITTALS:** The Contractor shall provide submittals in the form of Manufacturer's Catalog Data, Certificates of Compliance and Samples for all items listed on the attached AF Form 66. The Contractor shall not be permitted to perform any work on site without approved submittals. The submittals listed on the attached AF Form 66 shall be required and shall be submitted for Government Approved (GA) or For Information Only (FIO). Use AF Form 3000 to process submittals. Submit four copies of submittals to Contracting Officer. Execute DD Form 1354 Checklist and submit to Contracting Officer before final payment is issued.

1.14 **MANUFACTURER'S CATALOG DATA:** Data composed of catalog cuts, brochures, circulars, specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the contract documents.

1.15 **SAMPLES:** The Contractor shall submit actual nominally sized samples of the roof panels: R-Panels, and U-Panels; gutter and downspout, synthetic surface, synthetic turf, synthetic basketball surface, roof deck and paint color samples for

approval. The Contractor shall submit a sample in each color of the product. No products or materials shall be installed until respective submittals have been approved.

1.16 **CONTRACTOR'S WARRANTY:** The Contractor shall warrant all equipment, materials and workmanship for a period of one [1] year after project completion. Any manufacturer and/or specified warranty that is for a period longer than the one [1] year Contractor warranty shall be so warranted. At a date one month prior to termination of the one [1] warranty, the Contractor and the Government shall review all installed equipment, materials and workmanship and the Contractor shall make repairs and/or replacements of defective warranty items.

1.17 **MANUFACTURERS WARRANTIES:** The Contractor shall identify all items being installed that are covered by a manufacturers guarantee or warranty and provide validated copies of such. The identification shall list the Government as holder of said warranties, the name of the company and the commencement and expiration date of the guarantee or warranty.

1.18 **DELIVERY AND STORAGE:** All equipment and materials delivered and placed in storage shall be stored with protection from the weather, humidity and temperature variation, dirt and dust, and any other contaminants and per the manufacturer's recommendations. Store all materials in a secure, clean and dry locations.

1.19 **SAFETY**: All Contractor operations shall be conducted and performed in accordance with Department of Labor, OSHA requirements found in 29 CFR 1910 (1910.146 and 1910.147) and 29 CFR 1926, and Air Force Occupational Safety & Health (AFOSH) standards including AFI 91-203, Air Force Consolidated Occupational Safety Instruction. The Contractor shall also ensure that all work is performed in accordance with project identified national standards, military manuals, instructions, pamphlets, standards, and handbooks, and with the edition in effect on the date of this solicitation of the Corps of Engineers (COE) Safety Manual 385-1-1. All job sites are subject to inspections by the Department of Labor. In the event of conflicts between the OSHA standards and these requirements, the most stringent shall apply.

1.19.1 Resolution of Department of Labor citations for violations of Occupational Safety and Health Standards shall be a Contractor responsibility and shall provide for no basis of a claim against the Government.

1.20 **TEMPORARY FENCE:** Prior to the start of any work for this project, the Contractor shall provide temporary orange warning fencing around the site perimeter.

1.21 **FIELD OFFICE:** The Contractor shall maintain a clean, secure, weather-tight, temporary portable field office placed at the project sites with all required services during the duration of the project.

1.22 **PORTABLE TOILETS:** For the duration of this project, the Contractor shall provide and properly maintain portable toilet[s] for the use of the workers.

1.23 **CONSTRUCTION DOCUMENTS:** The Contractor shall maintain a complete, current set of the construction documents and daily project log[s] in the field office at all times.

1.24 **OPERATIONS SECURITY (OPSEC) REQUIREMENTS:** The purpose of OPSEC is to reduce the vulnerability of Air Force missions by eliminating or reducing successful adversary collection and exploitation of critical or sensitive information. OPSEC applies to all activities that prepare, sustain, or employ forces during all phases of operations. OPSEC is a process of identifying, analyzing and controlling critical and sensitive information indicating friendly actions associated with military operations and other activities to: 1) identify those actions that can be observed by adversary intelligence systems; 2) determine what specific indications could be collected, analyzed, and interpreted to derive critical or sensitive information in time to be useful to adversaries; 3) select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation. Organizations and personnel supporting the 17th Training Wing have OPSEC requirements associated with their activities and support. The Contractor shall comply with the 17th Training Wing OPSEC Program. During the construction contract pre-construction meeting further information shall be provided by the Government on the Goodfellow AFB OPSEC Program. The basis for the OPSEC program is AFI 10-701.

1.25 **SPECIFIC OPSEC REQUIREMENTS:**

1.25.1 Contractor personnel shall receive OPSEC Awareness Education and Duty-Related Training within 90 days of contract start date and annually thereafter.

1.25.2 OPSEC Awareness Education and Training shall be provided or coordinated through government channels.

1.25.3 The Contractor is susceptible to OPSEC assessments, surveys or any other evaluation tool available for the Wing OPSEC Program Manager or subordinate OPSEC Coordinator to use in order to gauge the effectiveness of the overall program.

1.26 **UTILITY CONSERVATION:** The Contractor shall be required to participate in government energy conservation programs. For the purpose of this contract, utilities such as water, electricity, etc., shall be furnished by the government at no cost to the Contractor. Long distance and Defense Switched Network (DSN) telephone services shall not be provided.

1.27 **WORK SCHEDULE:** Working hours for the Contractor shall normally be between the hours of 7:30 A.M. and 4:30 P.M. excluding Saturdays, Sundays, and Federal holidays. Refer to Section H of the solicitation/contract document for further information on working days. If the Contractor desires to work during periods other than above, a request must be made to the Contracting Officer in writing four (4) calendar days in advance of the Contractor’s intention. If the required base personnel are reasonably

available, the Contracting Officer may authorize the Contractor to perform work during periods other than normal duty hours/days.

1.28 **NORMAL WORK HOURS:** The Contractor shall schedule all work to occur between the hours of 7:30 AM and 4:30 PM, Monday through Friday, except on the Federal holidays and days designated as "Family Days" by Air Education and Training Command (AETC) as listed below. Permission to work outside these normal business hours may be granted by the Contracting Officer. Requests to work outside the normal work hours must be submitted in writing to the Contracting Officer at least 3 working days in advance of the date requested. The Contractor shall provide written notification to the Contracting Officer fourteen (14) calendar days lead time for work schedule.

Federal Holiday			
		2020	2021
New Year's Day	01 Jan		
Martin Luther King's	3rd Monday in January		
President's Day	3rd Monday in February		
Memorial Day	Last Monday in May	25 May	24 May
Independence Day	4 Jul	05 Jul	05 Jul
Labor Day	1st Monday in	07 Sep	06 Sep
Columbus Day	2nd Monday in October		
Veterans Day	11 Nov		
Thanksgiving Day	4th Thursday in	26 Nov	25 Nov
Christmas Day	25 Dec		

1.28.1 While AETC Family Days have not been identified past calendar year 2018 it is anticipated that the same number of AETC Family days shall be declared each year.

1,28.2 Any Holiday falling on a Saturday shall be observed the preceding Friday. Any Holiday falling on a Sunday shall be observed the following Monday.

1.28.3 Goodfellow AFB could be closed because of security problems, adverse weather, or other events. Unless otherwise notified by the Government, the Contractor should monitor local television stations, radio stations, or Goodfellow's Facebook page for notification of a possible late opening or base closure. The Contractor may not receive any other form of notification of a base closure from the Government, unless contacted by the Contracting Officer (CO) or the COR. The Contractor is responsible for notifying Contractor employees. Contractor(s) do not report when the base is closed due to security problems and/or adverse weather.

1.29 **TOBACCO USE IN AETC FACILITIES:** Contractors are advised that the Commander has placed restrictions on the smoking of tobacco products within AETC facilities. AFI 40-102, Tobacco Use in the Air Force, outlines the procedures used by

the commander to control smoking in our facilities. Contractor employees and visitors are subject to the same restrictions as government personnel. Smoking is permitted only in designated smoking areas. Additional information, to include locations of designated smoking areas, shall be provided to the Contractor at the pre-performance conference.

1.30 **BASE ACCESS SECURITY REQUIREMENTS:** The Contractor shall comply at all times with base law enforcement and security requirements to include base pass requirements.

1.30.1 Contractor Installation Access Pass. Before arrival, a Government identification card-holding person from the sponsoring agency, Base Contracting office/administrator or applicable local project manager shall submit a request for base access using the 17 Training Wing's Base Access List (BAL) memorandum as a form of registration for each credential applicant. The base sponsor/sponsoring agency/Contracting Officer and the contracted management team should establish an accountability process to account for each applicant, to oversee the BAL process, and to retrieve installation passes when access is no longer required. Base sponsors/sponsoring agencies or contract officers shall ensure the BAL is accurate, that it is signed and forwarded to the 17 SFS Pass & Registration section for completion of the vetting and fitness determination processes. The BAL should be delivered to Pass & Registration, located at the Visitor Control Center (VCC). When delivery is not possible, the BAL may be forwarded to Pass & Registration via a ".mil" email account located on Goodfellow AFB. The BAL shall include pertinent visitor information, reason for entry, frequency of entry, destination, times each day requiring entry, and duration of request.

1.30.2 Contractor Initial (and periodic) Installation Access Screening. The Contractor shall provide Pass and Registration with two forms of identification, one of which shall be a state issued photo identification. Prior to being allowed access, a minimum of a background/National Crime Information Center (NCIC) check shall be completed on all Contractors, requesting unescorted access for official business. This screening process shall validate the Contractor's suitability to visit Goodfellow and certify that the Contractor does not pose an increased threat to the base populace. The Contractor shall then be issued a temporary Defense Biometric Identification System (DBIDS) pass or AF Form 75A through the expiration date on the BAL request. Possession of an authorized access pass does not automatically authorize or guarantee access to the installation. The individual must still have a valid purpose to be on the installation and properly sponsored, as applicable.

1.30.3 Access Denial. If it is determined that a Contractor requesting access has been convicted of a felony or pled guilty to a felony charge within the past 10 years, or is considered not fit to obtain authorized access based on the information obtained during the identity vetting, or criminal history indicates the individual may present a threat to the good order, discipline and morale of the installation, Security Forces personnel shall deny entry. The Contractor shall be informed of the access denial, shall

be issued an Access Denial Letter, and shall be informed on how they may appeal this order.

1.30.4 Access Denial Appeal Process. When denied access, contract visitors shall be informed to report back their manager. If the contract worker and management are considering an appeal, it shall be submitted by letter to the 17 SFS Commander, within 30 days of access denial. The contract manager should first contact the military contract officer/administrator or on-base sponsor for additional guidance and clarification. The appeal may be delivered to the installation Visitor Control Section or mailed to Security Forces, addressed to 17 SFS/CC, 361 Apache Trail, Goodfellow AFB, 76908. The Contractor's appeal should discuss all facts and reasons to support rescinding access denial. The 17 TRW/CC shall approve/disapprove all appeals for entry.

1.30.5 For installation access on non-duty hours or down days:

1.30.5.1 Identify which workers need access on weekends, federal holidays/family days, and down days, where required.

1.30.5.2 Ensure only workers that are already vetted are on the Extended-Hours request (no new personnel). New personnel require a new BAL and formal vetting.

1.30.5.3 Complete the “After Hours” BAL for workers requiring down day access to the installation.

1.30.5.4 Identify the vehicle requirements. If operations cannot support the search procedures for large vehicles/special purpose equipment, the request may be declined unless arrangements are made to deliver the vehicle/equipment prior, during normal duty hours.

1.30.5.5 During the above-mentioned days, the Contract officering, contract representative sponsoring ID cardholder is required to be present during hours of the work request.

1.30.6 All BALs are accomplished each time employees or personnel change, not to exceed 180 days. Oversight for BAL updates and establishment of procedures to ensure Physical Access Control System (PACS) credentials and locally created access credentials from individuals who no longer require installation access is the responsibility of the contracting officer/contract administrator. When an employee (regardless of position) is no longer employed by the Contractor or Sub-Contractor all DBIDS passes shall be to be returned to the Contract Officer/Administrator or to the Visitor Control Center. If a local issued access credential/pass is not returned, the contract officer may withhold funds or the Installation Commander may consider permanent debarment to the installation. Immediate access denial may be initiated by Pass & Registration updating the DBIDS database until disposition of the DBIDS pass is resolved.

PART 2.0 – PRODUCTS:

2.1 **REFERENCES TO MATERIALS, MANUFACTURERS AND PRODUCTS:** Materials shall be the standard product of manufacturer's regularly engaged in the manufacture of such products. All products, devices, equipment and materials shall be new and of the quality indicated herein. The products furnished shall be equal to, meet the quality of and specifications indicated herein and on the drawings, minimum.

2.2 **SITE VISITS:** The Contractor shall visit the sites to become thoroughly familiar with details of the work and working conditions, verify dimensions in the field, and shall advise the Contracting Officer of any discrepancies before starting the work.

2.3 **GEOTECHNICAL REPORT:** There is a Geotechnical Report for the Physical Training Area and for the Military Working Dog Area inclusive with this SOW.

2.4 **CAST-IN-PLACE CONCRETE CRITERIA:** [Provide a Design Mix submittal in accordance with the following criteria for approval prior to concrete work for this project]:

2.4.1 Concrete Slab on Grade and Piers:

2.4.1.1 3/4" maximum coarse aggregate.

2.4.1.2 28 day compressive strength of 3000 psi, minimum.

2.4.1.3 Maximum water to cementitious material ratio of 0.53.

2.4.1.4 Slump between 3" minimum and 4 ½" maximum.

2.4.1.5 Air Content between 2% minimum and 4% maximum.

2.4.1.6 Use of fly-ash and/or ground-granulated-blast-furnace-slag shall be limited to 20% substitution by weight of cement.

2.4.1.7 Addition of water to batched concrete at the job site shall be limited to circumstances when the workability of delivered concrete is insufficient for practical placement and all of the water allowed by the mix design has not been added at the start of mixing. In no case shall the specified water to cementitious material ratio or slump be exceeded. Before any concrete shall be placed from the batch, a slump test shall be performed. Under no circumstances shall water be added to the concrete mixture after the slump test has been performed and the slump is within the specified limits indicated herein. Slump test shall be performed by an approved testing company with a standard slump cone in accordance with ASTM C-1611 recommendations.

2.4.1.8 Strength test cylinders shall be provided by Contractor by an approved testing agency on specimens that are representative of the work and which have been water soaked for at least 24 hours prior to testing. Specimens shall consist of not less than

three inch diameter cores or 3 inch cubes. A minimum of three [3] test cylinders shall be made for each pour, one each spaced at approximately the beginning, middle and near the end of each pour.

2.4.2 Reinforcing Steel: The Contractor shall provide new billet steel reinforcing conforming to ASTM A-615, ACI-315 and ACI-318 Grade 60, minimum. All reinforcing shall be continuous unless indicated otherwise. Stagger splices. Provide dowels matching size and spacing of main reinforcement, where required. Provide a submittal.

2.4.3 Formwork: Formwork shall be designed in accordance with the methodology of ACI 347R for anticipated loads, lateral pressure and stress. Form releasing agents shall be commercial formulations that shall not bond with, stain or adversely affect concrete surfaces. Forms shall be removed in a manner to prevent injury to the concrete and ensuring the complete safety of the structure. Formwork shall be removed when the concrete has attained sufficient strength to resist damage from the removal process, but not before 72 hours has elapsed minimum since the concrete placement. Provide a submittal.

2.4.4 WIRE TIES: The Contractor shall provide 6 inch-16 gauge steel rebar tie-wire at reinforcing bar cross members and at overlapping ends of reinforcing bar.

2.4.5 CONCRETE PIERS shall be priced based on the design depth of 15’-0” plus where required add a unit cost for each additional foot of depth beyond 15’0”. The Contractor shall provide temporary pier casings to prevent caving and sloughing of the pier hole during pier drilling/reinforcement and concrete placemen, where required. Provide a submittal.

2.4.6 EARTHWORK MATERIALS: Satisfactory materials include materials classified in ASTM D-2487 as GW, GP and SQ shall be free of trash, debris, roots other organic matter or stones larger than two inches in any dimension. Unsatisfactory materials include materials classified in ASTM D2487 as PT, OH, OL and any other materials not defined as satisfactory. Cohesionless and cohesive materials include materials classified in ASTM D2487 as GW, GP, SW, and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH and CH. Materials classified as GM and SM shall be identified as Cohesionless only when the fines are nonplastic. Rock shall consist of boulders measuring ½ cubic yard or more and materials that cannot be removed without systematic drilling and blasting such as rock material in ledges, bedded deposits, unstratified masses and conglomerate deposits and below ground concrete or masonry structures, exceeding
1.2 cubic yard in volume, except that pavements shall not be considered as rock. Unyielding materials shall consist of rock and gravelly soil with greater than two inches in any dimension. Unstable materials shall consist of materials too wet to provide support. Subgrade shall consist of existing scarified and compacted materials as indicated herein. Topsoil shall be approved, stockpiled, off-site material and/or any additional off-site locally representative humus containing material necessary. Topsoil shall be free from tree roots, stones, shale, parent and other materials that hinder

grading, planting, plant growth and maintenance operations, and free from noxious and other objectionable weed seeds and toxic substances.

2.5 **FLEXIBLE BASE MATERIAL**: The Contractor shall provide an aggregate base of crushed limestone consisting of TxDoT Type A, Grade 1 limestone, compacted to 96% Standard Proctor Density within 2% points of the optimum moisture content. Material shall be placed in four-inch maximum lifts, below finish surface material. Compaction testing shall be provided in accordance with this SOW and submitted by the Contractor prior to placing asphalt paving. Provide a submittal.

2.6 **ASPHALT PAVING:** The Contractor shall provide TxDoT Item 340, Type D asphalt paving as indicated on the drawings at the PT area Base Bid or Bid Option. Asphalt criteria shall comply with the requirements of the polyurethane running track surface that shall be applied on top of the asphalt. Provide a Design Mix submittal in accordance with the TxDoT Item 340, Type D criteria. Provide MSDS for this product. Provide a submittal.

2.7 **SYNTHETIC RUNNING SURFACE:** The Contractor shall provide a multi-layer, synthetic, non-petroleum, resilient, polyurethane surface system equal to the DYAD system as manufactured by EpiQTracks with a five [5] year minimum warranty at the PT area Base Bid or Bid Alternate, as indicated on the drawings. The layers shall consist of flexible base material per item #2.4 above, covered with a 1 ½" asphalt paving per item
#2.5 above, covered with a prefabricated 10 mm thick, high quality rubber basemat, covered with an epiQ Pore Sealer, covered with a Polyurethane seal coat and top layer, then covered with full-pour polyurethane with embedded EPDM granules. Ref: drawings. Provide MSDS for this product. Provide a submittal.

2.8 **SYNTHETIC CANINE TURF:** The Contractor shall provide a Synthetic Turf at the MWD area as indicated on the drawings. The layers shall consist of flexible base material per Item #2.4 above, cover with a layer of washed gravel followed by the application of the synthetic turf with in-fill silica sand equal to Softlawn Kennel Cut as manufactured by Synthetic Turf International with a eight [8] year minimum warranty. Ref: drawings. Provide MSDS for this product. Provide a submittal.

2.9 **SYNTHETIC BASKETBALL SURFACE:** The Contractor shall provide a Synthetic Surface at the PT area as part of the Bid Option where indicated on the drawings. The Synthetic Surface shall be equal to the Cushion Plus system as manufactured by Synthetic Surface Specialist with a five [5] year minimum warranty. Ref: drawings. Provide MSDS for this product. Provide a submittal.

2.10 **PRE-ENGINEERED CANOPY:** The Contractor shall provide a Pre-Engineered Metal Building [PEB] at the PT Area Base Bid or Bid Alternate and MWD Area.as indicated on the drawings and as manufactured by Mueller, Inc., or approved equal, with erection drawings, anchor bolt drawings and structural calculation performed by a currently Texas registered engineer displayed on the submittal.

2.10.1 The design of the Pre-Engineered Building [PEB] Frame System shall be a clear span, rigid frame with straight-shaft columns [**no tapered columns**], portal frame, roof beams comprised of a gable roof frame with a 2:12 roof slope, minimum, throughout.

2.10.2 PEB Live Load shall be 20 psf [Note: Roof Live Load reduction allowed].

2.10.3 Collateral Load: 10 psf, minimum.

2.10.4 Snow Loads:
Ground Snow: 5 psf
Roof Snow: 3.5 psf
Snow Exposure factor: 0.9
Snow Importance Factor: 1.1

2.10.5 Wind Loads:
Basic Wind Speed [ASCE 7]: 115 mph
Risk Category: II
Wind Importance Factor: 1.0
Exposure: C

2.10.6 Seismic Loads:
Site: Class C
Seismic Design Category: B
Seismic Importance Factor: 1.0

2.10.7 Framing System Design:

2.10.7.1 Entire Building Framing System shall be designed as a single system. All framing sections and/or weld-up plate sections shall be designed in accordance with the latest edition of The American Institute of Steel Construction “Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings.’ All cold-formed steel structural members shall be designed in accordance with the latest edition of the American Iron and Steel Institute “Specifications for the Design of Cold-Formed Steel Structural Members.” The framing system shall be designed in accordance with the latest edition of the International Building Code [IBC]. Loading per building data herein. Allowable deflection of the primary framing shall not exceed L/240 of the span.

2.10.7.2 PEB dimensions and column line locations for dimensioning shall comply with the drawings. No variations shall be permitted. Reference B/A-1, B/A-2 [A-12 references back to A-1] for column line locations for dimensioning.

2.10.7.3 Primary Framing: Structural plate or bar stock, minimum yield strength [Fy] of 50000 psi. Cold formed structural steel minimum yield strength [Fy] of 50000 psi.

Primary structural bolts and nuts ASTM A-325, size and quantity required by framing system manufacturer.

2.10.7.4 Rigid Frames: Frames shall consist of welded-up plate section columns and roof beams complete with necessary splice plates for bolted field assembly. All base plates, cap plates, compression splice plates and stiffener plates shall be factory welded into place and have the connection holes shop fabricated. Columns and roof beams shall be fabricated complete with holes in webs and flanges for the attachment of secondary structural members and bracing except for field work as noted on manufacturer's erection drawings.

2.10.8 Girts: Girts shall be Zee-Shaped, size and depth as required with minimum yield strength of 55000 psi. Simple span or continuous span, as required for design

2.10.9 Eave Girts: Eave Girts shall be factory pre-punched 'C' section sized to match purlins with minimum yield strength of 55000 psi.

2.10.10 Purlins: Purlins shall be Zee-Shaped, size and depth as required with minimum yield strength of 55000 psi. Simple span or continuous span, as required for design. Precision roll formed purlin spacing shall not exceed 4'-0."

2.10.11 Bracing: Roof frame bracing shall be diagonal 'X' bracing that shall be cable, rod or angle, sized as required.

2.10.12 Portal Frame: Fixed base Portal Framing shall be included to provide resistance to laterally applied forces. Reference drawings for locations.

2.10.13 Anchor Bolts: The Contractor shall provide anchor bolts sized in accordance with ASTM F-1554 and pre-engineered metal building manufacturer directions. Anchor bolts shall be hot dipped galvanized with washer and nut, The Hillman Group or equal. The Contractor shall provide anchor bolt shop drawings specifying the size[s] and locations of anchor bolts as per the pre-engineered metal canopy requirements, coordinated with all foundation work and the drawings.

2.10.14 Welding: Welding procedures, operator qualifications and welding quality standards shall be in accordance with the latest edition of the "American Welding Society Structural Welding Code."

2.10.15 Accessories: Adequate to meet AISC and MBMA specifications.

2.10.16 Painting: All framing steel shall be factory prime painted as temporary protection against ordinary atmospheric conditions. Subsequent finish painting shall be in accordance with Master Paint Institute standards. Prior to painting, all steel shall be cleaned of loose rust, loose mill scale, dirt and other foreign material. The fabricator shall not sandblast, flame clean or pickle prior to painting. Factory cover all steel with one coat of red oxide primer paint formulated to equal or exceed the

performance requirement of federal Specification TT-P-636D, TT-P-664C and SSPC Paint-25.

2.10.16.1 Primary Frames: Clean all steel per SSPC-SP2. Apply one coat of water reducible alkyd primer by spray or dip method to a minimum coating thickness of 1.0 mil.

2.10.16.2 Secondary Frames: Clean all steel per SSPC-SP8. Apply one coat of coil applied polyester primer to a minimum coating thickness of 0.5 mil [Purlins and Girts].

2.10.17 Metal Roof and Wall Panels: The panels shall be equal to Mueller, Inc. R-Panel and Mueller, Inc. U-Panel. The panels shall have a hail resistance of U.L. Class-4 Rating, shall be fire resistant and be wind resistant up to 140 mph. Colors shall be Mansard Brown and. Tan, per Mueller, Inc. Reference locations and colors on the drawings. The panels shall have been tested as defined in U.L. 580 and be Class 90. The panels shall be capable of resisting wind uplift pressure established per ASCE-7 and the International Building Code. The Contractor shall provide Metal Roof System with a 5-year minimum Warranty for Non-Structural Metal Roofing/Wall System, 30-year minimum warranty on manufacturer's material finish, 20-year minimum warrant on manufacturer's material against rust and 20-year minimum weather-tightness Warranty. The metal roof and wall panels shall be Aluminum-Zinc alloy coated [AZ-50 Galvalume] steel sheet, 26 gauge, ASTM A-792, Grade 40, Yield Strength 40 KSI, minimum, with seams at 36" O.C. Color sample shall be provided by the Contractor via submittal. Finish shall be full strength Kynar 500/Hylar 5000 Fluoropolymer coating applied by the manufacturer on a continuous coil line with a top coat to provide a total top side dry film thickness of 0.75
+or- 0.05 mil. over a 0.20 +or- 0.05 mil coat to provide a total top side dry film thickness of 0.95 +or- 0.10 mil. Bottom side shall be coated with a primer [non-metalics, only] and Beige urethane coating with a total dry film thickness of 0.35 +or- 0.05 mil. Finish shall conform to all tests for adhesion, flexibility and longevity as specified by the Kynar 500/Hylar 5000 finish supplier. Provide a submittal.

2.10.18 Metal Panel Accessories: All rake trim, peak boxes, outside corners, drip edges, rake end caps, transition trim, ceiling vents and accessories shall be of the same composition as the metal wall and roof panels, the model/type as indicted on the drawings and of the color indicated in the drawings. Screw head color for all attachments shall match the color of the surface to which they are attached, throughout.

2.10.19 All Roof and Wall panel laps shall face opposite to the direction of the prevailing wind of San Angelo, Texas which is South-Southwest to North-Northeast.

2.10.20 All roof panels, wall panels, accessories and fasteners shall be from a single manufacturer.

2.10.21 Roof Ridge Vent: Roof ridge vent shall be equal to Cor-A-Vent low profile floating ridge vent as manufactured by Rigid Global Buildings. Color shall match Mueller, Inc. Mansard Brown. Provide a submittal.

2.10.22 Gutter and Downspout: Provide new metal gutters and downspouts, bottom kick0outs, downspout straps, gutter straps of sizes and types indicated on the drawings, minimum. Color shall be Mueller, Inc. “Mansard Brown,” or equal. Color sample shall be provided by the Contractor via submittal.

2.10.23 Sealing Tape: The Contractor shall provide butyl sealing tape for metal roof panels and metal wall panels applied in accordance with the manufacturer’s recommendations.

2.11 **COLD-FORMED METAL FRAMING:** Provide the following cold-formed framing:

2.11.1 7/8”-20 gauge [0.0359” thick], galvanized furring channels x length required equal to that by U. S. Gypsum. Placed and spaced according to the drawings. Provide submittal.

2.11.2 3 5/8”-18 gauge [0.0478” thick], galvanized x length required steel studs equal to that by U. S. Gypsum. Placed and spaced according to the drawings. Provide a submittal.

2.11.3 3 5/8”-20 gauge [0.0359” thick] galvanized x length required top and bottom steel track equal to that by U. S. Gypsum. Placed and spaced according to the drawings. Provide a submittal.

2.11.4 6”-18 gauge [0.0478” thick], galvanized x length required steel studs equal to said steel studs by U. S. Gypsum. Placed and spaced according to the drawings. Provide a submittal.

2.11.5 6”-20 gauge [0.0359” thick] galvanized x length required top and bottom steel track equal to that by U. S. Gypsum. Placed and spaced according to the drawings. Provide a submittal.

2.11.6 Metal Stud Reinforcing: U-Channel [CRC] 16 gauge [0.0598” thick], galvanized x ¾’ x length required channel [CRC] with 18 gauge [0.0478”thick], galvanized bridging clips. CRC shall be spaced at 4’-0” O.C. vertical, maximum, all equal to that by U.S. Gypsum. Metal Stud Reinforcing shall be installed with the herein specified 3 5/8” and 6” metal stud framing. Provide a submittal.

2.11.7 Fasteners: Self-drilling, self-tapping screws with steel in accordance with ASTM C-1513 and galvanization in accordance with ASTM B633. Provide a submittal.

2.12 **METAL ROOF DECK:** Metal Roof Deck shall be 1 ½” ‘B’ wide-rib, 20 gauge [0.0359” thick], galvanized roof deck equal to that by Cordeck, [I = 0.212 In4/ft., Sp =

0.243 In3/ft., Sn = 0.255 In3/ft., weight-psf = 2.16] and in compliance with SDI Standards. Provide a submittal.

2.13 **BATT INSULATION:** Under roof deck batt insulation: R-30, ASTM C-665, Type III, Class A, NRC = 0.85, SSA = 0.86, FSK Faced Batts, 48" x 25'-0", minimum with 18" wide edge tabs [based on Purlin Spacing. Equal to EcoBatt Insulation with ECOSE technology by Knauf insulation. Secure with 1"-20 gauge [0.0359" thick] white steel banding [from 500 foot coils] at bottom and perpendicular to purlins at +or- 30" O.C., maximum. Provide a submittal.

2.14 **COATINGS:** "Coating" shall be the general term for material and process. "Paint" shall be defined as a mixture of a solid pigment suspended in a liquid which when applied to a surface dries to a protective and decorative coating. "Stain" shall be defined as a color in a dissolving vehicle that when spread on a surface penetrates to provide color within the surface. Coatings and practices shall comply with federal clean air standards. Lead-based metal primers and/or paints containing lead shall not be permitted and/or used in any coatings. Mecurial Fungicides shall not be permitted and/or used in any coatings. Volatile organic compounds [VOC] shall meet current VOC regulations. All coatings shall comply with the 'Approved Product List' of the Master Painter's Institute [MPI]. Provide MSDS for this item. Provide a submittal.

2.15 **STRIPING:** Striping [Ref: Drawings] for the PT & PT Bid option Areas shall be two [2"] two inches wide for basketball Court and four [4] inches wide for three Running Lane markings and shall be equal to Metalatex Semi-Gloss 1`00% acrylic emulsion coating as manufactured by Sherwin Williams [Provide MSDS for this product]. Provide a submittal.

2.16 **MWD OBSTACLE ITEMS:** Replace existing concrete MWD Training Items with like- kind manufactured obstacle items of the following [Ref: Drawings for locations (Item Numbers herein correspond with drawings)]:

	Item #	Quantity
2.13.1	[A.] Hurdle	3 Each
2.13.2	[B.] Window	1 Each
2.13.3	[C.] A-Frame	1 Each
2.13.4	[D.] Dog-Walk	1 Each
2.13.5	[E.] Tunnel	1 Each
2.13.6	[F.] Stair-Step	1 Each

2.17 Provide concrete bases for obstacle items, where required [Ref: Drawings]. Provide a submittal.

2.18 **ELECTRICAL REQUIREMENTS:**

2.18.1 Electrical: All electrical installation and components shall comply, be sized and installed in accordance with the National Electric Code. Provide power, panel boards, lighting fixtures, lamps, raceways, 600 volt wire and cable, wiring devices, device plates, devices, pull and junction boxes, safety switches, lighting and fan controls, circuit breakers, fuses, identification [nameplates, where required] wire and cable terminations and connections to individual units of equipment as required and where indicated on the Drawings. All wiring devices shall be U.L. listed, commercial specification grade, Switches shall be rated 20 amps at 120/277 volts, AC. Standard receptacles shall be commercial grade, 20 amp, duplex, grounding type, in NEMA configurations. Switches in the same location shall be ganged behind a single plate. Provide metal waterproof outlet covers at all duplex outlets. Provide a submittal.

2.18.2 Acceptable switch and receptacle manufacturers are Hubbell, Arrow-Hart, Bryant, Leviton, Pass & Seymour, General Electric, Slater, or equal. Provide a submittal.

2.19 **CONDUIT AND FITTINGS:** Conduit permitted shall be Rigid Galvanized, EMT or PVC. Conduit Types utilized shall be run only as permitted per code. All wiring shall be run in conduit. Conduit placed in concrete or run underground shall be rigid galvanized conduit or PVC. Conduit exposed or run in walls above grade shall be rigid or EMT. All conduit bends shall be free from dents and kinks. All conduit shall be electrically continuous from the service equipment to all outlets and shall be secured to all metal boxes with one lock nut outside, and one inside the box with a reinforced bakelite bushing. Leave a polypropylene pull string in all empty conduits. Provide a submittal.

2.20 **WIRE AND CABLE:** All wire and cables shall be U.L. listed and labeled and conform with applicable standards of U.L., NEMA, Federal Specifications and all other applicable industry standards. Connectors and Lugs shall meet U.L. Publication 486. All branch circuit wiring shall be 600 volt, copper, 60 degree C, minimum, Type THHN/THWN with a minimum size of #12 AWG. Wire sizes of #6 AWG and larger shall be stranded. Service and feeder cables shall be 600 volt, stranded copper, 75 degree C, minimum, Type XHHW. No sharing of neutrals and provide a separate ground. Provide a submittal.

2.21 Before energizing any equipment, verify that the correct power supply voltage, ampacity and phasing has been provided at the load side of the disconnect.

2.22 **CANOPY LIGHTING:** Canopy Lighting shall be LED light fixtures located in the quantities indicated on the drawings and shall be equal to the under canopy LED-P-XGSC100/50K/WH light fixture manufactured by naturaLED. Provide a light fixture guard equal to American Time G2071 at each canopy ceiling light fixture. Provide a submittal.

2.23 **CEILING FANS:** Ceiling fans shall be of the type and where located on the drawings. The ceiling fans shall be equal to the 16’-0” diameter Powerfoil D as

manufactured by Big Ass Fans with a ten [10] year minimum mechanical and ten [10] year minimum electrical warranty. The fans located at the PT area shall be three phase and the fans located at the MWD area shall be single phase. Provide a submittal.

2.24 **CHAIN-LINK FENCE AND GATES:** New chain-link fence, fence posts, top rails, post bracing, gate material and accessories shall be equal to that manufactured by General Wire & Supply Company, 3505 North Hillside, Wichita, Kansas 67219, [888] 250-1648. All components shall be from a single manufacturer.

2.24.1 Fence height shall be 6'-0" or 12'-0" layout and height as indicated on the drawings. Chain Link mesh shall be 9 gauge, 2" mesh, Class II with top edge knuckled and bottom edge twisted. All posts shall be round, cold-rolled, electric-resistance welded steel pipe in accordance with ASTM F-1043, Materials design group IC, WT-40 pipe, minimum steel yield strength 50000 psi. Type B external coating. End, Corner and Pull Posts shall be 2 7/8" O.D. pipe, weighing 3.26 lbs. per linear foot. Line posts shall be 2 ½" O.D. pipe weighing 2.32 lbs per linear foot. All line posts shall be spaced at 10'-0" O.C., maximum. Gate posts shall be 2 7/8" O.D., 3.26 lbs per linear foot. Top Rail shall be 1 5/8" O.D. pipe weighing 1.43 lbs per linear foot. Post Bracing Assembly shall be 1.66" O.D. pipe weighing
2.27 lbs per linear foot. 3/8" diameter rod with adjustable take-up. Wire Ties shall be 9 gauge, Class II steel ties for tubular posts spaced at 2'-0" O.C., maximum, throughout. Tension wire shall be 7 gauge wire complying with ASTM A-824 metallic coated marcelled tension wire in accordance with ASTM A-817. Gates shall be 2" O.D. pipe weighing 1.75 lbs per linear foot. Hinges shall be non-lift-off type, offset to permit 180 degree gate opening. Set in concrete. Provide locking device and padlock eyes as integral part of latch, requiring one padlock for locking gate leaves. Provide keepers for all gates.
Finish shall for all fence components, mesh and materials shall be heavy galvanized 2.0 ounce per square foot complying with ASTM A-392. Provide a submittal.

2.25 **HYDRO-MUCHING:** Localized Hydromulching shall be accomplished only when satisfactory results can be expected. Hydromulching shall be performed on all areas indicated on the drawings. Provide a submittal.

2.25.1 Materials used in the Hydromulching operation shall be of the best quality available and consist of the following:

2.15.1.1 Grass – Applied from May 1st to September 1st
2.15.1.2 Conweb – 2000 wood cellulose fiber
2.15.1.3 Hulled Bermuda grass seed
2.15.1.4 8-8-8-fertilizer

2.25.2 The mixture shall be applied at the following rate:

2.15.2.1	50 pounds Conweb	per 1000 square feet
2.15.2.2	2 pounds Bermuda grass seed	per 1000 square feet

2.15.2.3	7 gallons liquid fertilizer	per 1000 square feet, or
2.15.2.4	70 pounds granular fertilizer	per 1000 square feet

2.25.3 Hydromulching shall be applied free from noxious weeds and undesirable plants, stones, roots of trees and other materials that hinder development and maintenance. Water shall be free from oil, acid, alkali salt and other substances that are harmful to growth of grass. Water shall be source approved prior to usage.

2.25.4 Replanting: Areas on which a stand of growing grass is not present in a reasonable length of time shall be hydromulched again in accordance with the appropriate planting season and shall continue to be hydromulched and maintained throughout the maintenance period until an acceptable stand is obtained. A stand shall be defined as live grass plants from hydromulching occurring over 95% of the area, with no more than 10 square feet left uncovered in any one place.

2.26 **CONCRETE RIPRAP:** Concrete Riprap shall be TxDoT Item #432, Class B Concrete. 4500psi at 28 days, air content of 5%-8%, water/cementitious ratio of 0.45, coarse aggregate nominal size of 3/4, or smaller. Class B concrete is air entrained concrete. Reinforcing shall be 6x6-W2.9xW2.9 welded wire fabric with 6” laps [secured with 6”-16 gauge rebar tie-wire] on chairs spaced at 4’-0” O.C.E.W., maximum. Provide per drawings. Provide a submittal.

2.27 **GOVERNMENT/CONTRACTOR SALVAGE/STORAGE**: The following items shall be rendered as indicated herein {Ref: drawings]:

Government Salvage:	Contractor Storage:
PT Volleyball Net	PT Alpha Warrior Unit [1 Each]
PT Light Poles	PT Storage Containers [2 Each]
MWD Excavated Dirt	PT Bleachers [1 Each]

PART 3.0 – EXECUTION:

3.1 **GENERAL:** All work shall be performed as indicated in this SOW, the drawings and in accordance with the manufacturer’s diagrams, instructions and recommendations, unless otherwise specified. The Contractor shall field verify all dimensions and site conditions prior to commencement of any work for this project. Price increase adjustments to the original contract price shall not be issued because the Contractor was not aware of existing conditions. The Contractor shall provide all labor, materials, tools and equipment required to perform all preparation, demolition, disassembly, repairs, construction, installations and re-assembly as listed in this statement of work and the drawings.

3.2 **DEMOLITION:** The Contractor shall demolish and dispose of all items in accordance with this SOW and as indicated on the drawings. Retain indicated items per 2.22 The Contractor shall recycle or divert construction waste from landfill disposal

to the maximum extent practicable The Contractor shall track recycling and waste disposal and submit the report on the provided Construction Waste Management Form for Government Approval at the end of the project, and prior to final acceptance of the work. During demolition, the Contractor shall take all necessary precautions to prevent damage to existing property to remain in place. Any damage to the aforementioned shall be repaired and/or replaced by the Contractor at no additional cost to the Government.

3.3 **SITE EXCAVATION:** Strip topsoil and excavate regardless of material encountered, within the designated limits to the depth[s] indicated in the drawings. Select fill material excavated shall be transported to and placed in fill areas within the limits of the work. All unsatisfactory material including any soil which is disturbed by the Contractor's operations or softened due to exposure to the elements and water and surplus material shall be removed from the base. In no circumstance shall dumping of unsatisfactory material be allowed on base. In the event that it is necessary to remove unsatisfactory material to a depth greater than specified, the Contracting Officer shall be notified. Unsatisfactory material excavated below the grade shown and replaced with satisfactory material as directed shall be at no additional cost to the Government. Excavations carried below the depths indicated, without specific directions, shall, except as otherwise specified, be refilled to the proper grade with satisfactory material as directed. All additional work of this nature shall be at the Contractor's expense. Excavation and filling shall be performed in a manner and sequence that will provide drainage at all times. Excavations shall be kept free from water while work therein is in progress. Material required for fills in excess of that produced by excavation within the grading limits shall be obtained from borrow areas. Dispose of all materials in accordance with Part 5.0.

3.4 **PREPARATION OF GROUND SURFACE FOR FILL:** All vegetation, such as roots, brush, heavy sods, heavy growth of grass, and all decayed vegetable matter, rubbish, and other unsatisfactory material within the area upon which fill is to be placed, shall be stripped or otherwise removed before the fill is started. In no case will unsatisfactory material remain in or under the fill area. Sloped ground surfaces steeper than one vertical to three horizontal on which fill is to be placed shall be plowed, stepped, or broken up, as directed, in such manner that the fill material will bond with the existing surface. Prepared surfaces on which compacted fill is to be placed shall be wetted or dried as may be required to obtain the specified moisture content and density.

3.4.1 Provide sensor tape in all utility trenches in accordance with this SOW and the drawings.

3.5 **BACKFILL:** Place no backfill until work to be covered has been approved. Material shall be free of debris and vegetation, preferably approved excavated material. Place moist in 4” lifts minimum and compact in accordance with this SOW and the drawings.

3.6 **GRADING:** Maintain a positive slope away from structures in all directions and as indicated on the drawings. The entire construction area shall be graded to drain water off- site into the established drainage ways. There shall be no area of ponding water in the construction area. The surface upon completion shall be smooth and in conformity with the sections and grades indicated on the drawings.

3.7 **TOPSOIL PREPARATION**: On areas to receive topsoil, the compacted subgrade soil shall be scarified to a depth of two inches for bonding of topsoil with subsoil.

2.13 **UTILITIES:** Protect all utilities.

3.8 **EROSION CONTROL:** Take necessary measures during the construction period to control eroded soil or any foreign substance from entering and drainage or waterway.

3.9 **TESTING:** Provide testing in accordance with this SOW.

3.10 **EXISTING ALPHA WARRIOR UNIT [AWU]:** The Contractor shall dismantle the existing AWU and store said unit during work for this project. The AWU individual leg bases only shall be re-installed after final location coordination with the Government prior to placement of the flexible base, asphalt and finish surface [Ref: A-17 of the Drawings]. The individual leg bases shall be adjusted to accommodate the new finish surface elevation for the PT Base Bid or for the Bid Alternate. The AWU shall be re-assembled near or at the end of construction.

3.11 **WELDING, CUTTING, AND BRAZING:** Fire Protection shall complete inspection of all welding, cutting and brazing operations prior to any operation. The Contractor shall provide the appropriate operable fire extinguisher[s]. The Contractor shall comply with American Welding Society AWI D1.1, OSHA STD29 CFR 1910.252 Welding, Cutting and Brazing (General Requirements) and AFOSH 91-5 Welding, Cutting and Brazing. Air Force Form 592 USAF Welding, Cutting and Brazing permit shall be issued prior to any operation and shall be kept on site until completion of operation or permit expires. Contact Fire Protection at (325) 654-3532/33/34 for issuance of permit. Welding shall be performed by currently AWS certified welders and shall comply with AWS standards. The Contractor’s welders shall produce current certification documentation upon request.

3.12 **MAINTENANCE GRADES AND EROSION REPAIR:** It shall be the responsibility of the Contractor to maintain the established grades of the planting at the PT and MWD areas after the commencement of planting operations and during the specified maintenance period. Any damage to the finished surface from Contractor's operations shall be promptly repaired. In the event erosion occurs from either watering operations or from rainfall, such damage shall be promptly repaired. Ruts, ridges, tracks, and other surface irregularities shall be corrected and the areas replanted, where required, prior to acceptance.

3.13 **CLEANUP:** The Contractor shall collect any and all trash, debris, refuse, garbage, etc., that is generate and place it in appropriate containers with lids or approved covers on a periodic basis or as directed by the Contracting Officer's representative. The aforementioned materials shall be hauled from the site by appropriate means on a daily basis, unless otherwise approved by the Contracting Officer's representative. Disposal shall be outside the limits of Government property. Disposal shall be by sanitary landfill or other approved methods and shall conform to all local, state, and federal guidelines, criteria, and regulations. Upon completion of the work, the Contractor shall leave the work site and storage area(s) in a clean, neat and workmanlike condition satisfactory to the Contracting Officer. It is anticipated that excavation, filling, and plowing of roadways shall be required to restore the area to near natural conditions that shall permit the growth of vegetation thereon. Restoration to original contours is required unless otherwise directed by the Contracting Officer.

3.14 The Contractor shall be responsible for requesting a final inspection from TGC. At the contract final inspection, there shall be a joint Government (Goodfellow AFB & TGC) Contractor inspection to include operational testing of all building systems including lighting and ceiling fans to ensure all systems are operable.

3.15 **AS-BUILT DRAWINGS:** Following the project completion or turnover, within 14 days the Contractor shall furnish 2 redline sets of mark up as built drawings to the Contracting Officer. The statement "As-Built" and date shall be clearly marked at the lower right-hand corner of each drawing sheet.

3.16 **PRODUCT DATA:** Provide the Government with all Manufacturer's installation and maintenance instructions for all products and equipment.

PART 4.0 – UTILITY OUTAGES AND SPECIAL CONDITIONS:

4.1 **BASE CIVIL ENGINEERING WORK CLEARANCE REQUEST:** The Contractor shall obtain and process AF Form 103 for approval prior to commencement of work for this project. The Contractor shall have this approved form on the job site at all times.

4.1.1 Due to the requirement for multiple agencies to coordinate on these requests, expect 7 – 10 days for paperwork processing. Contractor requests should be submitted at the earliest possible date to preclude delays.

4.2 **UTILITY OUTAGES:** When a utility outage is necessary to perform the contract work in a occupied facility, regardless of whether the work area is occupied, the outage shall be performed by the Contractor during non-duty hours at no additional cost to the Government, unless otherwise approved by the Contracting Officer. The Contractor shall notify the Contract Inspector of outage requirements to include buildings affected; length of outage; and reasons for outage. The Contractor must allow affected occupants a minimum of two – (2) week notice prior to outage. The Contractor is also required to provide the Contracting Office a written notification of the requested outage.

4.3 **BASE FIRE REGULATIONS:** The Contractor shall comply with Base Fire Regulations as set forth in the latest edition of GAFB Instruction 32-2001, titled “Base Fire Protection Program”. The Contractor shall use no explosives or fire in performing the work. All work shall be in strict compliance with all National Fire Codes.

4.4 **CONFINED SPACE:** In accordance With Air Force Occupational Safety & Health Standard. 91-25, Ch. 7, the organization shall coordinate with the Contractor regarding with the following when the Contractor enters a confined space:

4.4.1 Notify the Contractor if the space is classified permit or non-permit required.

4.4.2 Brief Contractor on the contents of the space.

4.4.3 Brief Contractor on the known hazards of the space.

4.4.4. Brief the Contractor on what precautions and procedures have been implemented by the organization to protect AF workers.

4.4.5 Coordinate operations and procedures and agree on permit system to be used if both AF and Contractor personnel shall enter the space at the same time.

4.4.6 The Fire Department shall coordinate (document) on the contract if they are supplying a rescue team.

4.4.7 The Contractor shall follow all requirements outline in OSHA Std. 1910.146.

4.5 **LOCKOUT/TAGOUT, HAZARDOUS ENERGY CONTROL:** In addition to the requirements in OSHA Std. 1910.147, if a Contractor needs to lock or tag something out, the Contractor shall ensure that affected employees are notified before and after the locks and tags are used.

PART 5.0 - ENVIRONMENTAL REQUIREMENTS:

5.1 **COMPLIANCE WITH LAWS:** Construction activities shall NOT exempt from air emission, storm water, hazardous waste, and other environmental compliance rules and regulations. The Contractor shall comply and ensure that all Sub-Contractors comply with all applicable federal, state, and local laws, regulations, ordinances and standards related to environmental matters.

5.2 **PROTECTION OF HISTORICAL AND ARCHAEOLOGICAL RESOURCES:** All known Historical, Archaeological, and Cultural Resources within the Contractors work area shall be designated on the contract Technical Exhibits. The Contractor shall take precautions during the contract period to preserve all resources, as they existed at the time of contract award and comply with the Archaeological and Historic Preservation Act (AHPA) and the Archaeological Resources Protection Act (ARPA). The Contractor shall provide all protective devices such as off-limit markings, fencing, barricades or

other devices as needed and shall be responsible for preservation of the sites during this contract.

5.2.1 All items having any potential historical or archaeological interest outside of designated areas, which are discovered in the course of any construction activities, shall be carefully preserved. The Contractor shall protect the find in-place by leaving the archaeological find undisturbed and by using flags to mark a 50-foot radius area around the find. The find shall be immediately reported to the Contracting Officer so that the proper authorities may be notified. All work shall be stopped in the immediate area of the discovery until directed by the Contracting Officer to resume work. Any work required to preserve or protect these finds shall be accomplished before work resumes.

5.3 **HAZARDOUS AND SPECIAL WASTES GENERATED BY THE CONTRACTOR:** The Contractor shall identify, characterize, containerize, store and dispose of hazardous wastes in strict accordance with federal guidelines found in the Code of Federal Regulations, Title 40 (40 CFR) parts 260-270, state regulation 30 TAC 335, all local guidelines, and as specified. A Uniform Hazardous Waste Manifest shall be used by the Contractor to document all parties and locations involved in the transportation, storage and disposal of all hazardous and special wastes. This form shall be provided to the government by the Contractor and signed by the Base Environmental Coordinator (CEIE) before the waste is transported from the limits of government property. A copy of the manifest shall be signed by the receiver of the waste and submitted to the Contracting Officer not later than forty-five days after disposal has taken place. Hazardous waste treatment, storage and disposal facility shall be located within in the state of Texas, permitted by the U.S. EPA, and approved by CEIE.

5.4 **CONTRACTOR ENCOUNTERED HAZARDOUS WASTE:** The Contractor shall notify the Contracting Officer's Representative and CEIE upon encountering any material not identified in this Statement of Work thought to be hazardous that could jeopardize the safety of workers or personnel in the area. The Government shall be responsible for characterization, transportation, storage and disposal of the waste if necessary.

5.5 **ASBESTOS:** To the best of the Government's knowledge, no asbestos-containing material (ACM) shall be encountered during this project. Should the Contractor encounter previously unidentified or suspected ACM, which must be disturbed to comply with the contract documents, the Contractor shall cease that work which would disturb the suspect material and shall immediately notify the Contracting Officer. The Government shall take appropriate measures to ascertain the material's composition and determine any remedial actions necessary.

5.5.1 Asbestos Containing Building Materials: Under no circumstances, under the provisions of this contract, shall the Contractor be allowed to provide asbestos containing building materials, or products containing encapsulated asbestos or mineral fibers as defined in the 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants of 1990, to GAFB.

5.5.2 The Contractor shall provide a signed statement, accompanied by Material Safety Data Sheets (MSDS) for project materials, from a licensed asbestos inspector or the project architect or engineer, proclaiming that no asbestos-containing building materials were used in the construction.

5.6 **HAZARDOUS MATERIALS:** The Contractor shall provide to the Contracting Officer an AF Form 3000, Material and Approval Submittal, listing all materials to be utilized during the contract. If any of the material is classified as hazardous in accordance with AFI 32-7086, the Contractor shall submit an AF Form 3952, (Chemical/Hazardous Material Request Authorization) for each material item with all supporting information as required for approval. The Contractor must obtain authorization from the Contracting Officer prior to bringing or using hazardous materials on the installation. The Contractor must supply an up-to-date MSDS for each requested AF Form 3952 item listed as a hazardous material, as defined to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the MSDSs submitted under this contract. The Contractor must maintain an onsite file of all MSDSs. As determined by the Contracting Officer, either on a monthly basis or at the end of the contract, the Contractor shall submit for approval by the Contracting Officer (via AF From 3000), a Contractors Hazardous Materials Usage Report (2 copies) indicating usage of HAZMAT materials within the contract period on Goodfellow AFB. No hazardous materials, lubricants, oils, liquids or related materials shall be deposited in the refuse containers on base.

5.7 **NUISANCE AND POLLUTING ACTIVITY PROHIBITED**: Polluting, dumping, or discharging of any harmful, nuisance, or regulated materials (such as but not limited to concrete truck washout, vehicle maintenance fluids, residue from saw cutting operations, solid waste and hazardous substances) into building drains, site drains, streams, waterways, holding ponds or to the ground surface shall not be permitted and the Contractor shall be held responsible for any and all damages which may result. Further, the Contractor shall conduct work activities in such a fashion as to avoid creating any legal nuisance, including but not limited to, suppression of noise and dust, control of erosion, and implementation of other measures as necessary to minimize impacts of work activities.

5.8 **RELEASE OF FLUIDS TO THE SANITARY SEWER SYSTEM:** Goodfellow AFB's sanitary sewer system discharges into the Publicly Owned Treatment Works (POTW) operated by the City of San Angelo, Texas. This POTW has established testing requirements for certain constituents as well as discharge limits of those same constituents. Accordingly, any Contractor performing work at Goodfellow AFB and contemplating a release of non-hazardous water into the sanitary sewer system shall meet the pretreatment standards and comply with the testing/release requirements established by the City of San Angelo. Contractor is also responsible for all testing, monitoring, measuring, documenting, etc. to verify this compliance. Contractor shall

not discharge wastewater to base's sanitary sewer without prior approval of the Government.

5.9 **AIR EMISSIONS:** Media blasting may require registering the construction activity under state regulation 30 TAC 106.452. The Contractor shall prepare the state form PI- 7 for signature approval by the base prior to start of construction. The Contractor shall meet all provisions of the Permit-By-Rule.

5.10 **DRINKING WATER:** For all drinking water disruptions, the Contractor shall adhere to 30 TAC 290 Subchapter D paragraph 290.46(g and j). Submit an analysis report and a "Drinking Water Customer Service Inspection checklist" via an AF Form 3000 for Government Approval. Contact Bioenvironmental Engineering at (325) 654-3126 prior to restoring drinking water service.

5.11 **PROTECTION OF WATER RESOURCES:** All work under this contract shall be performed in such a manner that objectionable or nuisance conditions shall not be created in lakes, reservoirs, streams or storm water conveyances through or adjacent to the project areas. The Contractor shall comply with the terms and conditions of Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit, TXR150000 (GCP). At least 30 days prior to the start of construction, the Contractor shall seek coverage under the GCP for storm water and non-storm water discharges associated with his construction activities.

5.11.1 For all soil disturbance of more than 1 acre, the Contractor shall prepare a Storm Water Pollution Prevention Plan (SWP3) meeting all requirements specified in the GCP and shall include the Contractor's Best Management Practices for erosion and sedimentation control at the site. This plan shall be submitted for Government approval (GA).

5.11.2 Regardless of the amount of soil disturbed, all non-storm water discharges from Contractor's site shall be in conformance with TPDES General Permit TXR040000 for Small Municipal Separate Storm Sewer Systems (MS4).

5.11.3 If a Notice of Intent (NOI) is required for permit coverage, the Contractor shall submit the NOI to the state and provide copies to the Government via Form 3000 FIO. Contractor shall make required MS4 notifications to the City of San Angelo and the base. Copies of all notifications shall be provided to the Contracting Officer via Form 3000 FIO. Contractor shall be responsible for fees associated with obtaining coverage under the GCP.

5.11.4 The Contractor shall also file a Notice of Termination (NOT) TCEQ Form 20023 promptly after site stabilization in accordance with the general permit is achieved. These forms may be found at the TCEQ website (http://www.tceq.state.tx.us). The prime Contractor's principal shall sign to certify the NOI/NOC/NOT or Construction Site Notice. A copy of the NOT shall be provided to the Contracting Officer and Base Environmental Coordinator, FIO.

5.11.5 The Government shall specify if the contracted project is part of a larger common development requiring additional storm water measures be taken to obtain permit coverage, or if the project area of construction is greater than 5 acres.

5.11.6 Post-Construction Cleanup or Obliteration: The Contractor shall obliterate all evidence of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess materials, or any other vestiges of construction. It is anticipated that excavation, filling, and plowing of roadways shall be required to restore the area to near natural conditions, which shall permit the growth of vegetation thereon. The disturbed areas shall be graded and filled as required, and topsoil shall be spread to a depth of approximately four inches over the entire area and the entire area seeded with 30 pounds (pure live seed) of common Bermuda per 1000 square feet and then watered as required until a lush hardy growth is established to the satisfaction of the Contracting Officer. Restoration to original contours is required unless otherwise directed by the Contracting Officer.

5.11.7 At the end of the project, and prior to final acceptance, the Contractor shall submit a solid waste diversion report by completing the Construction Waste Management form identifying the materials and weights either recycled or diverted from solid waste disposal to other re-use as well as weights of waste disposed in a landfill.

5.12 **GREEN PROCUREMENT:** Green Purchasing is a mandatory component of the Air Force pollution prevention program. The Under Secretary of Defense issued a policy memorandum “Establishment of the DoD Green Purchasing Program (GPP)” which states: “The DoD goal is to achieve 100% compliance with mandatory Federal GPP programs in all acquisition transactions.” This document contains guidelines for implementing the RCRA, EO, DOD, and Air Force requirements.

5.13 **ENVIRONMENTAL MANAGEMENT SYSTEM:** Contractor’s on site supervisory personnel shall complete EMS Awareness Training. The Base Civil Engineer Environmental Coordinator should be contacted at (325) 654-5946 for information to complete the awareness training within 60 days of contract award or a new contract employee supervisor begins work. The training shall be accomplished utilizing The Environmental Awareness Course Hub (TEACH) at https://usaf.learningbuilder.com. The Contractor is responsible for providing EMS Awareness Training records, for each employee, to the Contracting Officer

PART 6.0 - SITE MAINTENANCE AND CLEANUP:

6.1 **SITE MAINTENANCE:** The Contractor shall protect adjacent property, buildings and their contents from dust, dirt or other materials. Work areas shall be maintained in a neat, clean, safe condition and shall, at a minimum, be cleaned at the end of each shift. All streets and roadways in/or adjacent to the site shall remain free of project generated trash and debris at all times.

PART 7.0 - ENERGY CONSERVATION:

7.1 **UTILITIES CONSERVATION:** The Contractor shall instruct employees in utilities conservation practices. The Contractor shall be responsible for operating under conditions that preclude the waste of utilities, which shall include: Lights shall be used only in areas where and when work is actually being performed. The Contractor shall not adjust mechanical equipment controls for heating, ventilation and air conditioning systems. Water faucets or valves shall be turned off after the required usage has been accomplished. The Contractor shall use good judgment in the conservation of Government utilities. Prevailing energy conservation practices shall be adhered to and enforced by the Contractor.

PART 8.0 – RESPONSIBILITY:

8.1 The above 1 through 7 summaries shall not in any way limit the responsibility of the Contractor to perform all work and furnish all plant, labor, and materials required by this Statement of Work.

PART 9.0 – STORAGE AND PARKING:

9.1 **CONTRACTOR STORAGE:** The Contracting Officer's representative shall designate Contractor storage and parking area. All project storage areas shall be kept free of debris, leaks, stains, or splashes and kept in a neat, clean, and safe condition. Any contamination of the storage area by a hazardous substance shall be immediately remediated by the Contractor, in accordance with PART 5.0 above at no additional expense to the Government. All hazardous materials shall be secured when not in use.

PART 10.0 - COMPLETION OF WORK:

10.1 **OPERATIONAL SYSTEMS:** The Contractor shall insure that work for this project is performed in accordance with the criteria herein and that all equipment and systems shall be fully operational at the completion of work for this project.

-END OF STATEMENT OF WORK-

PART 11.0 TECHNICAL EXHIBITS

A GEOTECHNICAL REPORT: PROPOSED SHADE STRUCTURE BEAVER FIT LOCKER
REFER TO APPENDIX A FOR REPORT

B. GEOTECHNICAL REPORT PROPOSED GOODFELLOW AIR FORCE BASE DOG TRAINING AREA
REFER TO APPENDIX B FOR REPORT

C. DRAWINGS

CS-1 Cover Sheet
CS-2 Index of Drawings, Notes Abbreviations
CS-3 Notes

1.5	Demolition Plan – PT base Bid
1.6	Demolition Plan – PT Bid Option.
1.7	Demolition Plan – MWD Base Bid
C-1	Site Plan – PT Base Bid
C-2	Site Plan – PT Bid Option
C-3	Site Plan – MWD Base Bid
A-1	Floor Plan – PT Base Bid
A-2	Floor Plan – MWD Base Bid
A-3	Reflected Ceiling Plan – PT Base Bid
A-4	Reflected Ceiling Plan – MWD Base Bid
A-5	Roof Plan – PT Base Bid
A-6	Roof Plan – MWD Base Bid
A-7	Elevations – PT & MWD Base Bid
A-8	Building Sections – PT, PT Bid Option & MWD
A-9	Building Sections – PT, PT Bid Option & MWD
A-10	Wall Sections – PT, PT Bid Option & MWD
A-11	Wall Sections – PT, PT Bid Option & MWD
A-12	Floor Plan PT – Bid Alt
A-13	Reflected Ceiling Plan PT – Bid Option
A-14	Roof Plan PT – Bid Option
A-15	Elevations PT – Bid Option
A-16	Miscellaneous Details
A-17	Miscellaneous Details

D. AF Form 66

TE-C: DRAWINGS

CONSTRUCT CANOPY STRUCTURES: PHYSICAL TRAINING (PT) & MILITARY WORKING DOG (MWD)

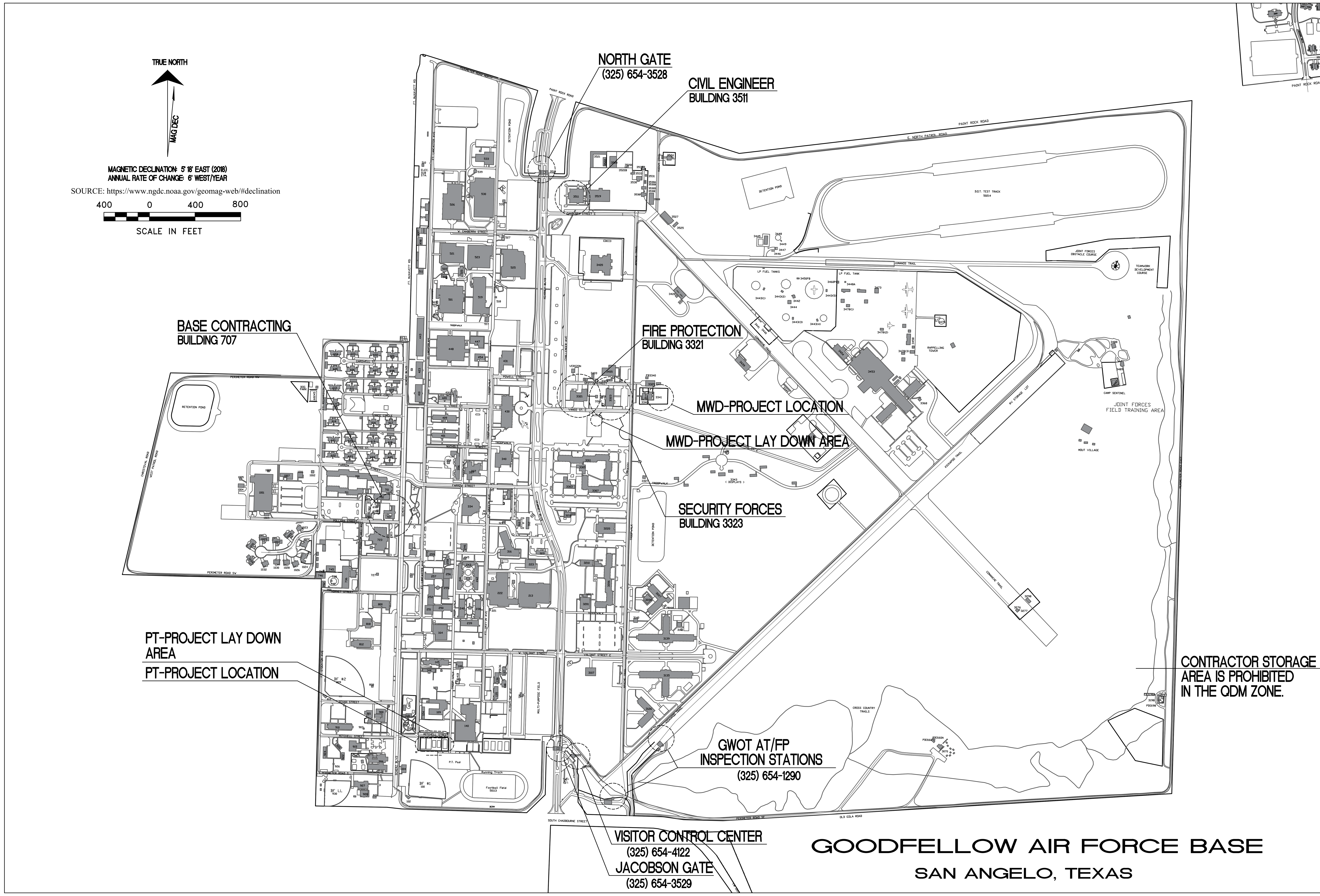
PROJECT NAME:

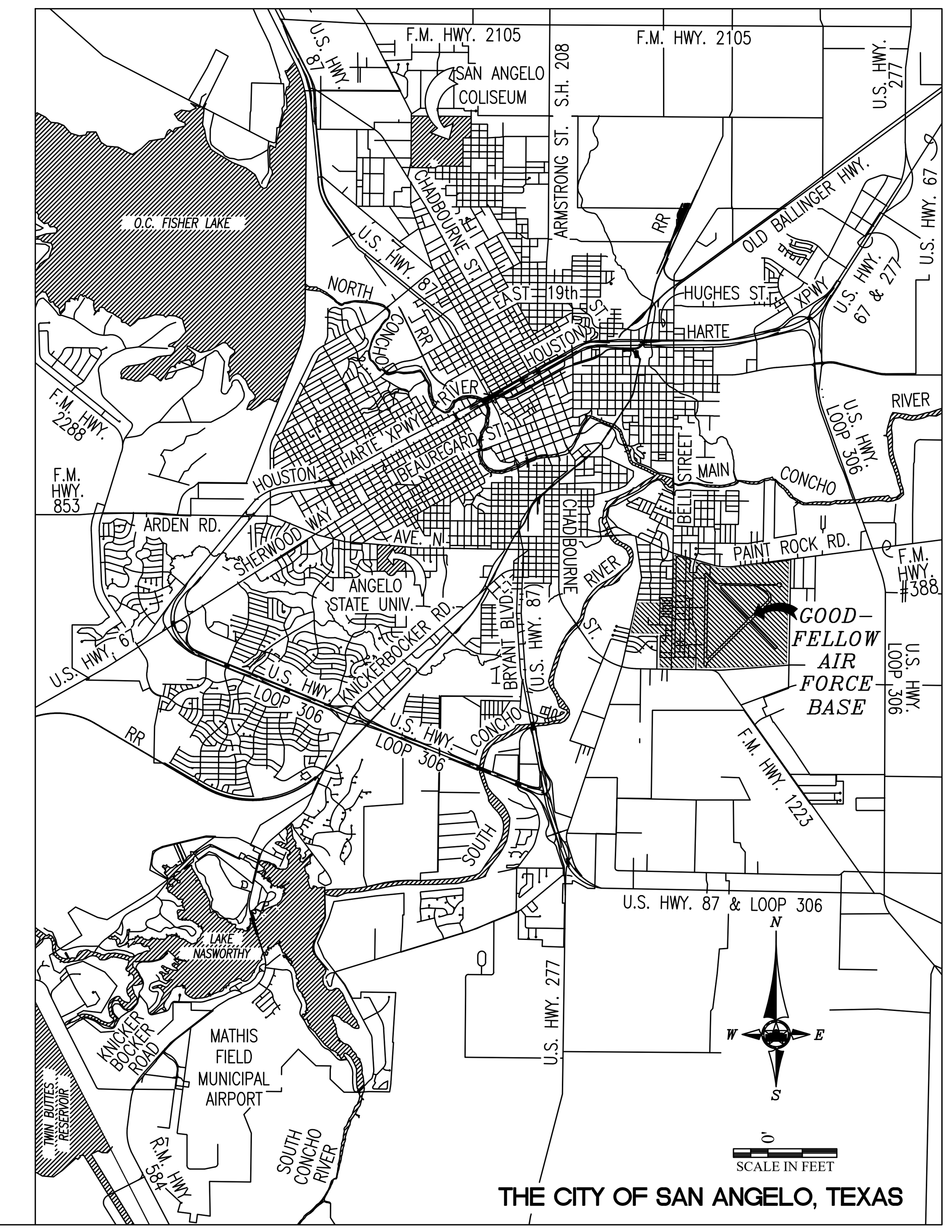
CANOPIES: for PHYSICAL TRAINING [PT] and MILITARY WORKING DOG [MWD]

PROJECT NUMBER:

#1056394

DATE	SIGNATURE
	RECOMMENDED (BCE)
	SUBMITTED (PROGRAMS CHIEF)
	FIRE CHIEF
	SAFETY
	ASSET MANAGEMENT
	BIO-ENVIRONMENTAL OFFICER
	SECURITY FORCES
	COMMUNICATIONS
	CHIEF OF OPERATIONS
	PROGRAM DEVELOPMENT
	PROGRAM MANAGEMENT
	PROJECT MANAGER
	USING AGENCY
	USING AGENCY





GENERAL NOTES

1. PROSPECTIVE OFFERERS SHALL ONLY CONTACT THE BASE CONTRACTING OFFICE 17 CONS/LGCA, 210 SCHERTZ BLVD. GOODFELLOW AIR FORCE BASE, TEXAS 76908-4122, 325-654-5174 FOR ANY AND ALL INFORMATION WITH REGARDS TO THIS SOLICITATION.
2. ALL WORK IS NEW UNLESS OTHERWISE INDICATED TO BE "EXISTING" OR "REUSED" OR "RELOCATED."
3. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
4. THE CONTRACTOR SHALL INITIATE AND PROCESS FOR APPROVAL AF FORM #103 "WORK CLEARANCE REQUEST" FOR THE CONTRACTING OFFICER PRIOR TO PERFORMANCE OF ON-SITE WORK.
5. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO EXCAVATION OR TRENCHING. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE SERVICE LINES AS REQUIRED FOR CONSTRUCTION FOR THIS PROJECT.
6. THE CONTRACTOR SHALL HAND DIG WITHIN (2) FEET EITHER SIDE OF UTILITY CROSSING UNTIL THE UTILITY IS PHYSICALLY EXPOSED, PRIOR TO PERFORMING MECHANICAL TRENCHING OR EXCAVATING.
7. PROVIDE NEW TOPSOIL AND HYDROMULCHING IN ALL AREAS WHERE DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES.
8. PROSPECTIVE OFFERERS ARE HIGHLY ENCOURAGED TO ATTEND THE SCHEDULED PRE-PROPOSAL SITE VISIT TO THOROUGHLY FAMILIARIZE THEMSELVES WITH ANY AND ALL EXISTING SITE AND PROJECT LOCATION CONDITIONS WHICH MAY AFFECT THE WORK UNDER THIS CONTRACT. THE GOVERNMENT SHALL NOT BE RESPONSIBLE FOR CONTRACTOR ERRORS OR OMISSIONS WHICH COULD BE MADE KNOWN BY ATTENDING A SCHEDULED SITE VISIT.
9. THE CONTRACTOR SHALL COORDINATE ALL COMMUNICATIONS WORK WITH THE ENGINEERING SECTION MANAGER AT FRONTIER COMMUNICATIONS AT 1-800-921-8102; WITH THE INSTALLATION OFFICE, SUDDEN-LINK CABLE AT 1-877-794-2724 AND THE GOODFELLOW AFB COMMUNICATIONS SQUADRON AT 325-654-3010.

PROJECT NOTES

1. THE CONTRACTOR SHALL MAINTAIN A CONSTRUCTION SITE NEAT AND CLEAN OF DEBRIS AS DIRECTED BY THE CONTRACTING OFFICER. THE CONTRACTOR'S WASTE DUMPSTERS SHALL BE EMPTIED ON A REGULAR BASIS. ROADWAYS SHALL BE CLEAR OF DIRT AND DEBRIS. THE CONTRACTOR SHALL WATER-DOWN AREA FOR DUST CONTROL.
2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCING AROUND THE LIMITS OF CONSTRUCTION SITE TEMPORARY CONSTRUCTION FENCING. SILT FENCING SHALL ALSO BE PROVIDED AROUND AREA STORM DRAINAGE SURFACE INLESTS. AT THE POST CONSTRUCTION PHASE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL MATERIALS RELATED TO THE PROJECT SILT FENCING, TO INCLUDE ACCUMULATED DEBRIS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BRINGING THE AREA AROUND ALL SILT FENCING BACK TO THEIR ORIGINAL CONDITION PRIOR TO THE INSTALLATION OF SAID FENCING AND PROJECT CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN RECORDS OF THE ORIGINAL CONDITION OF THE SITE, SUCH RECORDS SHALL BE IN THE FORM OF COLOR PHOTOGRAPHS THAT SHALL BE KEPT ON FILE AS WELL AS TRANSMITTED TO THE GOVERNMENT FOR SAFE KEEPING.
3. THE CONTRACTOR SHALL INSTALL AND MAINTAIN A 6'-0" TALL TEMPORARY CONSTRUCTION CHAIN-LINK FENCE AROUND THE LIMITS OF WORK, NOT INCLUDING THE CONSTRUCTION ACCESS ROAD. COORDINATE CHAINS AND PADLOCKS ON GATES WITH GOODFELLOW FIRE DEPARTMENT. EACH GATE SHALL BE NUMBERED FOR EMERGENCY ACCESS, SHALL HAVE INGRESS/EGRESS SIGNAGE AND AREA LIGHTING. THE CONTRACTOR SHALL MAINTAIN FIRE ACCESS THROUGH EACH INDIVIDUAL CONSTRUCTION SITE AT ALL TIMES.
4. TRUCK WASHOUT AREA SHALL BE CONSTRUCTED, MAINTAINED AND CLEANED CLEANED IN ACCORDANCE WITH TCEQ REGULATIONS. PROVIDE DETAILS AND MAINTENANCE PLAN AS PART OF THE STORWATER POLLUTION PREVENTION PLAN. STORWATER PERMITS SHALL BE REQUIRED PRIOR TO THE START OF CONTRUCTION.
5. ALL CONTRACTORS SHALL STOCKPILE REQUIRED MATERIALS AND EQUIPMENT WITHIN THE LIMITS OF RESPECTIVE PROJECT AREAS OR STAGING AREA AS INDICATED ON THE DRWAINGS.
6. ALL HAUL ROADS SHALL BE MAINTAINED SUCH THAT UNOBSTRUCTED ACCESS SHALL BE PROVIDED AT ALL TIMES FROM THE ROAD TO THE STAGING AREA AND FROM THE STAGING AREA TO THE WORK SITE AND FACILITATE GOVERNMENT ACCESS TO THE BASE AT ALL TIMES. THE MAINTENANCE OF HAUL ROADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT. THE HAUL ROAD LOCATIONS SHALL BE AS INDICATED ON THE STAGING/LAYDOWN AND ACCESS PLAN, OR BY THE CONTRACTING OFFICER.
7. THE CONTRACTOR SHALL COORDINATE ACTIVITIES THROUGHOUT THE PROJECT IN A MANNER THAT ALLOWS EMERGENCY ACCESS TO ALL EXISTING ROADWAYS
8. AT ALL TIMES WITHOUT DELAYS TO EMERGENCY VEHICLES RESPONSE TIME. WHILE WITHIN GOODFELLOW AFB, THE CONTRACTOR SHALL COMPLY WITH BASE REGULATIONS PERTAINING TO "NO FIREARMS" AND "NO ILLEGAL DRUGS."
9. ONLY RUBBER-TIRED VEHICLES SHALL BE ALLOWED ON EXISTING PAVEMENT THAT IS TO REMAIN IN PLACE.
10. ALL CONTRACTOR OPERATIONS SHALL BE CONDUCTED AND PERFORMED WITHIN ACCORDANCE OF DEPARTMENT OF LABOR OSHA REQUIREMENTS FOUND IN 29 CFR

10. CONT. 1910 [1910.146 AND 1910.147] AND 29 CFR 1926, AND AIR FORCE OCCUPATIONAL SAFETY AND HEALTH [AFOSH] AND AIR FORCE INSTRUCTION [AFI] STANDARDS INCLUDING AFI 91-203, AIR FORCE CONSOLIDATED OCCUPATINAL SAFETY INSTRUCTION. THE CONTRACTOR SHALL ALSO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH PROJECT IDENTIFIED NATIONAL STANDARDS, MILITARY MANUALS, PAMPHLETS, INSTRUCTIONS, STANDARDS, HANDBOOKS AND WITH THE CORPS OF ENGINEERS [COE] SAFETY MANUAL 385-1-1 [EDITION IN EFFECT ON THE DATE OF THIS SOLICITTION]. ALL PROJECT SITES SHALL BE SUBJECT TO INSPECTION BY THE DEPARTMENT OF LABOR. IN THE EVENT OF CONFLICT BETWEEN THE OSHA STANDARDS AND THESE RQUIREMENTS, THE MOST STRINGENT SHALL APPLY.
11. AT ALL TIMES, THE CONTRACTOR SHALL MAINTAIN ONE FIRE LANE FREE OF OBSTRUCTION AND MAINTAIN ACCESS TO THE SITE AND ALL SURROUNDING ROADS AND STREETS.
12. GRASS AND WEEDY VEGETATION WITHIN THE AREAS UTIIZED BY THE CONTRACTOR, INCLUDING WORK AREAS, ADMINISTRATIVE AREAS AND STORAGE AREAS SHALL BE MOWED WHEN THE GRASS AND WEEDY VEGETATION IS AT A HEIGHT OF 6 INCHES, MOWING SHALL BE TO A HEIGHT OF 3 INCHES. MOWING SHALL BE ACCOMPLISHED WITH A ROTARY MOWER THAT LEAVES THE CLIPPINGS EVENLY DISTRIBUTED ON THE SOIL SURFACE. MOWING SHALL BE ACCOMPLISHED DURING PERIODS AND IN SUCH A MANNER THAT THE SOIL AND GRASS SHALL NOT BE DAMAGED. TOWED OR SELF-PROPELLED RIDING MOWERS SHALL NOT BE OPERATED WITHIN 3 FEET OF TREES OR SHRUBS. AREAS ADJACENT TO TREES AND SHRUBS SHALL BE MOWED WITH HAND-PROPELLED MOWERS.
13. EROSION CONTROL DEVICES SHALL BE USED FOR STAGING AREAS AND MATERIAL STOCKPILES WHEN NECESSAY TO CONTROL EROSION AND STORM WATER RUNOFF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. A SWPPP SHALL BE SUBMITTED PRIOR TO MOBILIZING.

17th CIVIL ENGINEER SQUADRON — READY * WILLING * ABLE

ASBESTOS CONTAINING MATERIAL [ACM] AND LEAD BASED PAINT [LBP] STATEMENT
[Circle the appropriate ACM?LBP and place an "X" in the appropriate boxes]

This facility contains ACM/LBP materials.	
This facility does not contains ACM/LBP materials.	
This facility contains ACM/LBP materials that will be left in place for this project.	
This facility contains ACM/LBP materials that will be removed by the Air Force.	
This facility contains ACM/LBP materials that will be removed by an ACM/LBP removal contractor.	
This facility contains ACM/LBP materials that will be removed under this contract.	

REVISIONS

Symbol	Description	Date	Appr

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394
SHEET TITLE: COVER SHEET
Date: APRIL, 2020

SEQ.	SHEET	OF
01	CS-1	26

TYPICAL ABBREVIATIONS [WHERE APPLICABLE]

ACCORD.	ACCORDANCE
ACOUS. INSUL.	ACOUSTIC INSULATION
ADDTN.	ADDITION
ADJ.	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
ALUM.	ALUMINUM
ATTEN.	ATTENUATING
BITUM	BITUMINOUS
BLK	BLOCK
BLKG	BLOCKING
BM	BENCH MARK
BOT	BOTTOM
CAB	CABINET
CEM. BD.	CEMENTITIOUS BOARD
CER TILE	CERAMIC TILE
CLG	CEILING
CONC.	CONCRETE
CMU	CONC. MASONRY UNIT
COL.	COLUMN
CONF.	CONFERENCE
CONT.	CONTINUOUS
COORD	COORDINATE
CORR	CORRIDOR
DEMO	DEMOLITION
DET	DETAIL
DIM	DIMENSION
DIST	DISTANCE
DWG	DRAWING
EA	EACH
ELEC	ELECTRIC(AL)
E.W.C.	ELECTRIC WATER COOLER
EXIST.	EXISTING
EXP. JT.	EXPANSION JOINT
EQ	EQUAL
E.W.	EACH WAY
EXT.	EXTERIOR
EXT. CAB.	EXTINGUISHER CABINET
F.D.	FLOOR DRAIN
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH
FIN FLR	FINISH FLOOR
FLOUR.	FLOURESCENT
FLR.	FLOOR
FLR. E.J.	FLOOR EXPANSION JOINT
FURR'G	FURRING
GA.	GAUGE
GALV	GALVANIZED
GFE	GOVERNMENT FURNISH EQUIPMENT
GYP BD.	GYPSUM BOARD
H.C.	HANDICAPPED
HDWD.	HARDWOOD
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
INSUL	INSULATION
LAV	LAVATORY
MAINT	MAINTENANCE
MAX.	MAXIMUM
MECH.	MECHANICAL
MFRD.	MANUFACTURED
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MPE	MECHANICAL–PLUMBING–ELECTRICAL
MTD.	MOUNTED
MTL.	METAL
O.C.	ON CENTER
O.C.E.W.	ON CENTER EACH WAY
OPNG.	OPENING
ORIG. BLDG.	ORIGINAL BUILDING
P	PLATE
PLY'WD	PLYWOOD
PLBG.	PLUMBING
PROJ. MNT.	PROJECTOR MOUNT
PROT.	PROTECTION
PSI	POUNDS PER SQUARE INCH
R.A.F.	RAISED ACCESS FLOOR
REF.	REFERENCE
RESIL.	RESILIENT
RM.	ROOM
SCHED.	SCHEDULE
SCTN.	SECTION
SCW	SOLID CORE WOOD
SPEC.	SPECIFICATION
S.S.	STAINLESS STEEL
STL.	STEEL
STRUCT.	STRUCTURE
SUSP. GRID CLG. SYS.	SUSPENDED GRID CEILING SYSTEM
THK.	THICK
TYP.	TYPICAL
TYP. MRKR./ TACK BD.	TYPICAL MARKER/TACK BOARD
UNC.	UNCASED
U.S.G.	UNITED STATES GYPSUM
V.C.T.	VINYL COMPOSITION TILE
VERT.	VERTICAL
V.W.C.	VINYL WALL COVERING
WD.	WOOD
WDW.	WINDOW
W/	WITH
W/MFR'S	WITH MANUFACTURER'S
W.W.F.	WELDED WIRE FABRIC
ø	DIAMETER

PRIVATIZED ELECTRICAL UTILITY SYSTEMS:

AEP TEXAS NORTH COMPANY IS THE UTILITY OWNER AND SOLE PROVIDER OF THE ELECTRICAL DISTRIBUTION UTILITY SYSTEM AT GOODFELLOW AIR FORCE BASE, TEXAS.

NEWLY PROVIDED SYSTEM INFRASTRUCTURE AND/OR MODIFICATIONS OF OR CONNECTIONS TO THE EXISTING SYSTEM INFRAISTRUCTURE DENTIIFIED IN THE SPECIFICATIONS AND/OR DRWAINGS MUST BE COORDINATED WITH THE UTILITY OWNER PRIOR TO THE CONTRACT START DATE. TO CONNECT FACILITIES, THE CONSTRUCTION CONTRACTOR SHALL REQUEST THAT THE UTILITY OWNER PROVIDE THE REQUIRED CONNECTING FACILITIES, UP TO A POINT OF DEMARCATION WHICH INCLUDES ALL TERMINATIONS AT THE TRANSFORMER.

ALL WORK ON THE SYSTEM OR FACILLITIES EXPECTED TO CONNECT TO THE SYSTEM SHALL COMPLY WITH THE UTILITY OWNER'S SPECIFICATIONS AND CONSTRUCTION STANDARDS. IN NO EVENT SHALL THE CONSTRUCTION CONTRACTOR CONNECT TO, OR OTHERWISE TOUCH THE UTILITY OWNER'S INFRASTRUCURE WITHOUT THE UTILITY OWNER'S EXPRESS WRITTEN PERMISSION.

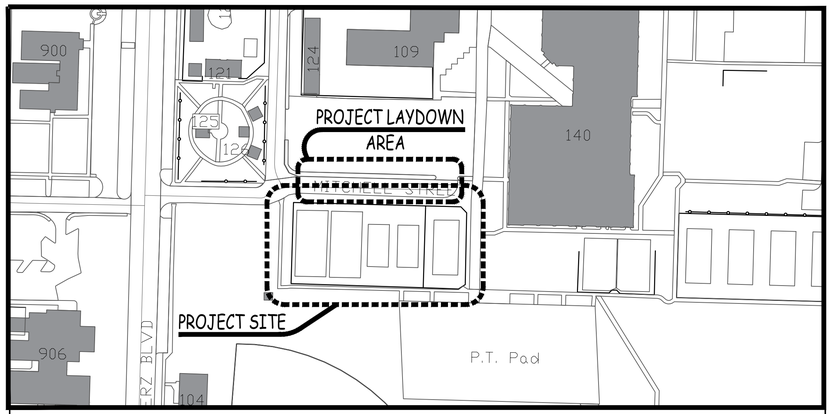
THE UTILITY OWNER: CONTACT VIA:
AEP TEXAS NORTH COMPANY
930 West 19th Street
San Angelo, Texas 76903
PHONE: 325–657–2800

ARCHITECT / ENGINEER RESPONSIBILITIES:
1. SITE PLAN WITH ADJACENT STREETS OR LANDMARKS IDENTIFIED.
2. BUILDING PLAN SHEETS WITH THE FOLLOWING INFORMATION:
   - A. LOCATION OF SERVICE ENTRANCE
   - B. REQUESTED TRANSFORMER LOCATION, IF A PREFERENCE IS KNOWN.
   - C. SQUARE FOOTAGE OF BUILDING SPACE WITH THE TYPE OF LOAD TO BE SERVED.
   - D. ELECTRICAL PANEL SCHEDULE
   - E. NUMBER AND SIZE OF SECONDARY CONDUCTORS TO BE TERMINATED AT THE TRANSFORMER
   - F. PROPOSED LOCATION OF OTHER UTILITY ROUTES AND ENTRANCES.
3. LOAD DEMAND INFORMATION FROM EXISTING SIMILAR BUILDINGS.
4. SCHEDULE OF WORK.

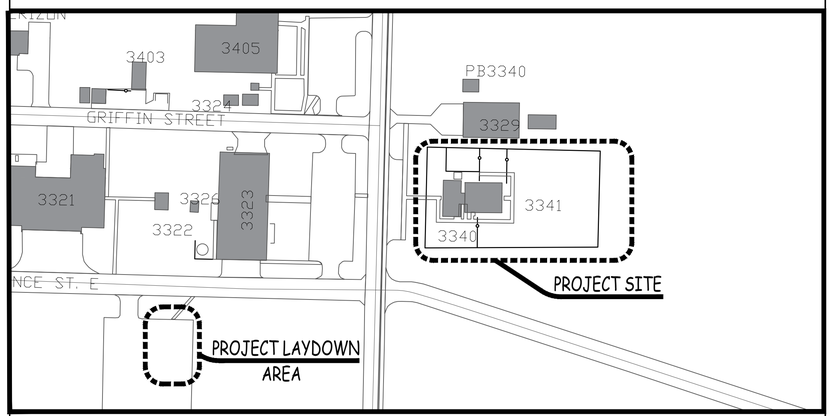
CONTRACTOR / BUILDER RESPONSIBILITIES:
1. CONTACT NAMES AND NUMBERS UPON ARRIVAL AT THE SITE.
2. LOCATION OF TRANSFORMER PAD.
3. INSTALL SECONDARY CONDUITS INTO THE APPROPRIATE WELL LOCATION BEFORE PAD INSTALLATION. THIS INCLUDES ANY REQUIRED METERING CABLE CONDUITS.
4. PROVIDE FINAL GRADE IN TRANSFORMER PAD AREA PRIOR TO PAD CONSTRUCTION.
5. INSTALLATION OF ANY REQUIRED INSTRUMENT RATED METERING EQUIPMENT.
6. PROVIDE SECONDARY CABLE TERMINALS.
7. PRIMARY CONDUIT DITCH COMPACTION IF REQUIRED.
8. ASPHALT AND/OR CONCRETE CUT AND REPAIR IF REQUIRED.
9. LOCATION OF OTHER UTILITY LINES INSTALLED DURING THIS CONSTRUCTION.
10. TEMPORARY POWER POLE (SEE ATTACHED SKETCHES). LOCATION TO BE APPROVED BY AEP TEXAS. NOTE: ANY LINE EXTENSION REQUIRED FOR THE PURPOSE OF TEMPORARY SERVICE WILL REQUIRE A CIAC TO COVER THE COST OF INSTALLATION AND REMOVAL OF TEMPORARY FACILITIES AND ANY MATERIAL WHICH CANNOT BE REUSED.

AEP TEXAS RESPONSIBILITIES:
1. SIZING AND INSTALLATION OF ALL PRIMARY CONDUCTORS INCLUDING DITCH AND CONDUIT.
2. SIZING AND INSTALLATION OF DISTRIBUTION TRANSFORMERS.
3. CONSTRUCTION OF TRANSFORMER PAD. SEE ATTACHED SKETCH
4. INSTALLATION OF SECONDARY CABLE TERMINALS.

CONSTRUCTION NOTES:
1. THE EDGE OF THE TRANSFORMER PAD SHALL NOT BE CLOSER THAN TWO FEET FROM A WALL, OR FIVE FEET FROM A DOOR OR WINDOW, OR TWENTY FEET FROM A STAIRWELL OR FIRE ESCAPE.
2. TRANSFORMERS SHALL NOT BE COMPLETELY ENCLOSED BY WALLS, FENCES, OR LANDSCAPING WITHOUT VENTILATION WHICH IS APPROVED BY AEP TEXAS. THE ENTIRE WIDTH OF THE FRONT OF THE TRANSFORMER AND SECONDARY CABINET SHALL BE ACCESSIBLE. IF A FENCE IS INSTALLED, IT WILL HAVE SUFFICIENT GATES NECESSARY TO PROVIDE THIS ACCESS.
3. TRANSFORMERS WILL BE LOCATED IN THE AREAS WITH ALL WEATHER ACCESS BY SERVICE TRUCKS. IN ADDITION, THERE WILL BE NO STRUCTURES CONSTRUCTED ABOVE TRANSFORMERS WHICH WOULD INHIBIT CRANE OPERATIONS.
4. NO OTHER UTILITY LINES WILL BE INSTALLED WITHIN TWO FEET OF THE TRANSFORMER PAD.
5. NO CUSTOMER EQUIPMENT, EXCEPT INSTRUMENT RATED METERING EQUIPMENT WHICH IS PLACED ON THE SECONDARY BUSHINGS, SHALL BE ATTACHED TO AEP TEXAS TRANSFORMERS; NOR WILL THERE BE ANY HOLES DRILLED INTO THE TRANSFORMER CABINET FOR CONDUITS, CONDUCTORS OR METERS.
6. THE NUMBER AND SIZE OF THE SECONDARY CONDUCTORS WHICH ARE ALLOWED TO BE ATTACHED TO THE TRANSFORMER SECONDARY BUSHINGS WILL BE CONTROLLED BY AEP TEXAS. IF THE DESIGN REQUIRES MORE OR LARGER CONDUCTORS THAN ALLOWED FOR A PARTICULAR TRANSFORMER SIZE, AEP TEXAS WILL INSTALL A SECONDARY CABINET WITH BUS BARS (SEE ATTACHED SKETCH) ADJACENT TO THE TRANSFORMER. AEP TEXAS WILL SUPPLY AND INSTALL THE SECONDARY CONDUCTORS FROM THE TRANSFORMER TO THE SECONDARY CABINET. THE POINT OF INTERCONNECTION WILL BE THE BUS BARS WITHIN THE SECONDARY CABINET. THIS CABINET WILL REQUIRE A LARGER TRANSFORMER PAD AS SHOWN ON THE ATTACHED SKETCH.
7. TRANSFORMERS LARGER THAN 1000 kVA WILL REQUIRE A LARGER PAD. THIS PAD IS SHOWN ON THE SKETCH LABELED 1500 AND 2500 kVA.
8. TEMPORARY CONSTRUCTION POWER WILL BE SUPPLIED TO CUSTOMER SUPPLIED POWER POLES LOCATED WITHIN FIVE FEET OF AN EXISTING PAD MOUNTED TRANSFORMER OR WITHIN FIFTY FEET OF A PRIMARY POWER POLE (SEE ATTACHED SKETCHES).



PT AREA

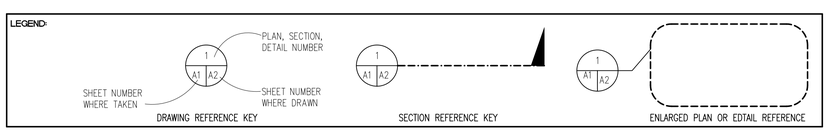


MWD AREA

1 / CS2 CS2 LOCALIZED AREA PLANS
NOT TO SCALE

TRUE NORTH

LEGEND:



INDEX OF DRAWINGS:

17th CIVIL ENGINEER SQUADRON
READY · WILLING · ABLE

REVISIONS

Symbol	Description	Date	Appr

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:
1056394

SHEET TITLE
ABREVIATIONS, INDEX OF DRAWINGS AND LOCALIZED SITE PLAN

Date:
APRIL, 2020

SEQ.	SHEET	OF
2	CS-2	26

A. GENERAL NOTES

1. CONSTRUCTION ACCESS TO THE SITE SHALL BE THROUGH THE EXISTING GATE LOCATED ON SOUTH CHADBOURNE STREET. ALL CONSTRUCTION TRAFFIC ENTERING THE BASE SHALL BE REQUIRED TO PASS THROUGH THE COMMERCIAL VEHICLE SEARCH AREA LOCATED TO THE EAST OF KEARNEY BOULEVARD. HOURS OF OPERATION ARE FROM 6:00 A.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY, PHONE 325-654-1290.

2. THE CONTRACTORS SHALL KEEP ALL PUBLIC ROADS AND STREETS CLEAN OF CONSTRUCTION DEBRIS, MUD, ETC. AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE EQUIPMENT AND PERSONNEL TO CLEAN ANY STREETS AS REQUESTED BY 17CES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO STREETS, PARKING AREAS AND BASE OR GOVERNMENT PROPERTY DAMAGED FROM THEIR CONSTRUCTION ACTIVITIES.

3. CONTRACTORS SHALL MAINTAIN A CONSTRUCTION SITE NEAT AND CLEAN OF DEBRIS AS DIRECTED BY THE CONTRACTING OFFICER. THE CONTRACTOR WASTE DUMPSTERS SHALL BE EMPTIED ON A REGULAR BASIS.

B. STAGING NOTES

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN A TEMPORARY CONSTRUCTION CHAIN LINK FENCE, 6 FEET HIGH, AROUND THE LIMITS OF WORK NOT INCLUDING THE CONSTRUCTION ACCESS ROAD. COORDINATE CHAINS AND PADLOCKS ON GATES WITH GOODFELLOW FIRE DEPARTMENT. EACH GATE SHALL BE NUMBERED FOR EMERGENCY ACCESS, SHALL HAVE ENTRY/EGRESS SIGNAGE AND AREA LIGHTING. CONTRACTORS SHALL MAINTAIN FIRE ACCESS THROUGH EACH INDIVIDUAL CONSTRUCTION SITE AT ALL TIMES.

2. TRUCK WASHOUT AREA SHALL BE CONSTRUCTED, MAINTAINED AND CLEANED IN ACCORDANCE WITH TCEQ REGULATIONS. PROVIDE DETAILS AND MAINTENANCE PLAN AS PART OF THE STORMWATER POLLUTION PREVENTION PLAN. STORMWATER PERMITS ARE REQUIRED PRIOR TO THE START OF CONSTRUCTION.

3. ALL CONTRACTORS SHALL STOCKPILE REQUIRED MATERIALS AND EQUIPMENT WITHIN LIMITS OF RESPECTIVE PROJECT AREAS OR STAGING AREA AS INDICATED ON THE DRAWINGS.

4. THE CONTRACTOR SHALL CONNECT TO EXISTING OR NEW FIRE HYDRANTS FOR TEMPORARY CONSTRUCTION WATER. INSTALL QUICK DISCONNECT, BACK FLOW PREVENTER AND SHUT-OFF VALVE ON 2 1/2" HOSE CONNECTION ONLY. PRIOR TO MAKING ANY CONNECTIONS TO BASE WATER SYSTEMS, THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH 17CES. A FIRE PLUG USAGE PERMIT IS REQUIRED AND USAGE SHALL BE METERED AT ALL TIMES.

5. ALL TEMPORARY ELECTRIC POWER FACILITIES SHALL MEET OR EXCEED NESC AND NEC REQUIREMENTS AS APPLICABLE FOR PRIMARY AND SECONDARY FACILITIES.

C. ACCESS AND VEHICLE PARKING

1. ACCESS TO THE PROJECT FOR ALL CONSTRUCTION PERSONNEL, VEHICLES AND EQUIPMENT IS ILLUSTRATED ON THE STAGING/LAYDOWN AND ACCESS PLAN. ACCESS ROUTES MAY BE SUBJECT TO CHANGE BASED ON OPERATIONAL REQUIREMENTS. POTENTIAL SCHEDULE IMPACTS SHALL BE COORDINATED WITH 17CES.

2. LOCATION OF ACCESS/ HAUL ROADS ARE AS INDICATED ON THE STAGING/LAYDOWN AND ACCESS PLAN.

3. ALL HAUL ROADS SHALL BE MAINTAINED SUCH THAT UNOBSTRUCTED ACCESS SHALL BE PROVIDED AT ALL TIMES FROM THE ROAD TO THE STAGING AREA AND FROM THE STAGING AREA TO THE WORK SITE AND FACILITATE GOVERNMENT ACCESS TO THE BASE AT ALL TIMES. THE MAINTENANCE OF HAUL ROADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT. THE HAUL ROAD LOCATIONS SHALL BE AS INDICATED ON THE STAGING/LAYDOWN AND ACCESS PLAN OR BY 17CES.

4. CONTRACTOR SHALL COORDINATE ACTIVITIES THROUGHOUT THE PROJECT IN A MANNER THAT ALLOWS EMERGENCY ACCESS TO ALL EXISTING ROADWAYS AT ALL TIMES WITHOUT DELAYS TO EMERGENCY VEHICLES RESPONSE TIME.

5. ALL CONTRACTOR VEHICLES AND PERSONNEL MAY BE SEARCHED BY SECURITY FORCES WHEN ENTERING THE BASE AND MAY EXPERIENCE DELAYS. ALL PERSONNEL ENTERING GOODFELLOW A.F.B. MUST HAVE A VALID PHOTO ID PER BASE SECURITY REQUIREMENTS. ALL VEHICLES ENTERING THE BASE MUST HAVE CURRENT/ VALID REGISTRATION, CURRENT/ VALID INSURANCE AND CURRENT/ VALID DRIVERS LICENSE FOR THE OPERATOR. ALL DRIVERS MUST COMPLY WITH ALL GOODFELLOW AFB DRIVING REQUIREMENTS (SPEED LIMITS, SEATBELTS, ETC.)

6. WHEN NOT ENGAGED IN CONSTRUCTION ACTIVITIES, THE CONTRACTOR'S CONSTRUCTION EQUIPMENT AND VEHICLES SHALL BE PARKED WITHIN THE WORK AREA OR STAGING AREA.

D. COORDINATION AND COMMUNICATION DURING CONSTRUCTION

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CORDON OFF THE WORK AREAS AND STREET CROSSINGS BY USING APPROVED BARRICADES.

E. TRAFFIC CONTROL

1. ONLY RUBBER-TIRED VEHICLES SHALL BE ALLOWED ON EXISTING PAVEMENT THAT IS TO REMAIN.

2. ANY DAMAGE TO ROADS AND PAVEMENT DUE TO CONSTRUCTION EQUIPMENT, CONSTRUCTION TRAFFIC OR CONSTRUCTION ACTIVITY SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT HIS/ HER OWN EXPENSE.

3. CONTRACTOR SHALL BORE UNDER KEARNEY BOULEVARD AS NO OPEN CUTTING OF THIS STREET IS PERMITTED.

F. EQUIPMENT AND STOCKPILE HEIGHT

1. STOCKPILE ALL CONSTRUCTION MATERIALS WITHIN STAGING AREA. MAXIMUM HEIGHT 15.00' WITH 5:1 SIDE SLOPES. PROVIDE EROSION CONTROL PROTECTION AROUND THE STOCKPILE LIMITS. ANY MATERIALS THAT ARE TO BE STOCKPILED FOR USE FOR OTHER PROJECTS ON THE BASE SHALL BE COORDINATED WITH 17CES. ALL MATERIAL NOT REQUIRED SHALL BE HAULED OFF GOVERNMENT PROPERTY.

G. EXCAVATION AND TRENCHES

1. OPEN TRENCHES AND EXCAVATIONS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH ORANGE AND WHITE TYPE III BARRICADES AND WITH FLASHING TYPE A-LOW INTENSITY WARNING LIGHTS FROM DUSK TILL DAWN.

H. OTHER SAFETY REQUIREMENTS

1. THE CONTRACTOR SHALL MAINTAIN SAFETY PRACTICES THAT CONFORM TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.

2. AT ALL TIMES THE CONTRACTOR SHALL MAINTAIN ONE FIRE LANE FREE FROM OBSTRUCTION AND MAINTAIN ACCESS TO THE SITE AND ALL SURROUNDING ROADS AND STREETS.

J. CONTRACTOR SAFETY PLAN SUBMITTALS

1. THE CONTRACTOR SHALL FURNISH A CONSTRUCTION SAFETY PLAN IN ACCORDANCE WITH THE SPECIFICATIONS WITH THE CONTRACTOR'S PROJECT SCHEDULE. THE SAFETY PLAN SHALL IDENTIFY THE FOLLOWING ITEMS:

   A. PROPOSED ACCESS POINTS, STAGING AREA AND HAUL ROUTES.
   B. TEMPORARY MARKINGS TO BE USED, IF ANY.
   C. LOCATIONS AND TYPE OF BARRICADES OR OTHER TRAFFIC CONTROL DEVICES.
   D. METHODS BY WHICH THE CONTRACTOR WILL COMMUNICATE WITH 17CES.

K. MAINTENANCE OF STORAGE AREA

1. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE CONSTRUCTION SITE, CONSTRUCTION TRAILER(S)/BUILDING(S), AND STORAGE AREA(S) IN A CLEAN, NEAT, WORKMAN LIKE CONDITION, FREE FROM ACCUMULATION OF WASTE, RUBBISH, WEEDS, OVERGROWN GRASS, OR CONSTRUCTION DEBRIS, TO THE SATISFACTION OF THE CONTRACTING OFFICER. ALL LOOSE OR LIGHT WEIGHT MATERIALS SHALL BE SECURED TO PREVENT BLOWING OR SCATTERING. THE BURNING OF TRASH OR CONSTRUCTION DEBRIS IS STRICTLY PROHIBITED ON GOODFELLOW AFB. PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS, TOOLS, EQUIPMENT, AND MATERIALS NOT THE PROPERTY OF THE GOVERNMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL LEAVE THE WORK SITE AND STORAGE AREA(S) IN A CLEAN, NEAT, AND WORKMANLIKE CONDITION SATISFACTORY TO THE CONTRACTING OFFICER. REFER TO SECTION 01 57 20.16 44 - ENVIRONMENTAL PROTECTION FOR GOODFELLOW AFB, PARAGRAPH 3.17, POST-CONSTRUCTION CLEANUP.

2. THE CONTRACTOR SHALL KEEP FENCING IN A STATE OF GOOD REPAIR AND PROPER ALIGNMENT. GRASSED OR UNPAVED AREAS, WHICH ARE NOT ESTABLISHED ROADWAYS, WILL BE COVERED WITH A LAYER OF GRAVEL AS NECESSARY TO PREVENT RUTTING AND THE TRACKING OF MUD ONTO PAVED OR ESTABLISHED ROADWAYS, SHOULD THE CONTRACTOR ELECT TO TRAVERSE THEM WITH CONSTRUCTION EQUIPMENT OR OTHER VEHICLES; GRAVEL GRADATION SHALL BE AT THE CONTRACTOR'S DISCRETION. MOW AND MAINTAIN GRASS LOCATED WITHIN THE BOUNDARIES OF THE CONSTRUCTION SITE FOR THE DURATION OF THE PROJECT. GRASS AND VEGETATION ALONG FENCES, BUILDINGS, UNDER TRAILERS, AND IN AREAS NOT ACCESSIBLE TO MOWERS WILL BE EDGED OR TRIMMED NEATLY.

3. GRASS AND WEEDY VEGETATION WITHIN THE AREAS UTILIZED BY THE CONTRACTOR, INCLUDING WORK AREAS, ADMINISTRATIVE AREAS, AND STORAGE AREAS, SHALL BE KEPT MOWED TO CONTROL VEGETATIVE GROWTH. VEGETATION SHALL BE MOWED WHEN IT REACHES A HEIGHT OF 6 INCHES. MOWING SHALL BE TO A HEIGHT OF 3 INCHES. MOWING SHALL BE ACCOMPLISHED WITH A ROTARY MOWER THAT LEAVES THE CLIPPINGS EVENLY DISTRIBUTED ON THE SOIL SURFACE. MOWING SHALL BE ACCOMPLISHED DURING PERIODS AND IN SUCH MANNER THAT THE SOIL AND GRASS WILL NOT BE DAMAGED. TOWED OR SELF-PROPELLED RIDING MOWERS SHALL NOT BE OPERATED WITHIN 3 FEET OF TREES OR SHRUBS. AREAS ADJACENT TO TREES AND SHRUBS SHALL BE MOWED WITH HAND-PROPELLED MOWERS.

4. EROSION CONTROL DEVICES SHALL BE USED FOR THE STAGING AREA AND ANY MATERIAL STOCK PILES WHEN NECESSARY TO CONTROL EROSION AND STORM WATER RUNOFF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

5. AREAS NOT MOWED: GOVERNMENT MAY IMMEDIATELY AFTER NOTICE TO THE CONTRACTOR AND AT THE DISCRETION OF THE CONTRACTING OFFICER MOW THE CONTRACTOR'S AREAS AT ANY TIME THE VEGETATION HEIGHT EXCEEDS 6 INCHES.

L. WATERING

1. THE CONTRACTOR SHALL COMPLY WITH THE CURRENT CITY OF SAN ANGELO, TEXAS WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN FOR ALL ON BASE WATER USAGE.

FTR CIVIL ENGINEER SQUADRON
READY - WILLING - ABLE

REVISIONS

Symbol	Description	Date	Appr

Designed by:	TRASK
Drawn by:	
Reviewed by:	
Submitted by:	

PROJECT TITLE

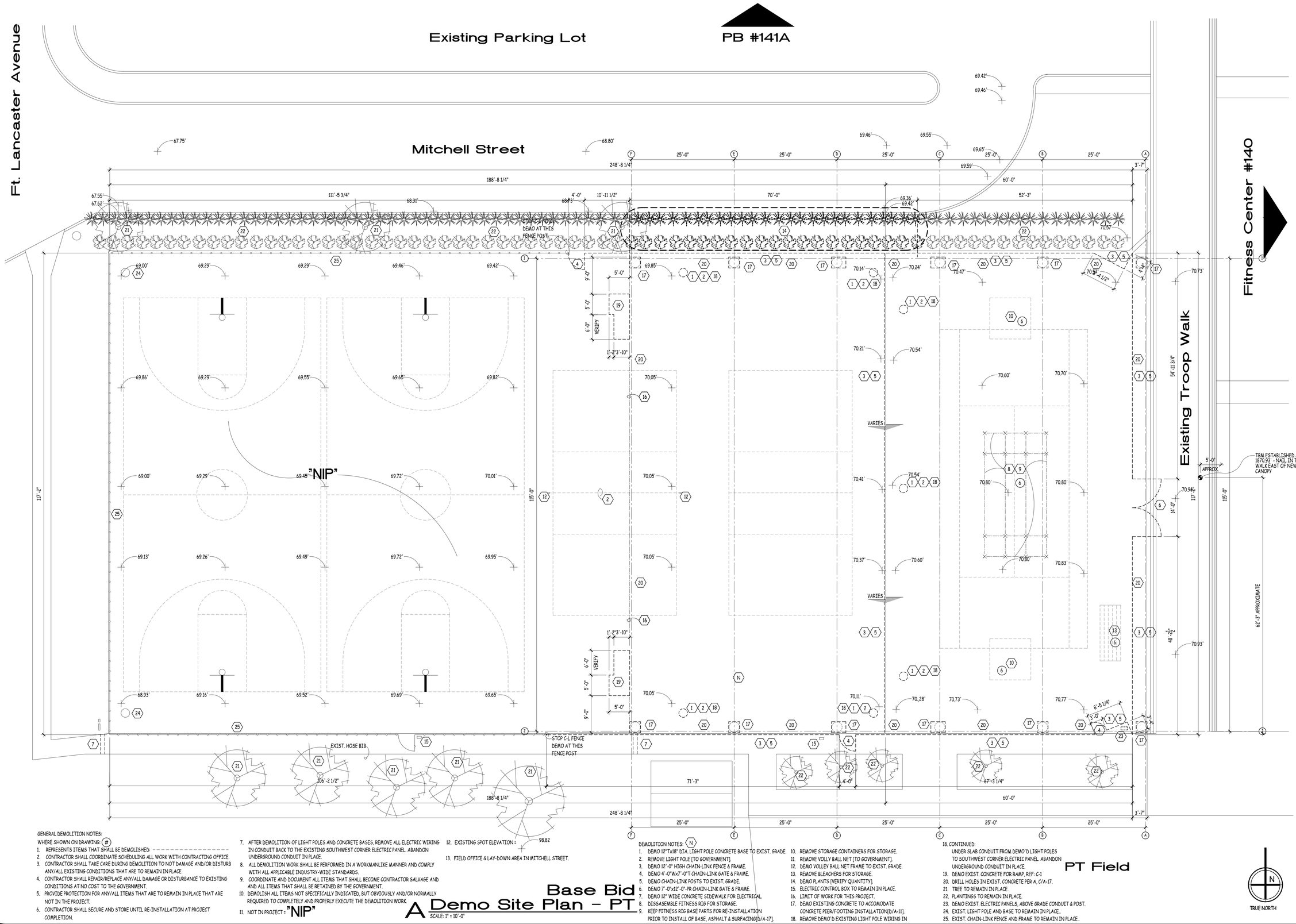
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: NOTES

Date: APRIL, 2020

SEQ.	SHEET	OF
3	CS-3	26



GENERAL DEMOLITION NOTES:

WHERE SHOWN ON DRAWING: (#)

1. REPRESENTS ITEMS THAT SHALL BE DEMOLISHED:
2. CONTRACTOR SHALL COORDINATE SCHEDULING ALL WORK WITH CONTRACTING OFFICE.
3. CONTRACTOR SHALL TAKE CARE DURING DEMOLITION TO NOT DAMAGE AND/OR DISTURB ANY/ALL EXISTING CONDITIONS THAT ARE TO REMAIN IN PLACE.
4. CONTRACTOR SHALL REPAIR/REPLACE ANY/ALL DAMAGE OR DISTURBANCE TO EXISTING CONDITIONS AT NO COST TO THE GOVERNMENT.
5. PROVIDE PROTECTION FOR ANY/ALL ITEMS THAT ARE TO REMAIN IN PLACE THAT ARE NOT IN THE PROJECT.
6. CONTRACTOR SHALL SECURE AND STORE UNTIL RE-INSTALLATION AT PROJECT COMPLETION.
7. AFTER DEMOLITION OF LIGHT POLES AND CONCRETE BASES, REMOVE ALL ELECTRIC WIRING IN CONDUIT BACK TO THE EXISTING SOUTHWEST CORNER ELECTRIC PANEL. ABANDON UNDERGROUND CONDUIT IN PLACE.
8. ALL DEMOLITION WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER AND COMPLY WITH ALL APPLICABLE INDUSTRY-WIDE STANDARDS.
9. COORDINATE AND DOCUMENT ALL ITEMS THAT SHALL BECOME CONTRACTOR SALVAGE AND AND ALL ITEMS THAT SHALL BE RETAINED BY THE GOVERNMENT.
10. DEMOLISH ALL ITEMS NOT SPECIFICALLY INDICATED, BUT OBVIOUSLY AND/OR NORMALLY REQUIRED TO COMPLETELY AND PROPERLY EXECUTE THE DEMOLITION WORK.
11. NOT IN PROJECT : "NIP"
12. EXISTING SPOT ELEVATION = 98.82
13. FIELD OFFICE & LAY-DOWN AREA IN MITCHELL STREET.

DEMOLITION NOTES: (N)

1. DEMO 12"Tx18" DIA. LIGHT POLE CONCRETE BASE TO EXIST. GRADE.
2. REMOVE LIGHT POLE [TO GOVERNMENT].
3. DEMO 12'-0" HIGH CHAIN-LINK FENCE & FRAME.
4. DEMO 4'-0"Wx7'-0"T CHAIN-LINK GATE & FRAME.
5. DEMO CHAIN-LINK POSTS TO EXIST. GRADE.
6. DEMO 7'-0"x12'-0"-PR CHAIN-LINK GATE & FRAME.
7. DEMO 12" WIDE CONCRETE SIDEWALK FOR ELECTRICAL.
8. DISSASEMBLE FITNESS RIG FOR STORAGE.
9. KEEP FITNESS RIG BASE PARTS FOR RE-INSTALLATION PRIOR TO INSTALL OF BASE, ASPHALT & SURFACING[D/A-17].
10. REMOVE STORAGE CONTAINERS FOR STORAGE.
11. REMOVE VOLLY BALL NET [TO GOVERNMENT].
12. DEMO VOLLEY BALL NET FRAME TO EXIST. GRADE.
13. REMOVE BLEACHERS FOR STORAGE.
14. DEMO PLANTS [VERIFY QUANTITY].
15. ELECTRIC CONTROL BOX TO REMAIN IN PLACE.
16. LIMIT OF WORK FOR THIS PROJECT.
17. DEMO EXISTING CONCRETE TO ACCOMODATE CONCRETE PIER/FOOTING INSTALLATION[D/A-11].
18. REMOVE DEMO'D EXISTING LIGHT POLE WIRING IN UNDER SLAB CONDUIT FROM DEMO'D LIGHT POLES TO SOUTHWEST CORNER ELECTRIC PANEL. ABANDON UNDERGROUND CONDUIT IN PLACE.
19. DEMO EXIST. CONCRETE FOR RAMP, REF: C-1
20. DRILL HOLES IN EXIST. CONCRETE PER A, C/A-17.
21. TREE TO REMAIN IN PLACE.
22. PLANTINGS TO REMAIN IN PLACE.
23. DEMO EXIST. ELECTRIC PANELS, ABOVE GRADE CONDUIT & POST.
24. EXIST. LIGHT POLE AND BASE TO REMAIN IN PLACE..
25. EXIST. CHAIN-LINK FENCE AND FRAME TO REMAIN IN PLACE..

Base Bid
A Demo Site Plan – PT

SCALE: 1" = 10'-0"

Symbol	Description	Date	Appr

Symbol	Description	Date	Appr
	REVISIONS		

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE

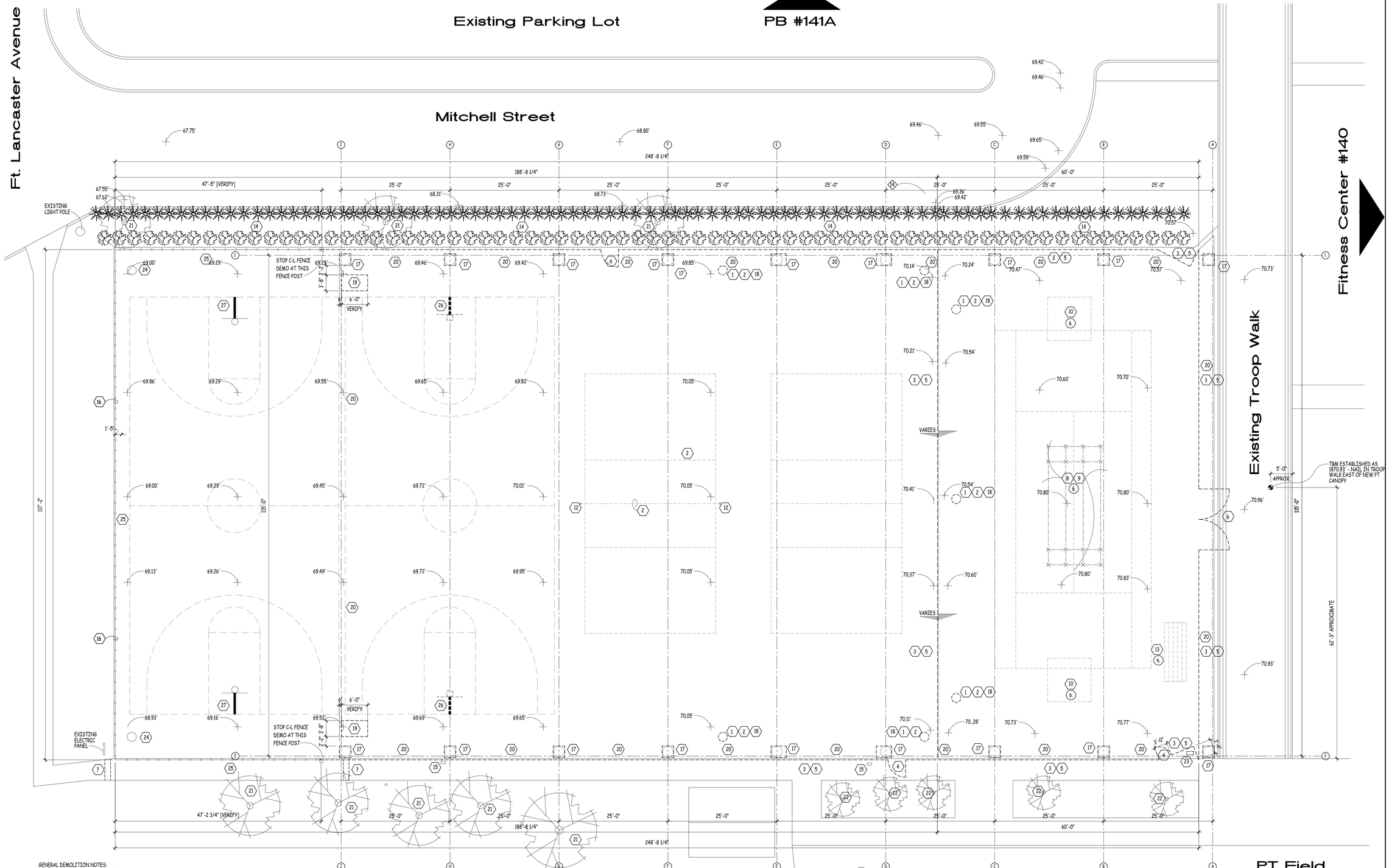
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: DEMOLITION PLAN - PT BASE BID

Date: April, 2020

SEQ.	SHEET	OF
4	D-1	26



GENERAL DEMOLITION NOTES:

WHERE SHOWN ON DRAWING: (#)

1. REPRESENTS ITEMS THAT SHALL BE DEMOLISHED:
2. CONTRACTOR SHALL COORDINATE SCHEDULING ALL WORK WITH CONTRACTING OFFICE.
3. CONTRACTOR SHALL TAKE CARE DURING DEMOLITION TO NOT DAMAGE AND/OR DISTURB ANY/ALL EXISTING CONDITIONS THAT ARE TO REMAIN IN PLACE.
4. CONTRACTOR SHALL REPAIR/REPLACE ANY/ALL DAMAGE OR DISTURBANCE TO EXISTING CONDITIONS AT NO COST TO THE GOVERNMENT.
5. PROVIDE PROTECTION FOR ANY/ALL ITEMS THAT ARE TO REMAIN IN PLACE THAT ARE NOT IN THE PROJECT.
6. CONTRACTOR SHALL SECURE AND STORE UNTIL RE-INSTALLATION AT PROJECT COMPLETION.
7. AFTER DEMOLITION OF LIGHT POLES AND CONCRETE BASES, REMOVE ALL ELECTRIC WIRING IN CONDUIT BACK TO THE EXISTING SOUTHWEST CORNER ELECTRIC PANEL. ABANDON UNDERGROUND CONDUIT IN PLACE.
8. ALL DEMOLITION WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER AND COMPLY WITH ALL APPLICABLE INDUSTRY-WIDE STANDARDS.
9. COORDINATE AND DOCUMENT ALL ITEMS THAT SHALL BECOME CONTRACTOR SALVAGE AND AND ALL ITEMS THAT SHALL BE RETAINED BY THE GOVERNMENT.
10. DEMOLISH ALL ITEMS NOT SPECIFICALLY INDICATED, BUT OBVIOUSLY AND/OR NORMALLY REQUIRED TO COMPLETELY AND PROPERLY EXECUTE THE DEMOLITION WORK.
11. EXISTING SPOT ELEVATION = 98.82
12. FIELD OFFICE & LAY-DOWN AREA IN MITCHELL STREET.

A Demo Site Plan – PT:Bid Opt.

SCALE: 1" = 10'-0"

DEMOLITION NOTES: (#)

1. DEMO 12"Tx18" DIA. LIGHT POLE CONCRETE BASE TO EXIST. GRADE.
2. REMOVE LIGHT POLE [TO GOVERNMENT].
3. DEMO 12'-0" HIGH CHAIN-LINK FENCE & FRAME.
4. DEMO 4'-0"Wx7'-0"T CHAIN-LINK GATE & FRAME.
5. DEMO CHAIN-LINK POSTS TO EXIST. GRADE.
6. DEMO 7'-0"x12'-0"-PR CHAIN-LINK GATE & FRAME.
7. DEMO 12" WIDE CONCRETE SIDEWALK FOR ELECTRICAL.
8. DISSASEMBLE FITNESS RIG FOR STORAGE.
9. KEEP FITNESS RIG BASE PARTS FOR RE-INSTALL PRIOR TO INSTALL OF BASE, ASPHALT & SURFACING[D/A-17].
10. REMOVE STORAGE CONTAINERS FOR STORAGE.
11. REMOVE VOLLY BALL NET [TO GOVERNMENT].
12. DEMO VOLLEY BALL NET FRAME TO EXIST. GRADE.
13. REMOVE BLEACHERS FOR STORAGE.
14. DEMO PLANTS [VERIFY QUANTITY].
15. ELECTRIC CONTROL BOX TO REMAIN IN PLACE.
16. LIMIT OF WORK FOR THIS PROJECT.
17. DEMO EXISTING CONCRETE TO ACCOMODATE CONCRETE PIER/FOOTING PLACEMENT. REF:D/A-11
18. REMOVE DEMO'D EXISTING LIGHT POLE WIRING IN UNDER SLAB CONDUIT FROM DEMO'D LIGHT POLES
18. TO SOUTHWEST CORNER ELECTRIC PANEL. ABANDON UNDERGROUND CONDUIT IN PLACE.
19. DEMO EXIST. CONCRETE FOR RAMP, REF: C-1
20. DRILL HOLES IN EXIST. CONCRETE PER A, C/A-17.
21. TREE TO REMAIN IN PLACE.
22. PLANTINGS TO REMAIN IN PLACE.
23. DEMO EXIST. ELECTRIC PANELS, ABOVE GRADE CONDUIT & POST.
24. EXIST. LIGHT POLE AND BASE TO REMAIN IN PLACE..
25. EXIST. CHAIN-LINK FENCE AND FRAME TO REMAIN IN PLACE..
26. DEMO EXIST. IN-GROUND BASKETBALL HOOP ASSY.
27. EXIST. IN-GROUND BASKETBALL HOOP TO REMAIN IN PLACE.

TRUE NORTH

Symbol	Description	Date	Appr

REVISIONS

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE

CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: DEMOLITION PLAN BID OPTION

Date: April, 2020

SEQ.	SHEET	OF
5	D-2	26

Apache Trail

parking Lot

EXISTING CONCRETE MWD TRAINING EQUIPMENT:

A. HURDLE

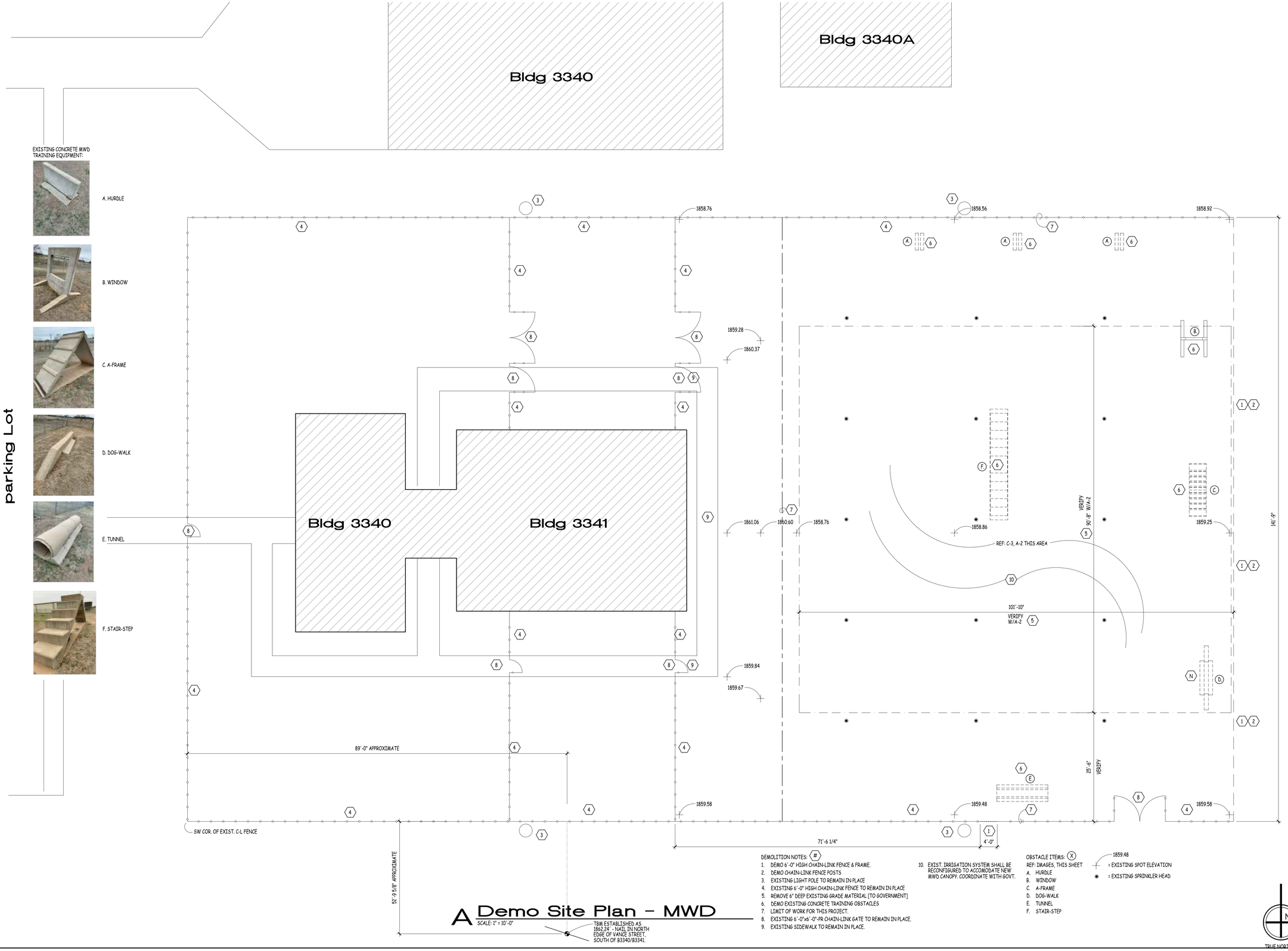
B. WINDOW

C. A-FRAME

D. DOG-WALK

E. TUNNEL

F. STAIR-STEP



A Demo Site Plan - MWD

SCALE: 1" = 10'-0"

TBM ESTABLISHED AS 1862.24' - NAIL IN NORTH EDGE OF VANCE STREET, SOUTH OF B3340/B3341.

DEMOLITION NOTES: (#)

1. DEMO 6'-0" HIGH CHAIN-LINK FENCE & FRAME.
2. DEMO CHAIN-LINK FENCE POSTS
3. EXISTING LIGHT POLE TO REMAIN IN PLACE
4. EXISTING 6'-0" HIGH CHAIN-LINK FENCE TO REMAIN IN PLACE
5. REMOVE 6" DEEP EXISTING GRADE MATERIAL [TO GOVERNMENT]
6. DEMO EXISTING CONCRETE TRAINING OBSTACLES
7. LIMIT OF WORK FOR THIS PROJECT.
8. EXISTING 6'-0"x6'-0"-PR CHAIN-LINK GATE TO REMAIN IN PLACE.
9. EXISTING SIDEWALK TO REMAIN IN PLACE.
10. EXIST. IRRIGATION SYSTEM SHALL BE RECONFIGURED TO ACCOMODATE NEW MWD CANOPY. COORDINATE WITH GOVT.

OBSTACLE ITEMS: (X)

REF: IMAGES, THIS SHEET

A. HURDLE
B. WINDOW
C. A-FRAME
D. DOG-WALK
E. TUNNEL
F. STAIR-STEP

1859.48 = EXISTING SPOT ELEVATION

= EXISTING SPRINKLER HEAD

TRUE NORTH

Symbol	Description	Date	Appr

REVISIONS

Designed by:

Drawn by: RASK

Reviewed by:

Submitted by:

PROJECT TITLE

CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: DEMOLITION PLAN - MWD

Date: April, 2020

SEQ.	SHEET	OF
6	D-3	26

Ft. Lancaster Avenue

Existing Parking Lot

PB #141A

Mitchell Street

Fitness Center #140

Existing Troop Walk

EXISTING PLANTING

EXIST. FENCE POST

RAMP LANDING FIN. ELEV. SHALL MATCH CANOPY FLOOR ELEV.

NEW 4'-0"x7'-0" CHAIN-LINK GATE

NEW 12'-0" TALL CHAIN-LINK FENCE, REF: D-K/A-16

LIMIT OF WORK THIS PROJECT AREA.

PORTAL FRAME (E/A-12)

INSTALL EQUAL TO DYAD AS MFR'D BY epiQTRACKS

PAINTED LANE MARKERS SHALL BE 4" WIDE

TBM ESTABLISHED AS 1870.93' - NAIL IN TROOP WALK EAST OF NEW PT CANOPY

N.I.P.

EXISTING BASKETBALL COURTS.

EXISTING ELECTRIC PANEL

NEW CONC. FOR SDWK.

EXIST. 4'Wx7'T C-L GATE

EXIST. CONC. SDWK. EXIST. HOSE BIB

EXIST. FENCE POST

U.S. ARMY STORAGE UNIT

U.S. ARMY STORAGE UNIT

PT Field

TRUE NORTH

REF: A-1 FOR ADDITIONAL INFORMATION. (#)

1. ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF PURLIN SPACE AND THE THE COLUMN FURRING SPACE TERMINATING AT COL. F2. FROM F2 THEN TRENCH TO THE ELECTRIC PANEL AT THE SW CORNER OF THE PT AREA.
2. NO SURACE WORK, THIS AREA.
4. LEG BASES FOR THE FITNESS RIG SHALL BE PLACED PRIOR TO INSTALL. OF BASE MATERIAL, ASPHALT PAVING AND RUNNING SURFACE.
5. PREP AREA AND PROVIDE RIPRAP CONCRETE IN THIS AREA.
6. REF: D/A-11 FOR PIER/FOOTING
7. REF: A/A-16 FOR COLUMN FURRING
8. FIELD OFFICE & LAY-DOWN AREA IN MITCHELL STREET.
9. COORDINATE RE-INSTALL LOCATION OF ALPHA WARRIOR UNIT WITH THE GOVERNMENT.

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

LEGEND:

= NEW RUNNING SURFACE

60.50 = NEW SPOT ELEVATIONS

59.48 = EXISTING SPOT ELEVATIONS

"NOT IN PROJECT" = N.I.P.

B HC Ramp

SCALE: 1" = 10'-0"

CONT. 1/2" ASPHALT IMPREG. EXPANSION JOINT FILLER - TO FULL DEPTH OF JOINT. 6x6-W2.9xW2.9 WWF ON CHAIRS @ 4'-0" O.C.E.W., MAXIMUM.

3000 PSI CONCRETE

FLEXIBLE BASE CONSISTING OF TYPE A, GRADE 1 LIMESTONE

6'-0" [VERIFY]

EXISTING CONC. SLAB

LANDING

SLOPE 1 : 12

EXISTING CONCRETE SLAB

CONT. 1/2" ASPHALT IMPREGNATED EXPANSION JOINT FILLER - TO FULL DEPTH OF JOINT

A Site Plan – PT: BASE BID

SCALE: 1" = 10'-0"

Symbol	Description	Date	Appr
	REVISIONS		

Designed by: TRASK

Drawn by:

Reviewed by:

Submitted by:

PROJECT TITLE

CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: SITE PLAN - PT: BASE BID

Date: April, 2020

SEQ.	SHEET	OF
7	C-1	26

Ft. Lancaster Avenue

Existing Parking Lot

PB #141A

Mitchell Street

Fitness Center #140

Existing Troop Walk

PT Field

EXIST. LIGHT POLE

EXIST. IN-GROUND BASKETBALL HOOP ASSEMBLY

PAINTED LINES SHALL BE 2" WIDE, TYP.

PAINTED LANE MARKERS SHALL BE 4" WIDE, TYP.

NE C-L FENCE STARTS @ THIS FENCE POST

NEW C-L FENCE STARTS @ THIS FENCE POST

3'-0"x7'-0" C-L GATE

SLOPE 1:12 DOWN

PORTAL FRAME (E/A-12)

VARIES

TBM ESTABLISHED AS 1870.93' - NAIL IN TROOP WALK EAST OF NEW PT CANOPY

EXIST. HOSE BIB

NEW CONC. FOR SDWK

★ FLEXIBLE BASE CONSISTING OF TYPE A, GRADE 1 LIMESTONE 6'-0" [VERIFY]

6x6-W2.9xW2.9 WWF ON CHAIRS @ 4'-0" O.C.E.W., MAXIMUM

3000 PSI CONCRETE

EXISTING CONCRETE SLAB

1/2" ASPHALT IMPREGNATED EXPANSION JOINT FILLER - @ FULL DEPTH OF JOINT

REF" A-17

B HC Ramp

SCALE: 1" = 10'-0"

A Site Plan - PT Bid Opt.

SCALE: 1" = 10'-0"

REF: A-12 FOR ADDITIONAL INFORMATION (#)

1. ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF PURLIN SPACE AND THE THE COLUMN FURRING SPACE TERMINATING AT COL. F2. FROM F2 THEN TRENCH TO THE ELECTRIC PANEL AT THE SW CORNER OF THE PT AREA.
2. PRE BASKETBALL COURT AREA FOR NEW SURFACE.
3. PROVIDE HYDROMULCHING THIS AREA.
4. LEG BASES FOR THE FITNESS RIG SHALL BE PLACED PRIOR TO INSTALLATION OF BASE MATERIAL, ASPHALT PAVING AND RUNNING SURFACE.
5. PREP AREA AND PROVIDE RIPRAP CONCRETE IN THIS AREA.
6. REF: D/A-11 FOR PIER/FOOTING
7. REF: A/A-16 FOR COLUMN FURRING
8. FIELD OFFICE & LAY-DOWN AREA IN MITCHELL STREET.
9. COORDINATE RE-INSTALL LOCATION OF ALPHA WARRIOR UNIT WITH THE GOVERNMENT.

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

LEGEND:

= NEW RUNNING SURFACE

= NEW BASKETBALL COURT SURFACE

60.50 = NEW SPOT ELEVATIONS

59.48 = EXISTING SPOT ELEVATIONS

= LOCALIZED HYDROMULCH AREA

"NOT IN PROJECT" = N.I.P.

TRUE NORTH

Symbol	Description	Date	Appr
	REVISIONS		

Designed by: RASK

Drawn by:

Reviewed by:

Submitted by:

PROJECT TITLE

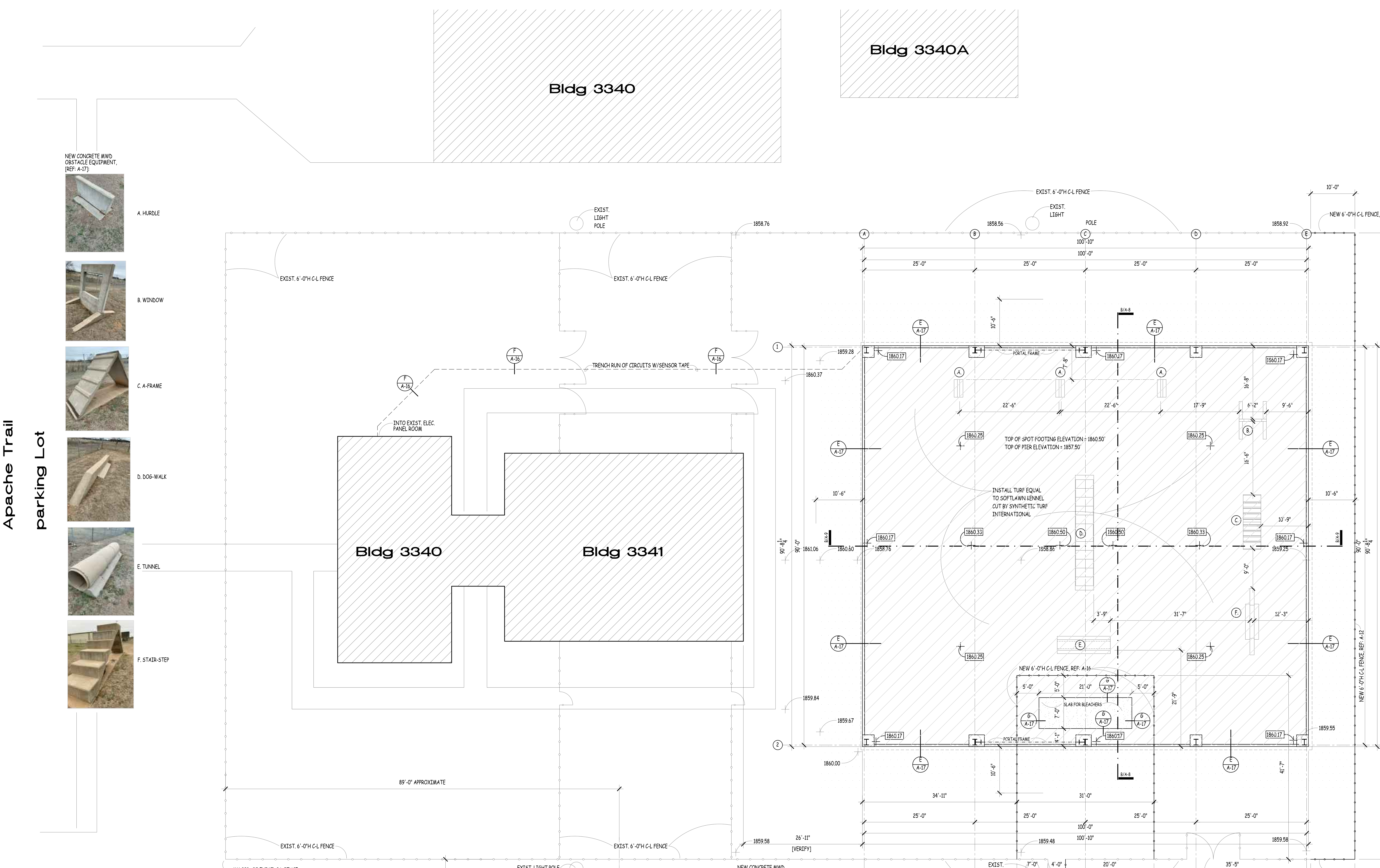
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: SITE PLAN - PT BID OPTION

Date: April, 2020

SEQ.	SHEET	OF
8	C-2	26



REF: A-2 FOR ADDITIONAL INFORMATION.

1. ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF PURLIN SPACE AND THE COLUMN FURRING SPACE TERMINATING AT COLUMN A1. FROM A1 THEN TRENCH TO THE ELECTRIC PANEL ROOM IN BUILDING 3341.
2. PROVIDE A SPLASH BLOCK AT EACH DOWNSPOUT
3. REF: E/A-11 FOR SPOT FOOTING/PIER.
4. REF: A-16 FOR COLUMN FURRING.
5. FIELD OFFICE & LAY-DOWN AREA IN SECTION OF PARKING LOT SOUTH OF BUILDING #3323

NEW CONCRETE MWD TRAINING OBSTACLE EQUIPMENT, [REF: A-17]
[PROVIDE CONC. BASES]: 'X.'

A. HURDLE
B. WINDOW
C. A-FRAME
D. DOG-WALK
E. TUNNEL
F. STAIR-STEP

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

LEGEND:

= NEW KENNEL SURFACE

1860.50 = NEW SPOT ELEVATIONS

1859.48 = EXISTING SPOT ELEVATIONS

= LOCALIZED HYDROMULCH AREA

TRUE NORTH

A Site Plan - MWD Base Bid

SCALE: 1" = 10'-0"

TBM ESTABLISHED AS 1862.24' - NAIL IN NORTH EDGE OF VANCE STREET, SOUTH OF B3340/B3341.

17th CIVIL ENGINEER SQUADRON — READY · WILLING · ABLE

REVISIONS

Symbol	Description	Date	Appr

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

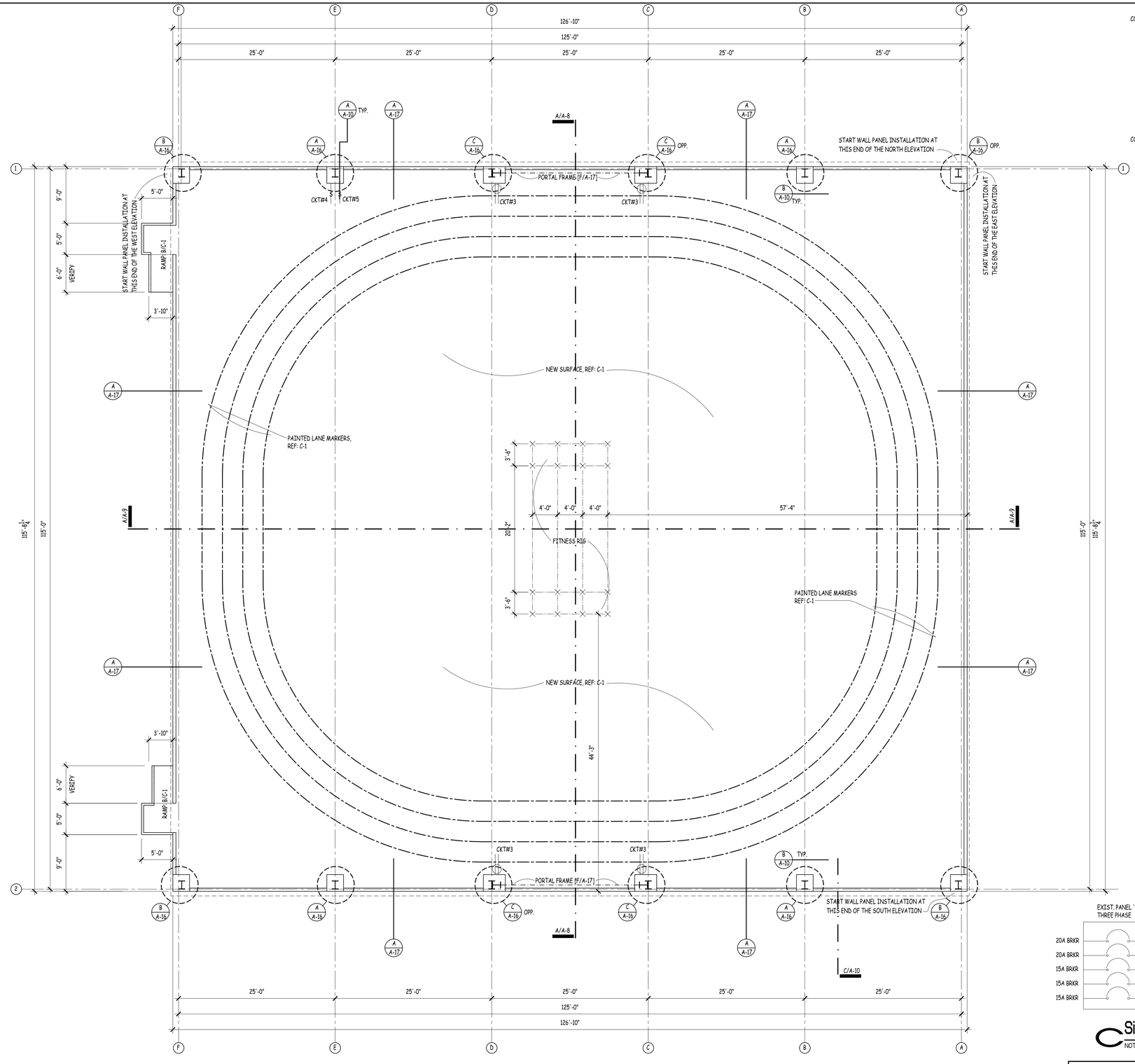
PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

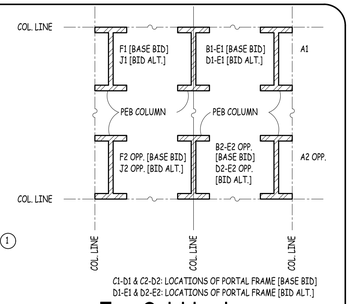
Project Number: 1056394

SHEET TITLE: SITE PLAN - MWD BASE BID

Date: April, 2020

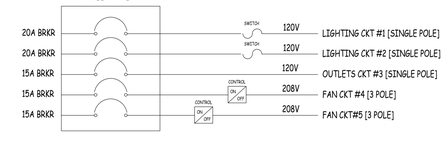
SEQ.	SHEET	OF
9	C-3	26





B Typ. Col. Line Loc.
NOT TO SCALE

PT ELECTRICAL NOTES:
1. FOR THE 2 FANS 3 PHASE, THE CONTRACTOR SHALL USE THE 2-3 PHASE SPARE BREAKERS IN THE EXIST. PANEL. THE CONTRACTOR SHALL CHANGE THE 100A EXISTING BREAKER TO NEW 20A-3 PHASE BREAKERS FOR THE FANS.
2. THE CONTRACTOR SHALL USE THE BREAKER SPACES IN THE EXIST. PANEL FOR THE LIGHTING AND OUTLET CIRCUITS.
3. ALL THE OUTLETS MUST BE GROUND FAULT AND IN J-BOXES W/METAL WEATHERPROOF ENCLOSURES.
4. THE CONDUIT FOR EACH CIRCUIT SHALL BE 1/2" EMT AND PVC FOR UNDERGROUND AND THE CABLE 12THWN.
5. PROVIDE TIMER SWITCHS FOR LIGHTS W/BUZZER.
6. PROVIDE SURGE PROTECTION AT PANEL.



C Single Line Diagram
NOT TO SCALE

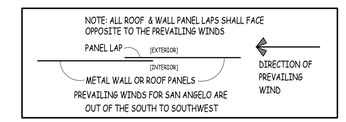
REF: C-1 FOR ADDITIONAL INFORMATION.

ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF PURLIN SPACE AND THE THE COLUMN FURRING SPACE TERMINATING AT COL. F1. FROM THERE TRENCHED TO THE ELECTRIC PANEL AT THE SW CORNER OF THE PT AREA. REF: C-1. COORDINATE RE-INSTALL LOCATION OF ALPHA WARRIOR UNIT WITH THE GOVERNMENT.

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

A Floor Plan – PT Base Bid
SCALE: 1/8" = 1'-0"

NOTE: ALL ROOF & WALL PANEL LAPS SHALL FACE OPPOSITE TO THE PREVAILING WINDS



Symbol	Description	Date	Appr

REVISIONS

Designed by: HK
Drawn by: RASK
Reviewed by:
Submitted by:

PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: FLOOR PLAN - PT BASE BID

Date: April, 2020

SEQ.	SHEET	OF
10	A-1	26

FOR REFERENCE NEW CONCRETE MWD TRAINING EQUIPMENT:

A. HURDLE

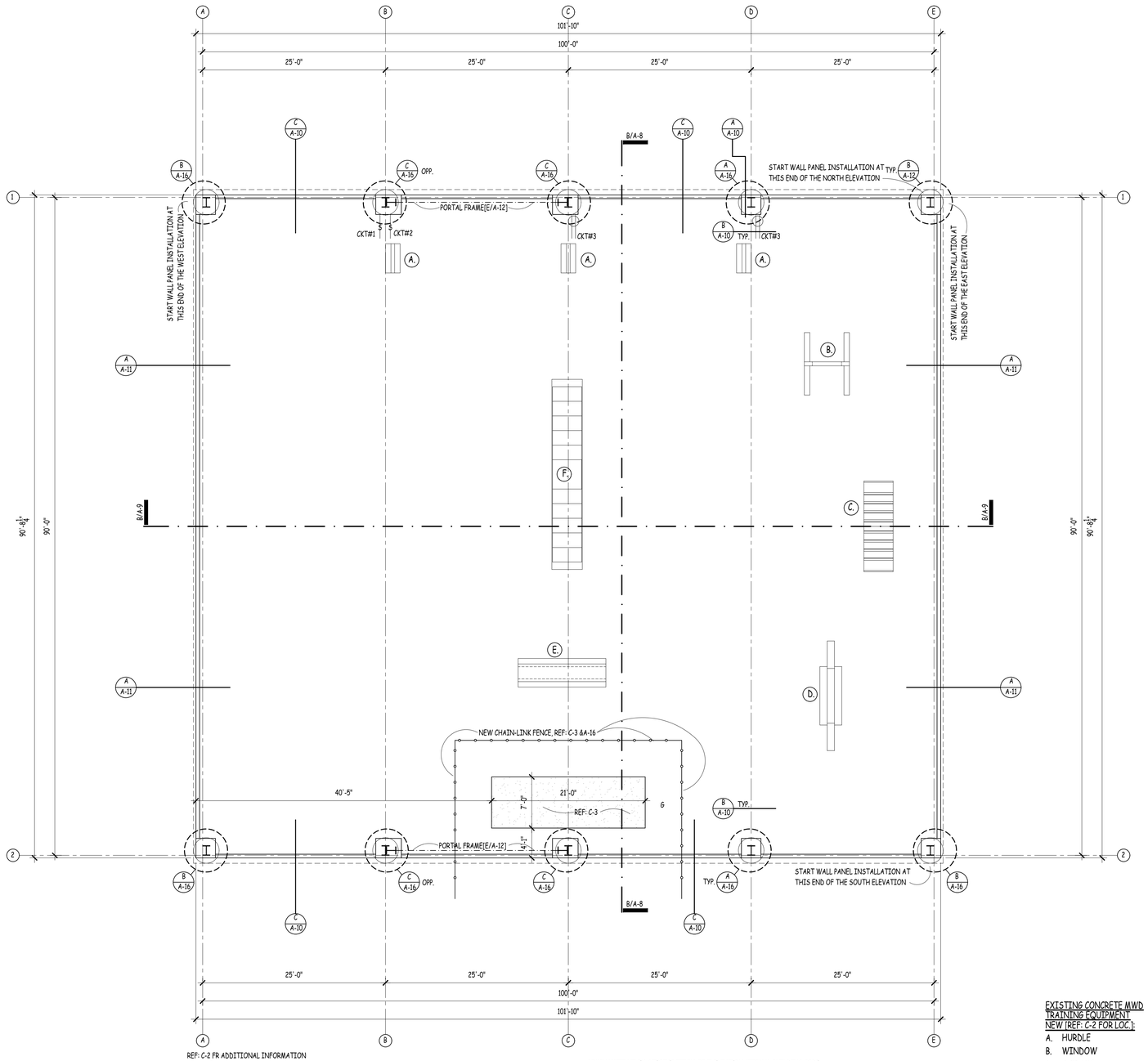
B. WINDOW

C. A-FRAME

D. DOG-WALK

E. TUNNEL

F. STAIR-STEP



REF: C-2 FR ADDITIONAL INFORMATION
PROVIDE SPLASH BLOCKS AT ALL DOWNSPOUTS
ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF PURLIN SPACE AND THE THE COLUMN FURRING SPACE TERMINATING AT COL. A1. FROM THERE TRENCHED TO THE ELECTRIC PANEL ROOM IN BUILDING 3341. REF: C-3.

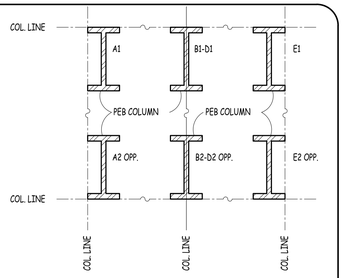
COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

A Floor Plan – MWD Base Bid

SCALE: 1/8" = 1'-0"

EXISTING CONCRETE MWD TRAINING EQUIPMENT
NEW (REF: C-2 FOR LOC.):

A. HURDLE
B. WINDOW
C. A-FRAME
D. DOG-WALK
E. TUNNEL
F. STAIR-STEP

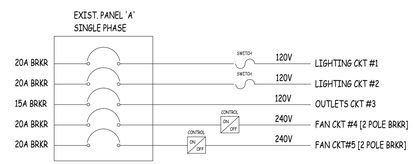


B1-C1 & B2-C2: LOCATIONS OF PORTAL FRAME

B Typ. Col. Line Loc.

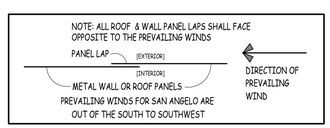
NOT TO SCALE

MWD ELECTRICAL NOTES:
1. THE CONTRACTOR SHALL USE THE BREAKER SPACES IN THE EXIST. PANEL FOR THE TWO FANS.
2. THE CONTRACTOR SHALL USE THE BREAKER SPACES IN THE EXIST. PANEL FOR THE LIGHTING AND OUTLET CIRCUITS.
3. ALL THE OUTLETS MUST BE GROUND FAULT AND IN J-BOXES W/METAL WEATHERPROOF ENCLOSURES.
4. THE CONDUIT FOR EACH CIRCUIT SHALL BE 1/2" EMT AND PVC FOR UNDERGROUND AND THE CABLE 12THHNA.
5. PROVIDE TIMER SWITCHS FOR LIGHTS W/BUZZER.
6. PROVIDE SURGE PROTECTION AT PANEL.



C MWD Single Line Diagram

NOT TO SCALE



TRUE NORTH

17th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by:	RASK
Drawn by:	
Reviewed by:	
Submitted by:	

PROJECT TITLE

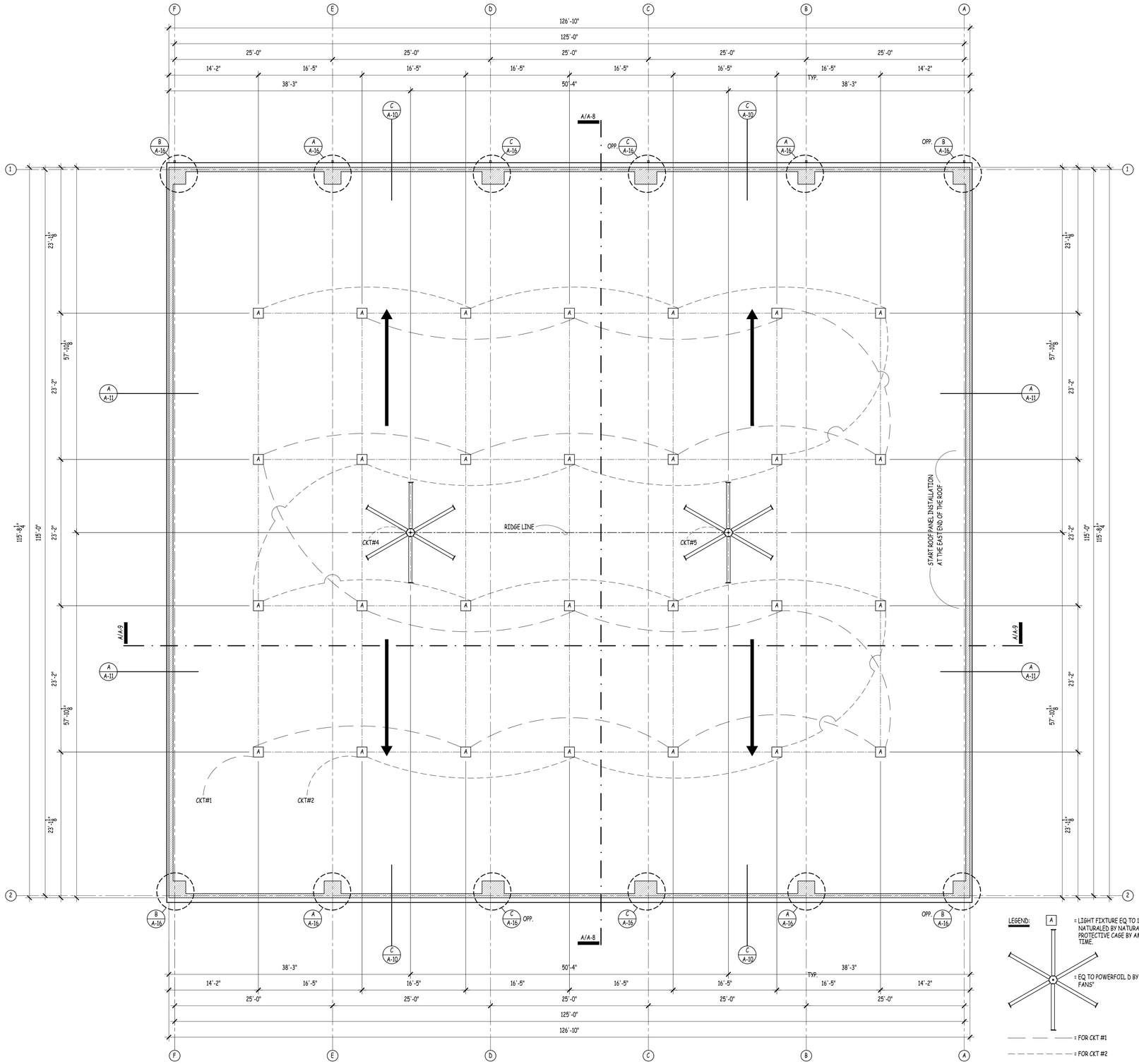
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: FLOOR PLAN - MWD BASE BID

Date: April, 2020

SEQ.	SHEET	OF
11	A-2	26



NOTES:
1. CLOSURE STRIPS PER MFR RECOMMENDATIONS.
2. BUTYL TAPE PER MFR RECOMMENDATIONS.
3. REF: A-1 FOR ADDITIONAL INFORMATION.
4. 26 GA. "U-PANEL" METAL CEIING = 2 : 12, THROUGHOUT.
5. PROVIDE CEILING VENTS ALONG CEILING PERIMETER IN ACCORDANCE W/MRF. RECOMMENDATIONS.
6. INSTALL OLIGHT FIXTURES TO 'U-PANEL CEILING
7. ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF FURLIN SPACE AND THE THE COLUMN FURRING SPACE TERMINATING AT COL. F2. FROM. THERE TRENCHED TO THE ELECTRIC PANEL AT THE SW CORNER OF THE PT AREA. REF: C-1.
8. DIRECTION OF DOWNWARD SLOPE
9. REF: A-1 FOR ELECTRICAL NOTES AND SINGLE LINE DIAGRAM.
10. PROVIDE ELEC. ACCESS PANELS IN ROOF AND COL. FURR'GS

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

LEGEND:
A = LIGHT FIXTURE EQ TO 100 WATT NATURALED BY NATURAL LED W/ PROTECTIVE CAGE BY AMERICAN TIME.
= EQ TO POWERFOIL D BY "BIG ASS FANS"
= FOR CKT #1
= FOR CKT #2
= CEILING RIDGE LINE
= DIRECTION OF DOWNWARD SLOPE

A Reflected Ceiling Plan – PT Base Bid

SCALE: 1/8" = 1'-0"

TRUE NORTH

17th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by	Drawn by:	Reviewed by:	Submitted by:
TRASK			

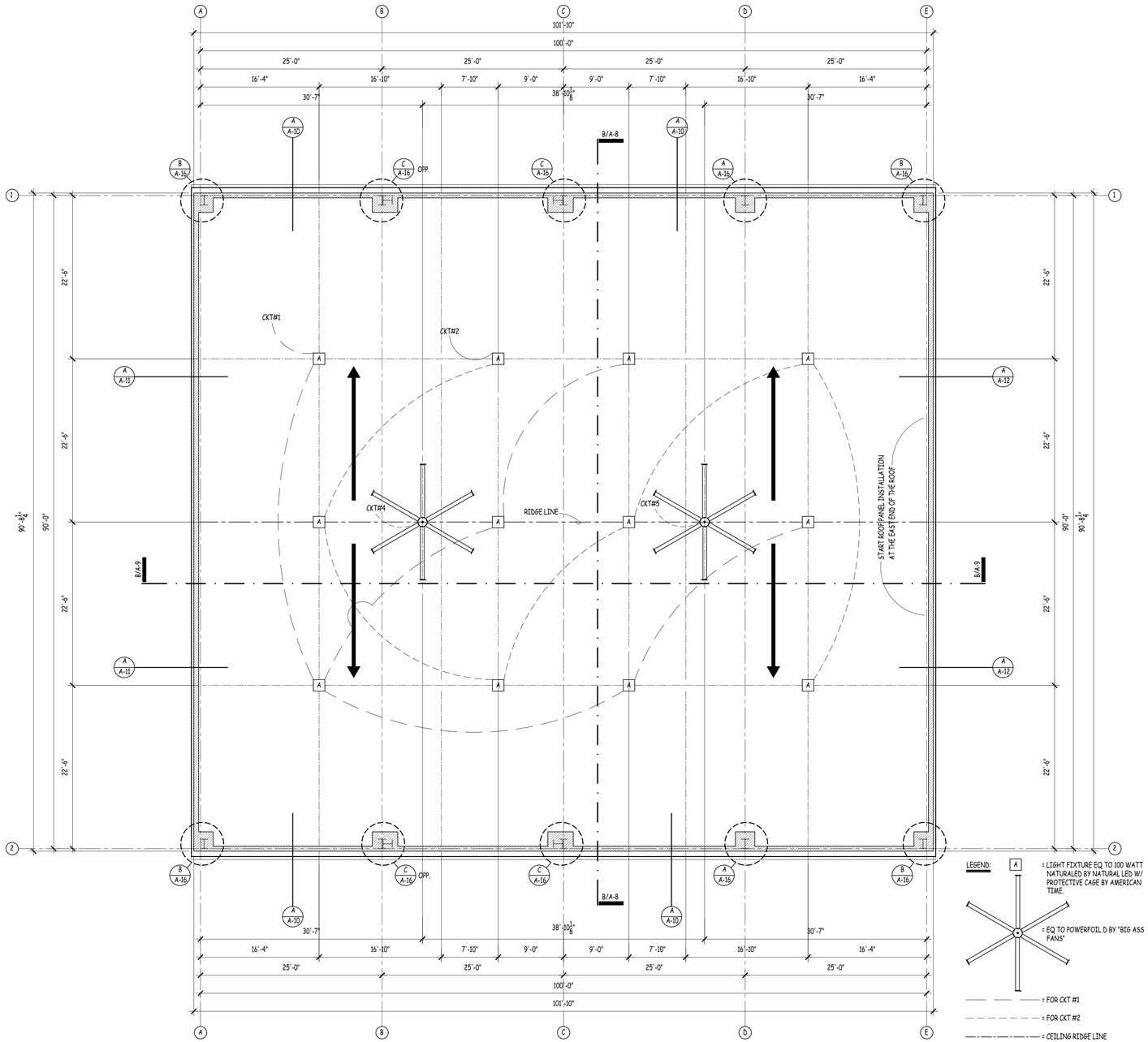
PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE
REFLECTED CEILING PLAN - PT BASE BID

Date: April, 2020

SEQ.	SHEET	OF
12	A-3	26



NOTES:

1. CLOSURE STRIPS PER MFR RECOMMENDATIONS.
2. BUTYL TAPE PER MFR RECOMMENDATIONS.
3. REF: A-2 FOR ADDITIONAL INFORMATION.
4. 26 GA. "U-PANEL" METAL CEILING = 2 : 12, THROUGHOUT.
5. PROVIDE CEILING VENTS ALONG CEILING PERIMETER IN ACCORDANCE W/MFR. RECOMMENDATIONS.
6. INSTALL OLIGHT FIXTURES TO 'U-PANEL CEILING
7. ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF PURLIN SPACE AND THE THE COLUMN FURRING SPACE TERMINATING AT COL. A1. FROM THERE TRENCHED TO THE ELECTRIC PANEL ROOM IN BUILDING 3341. REF: C-2.
8. DIRECTION OF DOWNWARD SLOPE
9. REF: A-2 FOR ELECTRICAL NOTES AND SINGLE LINE DIAGRAM
10. PROVIDE ELEC. ACCESS PANELS IN ROOF AND COL. FURR'GS

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

LEGEND:

A = LIGHT FIXTURE EQ TO 100 WATT NATURALED BY NATURAL LED W/ PROTECTIVE CAGE BY AMERICAN TIME.

= EQ TO POWERFOIL D BY "BIG ASS FANS"

= FOR CKT #1

= FOR CKT #2

= CEILING RIDGE LINE

= DIRECTION OF DOWNWARD SLOPE

A Reflected Ceiling Plan – MWD Base Bid

SCALE: 1/8" = 1'-0"

TRUE NORTH

Symbol	Description	Date	Appr

REVISIONS

Designed by: PASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE

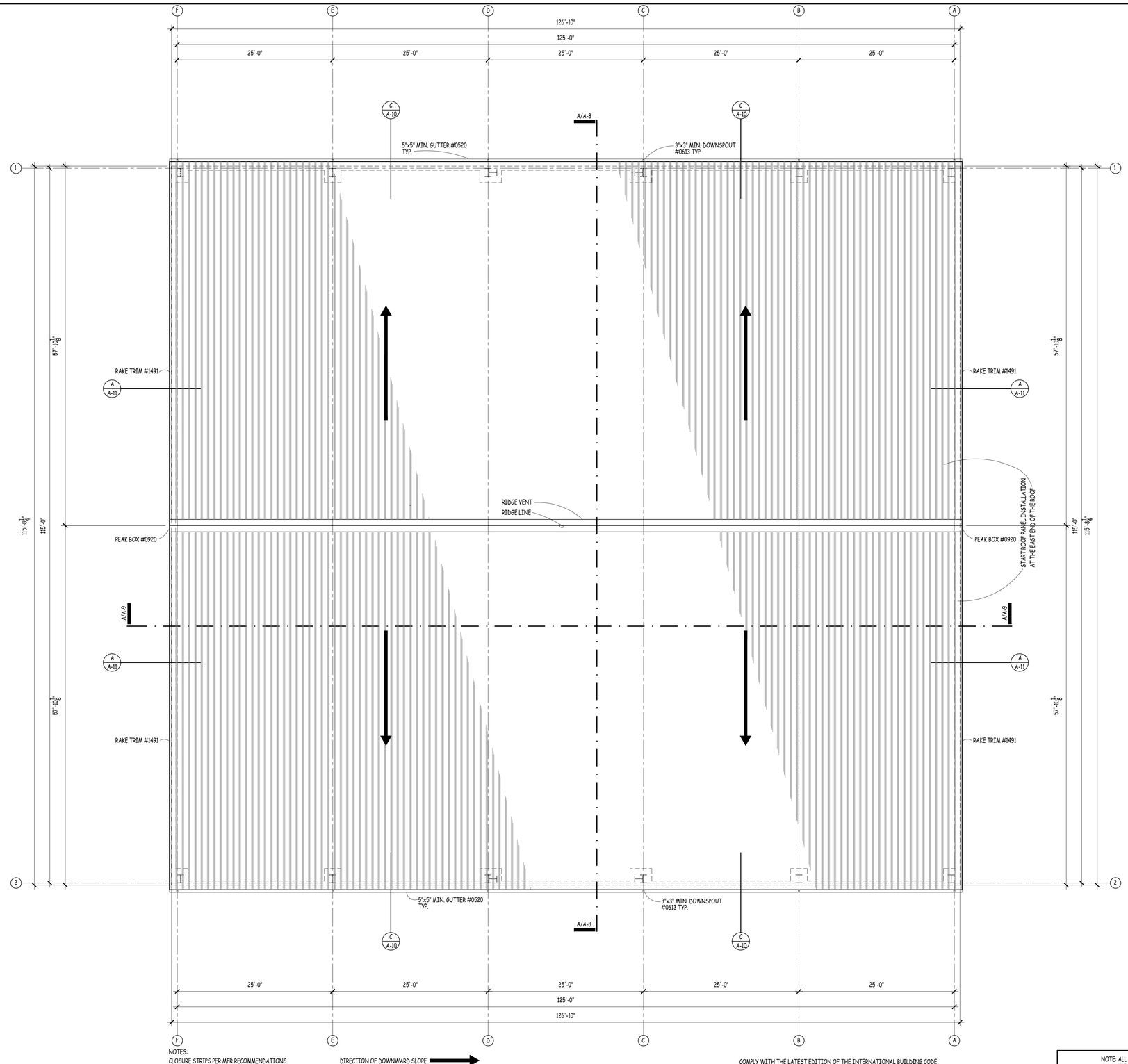
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: REFLECTED CEILING PLAN - MWD BASE BID

Date: April, 2020

SEQ.	SHEET	OF
13	A-4	26



A Roof Plan – PT Base Bid

SCALE: 1/8" = 1'-0"

Symbol	Description	Date	Appr

REVISIONS

Designed by:	BASK
Drawn by:	
Reviewed by:	
Submitted by:	

PROJECT TITLE

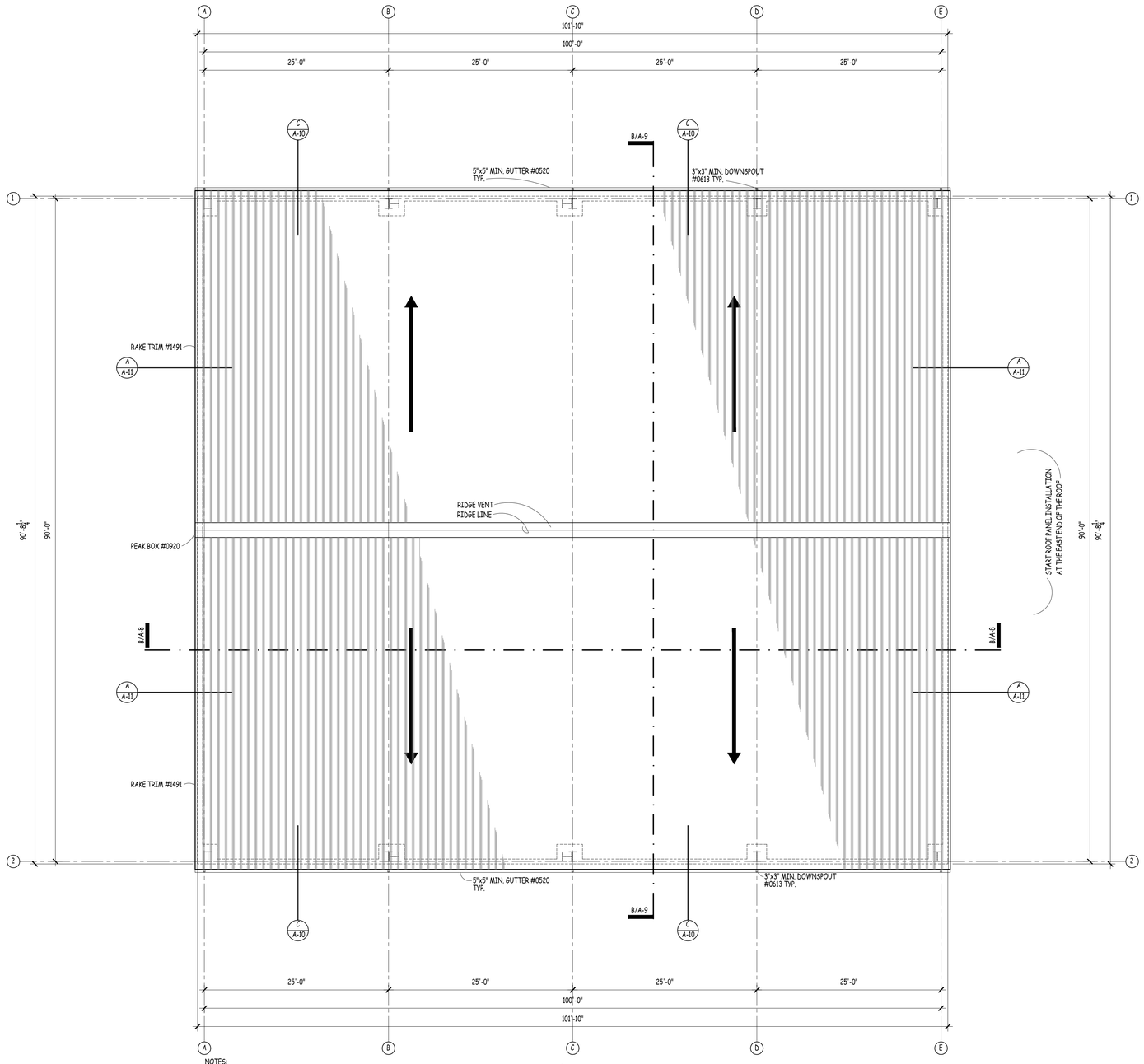
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:
1056394

SHEET TITLE
ROOF PLAN - PT
BASE BID

Date:
April, 2020

SEQ.	SHEET	OF
14	A-5	26



NOTES:
CLOSURE STRIPS PER MFR RECOMMENDATIONS.
BUTYL TAPE PER MFR RECOMMENDATIONS.
REF: A-2 FOR ADDITIONAL INFORMATION.
26 GA. "R-PANEL" METAL ROOF = 2 : 12, THROUGHOUT.
RIDGE VENT EQ TO COR-A VENT LOW PROFILE FLOATING RIDGE VENT BY RIGID GLOBAL BUILDINGS.

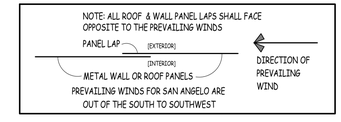
DIRECTION OF DOWNWARD SLOPE

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

A Roof Plan – MWD Base Bid

SCALE: 1/8" = 1'-0"

NOTE: ALL ROOF & WALL PANEL LAPS SHALL FACE OPPOSITE TO THE PREVAILING WINDS



PREVAILING WINDS FOR SAN ANGELO ARE OUT OF THE SOUTH TO SOUTHWEST

TRUE NORTH

Symbol	Description	Date	Appr

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
RASK			

PROJECT TITLE

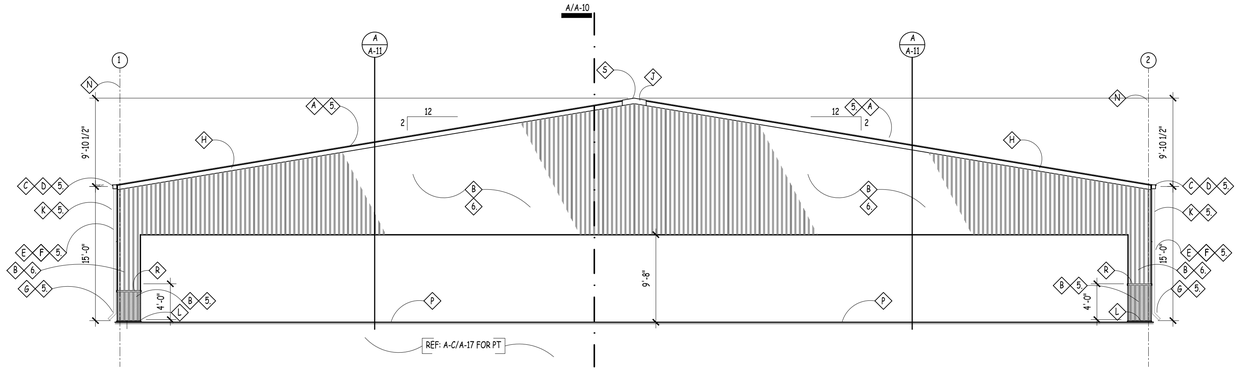
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: ROOF PLAN - MWD BASE BID

Date: April, 2020

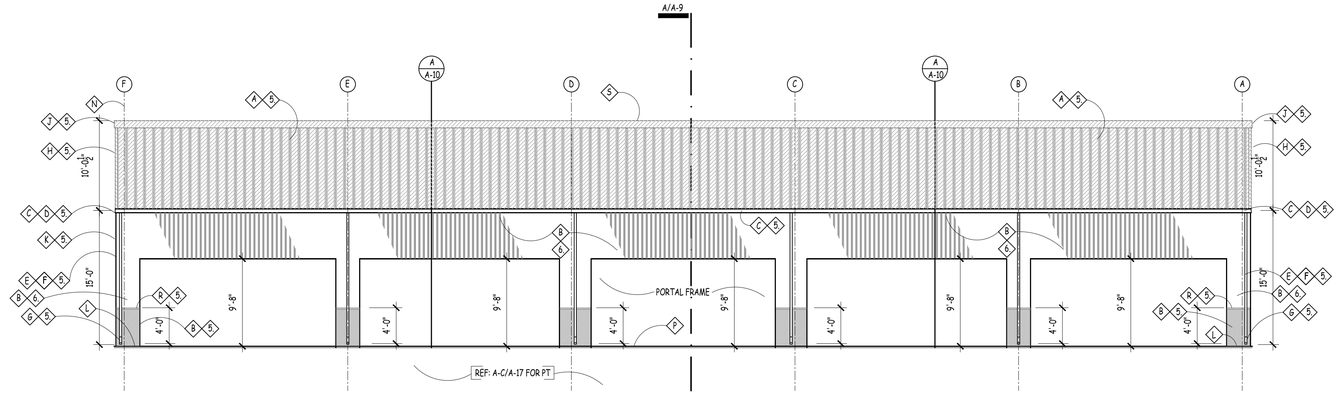
SEQ.	SHEET	OF
15	A-6	26



Opp Elev - Similar

A Bldg. Elev. - PT East Base Bid

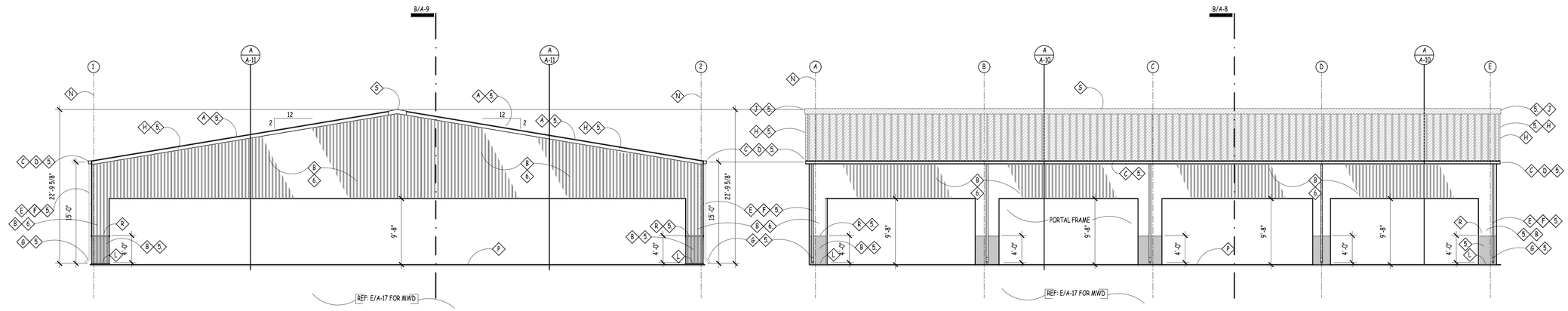
SCALE: 1/4" = 1'-0"



Opp Elev - Similar

B Bldg. Elev. - PT South Base Bid

SCALE: 1/4" = 1'-0"



Opp Elev - Similar

C Bldg. Elev. - MWD East Base Bid

SCALE: 1/4" = 1'-0"

Opp Elev - Similar

D Bldg. Elev. - MWD South Base Bid

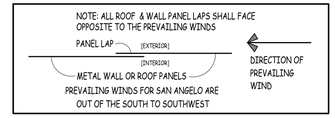
SCALE: 1/4" = 1'-0"

ITEM: X

A ROOF PANELS: "R-PANEL" 26 GA. EQUAL TO MUELLER INC.
B WALL PANELS: "U-PANEL" 26 GA. EQUAL TO MUELLER INC.
C GUTTER: "0520" 26 GA. EQUAL TO MUELLER INC.
D GUTTER STRAP: "1000" 26 GA. EQUAL TO MUELLER INC.
E DOWNSPOUT: "0613" 26 GA. EQUAL TO MUELLER INC.
F DOWNSPOUT STRAP: "1010" 26 GA. EQUAL TO MUELLER INC.
G BOTTOM KICK-OUT: "0633" 26 GA. EQUAL TO MUELLER INC.
H RAKE TRIM: "1480" 26 GA. EQUAL TO MUELLER INC.
J PEAK BOX: 0920" 26 GA. EQUAL TO MUELLER INC.
K OUTSIDE CORNER: "0152" 26 GA. EQUAL TO MUELLER INC.
L DRIP EDGE: "0342" 26 GA. EQUAL TO MUELLER INC.
M RAKE ENDCAP: "1122" 26 GA. EQUAL TO MUELLER INC.
N COLUMN LINE, TYPICAL
P FINISH SURFACE ELEVATION
Q FINISH GRADE
R TRANSITION TRIM
S ROOF VENT

NOTES:
1. SCREW HEAD COLOR SHALL MATCH PANEL COLOR
2. ALL MANUFACTURER PROVIDED TRIM SHALL MATCH MANSARD BROWN
3. ALL FABRICATED TRIM SHALL BE PAINTED COLOR TO MATCH MANSARD BROWN
4. PEB AND PANELS SHALL BE FROM THE SAME MANUFACTURER.
5. COLOR TO MATCH MUELLER MANSARD BROWN.
6. COLOR TO MATCH MUELLER TAN.

NOTE: ALL ROOF & WALL PANEL LAPS SHALL FACE OPPOSITE TO THE PREVAILING WINDS



PREVAILING WINDS FOR SAN ANGELO ARE OUT OF THE SOUTH TO SOUTHWEST

7TH CIVIL ENGINEER SQUADRON
READY - WILLING - ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE

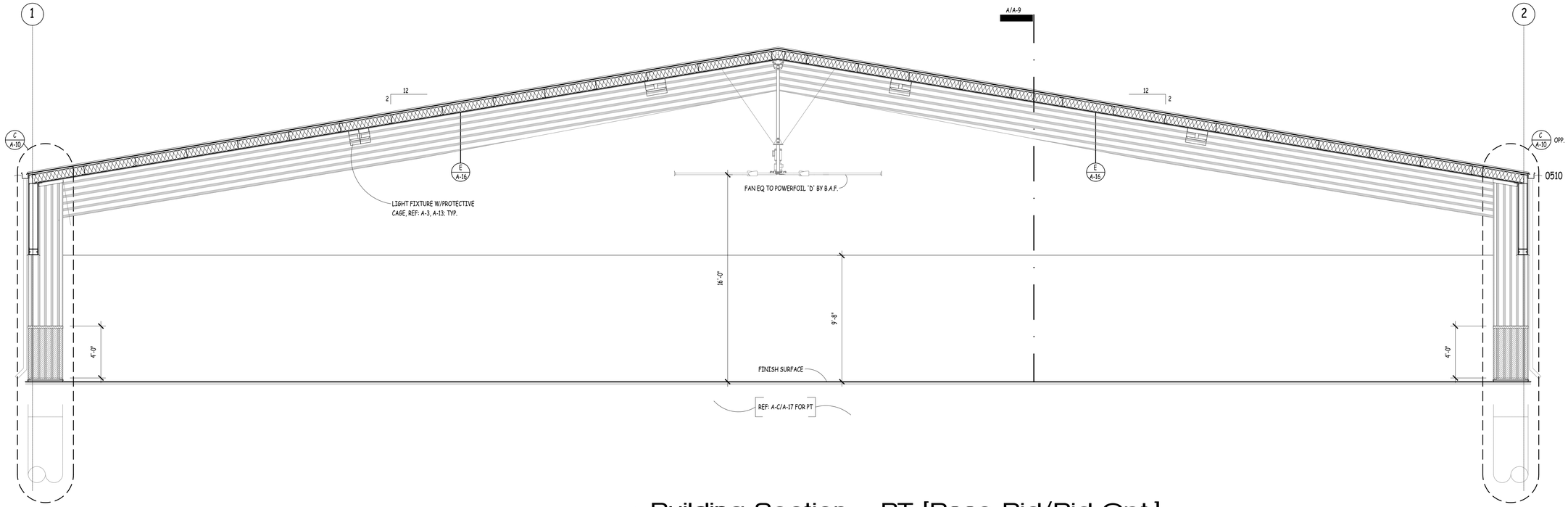
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: BUILDING ELEVATIONS BASE BID

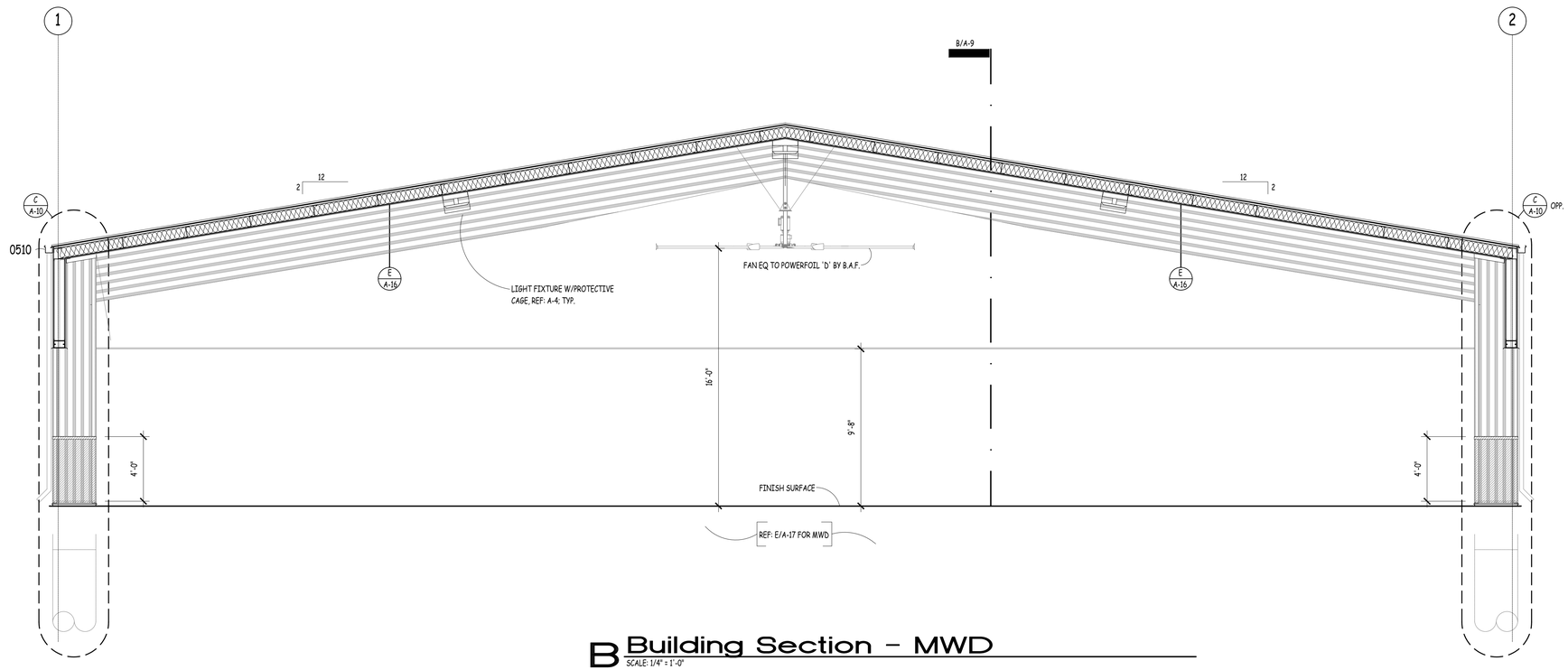
Date: April, 2020

SEQ.	SHEET	OF
16	A-7	26



A Building Section – PT [Base Bid/Bid Opt.]

SCALE: 1/4" = 1'-0"



B Building Section – MWD

SCALE: 1/4" = 1'-0"

Symbol	Description	Date	Appr

REVISIONS

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE

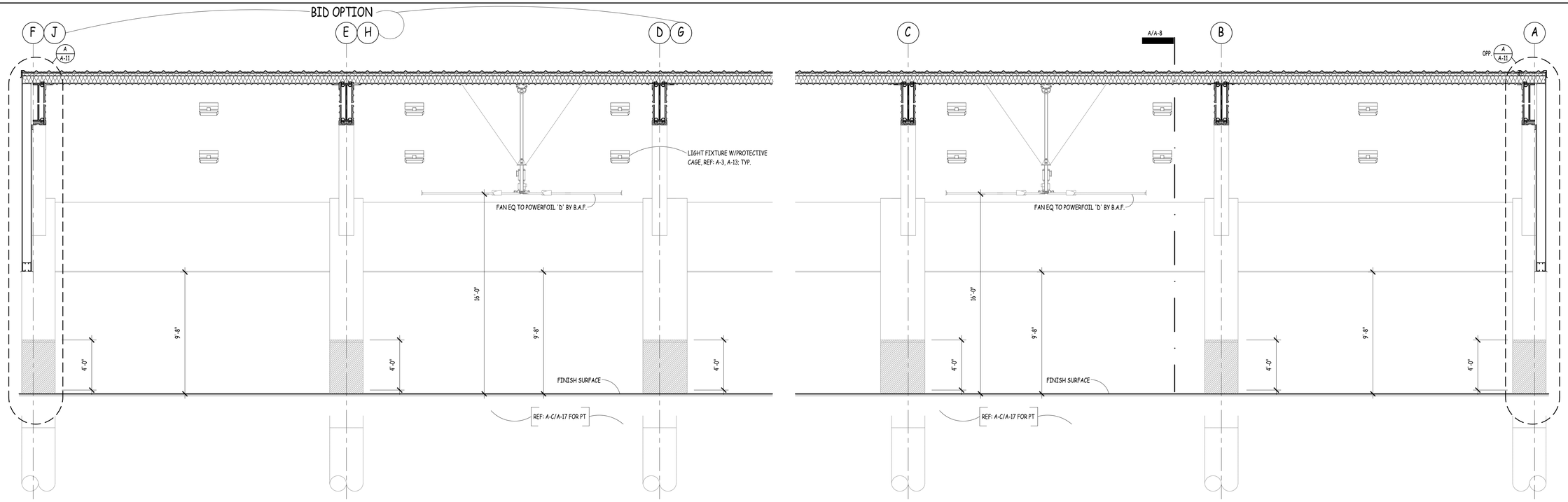
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: BUILDING SECTIONS

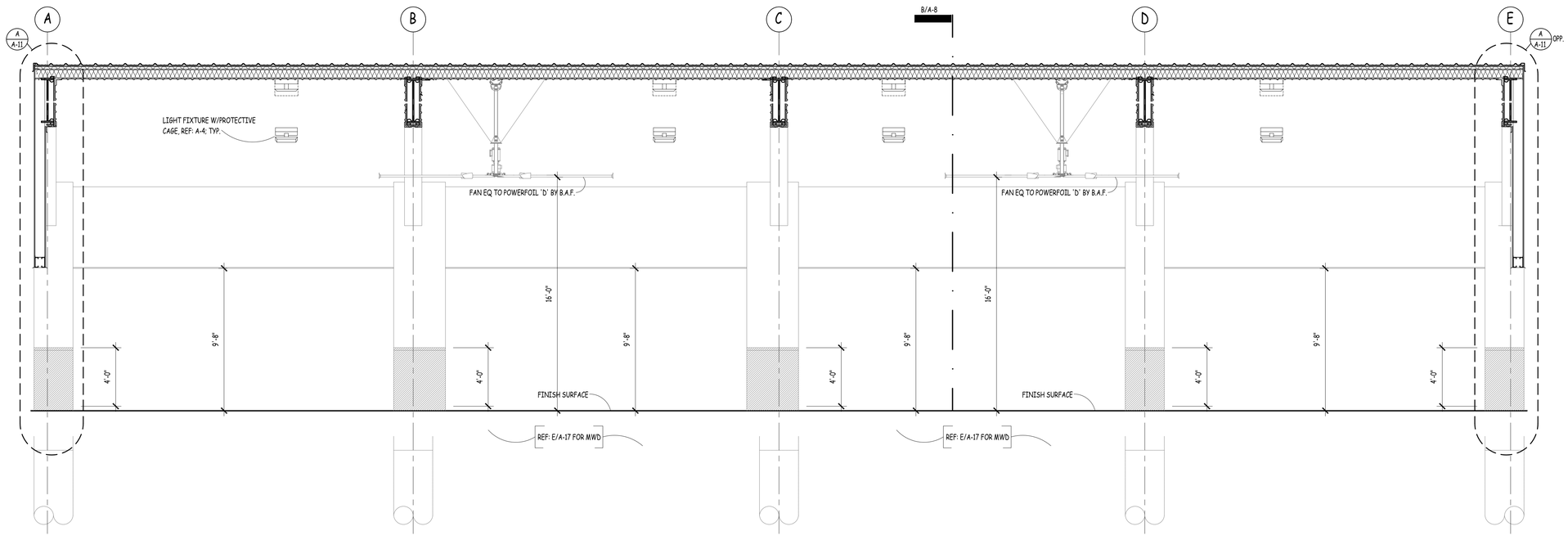
Date: April, 2020

SEQ.	SHEET	OF
17	A-8	26



A Building Section – PT [Base Bid/Bid Opt.]

SCALE: 1/4" = 1'-0"



B Building Section – MWD

SCALE: 1/4" = 1'-0"

17th CIVIL ENGINEER SQUADRON
READY · WILLING · ABLE

Symbol	Description	Date	Appr

REVISIONS

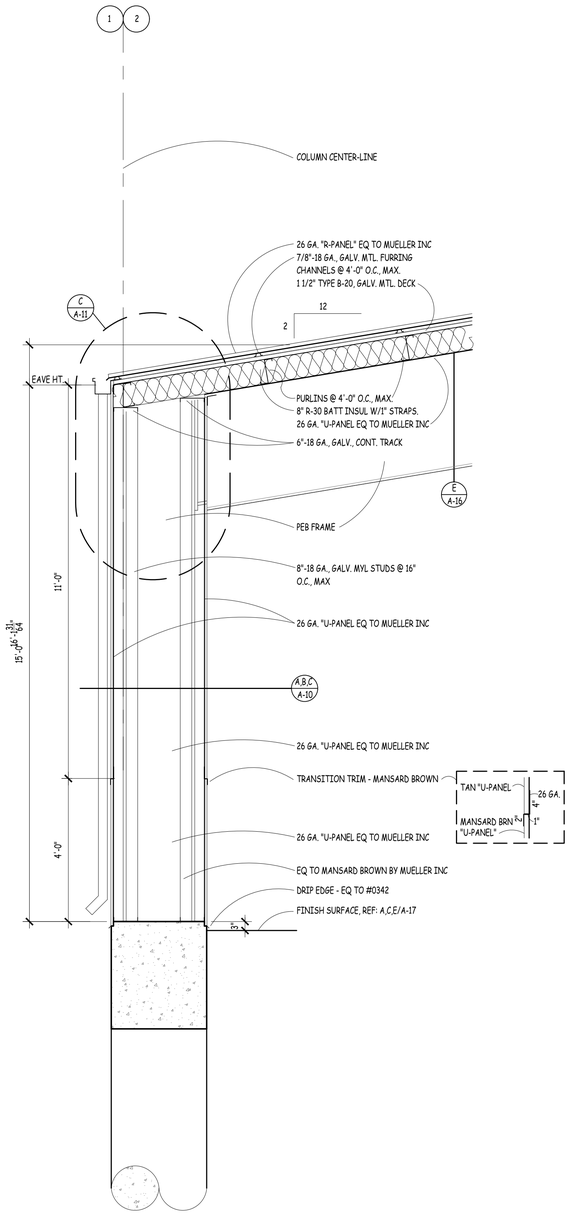
Designed by:	RASK
Drawn by:	
Reviewed by:	
Submitted by:	

PROJECT TITLE

CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:	1056394
SHEET TITLE	BUILDING SECTIONS
Date:	April, 2020

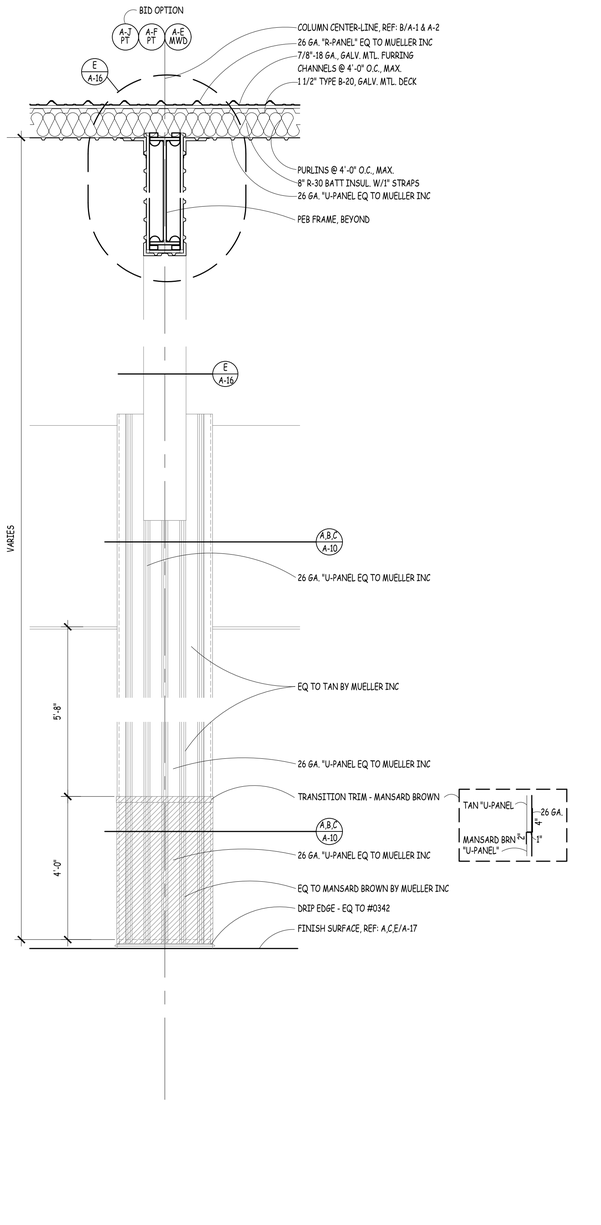
SEQ.	SHEET	OF
18	A-9	26



PROVIDE CEILING VENTS ALONG CEILING PERIMETER IN ACCORDANCE W/MRF. RECOMMENDATIONS.

A W. Sctn.

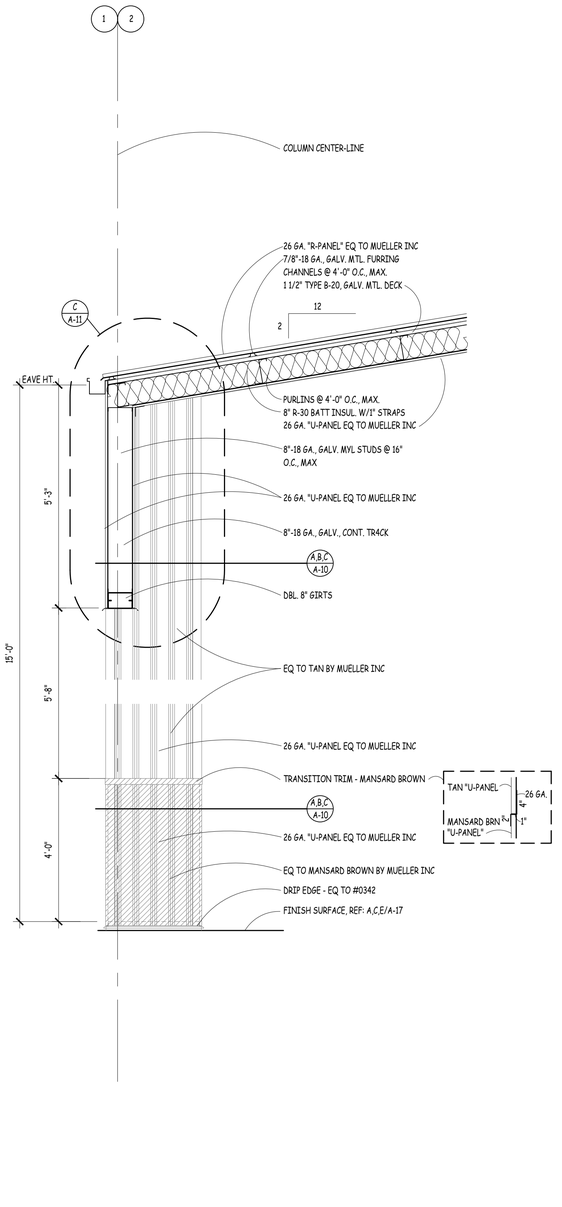
SCALE: 1/4" = 1'-0"



PROVIDE CEILING VENTS ALONG CEILING PERIMETER IN ACCORDANCE W/MRF. RECOMMENDATIONS.

B W. Sctn.

SCALE: 1/4" = 1'-0"



PROVIDE CEILING VENTS ALONG CEILING PERIMETER IN ACCORDANCE W/MRF. RECOMMENDATIONS.

C W. Sctn.

SCALE: 1/4" = 1'-0"

Symbol	Description	Date	Appr

REVISIONS

Designed by: TRASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE

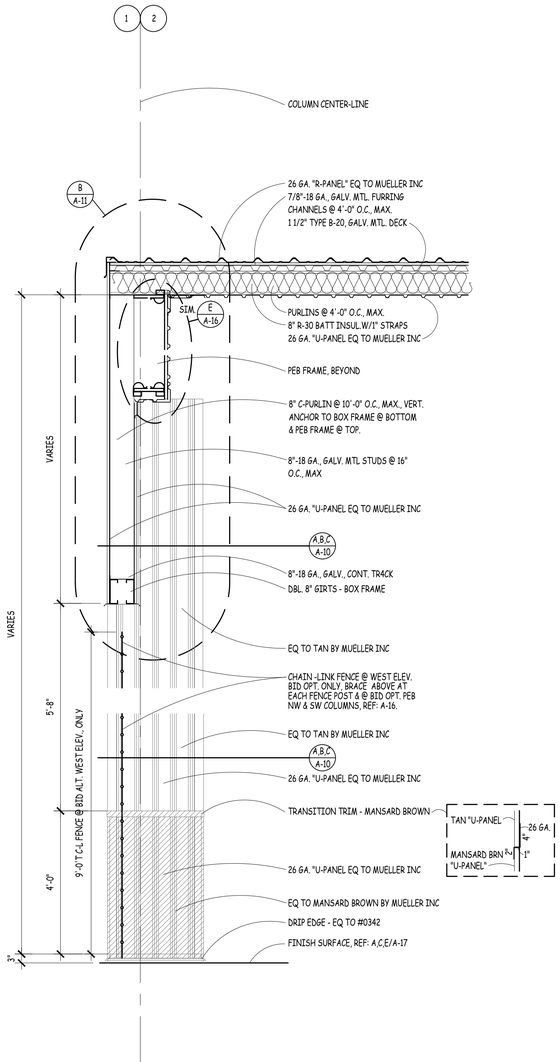
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: WALL SECTIONS

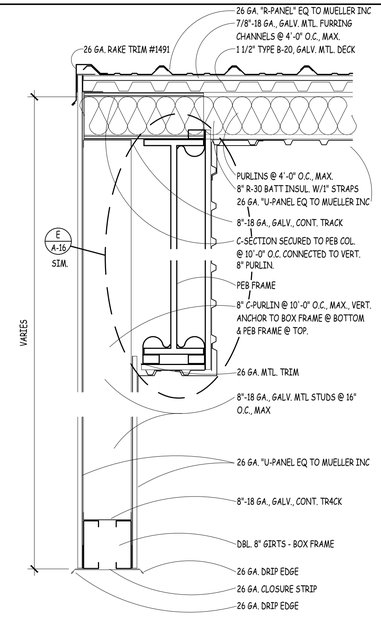
Date: April, 2020

SEQ.	SHEET	OF
19	A-10	26



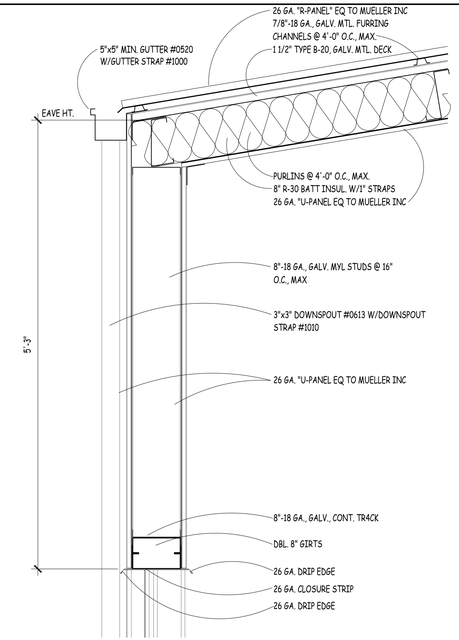
PROVIDE CEILING VENTS ALONG CEILING PERIMETER
IN ACCORDANCE W/MRF. RECOMMENDATIONS.

A W. Sctn.
SCALE: 1/4" = 1'-0"



PROVIDE CEILING VENTS ALONG CEILING PERIMETER
IN ACCORDANCE W/MRF. RECOMMENDATIONS.

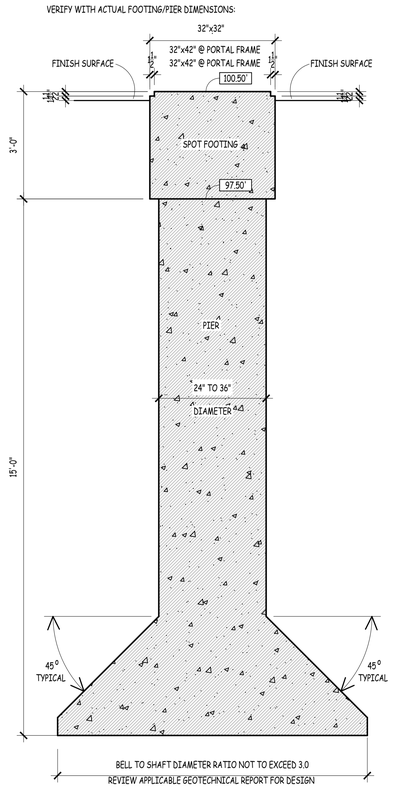
B Rake
SCALE: 1" = 1'-0"



PROVIDE CEILING VENTS ALONG CEILING PERIMETER
IN ACCORDANCE W/MRF. RECOMMENDATIONS.

C Eave
SCALE: 1" = 1'-0"

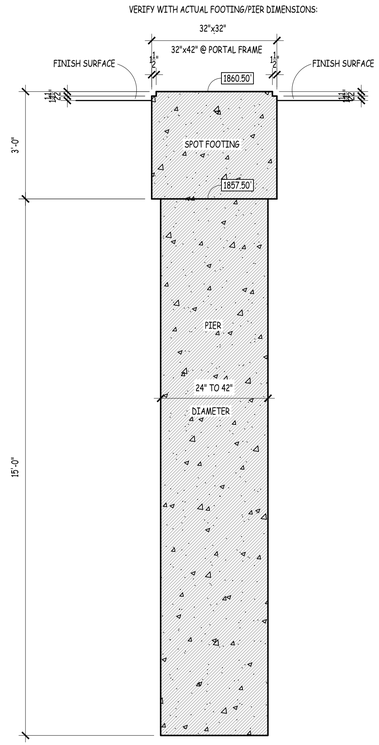
VERIFY WITH ACTUAL FOOTING/PIER DIMENSIONS:



REVIEW APPLICABLE GEOTECHNICAL REPORT FOR DESIGN
BASE BID TO 15' DEPTH, VALUE PER LF @ 15'-20'

D Drilled Pier-PT
NOT TO SCALE

VERIFY WITH ACTUAL FOOTING/PIER DIMENSIONS:



REVIEW APPLICABLE GEOTECHNICAL REPORT FOR DESIGN
BASE BID TO 15' DEPTH, VALUE PER LF @ 15'-20'

E Drilled Pier-MWD
NOT TO SCALE

10th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by: TASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE
WALL SECTION, DETAILS, PIERS

Date: April, 2020

SEQ.	SHEET	OF
20	A-11	26

REF: B/A-1:
FOR TYPICAL COLUMN
LINE LOCATIONS.

BID ALTERNATE
BASE BID

START WALL PANEL INSTALLATION AT THIS END OF THE WEST ELEVATION

START WALL PANEL INSTALLATION AT THIS END OF THE NORTH ELEVATION

START WALL PANEL INSTALLATION AT THIS END OF THE EAST ELEVATION

SLOPE 1 : 12 DOWN

REF: A,B/C-2

TYP.

OPP.

PORTAL FRAME [E/A-16]
BID ALTERNATE LOCATION

CKT#4
CKT#5
CKT#6
CKT#7

PAINTED LANE MARKERS
SHALL BE 4" WIDE

PT ELECTRICAL NOTES:

1. FOR THE 2 FANS 3 PHASE, THE CONTRACTOR SHALL USE THE 2-3 PHASE SPARE BREAKERS IN THE EXIST. PANEL. THE CONTRACTOR SHALL CHANGE THE 100A EXISTING BREAKER TO NEW 20A-3 PHASE BREAKERS FOR THE FANS.
2. THE CONTRACTOR SHALL USE THE BREAKER SPACES IN THE EXIST. PANEL FOR THE LIGHTING AND OUTLET CIRCUITS.
3. ALL THE OUTLETS MUST BE GROUND FAULT AND IN J-BOXES W/METAL WEATHERPROOF ENCLOSURES.
4. THE CONDUIT FOR EACH CIRCUIT SHALL BE 1/2" EMT AND PVC FOR UNDERGROUND AND THE CABLE 12THWN.
5. PROVIDE TIMER SWITCHS FOR LIGHTS W/BUZZER.
6. PROVIDE SURGE PROTECTION AT PANEL.

EXIST. PANEL 'A'
THREE PHASE

20A BRKR	120V	LIGHTING CKT #1 [SINGLE POLE]
20A BRKR	120V	LIGHTING CKT #2 [SINGLE POLE]
20A BRKR	120V	LIGHTING CKT #3 [SINGLE POLE]
15A BRKR	120V	OUTLETS CKT #4 [SINGLE POLE]
15A BRKR	208V	FAN CKT #5 [3 POLE]
15A BRKR	208V	FAN CKT #6 [3 POLE]
15A BRKR	208V	FAN CKT#7 [3 POLE]

B Single Line Diagram
NOT TO SCALE

BID ALTERNATE LOCATION
PORTAL FRAME [E/A-16]

START WALL PANEL INSTALLATION AT THIS END OF THE SOUTH ELEVATION

REF: C-1 FOR ADDITIONAL INFORMATION.

REF: C-3 FOR ADDITIONAL INFORMATION.

ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF PURLIN SPACE AND THE THE COLUMN FURRING SPACE TERMINATING AT COL. A1, FROM THERE TRENCHED TO THE ELECTRIC PANEL AT THE SW CORNER OF THE PT AREA. REF: C-1. COORDINATE RE-INSTALL LOCATION OF ALPHA WARRIOR UNIT WITH THE GOVERNMENT.

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

A Floor Plan – PT: Bid Opt.
SCALE: 1/8" = 1'-0"

NOTE: ALL ROOF & WALL PANEL LAPS SHALL FACE OPPOSITE TO THE PREVAILING WINDS

PANEL LAP — [EXTERIOR] — [INTERIOR] — METAL WALL OR ROOF PANELS

DIRECTION OF PREVAILING WIND

PREVAILING WINDS FOR SAN ANGELO ARE OUT OF THE SOUTH TO SOUTHWEST

TRUE NORTH

FOR CIVIL ENGINEER SUCCESSION
READY • WILLING • ABLE

Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by: TRASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: FLOOR PLAN - PT: BID OPTION

Date: April, 2020

SEQ.	SHEET	OF
21	A-12	26

REF: B/A-1:
FOR TYPICAL COLUMN
LINE LOCATIONS.

202'-2" BID ALT.
126'-10" BASE BID
BID ALTERNATE
BASE BID
FAN DIMENSION
A/A-8
OPP
CKT#1
CKT#2
CKT#3
CKT#5
CKT#6
CKT#7
CEILING RIDGE LINE
START ROOF PANEL INSTALLATION AT THE EAST END OF THE ROOF

LEGEND:
A = LIGHT FIXTURE EQ TO 100 WATT NATURALED BY NATURAL LED W/ 62071 PROTECTIVE CAGE BY AMERICAN TIME
= EQ TO POWERFOIL D BY "BIG ASS FANS"
= FOR CKT #1
= FOR CKT #2
= FOR CKT #3
= CEILING RIDGE LINE
= DIRECTION OF DOWNWARD SLOPE

TRUE NORTH

NOTES:
1. CLOSURE STRIPS PER MFR RECOMMENDATIONS.
2. BUTYL TAPE PER MFR RECOMMENDATIONS.
3. REF: A-1 FOR ADDITIONAL INFORMATION.
4. 26 GA. "U-PANEL" METAL CEIING = 2 : 12, THROUGHOUT.
5. PROVIDE CEILING VENTS ALONG CEILING PERIMETER IN ACCORDANCE W/MRF. RECOMMENDATIONS.
6. INSTALL OLIGHT FIXTURES TO 'U-PANEL CEILING
7. ALL ELECTRIC CIRCUITS SHALL RUN WITHIN THE ROOF PURLIN SPACE AND THE THE COLUMN FURRING SPACE TERMINATING AT COL. A2. FROM THERE TRENCHED TO THE ELECTRIC PANEL AT THE SW CORNER OF THE PT AREA. REF: C-3.
8. DIRECTION OF DOWNWARD SLOPE
9. REF: A-12 FOR ELECTRICAL NOTES AND SINGLE LINE DIAGRAM
10. PROVIDE ELEC. ACCESS PANELS IN ROOF AND COL. FURR'GS

COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND NEC.

A Reflected Ceiling Plan – PT: Bid Opt.

SCALE: 1/8" = 1'-0"

17th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

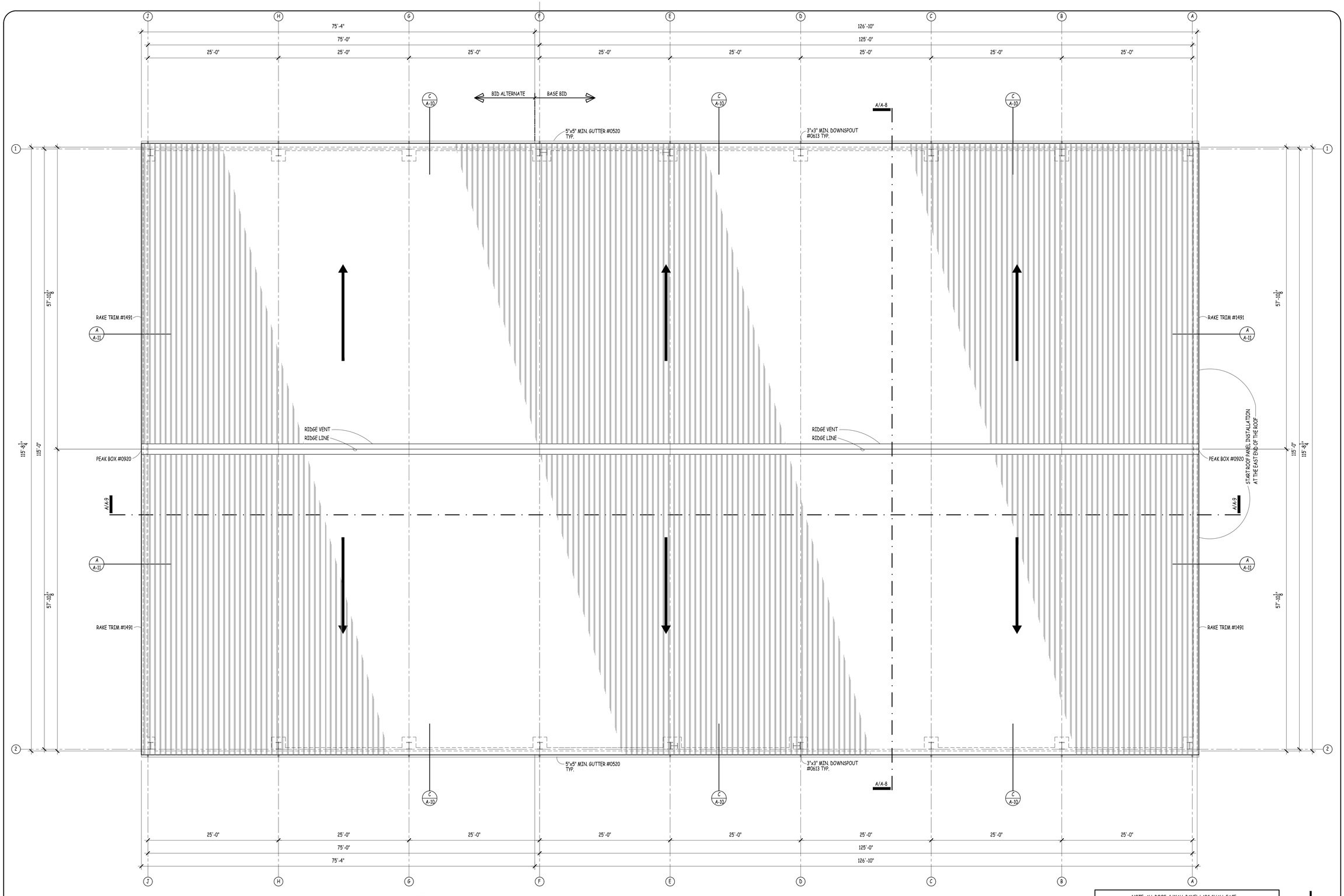
REVISIONS

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394
SHEET TITLE: REFLECTED CEILING PLAN - PT: BID OPTION
Date: April, 2020

SEQ.	SHEET	OF
22	A-13	26



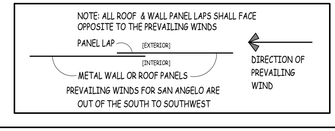
NOTES:
CLOSURE STRIPS PER MFR RECOMMENDATIONS.
BUTYL TAPE PER MFR RECOMMENDATIONS.
REF: A-2 FOR ADDITIONAL INFORMATION.
26 GA. "R-PANEL" METAL ROOF = 2 : 12, THROUGHOUT.
RIDGE VENT EQ TO COR-A VENT LOW PROFILE FLOATING RIDGE VENT BY RIGID GLOBAL BUILDINGS.

DIRECTION OF DOWNWARD SLOPE

A Roof Plan – PT: Bid Opt.

SCALE: 1/8" = 1'-0"

NOTE: ALL ROOF & WALL PANEL LAPS SHALL FACE OPPOSITE TO THE PREVAILING WINDS



PREVAILING WINDS FOR SAN ANGELO ARE OUT OF THE SOUTH TO SOUTHWEST

N
TRUE NORTH

17th CIVIL ENGINEER SQUADRON
READY · WILLING · ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE

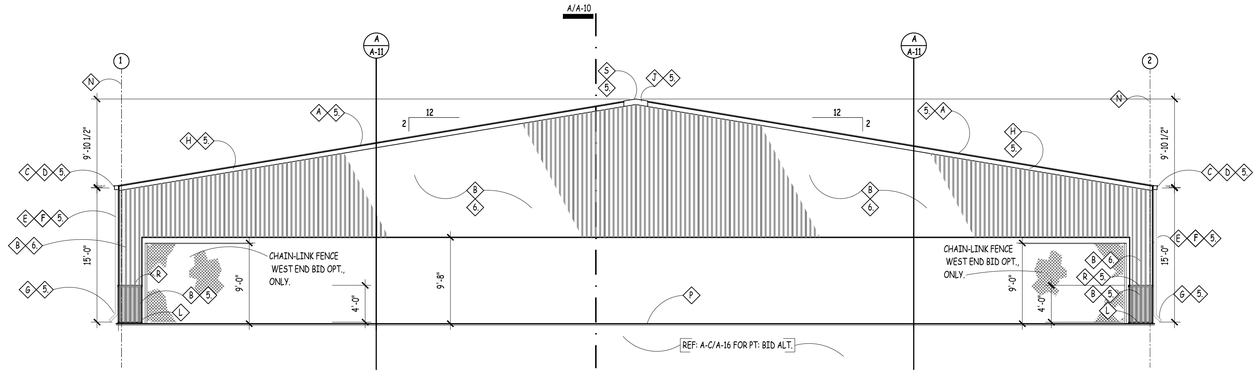
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: ROOF PLAN - PT BID OPTION

Date: April, 2020

SEQ.	SHEET	OF
23	A-14	26



ITEM: X

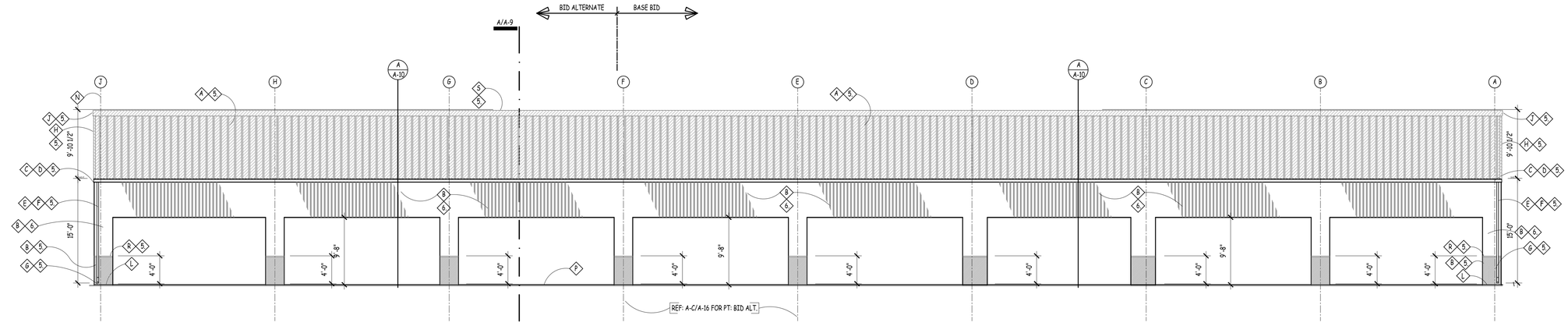
A ROOF PANELS: "R-PANEL" 26 GA. EQUAL TO MUELLER INC.
B WALL PANELS: "U-PANEL" 26 GA. EQUAL TO MUELLER INC.
C GUTTER: "0520" 26 GA. EQUAL TO MUELLER INC.
D GUTTER STRAP: "1000" 26 GA. EQUAL TO MUELLER INC.
E DOWNSPOUT: "0613" 26 GA. EQUAL TO MUELLER INC.
F DOWNSPOUT STRAP: "1010" 26 GA. EQUAL TO MUELLER INC.
G BOTTOM KICK-OUT: "0633" 26 GA. EQUAL TO MUELLER INC.
H RAKE TRIM: "1480" 26 GA. EQUAL TO MUELLER INC.
J PEAK BOX: 0920" 26 GA. EQUAL TO MUELLER INC.
K OUTSIDE CORNER: "0152" 26 GA. EQUAL TO MUELLER INC.
L DRIP EDGE: "0342" 26 GA. EQUAL TO MUELLER INC.
M RAKE ENDCAP: "1122" 26 GA. EQUAL TO MUELLER INC.
N COLUMN LINE, TYPICAL
P FINISH SURFACE ELEVATION
Q FINISH GRADE
R TRANSITION TRIM
S ROOF VENT

NOTES:
1. SCREW HEAD COLOR SHALL MATCH PANEL COLOR
2. ALL MANUFACTURER PROVIDED TRIM SHALL MATCH MANSARD BROWN
3. ALL FABRICATED TRIM SHALL BE PAINTED COLOR TO MATCH MANSARD BROWN
4. PEB AND PANELS SHALL BE FROM THE SAME MANUFACTURER.
5. COLOR TO MATCH MUELLER MANSARD BROWN.
6. COLOR TO MATCH MUELLER TAN.

Opp Elev - Similar

A Bldg. Elev. - PT East: Bid Opt.

SCALE: 1/4" = 1'-0"

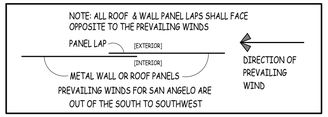


Opp Elev - Similar

B Bldg. Elev. - PT South: Bid Opt.

SCALE: 1/4" = 1'-0"

NOTE: ALL ROOF & WALL PANEL LAPS SHALL FACE OPPOSITE TO THE PREVAILING WINDS



PREVAILING WINDS FOR SAN ANGELO ARE OUT OF THE SOUTH TO SOUTHWEST

17th CIVIL ENGINEER SQUADRON
READY · WILLING · ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by: RASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE

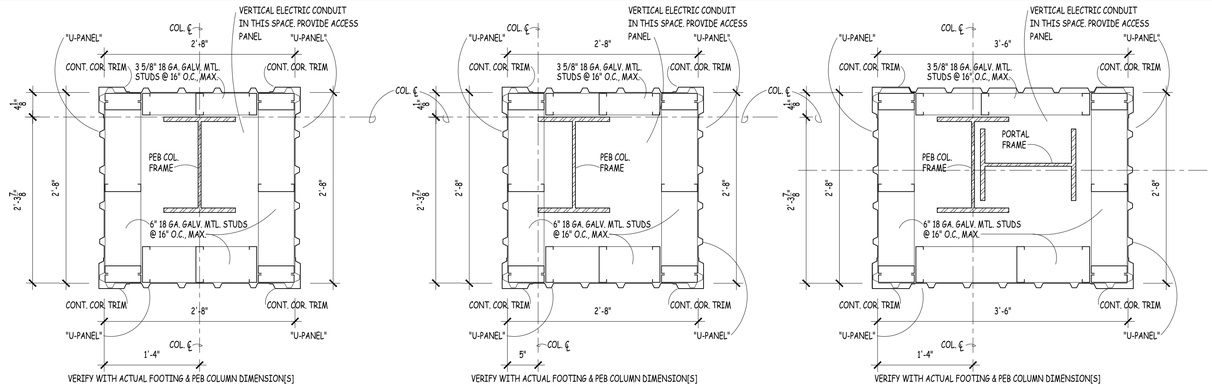
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394

SHEET TITLE: BUILDING ELEVATIONS BID OPTION

Date: April, 2020

SEQ.	SHEET	OF
24	A-15	26



VERIFY WITH ACTUAL FOOTING & PEB COLUMN DIMENSION[S]

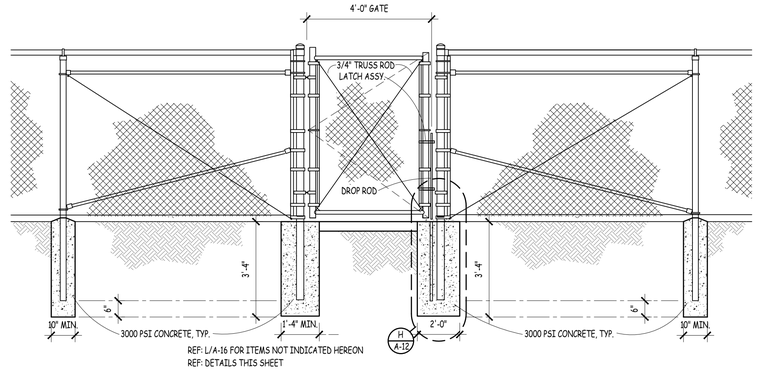
A Col. Furr'g

VERIFY WITH ACTUAL FOOTING & PEB COLUMN DIMENSION[S]

B Outside Corner Col. Furr'g

VERIFY WITH ACTUAL FOOTING & PEB COLUMN DIMENSION[S]

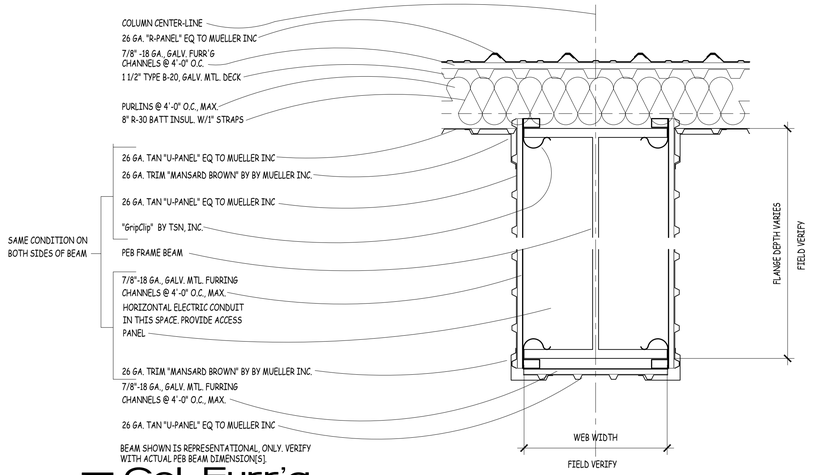
C Col. Furr'g



REF: L/A-16 FOR ITEMS NOT INDICATED HEREON
REF: DETAILS THIS SHEET

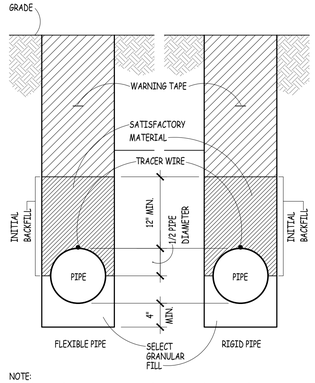
D Gate Elevation

NOT TO SCALE



E Col. Furr'g

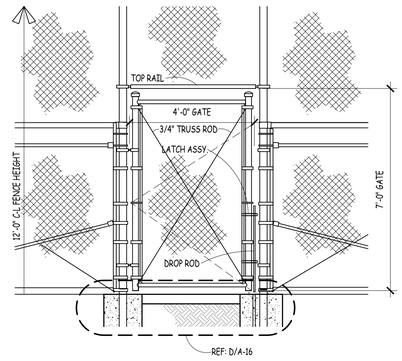
SCALE: 1" = 1'-0"



NOTE:
ALL NEW BURIED PLASTIC UTILITY LINES SHALL HAVE A #10 WIRE INSTALLED WITH THE PIPE. THIS WIRE SHALL BE CONTINUOUS & TAPED TO THE PIPE @ 20'-0" O.C. AND BE ACCESSIBLE ABOVE THE GROUND AT ALL VALVES AND BUILDING RISERS.

F Typ. Utility Trench

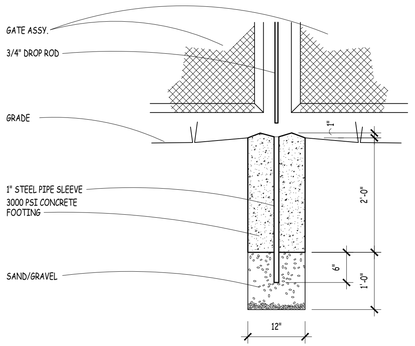
NOT TO SCALE



REF: D/A-16

G 7'-0" Gate Elevation

NOT TO SCALE

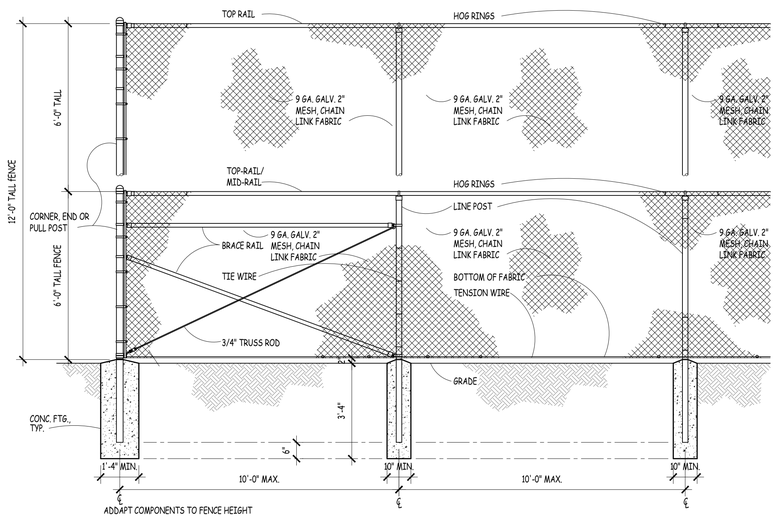


H Drop Rod Found. Dtl.

NOT TO SCALE

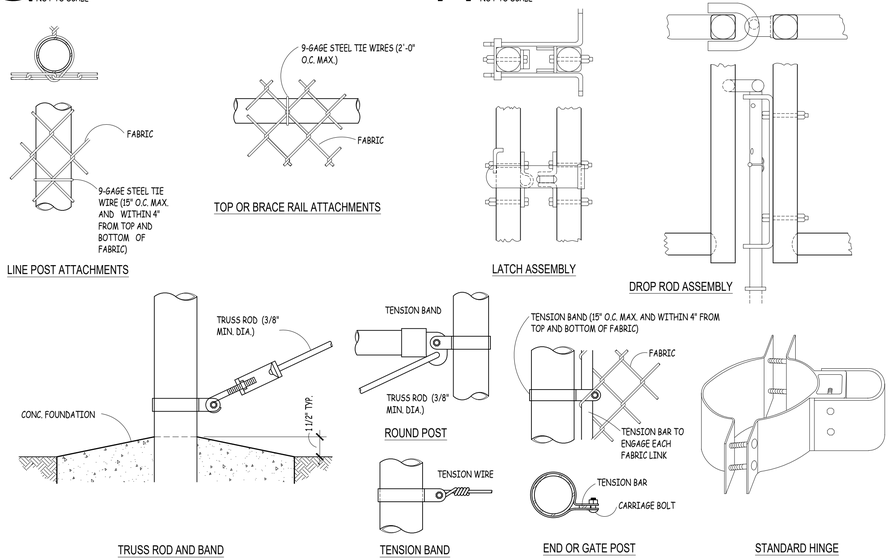
2 OUNCE/SQUARE FOOT GALVANIZED STEEL POST SCHEDULE		
USE: TUBULAR & ROUND	MINIMUM OUTSIDE DIMENSIONS	WEIGHT/LINEAR FOOT
CORNER, END, GATE & PULL POSTS	2 7/8" O.D.	3.26 PLF
LINE POSTS	2 1/2" O.D.	2.32 PLF
TOP, BOTTOM & BRACE RAILS	1 5/8" O.D.	1.43 PLF
GATE FRAME	2" O.D.	1.74 PLF
BRACE ASSEMBLY	1 5/8" O.D.	2.27 PLF
ROD W/ADJUSTABLE TAKE-UP	3/4" DIAMETER	-------

NOTES:
1. REFERENCE STATEMENT OF WORK FOR ADDITIONAL INFORMATION.
2. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE STATEMENT OF WORK.
3. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE SIDE OPPOSITE THE SECURE AREA.
4. SWING GATES SHALL BE CONSTRUCTED WITH DROP RODS, PADLOCKS, LATCH ASSEMBLY AND GATE KEEPERS EXCEPT AS NOTED.
5. ALL GATE FRAMES SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM F900.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER RIGID CONSTRUCTION OF ALL FENCES & GATES SUPPLIED.



J Typical Chain-link Fence Elevation

NOT TO SCALE



K Miscellaneous Fence Details

NOT TO SCALE

REVISIONS

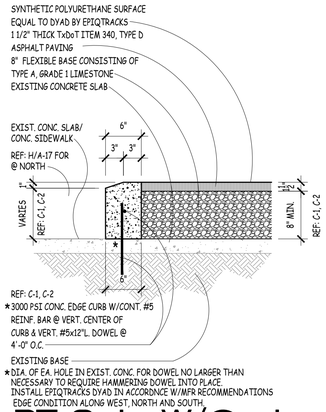
Symbol	Description	Date	Appr

Designed by: TRASK
Drawn by:
Reviewed by:
Submitted by:

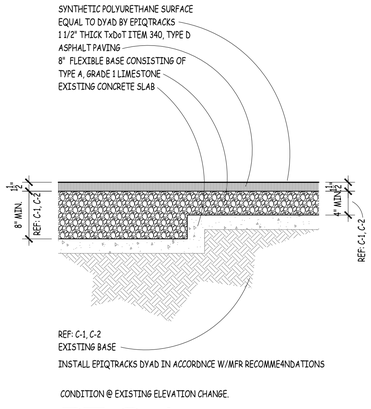
PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394
SHEET TITLE: MISCELLANEOUS DETAILS
Date: April, 2020

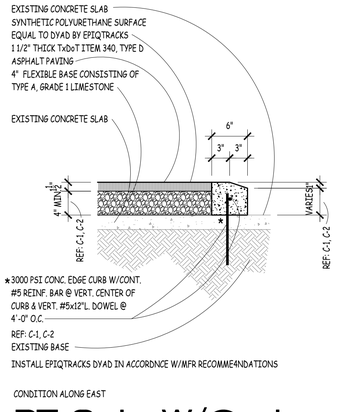
SEQ.	SHEET	OF
25	A-16	26



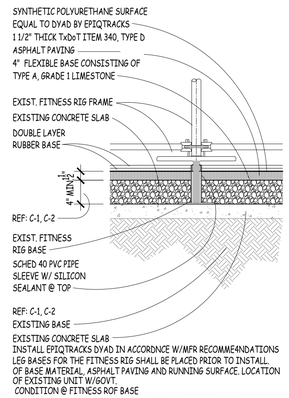
A PT Sctn W/Curb
SCALE: 1" = 1'-0"



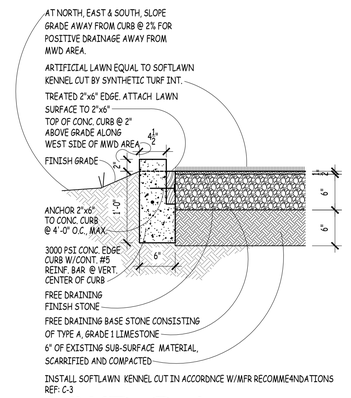
B PT Sctn
SCALE: 1" = 1'-0"



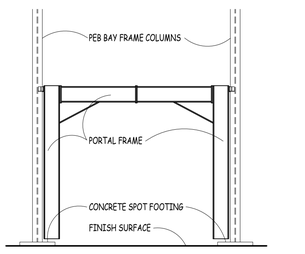
C PT Sctn W/Curb
SCALE: 1" = 1'-0"



D Fitness Rig Base
SCALE: 1" = 1'-0"



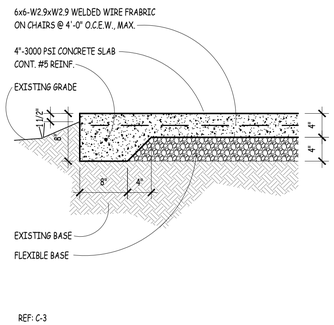
E MWD Sctn
SCALE: 1" = 1'-0"



PLACE PORTAL FRAME WHERE INDICATED IN THESE DRAWINGS.

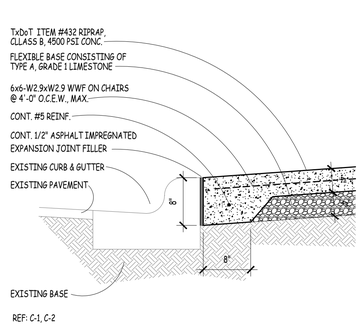
THIS PORTAL FRAME IS REPRESENTATIONAL, ONLY. THE CURRENTLY TEXAS REGISTERED ENGINEER SHALL DESIGN THE PORTAL FRAME IN ACCORDANCE WITH APPLICABLE DESIGN AND CODE STANDARDS

F Portal Frame
NOT TO SCALE



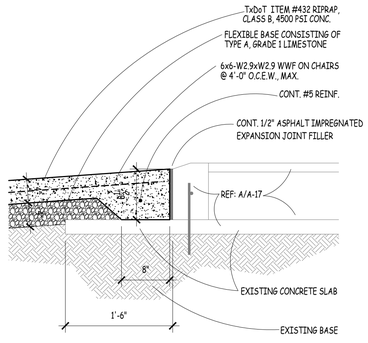
REF: C-3

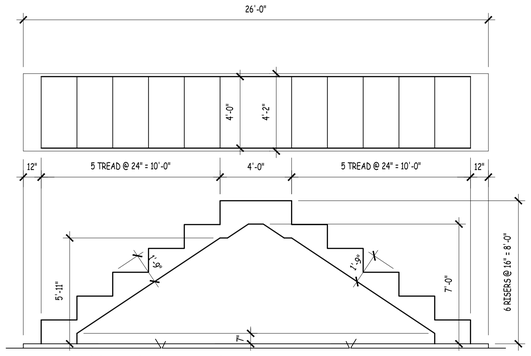
G MWD Conc. Slab
SCALE: 1" = 1'-0"



REF: C-1, C-2

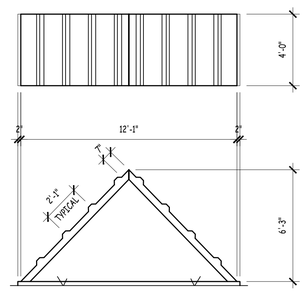
H Concrete Riprap
SCALE: 1" = 1'-0"





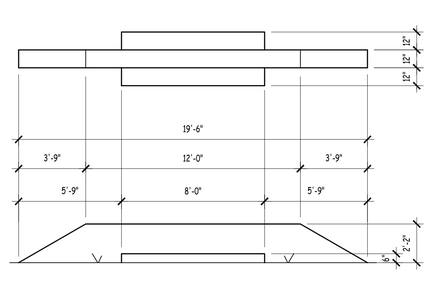
CONCRETE OBSTACLE. REF: C-3
IMAGE ABOVE, FOR REFERENCE, ONLY. PROVIDE CONCRETE BASE

J New Stair-Step
NOT TO SCALE



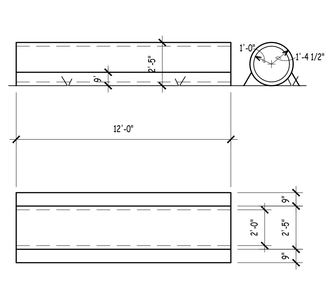
4 1/2" THICK CONCRETE OBSTACLE.
REF: C-3
PROVIDE CONCRETE BASE
IMAGE ABOVE, FOR REFERENCE, ONLY.

K New A-Frame
SCALE: 1" = 1'-0"



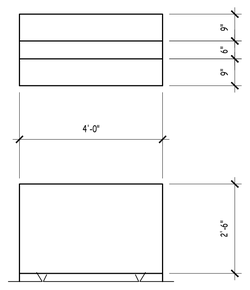
CONCRETE OBSTACLE.
REF: C-3
PROVIDE CONCRETE BASE
IMAGE ABOVE, FOR REFERENCE, ONLY.

L New Dog-Walk
SCALE: 1" = 1'-0"



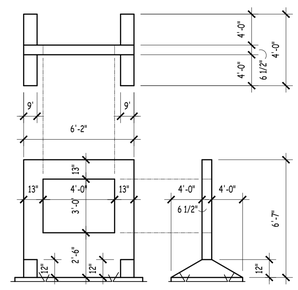
CONCRETE OBSTACLE.
REF: C-3
PROVIDE CONCRETE BASE
IMAGE ABOVE, FOR REFERENCE, ONLY.

M New Tunnel
SCALE: 1/4" = 1'-0"



CONCRETE OBSTACLE.
REF: C-3
PROVIDE CONCRETE BASE
IMAGE ABOVE, FOR REFERENCE, ONLY.

N New Hurdle: 3 Ea.
SCALE: 1/2" = 1'-0"



CONCRETE OBSTACLE.
REF: C-3
PROVIDE CONCRETE BASE
IMAGE ABOVE, FOR REFERENCE, ONLY.

P New Window
SCALE: 1/4" = 1'-0"

Symbol	Description	Date	Appr

REVISIONS

Designed by: TRASK
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CANOPIES
PT and MWD
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1056394
SHEET TITLE: MISCELLANEOUS DETAILS
Date: April, 2020

SEQ.	SHEET	OF
26	A-17	26

TE-D: SCHEDULE OF MATERIALS SUBMITTAL
AF FORM 66

CONSTRUCT CANOPY STRUCTURES: PHYSICAL TRAINING (PT) & MILITARY WORKING DOG (MWD)

SCHEDULE OF MATERIAL SUBMITTALS												PROJECT NUMBER 1056394		PROJECT TITLE Construct PT & MWD Canopies				SOLICITATION/CONTRACT NO.		
TO BE COMPLETED BY THE PROJECT ARCHITECT												TO BE COMPLETED BY CONTRACT ADMINISTRATOR							
		NO. OF COPIES REQUIRED																		
LINE NUMBER	ITEM OR DESCRIPTION OF ITEM, CONTRACT REFERENCE, TYPE OF SUBMITTAL (Ref spec & para)	CERTIFICATE OF COMPLIANCE	SHOP DRAWINGS	SAMPLES	COLOR SELECTION	MANUFACTURER'S RECCOMENDATIONS	MANUFACTURER'S WARRANTY	OPERATING INSTRUCTIONS	SEE PARA	OTHERS AS SPECIFIED	REQUIRED SUBMISSION DATE	DATE RECEIVED IN CONTRACTING	DATE TO CIVIL ENGINEERING	RETURN SUSPENSE DATE	FOLLOW UP	DATE CONTRACTOR NOTIFIED		CONTRACTOR RE-SUBMITTAL	FINAL APPROVAL	REMARKS
																APPROVED	DIS-APPROVED			
1	Para 1.13 Submittals.	x							4		(e)									FIO
2	Para 1.6.4 Work Plan	x							4		(e)									
3	Para 1.19 Safety Plan	x							4		(e)									FIO
4	Para 1.17 Welding, Cutting, and Brazing AF Form 592	x							4		(c)									GA
5	Para 1.27 Work Schedule	x							4		4 days prior (c)									FIO
6	Para 4.1 Base Civil Engineering Work Clearance Request AF Form 103	x							4		10 Days Prior (e)									FIO
7	Para 4.2 Utility Outage	x							4		14 days prior (c)									GA
8	Para 5.3 Hazardous and Special Wastes Generated by the Contractor	x							4		(d)									FIO
9	Para 5.4 Contractor Encountered Hazardous Waste	x							4		(d)									FIO

10	Para 5.6 Hazardous Material	x							4		(d)									FIO
11	Para 5.9 Air Emission	x							4		(e)									FIO
12	Para 5.10 Drinking Water	x																		FIO
13	Para 5.11 Protection of Water Resources (Construction General Permit)	x							4		30 days prior (e)									FIO
14	Para 5.12.7 Construction Waste Management	x							4		(b)									GA
15	2.0 Products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
16	2.4 Design Mix	x							4		14 days prior ©									GA
17	2.4.4 Slump Test Results	x							4		NLT 5 days After (g)									GA
18	2.4.1.8 Strength Test Results	x							4		NLT 5 days After (g)									GA
19	2.4.2 Concrete Reinforcing		x						4		10 days prior (c)									GA
20	2.4.5 Pier Reinforcing.		x						4		10 days prior (c)									GA
21	2.5 Flexible Base	x							4		10 days prior (c)									GA
22	2.6 Asphalt paving Design Mix	x							4		14 days prior (c)									GA
23	2.7 Synthetic Running Surface		x						4		10 days prior (c)									GA

(a) As soon as possible but in no case later than 45 calendar days after NTP.
(b) Prior to Final Inspection.
(c) Prior to Use.
(d) As Required.
(e) Prior to start of Construction (g) After Test

24	Synthetic Canine Turf		x						4		10 days prior (c)								GA
25	Synthetic Basketball Surface Bid Option		x						4		10 days prior (c)								GA
26	2.10.7 Metal Roof & Wall panels			x					4		10 days prior (c)								GA
27	2.11 Cold-Formed Metal Framing		x						4		10 days prior (c)								GA
28	2.12 Metal Roof Deck		x						4		10 days prior (c)								GA
29	2.13 Batt Insulation		x						4		10 days prior (c)								GA
30	2.14 Coatings			x					4		10 days prior (c)								GA
31	MWD Obstacle Items		x						4		10 days prior (c)								GA
32	2.18 Electrical Items		x						4		10 days prior (c)								GA
33	2.24 Chain-Link Fence		x						4		10 days prior (c)								GA
34	2.25 Hydromulching		x						4		10 days prior (c)								GA

(a) As soon as possible but in no case later than 45 calendar days after NTP.
(b) Prior to Final Inspection.
(c) Prior to Use.
(d) As Required.
(e) Prior to start of Construction (g) After Test

V. FIRE STATION CANOPY

I. STATEMENT OF WORK

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1.1 GENERAL: The work to be performed under this contract and in accordance with this Statement of Work shall consist of furnishing all necessary parts, labor, tools, transportation, supplies, supervision, equipment, materials, and incidentals necessary for providing all work shown on the drawings (Technical Exhibits), statement of work, and all applicable codes, regulations, standards and criteria in effect at the date of solicitation. The work outlined below shall consist of, but not be limited to the following:

1.2 PROJECT DESCRIPTION: The project includes demolition, site preparation, new asphalt pavement, new curb and gutter, new concrete pavement, new foundation and new pre-engineered overhead protection structure as shown on the drawings and described here-in.

1.2.1 Agency Relationship: Tom Green County (TGC) has sole contract authority. 17th Civil Engineer Squadron (17 CES) Goodfellow AFB will serve in the role of providing contract coordination/monitoring but will not have any direct contract authority to approve or disapprove construction work. All contract correspondence shall be directly submitted to TGC.

1.3 LOCATION: Goodfellow Air Force Base is located in Tom Green County, on the southeast side of San Angelo, TX. and is bounded to the north by Highway #388 (Paint Rock Rd.), to the west by Fort McKavitt Rd and Bell Street/Christoval Road, to the south by Highway #1223 (San Antonio Hwy.) and to the east by the eastern city limits. Work location is located just north of building 3321 (Fire Station).

1.4 WORK AND MECHANICS: The work for this project shall be executed in the best and most workmanlike manner, by qualified and efficient mechanics/tradesmen, skilled in their respective trades. Only certified journeymen in each respective trade, or apprentices under the direct supervision of certified journeymen, shall be permitted to install and/or supervise installation for this project. Individual trade work for this project shall be performed and quality maintained by the applicable trade, only. All trades shall coordinate their work with that of other trades. The Contractor shall coordinate and perform all operations in a manner that will result in a professional and expeditiously completed project. The work shall be in strict accordance with prevailing industry standards and manufacturer’s instructions. Work and materials shall comply with this Statement of Work and the editions in effect at the time of this solicitation for all applicable criteria, regulations, guidelines and codes, all of which are made a part thereof.

1.5 PERFORMANCE PERIOD: The Contractor shall have one hundred and twenty (120) calendar days to perform all work associated with this project.

1.6 WORK SCHEDULE: Workdays shall be from 0730 to 1630, Monday thru Friday; no weekend work allowed unless approved by the Contracting Representative. If weekend work is required Contractor shall submit request in writing to Contracting Representative a minimum of 72 hours in advance. The Contractor shall provide written notification to the Contracting Representative fourteen (14) calendar days lead time for work schedule.

1.7 WORK AREA ACCESS: Government escorts are not needed in this area.

1.8 CONCRETE TRUCKS: Cleaning out of concrete trucks on Goodfellow AFB is prohibited. Concrete truck chutes, only, may be rinsed at the construction site. Wastewater and concrete from this rinse shall be collected in a high-density polyethylene (HDPE) plastic-lined box or pit provided by the Contractor at the site. At the end of pouring operations, the Contractor shall excavate all the waste and liner and properly dispose of same. The Contractor shall dispose of all concrete debris to an authorized off base site and shall remove any and all concrete debris and residue at the end of the project at no additional cost to the contract. The pit shall be completely backfilled and the site restored to original conditions.

1.9 REFERENCES: All publications listed herein shall be the most current editions in effect at the time of solicitation and form a part of this Statement of Work. The publications are referred to in the text by basic designation only and include the following:

GAFB INSTRUCTION

GAFBI 32-2001 Goodfellow AFB Base Fire Protection Program

GAFBI 31-102 Installation Security Instruction

NATIONAL FIRE CODE

NATIONAL ELECTRIC CODE

UNIFORM BUILDING CODE (UBC)

US ARMY CORPS OF ENGINEERS HEALTH AND SAFETY MANUAL

OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA)

OSHA STD 29 CFR 1910 and 1926

OSHA STD 29 CFR 1910.252 Welding, Cutting and Brazing (General Requirements)

1.10 SUBMITTALS: The Contractor shall provide submittals in the form of manufacturer's data, certificates of compliance and samples for all items provided and installed per the attached AF Form 66. The Contractor will not be permitted to perform any work on site without approved submittals. The submittals listed on the attached AF Form 66 shall be required and shall be submitted for Approval (A) or For Information Only (FIO). Use AF Form 3000 to process submittals. Submit four copies of submittals to Contracting Representative. Execute Final DD Form 1354 and submit to Contracting Representative at final inspection.

1.11 MANUFACTURER'S CATALOG DATA: Data composed of catalog cuts, brochures, circulars, specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the contract documents.

SAMPLES: The Contractor shall submit actual samples of the roof and wall panels of the overhead structure, gutter and downspout sample, and paint color samples for approval. The Contractor shall submit a sample in each color of the product.

1.12 MANUFACTURERS WARRANTY: The Contractor shall identify all items being installed that are covered by a manufacturers guarantee or warranty and provide validated copies of such. The identification shall list the name of the company and the expiration date of the guarantee or warranty. The entire project shall have a one year warranty from the General Contractor starting at the time of Government possession.

1.13 PRODUCT DATA: LED light fixture data sheet.

1.14 AS BUILT DRAWINGS: At the time of the final inspection, the Contractor shall furnish 2 redline sets of mark up as built drawings to the Contracting Representative.

1.15 DELIVERY AND STORAGE: All equipment and materials delivered and placed in storage shall be stored with protection from the weather, humidity and temperature variation, dirt and dust, and any other contaminants. Store all materials in a secure, clean and dry location.

1.16 SAFETY: All Contractor operations shall be conducted and performed in accordance with Department of Labor, OSHA requirements found in 29 CFR 1910 (1910.146 and 1910.147) and 29 CFR 1926, and Air Force Occupational Safety & Health (AFOSH) standards including AFI 91-203, Air Force Consolidated Occupational Safety Instruction. The Contractor shall also ensure that all work is performed in accordance with project identified national standards, military manuals, instructions, pamphlets, standards, and handbooks, and with the edition in effect on the date of this solicitation of the Corps of Engineers (COE) Safety Manual 385-1-1. All job sites are subject to inspections by the Department of Labor. In the event of conflicts between the OSHA standards and these requirements, the most stringent shall apply.

1.16.1 Resolution of Department of Labor citations for violations of Occupational Safety and Health Standards is a Contractor responsibility and shall provide for no basis of a claim against the Government.

1.17 TEMPORARY FENCE: Prior to the start of any work for this project, the Contractor shall provide temporary orange warning fencing around the site perimeter.

1.18 DEMOLITION: The Contractor shall demolish and dispose of the concrete, curbs and gutter, poles and O.H. cable shown on the drawings to be removed. Contractor shall disassemble the existing overhead structures (two) and fence that is shown on the drawings to be removed, return to the government by moving all the existing O.H

structures and fence to the CE storage yard located on the east side of building 3520 with-in the CE yard. Contractor shall also remove the electrical outlets mounted at the fence. Properly terminate. Note: this circuit can be used to connect the new LED light located in the new facility. The contractor shall recycle or divert construction wastes from landfill disposal to the maximum extent practicable. Contractor shall track recycling and waste disposal and submit the report on the provided Construction Waste Management Form for Government records at the end of the project, and prior to final acceptance of the work. The Contractor shall take all necessary precautions to prevent damage to property to remain in place. Any damage to the aforementioned shall be repaired or replaced by the Contractor at no additional cost.

1.19 WELDING, CUTTING, AND BRAZING: Fire Protection shall complete inspection of all welding, cutting and brazing operations prior to any operation. The Contractor shall provide the appropriate operable fire extinguisher. Contractor shall comply be with OSHA STD29 CFR 1910.252 Welding, Cutting and Brazing (General Requirements) and AFOSH 91-5 Welding, Cutting and Brazing. Air Force Form 592 USAF Welding, Cutting and Brazing permit will be issued prior to any operation and shall be kept on site till completion of operation or permit expires. Contact Fire Protection at (325) 654-3532/33/34 for issuance of permit.

1.20 OPERATIONS SECURITY (OPSEC) REQUIREMENTS N/A

1.21 UTILITY CONSERVATION

The Contractor will be required to participate in government energy conservation programs. For the purpose of this contract, utilities such as water, electricity, etc., will be furnished by the government at no cost to the Contractor. Long distance and Defense Switched Network (DSN) telephone services will not be provided.

1.22 WORK SCHEDULE:

Working hours for the Contractor will normally be between the hours of 7:30 A.M. and 4:30 P.M. excluding Saturdays, Sundays, and Federal holidays. Refer to Section H of the solicitation/contract document for further information on working days. If the Contractor desires to work during periods other than above, a request must be made to the Contracting Representative in writing four (4) calendar days in advance of his/her intention. If the required base personnel are reasonably available, the Contracting Representative may authorize the Contractor to perform work during periods other than normal duty hours/days.

1.23 NORMAL WORK HOURS

The Contractor shall schedule all work to commence between the hours of 7:30 AM and 4:30 PM, Monday through Friday, except on the Federal holidays and days designated as “Family Days” by Air Education and Training Command (AETC) as listed below. Permission to work outside these normal business hours may be granted by the Contracting Representative. Requests to work outside the normal work hours must be submitted in writing to the Contracting Representative at least 3 working days in advance of the date requested.

Federal Holiday

		Family Days
New Year's Day	01 Jan	31 Dec 2018
Martin Luther King's	3rd Monday in January	
President's Day	3rd Monday in February	
Memorial Day	Last Monday in May	25 May 2018
Independence Day	4 Jul	31 Aug 2018
Labor Day	1st Monday in	
Columbus Day	2nd Monday in October	
Veterans Day	11 Nov	
Thanksgiving Day	4th Thursday in	23 Nov 2018
Christmas Day	25 Dec	24 Dec 2018

While AETC Family Days have not been identified past calendar year 2018 it is anticipated that the same number of AETC Family days will be declared each year.
Any Holiday falling on a Saturday will be observed the preceding Friday. Any Holiday falling on a Sunday will be observed the following Monday.
The base could be closed because of security problems, adverse weather, or other events. Unless otherwise notified by the Government, the Contractor should monitor local television stations, radio stations, or Goodfellow's Facebook page for notification of a possible base closure or late opening. The Contractor may not receive any other form of notification of a base closure from the Government, unless contacted by the Contracting Representative. The Contractor is responsible for notifying his/her employees. Contractor(s) do not report when the base is closed due to security problems and/or adverse weather.

1.24 TOBACCO USE IN AETC FACILITIES

Contractors are advised that the Commander has placed restrictions on the smoking of tobacco products in AETC facilities. AFI 40-102, Tobacco Use in the Air Force, outlines the procedures used by the commander to control smoking in our facilities. Contractor employees and visitors are subject to the same restrictions as government personnel. Smoking is permitted only in designated smoking areas. Additional information, to include locations of designated smoking areas, will be provided to the Contractor at the pre-performance conference.

1.25 BASE ACCESS SECURITY REQUIREMENTS: The Contractor shall comply at all times with base law enforcement and security requirements to include base pass requirements.

1.25.1 Contractor Installation Access Pass. Before arrival, a Government identification card-holding person from the sponsoring agency, Base Contracting administrator or applicable local project manager will submit a request for base access using the 17 Training Wing's Base Access List (BAL) memorandum as a form of registration for each credential applicant. The base sponsor/sponsoring

agency/Contracting Representative and the contracted management team should establish an accountability process to account for each applicant, to oversee the BAL process, and to retrieve installation passes when access is no longer required. Base sponsors/sponsoring agencies or contract representative will ensure the BAL is accurate, it is signed and forwarded to the 17 SFS Pass & Registration section for completion of the vetting and fitness determination processes. The BAL should be delivered to Pass & Registration, located at the Visitor Control Center (VCC). When delivery is not possible, the BAL may be forwarded to Pass & Registration via a ".mil" email account located on Goodfellow AFB. The BAL will include pertinent visitor information, reason for entry, frequency of entry, destination, times each day requiring entry, and duration of request.

Contractor Initial (and periodic) Installation Access Screening. The Contractor shall provide Pass and Registration with two forms of identification, one of which will be a state issued photo identification. Prior to being allowed access, a minimum of a background/National Crime Information Center (NCIC) check will be completed on all Contractors, requesting unescorted access for official business. This screening process will validate the Contractor's suitability to visit Goodfellow and certify that the Contractor does not pose an increased threat to the base populace. The Contractor will then be issued a temporary Defense Biometric Identification System (DBIDS) pass or AF Form 75A through the expiration date on the BAL request. Possession of an authorized access pass does not automatically authorize or guarantee access to the installation. The individual must still have a valid purpose to be on the installation and properly sponsored, as applicable.

1.25.2 Access Denial. If it is determined a Contractor requesting access has been convicted of a felony or pled guilty to a felony charge within the past 10 years, or is considered not fit to obtain authorized access based on the information obtained during the identity vetting, or criminal history indicates the individual may present a threat to the good order, discipline and morale of the installation, Security Forces personnel will deny entry. The Contractor will be informed of the access denial, will be issued an Access Denial Letter, and will be informed on how they may appeal this order.

Access Denial Appeal Process. When denied access, contract visitors will be informed to report back their manager. If the contract worker and management are considering an appeal, it will be submitted by letter to the 17 SFS Commander, within 30 days of access denial. The contract manager should first contact the contract administrator or on-base sponsor for additional guidance and clarification. The appeal may be delivered to the installation Visitor Control Section or mailed to Security Forces, addressed to 17 SFS/CC, 361 Apache Trail, Goodfellow AFB, 76908. The Contractor's appeal should discuss all facts and reasons to support rescinding access denial. The 17 TRW/CC will approve/disapprove all appeals for entry.

1.25.3 For installation access on non-duty hours or down days:

Identify which workers need access on weekends, federal holidays/family days, and down days.

Ensure only workers that are already vetted are on the Extended-Hours request (no new personnel). New personnel require a new BAL and formal vetting.

Complete the “After Hours” BAL for workers requiring down day access to the installation.

Identify the vehicle requirements. If operations cannot support the search procedures for large vehicles/special purpose equipment, the request may be declined unless arrangements are made to deliver the vehicle/equipment prior, during normal duty hours.

During the above-mentioned days, the sponsoring ID cardholder is required to be present during hours of the work request.

1.25.4 All BALs are accomplished each time employees or personnel change, not to exceed 180 days. Oversight for BAL updates and establishment of procedures to ensure Physical Access Control System (PACS) credentials and locally created access credentials from individuals who no longer require installation access is the responsibility of the contract administrator.

When an employee (regardless of position) is no longer employed by the Contractor or Sub-Contractor all DBIDS passes are to be returned to the Contract Administrator or to the Visitor Control Center. If a local issued access credential/pass is not returned, the contract representative may withhold funds or the Installation Commander may consider permanent debarment to the installation. Immediate access denial may be initiated by Pass & Registration updating the DBIDS database until disposition of the DBIDS pass is resolved.

PART 2.0 – PRODUCTS:

2.1 REFERENCES TO MATERIALS, MANUFACTURERS AND PRODUCTS: Materials shall be the standard product of manufacturer’s regularly engaged in the manufacture of such products. The products furnished shall meet the quality and specifications indicated herein.

2.2 SITE VISITS: The Contractor may visit the premises to become thoroughly familiar with details of the work and working conditions, verify dimensions in the field, and shall advise the Contracting Representative of any discrepancies before starting the work.

2.3 DRAWINGS INCLUDED IN THIS SOW: are drawings C-1 dated Jan 2020, D-1 dated Jan 2020, S-1 dated Jan 2020, S-2 dated Jan 2020, S-3 dated Jan 2020, S-4 dated 2020 and S-5 dated 2020.

2.4 CONCRETE FOUNDATION: Strength test shall be provided by Contractor by an approved agency on specimens that are representative of the work test and which have

been water soaked for at least 24 hours prior to testing. When the maximum-size aggregate is larger than 3/8 inch, specimens shall consist of not less than three inch diameter cores or 3 inch cubes. When the maximum size aggregate is 3/8 inch or smaller, specimens shall consist of not less than 2 inch diameter cores or 2 inch cubes. Concrete shall have a three to five inch slump, compression of at least 3000 PSI and tested at seven and thirty day period after pour per batch.

2.4.1 REINFORCING BAR: The Contractor shall provide rebar (grade 40 min) within the slab and beam as shown on the drawings. No welded wire mesh will be used in the foundation.

2.4.2 WIRE TIES: The Contractor shall provide 6 inch steel rebar tie at reinforcing bar cross members and at overlapping ends of reinforcing bar.

2.4.3 REBAR SUPPORT CHAIRS: The Contractor shall provide plastic rebar chairs to support rebar above ground within the concrete pad as shown on the drawings. The Contractor shall provide steel rebar chairs within the perimeter and cross section concrete beams under the pad as shown on the drawings.

2.4.4 ANCHOR BOLTS: The Contractor shall provide anchor bolts sized in accordance with pre-engineered metal building manufacturer directions. Anchor bolts shall be hot dipped galvanized with washer and nut, The Hillman Group or equal.

2.4.4.1 ANCHOR BOLT SHOP DRAWING: The Contractor shall provide anchor bolt shop drawing specifying the locations of anchor bolts as per the pre-engineered metal building requirements, coordinated with all foundation work.

2.4.5 CONTROL JOINT SEALANT: The Contractor shall provide control joint sealant at foundation where 1” deep saw cut control joints are shown.

2.4.6 CONCRETE: The Contractor shall provide concrete in accordance with drawings. Concrete shall be tested by a certified testing agency for slump (compression) per each batch of concrete delivered to the site. Concrete shall provide at least 3000 PSI compressive strength. The Contractor shall provide a submittal for concrete mix design for building.

2.4.7 SUB BASE MATERIAL FOR FOUNDATION:

2.4.7.1 AGGREGATE: The Contractor shall provide an aggregate base crushed limestone, compacted to 95% in six-inch max layers, below concrete slab. A compaction test must be submitted by the Contractor prior to placing concrete slab.

2.4.7.2 SAND: The Contractor shall provide 2” construction sand cover over aggregate.

2.4.7.3 VAPOR BARRIER: The Contractor shall provide a 6 mil. vapor barrier beneath the concrete slab. The Contractor shall provide a poly vinyl sheet directly beneath the foundation with a minimum 2 inch layer of sand directly beneath the vapor barrier. The vapor barrier shall be continuous under the slab and foundation.

2.5 PRE-ENGINEERED METAL BUILDING: The Contractor shall provide pre-engineered metal building. Mueller Metal Building or approved equal, with erection drawings and Anchor Bolt drawings. The building details shall be as shown on the drawings. The building to be rated for Dead Load of 2.5 psf, Live Load 20 psf, and Wind Load of 90 mph. The building is to be rated in Exposure C, Importance Wind: 1.0, Site Class: D, Importance Seismic 1.0, Seismic Coefficient: 0.1, Importance Snow of 1.0. Other loads include Extension Dead Load: 2.5 psf, Extension Live Load (SW) 20.0 psf, Extension Live Load (EW) 20.0 psf. All load, building materials and design shall be in accordance with the most current Uniform Building Code (UBC). Contractor shall provide drawings showing all pre-engineered structural elements sealed by a structural engineer licensed in the state of Texas.

2.5.1 RIGID FRAME: The Contractor shall provide complete rigid frame as required by the sealed structural drawings including all connections and bracing components.

2.5.2 PURLINS AND GIRTS: The Contractor shall provide steel roof purlins and wall girts spaced in accordance with steel building manufacturers seal drawings.
2.5.3 FASTENERS: The Contractor shall provide Self Drilling screw fasteners for sheet metal siding, and/or 1” self-drilling screw with washer, painted brown color or equal.

2.5.4 METAL ROOF AND WALL PANELS: Provide 26 gauge metal R-Panel roof panel and 26 gauge metal U-Panel wall panels, both equal to Mueller Inc. The Contractor shall provide Metal Roof System with a 5-year Warranty for Non-Structural Metal Roofing/Wall System, 20-year Manufacturer's Material (finish and rust) and Weather tightness Warranty. Zinc-coated steel conforming to ASTM A 653/A 653M; aluminum-zinc alloy coated steel conforming to ASTM A 792/A 792M, AZ 55 coating; or aluminum-coated steel conforming to ASTM A 463/A 463M, Type 2, coating designation T2 65. UL 580, Class 90 tested roof system. Metal roof R-Panel color shall be equal to Mansard Brown by Mueller Inc. and metal wall U-Panel color shall be equal to Tan by Mueller, Inc. Color sample shall be provided by the Contractor via submittal.

2.5.5 GUTTER AND DOWNSPOUT: Provide new metal gutters and downspouts Mueller “Mansard Brown” or equal. Color sample shall be provided by the Contractor via submittal.

2.5.6 SEALING TAPE: The Contractor shall provide butyl sealing tape for metal roof and metal panel walls.

PART 2.6 BITUMINOUS PAVING FOR ROADS, STREETS AND OPEN STORAGE AREAS

2.6.1 REFERENCES: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. All publications shall be the latest revision in effect on the date of solicitation except where a date is given.

Military Standard:

MIL-STD-620A Test Methods for Bituminous Paving Materials

American Society for Testing and Materials (ASTM), Publications

C117 Materials Finer than 75-mm (No. 200) Sieve in Mineral Aggregates by Washing

C127 Specific Gravity and Absorption of Coarse Aggregate

C128 Specific Gravity and Absorption of Fine Aggregate
C136 Sieve Analysis of Fine and Coarse Aggregates

D140 Sampling Bituminous Materials

D1856 Recovery of Asphalt from Solution by Abson Method

D2172 Quantitative Extraction of Bitumen from Bituminous Paving Mixtures

D2216 Laboratory Determination of Moisture Content of Soil, Rock, and Soil Aggregate Mixtures

D3515 Hot Mixed, Hot Laid Bituminous Paving Mixtures
Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, Texas Department of Transportation (TXDOT), June 2004.

2.6.2 MATERIALS:

2.6.2.1 Surface Course Tonnage: Bituminous mixture (Hot Mix Asphaltic Concrete) shall be weighed after mixing, and no deductions will be made for weight of bituminous material incorporated therein. No payment will be made for defective areas until corrected.

2.6.2.2 Correction Factor for Aggregates Used: Quantities of paving mixtures called for are based on aggregates having a specific gravity of 2.70 as determined in accordance with Apparent Specific Gravity paragraphs in ASTM C127 and ASTM C128. Correction in tonnage of intermediate- and wearing-course mixtures shall be made to compensate for the difference in the tonnage of mixtures used in the project, when specific gravities of aggregates used in mixtures are more than

2.75 or less than 2.65. Tonnage paid for shall be the number of tons used, proportionately corrected for specific gravities, using 2.70 as the base correctional factor.

2.6.3 SUBMITTALS: Copy of the waybill and delivery tickets shall be submitted to Contracting Representative.

2.6.4 WEATHER LIMITATIONS: Bituminous courses shall be constructed only when base course is dry and when weather is not rainy. Unless otherwise directed, asphalt courses shall not be constructed when temperature of the surface of base course is below 50 degrees Fahrenheit or when the air temperature is below 50 degrees F and falling.

2.6.5 PROTECTION OF PAVEMENT: After final rolling of the pavement, no vehicular traffic of any kind shall be permitted until the pavement has cooled and hardened or for at least 6 hours.

2.6.6 GRADE AND SURFACE-SMOOTHNESS REQUIREMENTS: Finished surface of bituminous courses, when tested as specified below and shall conform to gradeline and elevations shown and to surface-smoothness requirements specified.

2.6.6.1 Plan Grade: The grade of the completed surface shall not deviate more than 0.05 of a foot from the plan grade.

2.6.6.2 Surface Smoothness: When a 12-foot straightedge is laid on the surface parallel with the centerline of the paved area or transverse from crown to pavement edge the surface shall vary not more than 1/4 inch from the straightedge.

2.6.7 GRADE CONTROL: Lines and grades shall be established and maintained by means of line and grade stakes placed at site of work. Finished pavement elevations shall be established and controlled at the site of work by the Contractor in accordance with drawings.

2.6.8 SAMPLING AND TESTING:

2.6.8.1 Aggregates: Samples of aggregates shall be furnished by the Contractor for approval of aggregate sources and stockpiles prior to the start of production and at times during production of the bituminous mixtures. Times and points of sampling shall be designated by the Contract Representative. Samples shall be the basis of approval of specific sources or stockpiles of aggregates for aggregate requirements. Unless otherwise directed, ASTM D75 shall be used in sampling coarse and fine aggregate, and ASTM C183 shall be used in sampling mineral filler. All tests necessary to determine compliance with requirements specified herein shall be made by the Contractor.

2.6.8.2 Sources: Sources of aggregates shall be selected well in advance of the time the materials are required in the work. If a previously developed source is

selected, evidence shall be submitted 10 days before starting production, indicating that the central-plant hot-mix bituminous pavements constructed with the aggregates have had a satisfactory service record of at least five years under similar climatic and traffic conditions. When new sources are developed, the Contractor shall indicate sources and submit samples and his plan for operation 10 days before starting production. The Contracting representative shall make such tests and other investigations as necessary to determine whether aggregates meeting requirements specified herein can be produced from proposed sources. If a sample of material from a new source fails to meet specification requirements, the material represented by the sample shall be replaced, and the cost of testing the replaced sample shall be at the expense of the Contractor. Approval of the source of aggregate does not relieve the Contractor of responsibility for delivery at the job site of aggregates that meet the requirements specified herein.

2.6.8.3 Bituminous Materials: Samples of bituminous materials shall be obtained by the Contractor; sampling shall be in accordance with ASTM D140. Tests necessary to determine conformance with requirements specified herein shall be performed by the Contractor. Sources where bituminous materials are obtained shall be selected in advance of the time when materials shall be required in the work, and samples of the asphalt cement specified shall be submitted for approval not less than 10 days before production of asphalt mixture. In addition to initial qualification testing of bituminous materials, samples shall be taken before and during construction when shipments of bituminous materials are received or when necessary to assure some condition of handling or storage has not been detrimental to the bituminous material. The samples shall be taken by the Contractor and tested by certified testing laboratory.

2.6.8.4 Bituminous Mixtures: Sampling and testing of bituminous mixtures shall be accomplished by the Contractor.

2.6.9 DELIVERY, STORAGE, AND HANDLING OF MATERIALS:

2.6.9.1 Mineral Aggregates: Mineral aggregates shall be delivered to the site of the bituminous mixing plant and stockpiled in such manner as to preclude fracturing of aggregate particles, segregation, contamination, or intermingling of different materials in the stockpiles or cold-feed hoppers. Mineral filler shall be delivered, stored, and introduced into the mixing plant in a manner to preclude exposure to moisture or other detrimental conditions.

2.6.9.2 Bituminous Paving Mixture: Bituminous paving mixture shall be stored in accordance with the requirements of ASTM D3515; however in no case shall the mixture be stored for more than four hours. It shall not be heated by application of direct flame to walls of storage tanks or transfer lines. Storage tanks, transfer lines, and weigh buckets shall be thoroughly cleaned before a different type or grade of bitumen is introduced into the system. The asphalt cement shall be heated

sufficiently to allow satisfactory pumping of the material; however, the storage temperature shall be maintained below 300 degrees Fahrenheit.

2.6.9.3 Transportation: Transportation of bituminous mixture from mixing plant to site shall be in trucks having tight, clean, smooth beds coated with the least quantity of concentrated solution of hydrated line and water to prevent adhesion of mixture to truck bodies. Each load of mixture shall be covered with canvas, or other suitable material, of ample size to protect mixture from weather and prevent loss of heat. Deliveries shall be scheduled so that spreading and rolling of all mixture prepared for one day run can be completed during daylight unless adequate artificial lighting is provided. Mixture shall be delivered in such manner that temperature at time of dumping into spreader shall be not less than specified. Loads that have crusts of cold, unworkable materials or have become wet by rain shall be rejected. Hauling over freshly placed material shall be permitted.

2.6.10 ACCESS TO PLANT AND EQUIPMENT: The Contracting representative shall have access at all times to all parts of the paving plant for checking adequacy of the equipment in use; inspecting operation of the plant; verifying weights, proportions, and character of materials; and checking temperatures maintained in preparation of the mixtures.

2.6.10.1 WAYBILLS AND DELIVERY TICKETS: Waybills and delivery tickets shall be submitted to the Contracting Representative during the progress of the work. The Contractor shall submit to the Contracting Representative certified waybills and certified delivery tickets for all aggregates and bituminous materials actually used in the construction covered by the contract before submission of final invoice. The Contractor shall not remove bituminous material from the tank cars or storage tanks until the initial outage and temperature measurements have been taken nor shall the car or tank be released until the final outage has been taken by the Contracting representative.

2.6.11 HOT MIX SURFACE COURSE: Bituminous hot-mix surface course shall conform to the requirements of the TXDOT Standard Specification, Item 340, "Hot-Mix Asphaltic Concrete Pavement," except as specified hereinafter.

2.6.11.1 Asphalt Material: Asphalt material for the surface course shall be asphalt cement AC-20 conforming to TXDOT Standard Specifications for "Asphalts, Oils, and Emulsions", Item 300.

2.6.11.2 Aggregates: Paving mixture shall be Type "D".

2.6.11.3 Modifications: TXDOT Standard Specifications shall be modified as follows:

2.6.11.4 No. 10 Screen: Material retained on the No. 10 screen shall not exceed 65 percent.

2.6.11.5 Requirements: Density and stability requirements shall not apply.

2.6.11.6 The measurement and payment paragraphs shall not apply.

2.6.12 PROPORTIONING OF MIXTURE: Job-Mix Formula (JMF): No bituminous mixture shall be manufactured until the grading and asphalt content of the proposed mix has been furnished by the Contractor for the Contracting Representatives approval. The formula shall indicate the percentage of each sieve fraction of aggregate, percentage of asphalt, the temperature of the completed mixture when discharged from the mixer. The job-mix formula shall be allowed the tolerances specified in the TXDOT Standard Specifications, Item 340, "Hot Mix Asphaltic Concrete Pavement." The bitumen content and aggregate gradation may be adjusted within the limits of the gradation tables specified therein to improve the paving mixtures, as directed, without adjustments in the contract price. The percentage of each sieve fraction in the job-mix formula shall be restricted to values such that the application of the specified tolerances shall not cause the limits of the gradation tables to be exceeded.

2.6.13 TEST PROPERTIES: The finished mixture shall meet requirements below described when tested in accordance with MIL-STD-620.

2.6.13.1 Stability, Flow and Voids: For Non-absorptive Aggregate: When the water absorption value of the entire blend of aggregate does not exceed 2.5 percent as determined by ASTM C 127 and C 128, aggregate is designated as non-absorptive. The apparent specific gravity shall be used in computing the voids mix and voids filled with bitumen; the mixture shall meet the requirements of Table 1 below:

TABLE 1. NON-ABSORPTIVE AGGREGATE MIXTURE

Test property	Tire pressure below 100 psi. Surface course
Stability, minimum	500 (Lbs), 3336 (N)
Flow, maximum, 1/100-inch units	20
Air Voids, percent Voids filled with bitumen, percent	3-5 75-85

The theoretical specific gravity computed from the bulk-impregnated specific gravity method contained in MIL-STD-620, Method 105, or ASTM D2041 shall be used in computing percentages of voids total mix and voids filled with bitumen; the mixture shall meet requirements in TABLE 1 & 2.

2.6.13.2 For Absorptive Aggregate: When the water absorption value of the entire blend of aggregate exceeds 2.5 percent as determined in ASTM C 127 and C 128, the aggregate is designated as absorptive. Bulk-impregnated specific gravity shall be used in computing the percentage of air voids and voids filled with bitumen. The mixture shall be

tested at the same frequency as density testing. The values for all specimens will be averaged to obtain overall values which will be compared to, and shall meet the requirements in Table 1 below.

TABLE 1. ABSORPTIVE AGGREGATE MIXTURE

Test Property	Tire pressure below 100 psi. Surface course
Stability, minimum	500 (Lbs), 3336 (N)
Flow, maximum, 1/100-inch units	20
Air Voids, percent	2-4
Voids filled with bitumen, percent	80-90

2.6.13.3 Reduction in Stability by Immersion: If the index of retained stability of specimens of composite mixture is less than 75, aggregates shall be rejected or the bitumen shall be treated with an approved anti-stripping agent. Quantity or type of anti-stripping agent to add to the bitumen shall be sufficient, as approved by the Contracting representative, to produce an index of retained stability of not less than 75. Payment will not be made to the Contractor for addition of anti-stripping agent that may be required.

2.6.14 DENSITY: Maximum density values will be established as a function of optimum asphalt percent. Use of this value is described in Paragraphs 2.6.26 and 2.6.26.1 of this section.

2.6.15 SAMPLING & TESTING: Sampling and testing of bituminous mixture shall be accomplished by the Contractor. No payment will be made to the Contractor for mixtures rejected or for pavements or portions of pavements removed.

2.6.16 BASE COURSE CONDITIONING: The surface of the base course shall be inspected for adequate compaction and surface tolerances. Unsatisfactory areas shall be corrected as directed by the Contracting Representative.

2.6.17 PREPARATION OF BITUMINOUS MIXTURES: Rates of feed of aggregates shall be regulated so that the moisture content and temperature of aggregates shall be within specified tolerances. Aggregates, mineral filler, and bitumen shall be conveyed into the mixer in proportionate quantities required to meet the JMF. Mixing time shall be as required to obtain a uniform coating of the aggregate with the bituminous material. Temperature of bitumen at time of mixing shall not exceed 300 degrees Fahrenheit. Temperature of aggregate and mineral filler in the mixer shall not exceed 325 degrees Fahrenheit when bitumen is added. Overheated and carbonized mixtures or mixtures that foam shall not be used.

2.6.18 WATER CONTENT OF AGGREGATES: Drying operations shall reduce the water content of mixture to less than 0.75 percent. The water content test shall be conducted in

accordance with ASTM D2216; the weight of the sample shall be at least 500 grams. If the water content is determined on hot bin samples, the water content shall be a weighted average based on composition of blend.

2.6.19 SURFACE PREPARATION OF UNDERLYING COURSE: Prior to placing of the surface course, the underlying course shall be cleaned of all foreign or objectionable matter with power brooms and hand brooms and if necessary with graders. If vegetation is present it shall have herbicide and/or soil sterilant applied as directed and approved by the Contracting Representative. After adequate time has lapsed for the root systems to die, the vegetation shall be stripped from the underlying surface with graders and brooms.

2.6.20 PRIME COATING: Surfaces of previously constructed base course shall be sprayed with a coat of bituminous material - Bituminous Prime Coat.

2.6.21 TACK COATING: Contact surfaces of previously constructed pavement, curbs, manholes, and other structures shall be sprayed with a thin coat of bituminous material Bituminous Tack Coat.

2.6.22 PLACING: Bituminous courses shall be constructed only when the base course or existing pavement has no free water on the surface. Bituminous mixtures shall not be placed without ample time to complete spreading and rolling during daylight hours, unless approved satisfactory artificial lighting is provided.

2.6.22.1 Offsetting Joints: The wearing course shall be placed so that longitudinal joints of the surface course shall be offset from joints in any other course by at least one foot. Transverse joints in the surface course shall be offset by at least two feet from transverse joints in any other course.

2.6.22.2 General Requirements for Use of Mechanical Spreader: Range of temperatures of the mixture, when dumped into the mechanical spreader shall be determined by the Contracting Representative. Mixtures having temperature less than 225 degrees Fahrenheit when dumped into a mechanical spreader shall not be used. The mechanical spreader shall be adjusted and speed regulated so that surface of the course being laid shall be smooth and continuous without tears and pulls, and of such depth that, when compacted, the surface shall conform with cross section indicated. Unless otherwise directed, placing shall begin along the centerline of areas paved on a crowned section or on the high side of areas with a one-way slope, and shall be in the direction of the major traffic flow. Mixture shall be placed in consecutive adjacent strips having a minimum width of 10 feet, except when edge lanes require strips less than 10 feet to complete the area. Each strip laid before a succeeding strip shall be of such length that sufficient heat shall be retained to make the strip readily compactable so that a joint can be obtained that shall conform to Paragraph 3.10, Joints. Length of a strip that is to be followed by another strip will be determined by the Contracting Representative, and may be decreased or increased as required by air temperatures, wind, and other climatic conditions existing at time of placement. Longitudinal joints and edges shall be constructed to true line markings. The Contractor shall establish lines parallel to the centerline of area to be paved

and shall place string-lines coinciding with established lines for spreading machine to follow. Number and location of lines shall be as directed. Each lot of material placed shall conform to requirements specified in paragraph 3.10 - "Acceptability of Work." Placing of mixture shall be as nearly continuous as possible, speed of placing shall be adjusted, as directed, to permit proper rolling. When segregation occurs in the mixture during placing, the spreading operation shall be suspended until the cause is determined and corrected.

2.6.22.3 Placing Strips Succeeding Initial Strips: In placing each succeeding strip after the initial strip has been spread and compacted as specified below, the screed of the mechanical spreader shall overlap previously placed strip 3 to 4 inches and shall be sufficiently high so that compaction by rolling produce a smooth, dense joint. Mixture placed on edge of previously placed strip by mechanical spreader shall be pushed back to edge of strip by use of a lute. When the quantity of mixture on previously placed strip plus uncompacted material in strip being placed exceeds that required to produce smooth, dense joint, excess mixture shall be removed and wasted.

2.6.22.4 Shoveling, Raking, and Tamping After Machine Spreading: A sufficient number of experienced shovelers and rakers shall follow the spreading machine, adding hot mixture and raking mixtures as required to produce a course that, when completed, shall conform to all requirements specified herein. Broadcasting or fanning of mixture over areas being compacted shall not be permitted. When segregation occurs in mixture during placing, the spreading operation shall be suspended until cause is determined and corrected. Irregularities in alignment of the course left by mechanical spreader shall be corrected by trimming directly behind machine. Immediately after trimming, edges of the course shall be thoroughly compacted by tamping laterally with the lute. Distortion of course during tamping shall not be permitted.

2.6.22.5 Hand Spreading in Lieu of Machine Spreading: In areas where use of machine spreading is impractical, mixture shall be spread by hand. The mixture shall be dumped on approved dump boards or on adjacent approved area outside the area to be paved and shall be distributed into place from the dump boards or from the approved area by means of hot shovels. The mixture shall be spread with hot rakes in a uniformly loose layer of a thickness that when compacted will conform to the required grade and thickness. During hand spreading, each shovel-full of mixture shall be carefully placed by turning the shovel over in a manner that shall prevent segregation. In no case shall the mixture be placed by throwing or broadcasting from a shovel. The loads shall not be dumped any faster than can be properly handled by the shovelers and rakers. Rakers not equipped with stilt sandals shall not be permitted to stand in the hot mixture while raking the course. Spreading shall be done in a manner as to prevent segregation.

2.6.23 COMPACTION OF MIXTURE: Compaction of mixture shall be accomplished by the steel-wheel rollers the tandem rollers, the light pneumatic-tired rollers and the heavy self-propelled pneumatic-tired rollers (if required), specified above. Rolling shall begin as soon after placing as mixture shall bear roller without undue displacement. Delays in rolling freshly spread mixture will not be permitted.

2.6.23.1 Initial Rolling: Initial rolling of the first strip shall be accomplished with the steel-wheeled roller specified herein. The edge of the strip opposite to the edge on which additional strips are to be placed shall be rolled with the rear wheel of the steel-wheeled roller. The second pass of the roller shall have the rear wheel within 6 inches of the opposite edge. The steel-wheeled roller shall then continue rolling longitudinally, working across the strip to the initially rolled edge, overlapping on successive trips by at least half the width of the rear wheel of the roller. The initially uncompacted edge of the first strip and the free edge of each successive strip shall thoroughly compacted with the metal lute specified herein immediately following the completion of the rolling. In the initial rolling of the second and successive strips, the 6 inch unrolled portion of the previously placed strip and portion of recently placed strip shall be rolled with the rear wheel of the steel-wheel roller. The second pass of the roller shall be made with the rear wheel of the roller within 6 inches of the outside edge. Rolling shall continue longitudinally working back to the previously rolled joint overlapping on successive passes by at least half the width of the rear wheel of the steel-wheel roller. Alternate passes of the roller shall be of slightly different lengths. After initial rolling with the steel-wheel roller, preliminary tests for crown, grade and smoothness shall be made by the Contractor under the supervision of the Contracting Representative. Before the rolling is continued, deficiencies shall be corrected by adding or removing material so the finished course will conform to requirements for grade and smoothness specified herein. Further preliminary smoothness checks shall be made by the contractor as directed.

2.6.23.2 Final Rolling: After preliminary smoothness test, rolling shall be continued until mat density of each course of at least 97 percent and not more than 100 percent of density of laboratory compacted specimens of same mixture. The final rolling shall proceed as follows: Following the initial rolling with the steel-wheel roller, additional rolling of the area shall be done longitudinally and diagonally as directed, using a steel-wheeled roller as specified herein. The rolling shall continue until the minimum density requirements are obtained. The surface course only shall be rolled with a light pneumatic-tired roller while the course is still warm. The light pneumatic-tired roller shall follow the tandem roller immediately and rolling shall be continued until all areas of the surface have been subjected to at least three coverages. A heavy pneumatic-tired roller, may be used in lieu of the light pneumatic-tired roller when approved by the Contracting Representative.

Shallow ruts and ridges that may develop from pneumatic-tired rolling shall be smoothed out with the steel-wheeled roller specified herein. The steel-wheeled roller performing the final rolling shall follow immediately behind the pneumatic tired roller. The rolling shall be done longitudinally and diagonally, as directed.

2.6.23.3 Testing of Mixture: At the start of the plant operation, a quantity of mixture shall be prepared that is sufficient to construct a test section at least 50 feet long, two spreader widths wide and of a thickness to be used in the project. Mixture shall be placed, spread, and rolled with equipment to be used in the project and in accordance with the requirements specified above. This test section shall be tested and evaluated as a lot and shall conform to all specified requirements. If test results are satisfactory, the test section shall remain in place as part of the completed pavement. If tests indicate that the

pavement does not conform to specification requirements, necessary adjustments to plant operations and rolling procedures shall be made immediately, and test section shall be evaluated as specified in paragraph "Acceptability of Work." Additional test sections, as directed, shall be constructed and sampled for conformance to specification requirements. In no case shall the Contractor start full production of a surface course mixture without approval.

2.6.23.4 Correcting Deficient Areas: Mixtures that become contaminated or are defective shall be removed to the full thickness of the course. Edges of the area to be removed shall be cut so that sides are perpendicular and parallel to direction of traffic and edges are vertical. Edges shall be sprayed with bituminous materials Bituminous Tack Coat. Fresh paving mixture shall be placed in the excavated areas in sufficient quantity so that finished surface will conform to grade and smoothness requirements. Paving mixture shall be compacted to density specified herein. Skin patching of an area that has been rolled shall not be permitted.

2.6.24 JOINTS: Joints between old and new pavements, between successive work days, or joints that have become cold (less than 175 degrees F) shall be made to insure continuous bond between old and new sections of course. All joints shall have the same texture, density, and smoothness as other sections of the course. Contact surfaces of previously constructed pavements coated with dust, sand, or other objectionable material shall be cleaned by brushing or shall be cut back with an approved power saw, as directed. The surface against which new material is placed shall be sprayed with a thin, uniform coat of bituminous material Bituminous Tack Coat. Material shall be applied far enough in advance of placement of a fresh mixture to insure adequate curing. Care shall be taken to prevent damage or contamination of the sprayed surface.

2.6.24.1 Transverse Joints: The roller shall pass over the unprotected end of a strip of freshly placed material only when placing is discontinued or delivery of the mixture is interrupted to the extent that the material in place may become cold. In all cases, prior to continuing placement, the edge of the previously placed course shall be cut back to expose an even vertical surface the full thickness of the course. In continuing placement of a strip, the mechanical spreader shall be positioned on transverse joint so that sufficient hot mixture shall be spread to obtain a joint after rolling that conforms to the required density and smoothness specified herein. When required, the fresh mixture shall be raked against joints, thoroughly tamped with hot tampers, smoothed with hot irons, and then rolled. In all cases the transverse joints in adjacent lanes shall be offset a minimum of 2 feet.

2.6.24.2 Longitudinal Joints: Edges of previously placed strip shall be prepared such that the pavement in the immediately adjacent to the joint between this strip and the succeeding strip meets the requirements for grade, smoothness, and density specified in paragraph "Acceptability of Work."

2.6.25 ACCEPTABILITY OF WORK: A Lot shall be that quantity of construction that shall be evaluated for compliance with specification requirements. A Lot shall be equal to the

extent of HMAC in place. For testing purposes, each Lot will be divided into 250 ton Sublots. In the event that less than 250 tons is being placed, this quantity will be considered one Sublot. Following division into Sublots, if the remainder of HMAC in the Lot exceeds 100 tons, it shall be considered an additional Sublot. If the remainder is less than 100 tons, it shall be considered as part of the last Sublot. An independent testing laboratory shall conduct all initial acceptance tests. Additional tests required to determine acceptability of nonconforming material shall be performed by the Contractor. During the pre-construction phase, the frequency of testing may be altered with Contract Representative approval when considered necessary.

2.6.25.1 Lot Evaluation: In order to evaluate the Lot, aggregate gradation, asphalt content, and density tests will be performed on each Sublot. All density determinations shall follow Tex-207-F Part III (Nuclear Method), or approved equal test method. For density determination, one random test shall occur on the joint of each Sublot. These tests shall occur with the machine centered over the joint. After the mat has dried to a constant weight, the Contractor shall perform random density tests on the mat. These results will be averaged and considered as the two overall field density values for the entire Lot. Samples for determining asphalt content and aggregate gradation shall be taken from loaded trucks within each Sublot. A minimum of one sample per Sublot must be collected to provide an average asphalt content for the entire lot. Asphalt content shall be determined in accordance with ASTM D2172, Method A or B. Aggregate gradation shall be determined for the mix by testing the recovered aggregate in accordance with ASTM C136 and ASTM C117. If any Sublot gradations fail to meet the specified limits, the entire Lot shall fail the requirements.

2.6.25.2 Lot Failure: When a Lot of material fails to meet the specification requirements, that Lot shall be removed and replaced by the Contractor.

2.6.25.3 Optional Sampling and Testing: The Government reserves the right to sample and test any area which appears to deviate from the specification requirements. Testing in these areas shall be in addition to the Lot testing, and the requirements for these areas shall be the same as those for a Lot.

2.6.26 Density: The average mat and joint densities shall be expressed as a percentage of the laboratory density with air voids. The laboratory density for each Sublot shall be determined in accordance with MIL-STD-620, Method 100 from a minimum of three specimens per sublot. The maximum specific gravity/dry density shall be the average of all specimens.

2.6.26.1 Field Density: The field densities shall be determined in accordance with Paragraph 2.6.25.1 and compared with the maximum density to determine the percent compaction.

2.6.26.2 Lot Density: All density results on a Lot will be completed and reported within 24 hours after construction of that Lot. When the Contracting Representative considers it necessary to take additional samples for density measurements, samples will be taken

from each Sublot. The percent payment will be determined for each additional group of samples and averaged with the percent payment for the original group to determine the final percent payment. The Contractor shall fill all sample holes with hot mix and compact.

2.6.27 Grade: Grade-conformance tests shall be conducted by the Contractor. The finished surface of the pavement shall be tested for the conformance with plan-grade requirements. Within 5 working days after completion of placement of a particular Lot, the Contractor shall inform the Contracting Representative in writing of results of grade-conformance tests. The finished grade of each pavement area shall be determined by running lines of levels at intervals of 25 feet or less longitudinally and transversely to determine the elevation of the completed pavement in areas where the grade exceeds the plan-grade tolerances given in paragraph "Grade and Surface Smoothness Requirements" by more than 50 percent, the Contractor shall remove the deficient area and replace with fresh paving mixture. Sufficient material shall be removed to allow at least 1-1/2 inch of asphalt concrete to be placed. Skin patching for correcting low areas or planing for correcting high areas shall not be permitted.

2.6.28 Surface Smoothness: After completion of final rolling of the surface course, the compacted surface shall be tested by the Contractor with a 12-foot straightedge. Measurements shall be made perpendicular to and across all mats at distances along the mat not to exceed 25 feet. Location and deviation from straightedge of all measurements shall be recorded. Any joint or mat area surface deviation which exceeds the tolerance given in paragraph "Grade and Surface Smoothness Requirements" by more than 50 percent shall be corrected to meet the specification requirements. The Contractor shall remove the deficient area and replace with fresh paving mixture. Sufficient material shall be removed to allow at least 1 inch of asphalt concrete to be placed. Skin patching for correcting low areas or planing for correcting high areas shall not be permitted.

2.7 ESTABLISHMENT OF TURF: After completion of the topsoiling operation, all bare topsoil within the limits of construction shall receive hydromulch. The Contractor shall furnish all labor, tools, materials and equipment necessary to provide turf as described in the Task Order (TO) and specified herein. Turf work shall be accomplished only when satisfactory results can be expected. When conditions such as drought, excessive moisture, high winds, or other factors prevail to such an extent that satisfactory results are not likely to be obtained, the Contracting Representative at his/her discretion, may stop any phase of the work. The work shall be resumed only when, in the opinion of the Contracting Representative, the desired results are likely to be obtained. Establishment of turf shall be accomplished on all unpaved graded and disturbed areas that are the result of the Contractor's operations. The work shall include the application of seed, fertilizer, mulch, water, and all other operations necessary to provide the growth specified herein.

2.7.1 REFERENCES: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only, and shall be the latest edition in effect on the date of solicitation.

FEDERAL SPECIFICATIONS

FS O-F-241 Fertilizers, Mixed, Commercial

2.7.2 SUBMITTALS: Topsoil submittals with a “A” designation require approval; submittals having an “FIO” designation are for information only.

2.7.3 Topsoil Construction Equipment List, FIO: The Contractor shall furnish a list and description of the equipment that is proposed for handling and placing of topsoil.

2.7.4 Topsoil Certificate of Compliance, FIO: The Contractor shall furnish a certificate of compliance and analysis certifying that the topsoil proposed for use at the project site conforms to the specified requirements.

2.7.5 Topsoil Inspection: Offsite topsoil source - Not less than 5 days prior to the commencement of topsoiling operations, the Contracting Representative shall be notified of the offsite sources from which topsoil is to be furnished. The material will be inspected to determine whether the selected topsoil meets the requirements. The topsoil shall be approved prior to use.

2.7.6 Hydromulch: Chemical analysis composition percent.

2.7.7 Fertilizer: Label for the fertilizer to be used for approval.

2.7.8 TOPSOIL: All topsoil necessary to complete the work shall be obtained from topsoil stockpiles from grading and excavating operations and from approved topsoil sources off of Government controlled property. Topsoil shall be free from tree roots, stones, shale, parent and other materials that hinder grading, planting, plant growth and maintenance operations, and free from noxious and other objectionable weed seeds and toxic substances.

2.7.9 TURF MATERIALS: Materials used in the hydromulching operation shall be of the best quality available. The hydromulch shall contain no weed seed and shall consist of the following:

Summer Grasses - applied from May 1 to October 31
Conwed - 2000 wood cellulose fiber
Hulled Bermuda grass seed
8-8-8 Fertilizer

The mixture shall be applied at the following rates:

50 lb. Conwed per 1000 square feet
1 lb. Bermuda Grass seed per 1000 square feet
7 gal. liquid Fertilizer per 5000 square feet, or
70 lb. granular Fertilizer per 5000 square feet

2.7.10 Any deviation from the above rates and application seasons shall be approved by the Contracting Representative.

2.7.11 Hydroseed shall be furnished and placed free of noxious weeds and undesirable plants, stones, roots of trees, and other materials that hinder development and maintenance.

2.7.12 Water shall be free from oil, acid, alkali, salt, and other substances harmful to growth of grass, and shall be from a source approved prior to use.

2.7.13 TOPSOIL: Graded areas shall be topsoiled where indicated on plans and where it is determined by the Contracting Representative that at least 4 inches of suitable soil for the growth of grass is not present. Equipment necessary for handling and placing all materials required shall be on hand, in good condition and shall be approved before the work is started. Grades on the areas to be topsoiled are indicated in the (TO) and shall be maintained in a true and even condition.

2.7.14 Placing Topsoil: Topsoil shall be uniformly distributed and evenly spread to an average thickness of 4 inches, with a minimum thickness of 3 inches. Topsoil shall be spread so that planting can proceed with little additional soil preparation or tillage. Surface irregularities resulting from topsoiling or other operations shall be leveled to prevent depressions. The grades shall be adjusted to assure that the planted grade shall be 1-inch below the adjoining grade of any surfaced area. Topsoil shall not be placed when the subgrade is frozen, excessively wet or compacted, extremely dry, or in a condition detrimental to the proposed planting or grading.

2.7.15 Cleanup: Prior to topsoiling, vegetation that may interfere with operations shall be mowed, grubbed, and raked. The collected material shall be removed from the site. The surface shall be cleaned of stumps, and stones larger than 1 inch in diameter, and roots, cable, wire and other materials that might hinder the work or subsequent maintenance shall also be removed.

2.7.16 Repair: Where any portion of the surfaces becomes gullied or otherwise damaged, theaffected area shall be repaired to establish the condition and grade prior to topsoiling, and then shall be re-topsoiled as specified in Placing Topsoil.

2.7.17 Hydromulch: After topsoil has been placed, hydromulching shall be performed in accordance with standard practices, as approved by the Contracting Representative. All areas to receive hydromulching shall be cultivated to a depth of at least one inch (1"). The cross section previously established shall be maintained throughout the process of cultivation and any necessary reshaping shall be done prior to hydromulching. The Contractor is put on notice that they may be required to provide clean water/transportation to the site if it is not readily available by the Government.

2.7.18 Fertilizer: Fertilizer shall be applied not more than 24 hours in advance of tilling operations. Fertilizer shall be distributed with a fertilizer distributor (Ezee Flow) or approved equal. Fertilizer shall be uniformly distributed.

2.7.19 Refertilizing: The planted areas shall be refertilized five weeks after commencement of maintenance operations. Fertilizer shall be applied when the vegetation is dry. The refertilized areas shall be watered as specified for turf maintenance work within 24 hours following refertilizing operations.

2.7.20 TURF MAINTENANCE: It shall be the responsibility of the Contractor to maintain the planted areas during the planting period and for an additional period of not less than 45 calendar days. Maintenance work shall be accomplished until an acceptable stand of grass is present. A stand of grass is defined as 2” tall minimum green grass with no bare spots. Maintenance shall consist of watering, replanting, mowing, maintaining existing grades, and repair of erosion damage. Areas on which an acceptable stand of grass is not present at the end of the 45 days period shall be hydroseeded again, and maintained by the Contractor until an acceptable stand of grass is present at no additional cost.

2.7.21 Watering: The Contractor shall be responsible for applying water at sufficient quantity and frequency to establish an acceptable stand of grass within the maintenance period.

2.7.22 Replanting: Areas on which a stand of growing grass is not present in a reasonable length of time, it shall be hydroseeded again in accordance with the appropriate planting season and shall continue to be hydroseeded and maintained throughout the maintenance period until an acceptable stand is obtained. A stand shall be defined as live grass plants from hydromulching occurring over 95% of the area, with no more than 10 square feet left uncovered in any one place.

2.7.23 Mowing: Vegetation shall be kept under control by mowing. Any time that the weed or grass growth reaches a height of 3 inches, the areas shall be mowed. Mowing shall be done with approved mowing machines in such manner that shall leave a vegetation height of between 2 and 2½ inches.

2.7.24 Maintenance of Grades and Repair of Erosion Damage: It shall be the responsibility of the Contractor to maintain the established grades of the lawn areas after the commencement of planting operations and during the specified maintenance period. Any damage to the finished surface from Contractor's operations shall be promptly repaired. In the event erosion occurs from either watering operations or from rainfall, such damage shall be prompted repaired. Ruts, ridges, tracks, and other surface irregularities shall be corrected and the areas replanted, where required, prior to acceptance.

PART 3.0 – EXECUTION:

3.1 GENERAL: All work shall be performed as shown on the drawings, described in the SOW, and in accordance with the manufacturer’s diagrams and instructions, unless

otherwise specified. The Contractor shall field verify all dimensions and site conditions. Price increase adjustments to the original contract price will not be issued because the Contractor was not aware of existing conditions. The Contractor shall provide all labor, materials, tools and equipment required to perform all dismantling, repairs and installation as listed in this statement of work.

3.2 INSTALLATION: All work shall be done with the work area unoccupied. The Contractor shall coordinate with the Contract Inspector prior to start of work.

PART 4.0 – UTILITY OUTAGES AND SPECIAL CONDITIONS:

4.1 BASE CIVIL ENGINEERINGWORK CLEARANCE REQUEST: The Contractor shall obtain and process AF Form 103 for approval prior to commencement of work for this project. The Contractor shall have this approved form on the job site at all times.

4.1.1 Due to the requirement for multiple agencies to coordinate on these requests, expect 7 – 10 days for paperwork processing. Contractor requests should be submitted at the earliest possible date to preclude delays.

4.2 UTILITY OUTAGES: When a utility outage is necessary to perform the contract work in a occupied facility, regardless of whether the work area is occupied, the outage shall be performed by the Contractor during non-duty hours at no additional cost, unless otherwise approved by the Contracting Representative. The Contractor shall notify the Contract Inspector of outage requirements to include buildings affected; length of outage; and reasons for outage. The Contractor must allow affected occupants a minimum of 7 days prior to outage. The Contractor is also required to provide the Contracting Representative a written notification of the requested outage.

4.3 BASE FIRE REGULATIONS: The Contractor shall comply with Base Fire Regulations as set forth in the latest edition of GAFB Instruction 32-2001, titled “Base Fire Protection Program”. The Contractor shall use no explosives or fire in performing the work. All work shall be in strict compliance with all National Fire Codes.

4.4 CONFINED SPACE: In Accordance With Air Force Occupational Safety & Health Standard. 91-25, Ch. 7, the organization shall ensure the following information is included in the SOW (or equivalent contracting tool) when a Contractor enters a confined space:

a. Notify the Contractor if the space is classified permit or non-permit required.

b. Brief Contractor on the contents of the space.

c. Brief Contractor on the known hazards of the space.

d. Brief the Contractor on what precautions and procedures have been implemented by the organization to protect AF workers.

e. Coordinate operations and procedures and agree on permit system to be used if both AF and Contractor personnel will enter the space at the same time.

The fire department will coordinate (document) on the contract if they are supplying a rescue team.

The Contractor will follow all requirements outline in OSHA Std. 1910.146.

4.5 LOCKOUT/TAGOUT, HAZARDOUS ENERGY CONTROL:

LOCKOUT/TAGOUT: In addition to the requirements in OSHA Std. 1910.147, if a Contractor needs to lock or tag something out, the Contractor will ensure that affected employees are notified before and after the locks and tags are used.

PART 5.0 - ENVIRONMENTAL REQUIREMENTS:

5.1 COMPLIANCE WITH LAWS: Construction activities are NOT exempt from air emission, storm water, hazardous waste, and other environmental compliance rules and regulations. The Contractor shall comply and ensure that all Sub-Contractors comply with all applicable federal, state, and local laws, regulations, ordinances and standards related to environmental matters.

5.2 PROTECTION OF HISTORICAL AND ARCHAEOLOGICAL RESOURCES: All known Historical, Archaeological, and Cultural Resources within the Contractors work area will be designated on the contract Technical Exhibits. The Contractor shall take precautions during the contract to preserve all resources, as they existed at the time of contract award and comply with the Archaeological and Historic Preservation Act (AHPA) and the Archaeological Resources Protection Act (ARPA). The Contractor shall provide all protective devices such as off-limit markings, fencing, barricades or other devices as needed and shall be responsible for preservation of the sites during this contract.

All items having any potential historical or archaeological interest outside of designated areas, which are discovered in the course of any construction activities, shall be carefully preserved. The Contractor shall protect the find in-place by leaving the archaeological find undisturbed and by using flags to mark a 50-foot radius area around the find. The find shall be immediately reported to the Contracting Representative so that the proper authorities may be notified. All work shall be stopped in the immediate area of the discovery until directed by the Contracting Representative to resume work. Any work required to preserve or protect these finds shall be accomplished before work resumes.

5.3 HAZARDOUS AND SPECIAL WASTES GENERATED BY THE CONTRACTOR: The Contractor shall identify, characterize, containerize, store and dispose of hazardous wastes in strict accordance with federal guidelines found in the Code of Federal Regulations, Title 40 (40 CFR) parts 260-270, state regulation 30 TAC 335, all local guidelines, and as specified. A Uniform Hazardous Waste Manifest (if applicable) shall be used by the Contractor to document all parties and locations involved in the

transportation, storage and disposal of all hazardous and special wastes. This form shall be provided to the Contract Representative by the Contractor and signed by the Base Environmental Coordinator (CEIE) before the waste is transported from the limits of government property. A copy of the manifest shall be signed by the receiver of the waste and submitted to the Contracting Representative not later than forty-five days after disposal has taken place. Hazardous waste treatment, storage and disposal facility shall be located within in the state of Texas, permitted by the U.S. EPA, and approved by CEIE.

5.4 CONTRACTOR ENCOUNTERED HAZARDOUS WASTE: The Contractor shall notify the Contracting Representative and CEIE upon encountering any material not identified in this Statement of Work thought to be hazardous that could jeopardize the safety of workers or personnel in the area. The Government will be responsible for characterization, transportation, storage and disposal of the waste if necessary.

5.5 ASBESTOS: To the best of the Government's knowledge, no asbestos-containing material (ACM) will be encountered during this project. Should the Contractor encounter previously unidentified or suspected ACM, which must be disturbed to comply with the contract documents, the Contractor shall cease that work which would disturb the suspect material and shall immediately notify the Contracting Representative. The Government will take appropriate measures to ascertain the material's composition and determine any remedial actions necessary.

5.5.1 Asbestos Containing Building Materials: Under no circumstances, under the provisions of this contract, shall the Contractor be allowed to provide asbestos containing building materials, or products containing encapsulated asbestos or mineral fibers as defined in the 40 CFR 61, National Emission Standards for Hazardous Air Pollutants of 1990, to GAFB.
The Contractor shall provide a signed statement, accompanied by Safety Data Sheets (SDS) for project materials, from a licensed asbestos inspector or the project architect or engineer, proclaiming that no asbestos-containing building materials were used in the construction.

5.6 HAZARDOUS MATERIALS: The Contractor shall provide to the Contracting Representative an AF Form 3000, Material and Approval Submittal, listing all materials to be utilized during the contract. If any of the material is classified as hazardous in accordance with AFI 32-7086, the Contractor will submit an AF Form 3952, (Chemical/Hazardous Material Request Authorization) for each material item with all supporting information as required for approval. The Contractor must obtain authorization from the Contracting Representative prior to bringing or using hazardous materials on the installation. The Contractor must supply an up-to-date SDS for each requested AF Form 3952 item listed as a hazardous material, as defined to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the SDSs submitted under this contract. The Contractor must maintain an onsite file of all SDSs. The Contractor shall submit for Approval (via AF Form 3000) to the Contracting Representative on a monthly basis, or at

the end of the contract, as determined by the Contracting Representative, a report (2 copies) of usage of HAZMAT materials within that period on GAFB Contractors Hazardous Materials Usage Report. No hazardous materials, lubricants, oils, liquids or related materials shall be deposited in the refuse containers on base.

5.7 NUISANCE AND POLLUTING ACTIVITY PROHIBITED: Polluting, dumping, or discharging of any harmful, nuisance, or regulated materials (such as but not limited to concrete truck washout, vehicle maintenance fluids, residue from saw cutting operations, solid waste and hazardous substances) into building drains, site drains, streams, waterways, holding ponds or to the ground surface shall not be permitted and the Contractor shall be held responsible for any and all damages which may result. Further, the Contractor shall conduct work activities in such a fashion as to avoid creating any legal nuisance, including but not limited to, suppression of noise and dust, control of erosion, and implementation of other measures as necessary to minimize impacts of work activities.

5.8 RELEASE OF FLUIDS TO THE SANITARY SEWER SYSTEM: Goodfellow AFB's sanitary sewer system discharges into the Publicly Owned Treatment Works (POTW) operated by the City of San Angelo, Texas. This POTW has established testing requirements for certain constituents as well as discharge limits of those same constituents. Accordingly, any Contractor performing work at Goodfellow AFB and contemplating a release of non-hazardous water into the sanitary sewer system shall meet the pretreatment standards and comply with the testing/release requirements established by the City of San Angelo. Contractor is also responsible for all testing, monitoring, measuring, documenting, etc. to verify this compliance. Contractor shall not discharge wastewater to base's sanitary sewer without prior approval of the Contract Representative.

5.9 PESTICIDES (INSECTICIDES, FUNGICIDES, HERBICIDES, ETC.): Paragraph not used, not in project.

5.10 AIR EMISSIONS: Media blasting Paragraph not used, not in project.

5.11 DRINKING WATER: For all drinking water disruptions, the Contractor shall adhere to 30 TAC 290 Subchapter D paragraph 290.46(g and j). Submit an analysis report and a "Drinking Water Customer Service Inspection checklist" via an AF Form 3000 for Approval. Contact Bioenvironmental Engineering at (325) 654-3126 prior to restoring drinking water service.

5.12 PROTECTION OF WATER RESOURCES: All work under this contract shall be performed in such a manner that objectionable or nuisance conditions will not be created in lakes, reservoirs, streams or storm water conveyances through or adjacent to the project areas. The Contractor shall comply with the terms and conditions of Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit, TXR150000 (GCP). At least 30 days prior to the start of construction, the Contractor shall

seek coverage under the GCP for storm water and non-storm water discharges associated with his construction activities.

5.12.1 For all soil disturbance of more than 1 acre. This paragraph not used. Project is less than 1 acre.

5.12.2 Regardless of the amount of soil disturbed, all non-storm water discharges from Contractor's site shall conform with TPDES General Permit TXR040000 for Small Municipal Separate Storm Sewer Systems (MS4).

5.12.3 If a Notice of Intent (NOI) is required for permit coverage, the Contractor shall submit the NOI to the state and provide copies to the Government via Form 3000 FIO. Contractor shall make required MS4 notifications to the City of San Angelo and the base. Copies of all notifications will be provided to the Contracting Representative via Form 3000 FIO. Contractor shall be responsible for fees associated with obtaining coverage under the GCP.

5.12.4 The Contractor shall also file a Notice of Termination (NOT) TCEQ Form 20023 promptly after site stabilization in accordance with the general permit is achieved. These forms may be found at the TCEQ website (http://www.tceq.state.tx.us). The prime Contractor's principal shall sign to certify the NOI/NOC/NOT or Construction Site Notice. A copy of the NOT shall be provided to the Contracting Representative and Base Environmental Coordinator, FIO.
5.12.5 Post-Construction Cleanup or Obliteration: The Contractor shall obliterate all evidence of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess materials, or any other vestiges of construction. It is anticipated that excavation, filling, and plowing of roadways shall be required to restore the area to near natural conditions, which will permit the growth of vegetation thereon. The disturbed areas shall be graded and filled as required by 2.7 Establishment of Turf.

5.1.2.6 At the end of the project, and prior to final acceptance, the Contractor shall submit a solid waste diversion report by completing the Construction Waste Management form identifying the materials and weights either recycled or diverted from solid waste disposal to other re-use as well as weights of waste disposed in a landfill.

5.13 GREEN PROCUREMENT: Green Purchasing is a mandatory component of the Air Force pollution prevention program. The Under Secretary of Defense issued a policy memorandum "Establishment of the DoD Green Purchasing Program (GPP)" which states: "The DoD goal is to achieve 100% compliance with mandatory Federal GPP programs is all acquisition transactions." This document contains guidelines for implementing the RCRA, EO, DOD, and Air Force requirements.

5.14 ENVIRONMENTAL MANAGEMENT SYSTEM: Contractor's on site supervisory personnel shall complete EMS Awareness Training. The Base Civil Engineer Environmental Coordinator should be contacted at (325) 654-5946 for information to

complete the awareness training within 60 days of contract award or a new contract employee supervisor begins work. The training will be accomplished utilizing The Environmental Awareness Course Hub (TEACH) at https://usaf.learningbuilder.com. The Contractor is responsible for providing EMS Awareness Training records, for each employee, to the Contracting Representative.

PART 6.0 - SITE MAINTENANCE AND CLEANUP:

6.1 SITE MAINTENANCE: The Contractor shall protect adjacent property, buildings and their contents from dust, dirt or other materials. Work areas shall be maintained in a neat, clean, safe condition and shall, at a minimum, be cleaned at the end of each shift. All streets and roadways in/or adjacent to the site shall remain free of project generated trash and debris at all times.

6.2 CLEANUP: The Contractor shall collect any and all trash, debris, refuse, garbage, etc., that is generate and place it in appropriate containers with lids or approved covers on a periodic basis or as directed by the Contracting representative. The aforementioned materials shall be hauled from the site by appropriate means on a daily basis, unless otherwise approved by the Contracting representative. Disposal shall be outside the limits of Government property. Disposal shall be by sanitary landfill or other approved methods and shall conform to all local, state, and federal guidelines, criteria, and regulations. Upon completion of the work, the Contractor shall leave the work site and storage area(s) in a clean, neat and workmanlike condition satisfactory to the Contracting Representative. It is anticipated that excavation, filling, and plowing of roadways shall be required to restore the area to near natural conditions that will permit the growth of vegetation thereon. Final grades to be as shown on drawings.

PART 7.0 - ENERGY CONSERVATION:

7.1 UTILITIES CONSERVATION: The Contractor shall instruct employees in utilities conservation practices. The Contractor shall be responsible for operating under conditions that preclude the waste of utilities, which shall include: Lights shall be used only in areas where and when work is actually being performed. The Contractor shall not adjust mechanical equipment controls for heating, ventilation and air conditioning systems. Water faucets or valves shall be turned off after the required usage has been accomplished. The Contractor shall use good judgment in the conservation of Government utilities. Prevailing energy conservation practices shall be adhered to and enforced by the Contractor.

PART 8.0 – RESPONSIBILITY:

8.1 The above 1 through 7 summaries do not in any way limit the responsibility of the Contractor to perform all work and furnish all plant, labor, and materials required by this Statement of Work.

PART 9.0 – STORAGE AND PARKING:

9.1 CONTRACTOR STORAGE: The Contracting representative shall designate Contractor storage and parking area. All project storage areas shall be kept free of debris, leaks, stains, or splashes and kept in a neat, clean, and safe condition. Any contamination of the storage area by a hazardous substance shall be immediately remediated by the Contractor, in accordance with PART 5.0 above at no additional expense to the contract. All hazardous materials shall be secured when not in use.

PART 10.0 - COMPLETION OF WORK:

10.1 COMPLETION: The Contractor shall insure that work for this project is performed in accordance with the criteria herein at the completion of work for this project. Provide As-builts, all warranties, and Final DD 1354 at the time of final inspection.

-END OF STATEMENT OF WORK-

II. TECHNICAL EXHIBITS – OVERHEAD PROTECTION AT FIRESTATION

TE-A. DOD Contractor Environmental Guide

TE-B. Drawings

TE-C. AF Form 66

TE-A. DOD Contractor Environmental Guide

DEPARTMENT OF THE AIR FORCE
17TH TRAINING WING (AETC)
GOODFELLOW AIR FORCE BASE TEXAS

FROM: Installations Hazardous Materials Pharmacy (IHMP) 1 Jun 13
17th CES/CEIE

TO: To Whom It May Concern

SUBJECT: Reporting Requirements of Hazardous Materials Used by Contractors

All organizations using the services of a contractor are responsible for ensuring that any type of chemicals (hazardous materials) brought onto this installation and used by any contractor for any type of projects (such as construction projects, remodeling projects, cleaning projects or any other type of projects that require the use of chemicals) must be tracked by the installation of all chemicals used.

In order to comply with all Environmental Laws and Regulations, as set forth by Federal Law, the Department of Defense and the U.S. Air Force, this applies to all Federal installations. We are required to track all chemicals (hazardous materials) that are purchased, transported and used by any Contractor on any project on this installation. Our main goal is 100% accountability. This would include any and all short term or long term contractors.

To track these chemicals, as required, all Contractors must submit copies of Material Safety Data Sheets (MSDS's), wither they may be classed as hazardous or non-hazardous chemicals, as determined by the contractor, and must be submitted for review to the installations Environmental, Safety and Occupational Health (ESOH) team for review, along with any of the required forms and worksheets with as much information as possible. This must be done at least 15 days or more prior to any work being started on this installation.

It is also required that a Contractor Materials Usage Report be accomplished during the contract period(s) and submitted on a set schedule set forth be the government.

The listing below is just some of the general categories of chemicals that require review of their materials prior to use and the required reports from the contractor to the government representative. It is not possible to include all items in this list that may require reporting, so please call if there is a question about any item or material:

a. Compressed gas (All types)
b. Adhesives (All types)
c. Sealants (All types)
d. Paints (All types)
e. Lubricants (All types)
f. Oils (All types)
g. Fuels (All types)
h. Welding materials (All types)
i. Cleaning solvents (All types)
j. Chemicals used in testing or as additives (All types)
k. Any fluids (except water) added to machinery / government owned or leased equipment
l. Pesticides / insecticides (All types)

Installations Hazardous Materials Management Program (IHMP)
17th CES/CEIE
Bldg. 3511, Room 134
DSN No# 477-3299
Phone No# 325-654-3299
Fax No# 325-654-3460

Reporting of Hazardous Materials
Civilian Contractors

1. All Contractors shall submit all required Material Safety Data Sheets (MSDS) for any possible hazardous and/or non-hazardous chemicals that can and/or will be brought, transported and/or used on this installation.

2. All MSDSs, along with AF Form 3000 and any other required documents, along with the attached worksheets must be turned into their project Quality Assurance Evaluator (QAE), Base Contracting and/or the Project Representatives requiring the work to be accomplished by a contractor on this installation.

3. This will include any Contractor doing any type of work on the installation that will be paid by a Government Purchase Card (GPC) small service contract purchase.

4. All copies of the MSDS's will be forward to the Installations Hazardous Material Management Office (HAZMO), Building 3511, Room 134 for processing and review.

    a. Phone 325-654-3299 for Point of Contact (POC) at the HAZMO.

5. Upon review of the MSDS's, the HAZMO shall identify the materials deem as "Hazardous Materials" that require tracking by the installation. Items that have been deem as "Non-Hazardous" will not need to be track by the installation.

6. The HAZMO will communicate to the requestor, the MSDS's of the hazardous materials that will require the Installations Contractor HAZMAT Worksheet Request to be filled out by the Contractor.

7. The HAZMO can, if requested, assist the Contractor in completing the Worksheet.

8. The HAZMO will load the information from the Contractor Worksheet into the installations data tracking system for further review by Wing Safety and Bioenvironmental, as required.

9. After a complete review by the Environmental, Safety, Occupational and Heath (ESOH) team, the HAZMO will provide a copy of the completed records to the requestor, for the Contractor.

10. The Contractor will retain these records for the duration of the contract.

11. The Contractor will submit a Contractor Material Usage Data Sheet to the QAE once a month for contracts *over 60 days*.

12. For contracts *less than 60 days*, a Material Usage Data Sheet will be submitted by the Contractor to the QAE, GPC card holder or requestor at the completion of the contract, ***But*** before any payment is processed.

13. The QAE, GPC card holder and/or requestor, will provide a copy of the Usage Data Sheet to HAZMO for processing.

14. The HAZMO is ready to assist the QAE, GPC card holder and/or requestor and the Contractor in anyway to simplify and expedite this reporting and tracking procedure.

15. Please feel free to contact the Hazardous Material Management Office (HAZMO) with any questions or for assistance. Phone No# 654-3299.

CONTRACTOR HAZMAT WORKSHEET REQUEST

Fill In **All** Information

1. CONTRACTOR INFOMATION

Contractors Name:							
Contract Number Project Number							
Bldg /Room Number:		Physical Location Of Process:					
Estimated Start Date:					Estimated Completion Date:		
EESOH-MIS Shop Code	GDF					(Leave shop code blank if not known)	

2. MATERIAL INFORMATION

National Stock Number (NSN), Local Stock Number (LSN), Or Part Number/Trade Name (Leave blank if not known)

Material Noun (Be Specific)							
Size (Quantity)		**CIRCLE ONE**	Fluid Oz	Troy Oz			
Container Type	Box	Bottle	Can	Drum	Bag	Gram	Pint	Pound
	Cartridge		Other_____			Quart	Kg	Gallon
Unit of Issue		Units Per Container				Other _____		

3. LOCATION INFORMATION

Will The Process Be Performed On: (Check All That Apply)

☐ Existing Facility ☐ Equipment ☐ New Structure ☐ Aircraft ☐ Outdoors

Location Of Stored Materials	

4. ADDITIONAL INFORMATION (Circle Answer That Applies)

Is A Hazardous Waste Generated?	Yes	No	Additional Remarks:
Is A Site Diagram Available?	Yes	No	
Is The SPCC Plan Posted?	Yes	No	

5. CERTIFIER BLOCK

This Request Cannot Be Processed without a Government Representative's Signature

CONTRACTOR Title:		Phone:	Date
Printed Name		Signature	
GOV'T REP Title:		Phone:	Date
Printed Name		Signature	

NOTE: Manufacturer's Material Safety Data Sheet (MSDS) Required With Every Worksheet

CONTRACTOR INSTRUCTION GUIDE

This information is required in order to help the base Hazardous Material Office (HAZMO) track all hazardous materials on the installation as required, in order, to comply with all Environmental Laws and Regulations. A worksheet must be filled out for **each product** containing or identified as being or possible being a hazardous material. All blocks must be filled in.

1. Contractor Name: Fill in the name of the contracting company performing the work.

   Contract Number: Fill in contract number or project number

   Building / Room Number: Fill in the building and/or room number where the work will be accomplished at

   Location of Process: Identify the physical location of where the product will be used. Example: Intersection Street names, Area name, Street Name, etc……..

   Estimated Start Date: Fill in the date the project is projected to start.

   Estimated Completion Date: Fill in the date the project is projected to end.

   Shop Information: An installation shop code has already been assigned for Contractors to track the hazardous materials used by them on the installation.

2. Material Information: Information about the hazardous material that is going to be used.

   National Stock Number, Local Stock Number, or Part Number: Fill in the identifying number of the product to be used. If not known, one will be assigned later.

   Material Noun: Fill in the general term used to define the product. Example: Adhesive, Ni-cad Battery, etc.

   Size: Fill in the quantity, circle the unit of measure, and circle the container type.

   Unit of Issue: Fill in how the product is received. Example: box, case, pallet, each, etc.

   Units per Container: Identify how much comes in each unit of issue. Example: Twelve cans per box. Twelve being units per container and box being the unit of issue.

3. Location Information: Information about what the product will be used on, where it will be used, and where it will be stored when not in use.

   Check all boxes that apply pertaining to where and on what the process of using the hazardous material will occur.

   Location of Stored Materials: Identify the physical location of where the material will be stored when not in use.

4. Additional Information: Information for the purpose of completing reports.

   Hazardous Waste Generated: Does the process create any hazardous waste?

   Site Diagram Available: Is a site diagram available for additional information on the site where the product will be used and stored?

   Goodfellow AFB SPCC Red Plan: This is part of the base Spill Prevention, Control, and Countermeasures Plan. The Red Plan lists base procedures for reporting spills.

5. Certifier Block: The certifier is the Government Representative for the project. This block must be completed and signed by both parties.

   Note: A Manufacturers Material Safety Data Sheet (MSDS), for use by the Hazardous Materials Office, is required to be turned in each time a worksheet is completed.

   Each month a Contractor Hazardous Material Usage Data Sheet must be completed by the contractor and turned into the Government Representative for any project *over sixty days*.

   Projects *less than sixty days* are required to turn in a usage data sheet after completion of project.

The Government Representative will be responsible for turning over this information to the HAZMO.

Contractors Environmental Reporting Entry

The following information is required for tracking of all hazardous materials on the installation. For contracts **exceeding** six months, this form is required to be filed out **Monthly** and returned to the Government Representative, who will return it to the HAZMO office for processing. This information is required in order to comply with all Environmental Laws and Regulations. For purchase orders and/or contracts **less** than six months, this form is required at the start and at the completion of the work.

1. From:	**2. TO**: **17 CES/CEA** **460 E. Kearney Blvd., Bldg 3511, Rm 134** **Goodfellow AFB, TX 76908**		**3. Month/Quarter/Year Ending (mm/yyyy)**	
4. PRODUCT NSN / NAME	**5. AMT RECEIVED**	**6. U/I** *(Lb, Oz, Ea, Gl, Pt, Qt)*	**7. AMT USED**	**8. BALANCE**
Sherwin-Williams ProMar 400 - B42W102 ***(SAMPLE)***	*20*	*GL*	*15*	*5*
Texaco Hydraulic oil, SPS2878656 ***(SAMPLE)***	*10*	*GL*	*5*	*5*

Print Name: Contractor:_____ Date:_____

Signature: _____

Print Name: Government Rep:_____ Date:_____

Signature: _____

Form Instructions:

1. Organization and address of Contractor providing the report

2. Organization and address of Hazardous Material Management Office receiving report

3. Ending month and year for data being reported

4. Name and NSN (If known) of product being reported, for example Additive, latex gloss paint, walnut wood stain, etc,

5. Total quantity received in the reporting month or quarter or during the contract period

6. Unit of issue for the product reported, for example GL for Gallons, BX for Box, etc……

7. Total quantity issued or used in the reporting month or quarter or during the contract period

8. Balance of product left within your inventory.

9. Contractors name providing the report

9a. Date of report submittal

9b. Signature of person providing report

10. Government Rep.'s name providing the report

10a. Date of report submittal

10b. Signature of person providing report

TE-B. DRAWINGS: OVERHEAD PROTECTION AT FIRESTATION

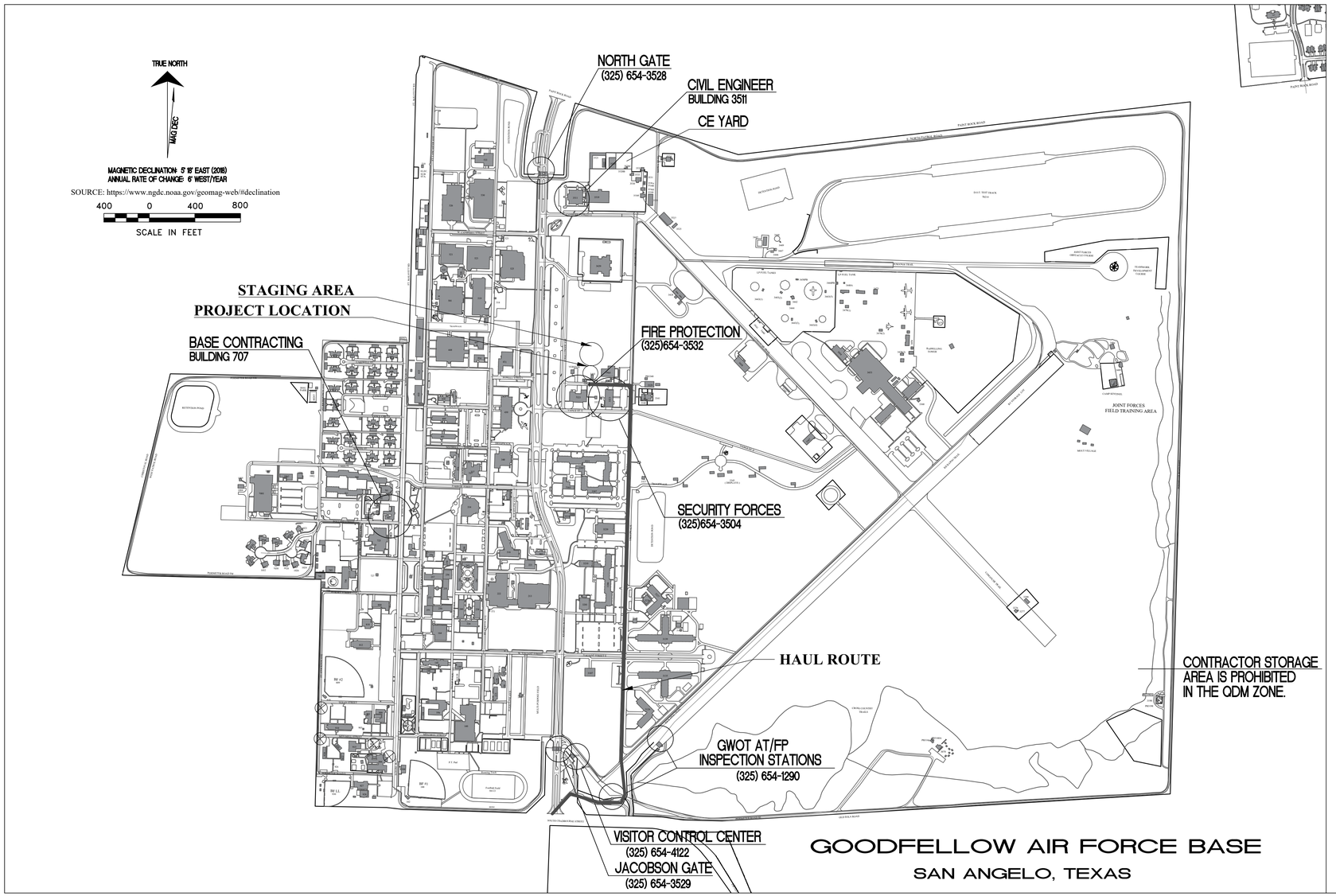
PROJECT NAME:

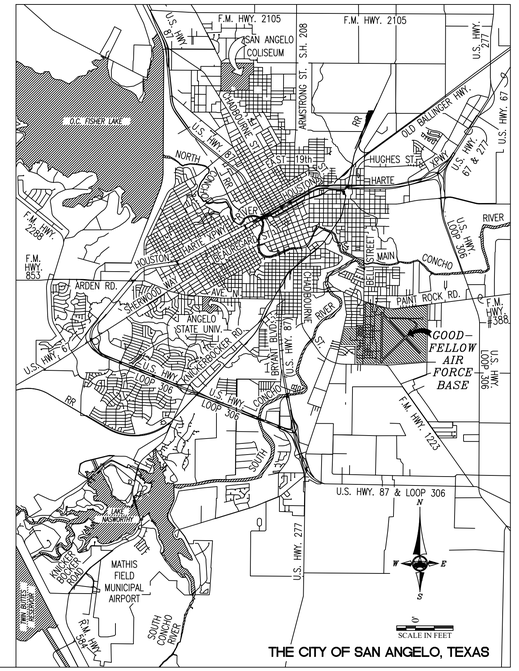
OVERHEAD PROTECTION AT FIRESTATION

PROJECT NUMBER: JCGU-10-1093

SERVICE REQ. # 1829083
WORK TASK # 6563146
OPPORTUNITY # 1086727

DATE	SIGNATURE
	RECOMMENDED (BCE)
	SUBMITTED (PROGRAMS CHIEF)
	FIRE CHIEF
	SAFETY
	ASSET MANAGEMENT
	BIO-ENVIRONMENTAL OFFICER
	SECURITY FORCES
	COMMUNICATIONS
	CHIEF OF OPERATIONS
	PROGRAM DEVELOPMENT
	PROGRAM MANAGEMENT
	PROJECT MANAGER
	USING AGENCY
	USING AGENCY





GENERAL NOTES

1. PROSPECTIVE OFFERERS MAY ONLY CONTACT THE BASE CONTRACTING OFFICE 17 CONS/LGCA, 210 SCHERTZ BLVD. GOODFELLOW AIR FORCE BASE, TEXAS 76908-4122, 325-654-5174 FOR ANY AND ALL INFORMATION WITH REGARDS TO THIS SOLICITATION.
2. ALL WORK IS NEW UNLESS OTHERWISE INDICATED TO BE "EXISTING" OR "REUSED" OR "RELOCATED." THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
3. THE CONTRACTOR SHALL INITIATE AND PROCESS FOR APPROVAL AF FORM #103 "WORK CLEARANCE REQUEST" FOR THE CONTRACTING REPRESENTATIVE PRIOR TO PERFORMANCE OF ON-SITE WORK.
4. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO EXCAVATION OR TRENCHING. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE SERVICE LINES AS REQUIRED FOR CONSTRUCTION FOR THIS PROJECT.
5. THE CONTRACTOR SHALL HAND DIG WITHIN (2) FEET EITHER SIDE OF UTILITY CROSSING UNTIL THE UTILITY IS PHYSICALLY EXPOSED, PRIOR TO PERFORMING MECHANICAL TRENCHING OR EXCAVATING. PROVIDE NEW TOPSOIL AND HYDROMULCHING IN ALL AREAS WHERE DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES.
6. PROSPECTIVE OFFERERS ARE HIGHLY ENCOURAGED TO ATTEND THE SCHEDULED PRE-PROPOSAL SITE VISIT TO THOROUGHLY FAMILIARIZE THEMSELVES WITH ANY AND ALL EXISTING SITE AND PROJECT LOCATION CONDITIONS WHICH MAY AFFECT THE WORK UNDER THIS CONTRACT. THE GOVERNMENT SHALL NOT BE RESPONSIBLE FOR CONTRACTOR ERRORS OR OMISSIONS WHICH COULD BE MADE KNOWN BY ATTENDING A SCHEDULED SITE VISIT.
7. THE CONTRACTOR SHALL COORDINATE ALL COMMUNICATIONS WORK WITH THE ENGINEERING SECTION MANAGER AT FRONTIER COMMUNICATIONS AT 1-800-921-8102; WITH THE INSTALLATION OFFICE, SUDDEN-LINK CABLE AT 1-877-794-2724 AND THE GOODFELLOW AFB COMMUNICATIONS SQUADRON AT 325-654-3010.

PROJECT NOTES

1. DO NOT SCALE DRAWING. VERIFY ALL ELEVATIONS AND DIMENSIONS ON SITE, AND ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING REPRESENTATIVE
2. CONTRACTOR TO COORDINATE WITH CONTRACTING REPRESENTATIVE TO LOCATE ALL UNDERGROUND UTILITIES AND BURIED ITEMS.
3. SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH DRAWINGS FOR PURPOSES OF BIDDING, SCHEDULING, AND CONSTRUCTION.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK RELATED TO DEMOLITION, BRACING, SHORING, FORMWORK, ETC. REQUIRED TO SAFELY PERFORM THE WORK.

LIST OF DRAWINGS

A-E Seal

131

ASBESTOS CONTAINING MATERIAL (ACM) AND LEAD BASED PAINT (LBP) STATEMENT
(Enter the appropriate ACM/LBP and place an "X" in the appropriate boxed)

This facility contains ACM/LBP materials.	
This facility does not contains ACM/LBP materials.	X
This facility contains ACM/LBP materials that will be removed under this contract.	
This facility contains ACM/LBP materials that will be removed under a future contract.	
This facility contains ACM/LBP materials that will be removed under this contract.	
This facility contains ACM/LBP materials that will be removed under a future contract.	
This facility contains ACM/LBP materials that will be removed under this contract.	

Symbol	Description	Date	Appr
	REVISIONS		

Designed by:
Drawn by:
Reviewed by:
Submitted by:

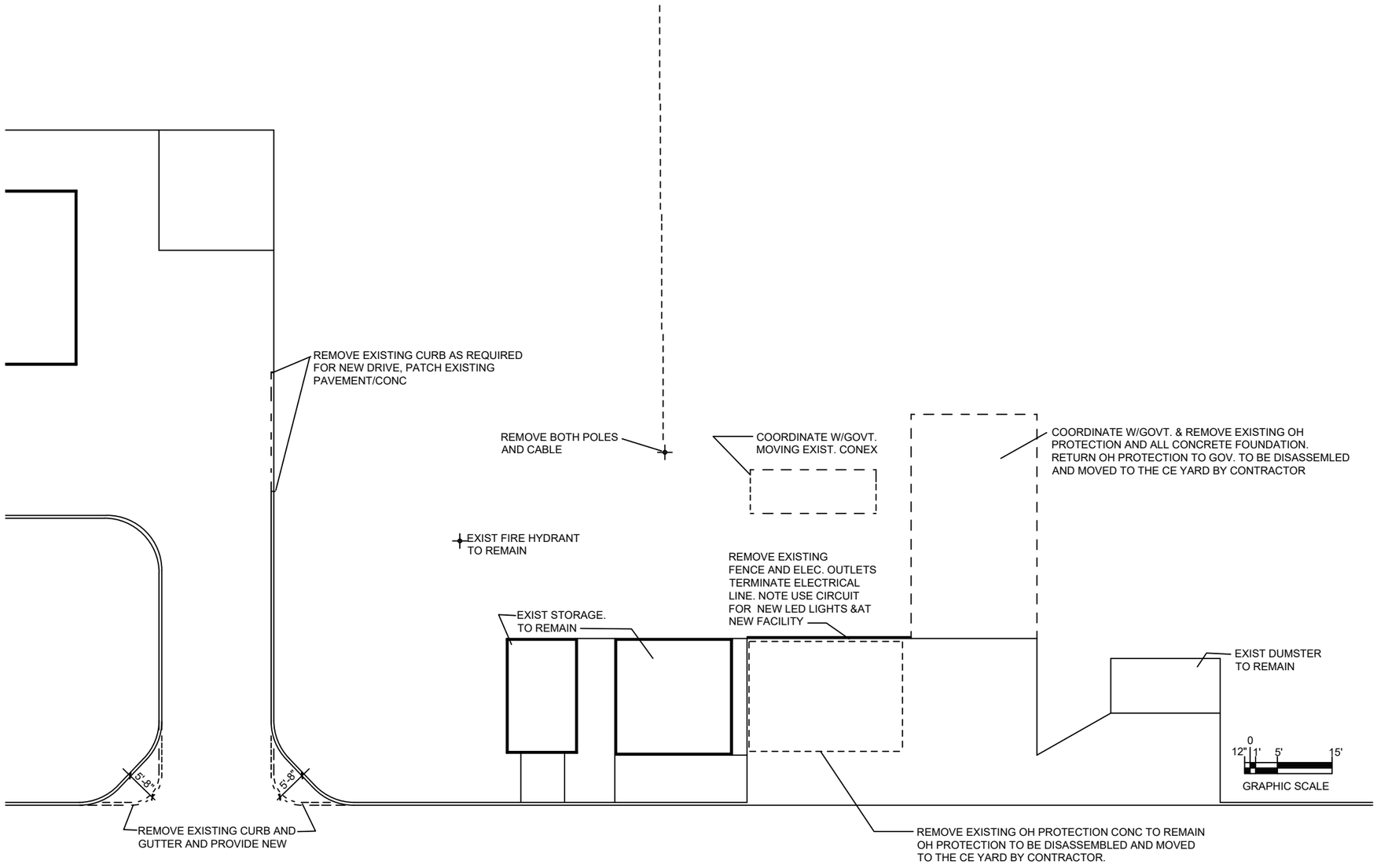
PROJECT TITLE
OVERHEAD PROTECTION AT FIRESTATION
1086727
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:
1086727

SHEET TITLE
BASE MAP/COVER SHEET

Date:
JAN 1, 2020

SEQ.	SHEET	OF
01	C-1	07



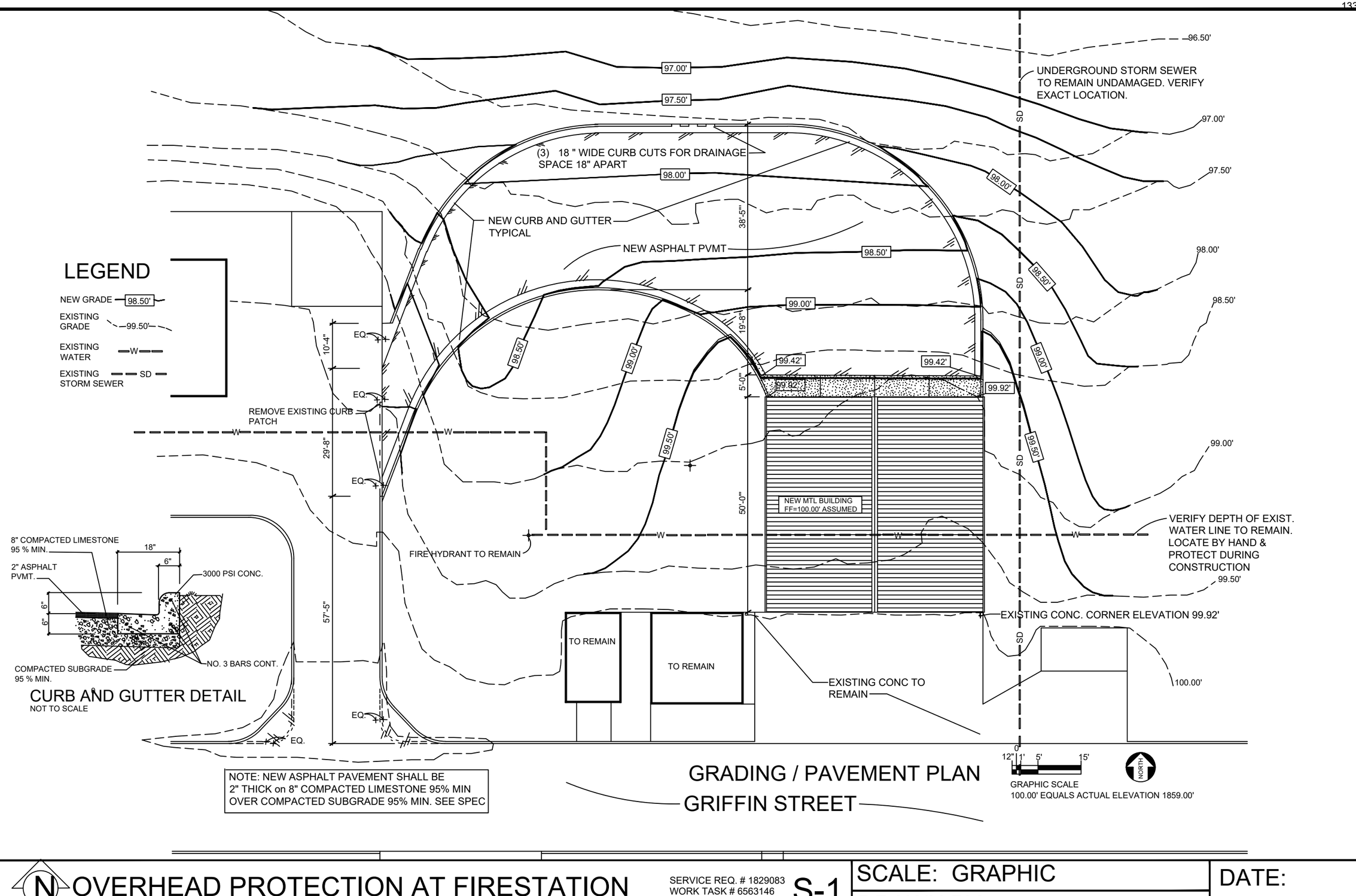
OVERHEAD PROTECTION AT FIRESTATION

D-1

SCALE: GRAPHIC

DRAWN BY: KWB

DATE: JAN 2020



OVERHEAD PROTECTION AT FIRESTATION

JCGU-10-1093

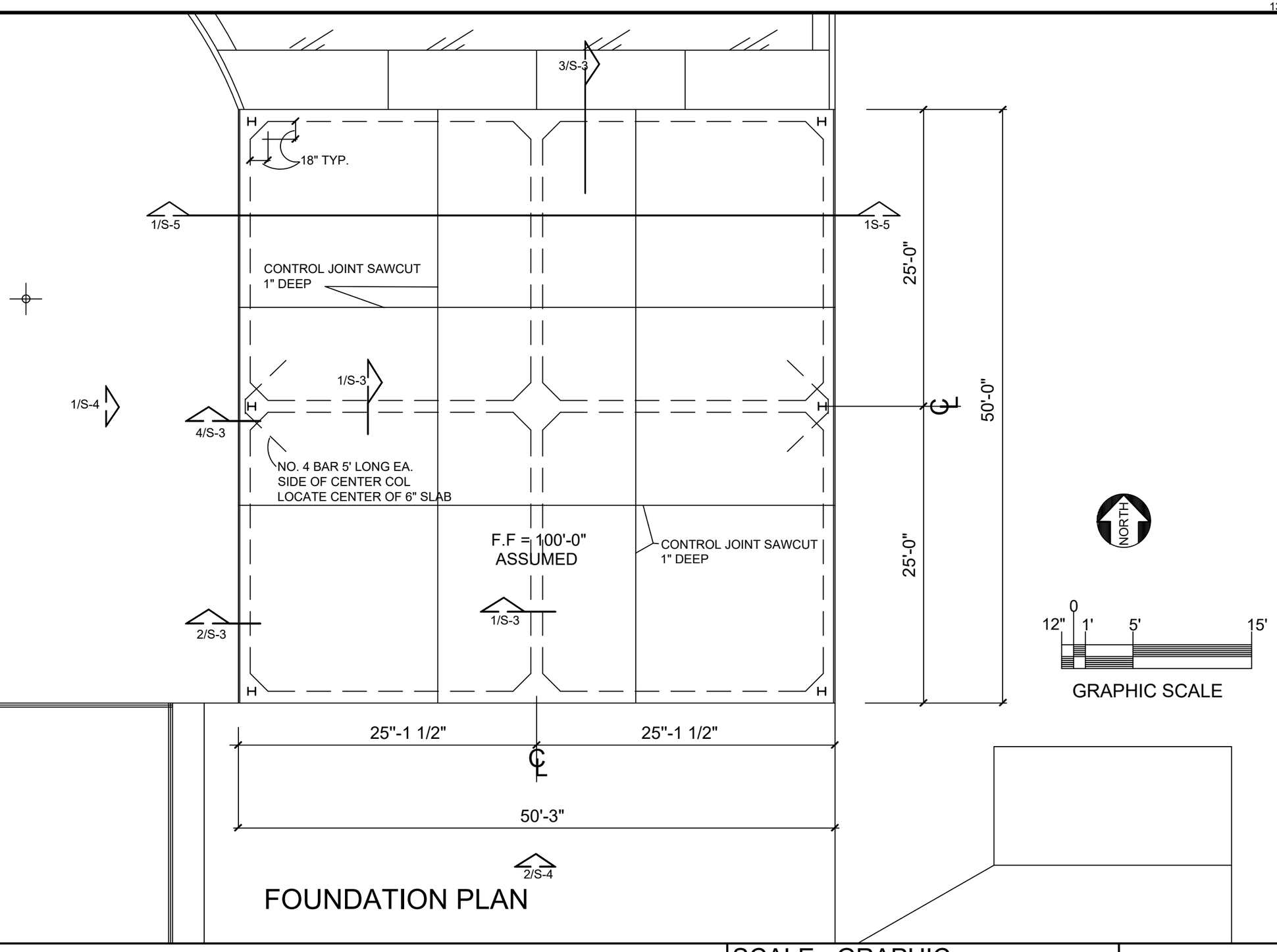
SERVICE REQ. # 1829083
WORK TASK # 6563146
OPPORTUNITY. # 1086727

S-1

SCALE: GRAPHIC

DRAWN BY: KWB

DATE: JAN 2020



FOUNDATION PLAN

OVERHEAD PROTECTION AT FIRESTATION

JCGU-10-1093

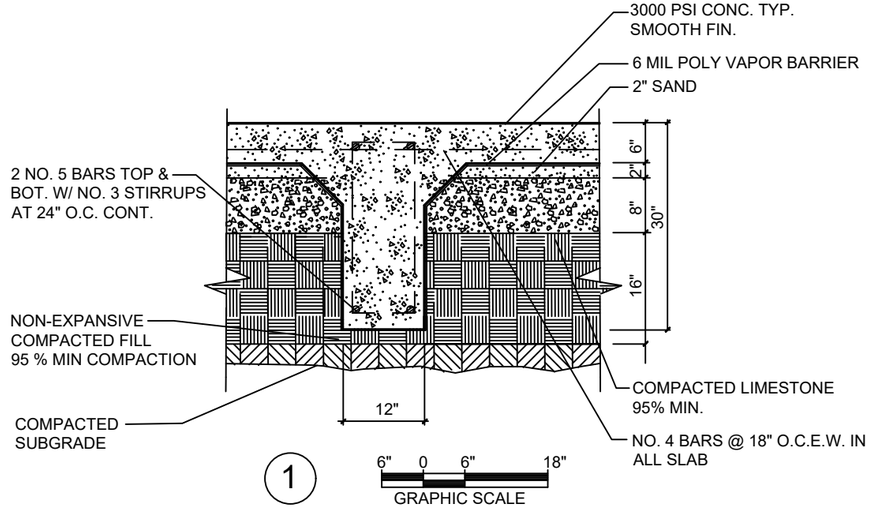
SERVICE REQ # 1829083
WORK TASK # 6563146
OPPORTUNITY # 1086727

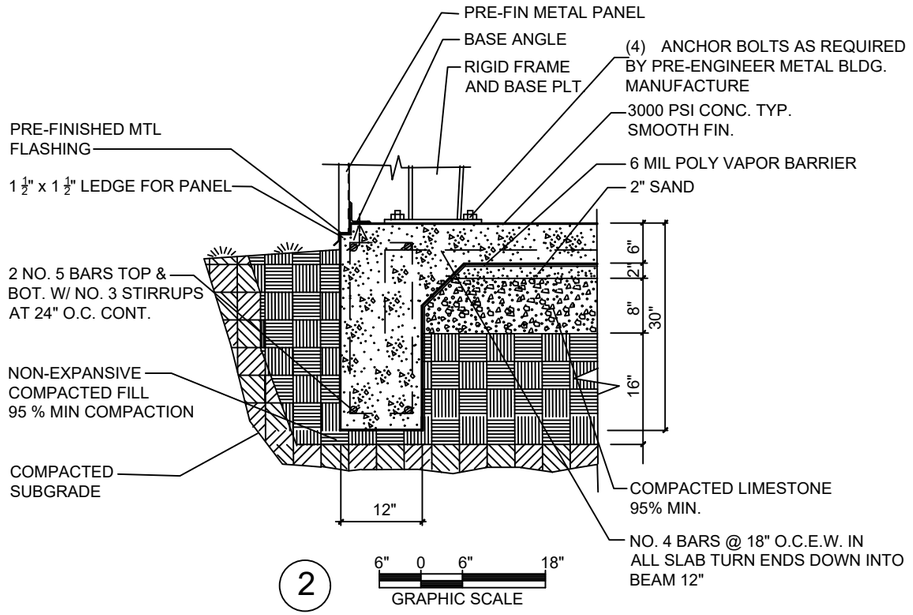
S-2

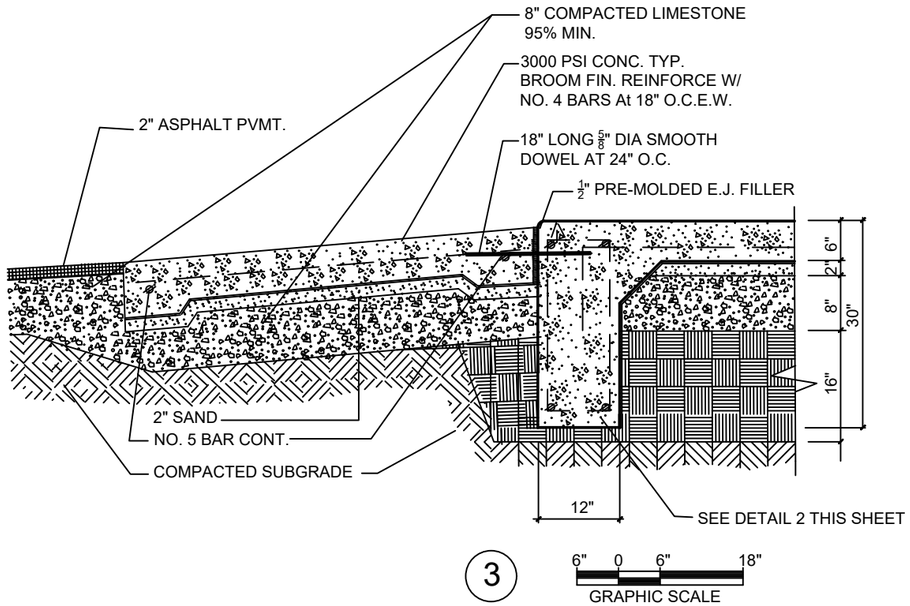
SCALE: GRAPHIC

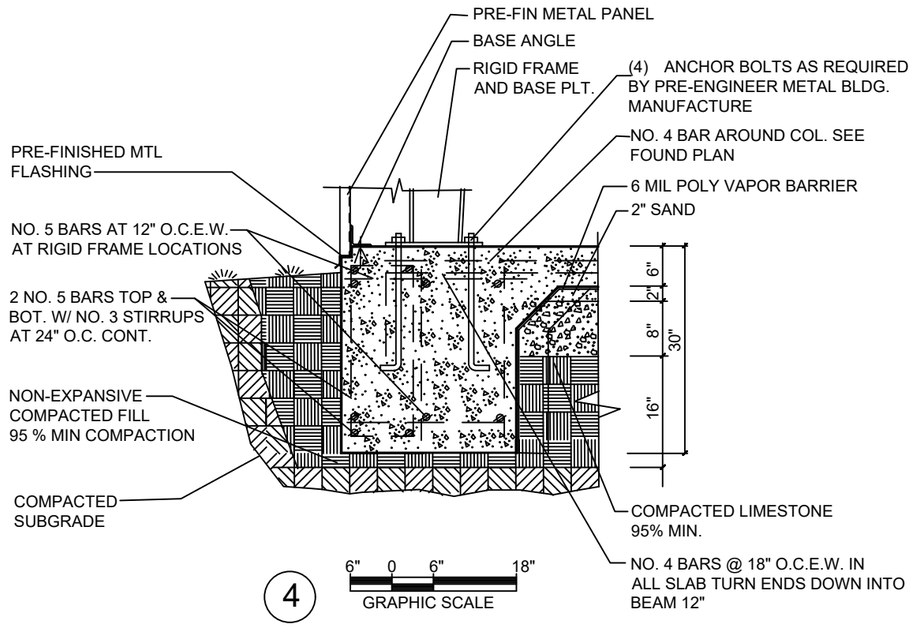
DRAWN BY: KWB

DATE: JAN 2020









# FOUNDATION DETAILS
FF = 100'-0" ASSUMED

OVERHEAD PROTECTION AT FIRESTATION

JCGU-10-1093

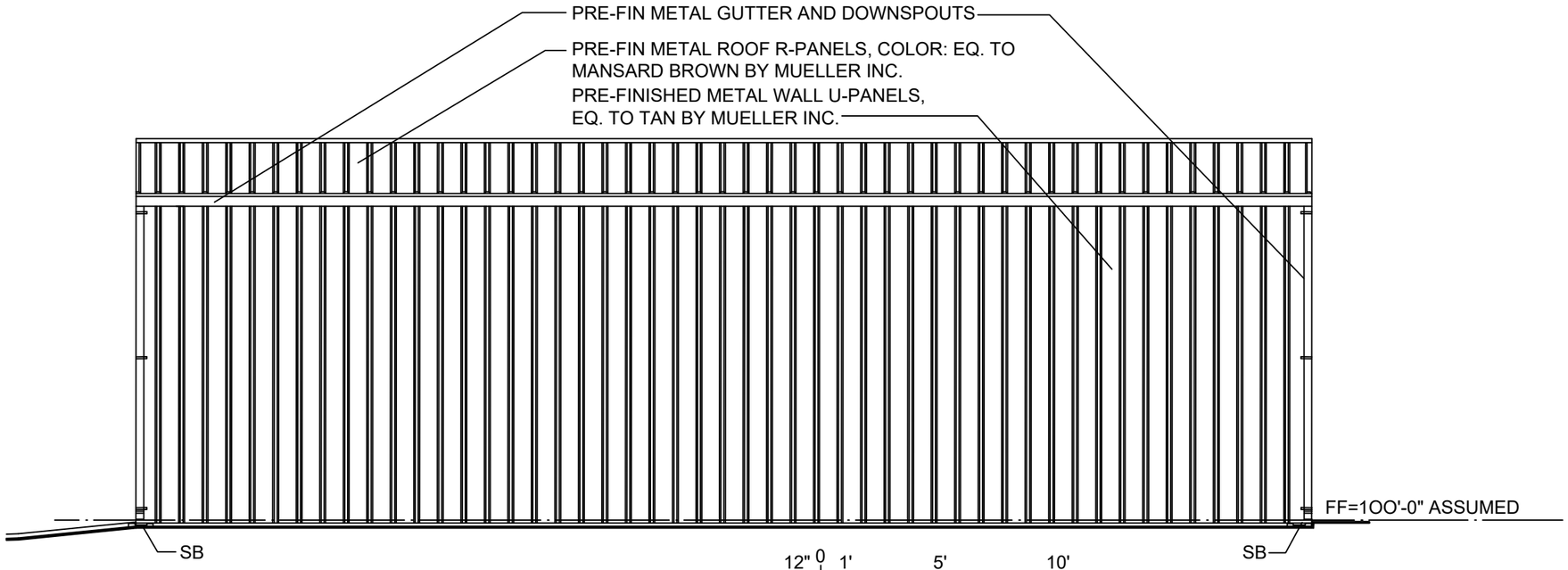
SERVICE REQ # 1829083
WORK TASK # 6563146
OPPORTUNITY # 1086727

S-3

SCALE: GRAPHIC

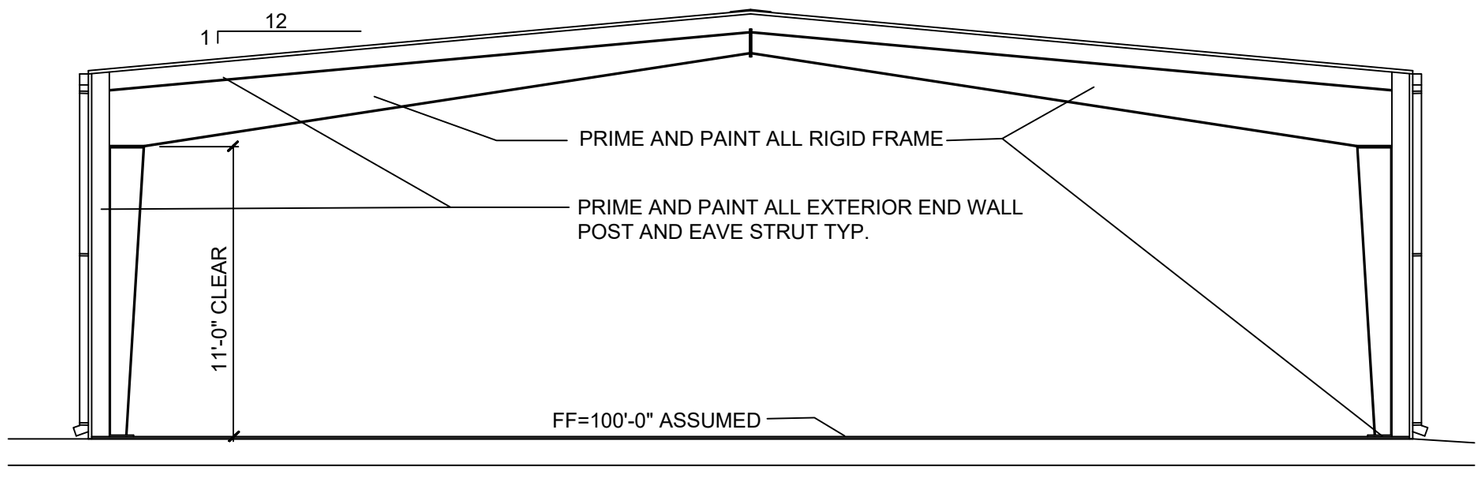
DRAWN BY: KWB

DATE: JAN 2020



① WEST ELEVATION

EAST ELEVATION OPPOSITE HAND



② SOUTH ELEVATION

NORTH ELEVATION OPPOSITE HAND

OVERHEAD PROTECTION AT FIRESTATION

JCGU-10-1093

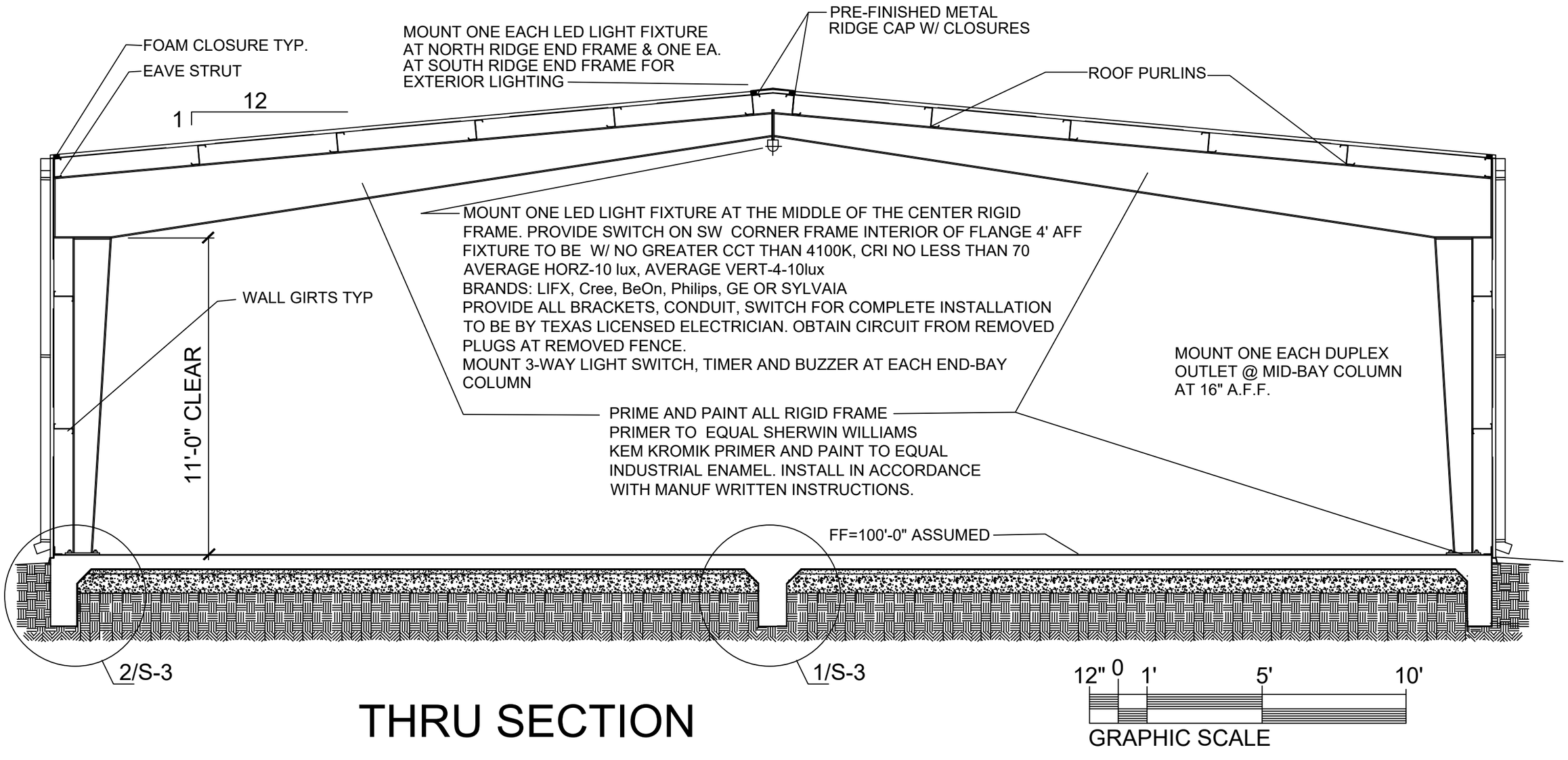
SERVICE REQ # 1829083
WORK TASK # 6563146
OPPORTUNITY # 1086727

S-4

SCALE: GRAPHIC

DRAWN BY: KWB

DATE: JAN 2020



THRU SECTION

OVERHEAD PROTECTION AT FIRESTATION JCGU-10-1093	SERVICE REQ # 1829083 WORK TASK # 6563146 OPPORTUNITY # 1086727 S-5	SCALE: GRAPHIC DRAWN BY: KWB	DATE: JAN 2020

TE-C. OVERHEAD PROTECTION AT FIRESTATION: AF FORM 66

SCHEDULE OF MATERIAL SUBMITTALS

PROJECT NUMBER	PROJECT TITLE	SOLICITATION/CONTRACT NO.
JCGU 10-1093	OH PROTECTION AT FIRESTATION	XXXXXX SERVICE REQ #1829083 OPPORTUNITY #1086727

TO BE COMPLETED BY THE PROJECT ENGINEER												TO BE COMPLETED BY CONTRACT ADMINISTRATOR								
		NO. OF COPIES REQUIRED														DATE CONTRACTOR NOTIFIED				
LINE NUMBER	ITEM OR DESCRIPTION OF ITEM, CONTRACT REFERENCE, TYPE OF SUBMITTAL (Ref spec & para)	CERTIFICATE OF COMPLIANCE	SHOP DRAWINGS	SAMPLES	COLOR SELECTION	MANUFACTURER'S RECCOMENDATIONS	MANUFACTURER'S WARRANTY	OPERATING INSTRUCTIONS	SEE PARA	OTHERS AS SPECIFIED	REQUIRED SUBMISSION DATE	DATE RECEIVED IN CONTRACTING	DATE TO CIVIL ENGINEERING	RETURN SUSPENSE DATE	FOLLOW UP	APPROVED	DIS-APPROVED	CONTRACTOR RE-SUBMITTAL	FINAL APPROVAL	REMARKS
1	Part 1.6/1.22/1.23, Work Schedule								4		(d)									FIO
2	Part 1. 16, Safety Plan								4		(a)									FIO
3	Part 1.19, AF Form 592 Welding, Cutting, Brazing permit								4		(d)									A
4	Part 1.25 Base Access List								4		(d)									A
5	Part 2.4 Concrete Strength Test								4		(d)									A
6	Part 2.4.4.1 Anchor Bolt Shop Drawing								4		(d)									A
7	Part 2.4.6 Concrete Mix Design								4		(c)									A
8	Part 2.4.7.1 Limestone Base Compaction Test								4		(d)									A
9	Part 2.5 Sealed Pre-engineered Structural Drawings								4		Approval prior to fabrication (c)									A

10	Part 2.5.4 Metal Roof and Wall Panels with Color Selections								4		Approval prior to fabrication (c)									A
11	Part 2.5.5 Gutter and Downspout with Color Selections								4		Approval prior to fabrication (c)									A
12	Part 2.6.3 Waybill and delivery tickets								1		(d)									FIO
13	Part 2.6.8.1 aggregate samples								1		Approval prior to production (d)									A
14	Part 2.6.8.1 Sources and Stockpiles								1		(d)									FIO
15	Part 2.6.8.3 Bituminous Materials Samples								1		(d)									FIO
16	Part 2.6.8.4 Bituminous Mixtures Test Reports								4		(d)									FIO
17	Part 2.7.3 Topsoil Equipment List								4		(c)									FIO
18	Part 2.7.4 Topsoil Cert of Compliance								4		(c)									FIO
19	Part 2.7.5 Offsite Topsoil Source								4		(c)									A
20	Part 2.7.6 Hydrmulch								4		(c)									A
21	Part 2.7.7 Fertilizer Label								4		(c)									A
22	Part 4.1 AF Form 103 Work Clearance Permit								4		(a)									A
23	Part 4.2 Utility Outages								4		7 Days Prior (c)									A

(a) As soon as possible but in no case later than 45 calendar days after NTP.
(b) Prior to Final Inspection.
(c) Prior to Use.
(d) As Required.

24	Part 5.3 Hazardous Waste Manifest								4		7 Days Prior (c)									A
25	Part 5.5.1 Signed Statement No Asbestos Used								4		(c)									A
26	Part 5.6 AF Form 3000 and AF Form 3952 HAZMat Request								4		7 Days Prior (c)									A
27	Part 10.1 As-Builts, Warranties, DD 1354								1		(d)									FIO

(a) As soon as possible but in no case later than 45 calendar days after NTP.
(b) Prior to Final Inspection.
(c) Prior to Use.
(d) As Required.

VI. CONSTRUCT ARMY PHYSICAL TRAINING FIELD

TABLE OF CONTENTS

Statement of Work (SOW)

CONSTRUCT ARMY PHYSICAL TRAINING FIELD

STATEMENT OF WORK

PART 1.0 – SCOPE OF WORK:

1.1 GENERAL: The work to be performed under this contract and in accordance with this Statement of Work shall consist of furnishing all necessary parts, labor, tools, transportation, supplies, supervision, equipment, materials, and incidentals necessary for providing all work shown on the drawings (Technical Exhibits), statement of work, and all applicable codes, regulations, standards and criteria in effect at the date of solicitation. The work outlined below shall consist of, but not be limited to the constructing of a new physical training field at Goodfellow Air Force Base.

1.2 AGENCY RELATIONSHIP: Tom Green County (TGC) has sole contract authority. 17th Civil Engineer Squadron (17 CES) Goodfellow AFB shall serve in the role of providing contract coordination/monitoring but shall not have any direct contract authority to approve or disapprove construction work. All contract correspondence shall be directly submitted to TGC contract representative.

1.4 LOCATION: Goodfellow Air Force Base is located in Tom Green County, on the southeast side of San Angelo, TX. and is bounded to the north by Highway #388 (Paint Rock Rd.), to the west by Fort McKavitt Rd and Bell Street/Christoval Road, to the south by Highway #1223 (San Antonio Hwy.) and to the east by the eastern city limits. Work location is by the tennis courts near Building #140 as described on the plans and haul routes.

1.3 PROJECT DESCRIPTION:
The Contractor shall construct an Army Physical Training Field as described in this Statement Of Work and Drawings. The Army Physical Training Field shall have artificial turf surfacing, area lighting/electricity and site work to include construction of connecting sidewalk and a concrete slab for bleachers. If any departure from the SOW are deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted as soon as possible to the Contracting Officer, or designated representative for action. No such departures shall be made without prior approval of the Contracting Officer, or designated representative.

2.2 SITE VISITS: The Contractor shall visit the site to become thoroughly familiar with details of the work and working conditions, verify dimensions in the field, and shall advise the Contracting Officer of any discrepancies before starting the work

1.5 WORK AND MECHANICS: The work for this project shall be executed in the best and most workmanlike manner, by qualified and efficient mechanics/tradesmen, skilled in their respective trades. Only certified journeymen in each respective trade, or apprentices under the direct supervision of certified journeymen, shall be permitted to install and/or

supervise installation for this project. Individual trade work for this project shall be performed and quality maintained by the applicable trade, only. All trades shall coordinate their work with that of other trades. The Contractor shall coordinate and perform all operations in a manner that shall result in a professional and expeditiously completed project. The Contractor shall provide items of work not specifically indicated, but obviously and/or normally required to complete and properly execute the work. The work shall be in strict accordance with prevailing industry standards and manufacturer's instructions. Work and materials shall comply with this Statement of Work, the Drawings and the editions in effect at the time of this solicitation for all applicable codes, criteria, regulations and guidelines, all of which shall be made a part of the SOW.

1.4.1 PROJECT SUPERINTENDENT/ALTERNATE: Project Superintendent shall have five years general construction experience, minimum; shall be a high school graduate or GED equivalent, minimum and having held the same position on 3 prior like projects of equal or greater complexity and construction costs, minimum. The Superintendent and/or the Alternate shall be available five work [5] days per week, eight [8] hours per work day. The Superintendent's approved alternate shall meet the same criteria as the superintendent, shall be present and able to respond on the Superintendent's behalf when the Superintendent is not available.

1.4.2 TESTING LABORATORY: The Contractor shall employ and pay for services of an independent testing laboratory to perform specified services and testing. The testing laboratory shall meet "Recommended Requirements for Independent Laboratory Qualifications" published by the American Council of Independent Laboratories, meet basic requirements of ASTM E-329 and shall be currently licensed to operate in the State of Texas.

1.4.2.1 Specific tests and inspections shall be as indicated in this SOW and the drawings.

1.4.3 Geotechnical Engineer: Provide the services of an independent Geotechnical Engineer to monitor the earthwork and perform specified testing of the earthwork.

1.4.3.1 Specific testing shall be as follows:

1.4.3.1.1 A minimum of at least one laboratory test for moisture-density relationship of the subgrade material in accordance with Texas Hwy Dept. test procedure TEX 113E.

1.4.3.1.2 A minimum of at least one laboratory test for moisture-density relationship of the select fill per TEX 113E.

1.4.3.1.3 A minimum of one field density test each 2000 SF for subgrade below Canopy Structure for "Density Control of Compaction" in accordance with latest ASTM D-2922 and ASTM D-3017.

1.4.3.1.4 A minimum of one field density test each 2000 SF for select fill below Canopy

Structure for “Density Control of Compaction” in accordance with latest ASTM D-2922 and ASTM D-3017.

1.4.3.1.5 A minimum of one field density test per lift each 200 LF of select fill within trenches for “Density Control of Compaction” in accordance with latest ASTM D-2922 and ASTM D-3017.

1.4.3.1.6 Any other tests specifically required by other sections, herein.

1.5.1 MANAGEMENT PLAN: The Contractor shall submit a Management Work Plan that fully describes the means to perform all work including but not limited to providing all equipment, tools, materials, supplies, transportation, supervision, management, proposed project schedules, work sequence plans, associated configurations for all demolition and new work including electrical, mechanical and communications infrastructure as described in the SOW.

1.5.2 TRAFFIC PLAN: The Contractor shall submit within 7 calendar days after (NTP) traffic and pedestrian plan showing pedestrian and traffic flow altered by demolition/construction and proposed alternate routing for approval by TGC. TGC shall approve the management plan before the Contractor shall commence any demolition/construction work.

1.5.3 FIRST WORK: After the work area is vacated and prior to starting construction operations, the first work performed by the Contractor shall be to fence in and secure his lay down area in accordance with Contractor’s staging plan. The fence shall be maintained at all times during demolition/construction and only be removed, with the Contracting Officer’s approval, at the conclusion of demolition/construction operations Site to be approved based on review of Contractor’s proposed location. This fence shall be minimum 6’-0” high portable chain link with portable interlocking panels, pedestrian gate(s), and vehicular gate(s) per the Drawings.

1.5.4 STORAGE AREAS: There are no Goodfellow AFB furnished covered or secure storage areas. Limited storage shall be permitted at the discretion of TGC on a space available basis. If the Contractor requires additional temporary field office, storage, and other construction buildings required temporarily in the performance of the work, the additional space shall require written approval of the Contracting Officer. Plans showing temporary field office, storage, and other construction buildings shall be submitted by the Contractor for Government Approval (GA). Utilities at the storage area shall be available for Contractor use. Goodfellow AFB assumes no responsibility for lost or stolen materials, equipment, or tools, the security of which lies solely with the Contractor. Contractor shall keep their storage areas clean, neat, and orderly. Contractor shall mow grass and weedy vegetation when it reaches a height of 6 inches. Mowing shall be to a height of 3 inches. Mowing shall be accomplished with a rotary mower that leaves the clippings evenly distributed on the soil surface. Mowing shall be accomplished during periods and in a manner that the soil and grass shall not be damaged. Towed or self-propelled riding mowers shall not be operated within 3 feet of shrubs or trees. Contractor

shall mow areas adjacent to shrubs and trees with hand propelled mowers. Temporary fencing used by the Contractor to delineate construction sites shall be securely anchored with tension wires and posts as required to prevent sagging and an unsightly appearance. Fencing shall be maintained by the Contractor in this manner throughout the life of the contract. Due to high winds in west Texas, Contractor shall take every precaution to preclude trash and materials from blowing off site.

1.5.4 OUTAGES: The Contractor, shall submit to 17 CES written notification regarding any and all utility outages 14 calendar days in advance of proposed outage. All water, power or communication outages shall be scheduled for weekends only.

1.5.5 CLEANING AND PROTECTION:

1.5.5.1 All construction debris, trash, dirt, etc. shall be immediately removed, at a minimum daily and as required, at the Contractor's expense in accordance with all local, state and federal environmental laws and regulations.

1.5.5.2 All areas shall be cleaned at a minimum daily and as required to maintain a professional appearance at all times.

1.4.11 The Contractor shall collect any and all trash, debris, refuse, garbage, etc., that is generated and place it in appropriate containers with lids or approved covers on a periodic basis or as directed by the Contracting Officer's representative. The aforementioned material shall be hauled from the site by appropriate means on a daily basis, unless otherwise approved by the Contracting Officer's representative. Disposal shall be outside the limits of Government property. Disposal shall be by sanitary landfill or other approved methods and shall conform to all local, state and Federal guidelines, criteria and regulations. Upon completion of the work, the Contractor shall leave the work site and storage area[s] in a clean, neat and workmanlike condition satisfactory to the Contracting Officer. It is anticipated that excavation, filling and plowing of roadways shall be required to restore the area to near natural condition that shall permit the growth of vegetation thereon. Restoration to the original contours shall be required unless otherwise directed by this SOW or by the Contracting Officer.

1.5.6 During the performance of the entire project, weekly progress/coordination meetings between the Government and Contractor shall occur. Meeting scheduling shall be determined by the TGC during the pre-construction meeting.

1.6 PERFORMANCE PERIOD: The Contractor shall have (120) calendar days to perform all work associated with this project.

1.7 WORK SCHEDULE: Workdays shall be from 0730 to 1630, Monday thru Friday; no weekend work shall be allowed unless approved by the Contracting Officer. If weekend work is required Contractor shall submit request in writing to Contracting Office a minimum of 72 hours in advance. The Contractor shall provide written notification to the Contracting Officer fourteen (14) calendar days lead time for work schedule.

1.8 WORK AREA ACCESS: Government escorts shall not be needed. The lowest level of security exists in general access areas.

1.9 CONCRETE TRUCKS: Cleaning out of concrete trucks on Goodfellow AFB shall be prohibited. Concrete truck chutes, only, shall be rinsed at the construction site. Wastewater and concrete from this rinse shall be collected in a high-density polyethylene (HDPE) plastic-lined box or pit provided by the Contractor at the site. At the end of pouring operations, the Contractor shall excavate all the waste and liner and properly dispose of same. The Contractor shall dispose of all concrete debris to an authorized off base site and shall remove any and all concrete debris and residue at the end of the project at no additional cost to the Government. The pit shall be completely backfilled and the site restored to original conditions.

1.10 REFERENCES: All publications listed herein shall be the most current editions in effect at the time of solicitation and form a part of this Statement of Work. The publications shall be referred to in the text by basic designation only and include the following:

GAFB INSTRUCTION
GAFBI 32-2001 Goodfellow AFB Base Fire Protection
Program GAFBI 31-102 Installation Security Instruction

INTERNATIONAL BUILDING CODE [IBC]

INTERNATIONAL FIRE CODE [IFC]

NATIONAL ELECTRIC CODE [NEC]

US ARMY CORPS OF ENGINEERS HEALTH AND SAFETY MANUAL EM 385-1-1

OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION
(OSHA) OSHA STD 29 CFR 1910 and 1926
OSHA STD 29 CFR 1910.252 Welding, Cutting and Brazing (General Requirements)

AMERICAN CONCRETE INSTITUTE [ACI]

AMERICAN COUNCIL OF INDEPENDENT LABORATORIES [ACIL]

AMERICAN SOCIETY FOR TESTING AND MATERIALS [ASTM]

AMERICAN SOCIETY OF CIVIL ENGINEERS [ASCE]

MASTER PAINTER'S INSTITUTE [MPI]

TEXAS DEPARTMENT OF TRANSPORTATION [TxDoT]

UNDERWRITERS LABORATORY [UL]
UL 580, Class90 Tests for Uplift Resistance of Roof Assemblies

US ARMY CORPS OF ENGINEERS HEALTH AND SAFETY MANUAL EM 385-1-1

OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION
(OSHA) OSHA STD 29 CFR 1910 and 1926
OSHA STD 29 CFR 1910.252 Welding, Cutting and Brazing (General

Requirements) AMERICAN CONCRETE INSTITUTE [ACI]

1.11 SUBMITTALS: The Contractor shall provide submittals in the form of manufacturer's data, certificates of compliance and samples for all items provided and installed per the attached AF Form 66. The Contractor shall not be permitted to perform any work on site without approved submittals. The submittals listed on the attached AF Form 66 shall be required and shall be submitted for Government Approved (GA) or For Information Only (FIO). AF Form 3000 shall be used to process submittals. Submit four copies of submittals to Contracting Officer. Execute DD Form 1354 Checklist and submit to Contracting Officer before final payment is issued.

1.11 MANUFACTURER'S CATALOG DATA: Data composed of catalog cuts, brochures, circulars, specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the contract documents.

1.12 SAMPLES: The Contractor shall submit actual nominally sized samples of the roof panels: R-Panels, and U-Panels; gutter and downspout, synthetic surface, synthetic turf, synthetic basketball surface, roof deck and paint color samples for approval. The Contractor shall submit a sample in each color of the product. No products or materials shall be installed until respective submittals have been approved.

1.13 CONTRACTORS WARRANTY: The Contractor shall warrant all equipment, materials and workmanship for a period of one [1] year after project completion. Any manufacturer and/or specified warranty that is for a period longer than the one [1] year Contractor warranty shall be so warranted. At a date one month prior to termination of the one [1] warranty, the Contractor and the Government shall review all installed equipment, materials, workmanship and the Contractor shall make repairs and/or replacements of defective warranty items.

1.12 MANUFACTURERS WARRANTY: The Contractor shall identify all items being installed that are covered by a manufacturers guarantee or warranty and provide validated copies of such. The identification shall list the name of the company and the

expiration date of the guarantee or warranty.

1.15 DELIVERY AND STORAGE: All equipment and materials delivered and placed in storage shall be stored per manufacturer's recommendations and with protection from the weather, humidity and temperature variation, dirt and dust, and any other contaminants. Store all materials in a secure, clean and dry location.

1.16 SAFETY: All Contractor operations shall be conducted and performed in accordance with Department of Labor, OSHA requirements found in 29 CFR 1910 (1910.146 and 1910.147) and 29 CFR 1926, and Air Force Occupational Safety & Health (AFOSH) standards including AFI 91-203, Air Force Consolidated Occupational Safety Instruction. The Contractor shall also ensure that all work shall be performed in accordance with project identified national standards, military manuals, instructions, pamphlets, standards, and handbooks, and with the edition in effect on the date of this solicitation of the Corps of Engineers (COE) Safety Manual 385-1-1. All job sites shall be subject to inspections by the Department of Labor. In the event of conflicts between the OSHA standards and these requirements, the most stringent shall apply.

1.16.1 Resolution of Department of Labor citations for violations of Occupational Safety and Health Standards is a Contractor responsibility and shall provide for no basis of a claim against the Government.

1.17 TEMPORARY FENCE: Prior to the start of any work for this project, the Contractor shall provide temporary barricades on the road where the work begins. There shall be no need to fence off the perimeter.

1.20 FIELD OFFICE: The Contractor shall maintain a clean, secure, weather-tight, temporary portable field office placed on site with all required services during the duration of the project.

1.21 PORTABLE TOILETS: For the duration of this project, the Contractor shall provide and properly maintain portable toilet[s] on site for the use of the workers.

1.22 CONSTRUCTION DOCUMENTS: The Contractor shall maintain a complete, current set of the construction documents and daily project log[s] in the field office at all times.

1.18 OPERATIONS SECURITY (OPSEC) REQUIREMENTS: The purpose of OPSEC is to reduce the vulnerability of Air Force missions by eliminating or reducing successful adversary collection and exploitation of critical or sensitive information. OPSEC shall apply to all activities that prepare, sustain, or employ forces during all phases of operations. OPSEC shall be a process of identifying, analyzing and controlling critical and sensitive information indicating friendly actions associated with military operations and other activities to: 1) identify those actions that can be observed by adversary intelligence systems; 2) determine what specific indications could be collected, analyzed, and interpreted to derive critical or sensitive information in time to be useful to adversaries; 3) select and execute measures that eliminate or reduce to an acceptable

level the vulnerabilities of friendly actions to adversary exploitation.
Organizations and personnel supporting the 17th Training Wing have OPSEC requirements associated with their activities and support. The Contractor shall comply with the 17th Training Wing OPSEC Program and during the construction contract pre-construction meeting further information shall be provided by the Government on the Goodfellow AFB OPSEC Program. The basis for the OPSEC program is AFI 10-701.

1.18.1 SPECIFIC REQUIREMENTS:

1.18.1.1 Contractor personnel shall receive OPSEC Awareness Education and Duty-Related Training within 90 days of contract start date and annually thereafter.

1.18.1.2 OPSEC Awareness Education and Training shall be provided or coordinated through government channels.

1.18.1.3 The Contractor shall be susceptible to OPSEC assessments, surveys or any other evaluation tool available for the Wing OPSEC Program Manager or subordinate OPSEC Coordinator to use in order to gauge the effectiveness of the overall program.

1.19 UTILITY CONSERVATION: The Contractor shall be required to participate in government energy conservation programs. For the purpose of this contract, utilities such as water, electricity, etc., shall be furnished by the government at no cost to the Contractor. Long distance and Defense Switched Network (DSN) telephone services shall not be provided.

1.20 WORK SCHEDULE: Working hours for the Contractor shall normally be between the hours of 7:30 A.M. and 4:30 P.M. excluding Saturdays, Sundays, and Federal holidays. Refer to Section H of the solicitation/contract document for further information on working days. If the Contractor desires to work during periods other than above, a request shall be made to the Contracting Officer in writing four (4) calendar days in advance of his/her intention. If the required base personnel are reasonably available, the Contracting Officer shall authorize the Contractor to perform work during periods other than normal duty hours/days.

1.21 NORMAL WORK HOURS: The Contractor shall schedule all work to commence between the hours of 7:30 AM and 4:30 PM, Monday through Friday, except on the Federal holidays and days designated as “Family Days” by Air Education and Training Command (AETC) as listed below. Permission to work outside these normal business hours shall be granted by the Contracting Officer. Requests to work outside the normal work hours shall be submitted in writing to the Contracting Officer at least 3 working days in advance of the date requested.

		2020	2021
New Year’s Day	01 Jan		
Martin Luther King’s Day	3rd Monday in January		
President’s Day	3rd Monday in February		

Memorial Day	Last Monday in May	25 May	24 May
Independence Day	4 Jul	05 Jul	05 Jul
Labor Day	1st Monday in	07 Sep	06 Sep
Columbus Day	2nd Monday in October		
Veterans Day	11 Nov		
Thanksgiving Day	4th Thursday in	26 Nov	25 Nov
Christmas Day	25 Dec		

While AETC Family Days have not been identified past calendar year 2018 it is anticipated that the same number of AETC Family days shall be declared each year.

Any Holiday falling on a Saturday shall be observed the preceding Friday. Any Holiday falling on a Sunday shall be observed the following Monday.

The base could be closed because of security problems, adverse weather, or other events. Unless otherwise notified by the Government, the Contractor shall monitor local television stations, radio stations, or Goodfellow's Facebook page for notification of a possible base closure or late opening. The Contractor shall not receive any other form of notification of a base closure from the Government, unless contacted by the Contracting Officer (CO) or the COR. The Contractor shall be responsible for employee notification. Contractor(s) shall not report when the base is closed due to security problems and/or adverse weather.

1.22 TOBACCO USE IN AETC FACILITIES: Contractors are advised that the Commander has placed restrictions on the smoking of tobacco products in AETC facilities. AFI 40-102, Tobacco Use in the Air Force, outlines the procedures used by the commander to control smoking in our facilities. Contractor employees and visitors shall be subject to the same restrictions as government personnel. Smoking shall be permitted only in designated smoking areas. Additional information, to include locations of designated smoking areas, shall be provided to the Contractor at the pre-performance conference.

1.23 BASE ACCESS SECURITY REQUIREMENTS: The Contractor shall comply at all times with base law enforcement and security requirements to include base pass requirements.

1.24 Contractor Installation Access Pass. Before arrival, a Government identification card-holding person from the sponsoring agency, Base Contracting office/administrator or applicable local project manager shall submit a request for base access using the 17 Training Wing's Base Access List (BAL) memorandum as a form of registration for each credential applicant. The base sponsor/sponsoring agency/Contracting Officer and the contracted management team shall establish an accountability process to account for each applicant, to oversee the BAL process, and to retrieve installation passes when access is no longer required. Base sponsors/sponsoring agencies or contract officers shall ensure the BAL is accurate, it is signed and forwarded to the 17 SFS Pass &

Registration section for completion of the vetting and fitness determination processes. The BAL shall be delivered to Pass & Registration, located at the Visitor Control Center (VCC). When delivery is not possible, the BAL shall be forwarded to Pass & Registration via a ".mil" email account located on Goodfellow AFB. The BAL shall include pertinent visitor information, reason for entry, frequency of entry, destination, times each day requiring entry, and duration of request.

Contractor Initial (and periodic) Installation Access Screening. The Contractor shall provide Pass and Registration with two forms of identification, one of which shall be a state issued photo identification. Prior to being allowed access, a minimum of a background/National Crime Information Center (NCIC) check shall be completed on all Contractors, requesting unescorted access for official business. This screening process shall validate the Contractor's suitability to visit Goodfellow and certify that the Contractor shall not pose an increased threat to the base populace. The Contractor shall then be issued a temporary Defense Biometric Identification System (DBIDS) pass or AF Form 75A through the expiration date on the BAL request. Possession of an authorized access pass shall not automatically authorize or guarantee access to the installation. The individual shall still have a valid purpose to be on the installation and properly sponsored, as applicable.

1.24.1 Access Denial. If it is determined a Contractor requesting access has been convicted of a felony or pled guilty to a felony charge within the past 10 years, or is considered not fit to obtain authorized access based on the information obtained during the identity vetting, or criminal history indicates the individual shall present a threat to the good order, discipline and morale of the installation, Security Forces personnel shall deny entry. The Contractor shall be informed of the access denial, shall be issued an Access Denial Letter, and shall be informed on how they shall appeal this order.

Access Denial Appeal Process. When denied access, contract visitors shall be informed to report back their manager. If the contract worker and management are considering an appeal, it shall be submitted by letter to the 17 SFS Commander, within 30 days of access denial. The contract manager shall first contact the military contract officer/administrator or on-base sponsor for additional guidance and clarification. The appeal shall be delivered to the installation Visitor Control Section or mailed to Security Forces, addressed to 17 SFS/CC, 361 Apache Trail, Goodfellow AFB, 76908. The Contractor's appeal shall discuss all facts and reasons to support rescinding access denial. The 17 TRW/CC shall approve/disapprove all appeals for entry.

1.24.2 For installation access on non-duty hours or down days: Identify which workers need access on weekends, Federal holidays/family days, and down days, where required.

Ensure only workers that are already vetted are on the Extended-Hours request (no new personnel). New personnel require a new BAL and formal vetting. Complete the "After Hours" BAL for workers requiring down day access to the installation.

Identify the vehicle requirements. If operations cannot support the search procedures for large vehicles/special purpose equipment, the request shall be declined unless arrangements are made to deliver the vehicle/equipment prior, during normal duty hours.

During the above-mentioned days, the Contract officering, contract representative sponsoring ID cardholder shall be required to be present during hours of the work request.

1.24.3 All BALs shall be accomplished each time employees or personnel change, not to exceed 180 days. Oversight for BAL updates and establishment of procedures to ensure Physical Access Control System (PACS) credentials and locally created access credentials from individuals who no longer require installation access shall be the responsibility of the contracting officer/contract administrator.

When an employee (regardless of position) is no longer employed by the Contractor or Sub-Contractor all DBIDS passes shall be to be returned to the Contract Officer/Administrator or to the Visitor Control Center. If a local issued access credential/pass is not returned, the contract officer shall withhold funds or the Installation Commander shall consider permanent debarment to the installation. Immediate access denial shall be initiated by Pass & Registration updating the DBIDS database until disposition of the DBIDS pass shall be resolved.

PART 2.0 – PRODUCTS:

2.1 REFERENCES TO MATERIALS, MANUFACTURERS AND PRODUCTS: Materials shall be the standard product of manufacturer's regularly engaged in the manufacture of such products. The products furnished shall meet the quality and specifications indicated in this SOW and the Drawings, minimum. The Contractor shall visit the premises to become thoroughly familiar with details of the work and working conditions, verify dimensions in the field, and shall advise the Contracting Officer of any discrepancies before commencing the work for this project.

2.3 Geotechnical Report: There is a Geotechnical Report for the Physical Training Field that is inclusive of this SOW.

2.11 CAST-IN-PLACE CONCRETE CRITERIA [Provide a Design Mix submittal in accordance with the following criteria for approval prior to concrete work for this project]:

2.11.1 Concrete Slab on Grade, etc:

2.11.1.1 3/4" maximum coarse aggregate.

2.11.1.2 28 day compressive strength of 3000 psi, minimum.

2.11.1.3 Maximum water to cementitious material ratio of 0.53.

2.11.1.4 Slump between 3” minimum and 4 ½” maximum.

2.11.1.5 Air Content between 2% minimum and 4% maximum.

2.11.1.6 Use of Fly-ash and/or Ground-Granulated-Blast-Furnace-Slag shall be limited to 20% substitution by weight of cement.

2.11.1.6 Addition of water to batched concrete at the job site shall be limited to circumstances when the workability of delivered concrete is insufficient for practical placement and all of the water allowed by the mix design has not been added at the start of mixing. In no case shall the specified water to cementitious material ratio or slump be exceeded. Before any concrete shall be placed from the batch, a slump test shall be performed. Under no circumstances shall water be added to the concrete mixture after the slump test has been performed and the slump is within the specified limits indicated herein. Slump test shall be performed by an approved testing company with a standard slump cone in accordance with ASTM C-1611 recommendations.

2.11.1.7 Strength test cylinders shall be provided by Contractor by an approved testing agency on specimens that are representative of the work and which have been water soaked for at least 24 hours prior to testing. Specimens shall consist of not less than three inch diameter cores or 3 inch cubes. A minimum of three [3] test cylinders shall be made for each pour, one each at approximately the beginning, middle and near the end of each pour.

2.3.2 Reinforcing Steel: The Contractor shall provide new billet steel reinforcing conforming to ASTM A-615, ACI-315 and ACI-318 Grade 60, minimum. All reinforcing shall be continuous unless indicated otherwise. Stagger splices. Provide dowels matching size and spacing of main reinforcement, where required.

2.3.3 Formwork: Formwork shall be designed in accordance with the methodology of ACI 347R for anticipated loads, lateral pressure and stress. Form releasing agents shall be commercial formulations that shall not bond with, stain or adversely affect concrete surfaces. Forms shall be removed in a manner to prevent injury to the concrete and ensuring the complete safety of the structure. Formwork shall be removed when the concrete has attained sufficient strength to resist damage from the removal process, but not before 72 hours has elapsed minimum since the concrete placement.

2.3.4 WIRE TIES: The Contractor shall provide 6 inch-16 gauge steel rebar tie-wire at reinforcing bar cross members and at overlapping ends of reinforcing bar.

2.4 FLEXIBLE BASE MATERIAL: The Contractor shall provide an aggregate base of crushed limestone consisting of TxDoT Type A, Grade 1 limestone, compacted to 96% Standard Proctor Density within 2% points of the optimum moisture content. Material shall be placed in four-inch maximum lifts, below finish surface material. Compaction testing shall be provided in accordance with this SOW and submitted by the Contractor prior to

placing asphalt paving.

2.6 DRAIN STONE FOUNDATION: The Contractor shall provide and install 6 inch (nominal thickness) drain stone mix, grade and compact to proper density or approved equal. A compaction test shall be submitted by the Contractor prior to placing Matrix Synthetic Turf or proved equal. Reference Drawings.

2.7 FIELD LOCK/TURF LOCK ADHESIVE: The Contractor shall provide and install field lock adhesive bonding or approved equal. The Contractor shall provide and install turf lock reinforced rivets for field marking locations or proved equal. Refer to drawings for details.

2.8 MATRIX SYNTHETIC TURF: The Contractor shall provide and install Matrix Synthetic Turf System or proved equal to include: running lane lines and lane numbering tufted and inlaid in white turf, pea gravel, proprietary "Real fill" installation of selected aggregate and cubodial "SBR" rubber, Matrix turf coated with polyurethane, 1 tow-behind ground driven sweeper, owner care and maintenance orientation, GMAX testing (force when land parameter), and provide a 8 year manufacturer warranty.

2.13 COATINGS: “Coating” shall be the general term for material and process. “Paint” shall be defined as a mixture of a solid pigment suspended in a liquid which when applied to a surface dries to a protective and decorative coating. “Stain” shall be defined as a color in a dissolving vehicle that when spread on a surface penetrates to provide color within the surface. Coatings and practices shall comply with federal clean air standards. Lead-based metal primers and/or paints containing lead shall not be permitted and/or used in any coatings. Mecurial Fungicides shall not be permitted and/or used in any coatings. Volatile organic compounds [VOC] shall meet current VOC regulations. All coatings shall comply with the ‘Approved Product List’ of the Master Painter’s Institute [MPI]. Provide MSDS for this item.

2.14 ELECTRICAL:

2.14.1 VOLTAGE DROP: The Contractor shall provide and install voltage drop at project location. See drawings for details.

2.14.2 EXTERIOR LIGHT POLES: The Contractor shall provide and install exterior lighting poles with a concrete base as described in the drawings. Acceptable manufacture is Light Poles Plus or approved equal. Ref: drawings.

2.14.3 EXTERIOR LIGHT FIXTURES: The Contractor shall provide and install high output LED sports and flood light fixtures as described in the plans. Acceptable manufacture is Light Poles Plus or approved equal. Refer to product specifications and drawings for details.

2.14.4 EXTERIOR RECEPTACLES: The Contractor shall install weatherproof outlets

(ground fault) for future use of equipment as described in the drawings.

2.14.5 TRANSFORMER: The Contractor shall provide and install small dry transformer. See drawings for details.

2.14.6 TIMER: The Contractor shall provide and install an astronomic dial timer for the lights.

2.14.7 UNDERGROUND PRIMARY: The Contractor shall install #6 THHN copper wire with nonmetallic flexible tubing. See drawings for details.

2.14.8 UNDERGROUNG SECONDARY: The Contractor shall provide and install #12 THHN copper wire with nonmetallic flexible tubing. See drawings for details.

2.14.9 ELECTRICAL PANEL: The Contractor shall provide and install a three phase, distribution panel. Refer to drawings for panel schedule and details.

2.14.10 BREAKER: The Contractor shall provide and install single pole breaker in the panel with an "on off" selector switch.

2.14.11 DISCONNECT SWITCH: The Contractor shall provide and install new combination lighting panel/disconnect switch for exterior lighting. Both panel and disconnect switch shall be controlled by a single photo-cell and a manually operated 120 minute timer.

2.18 HYDRO-MUCHING: Localized Hydromulching shall be accomplished only when satisfactory results can be expected. Hydromulching shall be performed on all areas indicated on the drawings. Localized placement of topsoil shall be in direct association with localized Hydromulching regarding surface area processed.

2.18.1 Materials used in the Hydromulching operation shall be of the best quality available and consist of the following:

2.15.1.1 Grass – Applied from Shall 1st to September 1st
2.15.1.2 Conweb – 2000 wood cellulose fiber
2.15.1.3 Hulled Bermuda grass seed
2.15.1.4 8-8-8-fertilizer

2.18.2 The mixture shall be applied at the following rate:

2.15.2.1 50 pounds Conweb per 1000 square feet
2.15.2.2 2 pounds Bermuda grass seed per 1000 square feet
2.15.2.3 7 gallons liquid fertilizer per 1000 square feet, or
2.15.2.4 70 pounds granular fertilizer per 1000 square feet

2.18.3 Hydromulching shall be applied free from noxious weeds and undesirable plants,

stones, roots of trees and other materials that hinder development and maintenance.Water shall be free from oil, acid, alkali salt and other substances that are harmful to growth of grass. Water shall be source approved prior to usage.

2.9.17 Replanting: Areas on which a stand of growing grass is not present in a reasonable length of time shall be hydromulched again in accordance with the appropriate planting season and shall continue to be hydromulched and maintained throughout the maintenance period until an acceptable stand is obtained. A stand shall be defined as live grass plants from hydromulching occurring over 95% of the area, with no more than 10 square feet left uncovered in any one place.

2.9.19 MAINTENANCE GRADES AND EROSION REPAIR: It shall be the responsibility of the Contractor to maintain the established grades of the lawn areas after the commencement of planting operations and during the specified maintenance period. Any damage to the finished surface from Contractor's operations shall be promptly repaired. In the event erosion occurs from either watering operations or from rainfall, such damage shall be promptly repaired. Ruts, ridges, tracks, and other surface irregularities shall be corrected and the areas replanted, where required, prior to acceptance.

PART 3.0 – EXECUTION:

3.1 GENERAL: All work shall be performed as indicated this SOW and the Drawings and in accordance with the manufacturer’s diagrams and instructions, unless otherwise specified. The Contractor shall field verify all dimensions and site conditions. Price increase adjustments to the original contract price shall not be issued because the Contractor was not aware of existing conditions. The Contractor shall provide all labor, materials, tools and equipment required to perform all dismantling, repairs and installation as listed in this statement of work and the drawings.

1.13 PRODUCT DATA: Provide Manufacturer's installation and maintenance instructions for all products.

1.14 AS BUILT DRAWINGS: Following the project completion or turnover, within 14 days the Contractor shall furnish 2 redline sets of mark up as built drawings to the Contracting Officer. The statement “As-Built” and date shall be clearly marked at the lower right-hand corner of each drawing sheet.

2.4 SITE EXCAVATION: Strip topsoil and excavate regardless of material encountered, within the grading limits as described in the drawings. Select fill material excavated shall be transported to and placed in fill areas within the limits of the work. All unsatisfactory material including any soil which is disturbed by the Contractor's operations or softened due to exposure to the elements and water and surplus material shall be removed from the base. In no circumstance shall dumping of unsatisfactory material be allowed on base. In the event that it is necessary to remove unsatisfactory material to a depth greater than specified, the Contracting Officer shall be notified. Unsatisfactory material

excavated below the grade shown and replaced with satisfactory material as directed shall be at no additional cost to the Government. Excavations carried below the depths indicated, without specific directions, shall, except as otherwise specified, be refilled to the proper grade with satisfactory material as directed. All additional work of this nature shall be at the Contractor's expense. Excavation and filling shall be performed in a manner and sequence that shall provide drainage at all times. Excavations shall be kept free from water while work therein is in progress. Material required for fills in excess of that produced by excavation within the grading limits shall be obtained from borrow areas. Dispose of all materials in accordance with Part 5.

2.5 PREPARATION OF GROUND SURFACE FOR FILL: All vegetation, such as roots, brush, heavy sods, heavy growth of grass, and all decayed vegetable matter, rubbish, and other unsatisfactory material within the area upon which fill is to be placed, shall be stripped or otherwise removed before the fill is started. In no case shall unsatisfactory material remain in or under the fill area. Sloped ground surfaces steeper than one vertical to three horizontal on which fill shall be to be placed shall be plowed, stepped, or broken up, as directed, in such manner that the fill material shall bond with the existing surface. Prepared surfaces on which compacted fill shall be to be placed shall be wetted or dried as shall be required to obtain the specified moisture content and density.

3.2 INSTALLATION: All work shall be done with the athletic field areas occupied and the work area unoccupied. The Contractor shall coordinate with the Contract Inspector prior to start of work.

3.3 The Contractor shall construct an Army Physical Training Field as described on this statement of work and drawings. The Army Physical Training Field shall have Matrix Synthetic Turf system, area lighting/electricity, and site work to include construction of connecting sidewalk and a concrete slab for bleachers. If any departure from the SOW shall be deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted as soon as possible to the Contracting Officer, or designated representative for action. No such departures shall be made without prior approval of the Contracting Officer, or designated representative.

2.13 BACKFILL MATERIAL: All topsoil and backfilling material necessary to complete the work shall be obtained from topsoil stockpiles from grading and excavating operations and from approved topsoil sources off of Government controlled property. It shall be free from tree roots, stones, shale, parent and other materials that hinder grading, planting, plant growth and maintenance operations, and free from noxious and other objectionable weed seeds and toxic substances.

1.5.7 The Contractor shall be responsible for requesting a final inspection from TGC. At the contract final inspection, there shall be a joint Government (Goodfellow AFB & TGC) Contractor inspection to include operational testing of all building systems including lighting and ceiling fans to ensure all systems are operable.

PART 4.0 – UTILITY OUTAGES AND SPECIAL CONDITIONS:

4.1 BASE CIVIL ENGINEERING WORK CLEARANCE REQUEST: The Contractor shall obtain and process AF Form 103 for approval prior to commencement of work for this project. The Contractor shall have this approved form on the job site at all times.

4.1.1 Due to the requirement for multiple agencies to coordinate on these requests, expect 7 – 10 days for paperwork processing. Contractor requests shall be submitted at the earliest possible date to preclude delays.

4.2 UTILITY OUTAGES: When a utility outage shall be necessary to perform the contract work in an occupied facility, regardless of whether the work area is occupied, the outage shall be performed by the Contractor during non-duty hours at no additional cost to the Government, unless otherwise approved by the Contracting Officer. The Contractor shall notify the Contract Inspector of outage requirements to include buildings affected; length of outage; and reasons for outage. The Contractor shall allow affected occupants a minimum of two – (2) weeks' notice prior to outage. The Contractor shall also be required to provide the Contracting Office a written notification of the requested outage.

4.3 BASE FIRE REGULATIONS: The Contractor shall comply with Base Fire Regulations as set forth in the latest edition of GAFB Instruction 32-2001, titled "Base Fire Protection Program". The Contractor shall use no explosives or fire in performing the work. All work shall be in strict compliance with all National Fire Codes.

4.4 LOCKOUT/TAGOUT, HAZARDOUS ENERGY CONTROL: In addition to the requirements in OSHA Std. 1910.147, if a Contractor needs to lock or tag something out, the Contractor shall ensure that affected employees are notified before and after the locks and tags are used.

PART 5.0 - ENVIRONMENTAL REQUIREMENTS:

5.1 COMPLIANCE WITH LAWS**:** Construction activities shall NOT exempt from air emission, storm water, hazardous waste, and other environmental compliance rules and regulations. The Contractor shall comply and ensure that all Sub-Contractors comply with all applicable federal, state, and local laws, regulations, ordinances and standards related to environmental matters.

5.2 PROTECTION OF HISTORICAL AND ARCHAEOLOGICAL RESOURCES: All known Historical, Archaeological, and Cultural Resources within the Contractors work area shall be designated on the contract Technical Exhibits. The Contractor shall take precautions during the contract to preserve all resources, as they existed at the time of contract award and comply with the Archaeological and Historic Preservation Act (AHPA) and the Archaeological Resources Protection Act (ARPA). The Contractor shall provide all protective devices such as off-limit markings, fencing, barricades or other

devices as needed and shall be responsible for preservation of the sites during this contract. All items having any potential historical or archaeological interest outside of designated areas, which are discovered in the course of any construction activities, shall be carefully preserved. The Contractor shall protect the find in-place by leaving the archaeological find undisturbed and by using flags to mark a 50-foot radius area around the find. The find shall be immediately reported to the Contracting Officer so that the proper authorities shall be notified. All work shall be stopped in the immediate area of the discovery until directed by the Contracting Officer to resume work. Any work required to preserve or protect these finds shall be accomplished before work resumes.

5.3 HAZARDOUS AND SPECIAL WASTES GENERATED BY THE CONTRACTOR: The Contractor shall identify, characterize, containerize, store and dispose of hazardous wastes in strict accordance with federal guidelines found in the Code of Federal Regulations, Title 40 (40 CFR) parts 260-270, state regulation 30 TAC 335, all local guidelines, and as specified. A Uniform Hazardous Waste Manifest shall be used by the Contractor to document all parties and locations involved in the transportation, storage and disposal of all hazardous and special wastes. This form shall be provided to the government by the Contractor and signed by the Base Environmental Coordinator (CEIE) before the waste shall be transported from the limits of government property. A copy of the manifest shall be signed by the receiver of the waste and submitted to the Contracting Officer not later than forty-five days after disposal has taken place. Hazardous waste treatment, storage and disposal facility shall be located within in the state of Texas, permitted by the U.S. EPA, and approved by CEIE.

5.4 CONTRACTOR ENCOUNTERED HAZARDOUS WASTE: The Contractor shall notify the Contracting Officer’s Representative and CEIE upon encountering any material not identified in this Statement of Work thought to be hazardous that could jeopardize the safety of workers or personnel in the area. The Government shall be responsible for characterization, transportation, storage and disposal of the waste if necessary.

5.5 ASBESTOS: To the best of the Government's knowledge, no asbestos-containing material (ACM) shall be encountered during this project. Shall the Contractor encounter previously unidentified or suspected ACM, which shall be disturbed to comply with the contract documents, the Contractor shall cease that work which would disturb the suspect material and shall immediately notify the Contracting Officer. The Government shall take appropriate measures to ascertain the material's composition and determine any remedial actions necessary.

5.5.1 Asbestos Containing Building Materials: Under no circumstances, under the provisions of this contract, shall the Contractor be allowed to provide asbestos containing building materials, or products containing encapsulated asbestos or mineral fibers as defined in the 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants of 1990, to GAFB.

5.6 HAZARDOUS MATERIALS: The Contractor shall provide the Contracting Officer

with an AF Form 3000, Material and Approval Submittal, listing all materials to be utilized during the contract. If any of the material is classified as hazardous in accordance with AFI 32-7086, the Contractor shall submit an AF Form 3952, (Chemical/Hazardous Material Request Authorization) for each material item with all supporting information as required for approval. The Contractor shall obtain authorization from the Contracting Officer prior to bringing or using hazardous materials on the installation. The Contractor shall supply an up-to-date SDS for each requested AF Form 3952 item listed as a hazardous material, as defined to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the SDSs submitted under this contract. The Contractor shall maintain an onsite file of all SDSs. As determined by the Contracting Officer, either on a monthly basis or at the end of the contract, the Contractor shall submit for approval by the Contracting Officer (via AF From 3000), a Contractors Hazardous Materials Usage Report (2 copies) indicating usage of HAZMAT materials within the contract period on GAFB. No hazardous materials, lubricants, oils, liquids or related materials shall be deposited in the refuse containers on base.

5.7 NUISANCE AND POLLUTING ACTIVITY PROHIBITED: Polluting, dumping, or discharging of any harmful, nuisance, or regulated materials (such as but not limited to concrete truck washout, vehicle maintenance fluids, residue from saw cutting operations, solid waste and hazardous substances) into building drains, site drains, streams, waterways, holding ponds or to the ground surface shall not be permitted and the Contractor shall be held responsible for any and all damages which shall result. Further, the Contractor shall conduct work activities in such a fashion as to avoid creating any legal nuisance, including but not limited to, suppression of noise and dust, control of erosion, and implementation of other measures as necessary to minimize impacts of work activities.

5.8 RELEASE OF FLUIDS TO THE SANITARY SEWER SYSTEM: Goodfellow AFB's sanitary sewer system discharges into the Publicly Owned Treatment Works (POTW) operated by the City of San Angelo, Texas. This POTW has established testing requirements for certain constituents as well as discharge limits of those same constituents. Accordingly, any Contractor performing work at Goodfellow AFB and contemplating a release of non-hazardous water into the sanitary sewer system shall meet the pretreatment standards and comply with the testing/release requirements established by the City of San Angelo. The Contractor shall also be responsible for all testing, monitoring, measuring, documenting, etc. to verify this compliance. Contractor shall not discharge wastewater to base's sanitary sewer without prior approval of the Government.

5.10 AIR EMISSIONS: Media blasting shall require registering the construction activity under state regulation 30 TAC 106.452. The Contractor shall prepare the state form PI-7 for signature approval by the base prior to start of construction. The Contractor shall meet all provisions of the Permit-By-Rule.

5.11 DRINKING WATER: For all drinking water disruptions, the Contractor shall adhere to 30 TAC 290 Subchapter D paragraph 290.46(g and j). Submit an analysis report and a “Drinking Water Customer Service Inspection checklist” via an AF Form 3000 for Government Approval. Contact Bioenvironmental Engineering at (325) 654-3126 prior to restoring drinking water service.

5.12 PROTECTION OF WATER RESOURCES: All work under this contract shall be performed in such a manner that objectionable or nuisance conditions shall not be created in lakes, reservoirs, streams or storm water conveyances through or adjacent to the project areas. The Contractor shall comply with the terms and conditions of Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit, TXR150000 (GCP). At least 30 days prior to the start of construction, the Contractor shall seek coverage under the GCP for storm water and non-storm water discharges associated with his construction activities.

5.12.1 For all soil disturbance of more than 1 acre, the Contractor shall prepare a Storm Water Pollution Prevention Plan (SWP3) meeting all requirements specified in the GCP and shall include the Contractor’s Best Management Practices for erosion and sedimentation control at the site. This plan shall be submitted for Government approval (GA).

5.12.2 Regardless of the amount of soil disturbed, all non-storm water discharges from Contractor’s site shall conform to TPDES General Permit TXR040000 for Small Municipal Separate Storm Sewer Systems (MS4).

5.12.3 If a Notice of Intent (NOI) is required for permit coverage, the Contractor shall submit the NOI to the state and provide copies to the Government via Form 3000 FIO. Contractor shall make required MS4 notifications to the City of San Angelo and the base. Copies of all notifications shall be provided to the Contracting Officer via Form 3000 FIO. Contractor shall be responsible for fees associated with obtaining coverage under the GCP.

5.12.4 The Contractor shall also file a Notice of Termination (NOT) TCEQ Form 20023 promptly after site stabilization in accordance with the general permit is achieved. These forms shall be found at the TCEQ website (http://www.tceq.state.tx.us). The prime Contractor’s principal shall sign to certify the NOI/NOC/NOT or Construction Site Notice. A copy of the NOT shall be provided to the Contracting Officer and Base Environmental Coordinator, FIO.

5.12.5 The Government shall specify if the contracted project shall be part of a larger common development requiring additional storm water measures be taken to obtain permit coverage, or if the project area of construction shall be greater than 5 acres.

5.12.6 Post-Construction Cleanup or Obliteration: The Contractor shall obliterate all evidence of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess materials, or any other

vestiges of construction. It shall be anticipated that excavation, filling, and plowing of roadways shall be required to restore the area to near natural conditions, which shall permit the growth of vegetation thereon. The disturbed areas shall be graded and filled as required, and topsoil shall be spread to a depth of approximately four inches over the entire area and the entire area seeded with 30 pounds (pure live seed) of common Bermuda per 1000 square feet and then watered as required until a lush hardy growth is established to the satisfaction of the Contracting Officer. Restoration to original contours is required unless otherwise directed by the Contracting Officer.

5.1.2.7 At the end of the project, and prior to final acceptance, the Contractor shall submit a solid waste diversion report by completing the Construction Waste Management form identifying the materials and weights either recycled or diverted from solid waste disposal to other re-use as well as weights of waste disposed in a landfill.

5.13 GREEN PROCUREMENT: Green Purchasing is a mandatory component of the Air Force pollution prevention program. The Under Secretary of Defense issued a policy memorandum “Establishment of the DoD Green Purchasing Program (GPP)” which states: “The DoD goal is to achieve 100% compliance with mandatory Federal GPP programs is all acquisition transactions.” This document contains guidelines for implementing the RCRA, EO, DOD, and Air Force requirements.

5.14 ENVIRONMENTAL MANAGEMENT SYSTEM: Contractor’s on site supervisory personnel shall complete EMS Awareness Training. The Base Civil Engineer Environmental Coordinator shall be contacted at (325) 654-5946 for information to complete the awareness training within 60 days of contract award or a new contract employee supervisor begins work. The training shall be accomplished utilizing The Environmental Awareness Course Hub (TEACH) at https://usaf.learningbuilder.com. The Contractor shall be responsible for providing EMS Awareness Training records, for each employee, to the Contracting Officer

PART 6.0 - SITE MAINTENANCE AND CLEANUP:

6.1 SITE MAINTENANCE: The Contractor shall protect adjacent property, buildings and their contents from dust, dirt or other materials. Work areas shall be maintained in a neat, clean, safe condition and shall, at a minimum, be cleaned at the end of each shift. All streets and roadways in/or adjacent to the site shall remain free of project generated trash and debris at all times.

PART 7.0 - ENERGY CONSERVATION:

7.1 UTILITIES CONSERVATION: The Contractor shall instruct employees in utilities conservation practices. The Contractor shall be responsible for operating under conditions that preclude the waste of utilities, which shall include: Lights shall be used only in areas where and when work is actually being performed. The Contractor shall not adjust mechanical equipment controls for heating, ventilation and air conditioning systems. Water faucets or valves shall be turned off after the required usage has been

accomplished. The Contractor shall use good judgment in the conservation of Government utilities. Prevailing energy conservation practices shall be adhered to and enforced by the Contractor.

PART 8.0 – RESPONSIBILITY:

8.1 The above 1 through 7 summaries shall not in any way limit the responsibility of the Contractor to perform all work and furnish all plant, labor, and materials required by this Statement of Work.

PART 9.0 – STORAGE AND PARKING:

9.1 CONTRACTOR STORAGE: The Contracting Officer's representative shall designate Contractor storage and parking area. All project storage areas shall be kept free of debris, leaks, stains, or splashes and kept in a neat, clean, and safe condition. Any contamination of the storage area by a hazardous substance shall be immediately remediated by the Contractor, in accordance with PART 5.0 above at no additional expense to the Government. All hazardous materials shall be secured when not in use.

PART 10.0 - COMPLETION OF WORK:

10.1 OPERATIONAL SYSTEMS: The Contractor shall insure that work for this project is performed in accordance with the criteria herein and that all equipment and systems shall be fully operational at the completion of work for this project.

---END OF STATEMENT OF WORK---

PART 11 TECHNICAL EXHIBITS

TE-A. Geotechnical Report – Proposed Shade Structure Beaver Fit Locker

REFER TO ATTACHMENT A FOR REPORT

TE-B. Drawings

1 CS-1 Cover Sheet
2 CS-2 Index of Drawings, Notes, Abbreviations
3 CS-3 Project Notes
4 SP-1 Site Plan
5 SP-2 Miscellaneous Details
6 PE-1 Utility Plan
7 PE-2 Electrical Plan

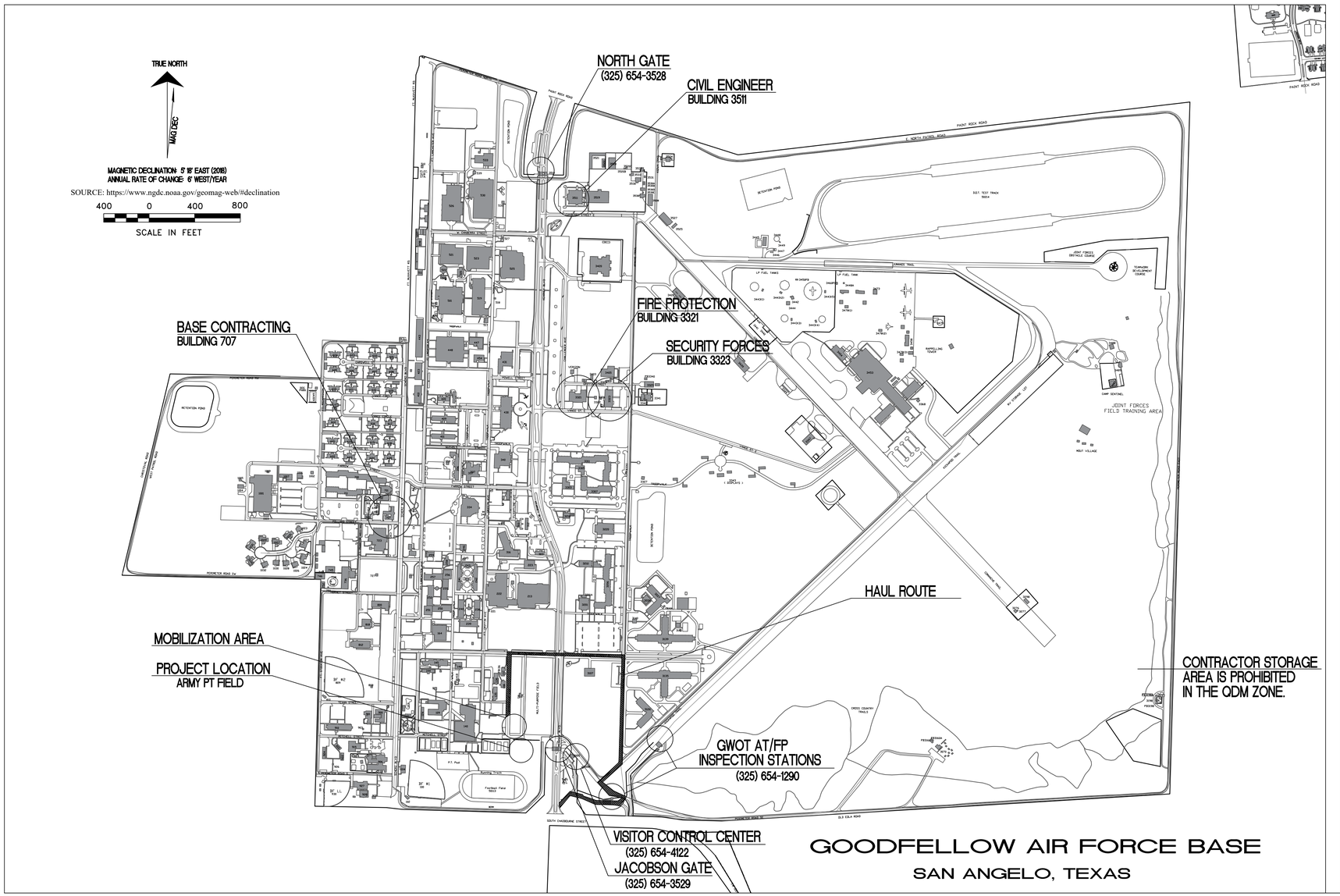
PROJECT NAME:

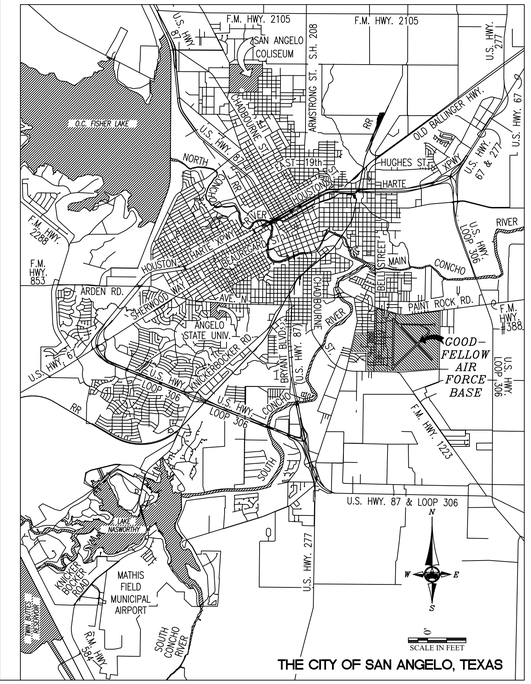
CONSTRUCT ARMY PHYSICAL TRAINING (PT) FIELD

PROJECT NUMBER:

1093157

DATE	SIGNATURE
	RECOMMENDED (BCE)
	SUBMITTED (PROGRAMS CHIEF)
	FIRE CHIEF
	SAFETY
	ASSET MANAGEMENT
	BIO-ENVIRONMENTAL OFFICER
	SECURITY FORCES
	COMMUNICATIONS
	CHIEF OF OPERATIONS
	PROGRAM DEVELOPMENT
	PROGRAM MANAGEMENT
	PROJECT MANAGER
	USING AGENCY
	USING AGENCY





GENERAL NOTES

1. PROSPECTIVE OFFERERS MAY ONLY CONTACT THE BASE CONTRACTING OFFICE 17 CONS/LGCA, 210 SCHERTZ BLVD. GOODFELLOW AIR FORCE BASE, TEXAS 76908-4122, 325-654-5174 FOR ANY AND ALL INFORMATION WITH REGARDS TO THIS SOLICITATION.
2. ALL WORK IS NEW UNLESS OTHERWISE INDICATED TO BE "EXISTING" OR "REUSED" OR "RELOCATED." THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
3. THE CONTRACTOR SHALL INITIATE AND PROCESS FOR APPROVAL AF FORM #103 "WORK CLEARANCE REQUEST" FOR THE CONTRACTING OFFICER PRIOR TO PERFORMANCE OF ON-SITE WORK.
4. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO EXCAVATION OR TRENCHING. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE SERVICE LINES AS REQUIRED FOR CONSTRUCTION FOR THIS PROJECT.
5. THE CONTRACTOR SHALL HAND DIG WITHIN (2) FEET EITHER SIDE OF UTILITY CROSSING UNTIL THE UTILITY IS PHYSICALLY EXPOSED, PRIOR TO PERFORMING MECHANICAL TRENCHING OR EXCAVATING. PROVIDE NEW TOPSOIL AND HYDROMULCHING IN ALL AREAS WHERE DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES.
6. PROSPECTIVE OFFERERS ARE HIGHLY ENCOURAGED TO ATTEND THE SCHEDULED PRE-PROPOSAL SITE VISIT TO THOROUGHLY FAMILIARIZE THEMSELVES WITH ANY AND ALL EXISTING SITE AND PROJECT LOCATION CONDITIONS WHICH MAY AFFECT THE WORK UNDER THIS CONTRACT. THE GOVERNMENT SHALL NOT BE RESPONSIBLE FOR CONTRACTOR ERRORS OR OMISSIONS WHICH COULD BE MADE KNOWN BY ATTENDING A SCHEDULED SITE VISIT.
7. THE CONTRACTOR SHALL COORDINATE ALL COMMUNICATIONS WORK WITH THE ENGINEERING SECTION MANAGER AT FRONTIER COMMUNICATIONS AT 1-800-921-8102; WITH THE INSTALLATION OFFICE, SUDDEN-LINK CABLE AT 1-877-794-2724 AND THE GOODFELLOW AFB COMMUNICATIONS SQUADRON AT 325-654-3010.

PROJECT NOTES

1. DO NOT SCALE DRAWINGS. VERIFY ALL ELEVATIONS AND DIMENSIONS ON SITE, AND ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER.
2. SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH DRAWINGS FOR PURPOSES OF BIDDING, SCHEDULING, AND CONSTRUCTION.
3. NO OPEN CUTTING OF ANY ROADWAY, PARKING AREA, OR SIDEWALK SHALL BE MADE UNLESS DIRECT WRITTEN APPROVAL FROM CONTRACTING IS PROVIDED.
4. REFERENCE THE US ARMY CORPS OF ENGINEERS HEALTH AND SAFETY MANUAL, EM385-1-1, LATEST EDITION.
5. CONTRACTOR SHALL DISPOSE OF ALL CONSTRUCTION MATERIALS OUTSIDE OF THE INSTALLATION.
6. CONTRACTOR TO COORDINATE WITH CONTRACTING OFFICER TO LOCATE ALL UNDERGROUND UTILITIES AND BURIED ITEMS. FOR LOCATIONS AND DEPTHS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK RELATED TO CONSTRUCTION, ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, ETC. REQUIRED TO SAFELY PERFORM THE WORK.
8. HAUL ROUTE FOR CONSTRUCTION TRAFFIC FROM ENTRANCE AT SOUTH CONSTRUCTION GATE ON SOUTH CHADBOURNE STREET, NORTH ON APACHE TRAIL, THEN WEST ON VALIANT STREET AND FINALLY SOUTH ON FLIGHTLINE AVE. CONTRACTOR PROVIDED: DOUBLE GATE WITH 6 FOOT HIGH STAND-UP SILT FENCE WITH SAND BAG SUPPORTS FOR MOBILIZATION AREA.
9. RESTORE SITE AFTER CONSTRUCTION COMPLETION TO INCLUDE ESTABLISHED TURF.

A-E Seal

ASBESTOS CONTAINING MATERIAL (ACM) AND LEAD BASED PAINT (LBP) STATEMENT
[circle the appropriate ACM/LBP and place an "X"]

This facility contains ACM/LBP materials.	X
This facility does not contain ACM/LBP materials.	
This facility contains ACM/LBP materials that will be left in place for this project.	
This facility contains ACM/LBP materials that will be removed by the Air Force.	
This facility contains ACM/LBP materials that will be removed by the contractor.	
This facility contains ACM/LBP materials that will be removed under the contract.	

Symbol	Description	Date	Appr
	REVISIONS		

Designed by:
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CONSTRUCT ARMY PHYSICAL TRAINING (PT) FIELD
PROJECT NUMBER: 1093157
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:
1093157

SHEET TITLE
COVER SHEET

Date:
April, 2020

SEQ.	SHEET	OF
01	CS-1	07

TYPICAL ABBREVIATIONS [WHERE APPLICABLE]

ACCORD.	ACCORDANCE	DEMO	DEMOLITION	GALV	GALVANIZED	PLY'WD	PLYWOOD
ACOUS. INSUL.	ACOUSTIC INSULATION	DET	DETAIL	GFE	GOVERNMENT FURNISH EQUIPMENT	PLBG.	PLUMBING
ADDTN.	ADDITION	DIM	DIMENSION			PROJ. MNT.	PROJECTOR MOUNT
ADJ.	ADJUSTABLE	DIST	DISTANCE	GYP BD.	GYPSUM BOARD	PROT.	PROTECTION
AFF	ABOVE FINISH FLOOR	DWG	DRAWING	H.C.	HANDICAPPED	PSI	POUNDS PER SQUARE INCH
ALUM.	ALUMINUM	EA	EACH	HDWD.	HARDWOOD		
ATTEN.	ATTENUATING	ELEC	ELECTRIC(AL)	H.M.	HOLLOW METAL	R.A.F.	RAISED ACCESS FLOOR
BITUM	BITUMINOUS	E.W.C.	ELECTRIC WATER COOLER	HORIZ.	HORIZONTAL	REF.	REFERENCE
BLK	BLOCK	EXIST.	EXISTING	INSUL	INSULATION	RESIL.	RESILIENT
BLKG	BLOCKING	EXP. JT.	EXPANSION JOINT	LAV	LAVATORY	RM.	ROOM
BM	BENCH MARK	EQ	EQUAL	MAINT	MAINTENANCE	SCHED.	SCHEDULE
BOT	BOTTOM	E.W.	EACH WAY	MAX.	MAXIMUM	SCTN.	SECTION
CAB	CABINET	EXT.	EXTERIOR	MECH.	MECHANICAL	SCW	SOLID CORE WOOD
CEM. BD.	CEMENTITIOUS BOARD	EXT. CAB.	EXTINGUISHER CABINET	MFRD.	MANUFACTURED	SPEC.	SPECIFICATION
CER TILE	CERAMIC TILE	F.D.	FLOOR DRAIN	MIN.	MINIMUM	S.S.	STAINLESS STEEL
CLG	CEILING	FEC	FIRE EXTINGUISHER CABINET	MISC.	MISCELLANEOUS	STL.	STEEL
CONC.	CONCRETE	FIN	FINISH	MPE	MECHANICAL–PLUMBING–ELECTRICAL	STRUCT.	STRUCTURE
CMU	CONC. MASONRY UNIT	FIN FLR	FINISH FLOOR			SUSP. GRID	
COL.	COLUMN	FLOUR.	FLOURESCENT	MTD.	MOUNTED	CLG. SYS.	SUSPENDED GRID CEILING SYSTEM
CONF.	CONFERENCE	FLR.	FLOOR	MTL.	METAL		
CONT.	CONTINUOUS	FLR. E.J.	FLOOR EXPANSION JOINT	O.C.	ON CENTER	THK.	THICK
COORD	COORDINATE	FURR'G	FURRING	O.C.E.W.	ON CENTER EACH WAY	TYP.	TYPICAL
CORR	CORRIDOR	GA.	GAUGE	OPNG.	OPENING	TYP. MRKR./ TACK BD.	TYPICAL MARKER/TACK BOARD
				ORIG. BLDG.	ORIGINAL BUILDING	UNC.	UNCASED
				P	PLATE	U.S.G.	UNITED STATES GYPSUM
						V.C.T.	VINYL COMPOSITION TILE
						VERT.	VERTICAL
						V.W.C.	VINYL WALL COVERING
						WD.	WOOD
						WDW.	WINDOW
						W/	WITH
						W/MFR'S	WITH MANUFACTURER'S
						W.W.F.	WELDED WIRE FABRIC
						ø	DIAMETER

PRIVATIZED ELECTRICAL UTILITY SYSTEMS:

AEP TEXAS NORTH COMPANY IS THE UTILITY OWNER AND SOLE PROVIDER OF THE ELECTRICAL DISTRIBUTION UTILITY SYSTEM AT GOODFELLOW AIR FORCE BASE, TEXAS.

NEWLY PROVIDED SYSTEM INFRASTRUCTURE AND/OR MODIFICATIONS OF OR CONNECTIONS TO THE EXISTING SYSTEM INFRAISTRUCTURE DENTIIFIED IN THE SPECIFICATIONS AND/OR DRWAINGS MUST BE COORDINATED WITH THE UTILITY OWNER PRIOR TO THE CONTRACT START DATE. TO CONNECT FACILITIES, THE CONSTRUCTION CONTRACTOR SHALL REQUEST THAT THE UTILITY OWNER PROVIDE THE REQUIRED CONNECTING FACILITIES, UP TO A POINT OF DEMARCATION WHICH INCLUDES ALL TERMINATIONS AT THE TRANSFORMER.

ALL WORK ON THE SYSTEM OR FACILLITIES EXPECTED TO CONNECT TO THE SYSTEM SHALL COMPLY WITH THE UTILITY OWNER'S SPECIFICATIONS AND CONSTRUCTION STANDARDS. IN NO EVENT SHALL THE CONSTRUCTION CONTRACTOR CONNECT TO, OR OTHERWISE TOUCH THE UTILITY OWNER'S INFRASTRUCURE WITHOUT THE UTILITY OWNER'S EXPRESS WRITTEN PERMISSION.

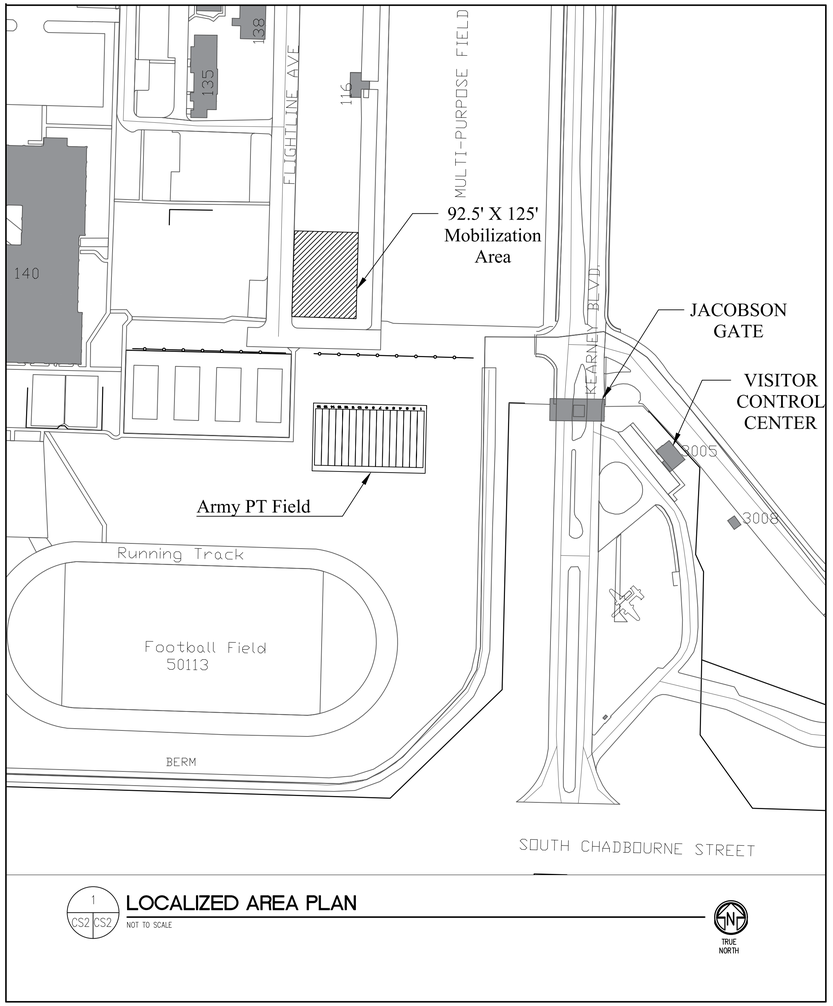
THE UTILITY OWNER: CONTACT VIA:
AEP TEXAS NORTH COMPANY
930 West 19th Street
San Angelo, Texas 76903
PHONE: 325–657–2800

ARCHITECT / ENGINEER RESPONSIBILITIES:
1. SITE PLAN WITH ADJACENT STREETS OR LANDMARKS IDENTIFIED.
2. BUILDING PLAN SHEETS WITH THE FOLLOWING INFORMATION:
   A. LOCATION OF SERVICE ENTRANCE
   B. REQUESTED TRANSFORMER LOCATION, IF A PREFERENCE IS KNOWN.
   C. SQUARE FOOTAGE OF BUILDING SPACE WITH THE TYPE OF LOAD TO BE SERVED.
   D. ELECTRICAL PANEL SCHEDULE
   E. NUMBER AND SIZE OF SECONDARY CONDUCTORS TO BE TERMINATED AT THE TRANSFORMER
   F. PROPOSED LOCATION OF OTHER UTILITY ROUTES AND ENTRANCES.
3. LOAD DEMAND INFORMATION FROM EXISTING SIMILAR BUILDINGS.
4. SCHEDULE OF WORK.

CONTRACTOR / BUILDER RESPONSIBILITIES:
1. CONTACT NAMES AND NUMBERS UPON ARRIVAL AT THE SITE.
2. LOCATION OF TRANSFORMER PAD.
3. INSTALL SECONDARY CONDUITS INTO THE APPROPRIATE WELL LOCATION BEFORE PAD INSTALLATION. THIS INCLUDES ANY REQUIRED METERING CABLE CONDUITS.
4. PROVIDE FINAL GRADE IN TRANSFORMER PAD AREA PRIOR TO PAD CONSTRUCTION.
5. INSTALLATION OF ANY REQUIRED INSTRUMENT RATED METERING EQUIPMENT.
6. PROVIDE SECONDARY CABLE TERMINALS.
7. PRIMARY CONDUIT DITCH COMPACTION IF REQUIRED.
8. ASPHALT AND/OR CONCRETE CUT AND REPAIR IF REQUIRED.
9. LOCATION OF OTHER UTILITY LINES INSTALLED DURING THIS CONSTRUCTION.
10. TEMPORARY POWER POLE (SEE ATTACHED SKETCHES). LOCATION TO BE APPROVED BY AEP TEXAS. NOTE: ANY LINE EXTENSION REQUIRED FOR THE PURPOSE OF TEMPORARY SERVICE WILL REQUIRE A CIAC TO COVER THE COST OF INSTALLATION AND REMOVAL OF TEMPORARY FACILITIES AND ANY MATERIAL WHICH CANNOT BE REUSED.

AEP TEXAS RESPONSIBILITIES:
1. SIZING AND INSTALLATION OF ALL PRIMARY CONDUCTORS INCLUDING DITCH AND CONDUIT.
2. SIZING AND INSTALLATION OF DISTRIBUTION TRANSFORMERS.
3. CONSTRUCTION OF TRANSFORMER PAD. SEE ATTACHED SKETCH
4. INSTALLATION OF SECONDARY CABLE TERMINALS.

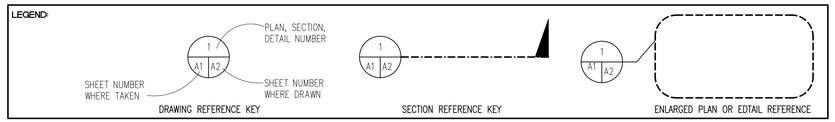
CONSTRUCTION NOTES:
1. THE EDGE OF THE TRANSFORMER PAD SHALL NOT BE CLOSER THAN TWO FEET FROM A WALL, OR FIVE FEET FROM A DOOR OR WINDOW, OR TWENTY FEET FROM A STAIRWELL OR FIRE ESCAPE.
2. TRANSFORMERS SHALL NOT BE COMPLETELY ENCLOSED BY WALLS, FENCES, OR LANDSCAPING WITHOUT VENTILATION WHICH IS APPROVED BY AEP TEXAS. THE ENTIRE WIDTH OF THE FRONT OF THE TRANSFORMER AND SECONDARY CABINET SHALL BE ACCESSIBLE. IF A FENCE IS INSTALLED, IT WILL HAVE SUFFICIENT GATES NECESSARY TO PROVIDE THIS ACCESS.
3. TRANSFORMERS WILL BE LOCATED IN THE AREAS WITH ALL WEATHER ACCESS BY SERVICE TRUCKS. IN ADDITION, THERE WILL BE NO STRUCTURES CONSTRUCTED ABOVE TRANSFORMERS WHICH WOULD INHIBIT CRANE OPERATIONS.
4. NO OTHER UTILITY LINES WILL BE INSTALLED WITHIN TWO FEET OF THE TRANSFORMER PAD.
5. NO CUSTOMER EQUIPMENT, EXCEPT INSTRUMENT RATED METERING EQUIPMENT WHICH IS PLACED ON THE SECONDARY BUSHINGS, SHALL BE ATTACHED TO AEP TEXAS TRANSFORMERS; NOR WILL THERE BE ANY HOLES DRILLED INTO THE TRANSFORMER CABINET FOR CONDUITS, CONDUCTORS OR METERS.
6. THE NUMBER AND SIZE OF THE SECONDARY CONDUCTORS WHICH ARE ALLOWED TO BE ATTACHED TO THE TRANSFORMER SECONDARY BUSHINGS WILL BE CONTROLLED BY AEP TEXAS. IF THE DESIGN REQUIRES MORE OR LARGER CONDUCTORS THAN ALLOWED FOR A PARTICULAR TRANSFORMER SIZE, AEP TEXAS WILL INSTALL A SECONDARY CABINET WITH BUS BARS (SEE ATTACHED SKETCH) ADJACENT TO THE TRANSFORMER. AEP TEXAS WILL SUPPLY AND INSTALL THE SECONDARY CONDUCTORS FROM THE TRANSFORMER TO THE SECONDARY CABINET. THE POINT OF INTERCONNECTION WILL BE THE BUS BARS WITHIN THE SECONDARY CABINET. THIS CABINET WILL REQUIRE A LARGER TRANSFORMER PAD AS SHOWN ON THE ATTACHED SKETCH.
7. TRANSFORMERS LARGER THAN 1000 kVA WILL REQUIRE A LARGER PAD. THIS PAD IS SHOWN ON THE SKETCH LABELED 1500 AND 2500 kVA.
8. TEMPORARY CONSTRUCTION POWER WILL BE SUPPLIED TO CUSTOMER SUPPLIED POWER POLES LOCATED WITHIN FIVE FEET OF AN EXISTING PAD MOUNTED TRANSFORMER OR WITHIN FIFTY FEET OF A PRIMARY POWER POLE (SEE ATTACHED SKETCHES).



1 / CS2 CS2 LOCALIZED AREA PLAN
NOT TO SCALE

TRUE NORTH

LEGEND:



INDEX OF DRAWINGS:

A-E Seal

17th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

REVISIONS

Symbol	Description	Date	Appr

Symbol	Description	Date	Appr

Designed by:
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CONSTRUCT ARMY PHYSICAL TRAINING (PT) FIELD
PROJECT NUMBER: 1093157
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:
1093157

SHEET TITLE
ABREVIATIONS, INDEX OF DRAW–INGS AND LOCALIZED SITE PLAN

Date:
April, 2020

SEQ.	SHEET	OF
02	CS-2	07

A. GENERAL NOTES

1. CONSTRUCTION ACCESS TO THE SITE SHALL BE THROUGH THE EXISTING GATE LOCATED ON SOUTH CHADBOURNE STREET. ALL CONSTRUCTION TRAFFIC ENTERING THE BASE IS REQUIRED TO PASS THROUGH THE COMMERCIAL VEHICLE SEARCH AREA LOCATED TO THE EAST OF KEARNEY BOULEVARD. HOURS OF OPERATION ARE FROM 6:00 A.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY, PHONE 325-654-1290.

2. CONTRACTORS SHALL KEEP ALL PUBLIC ROADS AND STREETS CLEAN OF CONSTRUCTION DEBRIS, MUD, ETC. AT ALL TIMES. CONTRACTOR SHALL PROVIDE EQUIPMENT AND PERSONNEL TO CLEAN ANY STREETS AS REQUESTED BY 17CES. CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS TO STREETS, PARKING AREAS AND BASE OR GOVERNMENT PROPERTY DAMAGED FROM THEIR CONSTRUCTION ACTIVITIES.

3. CONTRACTORS SHALL MAINTAIN A CONSTRUCTION SITE NEAT AND CLEAN OF DEBRIS AS DIRECTED BY CONTRACTING OFFICER. CONTRACTOR WASTE DUMPSTERS SHALL BE EMPTIED ON A REGULAR BASIS.

B. STAGING NOTES

1. CONTRACTOR SHALL INSTALL AND MAINTAIN A TEMPORARY CONSTRUCTION CHAIN LINK FENCE, 6 FEET HIGH, AROUND THE LIMITS OF WORK NOT INCLUDING THE CONSTRUCTION ACCESS ROAD. COORDINATE CHAIN AND PADLOCKS ON GATES WITH GOODFELLOW FIRE DEPARTMENT. EACH GATE SHALL BE NUMBERED FOR EMERGENCY ACCESS, SHALL HAVE ENTRY/EGRESS SIGNAGE AND AREA LIGHTING. CONTRACTORS SHALL MAINTAIN FIRE ACCESS THROUGH EACH INDIVIDUAL CONSTRUCTION SITE AT ALL TIMES.

2. TRUCK WASHOUT AREA SHALL BE CONSTRUCTED, MAINTAINED AND CLEANED IN ACCORDANCE WITH TCEQ REGULATIONS. PROVIDE DETAILS AND MAINTENANCE PLAN AS PART OF THE STORMWATER POLLUTION PREVENTION PLAN. STORMWATER PERMITS ARE REQUIRED PRIOR TO THE START OF CONSTRUCTION.

3. ALL CONTRACTORS SHALL STOCKPILE REQUIRED MATERIALS AND EQUIPMENT WITHIN LIMITS OF RESPECTIVE PROJECT AREAS OR STAGING AREA AS INDICATED ON THE DRAWINGS.

4. CONTRACTOR SHALL CONNECT TO EXISTING OR NEW FIRE HYDRANTS FOR TEMPORARY CONSTRUCTION WATER. INSTALL QUICK DISCONNECT, BACK FLOW PREVENTER AND SHUT-OFF VALVE ON 2 1/2" HOSE CONNECTION ONLY. PRIOR TO MAKING ANY CONNECTIONS TO BASE WATER SYSTEMS, THE CONTRACTOR MUST NOTIFY AND COORDINATE WITH 17CES. A FIRE PLUG USAGE PERMIT IS REQUIRED AND USAGE SHALL BE METERED AT ALL TIMES.

5. ALL TEMPORARY ELECTRIC POWER FACILITIES SHALL MEET OR EXCEED NESC AND NEC REQUIREMENTS AS APPLICABLE FOR PRIMARY AND SECONDARY FACILITIES.

C. ACCESS AND VEHICLE PARKING

1. ACCESS TO THE PROJECT FOR ALL CONSTRUCTION PERSONNEL, VEHICLES AND EQUIPMENT IS ILLUSTRATED ON THE STAGING/LAYDOWN AND ACCESS PLAN. ACCESS ROUTES MAY BE SUBJECT TO CHANGE BASED ON OPERATIONAL REQUIREMENTS. POTENTIAL SCHEDULE IMPACTS SHALL BE COORDINATED WITH 17CES.

2. LOCATION OF ACCESS/ HAUL ROADS ARE AS INDICATED ON THE STAGING/LAYDOWN AND ACCESS PLAN.

3. ALL HAUL ROADS SHALL BE MAINTAINED SUCH THAT UNOBSTRUCTED ACCESS WILL BE PROVIDED AT ALL TIMES FROM THE ROAD TO THE STAGING AREA AND FROM THE STAGING AREA TO THE WORK SITE AND FACILITATE GOVERNMENT ACCESS TO THE BASE AT ALL TIMES. THE MAINTENANCE OF HAUL ROADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT. THE HAUL ROAD LOCATIONS SHALL BE AS INDICATED ON THE STAGING/LAYDOWN AND ACCESS PLAN OR BY 17CES.

4. CONTRACTOR SHALL COORDINATE ACTIVITIES THROUGHOUT THE PROJECT IN A MANNER THAT ALLOWS EMERGENCY ACCESS TO ALL EXISTING ROADWAYS AT ALL TIMES WITHOUT DELAYS TO EMERGENCY VEHICLES RESPONSE TIME.

5. ALL CONTRACTOR VEHICLES AND PERSONNEL MAY BE SEARCHED BY SECURITY FORCES WHEN ENTERING THE BASE AND MAY EXPERIENCE DELAYS. ALL PERSONNEL ENTERING GOODFELLOW A.F.B. MUST HAVE A VALID PHOTO ID PER BASE SECURITY REQUIREMENTS. ALL VEHICLES ENTERING THE BASE MUST HAVE CURRENT/ VALID REGISTRATION, CURRENT/ VALID INSURANCE AND CURRENT/ VALID DRIVERS LICENSE FOR THE OPERATOR. ALL DRIVERS MUST COMPLY WITH ALL GOODFELLOW AFB DRIVING REQUIREMENTS (SPEED LIMITS, SEATBELTS, ETC.)

6. WHEN NOT ENGAGED IN CONSTRUCTION ACTIVITIES, THE CONTRACTOR'S CONSTRUCTION EQUIPMENT AND VEHICLES SHALL BE PARKED WITHIN THE WORK AREA OR STAGING AREA.

D. COORDINATION AND COMMUNICATION DURING CONSTRUCTION

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CORDON OFF THE WORK AREAS AND STREET CROSSINGS BY USING APPROVED BARRICADES.

E. TRAFFIC CONTROL

1. ONLY RUBBER-TIRED VEHICLES SHALL BE ALLOWED ON EXISTING PAVEMENT THAT IS TO REMAIN.

2. ANY DAMAGE TO ROADS AND PAVEMENT DUE TO CONSTRUCTION EQUIPMENT, CONSTRUCTION TRAFFIC OR CONSTRUCTION ACTIVITY SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT HIS/ HER OWN EXPENSE.

3. CONTRACTOR SHALL BORE UNDER KEARNEY BOULEVARD AS NO OPEN CUTTING OF THIS STREET IS ALLOWED.

F. EQUIPMENT AND STOCKPILE HEIGHT

1. STOCKPILE ALL CONSTRUCTION MATERIALS WITHIN STAGING AREA. MAXIMUM HEIGHT 15.00' WITH 5:1 SIDE SLOPES. PROVIDE EROSION CONTROL PROTECTION AROUND THE STOCKPILE LIMITS. ANY MATERIALS THAT ARE TO BE STOCKPILED FOR USE FOR OTHER PROJECTS ON THE BASE SHALL BE COORDINATED WITH 17CES. ALL MATERIAL NOT REQUIRED SHALL BE HAULED OFF GOVERNMENT PROPERTY.

G. EXCAVATION AND TRENCHES

1. OPEN TRENCHES AND EXCAVATIONS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH ORANGE AND WHITE TYPE III BARRICADES AND WITH FLASHING TYPE A-LOW INTENSITY WARNING LIGHTS FROM DUSK TILL DAWN.

H. OTHER SAFETY REQUIREMENTS

1. CONTRACTOR SHALL MAINTAIN SAFETY PRACTICES THAT CONFORM TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.

2. CONTRACTOR SHALL MAINTAIN AT ALL TIMES ONE FIRE LANE FREE FROM OBSTRUCTION AND MAINTAIN ACCESS TO THE SITE AND ALL SURROUNDING ROADS AND STREETS.

I. CONTRACTOR SAFETY PLAN SUBMITTALS

1. CONTRACTOR SHALL FURNISH A CONSTRUCTION SAFETY PLAN IN ACCORDANCE WITH THE SPECIFICATIONS WITH HIS/HER PROJECT SCHEDULE. THE SAFETY PLAN SHALL IDENTIFY THE FOLLOWING ITEMS:

   A. PROPOSED ACCESS POINTS, STAGING AREA AND HAUL ROUTES.
   B. TEMPORARY MARKINGS TO BE USED, IF ANY.
   C. LOCATIONS AND TYPE OF BARRICADES OR OTHER TRAFFIC CONTROL DEVICES.
   D. METHODS BY WHICH THE CONTRACTOR WILL COMMUNICATE WITH 17CES.

J. MAINTENANCE OF STORAGE AREA

1. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE CONSTRUCTION SITE, CONSTRUCTION TRAILER(S)/BUILDING(S), AND STORAGE AREA(S) IN A CLEAN, NEAT, WORKMAN LIKE CONDITION, FREE FROM ACCUMULATION OF WASTE, RUBBISH, WEEDS, OVERGROWN GRASS, OR CONSTRUCTION DEBRIS, TO THE SATISFACTION OF THE CONTRACTING OFFICER. ALL LOOSE OR LIGHT WEIGHT MATERIALS SHALL BE SECURED TO PREVENT BLOWING OR SCATTERING. THE BURNING OF TRASH OR CONSTRUCTION DEBRIS IS STRICTLY PROHIBITED ON GOODFELLOW AFB. PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS, TOOLS, EQUIPMENT, AND MATERIALS NOT THE PROPERTY OF THE GOVERNMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL LEAVE THE WORK SITE AND STORAGE AREA(S) IN A CLEAN, NEAT, AND WORKMANLIKE CONDITION SATISFACTORY TO THE CONTRACTING OFFICER. REFER TO SECTION 01 57 20.16 44 - ENVIRONMENTAL PROTECTION FOR GOODFELLOW AFB, PARAGRAPH 3.17, POST-CONSTRUCTION CLEANUP.

2. THE CONTRACTOR SHALL KEEP FENCING IN A STATE OF GOOD REPAIR AND PROPER ALIGNMENT. GRASSED OR UNPAVED AREAS, WHICH ARE NOT ESTABLISHED ROADWAYS, WILL BE COVERED WITH A LAYER OF GRAVEL AS NECESSARY TO PREVENT RUTTING AND THE TRACKING OF MUD ONTO PAVED OR ESTABLISHED ROADWAYS, SHOULD THE CONTRACTOR ELECT TO TRAVERSE THEM WITH CONSTRUCTION EQUIPMENT OR OTHER VEHICLES; GRAVEL GRADATION WILL BE AT THE CONTRACTOR'S DISCRETION. MOW AND MAINTAIN GRASS LOCATED WITHIN THE BOUNDARIES OF THE CONSTRUCTION SITE FOR THE DURATION OF THE PROJECT. GRASS AND VEGETATION ALONG FENCES, BUILDINGS, UNDER TRAILERS, AND IN AREAS NOT ACCESSIBLE TO MOWERS WILL BE EDGED OR TRIMMED NEATLY.

3. GRASS AND WEEDY VEGETATION WITHIN THE AREAS UTILIZED BY THE CONTRACTOR, INCLUDING WORK AREAS, ADMINISTRATIVE AREAS, AND STORAGE AREAS, SHALL BE KEPT MOWED TO CONTROL VEGETATIVE GROWTH. VEGETATION SHALL BE MOWED WHEN IT REACHES A HEIGHT OF 6 INCHES. MOWING SHALL BE TO A HEIGHT OF 3 INCHES. MOWING SHALL BE ACCOMPLISHED WITH A ROTARY MOWER THAT LEAVES THE CLIPPINGS EVENLY DISTRIBUTED ON THE SOIL SURFACE. MOWING SHALL BE ACCOMPLISHED DURING PERIODS AND IN SUCH MANNER THAT THE SOIL AND GRASS WILL NOT BE DAMAGED. TOWED OR SELF-PROPELLED RIDING MOWERS SHALL NOT BE OPERATED WITHIN 3 FEET OF TREES OR SHRUBS. AREAS ADJACENT TO TREES AND SHRUBS SHALL BE MOWED WITH HAND-PROPELLED MOWERS.

4. EROSION CONTROL DEVICES SHALL BE USED FOR THE STAGING AREA AND ANY MATERIAL STOCK PILES WHEN NECESSARY TO CONTROL EROSION AND STORM WATER RUNOFF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

5. AREAS NOT MOWED: GOVERNMENT MAY IMMEDIATELY AFTER NOTICE TO THE CONTRACTOR AND AT THE DISCRETION OF THE CONTRACTING OFFICER MOW THE CONTRACTOR'S AREAS AT ANY TIME THE VEGETATION HEIGHT EXCEEDS 6 INCHES.

K. WATERING

1. THE CONTRACTOR SHALL COMPLY WITH THE CURRENT CITY OF SAN ANGELO, TEXAS WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN FOR ALL ON BASE WATER USAGE.

A-E Seal:

REVISIONS

Symbol	Description	Date	Appr

Designed by:
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CONSTRUCT ARMY PHYSICAL TRAINING (PT) FIELD
PROJECT NUMBER: 1093157
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1093157

SHEET TITLE: PROJECT NOTES

Date: April, 2020

SEQ.	SHEET	OF
03	CS-3	07

PLAN NOTES:

1. CONTRACTORS SHALL MAINTAIN A CONSTRUCTION SITE NEAT AND CLEAN OF DEBRIS AS DIRECTED BY CONTRACTING OFFICER. CONTRACTORS WASTE DUMPSTERS SHALL BE EMPTIED ON A REGULAR BASIS. ROADWAYS SHOULD BE CLEAR OF DIRT AND DEBRIS. CONTRACTOR WILL WATER DOWN AREA FOR DUST CONTROL.

2. CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCING AROUND THE LIMITS OF CONSTRUCTION/SITE TEMPORARY CONSTRUCTION FENCING. SILT FENCING WILL ALSO BE PROVIDED AROUND TWO STORM DRAINAGE SURFACE INLETS. AT THE POST CONSTRUCTION PHASE THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL MATERIALS RELATED TO THE SILT FENCING OF THE PROJECT, TO INCLUDE ACCUMULATED DEBRIS. CONTRACTOR IS RESPONSIBLE FOR BRINGING THE AREAS AROUND ALL SILT FENCING BACK TO THEIR ORIGINAL CONDITIONS PRIOR TO THE INSTALLATION OF SAID FENCING AND PROJECT CONSTRUCTION. CONTRACTOR WILL MAINTAIN RECORDS OF THE ORIGINAL CONDITION OF THE SITE. SUCH RECORDS WILL BE IN THE FORM OF COLOR PHOTOGRAPHS WHICH WILL BE KEPT ON FILE AS WELL AS TRANSMITTED TO THE GOVERNMENT FOR SAFE KEEPING.

3. CONTRACTOR SHALL INSTALL AND MAINTAIN A TEMPORARY CONSTRUCTION CHAIN LINK FENCE, 6 FEET HIGH, AROUND THE LIMITS OF WORK NOT INCLUDING THE CONSTRUCTION ACCESS ROAD. COORDINATE CHAIN AND PADLOCKS ON GATES WITH GOODFELLOW FIRE DEPARTMENT. EACH GATE SHALL BE NUMBERED FOR EMERGENCY ACCESS, SHALL HAVE ENTRY/EGRESS SIGNAGE AND AREA LIGHTING. CONTRACTORS SHALL MAINTAIN FIRE ACCESS THROUGH EACH INDIVIDUAL CONSTRUCTION SITE AT ALL TIMES.

4. TRUCK WASHOUT AREA SHALL BE CONSTRUCTED, MAINTAINED AND CLEANED IN ACCORDANCE WITH TCEQ REGULATIONS. PROVIDE DETAILS AND MAINTENANCE PLAN AS PART OF THE STORMWATER POLLUTION PREVENTION PLAN. STORMWATER PERMITS ARE REQUIRED PRIOR TO THE START OF CONSTRUCTION.

5. ALL CONTRACTORS SHALL STOCKPILE REQUIRED MATERIALS AND EQUIPMENT WITHIN LIMITS OF RESPECTIVE PROJECT AREAS OR STAGING AREA AS INDICATED ON THE DRAWINGS.

6. CONTRACTOR SHALL RELOCATE ALL STAGING AND STORAGE THAT SHALL NOT CROSS SOUTH SIDEWALK ADJACENT TO PARKING LOT, AND LOCATE SOUTH CONTRACTING FENCE ALONG(INSIDE) SIDEWALK. SIDEWALKS TO REMAIN OPEN.

7. ALL HAUL ROADS SHALL BE MAINTAINED SUCH THAT UNOBSTRUCTED ACCESS WILL BE PROVIDED AT ALL TIMES FROM THE ROAD TO THE STAGING AREA AND FROM THE STAGING AREA TO THE WORK SITE AND FACILITATE GOVERNMENT ACCESS TO THE BASE AT ALL TIMES. THE MAINTENANCE OF HAUL ROADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT. THE HAUL ROAD LOCATIONS SHALL BE AS INDICATED ON THE STAGING/LAYDOWN AND ACCESS PLAN OR BY THE CONTRACTING OFFICER.

8. CONTRACTOR SHALL COORDINATE ACTIVITIES THROUGHOUT THE PROJECT IN A MANNER THAT ALLOWS EMERGENCY ACCESS TO ALL EXISTING ROADWAYS AT ALL TIMES WITHOUT DELAYS TO EMERGENCY VEHICLES RESPONSE TIME.

9. CONTRACTOR WHILE WITHIN GOODFELLOW AFB, SHALL COMPLY WITH BASE REGULATIONS PERTAINING "NO FIREARMS" AND "NO ILLEGAL DRUGS" ON BASE POLICIES.

10. ONLY RUBBER-TIRED VEHICLES SHALL BE ALLOWED ON EXISTING PAVEMENT THAT IS TO REMAIN.

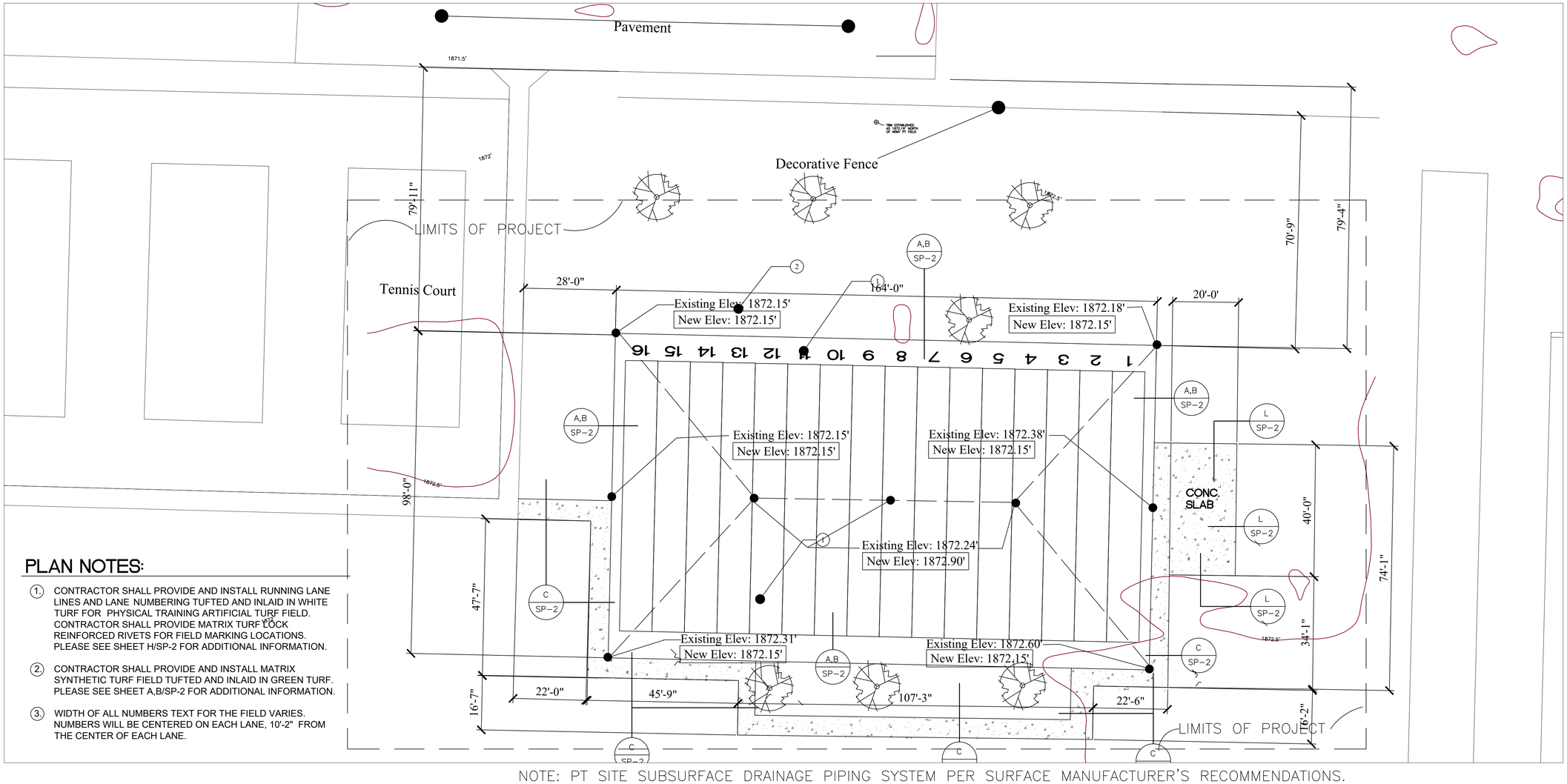
11. ALL CONTRACTOR OPERATIONS SHALL BE CONDUCTED AND PERFORMED IN ACCORDANCE WITH DEPARTMENT OF LABOR, OSHA REQUIREMENTS FOUND IN 29 CFR 1910 (1910.146 AND 1910.147) AND 29 CFR 1926, AND AIR FORCE OCCUPATIONAL SAFETY & HEALTH (AFOSH) AND AIR FORCE INSTRUCTION (AFI) STANDARDS INCLUDING AFI 91-203, AIR FORCE CONSOLIDATED OCCUPATIONAL SAFETY INSTRUCTION. THE CONTRACTOR SHALL ALSO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH PROJECT IDENTIFIED NATIONAL STANDARDS, MILITARY MANUALS, INSTRUCTIONS, PAMPHLETS, STANDARDS, AND HANDBOOKS, AND WITH THE EDITION IN EFFECT ON THE DATE OF THIS SOLICITATION OF THE CORPS OF ENGINEERS (COE) SAFETY MANUAL 385-1-1. ALL JOB SITES ARE SUBJECT TO INSPECTIONS BY THE DEPARTMENT OF LABOR. IN THE EVENT OF CONFLICTS BETWEEN THE OSHA STANDARDS AND THESE REQUIREMENTS, THE MOST STRINGENT SHALL APPLY.

12. CONTRACTOR SHALL MAINTAIN AT ALL TIMES ONE FIRE LANE FREE FROM OBSTRUCTION AND MAINTAIN ACCESS TO THE SITE AND ALL SURROUNDING ROADS AND STREETS.

13. GRASS AND WEEDY VEGETATION WITHIN THE AREAS UTILIZED BY THE CONTRACTOR, INCLUDING WORK AREAS, ADMINISTRATIVE AREAS, AND STORAGE AREAS, SHALL BE KEPT MOWED TO CONTROL VEGETATIVE GROWTH. VEGETATION SHALL BE MOWED WHEN IT REACHES A HEIGHT OF 6 INCHES. MOWING SHALL BE TO A HEIGHT OF 3 INCHES. MOWING SHALL BE ACCOMPLISHED WITH A ROTARY MOWER THAT LEAVES THE CLIPPINGS EVENLY DISTRIBUTED ON THE SOIL SURFACE. MOWING SHALL BE ACCOMPLISHED DURING PERIODS AND IN SUCH MANNER THAT THE SOIL AND GRASS WILL NOT BE DAMAGED. TOWED OR SELF-PROPELLED RIDING MOWERS SHALL NOT BE OPERATED WITHIN 3 FEET OF TREES OR SHRUBS. AREAS ADJACENT TO TREES AND SHRUBS SHALL BE MOWED WITH HAND-PROPELLED MOWERS.

14. EROSION CONTROL DEVICES SHALL BE USED FOR THE STAGING AREA AND ANY MATERIAL STOCK PILES WHEN NECESSARY TO CONTROL EROSION AND STORM WATER RUNOFF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. A SWPPP SHALL BE SUBMITTED PRIOR TO MOBILIZATION.

15. CONTRACTOR SHALL NOT REMOVE ANY TREES IN THE AREA.



PLAN NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL RUNNING LANE LINES AND LANE NUMBERING TUFTED AND INLAID IN WHITE TURF FOR PHYSICAL TRAINING ARTIFICIAL TURF FIELD. CONTRACTOR SHALL PROVIDE MATRIX TURF LOCK REINFORCED RIVETS FOR FIELD MARKING LOCATIONS. PLEASE SEE SHEET H/SP-2 FOR ADDITIONAL INFORMATION.

2. CONTRACTOR SHALL PROVIDE AND INSTALL MATRIX SYNTHETIC TURF FIELD TUFTED AND INLAID IN GREEN TURF. PLEASE SEE SHEET A,B/SP-2 FOR ADDITIONAL INFORMATION.

3. WIDTH OF ALL NUMBERS TEXT FOR THE FIELD VARIES. NUMBERS WILL BE CENTERED ON EACH LANE, 10'-2" FROM THE CENTER OF EACH LANE.

NOTE: PT SITE SUBSURFACE DRAINAGE PIPING SYSTEM PER SURFACE MANUFACTURER'S RECOMMENDATIONS.

1 / SP-1 SP-1 ARMY PHYSICAL TRAINING FIELD SITE PLAN

Not To Scale

TRUE NORTH

Symbol	Description	Date	Appr

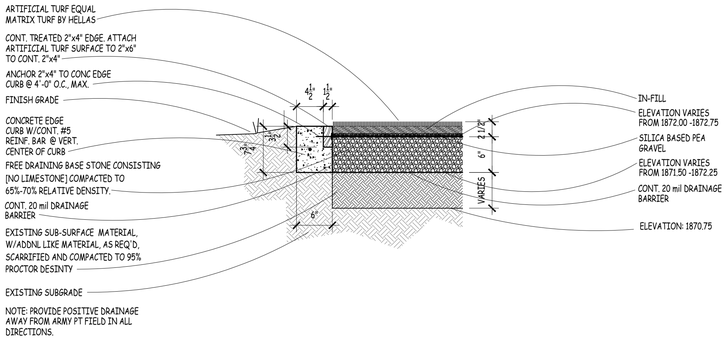
REVISIONS

Designed by:
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CONSTRUCT ARMY PHYSICAL TRAINING (PT) FIELD
PROJECT NUMBER: 1093157
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

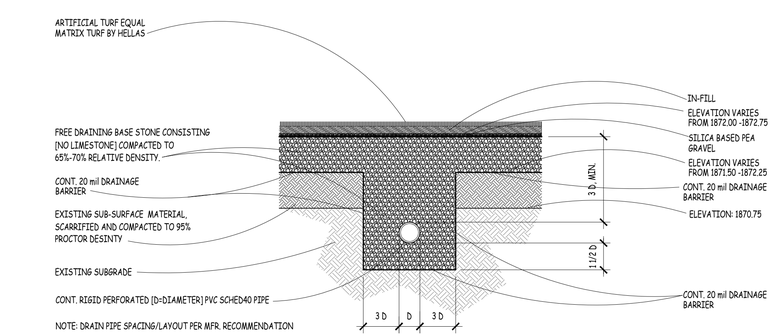
Project Number: 1093157
SHEET TITLE: Site Plan
Date: April, 2020

SEQ.	SHEET	OF
04	SP-1	07



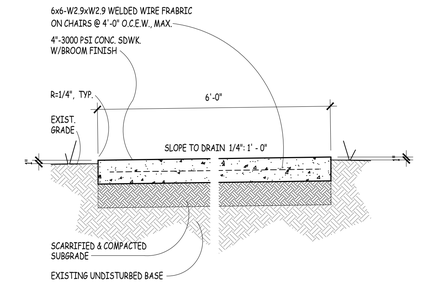
A PT Field Artificial Turf

SCALE: 1" = 1'-0"



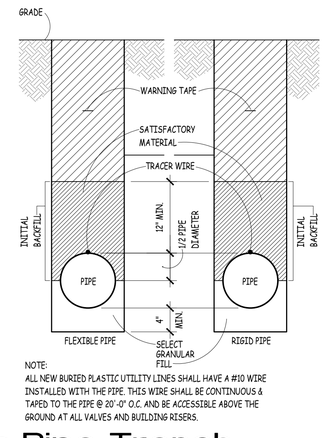
B PT Field Draingage Piping System

SCALE: 1" = 1'-0"



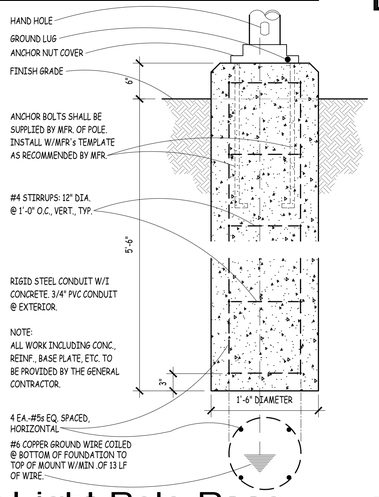
C Conc. Sidewalk

SCALE: 1" = 1'-0"



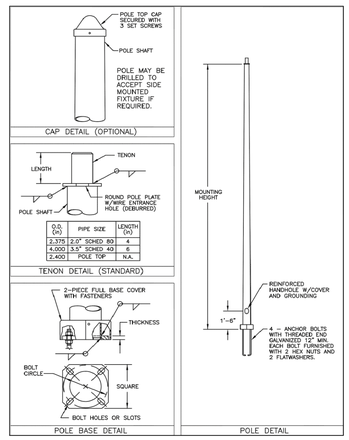
D Pipe Trench

SCALE: 1" = 1'-0"



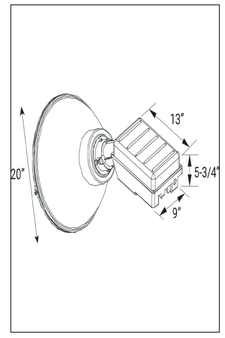
E Light Pole Base

SCALE: 1" = 1'-0"



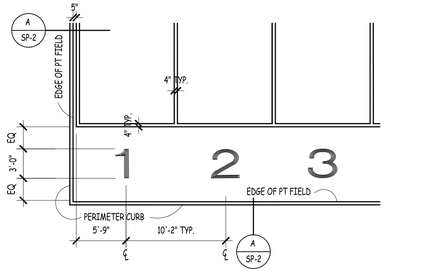
F Light Pole

NOT TO SCALE



G Light Fixture

NOT TO SCALE



H Numbers/Lines

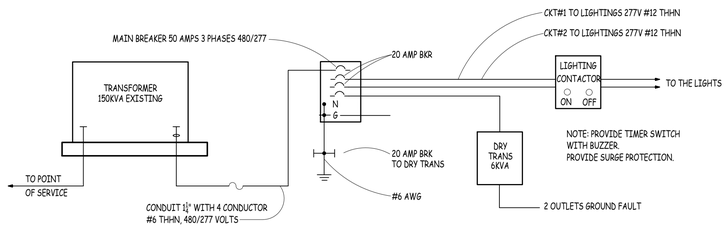
NOT TO SCALE

New Panel Schedule Army PT PAD												
Load Description	Note	Load	AMP	P	CKT	PHASE	CKT	P	Load Description	Note	AMP	LOAD
Lighting CKT 1		L	14.4	1	1	A	2	1	Lighting CKT 2		14.4	L
					3	B	4	3	6KVA Dry Transformer		12.06	DT
					5	C	6		6KVA Dry Transformer			
					7	A	8		6KVA Dry Transformer			
					9	B	10					
					11	C	12					
					13	A	14					
					15	B	16					
					17	C	18					

Summary by Load Type	Connected KVA			
	PHA	PHB	PH C	
L Lighting	11.966	11.966	0	
DT Dry Transformer	3.35	3.35	3.35	
Total in KVA	15.316	15.316	3.35	
	Connected Amps			
	PHA	PHB	PHC	
L Lighting	14.4	14.4	0	
DT Dry Transformer	4.02	4.02	4.02	
Total in AMP	18.42	18.42	4.02	

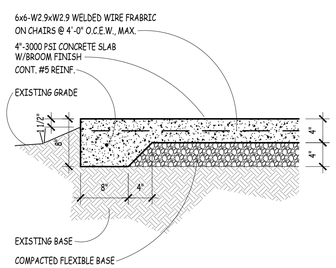
J Panel Schedule

NOT TO SCALE



K Electrical Single-Line

NOT TO SCALE



REF: SP-1

L Conc. Slab

NOT TO SCALE

REVISIONS			
Symbol	Description	Date	Appr

Designed by:	Drawn by:	Reviewed by:	Submitted by:

PROJECT TITLE
CONSTRUCT ARMY PHYSICAL TRAINING [PT] FIELD
PROJECT NUMBER 1093157
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1093157

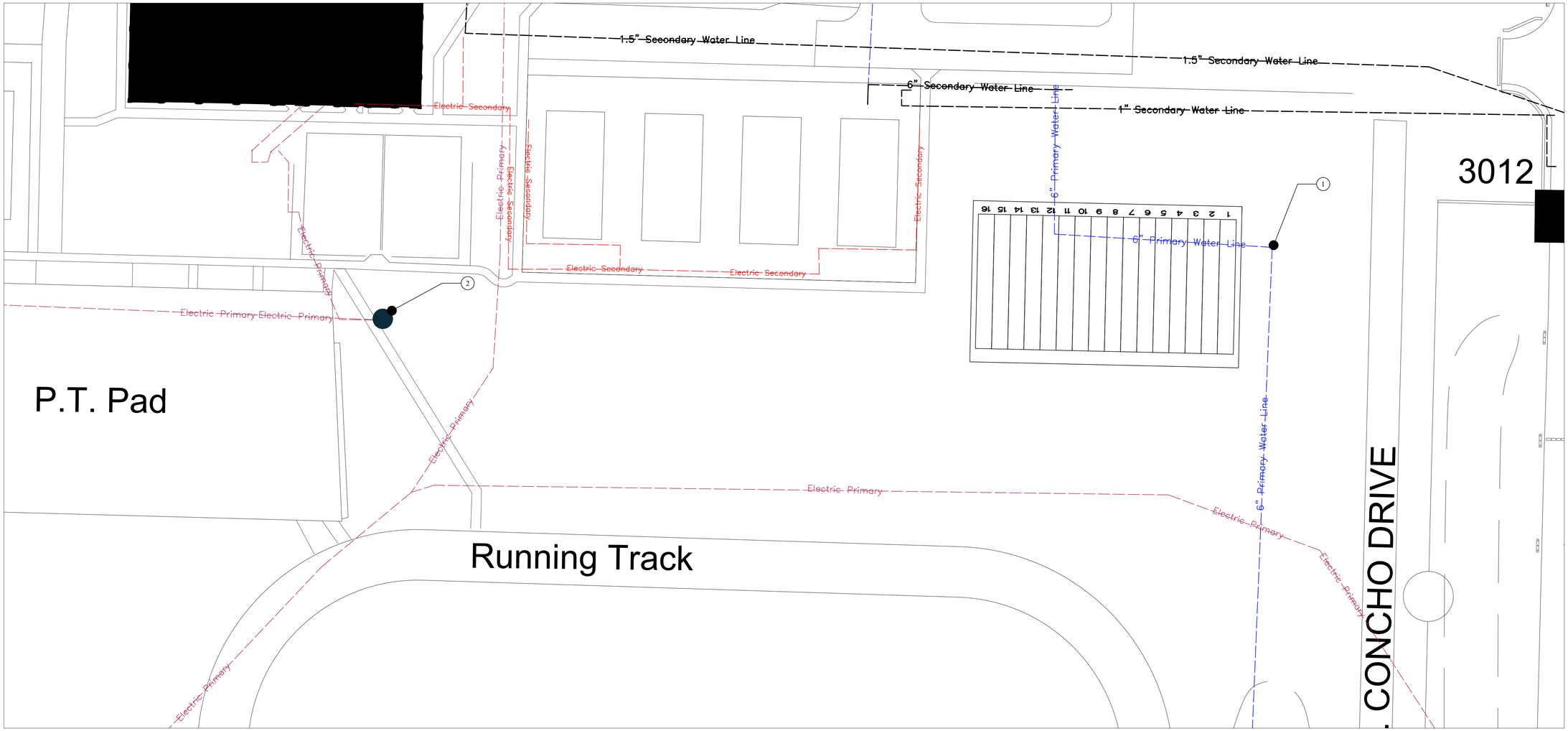
SHEET TITLE: MISCELLANEOUS DETAILS

Date: April, 2020

SEQ.	SHEET	OF
05	SP-2	07

PLAN NOTES:

1. EXISTING PRIMARY UNDERGROUND 6 INCH WATER MAIN LINE TO BE ABANDONED IN PLACE BY OTHERS.
2. EXISTING TRANSFORMER, PANEL, & LIGHT CONTACTORS.



1 PE-1 | PE-1 UTILITY SITE PLAN
Not To Scale

TRUE NORTH

FOR CIVIL ENGINEER SQUADRON
READY · WILLING · ABLE

Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by:
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CONSTRUCT ARMY PHYSICAL TRAINING (PT) FIELD
PROJECT NUMBER: 109357
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1093157
SHEET TITLE: Utility Site Plan
Date: April, 2020

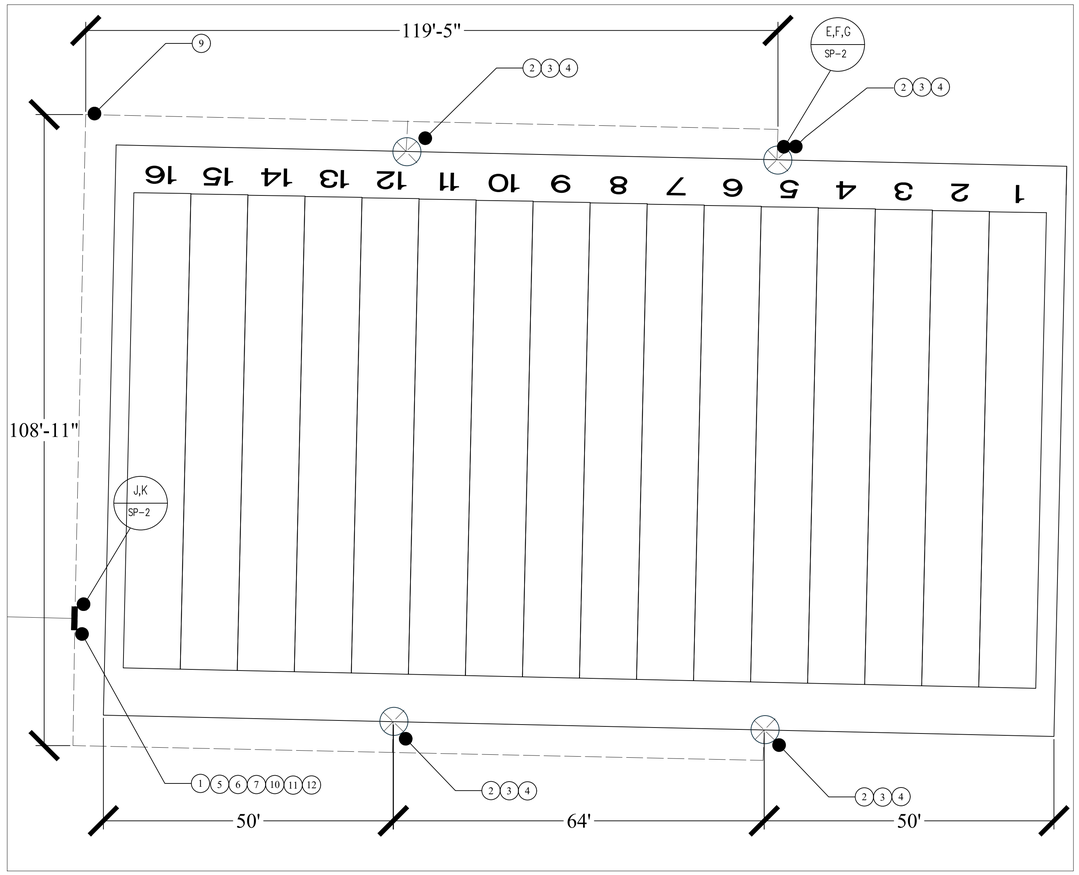
SEQ.	SHEET	OF
06	PE-1	07

PLAN NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL VOLTAGE DROP AT PROJECT LOCATION. POINT OF CONNECTION VOLTAGE IS 480/277.
2. CONTRACTOR SHALL PROVIDE AND INSTALL 4 ROUND TAPERED STEEL SPORTS LIGHTING POLES WITH A GALVANIZED FINISH AT 50' HIGH, AN ANCHOR BASE, WIRING HAND HOLE AND COVER.
3. CONTRACTOR SHALL PROVIDE AND INSTALL 16 FIXTURE MOUNTS SET AT 180 DEGREES, 4 ANGLED IRON CROSS ARMS, SIDE OF POLE MOUNTED, WITH A HOT-DIP GALVANIZED FINISH.
4. CONTRACTOR SHALL PROVIDE AND INSTALL 16 20" HIGH OUTPUT LED SPORTS AND FLOOD LIGHT FIXTURES WITH 4 LAMPS FOR EACH LIGHTING POLE. LAMPS RUN 440 WATTS, 120-277 VOLTS, 5700K COOL WHITE, 63657 NOMINAL LUMENS, 1500W HID REPLACE. THE FIXTURES SHALL HAVE A EPA OF 18.5 AND 463 POUNDS AT 90 MPH.
5. CONTRACTOR SHALL PROVIDE AND INSTALL 2 WEATHERPROOF OUTLETS (GROUND FAULT) FOR FUTURE USE OF EQUIPMENT.
6. CONTRACTOR SHALL PROVIDE AND INSTALL SMALL DRY TRANSFORMER, 6KVA 3Ø 480/277 IN PRIMARY AND 120/208 ON THE SECONDARY.
7. CONTRACTOR SHALL PROVIDE AND INSTALL ASTRONOMIC DIAL TIMER ON LIGHTING CONTROL PANEL.
8. CONTRACTOR SHALL PROVIDE AND INSTALL #6 THHN COPPER WIRE WITH NONMETALLIC FLEXIBLE TUBING. TUBING MUST BE 1-1/4" IN DIAMETER. WIRE MUST CONNECT WITH NEW VOLTAGE DROP AND DISTRIBUTION PANEL. LOCATION IS 350' FROM EXISTING PANEL.
9. CONTRACTOR SHALL PROVIDE AND INSTALL #12 THHN COPPER WIRE WITH NONMETALLIC FLEXIBLE TUBING. TUBING MUST BE 3/4" IN DIAMETER. WIRE MUST CONNECT FROM DISTRIBUTION PANEL TO EACH EXTERIOR LIGHT POLE/FIXTURE.
10. CONTRACTOR SHALL PROVIDE AND INSTALL DISTRIBUTION PANEL, THREE PHASE, 4 WIRES WITH A MAIN BREAKER OF 50 AMP.
11. CONTRACTOR SHALL PROVIDE AND INSTALL SINGLE POLE, 277 V 20 AMP BREAKER IN THE PANEL WITH A "ON OFF" SELECTOR SWITCH.
12. CONTRACTOR SHALL PROVIDE AND INSTALL NEW COMBINATION LIGHTING PANEL/DISCONNECT SWITCH FOR THE LIGHTINGS. BOTH PANEL AND DISCONNECT SWITCH WILL BE CONTROLLED BY A SINGLE PHOTO-CELL AND A MANUALLY OPERATED ELECTRIC 277 V 120 MINUTE TIMER.
13. EXISTING TRANSFORMER, PANEL, & LIGHT CONTACTORS.

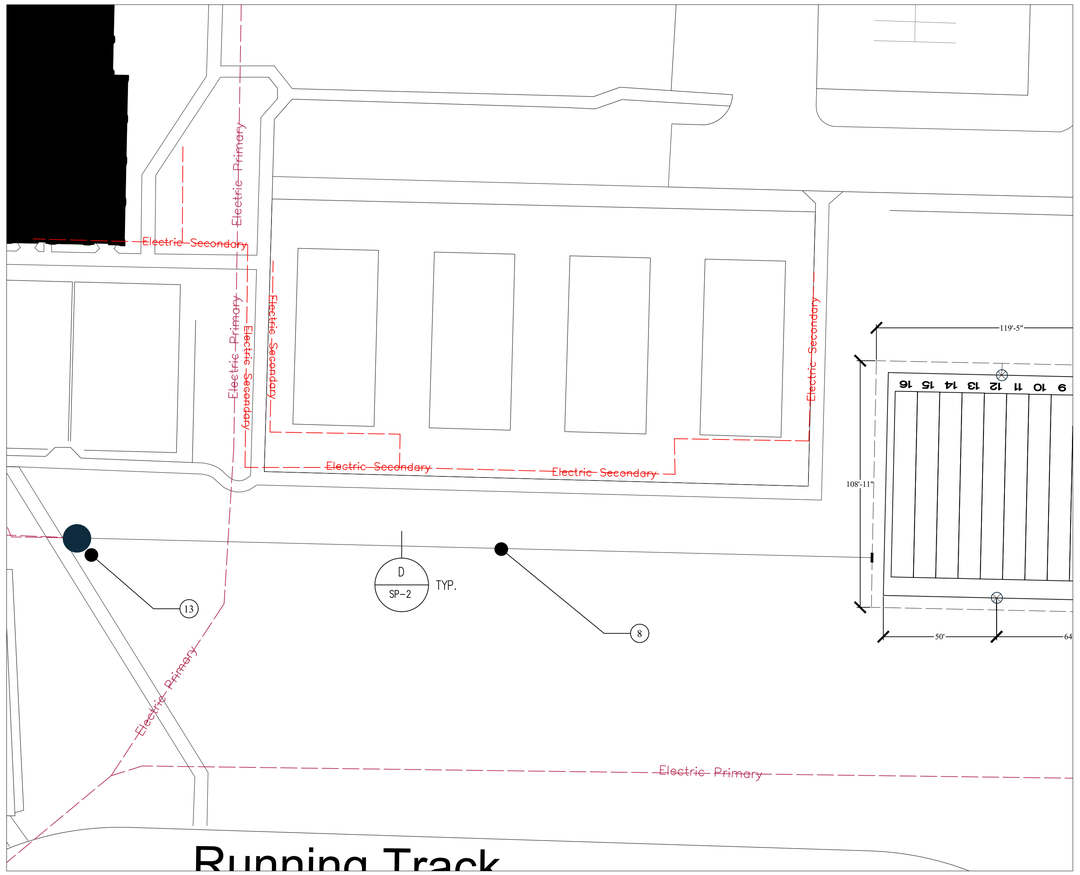
GENERAL NOTES:

1. ALL EQUIPMENT MUST BE WATERPROOF.



1 PE-2 PE-2 PHYSICAL TRAINING FIELD ELECTRICAL PLAN
Not To Scale

TRUE NORTH



2 PE-2 PE-2 ELECTRICAL CONNECTING PLAN
Not To Scale

TRUE NORTH

Symbol	Description	Date	Appr

REVISIONS

Designed by:
Drawn by:
Reviewed by:
Submitted by:

PROJECT TITLE
CONSTRUCT ARMY PHYSICAL TRAINING (PT) FIELD
PROJECT NUMBER: 1093157
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: 1093157
SHEET TITLE: Utility Site Plan
Date: April, 2020

SEQ.	SHEET	OF
07	PE-2	07

TE-C. AF Form 66 Schedule of Materials Submittals

SCHEDULE OF MATERIAL SUBMITTALS

PROJECT NUMBER	PROJECT TITLE	SOLICITATION/CONTRACT NO.
1093157	Construct Army Physical Training Field	

TO BE COMPLETED BY THE PROJECT ENGINEER												TO BE COMPLETED BY CONTRACT ADMINISTRATOR								
		NO. OF COPIES REQUIRED														DATE CONTRACTOR NOTIFIED				
LINE NUMBER	ITEM OR DESCRIPTION OF ITEM, CONTRACT REFERENCE, TYPE OF SUBMITTAL (Ref spec & para)	CERTIFICATE OF COMPLIANCE	SHOP DRAWINGS	SAMPLES	COLOR SELECTION	MANUFACTURER'S RECCOMENDATIONS	MANUFACTURER'S WARRANTY	OPERATING INSTRUCTIONS	SEE PARA	OTHERS AS SPECIFIED	REQUIRED SUBMISSION DATE	DATE RECEIVED IN CONTRACTING	DATE TO CIVIL ENGINEERING	RETURN SUSPENSE DATE	FOLLOW UP	APPROVED	DIS-APPROVED	CONTRACTOR RE-SUBMITTAL	FINAL APPROVAL	REMARKS
1	Para 1.10 Submittals.	x							4		(e)									FIO
2	Para 1.10.1 Work Plan								4		(e)									
3	Para 1.14 Safety Plan								4		(e)									FIO
4	Para 1.17 Welding, Cutting, and Brazing AF Form 592								4		(c)									GA
5	Para 1.20 Work Schedule								4		4 days prior (c)									FIO
6	Para 4.1 Base Civil Engineering Work Clearance Request AF Form 103								4		10 Days Prior (e)									FIO
7	Para 4.2 Utility Outage								4		14 days prior (c)									GA
8	Para 5.3 Hazardous and Special Wastes Generated by the Contractor								4		(d)									FIO
9	Para 5.4 Contractor Encountered Hazardous Waste								4		(d)									FIO

10	Para 5.6 Hazardous Material								4		(d)								FIO
11	Para 5.10 Air Emission								4		(e)								FIO
12	Para 5.12 Protection of Water Resources (Construction General Permit)								4		30 days prior (e)								FIO
13	Para 5.12.7 Construction Waste Management								4		(b)								GA

(a) As soon as possible but in no case later than 45 calendar days after NTP.
(b) Prior to Final Inspection.
(c) Prior to Use.
(d) As Required.
(e) Prior to start of Construction

VII. ATTACHMENTS

ATTACHMENT A

GEOTECHNICAL REPORT: PROPOSED SHADE STRUCTURE BEAVER FIT LOCKER

SKG ENGINEERING, LLC

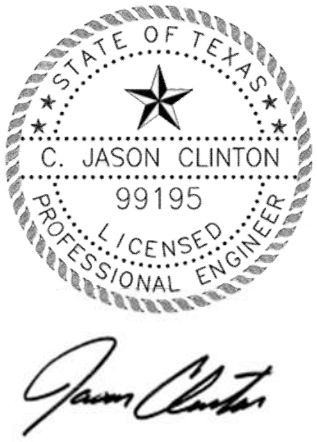
Geotechnical Report

Proposed Shade Structure

Beaver Fit Locker

Off of Mitchell Street

Goodfellow Air Force Base, Texas



2/19/2020
SKG Engineering, LLC
F-7608

PREPARED FOR:
Mr. Ron Trepanier, P.E.
17th Civil Engineer Squadron
460 East Kearney Boulevard
Goodfellow AFB, Texas 76908

February 2020

20-E-0109

SKG
ENGINEERING, LLC
FIRM REGISTRATION NUMBER F-7608
SURVEYING ♦ ENVIRONMENTAL ♦ LAB/CMT

706 SOUTH ABE STREET
SAN ANGELO, TEXAS 76903

PHONE: 325.655.1288
FAX: 325.657.8189

February 19, 2020 20-E-0109

Mr. Ron Trepanier, P.E.
17th Civil Engineer Squadron
460 East Kearney Boulevard
Goodfellow AFB, Texas

Subject: Geotechnical Report, Proposed Shade Structure, Beaver Fit Locker, Off of Mitchell Street, Goodfellow Air Force Base, San Angelo, Texas

Mr. Trepanier,

In accordance with your authorization, SKG Engineering has completed its geotechnical investigation at the referenced site. The work was done in accordance with the proposal dated the 9th day of January 2020. The data and results are included in the attached report.

If you have any questions or comments, or if we can be of any more service to you, please do not hesitate to contact us at (325) 655-1288.

Sincerely,
SKG Engineering, LLC

Caleb Miller, E.I.T. Jason Clinton, P.E.

SKG Engineering, LLC
F-7608

Attachments - Geotechnical Report

CC: File

N:\Engineering\2020\20E0109 Goodfellow AFB_Beaver Fit Locker_Geotech\Geotechnical Report.doc

Table of Contents

Attachments

1.0 Introduction

1.1 Overview

The purpose of this exploration was to determine subsurface materials and conditions and to establish the characteristics of these materials in order to recommend the criteria by which to establish foundation recommendations for the proposed shade structure. A summary of field conditions is included in Attachment A.

2.0 Exploration

2.1 Soil Borings

The subsurface explorations were conducted on this site in February 2020. The site has been previously developed with fencing and multiple sporting court surfaces. The boreholes were drilled to a maximum depth of 20', and the logs of these boreholes are included in this report. The drilling was performed with a truck mounted air rotary drill rig. The drilling activities were performed in accordance with accepted methods and procedures. The boreholes were conducted within the limits of the proposed shade structure. A location map showing the approximate borehole locations is included in Attachment B.

Material samples were recovered at various depths for testing. The primary means of extracting subsurface soil samples was by the use of a 3" Shelby-tube and/or a 2" O.D. split barrel sampler. Split spoon sampling procedures were performed in accordance with ASTM D 1586 and Shelby tube samples were obtained in accordance with ASTM D 1587. The samples were extruded or removed in the field and placed in moisture tight bags and labeled. The samples were then transported to the laboratory for testing and visual evaluation by geotechnical personnel. The Unified Soil Classification System was utilized in accordance with ASTM D 2487 to verify field classifications. Refer to the logs of borings located in Attachment C for lithology, sample locations and quantities.

2.2 Laboratory Tests

Tests were performed to determine engineering characteristics of the subsurface materials encountered including, but not limited to, soil moisture content (ASTM D 2216), Atterberg Limits (ASTM D 4318) and sieve analysis. The test results can be found in Attachment D. Samples not tested in the laboratory will be retained for a maximum of 60 days and then discarded unless otherwise notified in writing prior to disposal of the samples.

3.0 Subsurface Investigation

3.1 Site Geology

Based on the location of the site on geological maps, it is our opinion that the predominate soil is the Angelo – Urban land complex, 0 – 3% Slopes (AuB). These particular soils are indicative of nearly level to gently sloping topography on smooth outwashed plains. These soils are well drained and have slow surface runoff. Shrink-swell potential and soil corrosivity to uncoated steel are moderate. Based on the location of the site and soil conditions we do not foresee any adverse issues related to elevated sulfate concentrations.

3.2 Subsurface Materials and Conditions

The specific subsurface stratum encountered in each borehole is described in the logs of boreholes included in Attachment C. The strata encountered at the boreholes conducted at the site can be divided into three major strata. The first stratum is a layer of fat clay with sand which extends from a depth of 0'

to 2'. The second soil stratum consists of lean clay with sand extending from a depth of 2' to 8'. The third stratum consists of fat clay which extends from 8' to the depth of the boreholes.

3.3 Subsurface Water

There was no groundwater noted in any of the boreholes at the time of the investigation. The absence of groundwater noted does not express or imply a groundwater study was performed, which is beyond the scope of this report. It should be noted that groundwater levels are subject to change based on seasonal and climatic conditions.

4.0 Site and Design Considerations

4.1 Basic Considerations

The properties of in-situ soils, site characteristics, and the level of tolerable deflection should be carefully considered during the design phase. A foundation should economically meet the functional requirements of the structure and minimize differential movement of the structure that could cause damage.

The site has been previously developed, and there are existing sporting court surfaces and fencing present at the site. Any of the previous developments which fall within the footprint of the proposed shade structure should be removed in their entirety and engineered fill should be used to fill the excavated areas. The fill should be placed and compacted in accordance with the Site Preparation section of this report.

The depth and hardness of the subsurface soil strata present varies across the site. The variations should be noted by the engineer and contractor for all aspects of design and construction.

The subsurface soils encountered at the site have moderate to high Potential for Vertical Rise (PVR). A soil modification plan to remove and replace the site soils would be costly, and the owner should determine the feasibility of soil modification in accordance with their tolerance for movement.

The structural engineer should ensure the foundation design for the proposed shade structure has adequate self-weight and reinforcement to withstand any overturning moment generated from expected wind forces.

Routing of drainage should be addressed in the design phase of the project to ensure drainage is routed away and around proposed and existing foundation systems.

4.2 Shrink/Swell Considerations

Shrink/swell movements of the in-situ soils with changes in the soil moisture content are anticipated to be moderately high at the site. The Potential Vertical Rise (PVR) was calculated to be on the order of 2" using the McDowell PVR Method. The PVR was approximated using the McDowell's initial dry soil condition and a potential active zone to fifteen feet below grade.

For a spread footing foundation system (with no slab or grade beams connecting footings), the PVR may be reduced to be on the order of 1-½" by bearing the spread footings at a depth of 2' below the existing grade. The PVR may be reduced to be on the order of 1-¼" by bearing the spread footings at a depth of 5' below the existing grade. The PVR may be reduced to be on the order of 1" by bearing the spread footings at a depth of 8' below the existing grade.

The PVR and moreover foundation movement is effected by many factors that influence its magnitude and rate of change. Factors include: seasonal variations in the moisture content between the interior and perimeter of the foundation, topographic relief, vegetative cover, confining pressures, fluctuating and

shallow water tables, and the composition of underlying soils. In-situ clays can expand with the introduction of moisture and shrink with decreases in moisture.

4.3 Spread Footings

Spread footings may be used where there is a suitable bearing stratum near the surface and where the potential for heave or settlement is within an acceptable range. Spread footings should be sized to support anticipated loads. We recommend bearing the spread footings a minimum of 2' below existing grade. The allowable bearing pressure exerted by the spread footings on the in-situ soils from a depth of 1' to 4' is 1,400 psf and from a depth of 4' to 8' is 1,900 psf.

4.4 Drilled Piers

Straight shaft or belled piers can be used for foundation support where column loads are less than 25 kips. The piers should bear at a depth to obtain adequate bearing capacity and lateral support when it cannot be obtained utilizing a shallow foundation. The piers should be located below the active zone and founded on a firm, stable stratum. We recommend foregoing utilizing side shear resistance for the allowable bearing capacity of the piers between 0 and 8 feet of depth. The piers can be designed with an allowable side shear resistance of 400 psf for the portion of shaft extending from a depth of 8’ to the depth of the borehole, in addition to the allowable end bearing pressure stated below. An allowable side shear resistance of 350 psf for the portion of shaft extending from a depth of 8’ to the depth of the borehole may be utilized for uplift resistance. Please refer to the following table for pier design parameters.

Depth (ft)	Allowable End Bearing (psf)	Cohesion (psf)	Modulus of Subgrade Reaction (kcf)
8 to 10	4,800	2,400	255
10 to 15	5,600	2,800	255
15 to 18	6,000	3,000	255

We recommend a minimum and maximum shaft diameter of 24" and 36", respectively for piers. The bell to shaft diameter ratio should not exceed 3.0. It should also be noted that bells in excess of 60" in diameter may become more difficult to construct due to the potential of caving or sloughing. The maximum slope angle of the underreamed bell should not exceed 45 degrees. Adjacent piers should maintain a minimum center to center spacing of 3 times the end bearing diameter. Piers spaced as specified do not require a reduction in the load carrying capacity of the individual piers due to group action. Refer to the LATERAL DESIGN CRITERIA of this report for lateral design considerations.

Settlement of properly constructed piers are estimated to be less than ½" for loads of 25 kips or less. Additional settlement may occur if the load exceeds 25 kips.

Piers should be inspected for proper size, depth and reinforcement placement prior to the placement of any concrete. It is essential that the bearing stratum of the piers be identified by the engineer or his representative. A representative from SKG Engineering should be present during drilling activities to approve the bearing strata. Each pier excavation should be completed, and concrete placed within one day. In no instance should any pier excavation be left open overnight. We recommend alternating the drilling and placement of concrete for shafts in groups. Foundation concrete should be placed in clean, dry holes. Bottoms of pier excavation should be cleared of loose debris prior to the placement of concrete.

We do not anticipate the need for temporary pier casing to prevent caving or sloughing of the hole during pier drilling operations, due to the subsurface stratum. However, should field conditions warrant the use of pier casings, they should be used.

4.5 Uplift Loads

The piers could experience tensile loads as a result of post construction heave of the clay soils. The shafts must contain sufficient reinforcing steel for the length of the shaft to accommodate the net tensile loads. There are several factors effecting the magnitude of the loads, such as; shaft diameter, soil parameters and in-situ moisture levels during and after construction.

4.6 Seismic Design Criteria

We have provided the seismic criteria for use in the structural design phase of the project. The seismic criteria is based on the 2015 International Building Code. The stratum referenced in this section refer to those described in the section SUBSURFACE MATERIALS AND CONDITIONS of this report. Please refer to the following table for seismic design parameters.

Mapped Spectral Response Acceleration					
Description	Site Class	Short Periods (S_s)	1 Second Period (S_1)	Site Coefficients	
				F_a	F_v
Stratum I	E	0.09g	0.04g	2.5	1.7
Stratum II & III	D	0.09g	0.04g	1.6	2.4

4.7 Lateral Design Criteria

Recommended Lateral Design Criteria per Soil Type				
Soil Type	Lateral Bearing Pressure, to a maximum value at 15 feet (psf/ft)	Angle of Internal Friction (degrees)	Friction Factor (Between Concrete and Native Soil)	Approximate Unit Weight (pcf)
Clay	50	28	--	105
Fat Clay	50	19	--	90

4.8 Backfill Material and Compaction

Retaining walls should be backfilled with a 12" width of pea gravel for the height of the wall. Backfill behind the pea gravel should be a non-expansive fill material with a maximum particle size of 4" nominal diameter three quarters of the wall height and a clay cap on the top quarter of the wall height. We recommend providing weep holes along the bottom of the retaining wall height at 10' on center maximum spacing for the length of the wall. We recommend placing fill in maximum 8" loose lifts and compacted to between 93% to 97% of the Standard Proctor Density. Compaction tests should be performed on each lift.

4.9 Drainage

Positive drainage away from the foundation must be provided and maintained to reduce subsurface moisture variations. The minimum recommended slope away from the foundation is 5% for the first 10 feet for areas not covered by a sidewalk or pavement. Water shall not be permitted to pond on the finished site.

Due to the presence of in-situ clays, we recommend through the design and construction phase an emphasis on maintaining a stable moisture content in the soils beneath and adjacent to the foundation be a major priority. Temporary and permanent control measures should be properly designed and installed to ensure positive drainage away from the foundation to maintain a quasi stable soil moisture content. The measures include, but are not limited to gutters, sprinkler systems, and a site grading plan.

4.10 Underground Utilities

The backfill material used for underground utility trenches should be on-site materials or imported clayey materials. We recommend not using a granular material to avoid the possibility of water migration through the trenches and possibly under foundation systems at the site.

4.11 Exterior Flatwork Considerations

Engineered fill shall be used as needed to bring the flatwork to grade. Control joints should be cut at a maximum spacing of 6' for the length of the flatwork and expansion joints at a maximum spacing of 50'. We recommend installing flatwork as not to impound water adjacent to structural foundations.

4.12 Trenching and Excavation Requirements

The guidelines specified by Occupational Safety and Health Administration (OSHA) should be followed for all excavation activities. The OSHA Standards (29 CFR Part 1926 revised, 1989) require all trenches that exceed 5' in depth to be shored or benched appropriately unless the soil stratum is “solid” rock.

The OSHA standards should be strictly adhered to for all excavation activities. The classification of the soils encountered at the site are Type B soils. The soil classifications are based on soils encountered in the boreholes conducted at the site. Refer to the following OSHA Table B-1 for slope requirements for

excavations that are less than 20 feet in depth. Trenches in excess of 20 feet in depth should be designed by a registered professional engineer.

Maximum Allowable Slopes		
Stratum	Horizontal	Vertical
Stable Rock	Vertical	1
Type A	3/4	1
Type B	1	1
Type C	1-1/2	1

The above information is provided for temporary excavations. We recommend that any permanent trenches proposed for the site should have a minimum of 4:1 side slopes. Any permanent trenches or channels should be lined with erosion control measures.

5.0 Site Preparation

5.1 Subgrade

Remove the top 6" of surface soils, any deleterious material, and in-situ soils as necessary to bring the finished floor elevation to design grade. The top 6" of material should then be scarified, moisture conditioned, and compacted to at least 95% of the Standard Proctor Density within 2% points of the optimum moisture content. Any soft or pumping areas are to be excavated and an engineered fill shall be used as backfill. Where existing slopes exceed ten horizontal to one vertical, the cross slope should be benched to provide a minimum of 6' bench width.

5.2 Engineered Fill

An approved select fill shall be used to bring the foundation system to grade. It shall be a non-granular, cohesive soil, free of deleterious material, have a liquid limit of less than 40, and a plasticity index between 6 and 14. The select fill shall meet the following percent retained on sieve requirements: 2-1/2": 0-5%, No. 4: 40-80%, and No. 40: 50-85% or obtain approval from the geotechnical engineer. The fill should be installed in maximum eight-inch loose lifts and compacted to at least 95% of the Standard Proctor Density within 3% points of the optimum moisture content. Base consisting of TxDOT Type A, Grade 2 limestone will be accepted as engineered fill. Blended materials utilized for engineered fill will have to meet the specifications herein and be approved by the geotechnical engineer. If a blended material is approved, the contractor shall blend the material and have one stockpile for the entire project. Continuous blending of material throughout the duration of the project is not acceptable.

5.3 Flexible Base Material

Provide compacted base consisting of Type A, Grade 2, limestone material below the foundation. Compact to 96% of the Standard Proctor Density within 2% points of the optimum moisture content. Material shall be placed in lifts not to exceed 8". Alternative flexible base materials provided by local suppliers which do not meet theses specifications shall be approved by the Engineer of record.

5.4 Testing

Test results of the engineered fill shall be submitted to the engineer of record for approval prior to incorporating into the work. Arrange for a testing agency to verify flexible base, engineered fill, and subgrade compaction and moisture content. To confirm the compaction of the subgrade, engineered fill, and base we recommend the more stringent of three density tests for each lift placed or one density test for every 2,000 square feet of foundation area for each lift placed. The Standard Proctor Density shall be determined in accordance with ASTM D698.

6.0 Limitations

The recommendations presented in this report are based upon the information obtained from the borings performed at the site and from other information discussed in this report. This report is based upon the findings from the borings made and may not identify all subsurface variations which exist across the site. The nature and extent of such variations may not become evident until construction. If significant variations appear, contact SKG Engineering to further access the design criteria and the recommendations contained within this report.

The scope of services for this project does not include either specifically or by implication any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such conditions, the appropriate investigations should be performed.

No warranties, either expressed or implied, are intended or made. In the event that changes in the nature, design, or location of the project as outlined in this report are made, the recommendations contained in this report shall not be considered valid unless SKG Engineering reviews the changes and either verifies or modifies the conclusions of this report in writing.

Attachment A

Field Conditions

Summary of Field Conditions

The following field conditions were observed during the field exploration activities.

1. The site is developed with multiple sport court surfaces and fencing. The accessibility of some types of equipment should be verified in some of the areas of the site where fencing and/or structures are in the area.

2. The surface at the site is currently developed as noted above. However, soil conditions below paved surfaces on the site are generally clay that is considered a soft soil material. Once previous pavement/surfacing is removed, the soil conditions will probably prove to hinder mobilization of some types of construction equipment during rain events that saturate the soils.

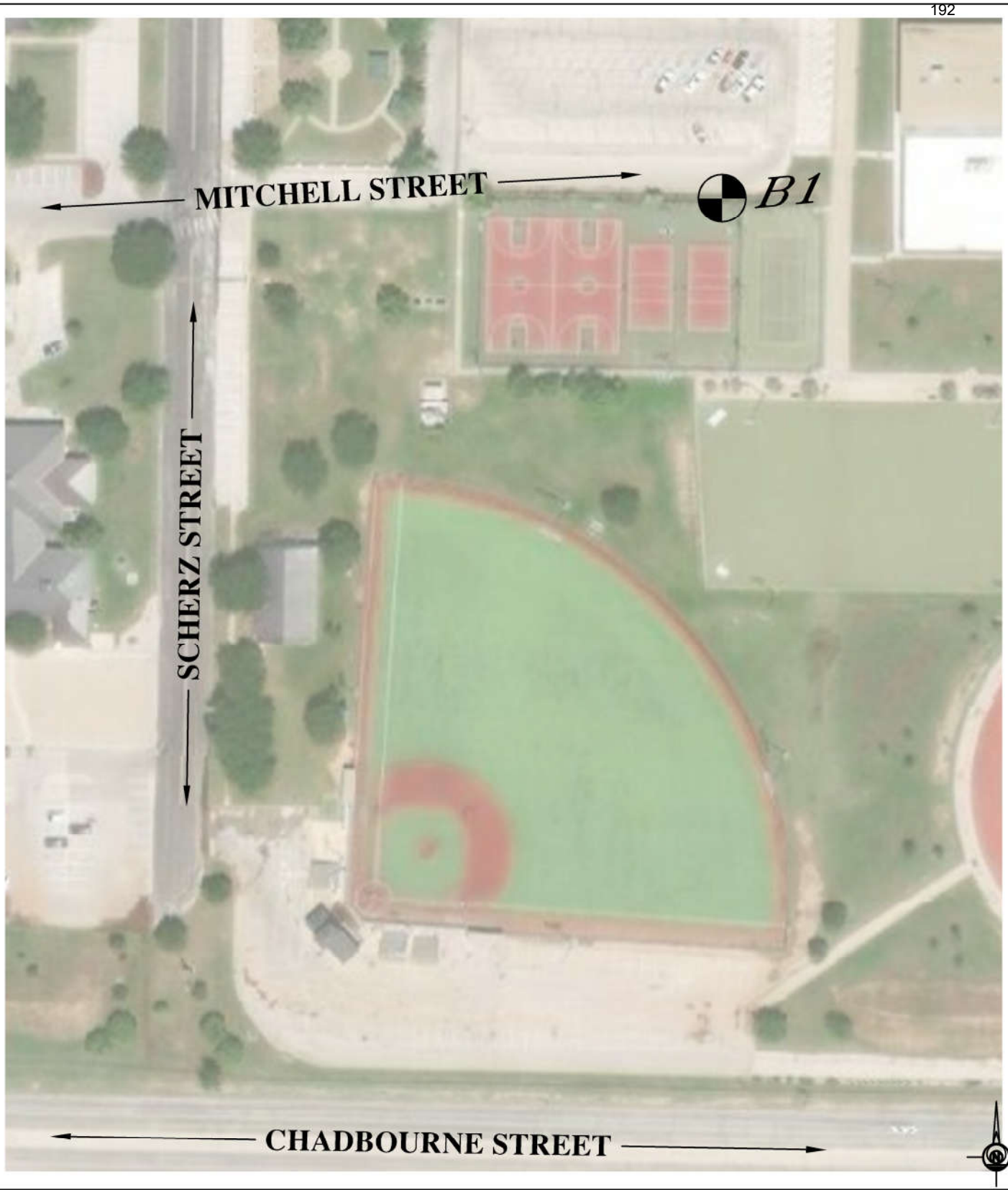
3. Groundwater was not present at the time of drilling activities in any of the boreholes.

4. No rock was encountered in any of the boreholes conducted at the site.

5. Site soils are not anticipated to be of quality to be used for fill material under the foundation systems. We anticipate the site soils may be used for nonstructural applications, such as; landscape fill.

Attachment B

Borehole Location Map



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FIRM REGISTRATION NUMBER F-7608
www.skge.com

PROPOSED SHADE STRUCTURE
BEAVER FIT LOCKER
OFF OF MITCHELL STREET
GFAFB, TEXAS

BOREHOLE LOCATION MAP

DWG BY: SKG	DWG. DATE: 2/13/2020
JOB NO. 20-E-0109	SHEET NO. BH1
SCALE: 1"=100'	

Attachment C

Logs of Boreholes

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISION			GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE.	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL GRADED GRAVELS, GRAVEL–SAND MIXTURES, LITTLE OR NO FINES.
				GP	POORLY GRADED GRAVELS OR GRAVEL–SAND MIXTURES, LITTLE OR NO FINES.
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL–SAND–SILT MIXTURES.
				GC	CLAYEY GRAVELS, GRAVEL–SAND–SILT MIXTURES.
	SILTS AND CLAYS MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.
				SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES.
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND–SILT MIXTURES.
				SC	CLAYEY SANDS, SAND–CLAY MIXTURES.
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE.	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50.			ML	INORGANIC SILTS AND VERY FINE SANDS, FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS AND WITH SLIGHT PLASTICITY.
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY.
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50.			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS.
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS.
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS.

SAMPLER TYPE

SOIL TERMS	DESCRIPTION
BLOCKY	CONTAINS CRACKS OR FAILURE PLANES RESULTING IN ROUGH CUBES OF MATERIAL.
CALCAREOUS	CONTAINS APPRECIABLE QUANTITIES OF CALCIUM CARBONATE.
FISSURED	CONTAINS SHRINKAGE CRACKS, WHICH ARE FREQUENTLY FILLED WITH FINE SAND OR SILT. THE FISSURES ARE USUALLY NEAR VERTICAL IN ORIENTATION.
INTERBEDDED	COMPOSED OF ALTERNATING LAYERS OF DIFFERENT SOIL TYPES.
LAMINATED	COMPOSED OF THIN LAYERS OF VARYING COLOR AND TEXTURE.
NODULES	SECONDARY INCLUSIONS THAT APPEAR AS SMALL LUMPS ABOUT 0.1 TO 0.3 INCH IN DIAMETER.
PARTINGS	INCLUSION OF DIFFERENT MATERIAL LESS THAN ⅛ INCH THICK EXTENDING THROUGH THE SAMPLE.
POCKETS	INCLUSION OF DIFFERENT MATERIAL THAT IS SMALLER THAN THE DIAMETER OF THE SAMPLE.
SEAMS	INCLUSION OF DIFFERENT MATERIAL BETWEEN ⅛ AND 3 INCHES THICK, AND EXTENDS THROUGH THE SAMPLE.
SLICKENSIDED	HAS INCLINED PLANES OF WEAKNESS THAT ARE SLICK AND GLOSSY IN APPEARANCE. SLICKENSIDES ARE COMMONLY THOUGHT TO BE RANDOMLY ORIENTED.
STREAKS OR STAINS	STAINS OF LIMITED EXTENT THAT APPEAR AS SHORT STRIPES, SPOTS OR BLOTCHES.

ROCK TERMS	
BEDDING PLANE	A SURFACE PARALLEL TO THE SURFACE OF DEPOSITION, GENERALLY MARKED BY CHANGES IN COLOR OR GRAIN SIZE.
FRACTURE	A NATURAL BREAK IN ROCK ALONG WHICH NO DISPLACEMENT HAS OCCURED.
JOINT	A NATURAL BREAK ALONG WHICH NO DISPLACEMENT HAS OCCURED, WHICH GENERALLY INTERSECTS PRIMARY SURFACES.
% RECOVERY	THE RATIO OF TOTAL LENGTH OF RECOVERY TO THE TOTAL LENGTH OF CORE RUN, EXPRESSED AS A PERCENTAGE.
RQD - ROCK QUALITY DESIGNATION	THE RATIO OF TOTAL RECOVERED LENGTH OF FRAGMENTS LONGER THAN 4 INCHES TO THE TOTAL RUN LENGTH, EXPRESSED AS A PERCENTAGE.
WEATHERING	THE PROCESS BY WHICH ROCK IS BROKEN DOWN AND DECOMPOSED.

MOISTURE CONTENT

DRY	ABSENCE OF MOISTURE, DUSTY, DRY TO THE TOUCH.
DAMP	SOME PERCEPTIBLE MOISTURE; BELOW OPTIMUM.
MOIST	NO VISIBLE WATER; NEAR OPTIMUM MOISTURE CONTENT.
WET	VISIBLE FREE WATER, USUALLY SOIL IS BELOW WATER TABLE.

CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	POCKET PENETROMETER READING IN TONS/FT2	N-VALUE (BLOWS/FOOT)
VERY SOFT	0 TO 0.25	<2
SOFT	0.25 TO 0.5	2 TO 4
FIRM	0.5 TO 1.0	4 TO 8
STIFF	1.0 TO 2.0	8 TO 15
VERY STIFF	2.0 TO 4.0	15 TO 30
HARD	>4.0 OR 4.5+	>30

CLAY	SILT	SAND			GRAVEL		COBBLES	BOULDERS
		FINE	MEDIUM	COARSE	FINE	COARSE		
0.005mm	No.200	No.40	No.10	No.4	¾"	3"	12"	

U.S. STANDARD SIEVE SIZE

RELATIVE DENSITY-GRANULAR SOILS

CONSISTENCY	N-VALUE (BLOWS/FOOT)
VERY LOOSE	0 TO 4
LOOSE	5 TO 10
MEDIUM DENSE	11 TO 30
DENSE	31 TO 50
VERY DENSE	>50 OR 50+

REFERENCE: THE UNIFIED SOIL CLASSIFICATION SYSTEM, CORPS OF ENGINEERS, U.S. ARMY TECHNICAL MEMORANDUM NO. 3–357, VOL. 1 MARCH, 1953 (REVISED APRIL, 1960)

KEY
TO SYMBOLS AND TERMS

SKG
ENGINEERING

Project: **Proposed Shade Structure - Beaver Fit Locker**
Goodfellow AFB, Texas

B-1

Boring Location: Refer to the borehole location map

Date Started: February 6, 2020 **Date Finished:** February 6, 2020

Drilling Method: Hollow Stem Auger

Hammer Weight: 140 lbs **Drop:** 30 inches

Sampler: Shelby tube/2" split barrel sampler

Surface Elevation:

Depth (feet)	Lithology	Material Description	Samples: Number	Samples: Type	Samples: SPT	Laboratory: W%	Laboratory: PI	Laboratory: Pent. (tsf)
0		fat CLAY (CH); brown, with sand			2/2/3	21.1	29	
					3/7/9			
		lean CLAY (CL); light brown, with sand			9/11/13	22.9	20	
5		GWT not encountered						
		fat CLAY (CH); light brown			14/21/20			
10								
					17/23/25	18.6	41	
15								
					18/26/24			
20		Boring completed at a depth of 20'. Groundwater was not present at the time of drilling activities.						
25								
30								
35								

Attachment D

Laboratory Results

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ANALYSIS RESULTS

CLIENT:	Goodfellow AFB
PROJECT:	Shade Structure
PROJECT #:	20-E-0109
DATE:	2/13/2020

Lab No.	Description	Plastic Limit (%) *	Liquid Limit (%)*	Plasticity Index *	Moisture (%) *	Pass # 4 Sieve (%)*	Pass # 40 Sieve (%)*	Pass # 200 Sieve (%)*
0107	B1 0' 1.5'	23	52	29	21.1	98.0	86.7	73.0
0108	B1 3.5' 5'	20	41	20	22.9	97.0	83.7	74.2
0109	B1 13.5' 15'	29	70	41	18.6	99.9	96.4	91.1

Average PL	24
Average LL	54
Average PI	30
Average % Clay	79.4

Stephanie Cheatheam

Stephanie Cheatheam
Lab/CMT Manager

ATTACHMENT B

GEOTECHNICAL REPORT: PROPOSED GOODFELLOW AIR FORCE BASE DOG TRAINING AREA

SKG ENGINEERING, LLC

Geotechnical Report

Proposed Goodfellow Air Force Base
Dog Training Area
Goodfellow AFB, Texas 76908

12/20/2018
SKG Engineering, LLC
F-7608

PREPARED FOR:
Mr. Ron Trepainer
Senior Civil Engineer
460 East Kearney Blvd
San Angelo, Texas 76908

December 2018

18-E-1561

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December 20, 2018

18-E-1561

Mr. Ron Trepainer
Senior Civil Engineer
460 East Kearney Blvd
Goodfellow AFB, Texas 76908

Subject: Geotechnical Report, Proposed Goodfellow Air Force Base Dog Training Area, Goodfellow AFB, Texas

Mr. Trepainer,

In accordance with your authorization, SKG Engineering has completed its geotechnical investigation at the referenced site. The work was done in accordance with the proposal dated the 1st day of November, 2018. The data and results are included in the attached report.

If you have any questions or comments, or if we can be of any more service to you, please do not hesitate to contact us at (325) 655-1288.

Sincerely,
SKG Engineering, LLC

Jason Clinton, P.E.

SKG Engineering, LLC
F-7608

Attachments - Geotechnical Report

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2.0 Exploration

2.1 Soil Borings

The subsurface explorations were conducted on this site in December 2018. The borehole was drilled to a maximum depth of 20', and the log of the borehole is included in this report. The drilling was performed with a truck mounted air rotary drill rig. The drilling activities were performed in accordance with accepted methods and procedures. The borehole was conducted within the limits of the proposed building area. A location map showing the approximate borehole locations is included in Attachment B.

Material samples were recovered at various depths for testing. The primary means of extracting subsurface soil samples was by the use of a 3" Shelby-tube and/or a 2" O.D. split barrel sampler. Split spoon sampling procedures were performed in accordance with ASTM D 1586 and Shelby tube samples were obtained in accordance with ASTM D 1587. The samples were extruded or removed in the field and placed in moisture tight bags and labeled. The samples were then transported to the laboratory for testing and visual evaluation by geotechnical personnel. The Unified Soil Classification System was utilized in accordance with ASTM D 2487 to verify field classifications. Refer to the logs of borings located in Attachment C for lithology, sample locations and quantities.

2.2 Laboratory Tests

Tests were performed to determine engineering characteristics of the subsurface materials encountered including, but not limited to, soil moisture content (ASTM D 2216), Atterberg Limits (ASTM D 4318) and sieve analysis. The test results can be found in Attachment D. Samples not tested in the laboratory will be retained for a maximum of 60 days and then discarded unless otherwise notified in writing prior to disposal of the samples.

3.0 Subsurface Investigation

3.1 Subsurface Materials and Conditions

The specific subsurface stratum encountered in each borehole is described in the logs of boreholes included in Attachment C. The strata encountered at the boreholes conducted at the site can be divided into three major strata. The first stratum is a layer of fat clay that extends from a depth of 0' to 2'. The second soil stratum consists of lean clay that extends from a depth of 2' to 12'. The third stratum consists of gravel with silt and sand that extends from 12' to the depth of the boreholes.

3.2 Subsurface Water

There was no groundwater noted in the borehole at the time of the investigation. The absence of groundwater noted does not express or imply a groundwater study was performed, which is beyond the scope of this report. It should be noted that groundwater levels are subject to change based on seasonal and climatic conditions.

4.0 Site and Design Considerations

4.1 Basic Considerations

The properties of in-situ soils, site characteristics, and the level of tolerable deflection should be carefully considered during the design phase. A foundation should economically meet the functional requirements of the structure and minimize differential movement of the structure that could cause damage.

Routing of drainage should be addressed in the design phase of the project to ensure drainage is routed away and around proposed foundation systems and erosive conditions on the moderate slopes are avoided.

4.2 Subsurface Moisture

Water, in the form of a liquid, can rise upward through subsurface soils by capillary action, absorption or gravitational pull well above the water table. Water changes from a liquid to a vapor as it evaporates. Water vapor will move from areas of high vapor pressure to a lower vapor pressure through diffusion. Diffusion is how water vapor distributes itself above the water table and occurs in both soils and concrete.

It is generally recognized that the relative humidity in the soils below a foundation will be close to 100%. Such a high relative humidity is reached even when the moisture content in the material below the foundation is found to be low. Without a capillary break or vapor barrier below the foundation, a high relative humidity or water source below a foundation can contribute moisture to the concrete. This can cause soluble alkalis in the concrete to enter into solution thus raising the pH. Moisture induced pH levels in concrete can be on the range of 10 to 12 while normal cured levels can be on the range of 7 to 9.

The impact of subsurface moisture can be reduced by the use of a vapor barrier or capillary break. A vapor barrier below the foundation is recommended when floor coverings or adhesives are sensitive to moisture or alkaline conditions. A vapor barrier can be in the form of poly vinyl sheets and a capillary break can be a sand or granular base. Verification of the vapor emission limitations from the foundation is vital to the selection of the proper vapor barrier system.

4.3 Shrink/Swell Considerations

Shrink/swell movements of the in-situ soils with changes in the soil moisture content are anticipated to be moderate at the site. The Potential Vertical Rise (PVR) was calculated to be on the order of 1-3/4" using the McDowell PVR Method. The PVR was approximated using the McDowell's initial dry soil condition and a potential active zone to fifteen feet below grade. The intent of this section is to provide for a soil removal and replacement for the depths noted below. No finished floor elevations were provided at the time of this report and consideration of specific elevations would have to be reviewed when additional information is available.

The PVR can be reduced to be on the order of 1" by providing a 3' layer of engineered fill below the foundation. The PVR can be reduced to be on the order of ½" by providing a 10' layer of engineered fill below the foundation. When engineered fill is utilized to reduce the PVR, the continuous footings have to bear at the same depth as the depth of the engineered fill or engineered fill should be placed below the grade beam to accomplish the required depth. Refer to the Engineered Fill section for placement and specifications.

The PVR and moreover foundation movement is effected by many factors that influence its magnitude and rate of change. Factors include: seasonal variations in the moisture content between the interior and perimeter of the foundation, topographic relief, vegetative cover, confining pressures, fluctuating and

shallow water tables, and the composition of underlying soils. In-situ clays can expand with the introduction of moisture and shrink with decreases in moisture.

4.4 Foundation System and Recommendations

We recommend an adequately reinforced slab on grade foundation system with grade beams placed as determined by the structural engineer with spread footings to support concentrated point loads and provide lateral stability where necessary. Pier parameters are provided herein, if the structural engineer chooses to utilize a foundation supported by piers. The pier recommendations are for a structurally suspended slab, because of the moderate PVR. We do not recommend to utilize piers with a slab bearing on grade due to the potential movement variation between piers and the slab. We do not foresee the structurally suspended slab as being a feasible option for this project. We recommend to utilize a soil removal and replacement as required by the owner's tolerance for movement. We would recommend a maximum of 1" PVR for any slab on grade foundation system, as a minimum criterial.

4.4.1 Grade Supported Foundation

We recommend a vapor barrier in the form of a poly vinyl sheet directly beneath the foundation with a minimum 8" thick layer of granular base beneath the vapor barrier and a minimum 3' layer of engineered fill beneath the base or as required to bring the finished floor elevation to design grade. Footings shall bear to a depth of 3' below existing grade or engineered fill shall be provided below the perimeter grade beams to a depth of 3' below existing grade to accommodate the soil modification plan. A depth of 8" shall be utilized for the design frost depth. We recommend the poly vinyl vapor barrier to be a minimum 10 ml thickness. The placement of these materials shall be in accordance with the Site Preparation section of this report. We recommend for the poly vinyl to be installed over a sand bed of approximately 1" thick to minimize tears in the vinyl experienced when installed over a granular base. We recommend installing the vapor barrier in a manner to minimize tears and abrasions to the vinyl. We recommend doing a pre-pour inspection to verify that the vinyl is not torn and if so, that it is taped up and sealed, prior to placement of concrete.

We recommend grade beams not supported by piers to be a minimum of 12" wide, the dimensions of spread footings should be a minimum of 30" on all sides, and all footings properly reinforced for the anticipated design loads to minimize the possibility of a local bearing capacity failure.

Shallow continuous footings used for any portion of the foundation system should be structurally tied to the grade beams, spread footings, piers or other structural elements. We recommend bearing the footings a minimum of 1' below finished grade. The allowable bearing pressure exerted by the grade beams or spread footings on the in-situ soils from a depth of 1' to 2' is 2,100 psf and from a depth of 2' to 4' is 2,900 psf. The value of 125 pci for subgrade modulus may be used for design purposes. The value of 28 degrees may be utilized for the internal friction angle of the clayey soils for design purposes. The value of 0.35 for the ultimate lateral sliding resistance coefficient may be utilized for design in regard to the foundation on an engineered fill. The allowable bearing pressure exerted by grade beams bearing into an engineered fill, placed in accordance with the specifications in Site Preparation of this report, is 3,500 psf.

4.4.2 Drilled Piers

Floor slabs that have a high performance criteria and a low tolerance for movement should be structurally suspended on piers. Void cartons should be utilized under grade beams and the slab. The void cartons should be a minimum of 10" thick. If a crawlspace is provided, it should be graded to drain so that water is not permitted to accumulate beneath the floor slab. We recommend to install a vapor barrier for the proposed crawl spaces. We recommend the poly vinyl vapor barrier to be a minimum 10 ml thickness. We do not recommend the use of trapezoidal void forms, due to the varied results of concrete placement

typically experienced. Wall loads should be transmitted to the drilled piers by grade beams and the grade beam should be structurally connected to the piers.

Straight shaft piers can be used for foundation support where column loads are less than 50 kips. The piers should bear a minimum of 15' up to 18' below existing grade, bearing into the firm gravels and clays. The piers should be located below the active zone and founded on a firm, stable stratum. We recommend foregoing utilizing side shear resistance for the allowable bearing capacity of the piers between 0 and 10 feet of depth. The piers can be designed with an allowable side shear resistance of 450 psf for the portion of shaft extending from a depth of 10' to the depth of the borehole, in addition to the allowable end bearing pressure stated below. An allowable side shear resistance of 350 psf for the portion of shaft extending from a depth of 10' to the depth of the borehole may be utilized for uplift resistance. The allowable lateral bearing of the piers on the clayey soils may be taken as 150 psf/f and 50psf/f in the gravels. Field adjustments to some shafts depths may be required due to the variation in the site elevations and varied soils encountered. The allowable end bearing pressure exerted by the piers on the soils 15' to 18' below existing grade is 10,500 psf.

We do not recommend the use of underreamed piers in the subsurface gravel encountered due to the difficulty of construction. We recommend a minimum and maximum shaft diameter of 24" and 42", respectively for piers. Adjacent piers should maintain a minimum center to center spacing of 3 times the end bearing diameter. Piers spaced as specified do not require a reduction in the load carrying capacity of the individual piers due to group action.

Settlement of properly constructed piers are estimated to be less than ½" for loads of 50 kips or less. Additional settlement may occur if the load exceeds 50 kips.

Piers should be inspected for proper size, depth and reinforcement placement prior to the placement of any concrete. It is essential that the bearing stratum of the piers be identified by the engineer or his representative. A representative from SKG Engineering should be present during drilling activities to approve the bearing strata. Each pier excavation should be completed and concrete placed within one day. In no instance should any pier excavation be left open overnight. We recommend alternating the drilling and placement of concrete for shafts in groups. Foundation concrete should be placed in clean, dry holes. Bottoms of pier excavation should be cleared of loose debris prior to the placement of concrete.

We anticipate temporary pier casing will have to be used to prevent caving or sloughing of the hole during pier drilling operations, due to the subsurface stratum. The groundwater encountered will hinder pier installation processes and possibly the pier drilling. The contractor should anticipate utilizing all measures required to install the piers which may include: casing the piers, dewatering the pier excavations by means of pumps and pumping of concrete from the bottom of the pier.

4.4.3 Uplift Loads

The piers could experience tensile loads as a result of post construction heave of the clay soils. The shafts must contain sufficient reinforcing steel for the length of the shaft to accommodate the net tensile loads. There are several factors affecting the magnitude of the loads, such as; shaft diameter, soil parameters and in-situ moisture levels during and after construction.

4.5 Seismic Design Criteria

We have provided the seismic criteria for use in the structural design phase of the project. The seismic criteria is based on the 2015 International Building Code. The stratum referenced in this section refer to

those described in the section Subsurface Materials and Conditions of this report. Please refer to the following table for seismic design parameters.

Mapped Spectral Response Acceleration					
Description	Site Class	Short Periods (S_s)	1 Second Period (S_1)	Site Coefficients	
				F_a	F_v
Stratum I	E	0.09g	0.04g	2.5	3.5
Stratum II	D	0.09g	0.04g	1.6	2.4
Stratum III	C	0.09g	0.04g	1.2	1.7

The International Building Code (IBC) requires a site soil profile determination extending a depth of 100 feet for seismic site classification. The scope of our geotechnical services requested does not include the 100 foot soil profile determination. Additional services can be performed if requested or required, since our scope terminated the boreholes at a depth of 20 feet. We would recommend utilizing a Seismic Site Classification of D for this site, based on the soil conditions to a depth of 20 feet.

4.6 Lateral Design Criteria

Retaining walls that are sensitive to movements on the order of 1-3/4" should be supported by piers bearing a minimum of 15' below existing grade in a firm stable stratum. We recommend that wall footings bear a minimum of 2' below finished grade and be designed to withstand the lateral forces applied by earth pressures described below. The footings should not exceed the allowable bearing capacity of the soil on which it bears. The allowable passive earth pressure is 298 psf/ft of the depth, to a maximum of 1,500 psf.

Lateral earth pressures acting on the retaining walls will depend on several parameters such as; backfill used, drainage conditions and loads of adjacent structures. Recommended lateral earth pressures expressed as equivalent fluid pressures are presented below. The pressures below are assuming positive drainage is provided to prevent hydrostatic pressures.

Equivalent Fluid Pressures		
Material	At Rest (psf/ft)	Active (psf/ft)
Stratum I	--	--
Stratum II&III	100	60
Engineered Fill	55	35

4.7 Backfill Material and Compaction

Retaining walls should be backfilled with a 12" width of pea gravel for the height of the wall. Backfill behind the pea gravel should be a non-expansive fill material with a maximum particle size of 4" nominal diameter three quarters of the wall height and a clay cap on the top quarter of the wall height. We recommend providing weep holes along the bottom of the retaining wall height at 10' on center maximum spacing for the length of the wall. We recommend placing fill in maximum 8" loose lifts and compacted to between 93% to 97% of the Standard Proctor Density. Compaction tests should be performed on each lift.

4.8 Drainage

Positive drainage away from the foundation must be provided and maintained to reduce subsurface moisture variations. The minimum recommended slope away from the foundation is 5% for the first 10

feet for areas not covered by a sidewalk or pavement. Water shall not be permitted to pond on the finished site.

Due to the presence of in-situ clays, we recommend through the design and construction phase an emphasis on maintaining a stable moisture content in the soils beneath and adjacent to the foundation be a major priority. Temporary and permanent control measures should be properly designed and installed to ensure positive drainage away from the foundation to maintain a quasi stable soil moisture content. The measures include, but are not limited to gutters, sprinkler systems, and a site grading plan.

4.9 Underground Utilities

The backfill material used for underground utility trenches should be on-site materials or imported clayey materials. We recommend not using a granular material to avoid the possibility of water migration through the trenches and possibly under foundation systems at the site.

4.10 Exterior Flatwork Considerations

Engineered fill shall be used as needed to bring the flatwork to grade. Control joints should be cut at a maximum spacing of 6' for the length of the flatwork and expansion joints at a maximum spacing of 50'. We recommend installing flatwork as not to impound water adjacent to structural foundations.

4.11 Trenching and Excavation Requirements

The guidelines specified by Occupational Safety and Health Administration (OSHA) should be followed for all excavation activities. The OSHA Standards (29 CFR Part 1926 revised, 1989) require all trenches that exceed 5' in depth to be shored or benched appropriately unless the soil stratum is "solid" rock.

The OSHA standards should be strictly adhered to for all excavation activities. The classification of the soils encountered at the site are Type B soils. The soil classifications are based on soils encountered in the boreholes conducted at the site. Refer to the following OSHA Table B-1 for slope requirements for excavations that are less than 20 feet in depth. Trenches in excess of 20 feet in depth should be designed by a registered professional engineer.

Maximum Allowable Slopes		
Stratum	Horizontal	Vertical
Stable Rock	Vertical	1
Type A	3/4	1
Type B	1	1
Type C	1-1/2	1

The above information is provided for temporary excavations. We recommend that any permanent trenches proposed for the site should have a minimum of 4:1 side slopes. Any permanent trenches or channels should be lined with erosion control measures.

5.0 Site Preparation

5.1 Subgrade

Remove the top 6" of surface soils, any deleterious material, and in-situ soils as necessary to bring the finished floor elevation to design grade. The top 6" of material should then be scarified, moisture conditioned, and compacted to at least 95% of the Standard Proctor Density within 2% points of the optimum moisture content. Any soft or pumping areas are to be excavated and an engineered fill shall be used as backfill. Where existing slopes exceed ten horizontal to one vertical, the cross slope should be benched to provide a minimum of 6' bench width.

5.2 Engineered Fill

An approved select fill shall be used to bring the foundation system to grade. It shall be a non-granular, cohesive soil, free of deleterious material, have a liquid limit of less than 40, and a plasticity index between 6 and 14. The select fill shall meet the following percent retained on sieve requirements: 2-1/2": 0-5%, No. 4: 40-80%, and No. 40: 50-85% or obtain approval from the geotechnical engineer. The fill should be installed in maximum eight inch loose lifts and compacted to at least 95% of the Standard Proctor Density within 3% points of the optimum moisture content. Base consisting of TxDOT Type A, Grade 2 limestone will be accepted as engineered fill. Blended materials utilized for engineered fill will have to meet the specifications herein and be approved by the geotechnical engineer. If a blended material is approved, the contractor shall blend the material and have one stockpile for the entire project. Continuous blending of material throughout the duration of the project is not acceptable.

5.3 Flexible Base Material

Provide compacted base consisting of Type A, Grade 2, limestone material below the foundation. Compact to 96% of the Standard Proctor Density within 2% points of the optimum moisture content. Material shall be placed in lifts not to exceed 8". Alternative flexible base materials provided by a local suppliers which do not meet theses specifications shall be approved by the Engineer of record.

5.4 Testing

Test results of the engineered fill shall be submitted to the engineer of record for approval prior to incorporating into the work. Arrange for a testing agency to verify flexible base, engineered fill, and subgrade compaction and moisture content. To confirm the compaction of the subgrade, engineered fill, and base we recommend the more stringent of three density test for each lift placed or one density test for every 2,000 square feet of foundation area for each lift placed. The Standard Proctor Density shall be determined in accordance with ASTM D698.

6.0 Limitations

The recommendations presented in this report are based upon the information obtained from the borings performed at the site and from other information discussed in this report. This report is based upon the findings from the borings made and may not identify all subsurface variations which exist across the site. The nature and extent of such variations may not become evident until construction. If significant variations appear, contact SKG Engineering to further access the design criteria and the recommendations contained within this report.

The scope of services for this project does not include either specifically or by implication any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such conditions, the appropriate investigations should be performed.

No warranties, either expressed or implied, are intended or made. In the event that changes in the nature, design, or location of the project as outlined in this report are made, the recommendations contained in this report shall not be considered valid unless SKG Engineering reviews the changes and either verifies or modifies the conclusions of this report in writing.

Attachment A

Field Conditions

Summary of Field Conditions

The following field conditions were observed during the field exploration activities.

1. The site is developed with current facilities. The accessibility of some types of equipment should be verified in some of the areas of the site where multiple buildings are in the area.

2. The surface soil conditions on the site are generally clay that is considered a soft soil material. The soil conditions will probably prove to hinder mobilization of some types of construction equipment during rain events that saturate the soils.

3. Groundwater was not present at the time of drilling activities in any of the boreholes.

4. No rock was encountered in any of the boreholes conducted at the site.

5. Site soils are not of quality to be used for engineered fill material under the foundation systems.

Attachment B

Borehole Location Map

SKG
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FIRM REGISTRATION NUMBER F-7608
www.skge.com

PROPOSED DOG TRAINING AREA
GOODFELLOW AIR FORCE BASE
SAN ANGELO, TEXAS

BOREHOLE LOCATION MAP

DWG BY: DLH	DWG. DATE: 12.20.2018
JOB NO. 18-E-1561	SHEET NO. BH1
SCALE: 1"=100'	

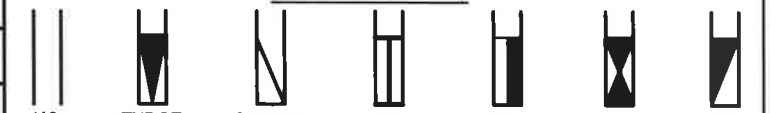
Attachment C

Logs of Boreholes

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISION			GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COURSE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE.)	GRAVEL AND GRAVELLY SOILS (MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE)	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL GRADED GRAVELS, GRAVEL–SAND MIXTURES, LITTLE OR NO FINES.
				GP	POORLY GRADED GRAVELS OR GRAVEL–SAND MIXTURES, LITTLE OR NO FINES.
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL–SAND–SILT MIXTURES.
				GC	CLAYEY GRAVELS, GRAVEL–SAND–SILT MIXTURES.
	SILTS AND CLAYS (MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE)	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.
				SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES.
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND–SILT MIXTURES.
				SC	CLAYEY SANDS, SAND–CLAY MIXTURES.
FINE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE.)	SILTS AND CLAYS (LIQUID LIMIT LESS THAN 50.)			ML	INORGANIC SILTS AND VERY FINE SANDS, FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS AND WITH SLIGHT PLASTICITY.
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY.
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50.)			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS.
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS.
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS.

SAMPLER TYPE



WATER LEVEL AT END OF DRILLING

WATER TABLE AT TIME OF DRILLING

SOIL TERMS	DESCRIPTION
BLOCKY	CONTAINS CRACKS OR FAILURE PLANES RESULTING IN ROUGH CUBES OF MATERIAL.
CALCAREOUS	CONTAINS APPRECIABLE QUANTITIES OF CALCIUM CARBONATE.
FISSURED	CONTAINS SHRINKAGE CRACKS, WHICH ARE FREQUENTLY FILLED WITH FINE SAND OR SILT. THE FISSURES ARE USUALLY NEAR VERTICAL IN ORIENTATION.
INTERBEDDED	COMPOSED OF ALTERNATING LAYERS OF DIFFERENT SOIL TYPES.
LAMINATED	COMPOSED OF THIN LAYERS OF VARYING COLOR AND TEXTURE.
NODULES	SECONDARY INCLUSIONS THAT APPEAR AS SMALL LUMPS ABOUT 0.1 TO 0.3 INCH IN DIAMETER.
PARTINGS	INCLUSION OF DIFFERENT MATERIAL LESS THAN ⅛ INCH THICK EXTENDING THROUGH THE SAMPLE.
POCKETS	INCLUSION OF DIFFERENT MATERIAL THAT IS SMALLER THAN THE DIAMETER OF THE SAMPLE.
SEAMS	INCLUSION OF DIFFERENT MATERIAL BETWEEN ⅛ AND 3 INCHES THICK, AND EXTENDS THROUGH THE SAMPLE.
SLICKENSIDED	HAS INCLINED PLANES OF WEAKNESS THAT ARE SLICK AND GLOSSY IN APPEARANCE. SLICKENSIDES ARE COMMONLY THOUGHT TO BE RANDOMLY ORIENTED.
STREAKS OR STAINS	STAINS OF LIMITED EXTENT THAT APPEAR AS SHORT STRIPES, SPOTS OR BLOTCHES.

ROCK TERMS	
BEDDING PLANE	A SURFACE PARALLEL TO THE SURFACE OF DEPOSITION, GENERALLY MARKED BY CHANGES IN COLOR OR GRAIN SIZE.
FRACTURE	A NATURAL BREAK IN ROCK ALONG WHICH NO DISPLACEMENT HAS OCCURED.
JOINT	A NATURAL BREAK ALONG WHICH NO DISPLACEMENT HAS OCCURED, WHICH GENERALLY INTERSECTS PRIMARY SURFACES.
% RECOVERY	THE RATIO OF TOTAL LENGTH OF RECOVERY TO THE TOTAL LENGTH OF CORE RUN, EXPRESSED AS A PERCENTAGE.
RQD - ROCK QUALITY DESIGNATION	THE RATIO OF TOTAL RECOVERED LENGTH OF FRAGMENTS LONGER THAN 4 INCHES TO THE TOTAL RUN LENGTH, EXPRESSED AS A PERCENTAGE.
WEATHERING	THE PROCESS BY WHICH ROCK IS BROKEN DOWN AND DECOMPOSED.

MOISTURE CONTENT

DRY	ABSENCE OF MOISTURE, DUSTY, DRY TO THE TOUCH.
DAMP	SOME PERCEPTIBLE MOISTURE; BELOW OPTIMUM.
MOIST	NO VISIBLE WATER; NEAR OPTIMUM MOISTURE CONTENT.
WET	VISIBLE FREE WATER, USUALLY SOIL IS BELOW WATER TABLE.

CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	POCKET PENETROMETER READING IN TONS/FT2	N-VALUE (BLOWS/FOOT)
VERY SOFT	0 TO 0.25	<2
SOFT	0.25 TO 0.5	2 TO 4
FIRM	0.5 TO 1.0	4 TO 8
STIFF	1.0 TO 2.0	8 TO 15
VERY STIFF	2.0 TO 4.0	15 TO 30
HARD	>4.0 OR 4.5+	>30

CLAY	SILT	SAND			GRAVEL		COBBLES	BOULDERS
		FINE	MEDIUM	COARSE	FINE	COARSE		
0.005mm		No.200	No.40	No.10	No.4	¾"	3"	12"

U.S. STANDARD SIEVE SIZE

RELATIVE DENSITY-GRANULAR SOILS

CONSISTENCY	N-VALUE (BLOWS/FOOT)
VERY LOOSE	0 TO 4
LOOSE	5 TO 10
MEDIUM DENSE	11 TO 30
DENSE	31 TO 50
VERY DENSE	>50 OR 50+

REFERENCE: THE UNIFIED SOIL CLASSIFICATION SYSTEM, CORPS OF ENGINEERS, U.S. ARMY TECHNICAL MEMORANDUM NO. 3–357, VOL. 1 MARCH, 1953 (REVISED APRIL, 1960)

KEY
TO SYMBOLS AND TERMS

SKG ENGINEERING

Project: **Proposed Dog Training Facility**
San Angelo, Texas

B-1

Boring Location: Refer to the borehole location map

Date Started: December 13, 2018 | **Date Finished: December 13, 2018**

Drilling Method: Air rotary

Hammer Weight: 140 lbs | **Drop: 30 inches**

Sampler: Shelby tube/2" split barrel sampler

Depth (feet)	Lith-ology	Material Description	Samples: Number	Samples: Type	Samples: SPT	Laboratory: M%	Laboratory: PI	Laboratory: Pen (tsf)
		Surface Elevation:						
0		fat CLAY (CH); brown			2/4/5	24.3	31	
		lean CLAY (CL); tan			7/9/10			
5		GWT not encountered			6/7/8	12.9	27	
10					50-5"	16.2	24	
		silty clayey GRAVEL (GC-GM)						
15					50-3"			
20					50-2"			
		Boring completed at a depth of 20'. Groundwater was not present at the time of drilling activities.						
25								
30								
35								

Attachment D

Laboratory Results

SKG
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ANALYSIS RESULTS

CLIENT: GAFB
PROJECT: Dog Training Area
PROJECT #: 18-E-1561
DATE: 12/20/2018

Lab No.	Description	Plastic Limit (%) *	Liquid Limit (%)*	Plasticity Index *	Moisture (%) *	Pass # 4 Sieve (%)*	Pass # 40 Sieve (%)*	Pass # 200 Sieve (%)*
1258	B1 0' 1.5'	20	51	31	24.3	99.0	94.6	75.0
1259	B1 3.5' 5'	21	48	27	12.9	99.2	87.4	62.2
1260	B1 8.5' 10'	20	44	24	16.2	95.6	90.3	86.5

Average PL	20
Average LL	48
Average PI	27
Average % Clay	74.6

Stephanie Cheatheam

Stephanie Cheatheam
Lab/CMT Manager

ATTACHMENT C:

DAVIS BACON WAGE DETERMINATION

General Decision Number: TX20200282 08/28/2020

Superseded General Decision Number: TX20190282

State: Texas

Construction Type: Building

Counties: Irion and Tom Green Counties in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate,if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the

federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	08/28/2020

BOIL0074-003 01/01/2017

	Rates	Fringes
BOILERMAKER	$ 28.00	22.35

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* ENGI0178-005 06/01/2020

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
(1) Tower Crane	$ 32.85	13.10
(2) Cranes with Pile Driving or Caisson Attachment and Hydraulic Crane 60 tons and above	$ 28.75	10.60
(3) Hydraulic cranes 59 Tons and under	$ 32.35	13.10

IRON0084-011 06/01/2019

	Rates	Fringes

IRONWORKER, ORNAMENTAL.....$ 24.42 7.12

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* PLUM0404-001 09/01/2019

	Rates	Fringes
PLUMBER	$ 25.55	8.76

SUTX2014-062 07/21/2014

	Rates	Fringes
BRICKLAYER	$ 20.00	0.00
CARPENTER, Excludes Drywall Hanging, and Metal Stud Installation	$ 13.82	0.00
CEMENT MASON/CONCRETE FINISHER	$ 13.76	0.00
DRYWALL HANGER AND METAL STUD INSTALLER	$ 16.72	0.00
ELECTRICIAN	$ 23.18	6.31
INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation)	$ 19.77	7.13
IRONWORKER, REINFORCING	$ 12.27	0.00
IRONWORKER, STRUCTURAL	$ 22.16	5.26
LABORER: Common or General	$ 9.74	0.00

LABORER: Mason Tender - Brick	$ 11.38	0.00
LABORER: Mason Tender - Cement/Concrete	$ 10.58	0.00
LABORER: Pipelayer	$ 12.49	2.13
LABORER: Roof Tearoff	$ 11.28	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	$ 14.25	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader	$ 13.93	0.00
OPERATOR: Bulldozer	$ 18.29	1.31
OPERATOR: Drill	$ 16.22	0.34
OPERATOR: Forklift	$ 14.83	0.00
OPERATOR: Grader/Blade	$ 13.37	0.00
OPERATOR: Loader	$ 13.55	0.94
OPERATOR: Mechanic	$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete)	$ 16.03	0.00
OPERATOR: Roller	$ 12.70	0.00
PAINTER (Brush, Roller, and Spray)	$ 15.00	0.73

PIPEFITTER.....$ 25.80 8.55

ROOFER.....$ 13.17 0.26

SHEET METAL WORKER (HVAC Duct Installation Only).....$ 22.73 7.52

SHEET METAL WORKER, Excludes HVAC Duct Installation.....$ 15.00 0.00

TILE FINISHER.....$ 11.22 0.00

TILE SETTER.....$ 14.74 0.00

TRUCK DRIVER: Dump Truck.....$ 12.39 1.18

TRUCK DRIVER: Flatbed Truck.....$ 19.65 8.57

TRUCK DRIVER: Semi-Trailer Truck.....$ 12.50 0.00

TRUCK DRIVER: Water Truck.....$ 12.00 4.11

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours

they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were

prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted

because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

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            U.S. Department of Labor
            200 Constitution Avenue, N.W.
            Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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          END OF GENERAL DECISION"
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Checklist for Certifications and Documentation:

____Qualifications Documentation

____Proposal Bond

____References

____Insurance Certification or Binder Certification

____Workers' Compensation Affidavit

____Civil Rights Compliance

____Government Code 2270 Affidavit

____Child Support Statement

____Proposal Cost Worksheets

____Submission Affidavit

***SUBMISSION AFFIDAVIT MUST BE SIGNED, NOTORIZED, AND INCLUDED WITH PROPOSAL. FAILURE TO INCLUDE WILL DISQUALIFY SUBMISSION.**

EXHIBIT A

VENDOR REFERENCES

Please list at least three (3) companies or governmental agencies where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR PROPOSAL.

Reference One

Government/Company Name: _____
Address: _____
Contact Person and Title: _____
Phone: _____ Fax: _____
Contract Period: _____ Scope of Work: _____

Reference Two

Government/Company Name: _____
Address: _____
Contact Person and Title: _____
Phone: _____ Fax: _____
Contract Period: _____ Scope of Work: _____

Reference Three

Government/Company Name: _____
Address: _____
Contact Person and Title: _____
Phone: _____ Fax: _____
Contract Period: _____ Scope of Work: _____

EXHIBIT B

Insurance Certification or Binder Certification

I, _____, as a duly authorized representative of _____
_____,
(full name) (name of firm)

certify that evidence of required general liability, worker's compensation, and professional liability insurance for personnel assigned to the project and automobile insurance for any vehicles used for the project in the amounts in this RFP shall be provided to the issuer of this RFP within 10 calendar days of any Notice of Award.

Signature – Company Official	Printed/Typed Firm Name
Printed/Typed Name/Title	Date

Insurance Requirements

Worker's Compensation – Statutory Amount Employer's Liability - $500,000.00

Commercial General Liability
Personal injury and property damage:
$1,000,000.00 combined single limit each occurrence and
$2,000,000.00 aggregate

Business Automobile Liability for all vehicles
Bodily Injury and property damage:
$1,000,000.00 combined single limit any one accident

EXHIBIT C

WORKERS' COMPENSATION AFFIDAVIT

STATE OF _____ §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument and, being by me first duly sworn, upon oath declared that the statements and capacity acted in are true and correct.

I, _____ am a duly authorized officer of _,
and hereby certify that all "persons providing services on the project" will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commissioners' Division of Self-Insurance Regulation. Providing false or misleading information may subject the company to administrative penalties, criminal penalties, civil penalties or other civil actions.

I furthermore certify that the company will provide, to Tom Green County, certificates of coverage showing statutory workers' compensation insurance coverage for all "persons providing services on the project", including all entities.

I hereby acknowledge that "persons providing services on the project" includes all persons or entities performing all or part of the services the company has undertaken to perform on the project, regardless of whether that person contracted directly with the company and regardless of whether that person has employees. This includes, without limitation, independent companies, contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity that furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor transportation, or other service related to the project. "Services" do not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

I furthermore acknowledge that failure to comply with any of these provisions is a breach of contract by the company which entitles Tom Green County to declare the contract void if the company does not remedy the breach within ten days after receipt of notice of breach from Tom Green County.

Signature – Company Official	Printed/Typed Firm Name
Printed/Typed Name/Title	Date

EXHIBIT D

CIVIL RIGHTS COMPLIANCE

1. Nondiscrimination

The Project Delivery Firm, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Project Delivery Firm shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 and Part 710.405(b) of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

2. Solicitations for Subcontracts Including Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Project Delivery Firm for work to be performed under a subcontract including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Project Delivery Firm of its obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, sex, or national origin.

Signature – Company Official	Printed/Typed Firm Name
Printed/Typed Name/Title	Date

EXHIBIT E

GOVERNMENT CODE 2270 AFFIDAVIT

I, _____,
(Person's Name)

the undersigned representative of _____
(Company or Business Name)

(hereafter referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named-above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and

2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.001, Texas Government Code:
1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and

2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

_____ _____
DATE SIGNATURE OF COMPANY REPRESENTATIVE

On this the _____ day of _____, 20____, personally appeared

_____, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

NOTARY SEAL

_____
NOTARY SIGNATURE

_____
Date

EXHIBIT F

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. *See* Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of person who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 **Name of local government officer with whom filer has employment or business relationship.**

_____
Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

☐ Yes ☐ No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐ Yes ☐ No

D. Describe each employment or business relationship with the local government officer named in this section.

4

_____ _____
Signature of person doing business with the governmental entity Date

EXHIBIT G

Form **W-9**
(Rev. December 2014)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Print or type
See Specific Instructions on page 2.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification; check only **one** of the following seven boxes:
☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate
☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ►
Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.
☐ Other (see instructions) ►

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any)
Exemption from FATCA reporting code (if any)
(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) | Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number
___ - ___ - ____

or

Employer identification number
__ - _____

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here | **Signature of U.S. person** ► | **Date** ►

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at *www.irs.gov/fw9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

EXHIBIT H
CHILD SUPPORT STATEMENT FOR

NEGOTIATED CONTRACTS AND GRANTS

Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity named in this contract, proposals, or application is eligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

List below the name and social security number of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25% of the business entity submitting the proposals or application.

NAME	**SOCIAL SECURITY NUMBER**

Section 231.006, Family Code, specifies that a child support obligor who is more than 30 days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25% is not eligible to receive payments from state funds under a contract to provide property, materials, or services; or receive a state-funded grant or loan.

A child support obligor or business entity ineligible to receive payments described above remains ineligible until all arrearage have been paid or the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency.

Except as provided by Section 231.302(d), Family Code, a social security number is confidential and may be disclosed only for the purposes of responding to a request for information from an agency operating under the provision of Parts A and D of Title IV of the federal Social Security Act (42 USC Section 601417 and 651-669).

Signature – Company Official	Printed/Type Firm Name
Printed/Typed Name and Title	Date

EXHIBIT I
PROPOSAL COST WORKSHEET – PHYSICAL TRAINING CANOPY

RFP 21-005

"Goodfellow Air Force Base Canopy Structures – Physical Training & Military Working Dog"

SCHEDULE OF ITEMS

Provide all labor, equipment, materials, and incidentals necessary to accomplish Basic CLIN 0001 in accordance with the specifications and drawings subject to the terms and conditions of the complete contract. Total Basic Performance period shall be ONE HUNDRED & EIGHTY (180) calendar days for Basic CLIN without awarded CLIN Options. Note, CLIN Options if awarded will change the total performance period time as described below.

CLIN	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT

0001 **(Basic CLIN):** Construct Physical Training Canopy: Perform all work as described in the plans and specifications unless otherwise noted as a separate CLIN below. Total performance period is 180 calendar days.

Job L.S. **** _____
UNIT TOTAL

TOTAL CLIN (Basic): CLIN 0001

_____
TOTAL

0002 **(Option CLIN):** Construct Physical Training Canopy Option. Perform all work as described in the plans and specifications unless otherwise noted as a separate CLIN below. Total performance period is 210 calendar days.

Job L.S. ****
UNIT

(Option): CLIN 0002 _____
TOTAL

TOTAL CLIN 0001 + CLIN 0002 - PT

_____
TOTAL

EXHIBIT J
PROPOSAL COST WORKSHEET – MILITARY WORKING DOG CANOPY

RFP 21-005

"Goodfellow Air Force Base Canopy Structures – Physical Training & Military Working Dog"

SCHEDULE OF ITEMS

Provide all labor, equipment, materials, and incidentals necessary to accomplish Basic CLIN 0001 in accordance with the specifications and drawings subject to the terms and conditions of the complete contract. Total Basic Performance period shall be ONE HUNDRED & TWENTY (120) calendar days for Basic CLIN without awarded CLIN Options. Note, CLIN Options if awarded will add change the total performance period time as described below.

CLIN	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT

0001 (Basic CLIN): Construct Military Working Dog Canopy: Perform all work as described in the plans and specifications unless otherwise noted as a separate CLIN below. Total performance period is 120 calendar days.

Job	L.S.	****	_____
		UNIT	TOTAL

TOTAL CLIN (Basic): CLIN 0001 **_____**

TOTAL

0002 (Option CLIN): Provide concrete slab for bleachers with chain-link fence enclosure. Perform all work as described in the plans and specifications unless otherwise noted as a separate CLIN below. Total performance period is 130 calendar days.

Job	L.S.	****	
		UNIT	
(Option): CLIN 0002			_____
			TOTAL

TOTAL CLIN 0001 + CLIN 0002 - MWD

_____

TOTAL

EXHIBIT K
PROPOSAL COST WORKSHEET – FIRE STATION CANOPY

RFP 21-005

SCHEDULE OF ITEMS

Provide all labor, equipment, materials, and incidentals necessary to accomplish Basic CLIN 0001 in accordance with the specifications and drawings subject to the terms and conditions of the complete contract. Total Basic Performance period shall be ONE HUNDRED & TWENTY (120) calendar days for Basic CLIN without awarded CLIN Options.

CLIN	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
0001 (Basic CLIN):	Construct Fire Station OH protection: Perform all work as described in the plans and specifications unless otherwise noted as a separate CLIN below. Total performance period is 120 calendar days.	Job	L.S.	**** UNIT	**TOTAL**

TOTAL CLIN (Basic): CLIN 0001

TOTAL

EXHIBIT L

PROPOSAL COST WORKSHEET –CONSTRUCT ARMY PHYSICAL TRAINING FIELD

RFP 21-005

SCHEDULE OF ITEMS

Provide all labor, equipment, materials, and incidentals necessary to accomplish Basic CLIN 0001 in accordance with the specifications and drawings subject to the terms and conditions of the complete contract. Total Basic Performance period shall be ONE HUNDRED & TWENTY (120) calendar days for Basic CLIN without awarded CLIN Options. Note, CLIN Options if awarded will add additional performance period time as described below.

CLIN	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT

0001 (Basic CLIN): Construct Army Physical Training Field: Perform all work as described in the plans and specifications unless otherwise noted as a separate CLIN below. Total performance period is 120 calendar days.

Job L.S. **** _____
UNIT **TOTAL**

TOTAL CLIN (Basic): CLIN 0001

_____
TOTAL

0002 (Option CLIN): Provide area lighting and electricity. Perform all work as described in the plans and specifications unless otherwise noted as a separate CLIN below. Total performance period is 60 calendar days.

Job L.S. **** _____
UNIT **TOTAL**

0003 (Option CLIN): Provide connecting sidewalk and Concrete Slab for bleachers. Perform all work as described in the plans and specifications unless otherwise noted as a separate CLIN below. Total performance period is 30 calendar days.

Job L.S. **** _____
UNIT **TOTAL**

TOTAL CLIN (Options): CLIN 0002 + CLIN 0003

Job	L.S.	****	_____
		UNIT	**TOTAL**

TOTAL CLIN (Basic + Options): CLIN 0001 + CLIN 0002 + CLIN 0003

_____

TOTAL

SUBMISSION AFFIDAVIT

RFP 21-005

"Goodfellow Air Force Base DEAAG Construction - Canopy Structures & PT Field"

The undersigned certifies that the submitted prices contained in this bid have been carefully checked and are submitted as correct and final and if bid is accepted (within 90 days unless otherwise noted by vendor), agrees to furnish any and/or all items upon which prices are offered, at the price(s) and upon the conditions contained in the Specifications.

STATE OF _____ COUNTY OF _____ BEFORE ME, the undersigned authority, a Notary Public in and for the State of _____, on this day personally appeared _____who, after having first been duly sworn, upon oath did depose and say;
That the foregoing bid submitted by _____
hereinafter called "Offeror" is the duly authorized agent of said company and that the person signing said proposal has been duly authorized to execute the same. Offeror affirms that they are duly authorized to execute this contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other offeror, and that the contents of this proposal as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this bid.

Respondent hereby assigns to purchaser any and all claims for overcharges associated with this Contract which arise under the antitrust laws of the United States, 15 USCA Section 1 et seq., and which arise under the antitrust laws of the State of Texas, Tex. Bus. & Com. Code, Section 15.01, et seq.

_____	_____
Printed Name of Vendor	Company Name
_____	_____
Signature of Vendor	Title
_____	_____/_____
Address of Vendor	Telephone Number / Fax Number
_____	_____
City, State, Zip	Email Address

Subscribed and sworn to before me by _____on this day of _____, 20___.

Notary Public in and for the State of _____