October 8, 2020

ADDENDUM NO. Three (3)
PROJECT NO: 112741
TITLE OF PROJECT: Headquarters HQ Replacement Phase 1
FACILITY LOCATION: Tyler State Park, Smith County, Texas

NOTICE TO ALL BIDDERS:

This addendum shall be considered part of the Contract Documents and is issued to change, amplify, or delete from or otherwise explain the documents where provisions of this addendum differ from those of the original contract documents. This addendum shall have precedence over the original contract documents and shall govern.

Bidders are hereby notified that they shall incorporate this addendum in their bid, and it shall be construed that the Contractor's Bid shall reflect with full knowledge, all items, changes and modifications to the contract documents herein specified.

Bidders are advised to check for updates, addenda issuance, and bid opening date changes at the TPWD Infrastructure Division Website:

http://www.tpwd.state.tx.us/business/bidops/current_bid_opportunities/construction/

CLARIFICATION: TPWD does not approve or deny substitution request prior to the award of contract. Refer to the specification and construction documents for requirements.

REFER to and INCLUDE the attached Addendum No. 3 documents signed and sealed by the Architect of Record on October 7, 2020. *(81 pages*) Questions received within the timeframe stipulated in the Invitation to Bid and Contract Documents are attached in Exhibit A. Answers are provide immediately following each question.

Date, time and location for receipt of bids remains the same.
Tuesday, October 27, 2020 at 2:00PM

Bidders shall acknowledge receipt of this addendum in the space provided on the Contractor's Bid form located above the signature block. WARNING: BIDDER'S FAILURE TO ACKNOWLEDGE RECEIPT OF ADDENDA MAY RESULT IN REJECTION OF BID.

END OF ADDENDUM NUMBER THREE (3)

Sincerely,

/s/ Mandy Holcomb
Mandy Holcomb, CTCD, CTCM
Sr. Contract Manager
Infrastructure Division

ADDENDUM NO. 3

Tyler State Park
Headquarters
TPWD Project Number 112741
FPC Project Number 92705
October 8, 2020

The following Addendum modifies and becomes part of the Contract Documents dated 07/03/2020 for this project:

MODIFICATIONS TO THE CONTRACT DOCUMENTS

Item 1.01. Bidding Questions (Two, 8 ½ x 11 pages)
Refer to Exhibit A for bidding questions and answers.

Item 1.02 MEP Narrative (Two, 8 ½ x 11 pages)
Refer to Exhibit B for MEP narrative.

Item 1.03 Technology Narrative (Two, 8 ½ x 11 pages)
Refer to Exhibit C for Technology narrative.

Item 1.04 Geotechnical report (37, 8 ½ x 11 pages)
Refer to Exhibit D for Geotechnical report.

Item 2.01 Specification Section 07 2500 Weather Barriers (Four, 8 ½ x 11 pages)
Add section 2.02, A related to UV barriers

Item 2.02 Specification Section 31 3116 Termite Control (Two, 8 ½ x 11 pages)
Add section in its entirety to project manual.

Item 3.01 Cover Sheet (One 24 x 36 sheet)
Revise contractor staging note
Revise electrical code to be NEC 2020

Item 3.02 Sheet L101 Tree Mitigation Plan (One 24 x 36 sheet)
Add tree clearing note at transformer pad

Item 3.03 Sheet A101 Site Plan (One 24 x 36 sheet)
Revise site plan key notes.

Item 3.04 Sheet A201 Floor Plans (One 24 x 26 sheet)
Revise floor plan key notes.

Item 3.05 Sheet A202 Enlarged Floor Plan Area A (One 24 x 26 sheet)
Revise floor plan key notes.

Item 3.06 Sheet A602 Interior / Storefront Elevations (One 24 x 26 sheet)
Add curtain wall note to window type SF05.

Item 3.07 Sheet A803 Section Details (One 24 x 26 sheet)
Revise detail note.

Item 3.08 Sheet A804 Door Details (One 24 x 26 sheet)
Revise detail note.

Item 3.09 Sheet S202 Floor Plan Framing Plan – Area A (One 24 x 26 sheet)
Revise radio tower note

Item 3.10 Sheet S311 Concrete Details (One 24 x 26 sheet)
Add detail 5 to sheet for propane tank foundation.

END OF ADDENDUM 3

ADDENDUM NO. 3

TYLER STATE PARK HEADQUARTERS REPLACEMENT

PROJECT #112741

OCTOBER 8, 2020

OWNER'S SUPPLEMENTAL INSTRUCTIONS

ITEM 4.01 SHEET SIGN

Add erection of a sign to be displayed during construction. Owner to provide graphics for sign at a later date. Owner to demolish sign at close of TxDOT phase of construction. Coordinate sign location with Owner.

Exhibit A

Questions received for Project No. 112741 – Headquarter (HQ) Replacement Phase 1 at Tyler State Park

Q1. It was brought to our attention that a soil report is referenced in the specifications but not found anywhere. Will that be coming out in an addendum?

A1. Refer to the attached Exhibit D - Geotechnical Engineering Report dated 07/27/20 (38 pages).

Q2. A201 Note 6- Who provides TV? Make, Model?

A2. TV is provided by contractor and to be included in furniture, fixture and equipment allowance. Refer to sheet A505 for type.

Q3. A201 &A202 Note 3 -Site reclaimed pine? Please give information. This is not in spec O62000?

A3. Note has been updated in addendum 03 to match millwork elevations and details.

Q4. Spec 062000-Finish Carpentry 2.01.B.1 Fascias-Custom grades- No species given .Please advise.

A4. Douglas-fir to match wood roof deck, S4S.

Q5. Propane tank-To be owner/owner vendor provided correct? What is size of pad?

A5. Propane tank is to be provided by contractor, final size of pad to be coordinated with tank selection. Detail for pad provided by structure in addendum 03.

Q6. UV barrier at clerestory detail. No spec given for UV barrier. Please advise.

A6. UV Barrier spec added to section 07 2500 Weather Barriers in addendum 03.

Q7. Z Chanel shown at SR to wood window 4/A803. But not shown at 1/A803….is this intentional? What is the z channel? A fry -Reglet aluminum channel?

A7. Reveal joint to be provided around wood trim at openings as shown in detail 4/A803. Detail has been updated in addendum 03 to call out Fry Reglet reveal type. Detail 1/A803 is showing wall to roof detail, no reveal joint at this location

Q8. A805- Quartz is called out for counters except at lavatory, detail 6(just says countertop). Spec 123600.2.01.A.2- has natural quartz and resin composite countertops…Which is lav counter to be?

A8. Provide Quartz countertops as noted in room finish schedule on sheet A401.

Q9. Plumbing -P202 & P301- Sump pump not shown on riser drawing. Where is this?

Questions received for Project No. 112741 – Headquarter (HQ) Replacement Phase 1 at Tyler State Park

A9. The sump pump is located in the basement of the building and show on sheet P201 and P301 as SP-1. The lift station on the exterior of the building is separate and covered as a civil item.

Q10. A101 shows a sump pump in Mech courtyard but C300 shows that to be the lift station. Please advise?

A10. Note on sheet A101 has been updated in addendum 03 to reference civil lift station

Q11. Is there a geotechinical Report?

A11. See A1

Q12. L202 Geogrid is called out and so is filter fabric are these the same thing? No spec for either is provided ? please advise?

A12. Geogrid material to be SG150 Stratagrid by Strata or approved equal. Filter fabric to be Mirafi 140N by Tencate or approved equal.

Q13. There is a spec for Asphalt Paving. Isn't that to be in future phases?

A13. The asphalt pavement specification is included in case unforeseen asphalt work arises during construction. Current plant does not include any asphalt paving.

Q14. Will there be a need for Subterranean Termite Control? In Section 06 1753 Related Requirements, Bullet #1 says that 313116 Termite Control for site application of borate treatment to wood trusses. Before concrete is laid usually the ground is treated for termite control, but in the spec book 313116 does not exist.

A14. Specification section 31 3116 Termite Control has been added in addendum 03.

Q15. The finish schedule on page A401 is calling for the wet walls to have tile full height; however, on the interior elevations on page A601 it is showing the wet walls to have ceramic at the same height as the other walls in detail numbers: 8, 10, 20, & 25. Which detail do I need to go by?

A15. Single user restrooms have tile up to 5'-0" a.f.f. and paint above. Larger gang restrooms have tile up to 7'-2" with wood trim and paint above.

Q16. Two types of aluminum framing systems are spec'd and the drawing details do not show a distinction between the two. Please indicate which aluminum window frames are intended to be furnished as curtain wall.

A16. Curtain wall window note added to window type SF05 on sheet A602 in addendum 03.

Exhibit B

ADDENDUM #3

Date: October 7, 2020

Client: Ford, Powell & Carson Architects and Planners

Project Name: Tyler State Park Headquarters Replacement Phase 1

AAI Project Number: 17-012

This addendum is generally separated into sections for convenience; however, all contractors, subcontractors, material men and other parties shall be responsible for reading the entire addendum. The failure to list an item or items in all affected sections of this addendum does not relieve any part affected from performing as per instructions, providing that the information is set forth one time any place in this addendum. These documents shall be attached to and become part of the Contract Documents for this project.

PLAN ITEMS

MECHANICAL

RE: Plan Sheet M101:
- Item 1: Relocated MSCU-1 from Mechanical Yard on Eastern side of building to yard on Western side of building.
- Item 2: Revised Refrigerant line set routing as a result of Item 1.
- Item 3: Revised rating of fire damper.
- Item 4: Revised keyed note #6.

RE: Plan Sheet M102:
- Item 1: Relocated MSCU-1 from Mechanical Yard on Eastern side of building to yard on Western side of building.
- Item 2: Revised Refrigerant line set routing as a result of Item 1.
- Item 3: Revised rating of fire damper.
- Item 4: Revised keyed notes #11 and 20.
- Item 5: Included manual dampers in return air transfers and added keyed note #27.

RE: Plan Sheet M103:
- Item 1: Revised rating of fire damper.
- Item 2: Revised keyed note #10.
- Item 3: Included manual dampers in return air transfers and added keyed note #17.

RE: Plan Sheet M402:
- Item 1: Revised controls diagram for Detail #1 (VAV DX System Control Diagram)

Alderson & Associates, Inc.

ADDENDUM #3

ELECTRICAL

RE: Plan Sheet E001:
- Item 1: Add notes to clarify scope of work required for electrical service and communication ductbank installation.

RE: Plan Sheet E101:
- Item 1: Revise keyed notes to clarify scope of work required for electrical service and communication ductbank installation.

RE: Plan Sheet E101:
- Item 1: Revise and add keyed notes to clarify scope of work required for electrical service and communication ductbank installation.

RE: Plan Sheet E301:
- Item 1: Add floor outlet at podium in Conference Room 22.

RE: Plan Sheet E302:
- Item 1: Remove equipment connection for mini-split condensing unit, which was moved to radio tower yard.

RE: Plan Sheet E303:
- Item 1: Add conduits penetrating exterior wall for communications cabling to radio tower.
- Item 2: Add outlet on telecom rack in IT Room.
- Item 3: Add ground ring and grounding busbar to radio tower.
- Item 4: Add connection for mini-split condensing unit, which had been in mechanical yard.

RE: Plan Sheet E501:
- Item 1: Revise keyed notes to clarify grounding requirements for grounding bars in Electrical Room and in IT Room.
- Item 2: Add driven ground rod at telecom grounding bar.

RE: Plan Sheet E601:
- Item 1: Add note to Mechanical Equipment Connection Schedule to clarify Mini-Split Fan/Coil Unit MS-2 is connected through condensing unit outside.

PLUMBING

RE: Plan Sheet P107:
- Item 1: Revised keyed note #2.

END OF ITEMS FOR ADDENDUM #3

MEB

Exhibit C

October 7, 2020

To: FPC Architects

Attention: Stephen Guzman

From: Darryl Reed

Subject: Tyler Texas State Park Addendum #3 Technology Adjustments.

COMBS Consulting Group has prepared Addendum #3 to make adjustments at the Technology Drawings as discussed in the coordination meeting held on 9-22-2020 and owners comments received on 9-29-2020.

Instructions: The following changes shall be made as indicated in Technology drawings.

Item #1
-Page T101 – adjusted the conduit pathways, keyed notes per owner's request.

Item #2
-Page T202 – adjusted keyed note #20 per owner's request.

Item #3
-Page T203- Add data outlet next to the to the Multimedia location.

-Page T203 - Adjusted keyed note #20 per owner's request.

Item #4:
-Page T301 - Add (1) quad 20amp outlet above the equipment rack.

-Page T301 – Add (1) grounding rod (by div 26) at the service provider wall field to support the service provider grounding requirements. The ground rod shall be grounded to the busbar in the room by Division 26.

-Page T301 – Keynote #4 verbiage updated for Division 26 to install the ground cable from the busbar to the building service ground.

Item #3:
-Page T402 – Added typical grounding detail to show the Division 26 grounding line from the busbar to the building service ground.

Contractor shall provide an itemized listing of material and labor to include quantity, part number, unit cost, extended material cost, and labor hours, hourly labor cost, and extended labor cost.

We are requesting that your office process a Request for Pricing so as to proceed with obtaining a price from the contractor for the above scope of work. Please note the above scope of work does not include work for any electrical (wiring, outlets, etc.) changes associated with this work.

Please do not hesitate to contact us if you have any questions regarding this or any other matter.

Sincerely,

Darryl Reed
Infrastructure Studio Leader
COMBS Consulting Group
8200 IH-10 West, Suite 103
San Antonio, Texas 78230
210-698-7887 Office
210-240-9289 Mobile
Darryl.reed@combs-group.com

Exhibit D – Geotechnical Engineering Report

DISCLAIMER OF LIABILITY

The Owner and Architect/Engineer disclaim any responsibility for the accuracy, true location and extent of the soils investigation that has been prepared by others. They further disclaim responsibility for interpretation of that data by Bidders. Report of the soils investigation is bound in this project manual for the Bidders' convenience only and IS NOT AND SHALL NOT CONSTITUTE PART OF THE BIDDING AND CONTRACT DOCUMENTS.

Geotechnical Engineering Report

Tyler State Park Headquarters Replacement
Tyler, Texas
January 27, 2020
Terracon Project No. CM195066

Prepared for:
Ford, Powell & Carson Architects & Planners, Inc.
San Antonio, Texas

Prepared by:
Terracon Consultants, Inc.
Tyler, Texas

January 27, 2020

Ford, Powell & Carson Architects & Planners, Inc.
1138 East Commerce Street
San Antonio, Texas 78205

Attn: Mr. Jeremy Kreusel
P: (210) 226 1246
E: jkreusel@fpcarch.com

Re: Geotechnical Engineering Report
Tyler State Park Headquarters Replacement
789 Park Road 16
Tyler, Texas
Terracon Project No. CM195066

Dear Mr. Kreusel:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PCM195066. We performed a geotechnical study for the project and presented our results in Terracon Report No. 93165115, dated May 24, 2017. We understand that after our original study was completed, the planned building location was offset about 50 feet southwest of the originally planned location. This report presents the findings of our previous and current subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations and floor slabs for the proposed project based on the updated project layout.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.
(Texas Firm Registration No. F-3272)

Pablo Gomez Bakaitis, E.I.T.
Staff Engineer

William M. Martin, P.E, APMP
Senior Geotechnical Engineer

REPORT TOPICS

INTRODUCTION 1
SITE CONDITIONS 1
PROJECT DESCRIPTION 2
GEOTECHNICAL CHARACTERIZATION 3
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FLOOR SLABS 11
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LATERAL EARTH PRESSURES 13
GENERAL COMMENTS 15

Note: For interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Geotechnical Engineering Report

Tyler State Park Headquarters Replacement

789 Park Road 16

Tyler, Texas

Terracon Project No. CM195066

January 27, 2020

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed Tyler State Park Headquarters to be located at 789 Park Road 16 in Tyler, Texas. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Excavation considerations
- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per IBC
- Lateral earth pressures

The current geotechnical engineering Scope of Services for this project included the advancement of one test boring to a depth of approximately 30 feet below existing site grade. Our previous geotechnical engineering scope of services for the project included the advancement of four test borings to a depth of approximately 30 feet below existing grades.

Maps showing the site and boring location are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring log in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located at 789 Park Road 16 in Tyler, Texas. Approximate GPS: 32.481710°, -95.289362° See **Site Location**

Item	Description
Existing Improvements	Existing park developments such as campsites, restrooms and maintenance facilities and associated drives and parking areas. However, there are no existing developments located within the footprint of the planned new headquarters building.
Current Ground Cover	Grass and heavily vegetated tree coverage.
Existing Topography	Based on a preliminary grading plan, the site topography appears to vary with about 7 feet of elevation change across the project site.

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Proposed Structures	The project includes the construction of a single-story headquarters building covering an area of about 6,540 square feet and an equipment pad covering an area of about 200 square feet immediately east of the proposed building. We previously completed a geotechnical report for the proposed headquarters building. We understand that after our original study was completed, the planned building location was offset about 50 feet southwest of the originally planned location. We supplemented the previous soil borings from Terracon Report Number 93165115 with a new soil boring at the planned building location to develop foundation recommendations for the proposed headquarters building at the newly planned location.
Finished Floor Elevation	Finished floor elevation (FFE) was unknown at the time of this report; however, we anticipate the FFE of the first-floor level of the building will be within 2 feet of existing site grade.
Maximum Loads	Unknown at the time this proposal was prepared.
Grading/Slopes	Final slope angles of as steep as 3H:1V (Horizontal: Vertical) are expected.
Below-Grade Structures	The new building will be a split-level structure. The below grade basement portion of the building will cover an area of about 1,400 square feet and will be about 10 feet below the first-floor level of the structure.

Item	Description
Free-Standing Retaining Walls	A retaining wall structure, extending a distance of about 63 linear feet, is planned near the northern and western walls of the basement foundation. Another retaining wall structure is planned along the exterior south stairwell that extends east for about 32 linear feet and turns north and runs along the eastern exterior wall of the basement/stairwell for about 17 linear feet. Based on provided drawing A302, the retaining wall structures are assumed to be no more than 10 feet in height.
Pavements	Pavement recommendations are beyond our requested scope of services for this project.

GEOTECHNICAL CHARACTERIZATION

Subsurface Profile

We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data and our understanding of the geologic setting. The following paragraphs provide a representation of the subsurface characterization. A brief summary of field and laboratory data is also included.

This geotechnical characterization forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. As noted in **General Comments**, the characterization is based upon widely spaced exploration points across the site, and variations are likely.

Based on the information developed from our original and current field exploration, in general, the soil stratigraphy at this site consists of layers of clayey sand, sandy lean clay, and fat clay with various amounts of sand.

Based on the laboratory tests run on the new boring, the samples of sandy lean clay and fat clay with various amounts of sand that were tested and classified using the Atterberg limits test have plasticity indices ranging from 31 to 54, indicating a moderate to high potential for shrink/swell movement. The samples of sandy lean clay and fat clay with various amounts of sand were further classified using the percent fines determination, and the amount of material passing the No. 200 sieve measured in those samples ranged from 58 to 95 percent.

The soils in our boring are generally considered stiff to hard, as indicated by SPT values ranging from 15 to greater than 30 blows per foot, and a hand penetrometer value of 3.0 tons per square foot (tsf).

Conditions encountered at the boring location are indicated on the individual boring log shown in the **Exploration Results** section and are attached to this report. Stratification boundaries on the

boring log represent the approximate location of changes in native soil types; however, the in-situ transition between materials may be gradual.

Groundwater Conditions

The borehole was observed while drilling and immediately after completion for the presence and level of groundwater. The water levels observed in the borehole can be found on the boring log in **Exploration Results**, and are summarized below.

Boring Number	Approximate Boring Depth (feet) [1]	Approximate Depth to Groundwater while Drilling (feet) [1]	Approximate Depth to Groundwater after Drilling (feet) [1]
B-1	30	27	27 and open to 40

1. Below ground surface

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

GEOTECHNICAL OVERVIEW

We were provided with a preliminary grading plan; however, the finished floor elevations of the building first floor and basement were unknown at the time of this report. Once the grading plan and the building first floor and basement elevations are finalized we should be provided with that information so that our recommendations can be reviewed and revised if needed.

The near surface soils could become unstable with typical earthwork and construction traffic, especially after precipitation events. The effective drainage should be completed early in the construction sequence and maintained after construction to avoid potential issues. If possible, the grading should be performed during the warmer and drier times of the year. If grading is performed during the winter months, an increased risk for possible undercutting and replacement of unstable subgrade will persist. Additional site preparation recommendations, including subgrade improvement and fill placement, are provided in the **Earthwork** section.

Expansive soils are present on this site. Based on the information developed from our current and previous field and laboratory, the potential vertical rise (PVR) at the existing ground surface or near the first floor level of the building is estimated to range between about one and one-half inches to four and one-half inches, and the subgrade soils at the basement level or about 10 feet below the first floor level of the building will have PVR values ranging between one and three-quarters and

three and one-quarter inches. This report provides recommendations to help mitigate the effects of soil shrinkage and expansion. However, even if these procedures are followed, some movement and (at least minor) cracking in the structures should be anticipated. The severity of cracking and other damage such as uneven slabs will probably increase if modification of the site results in excessive wetting or drying of the expansive soils. Eliminating the risk of movement and distress may not be feasible, but it may be possible to further reduce the risk of movement if significantly more expensive measures are used during construction. Some of these options are discussed in this report such as complete replacement of expansive soils.

As tentatively planned by the project design team, a shallow foundation system and floor slab-on-grade on a structural fill pad can be used for the proposed building if the risk of shrink/swell and settlement movement is acceptable, and provided the subgrade is prepared as discussed in this report, including stripping, overexcavation and placement of compacted structural fill. Recommendations are provided in the following sections for preparation of the subgrade, and construction of the structural fill building pad, foundations, and floor slab. The **Shallow Foundations** section addresses support of the building bearing on structural fill. The **Floor Slabs** section addresses slab-on-grade support of the building.

The **General Comments** section provides an understanding of the report limitations.

EARTHWORK

Earthwork is anticipated to include the removal of trees and their entire root system, clearing and grubbing, excavations, and fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations and floor slabs.

Site Preparation

Prior to placing fill, existing vegetation and root mat should be removed. Complete stripping of the topsoil should be performed in the proposed building area.

The subgrade should be proofrolled with an adequately loaded vehicle such as a fully-loaded tandem-axle dump truck. The proofrolling should be performed under the direction of the Geotechnical Engineer. Areas excessively deflecting under the proofroll should be delineated and subsequently addressed by the Geotechnical Engineer. Such areas should either be removed or modified by stabilizing with lime. Excessively wet or dry material should either be removed or moisture conditioned and recompacted.

Fill Material Types

Fill required to achieve design grade should be classified as structural fill. Structural fill is material used below, or within 5 feet of structures. Earthen materials used for fill should meet the following material property requirements:

Soil Type [1]	USCS Classification and Parameters	Acceptable Placement Location
Structural Fill	Clayey Sand (SC) 4≤PI≤18 LL = 40% or less Less than 45% passing the No. 200 Sieve	Must be used to construct the structural fill pad under the grade-supported slab. Structural fill should also be considered below exterior concrete flatwork to reduce potential movements.

1. Prior to any filling operations, samples of the proposed fill materials should be obtained for laboratory moisture-density testing. The tests will provide a basis for evaluation of fill compaction by in-place density testing. Terracon should perform sufficient in-place density tests during the filling operations to evaluate that proper levels of compaction, including dry unit weight and moisture content, are being attained.

Fill Compaction Requirements

Structural fill should meet the following compaction requirements.

Item	Structural Fill
Maximum Lift Thickness	8 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used
Minimum Compaction Requirements [1, 2, 3]	95% of maximum 98% of maximum below 5-foot depth where fill thickness is greater than 5 feet
Water Content Range [1]	Select fill: -3% to +3% of optimum

1. Maximum dry density and optimum water content as determined by the standard Proctor test (ASTM D 698).
2. High plasticity cohesive fill should not be compacted to more than 100 percent of standard Proctor maximum dry density.
3. If the granular material is a coarse sand or gravel, or of a uniform size, or has a low fines content, compaction comparison to relative density may be more appropriate. In this case, granular materials should be compacted to at least 70% relative density (ASTM D 4253 and D 4254).

Utility Trench Backfill

For low permeability subgrades, utility trenches are a common source of water infiltration and migration. Utility trenches penetrating beneath the building should be effectively sealed to restrict water intrusion and flow through the trenches, which could migrate below the building. The trench should provide an effective trench plug that extends at least 5 feet from the face of the building exterior. The plug material should consist of cementitious flowable fill or low permeability clay. The trench plug material should be placed to surround the utility line. If used, the clay trench plug material should be placed and compacted to comply with the water content and compaction recommendations for structural fill stated previously in this report.

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roof should have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the building.

Exposed ground should be sloped and maintained at a minimum 5% away from the building for at least 10 feet beyond the perimeter of the building. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After building construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where paving or flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Earthwork Construction Considerations

Shallow excavations for the proposed structure are anticipated to be accomplished with conventional construction equipment. Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of floor slabs. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over or adjacent to construction areas should be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and recompacted prior to floor slab construction.

Although shallow groundwater was not observed in current the boring, during seasons of significant rain events, the groundwater table could affect overexcavation efforts, especially for over-excavation

and replacement of lower strength soils. A temporary dewatering system consisting of sumps with pumps could be necessary to achieve the recommended depth of over-excavation.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, “Excavations” and its appendices, and in accordance with any applicable local, and/or state regulations.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proofrolling, and mitigation of areas delineated by the proofroll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet (minimum 3 per lift) of compacted fill in the building areas. One density and water content test should be performed for every 50 linear feet of compacted utility trench backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. If unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer’s evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

Design Parameters – Compressive Loads

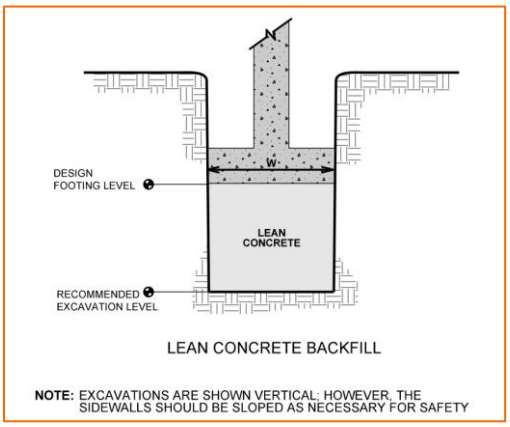
Description	Individual Column	Continuous Wall
Minimum Embedment Below Finished Grade Around Perimeter of Structure[1]	18 inches	18 inches
Recommended Bearing Stratum[1]	Compacted structural fill Bearing stratum to be verified by Terracon	
Minimum Dimension	30 inches	18 inches
Maximum Net Allowable Bearing Pressure, Dead Load Plus Sustained Live Load[2, 3]	2,000 psf	1,600 psf
Maximum Net Allowable Bearing Pressure, Total Load[2,3]	2,400 psf	2,000 psf
Estimated Total Settlement[4]	1 inch or less	
Estimated Differential Settlement[5]	Approximately ½ of total settlement	
Allowable Passive Pressure[6]	1,000 psf	
Allowable Frictional Resistance[7]	250 psf	
Uplift Resistance[8]	Foundation weight: 150 pcf Soil weight: 120 pcf	

1. To bear within the structural fill soils.
2. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. Assumes any unsuitable fill or soft soils, if encountered, will be undercut and replaced with properly compacted structural fill.
3. Use whichever loading condition yields the larger size footing.
4. Provided proper construction practices are followed. A clear distance between footings of one footing size of the larger of the two footings should not produce overlapping stress distributions, and adjacent footings would essentially behave as independent foundations.
5. Differential settlements may result from variances in subsurface conditions, loading conditions and construction procedures. The settlement response of the footings will be more dependent upon the quality of construction than upon the response of the subgrade to the foundation loads.
6. Lateral loads transmitted to the shallow spread footings will be resisted by a combination of soil-concrete friction on the base of the footing and passive pressure on the sides of the footing. The passive pressure along the exterior face of the footings should be neglected within the upper 3 feet due to surface effects unless pavement and/or flatwork is provided up to the edge of the structure.
7. Frictional resistance between bottom of footing and compacted structural fill or undisturbed native soil.
8. Structural uplift loads on the shallow footings may be resisted by the weight of the foundation and supported structure plus the weight of soil backfill directly above the foundation. The ultimate uplift capacity of shallow footings should be reduced by an appropriate factor of safety to compute allowable uplift capacity.

Foundation Construction Considerations

As noted in **Earthwork**, the footing excavations should be evaluated under the direction of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

If unsuitable bearing soils are encountered at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. This is illustrated on the sketch below.



SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil properties encountered at the site and as described on the exploration log and results, it is our professional opinion that the **Seismic Site Classification is D**. Subsurface explorations at this site were extended to a maximum depth of 30 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

FLOOR SLABS

The new building will be a split-level structure, and the below grade basement portion of the building will be about 10 feet below the first-floor level of the structure. Based on the information developed from our current and previous field and laboratory programs, and on method Tex-124-E in the Texas Department of Transportation (TxDOT) Manual of Testing Procedures, we estimate that the subgrade soils at the existing ground surface or near the first floor level of the building have potential vertical rise (PVR) values ranging between about one and one-half inches to four and one-half inches, and the subgrade soils at the basement level or about 10 feet below the first floor level of the building will have PVR values ranging between one and three-quarters and three and one-quarter inches. Those PVR values were estimated using existing moisture conditions, as well as assuming dry conditions for the upper 6 feet, and average to wet conditions below 6 feet. The actual movements could be greater if poor drainage, ponded water, and/or other sources of moisture are allowed to infiltrate beneath the structure after construction. Removal of existing soil and/or placement of fill would change the PVR values, as would changing the moisture conditions used for analysis.

The existing soils at the first-floor level of the building and the basement level of the building should be stripped and overexcavated down to the elevation required for a structural fill pad as indicated in the table below. As a minimum, at least 6 inches of surficial soil should be stripped before placement of structural fill. The structural fill thicknesses are referenced from the planned finished subgrade elevation based on a first-floor elevation within about 2 feet of existing site grade. The finished floor elevations of the building first floor and basement were unknown at the time of this report. Once the grading plan and the building first floor and basement elevations are finalized we should be provided with that information so that our recommendations can be reviewed and revised if needed.

The structural fill pad should extend a minimum of 5 feet beyond the edge of the proposed structure. The final exterior grade adjacent to the slab should be sloped to promote positive drainage away from the structure. Following overexcavation of the soil to the specified depth, and prior to placement of structural fill, the exposed subgrade soils should be thoroughly proof-rolled and/or evaluated by Terracon using other methods, and prepared as outlined in **Earthwork**.

The subgrade and structural fill soils should be prepared as outlined in **Earthwork**, which contains material and placement requirements for structural fill, as well as other subgrade preparation recommendations. Design parameters for the floor slab assume the requirements for **Earthwork** have been followed. Specific attention should be given to positive drainage away from the structure.

Floor Slab Design Parameters

The grade-supported slab should be designed using the following recommendations.

Item	Description
Slab Support – First-Floor Level	Structural fill at least 6 feet thick
Slab Support – Basement Level	Structural fill at least 4 feet thick
Estimated Potential Vertical Rise (PVR)	Approximate 1 inch

The slab should be structurally independent of spread footing or continuous footing foundations that are not cast monolithically with the slab to allow independent movement. Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional jointing recommendations, refer to the ACI Design Manual.

The use of a vapor retarder or barrier should be considered beneath concrete slabs-on-grade that will be covered with wood, tile, carpet or other moisture-sensitive or impervious coverings, or when the slab will support equipment or materials sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer and slab contractor should refer to ACI 302 and ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder/barrier. Any “leveling or cushion” sand beneath the vapor retarder should be compacted.

Floor Slab Construction Considerations

Finished subgrade within, and for at least 5 feet beyond, the floor slab should be protected from traffic, rutting, or other disturbance and maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become damaged or desiccated prior to construction of floor slabs, the affected material should be removed and structural fill should be added to replace the resulting excavation. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab support course.

Terracon should observe the condition of the floor slab subgrade immediately prior to placement of the floor slab support course, reinforcing steel and concrete. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

BELOW-GRADE AND RETAINING WALL STRUCTURES

We understand that a below grade basement covering an area of about 1,400 square feet and having a maximum depth of about 10 feet is planned near the eastern portion of the building. We also understand that site retaining walls for grade changes outside the buildings are planned. We anticipate the height of the retaining walls will be limited to about 10 feet. The sides of below-grade excavations should be sloped or shored. The wall footings should bear in newly placed structural fill or in competent natural soils at least 2 feet below the final lowest adjacent grade and should be designed for a net allowable bearing pressure of 1,000 psf. This may require overexcavation of expansive soils and/or weak soil below the foundation elevation and replacement with compacted structural fill.

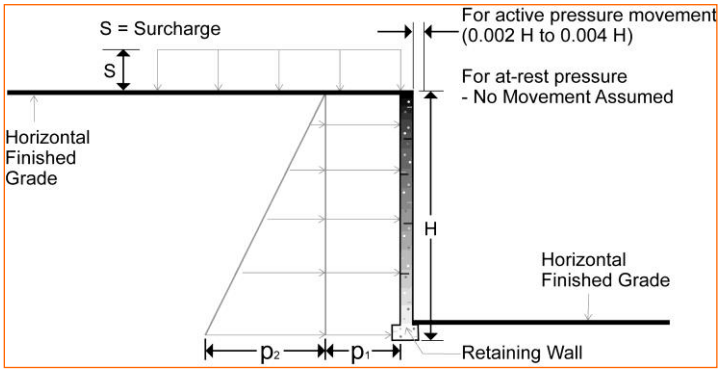
The locations, depths, and loads of the uphill developments need to consider the impact they will have on the downhill developments. To reduce effects of the nearby foundations, the below grade and retaining wall structures should be located outside the influence zone of the nearby foundations typically defined by a line extending downward 45 degrees from the outside edges of the adjacent foundation and out a horizontal distance equal to the width of the adjacent foundation. If requested, we would be pleased to analyze the influence between those foundations and recommend suitable clear spacing between the planned structures under a separate cover.

The lateral earth pressure recommendations given in the following section are applicable to the design of free-standing retaining walls subject to slight rotation, and rigid walls not subject to rotation. These recommendations are not applicable to the design of modular block walls with geogrid-reinforced backfill, often termed mechanically stabilized earth (MSE) walls. Recommendations for MSE wall systems are beyond our scope of services. However, we would be pleased to develop recommendations for the design of MSE wall systems upon your request. Those services would be provided under separate contract.

LATERAL EARTH PRESSURES

Design Parameters

Structures with unbalanced backfill levels on opposite sides should be designed for earth pressures at least equal to values indicated in the following table. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction and/or compaction and the strength of the materials being restrained. Two wall restraint conditions are shown in the diagram below. Active earth pressure is commonly used for design of free-standing cantilever retaining walls and assumes wall movement. The “at-rest” condition assumes no wall movement and is commonly used for basement walls, loading dock walls, or other walls restrained at the top. The recommended design lateral earth pressures do not include a factor of safety and do not provide for possible hydrostatic pressure on the walls (unless stated).



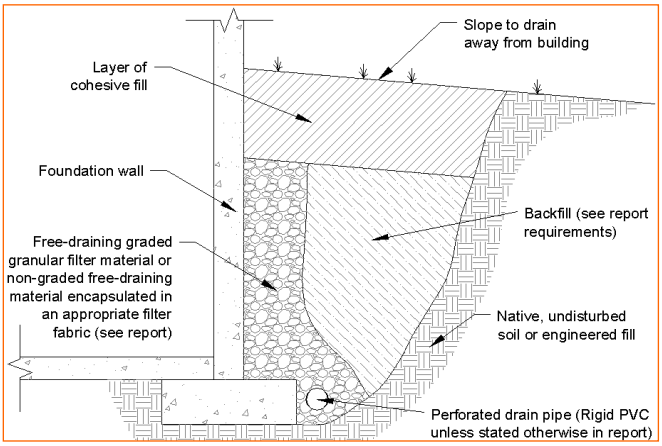
Lateral Earth Pressure Design Parameters				
Earth Pressure Condition [1]	**Coefficient for Backfill Type** [2]	**Surcharge Pressure** [3, 4, 5] **p_1 (psf)**	**Effective Fluid Pressures (psf)** [2, 4, 5]	
			Unsaturated [6]	**Submerged** [6]
Active (Ka)	Granular - 0.31 Fine Grained - 0.41	(0.31)S (0.41)S	(40)H (50)H	(80)H (85)H
At-Rest (Ko)	Granular - 0.47 Fine Grained - 0.58	0.47)S (0.58)S	(55)H (70)H	(90)H (95)H
Passive (Kp)	Granular - 3.25 Fine Grained - 2.46	--- ---	(390)H (295)H	(250)H (205)H

1. For active earth pressure, wall must rotate about base, with top lateral movements 0.002 H to 0.004 H, where H is wall height. For passive earth pressure, wall must move horizontally to mobilize resistance.
2. Uniform, horizontal backfill, compacted to at least 95% of the ASTM D 698 maximum dry density, rendering a maximum unit weight of 120 pcf.
3. Uniform surcharge, where S is surcharge pressure.
4. Loading from heavy compaction equipment is not included.
5. No safety factor is included in these values.
6. To achieve "Unsaturated" conditions, follow guidelines in **Subsurface Drainage for Below-Grade Walls** below. "Submerged" conditions are recommended when drainage behind walls is not incorporated into the design.

Backfill placed against structures should consist of granular soils or low plasticity cohesive soils. For the granular values to be valid, the granular backfill must extend out and up from the base of the wall at an angle of at least 45 and 60 degrees from vertical for the active and passive cases, respectively.

Subsurface Drainage for Below-Grade Walls

A perforated rigid plastic drain line installed behind the base of walls and extends below adjacent grade is recommended to prevent hydrostatic loading on the walls. The invert of a drain line around a below-grade building area or exterior retaining wall should be placed near foundation bearing level. The drain line should be sloped to provide positive gravity drainage to daylight or to a sump pit and pump. The drain line should be surrounded by clean, free-draining granular material having less than 5% passing the No. 200 sieve, such as No. 57 aggregate. The free-draining aggregate should be encapsulated in a filter fabric. The granular fill should extend to within 2 feet of final grade, where it should be capped with compacted cohesive fill to reduce infiltration of surface water into the drain system.



As an alternative to free-draining granular fill, a pre-fabricated drainage structure may be used. A pre-fabricated drainage structure is a plastic drainage core or mesh which is covered with filter fabric to prevent soil intrusion, and is fastened to the wall prior to placing backfill.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Planned Boring Depth (feet) [1]	Planned Location
1	30	Planned building area

1. Below ground surface.

Boring Layout and Elevations: Unless otherwise noted, Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet). If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: We advance the boring with a truck-mounted rotary drill rig using continuous flight augers (solid stem). Five samples are typically obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the thin-walled tube sampling procedure, a thin-walled, seamless steel tube with a sharp cutting edge is pushed hydraulically into the soil to obtain a relatively undisturbed sample. Hand penetrometer tests were performed on these soil samples. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring log at the test depths. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, all borings were backfilled with auger cuttings after their completion.

An automatic SPT hammer was used in advancing the split-barrel sampler in the boring. A greater efficiency is typically achieved with the automatic hammer compared to the conventional safety hammer operated with a cathead and rope. Published correlations between the SPT N-values and soil properties are based on the lower efficiency cathead and rope method. The higher efficiency of an automatic SPT hammer affects the SPT N-value by increasing the penetration per hammer blow over what would be obtained using the cathead and rope method. The effect of the automatic hammer efficiency has been considered in the interpretation and analysis of the subsurface information for this report.

The sampling depths, penetration distances, and other sampling information were recorded on the field boring log. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field a boring log as part of the drilling operations. This field log included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between

samples. A final boring log was prepared from the field log. The final boring log represents the Geotechnical Engineer's interpretation of the field log and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D422 Standard Test Method for Particle-Size Analysis of Soils

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

SITE LOCATION AND EXPLORATION PLANS

Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

EXHIBIT - SITE LOCATION PLAN

Tyler State Park Headquarters Replacement ■ Tyler, Texas

January 27, 2020 ■ Terracon Project No. CM195066

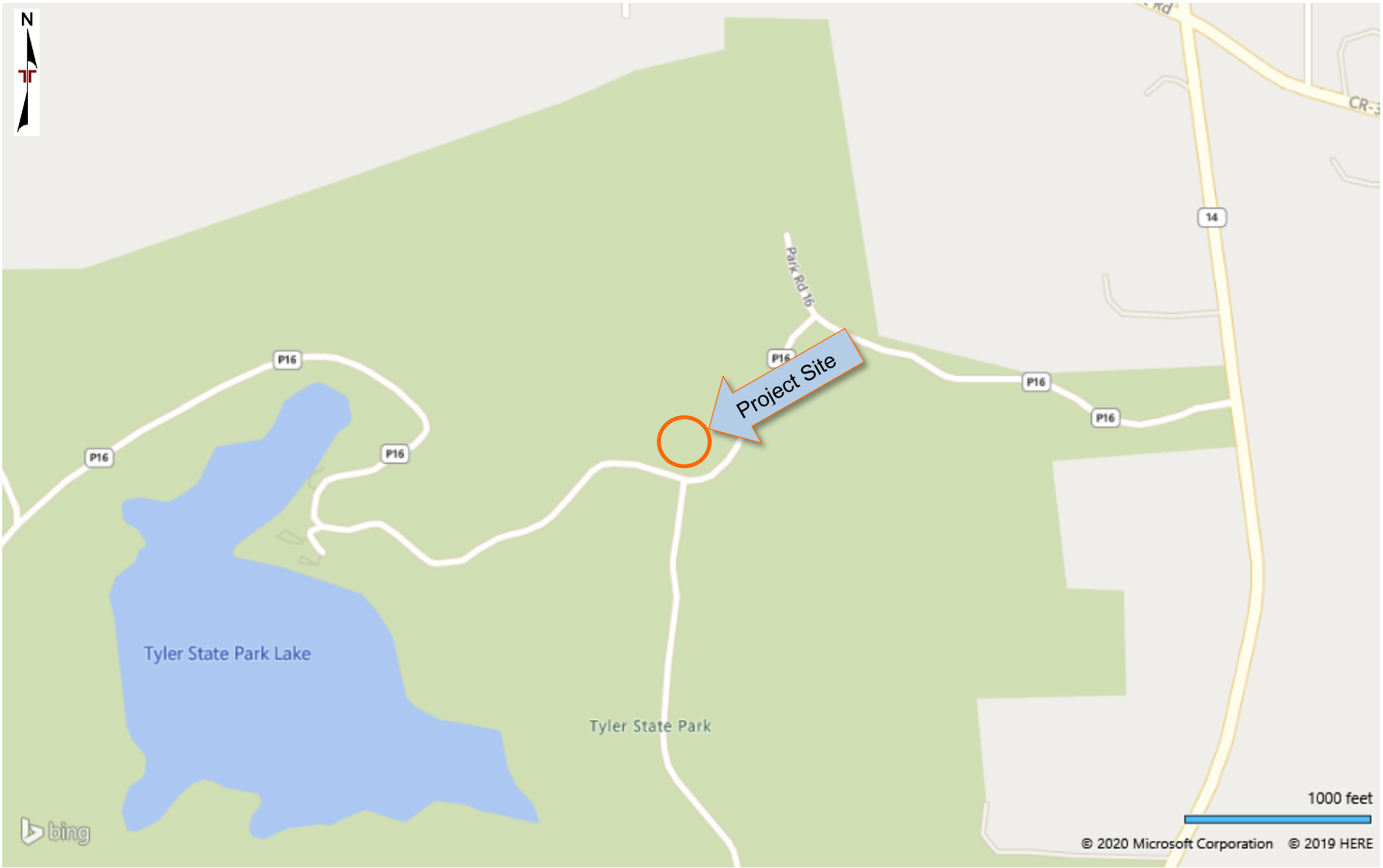


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

EXHIBIT - EXPLORATION PLAN

Tyler State Park Headquarters Replacement ■ Tyler, Texas
January 27, 2020 ■ Terracon Project No. CM195066

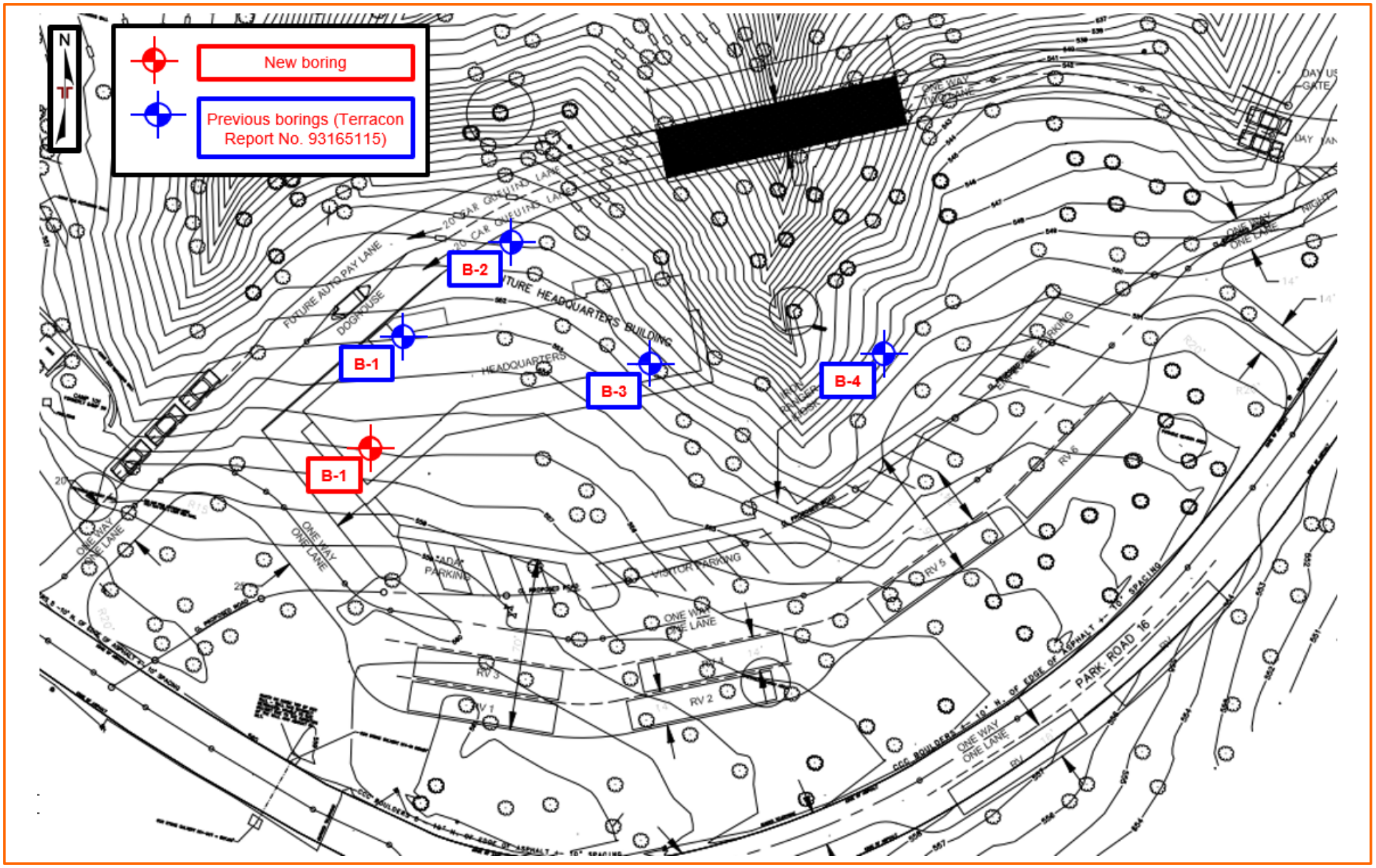


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY Google Earth Pro ™

EXPLORATION RESULTS

Contents:

Terracon Report No. CM195066 Boring Log (B-1)
Terracon Report No. 93165115 Boring Logs (B-1 through B-4)

Note: All attachments are one page unless noted above.

Terracon Report No. CM195066 Boring Log (B-1)

BORING LOG NO. B-1

PROJECT: Tyler State Park Headquarters Replacement

CLIENT: Ford, Powell & Carson Architects & Planners, Inc
San Antonio, Texas

SITE: 789 Park Road 16
Tyler, Texas

LOCATION See Exploration Plan

Latitude: 32.4812° Longitude: -95.2895°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	FAT CLAY (CH), red, stiff to hard, with iron ore gravel -with roots and organics to 2 feet				6-8-9 N=17							
					5-8-11 N=19				21		78-24-54	95
		5			12-21-13 N=34							
	6.0				5-6-9 N=15							
	FAT CLAY WITH SAND (CH), tan and gray, stiff to very stiff				4-7-10 N=17				30		66-23-43	83
		10										
					HP=3.0							
		15										
	17.0											
	SANDY LEAN CLAY (CL), tan and dark gray, very stiff to hard -with iron ore gravel to 27 feet				5-9-18 N=27							
		20										
					50/1"							
	-dark gray and glauconitic below 27 feet	25	▽									
					15-16-18 N=34				28		47-16-31	58
	30.0	30										
	Boring Terminated at 30 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Dry auger to completion at 30 feet.

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

▽ *And open to 30 feet upon completion.*

Terracon
104 Jordan Plaza Blvd Ste 401
Tyler, TX

Boring Started: 01-14-2020 | Boring Completed: 01-14-2020

Drill Rig: Track | Driller: Ed Wilson

Project No.: CM195066

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL CM195066 TYLER STATE PARK .GPJ TERRACON_DATATEMPLATE.GDT 1/20/20

Terracon Report No. 93165115 Boring Logs (B-1 through B-4)

BORING LOG NO. B-1

PROJECT: Tyler State Park Visitor Center

CLIENT: Ford, Powell & Carson Architects & Planners, Inc
San Antonio, Texas

SITE: 789 Park Road 16
Tyler, Texas

LOCATION See Exhibit A-2

Latitude: 32.481261° Longitude: -95.28945°

Surface Elev.: 553 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	SANDY FAT CLAY (CH), red, brown and black, hard, with roots and organics										
2.0	551			16-19-20 N=39				21		66-21-45	55
	FAT CLAY (CH), red and brown, hard			15-17-21 N=38							
6.0	547	5		15-19-24 N=43				26		81-22-59	78
	CLAYEY SAND (SC), red and brown, very dense			50/1"							
		10		50/1"							
17.0	536	15		50/1"				21		53-21-32	42
	SANDY FAT CLAY (CH), red and brown, hard			30-35-40 N=75							
		20									
		25		30-31-39 N=70				24		62-26-36	55
30.0	523	30		36-41-44 N=85							
	Boring Terminated at 30 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.
Surface elevation was estimated from a topographic map provided by the client.

Hammer Type: Rope and Cathead
Depth-to-water observations were not possible due to wet rotary drilling from the ground surface.

Advancement Method:
Wet rotary to 30 feet.

Abandonment Method:
Backfilled with Auger Cuttings

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater observations were not possible due to wet rotary drilling from the ground surface.

Terracon
1609 S Chestnut St Ste 107
Lufkin, TX

Boring Started: 5/3/2017 Boring Completed: 5/3/2017

Drill Rig: Buggy Driller: Triangle

Project No.: 93165115 Exhibit: A-4

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 93165115 TYLER STATE PARK .GPJ TERRACON_DATATEMPLATE.GDT 5/23/17

BORING LOG NO. B-2

PROJECT: Tyler State Park Visitor Center

CLIENT: Ford, Powell & Carson Architects & Planners, Inc
San Antonio, Texas

SITE: 789 Park Road 16
Tyler, Texas

LOCATION See Exhibit A-2

Latitude: 32.481358° Longitude: -95.289375°

Surface Elev.: 549 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	SANDY FAT CLAY (CH), red, brown and black, very stiff - with roots and organics to 2 feet				10-10-12 N=22							
					8-11-13 N=24				24		80-24-56	54
		5			8-10-12 N=22							
6.0	543											
	CLAYEY SAND (SC), red and brown, medium dense to dense				11-14-17 N=31							
					11-11-15 N=26							
		10										
					12-15-20 N=35				24		59-22-37	48
17.0	532	15										
	SANDY FAT CLAY (CH), red and brown, hard				16-20-25 N=45							
		20										
					50/5"							
		25										
					24-27-34 N=61				25		73-23-50	65
30.0	519	30										
	Boring Terminated at 30 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.
Surface elevation was estimated from a topographic map provided by the client.

Hammer Type: Rope and Cathead
Depth-to-water observations were not possible due to wet rotary drilling from the ground surface.

Advancement Method:
Wet rotary to 30 feet.

Abandonment Method:
Backfilled with Auger Cuttings

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater observations were not possible due to wet rotary drilling from the ground surface.

Terracon
1609 S Chestnut St Ste 107
Lufkin, TX

Boring Started: 5/3/2017 Boring Completed: 5/3/2017

Drill Rig: Buggy Driller: Triangle

Project No.: 93165115 Exhibit: A-5

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 93165115 TYLER STATE PARK .GPJ TERRACON_DATATEMPLATE.GDT 5/23/17

BORING LOG NO. B-3

PROJECT: Tyler State Park Visitor Center

CLIENT: Ford, Powell & Carson Architects & Planners, Inc
San Antonio, Texas

SITE: 789 Park Road 16
Tyler, Texas

LOCATION See Exhibit A-2

Latitude: 32.481253° Longitude: -95.289203°

Surface Elev.: 551.5 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
					10-14-16 N=30							
					13-15-20 N=35				19		54-22-32	44
		5			29-34-33 N=67							
					18-23-24 N=47				31		43-21-22	53
					18-18-22 N=40							
		10										
					10-14-19 N=33							
		15										
					10-16-17 N=33				21		54-21-33	44
		20										
					18-21-27 N=48							
		25										
					20-25-31 N=56				26		38-18-20	48
		30										

CLAYEY SAND (SC), red, brown and black, dense, with roots and organics

4.0 547.5

SANDY LEAN CLAY (CL), red and brown, hard

10.0 541.5

CLAYEY SAND (SC), red and brown, dense to very dense

30.0 521.5

Boring Terminated at 30 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.
Surface elevation was estimated from a topographic map provided by the client.

Hammer Type: Rope and Cathead
Depth-to-water observations were not possible due to wet rotary drilling from the ground surface.

Advancement Method:
Wet rotary to 30 feet.

Abandonment Method:
Backfilled with Auger Cuttings

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater observations were not possible due to wet rotary drilling from the ground surface.

Terracon
1609 S Chestnut St Ste 107
Lufkin, TX

Boring Started: 5/3/2017 Boring Completed: 5/3/2017

Drill Rig: Buggy Driller: Triangle

Project No.: 93165115 Exhibit: A-6

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 93165115 TYLER STATE PARK .GPJ TERRACON_DATATEMPLATE.GDT 5/23/17

BORING LOG NO. B-4

PROJECT: Tyler State Park Visitor Center

CLIENT: Ford, Powell & Carson Architects & Planners, Inc
San Antonio, Texas

SITE: 789 Park Road 16
Tyler, Texas

LOCATION See Exhibit A-2

Latitude: 32.481331° Longitude: -95.288931°

Surface Elev.: 550 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
			12-16-10 N=26							
4.0	546		8-11-14 N=25				26		77-26-51	62
		5	8-10-17 N=27							
			11-16-20 N=36				38		43-18-25	38
		10	11-15-20 N=35							
			19-24-30 N=54							
17.0	533	15								
			18-24-29 N=53				40		54-23-31	53
		20								
			12-16-22 N=38							
		25								
30.0	520		12-12-16 N=28				20		55-22-33	71
		30								

SANDY FAT CLAY (CH), red, brown and black, very stiff, with roots and organics

CLAYEY SAND (SC), red and brown, medium dense to very dense

SANDY FAT CLAY (CH), red and brown, very stiff to hard

Boring Terminated at 30 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.
Surface elevation was estimated from a topographic map provided by the client.

Hammer Type: Rope and Cathead
Depth-to-water observations were not possible due to wet rotary drilling from the ground surface.

Advancement Method:
Wet rotary to 30 feet.

Abandonment Method:
Backfilled with Auger Cuttings

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater observations were not possible due to wet rotary drilling from the ground surface.

Terracon
1609 S Chestnut St Ste 107
Lufkin, TX

Boring Started: 5/3/2017 Boring Completed: 5/3/2017

Drill Rig: Buggy Driller: Triangle

Project No.: 93165115 Exhibit: A-7

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 93165115 TYLER STATE PARK .GPJ TERRACON_DATATEMPLATE.GDT 5/23/17

SUPPORTING INFORMATION

Contents:

General Notes
Unified Soil Classification System

Note: All attachments are one page unless noted above.

GENERAL NOTES
DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

Tyler State Park Headquarters Replacement ■ Tyler, Texas
January 27, 2020 ■ Terracon Project No. CM195066

Terracon GeoReport

SAMPLING	WATER LEVEL	FIELD TESTS
Shelby Tube Standard Penetration Test	**Water Initially Encountered** **Water Level After a Specified Period of Time** **Water Level After a Specified Period of Time** Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	**N** Standard Penetration Test Resistance (Blows/Ft.) **(HP)** Hand Penetrometer **(T)** Torvane **(DCP)** Dynamic Cone Penetrometer **UC** Unconfined Compressive Strength **(PID)** Photo-Ionization Detector **(OVA)** Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (tsf)**	**Standard Penetration or N-Value Blows/Ft.**
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELATIVE PROPORTIONS OF SAND AND GRAVEL		RELATIVE PROPORTIONS OF FINES	
Descriptive Term(s) of other constituents	Percent of Dry Weight	**Descriptive Term(s) of other constituents**	**Percent of Dry Weight**
Trace	<15	Trace	<5
With	15-29	With	5-12
Modifier	>30	Modifier	>12

GRAIN SIZE TERMINOLOGY		PLASTICITY DESCRIPTION	
Major Component of Sample	**Particle Size**	**Term**	**Plasticity Index**
Boulders	Over 12 in. (300 mm)	Non-plastic	0
Cobbles	12 in. to 3 in. (300mm to 75mm)	Low	1 - 10
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)	Medium	11 - 30
Sand	#4 to #200 sieve (4.75mm to 0.075mm	High	> 30
Silt or Clay	Passing #200 sieve (0.075mm)		

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or [Cc<1 or Cc>3.0] [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or [Cc<1 or Cc>3.0] [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K, L, M, N]
			Liquid limit - not dried			Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K, L, M, P]
			Liquid limit - not dried			Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

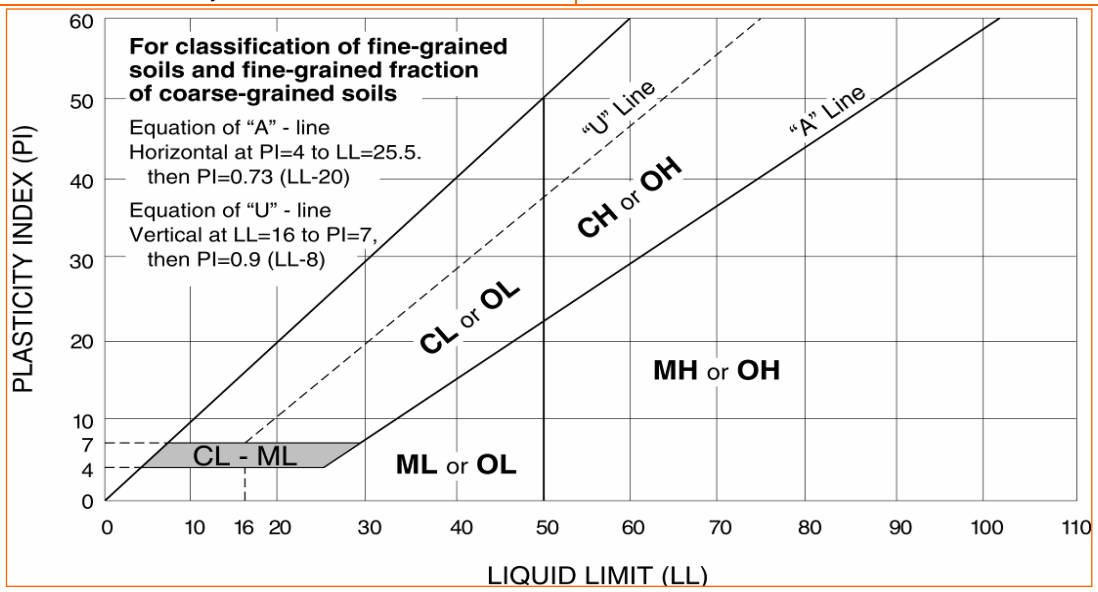
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



SECTION 07 2500
WEATHER BARRIERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Air Barriers: Materials that form a system to stop passage of air through exterior walls, joints between exterior walls and roof, joints around frames of openings in exterior walls, and ____.

1.02 RELATED REQUIREMENTS

A. Section 04 2000 Unit Masonry

B. Section 04 4313 Stone Masonry Veneer

C. Section 07 6200 - Sheet Metal Flashing and Trim: Metal flashings installed in conjunction with weather barriers.

D. Section 07 9200 - Joint Sealants: Sealing building expansion joints.

E. Section 09 2116 - Gypsum Board Assemblies: Water-resistive barrier under exterior cladding.

1.03 REFERENCE STANDARDS

A. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension; 2006a (Reapproved 2013).

B. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2013.

C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

D. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.

E. ASTM E2178 - Standard Test Method for Air Permeance of Building Materials; 2013.

F. ICC-ES AC148 - Acceptance Criteria for Flexible Flashing Materials; ICC Evaluation Service, Inc; 2011.

G. ICC-ES AC212 - Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing; ICC Evaluation Service, Inc; 2015.

1.04 SUBMITTALS

A. See TPWD UGC/Special Conditions, for submittal procedures

B. Product Data: Provide data on material characteristics.

C. Shop Drawings: Provide drawings of special joint conditions.

D. ABAA Field Quality Control Submittals: Submit third-party reports of testing and inspection required by ABAA QAP.

E. Manufacturer's Installation Instructions: Indicate preparation.

F. ABAA Manufacturer Qualification: Submit documentation of current evaluation of proposed manufacturer and materials.

G. ABAA Installer Qualification: Submit documentation of current contractor accreditation and current installer certification; keep copies of each contractor accreditation and installer certification on site during and after installation, and present on-site documentation upon request.

1.05 QUALITY ASSURANCE

A. Air Barrier Association of America (ABAA) Quality Assurance Program (QAP); www.airbarrier.org/#sle:

1. Installer Qualification: Use accredited contractor, certified installers, evaluated materials, and third-party field quality control audit.

2. Manufacturer Qualification: Use evaluated materials from a single manufacturer regularly engaged in air barrier material manufacture, and use secondary materials approved in writing by primary material manufacturer.

B. Perform work in accordance with the printed requirements of the air barrier manufacturer and this specification

C. Maintain one copy of the manufacturer instructions on site.

D. Ath the beginning of the work and at all times during the execution of the work, allow access to work site by the air barrier membrane manufacturer's representative.

E. components used in this section shall be sourced from one manufacturer, including sheet membrane, air barrier sealants, primers, mastics, tapes and adhesives as listed as an evaluated air barrier assembly by the air Barrier Association of America.

1.06 MOCK-UP

A. Provide mock-up of air barrier material as part of exterior wall material mock-up required in other sections.

B. Items to be incorporated in mock-up include:
1. Where directed by architect, construct typical exterior wall panel incorporating veneer system, through wall flashing, CMU, wall ties, board insulation, aluminum window frame, showing air barrier membrane application details and transition membranes.

C. Allow fo rinspection of mock-up by architect before proceeding with air barrier work.

1.07 FIELD CONDITIONS

A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

PART 2 PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES

2.02 AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WATER-RESISTIVE)

A. UV Barrier Sheet, Self-Adhered:
1. Air Permeance: 0.004 cfm/sq ft (0.02 L/(s sq m)), maximum, when tested in accordance with ASTM E2178.
2. Water Vapor Permeance: 10 perms (572 ng/(Pa s sq m)), minimum, when tested in accordance with ASTM E96/E96M Procedure A (Desiccant Method) at 73.4 degrees F (23 degrees C).
3. Ultraviolet (UV) and Weathering Resistance: , non-woven polyester substrate and waterproof acrylic polymeric coating stabilized against oxidation and UV degradation. Approved in writing by manufacturer for up to 25 years service life expectancy
4. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less (Class A), when tested in accordance with ASTM E84.
5. Seam and Perimeter Tape: As recommended by sheet manufacturer.
6. Color: Black
7. Manufacturers:
a. Dorken Systems Inc; DELTA-VENT S: www.dorken.com/#sle.
b. Substitutions: See Owner’s General Conditions and Special Conditions.

B. Air Barrier, Fluid Applied: Vapor permeable, elastomeric waterproofing.
1. Air Barrier Membrane:
a. Material: Water-based polymer-modified bitumen.
b. Dry Film Thickness (DFT): 30 mil, 0.030 inch (0.762 mm), minimum.
c. Air Permeance: 0.004 cfm/sq ft (0.02 L/(s sq m)), maximum, when tested in accordance with ASTM E2178.
d. Water Vapor Permeance: 5 perms (287 ng/(Pa s sq m)), minimum, when tested in accordance with ASTM E96/E96M Procedure B (Water Method) at 73.4 degrees F (23 degrees C).

e. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to three months of weather exposure.
f. Elongation: 300 percent, minimum, when tested in accordance with ASTM D412.
g. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
h. Nail Sealability: Pass, when tested in accordance with ASTM D1970/D1970M.
i. Code Acceptance: Comply with applicable requirements of ICC-ES AC212.
j. Primer, Sealants, Tapes and Accessories: As recommended by coating manufacturer.
k. Manufacturers:
   1) Tremco Commercial Sealants & Waterproofing; ExoAir 220: www.tremcosealants.com/#sle.
   2) W.R. Meadows, Inc; Air-Shield LMP: www.wrmeadows.com/#sle.
   3) Grace construction Products, perm-a-barrier VP, a non-asphaltic product
   4) STS Coatings, Wall Guardian; FW-100A, a non-asphaltic product (Basis of design)
   5) Substitutions: Refer to Owner's General Conditions and Special Conditions.

2.03 ACCESSORIES

A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.

B. Flexible Flashing: Sheathing fabric saturated with air barrier coating and complying with the applicable requirements of ICC-ES AC148.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces and conditions are ready to accept the work of this section.

3.02 PREPARATION

A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.

3.03 INSTALLATION

A. Install materials in accordance with manufacturer's instructions.

B. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.

C. Self-Adhered Sheets:
   1. Prepare substrate in manner recommended by sheet manufacturer; fill and tape joints in substrate and between dissimilar materials.
   2. Lap sheets shingle-fashion to shed water and seal laps air tight.
   3. Once sheets are in place, press firmly into substrate with resilient hand roller; ensure that laps are firmly adhered with no gaps or fishmouths.
   4. Use same material, or other material approved by sheet manufacturer for the purpose, to seal to adjacent construction and as flashing.
   5. At wide joints, provide extra flexible membrane allowing joint movement.

D. Coatings:
   1. Prepare substrate in manner recommended by coating manufacturer; treat joints in substrate and between dissimilar materials as recommended by manufacturer.
   2. Prepare CMU surfaces in a manner recommended by coating manufacturer; path cracks, protrusions, small voids, offsets, details , irregularities, and small deformities.
   3. Where exterior masonry veneer is to be installed, install masonry anchors before installing weather barrier over masonry; seal around anchors air tight.
   4. Use transition flashing to seal to adjacent construction and to bridge joints.

E. Openings and Penetrations in Exterior Weather Barriers:

1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches (125 mm) onto weather barrier and at least 6 inches (150 mm) up jambs; mechanically fasten stretched edges.
2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches (100 mm) wide; do not seal sill flange.
3. At openings to be filled with non-flanged frames, seal weather barrier to each side of opening framing, using flashing at least 9 inches (230 mm) wide, covering entire depth of framing.
4. At head of openings, install flashing under weather barrier extending at least 2 inches (50 mm) beyond face of jambs; seal weather barrier to flashing.
5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

3.04 SCHEDULE

A. Install liquid membrane system over the entire surface of the sheathing, C.M.U.
   1. Seal all masonry anchor penetrtations air tight

B. Hollow metal door and frames: Seal door frame to wall surface with transition membrane

C. Wall and roof junction: Seal wall to roof with transition membrane

D. Seal the top of sheathing, C.M.U to underside of the roof system or structure with foam or sealant

E. Openings: Seal around the perimeter of all opening with transition membrane.

F. Perimeter wood nailers at wall openings: Cover all exposed surfaces of wood nailers with transition membrane. Extend membrane over sheathing, masonry and wood framing.

G. Aluminum window frames with flashing flanges: Seal the flashing flanges to the wall surface with transition membrane.

H. Aluminum window frames without flashing flanges: Seal frames to the wall surface with transition membrane.

I. Aluminum storefront frames: Seal frames to the wall surface with transition membrane.

J. Aluminum curtain wall frames: Seal frames to wall surface with transition membrane.

3.05 PROTECTION

A. Do not leave materials exposed to weather longer than recommended by manufacturer.

END OF SECTION

SECTION 31 3116
TERMITE CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Chemical soil treatment.

B. Site-applied termiticide for wood, steel, and concrete.

1.02 REFERENCE STANDARDS

A. Title 7, United States Code, 136 through 136y - Federal Insecticide, Fungicide and Rodenticide Act; 1947 (Revised 2001).

1.03 SUBMITTALS

A. Refer to Owner’s General Conditions and Special Conditions, for submittal procedures.

B. Product Data: Indicate toxicants to be used, composition by percentage, dilution schedule, intended application rate.

C. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements.

D. Test Reports: Indicate regulatory agency approval reports when required.

E. Test Reports: Submit termite-resistant sheet manufacturer's summary of independent laboratory and field testing for effectiveness in subterranean termite exclusion.

F. Manufacturer's Certificate: Certify that toxicants meet or exceed specified requirements.

G. Manufacturer's Instructions: Indicate caution requirement.

H. Installer Qualifications: Company specializing in performing work of the type specified and with minimum three (3) years of documented experience and approved by manufacturer.

I. Warranty: Submit warranty and ensure that forms have been completed in Owner's name.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing this type of work and:
   1. Having minimum of three (3) years documented experience.
   2. Approved by manufacturer of treatment materials.
   3. Licensed in the State in which the Project is located.

1.05 WARRANTY

A. See Owner’s General Conditions and Special Conditions, for additional warranty requirements.

B. Provide five year installer's warranty against damage to building caused by termites.
   1. Include coverage for repairs to building and to contents damaged due to building damage. Repair damage and, if required, re-treat.
   2. Inspect annually and report in writing to Owner. Provide inspection service for five years from Date of Substantial Completion.

PART 2 PRODUCTS

2.01 CHEMICAL SOIL TREATMENT

A. Toxicant Chemical: EPA (Title 7, United States Code, 136 through 136y) approved; synthetically color dyed to permit visual identification of treated soil.

B. Diluent: Recommended by toxicant manufacturer.

C. Manufacturers:
   1. Bayer Environmental Science Corp; ____: www.backedbybayer.com/pest-management/#sle.
   2. FMC Professional Solutions; ____: www.fmcprosolutions.com/#sle.
   3. Syngenta Professional Products; ____: www.syngentaprofessionalproducts.com/#sle.
   4. Substitutions: [See Owner’s General Conditions and Special Conditions

D. Mixes: Mix toxicant to manufacturer's instructions.

2.02 SITE-APPLIED TERMITICIDE

A. Site Applied Termiticide for Wood, Steel and Concrete: Borate mineral salt based, spray applied termiticide formulated for use on wood, steel, concrete and other building materials.
   1. Active Ingredient: 40% minimum disodium octaborate tetrahydrate (DOT).
   2. Carrier and Penetrant: Proprietary glycol solution.
   3. Products:
      a. Nisus Corporation; Bora-Care: www.nisuscorp.com/#sle.
      b. Substitutions: [See Owner's General Conditions and Special Conditions

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that soil surfaces are unfrozen, sufficiently dry to absorb toxicant, and ready to receive treatment.

B. Verify final grading is complete.

3.02 APPLICATION - CHEMICAL TREATMENT

A. Comply with requirements of U.S. EPA and applicable state and local codes.

B. Spray apply toxicant in accordance with manufacturer's instructions.

C. Apply toxicant at following locations:
   1. Under Slabs-on-Grade.
   2. At Both Sides of Foundation Surface.
   3. Soil Within 10 feet (3 m) of Building Perimeter For a Depth of 1 feet (____ m).

D. Under slabs, apply toxicant immediately prior to installation of vapor barrier.

E. At foundation walls, apply toxicant immediately prior to finish grading work outside foundations.

F. Apply extra treatment to structure penetration surfaces such as pipe or ducts, and soil penetrations such as grounding rods or posts.

G. Re-treat disturbed treated soil with same toxicant as original treatment.

H. If inspection or testing identifies the presence of termites, re-treat soil and re-test.

3.03 INSTALLATION - SITE-APPLIED TERMITICIDE

A. Comply with manufacturer's written instructions.

3.04 PROTECTION

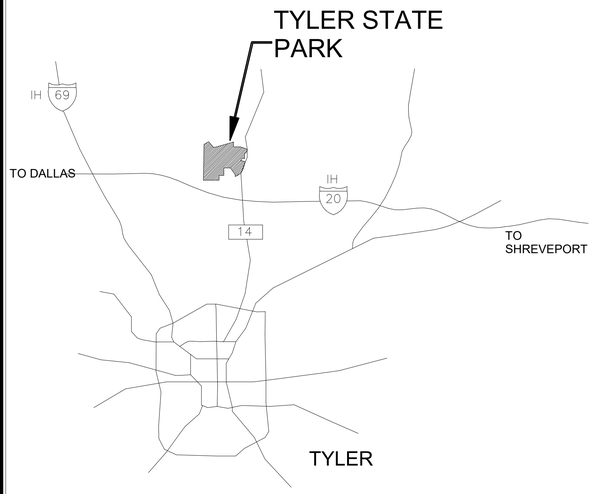
A. Do not permit soil grading over treated work.

END OF SECTION

COUNTY LOCATION MAP

NOT TO SCALE

NORTH

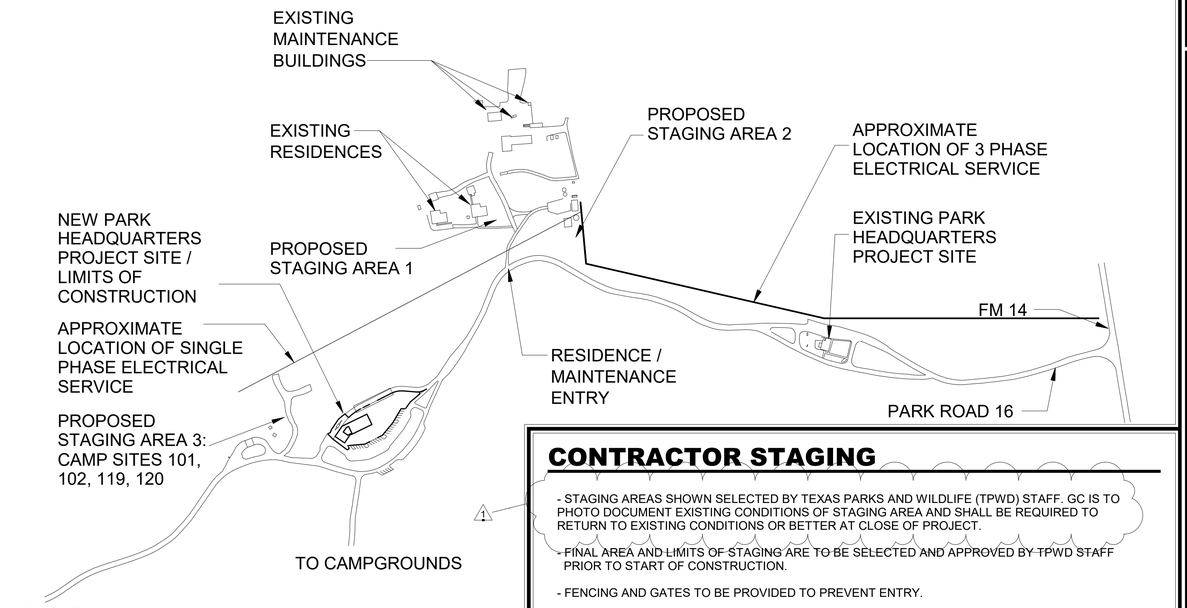


VICINITY MAP

NOT TO SCALE

NORTH

TYLER STATE PARK



SITE LOCATION MAP

NOT TO SCALE

NORTH

CONTRACTOR STAGING

- STAGING AREAS SHOWN SELECTED BY TEXAS PARKS AND WILDLIFE (TPWD) STAFF. GC IS TO PHOTO DOCUMENT EXISTING CONDITIONS OF STAGING AREA AND SHALL BE REQUIRED TO RETURN TO EXISTING CONDITIONS OR BETTER AT CLOSE OF PROJECT.

- FINAL AREA AND LIMITS OF STAGING ARE TO BE SELECTED AND APPROVED BY TPWD STAFF PRIOR TO START OF CONSTRUCTION.

- FENCING AND GATES TO BE PROVIDED TO PREVENT ENTRY.

- TEMPORARY POWER TO BE ESTABLISHED AND PROVIDED BY THE GENERAL CONTRACTOR. NO TREE CLEARING TO BE DONE AS PART OF TEMP. POWER.

SCOPE OF WORK, PHASE 1 ONLY

- **PHASE 1 (IN CONTRACT):** CONSTRUCTION OF NEW HEADQUARTERS BUILDING, FEE BOOTH, RADIO TOWER, ASSOCIATED UTILITIES AND SITEWORK. PROVIDE UTILITIES FOR IRON RANGER STATION.

- **TXDOT (NOT IN CONTRACT):** CONSTRUCTION OF NEW ROADS, BRIDGE, AND PARKING AREAS TO SERVE THE NEW HEADQUARTERS BUILDING. REVISE EXISTING ROADWAY AS REQUIRED TO WORK WITH NEW ROAD. ESTIMATED START DATE, SUMMER 2021

- **PHASE 2 (NOT IN CONTRACT):** DEMOLISH AND DISPOSE OF THE EXISTING HEADQUARTERS BUILDING AND REVISE THE ENTRY ROAD AND TURNAROUND. NEW LANDSCAPING / SEEDING AT AREA OF EXISTING HEADQUARTERS AND TxDOT ROAD PROJECT

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PROJECT

TYLER
STATE PARK

HEADQUARTERS REPLACEMENT
PHASE 1

PROJECT NO: 112741

DATE: JULY 03,2020

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G102	TAS STANDARDS
G103	TAS STANDARDS
LSP100	LIFE SAFETY PLAN
C100	SITE SCOPE EXHIBIT
C200	DIMENSIONAL CONTROL PLAN
C300	DRAINAGE AREA MAP
C400	INTERIM GRADING PLAN
C401	GRADING & DRAINAGE PLAN
C402	STORM PROFILES & CALCS
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T501	TECHNOLOGY TYPICAL LABELING SCHEME
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BUILDING CODE SUMMARY

A. INTERNATIONAL CODE COUNCIL

i. BUILDING CODE	INTERNATIONAL BUILDING CODE 2015
ii. RESIDENTIAL CODE	INTERNATIONAL RESIDENTIAL CODE 2015
iii. EXISTING BUILDINGS	INTERNATIONAL EXISTING BUILDINGS CODE 2015
iv. STRUCTURAL CODE	INTERNATIONAL BUILDING CODE 2015
v. PLUMBING CODE	INTERNATIONAL PLUMBING CODE 2015
vi. MECHANICAL CODE	INTERNATIONAL MECHANICAL CODE 2015
vii. ENERGY CODE	INTERNATIONAL ENERGY CODE 2015
viii. GAS CODE	INTERNATIONAL FUEL GAS CODE 2015

B. NATIONAL FIRE PROTECTION ASSOCIATION

i. ELECTRICAL CODE	NATIONAL ELECTRICAL CODE 2020

C. STATE ENERGY CONSERVATION OFFICE (SECO)/TEXAS COMPTROLLER'S OFFICE

1. ENERGY CODES FOR STATE BUILDINGS - See Energy Conservation Design Standards: Texas Administrative Code, Title 34, Part 1, Ch.19, Subchapter C
   a. COMPLIANCE WITH THE ENERGY CONSERVATION DESIGN STANDARD OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATION AN D AIR CONDITIONING ENGINEERS (ASHRAE) /ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA), ENERGY STANDARD FOR BUILDINGS, ASHRAE/IESNA STANDARD 90.1 (2013)
   See SECO website for State Funded Buildings, New Construction and Major Renovation Requirements and SECO Compliance Certification Forms
2. WATER CONSERVATION STANDARDS FOR STATE BUILDINGS - Energy Conservation Design Standards: Texas Administrative Code, Title 34, Part 1, Ch.19, Subchapter C
   a. COMPLIANCE WITH THE WATER CONSERVATION DESIGN STANDARDS FOR STATE BUILDINGS AND INSTITUTIONS OF HIGHER EDUCATION FACILITIES, STATE ENERGY CONSERVATION OFFICE (SECO), 2016
   See SECO website for Texas Water Conservation Design Standards, Requirements and SECO Compliance Certification I Reporting Form

D. ACCESSIBILITY CODE

i. U.S. DEPT. OF JUSTICE, 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
ii. U.S. DEPT. OF JUSTICE, ARCHITECTURAL BARRIERS ACT, ACCESSIBILITY GUIDELINES FOR OUTDOOR DEVELOPED AREAS ON FEDERAL LANDS, EFFECTIVE NOVEMBER-25-2013
iii. 2012 TEXAS ACCESSIBILITY STANDARDS, ELIMINATION OF ARCHITECTURAL BARRIERS, TEXAS GOVERNMENT CODE, CHAPTER 469

E. PLAYGROUND SAFETY CODE

i. Public Playground Safety Handbook, U.S. Consumer Product Safety Commission.

TEXAS PARKS & WILDLIFE

TEXAS PARKS AND WILDLIFE

INFRASTRUCTURE DIVISION

4200 SMITH SCHOOL ROAD · AUSTIN, TEXAS 78744-3292

CONSTRUCTION DOCUMENTS

REGISTERED ARCHITECT
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20948
STATE OF TEXAS
07/17/2020

RELEASED FOR SOLICITATION

PROJECT MANAGER, INFRASTRUCTURE DIVISION — DATE

DESIGN BRANCH HEAD, INFRASTRUCTURE DIVISION — DATE

PM BRANCH HEAD, INFRASTRUCTURE DIVISION — DATE

DEPUTY DIRECTOR, INFRASTRUCTURE DIVISION — DATE

SET NO:

CONSTRUCTION DOCUMENTS

TREE PRESERVATION GENERAL NOTES

1. TREES TO BE MARKED AND APPROVED BY TPWD FOR STOCKPILE OR HAULING PRIOR TO CUTTING OF TREES. CONTRACTOR IS TO CUT STOCKPILED TREES INTO 16' LENGTHS AND COORDINATE WITH TPWD ON THE STOCKPILE LOCATION FOR TREES. CUT AND HAUL TREES WILL BECOME PROPERTY OF THE CONTRACTOR.

2. DURING CONSTRUCTION, TREES TO BE REMOVED SHOULD BE REMOVED FROM THE SITE IN A MANNER TO AVOID INJURY TO REMAINING TREES, INCLUDING THE REMOVAL OF STUMPS AND/OR ROOT SYSTEMS. HEAVY EQUIPMENT SHALL NOT ENCROACH ON THE ROOT SYSTEMS OF TREES TO BE RETAINED OR OTHER TREES OF HIGH VALUE. IF NECESSARY, TREES SHOULD BE REMOVED MANUALLY WITH CHAIN SAWS, AND STUMPS SHOULD BE GROUND OUT INSTEAD OF USING HEAVY EQUIPMENT.

3. PROHIBITED ACTIVITIES IN CANOPY DRIP-LINE: THE FOLLOWING ACTIVITIES ARE PROHIBITED WITHIN THE LIMITS OF THE CANOPY DRIP-LINE OF ANY PROTECTED TREE.
   A. MATERIAL STORAGE: NO MATERIALS INTENDED FOR USE IN CONSTRUCTION OR WASTE MATERIALS ACCUMULATED DUE TO EXCAVATION OR DEMOLITION SHALL BE PLACED WITHIN THE LIMITS OF THE CANOPY DRIP-LINE OF ANY PROTECTED TREE.

   B. EQUIPMENT CLEANING/LIQUID DISPOSAL: NO EQUIPMENT SHALL BE CLEANED OR OTHER LIQUIDS DEPOSITED OR ALLOWED TO FLOW OVERLAND WITHIN THE LIMITS OF THE CANOPY DRIP-LINE OF A PROTECTED TREE. THIS INCLUDES, WITHOUT LIMITATION, PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR OR SIMILAR MATERIALS.

   C. TREE ATTACHMENTS: NO SIGNS, WIRES OR OTHER ATTACHMENTS, OTHER THAN THOSE A PROTECTIVE NATURE, SHALL BE ATTACHED TO ANY PROTECTED TREE.

   D. VEHICULAR TRAFFIC: NO VEHICULAR AND/OR CONSTRUCTION EQUIPMENT TRAFFIC OR PARKING SHALL TAKE PLACE WITHIN THE LIMITS OF THE CANOPY DRIP-LINE OF ANY PROTECTED TREE OTHER THAN ON EXISTING STREET PAVEMENT. THIS RESTRICTION DOES NOT APPLY TO SINGLE INCIDENT ACCESS WITHIN THE CANOPY DRIP-LINE FOR PURPOSES OF CLEARING UNDERBRUSH, ESTABLISHING THE BUILDING PAD AND ASSOCIATED LOT GRADING, VEHICULAR TRAFFIC NECESSARY FOR ROUTINE UTILITY MAINTENANCE, EMERGENCY RESTORATION OF UTILITY SERVICE, OR ROUTINE MOWING OPERATIONS.

   E. GRADE CHANGES: NO GRADE CHANGES SHALL BE ALLOWED WITHIN THE LIMITS OF THE CANOPY DRIP-LINE OF ANY PROTECTED TREE UNLESS ADEQUATE CONSTRUCTION METHODS ARE APPROVED BY THE LANDSCAPE ADMINISTRATOR.

   F. IMPERVIOUS PAVING: NO PAVING WITH ASPHALT, CONCRETE OR OTHER IMPERVIOUS MATERIALS THAT MAY REASONABLY BE EXPECTED TO KILL A TREE SHALL BE PLACED WITHIN THE LIMITS OF THE CANOPY DRIP-LINE OF A PROTECTED TREE EXCEPT AS OTHERWISE ALLOWED IN THE CITY ORDINANCE.

   G. NO HEAVY EQUIPMENT, INCLUDING BUT NOT LIMITED TO TRUCKS, TRACTORS, TRAILERS, BULLDOZERS, BOBCAT TRACTORS, TRENCHERS, COMPRESSORS, AND HOISTS, SHALL BE ALLOWED INSIDE THE CANOPY DRIP-LINE OF ANY PROTECTED TREE ON ANY CONSTRUCTION SITE WITHOUT THE SPECIFIC APPROVAL OF THE LANDSCAPE ADMINISTRATOR.

4. PROCEDURES REQUIRED PRIOR TO CONSTRUCTION: THE FOLLOWING PROCEDURES SHALL BE FOLLOWED ON ALL TYPES OF CONSTRUCTION PROJECTS (INCLUDING WITHOUT LIMITATION RESIDENTIAL, COMMERCIAL, AND MUNICIPAL/PUBLIC DOMAIN PROJECTS).

   A. PROTECTIVE FENCING: PRIOR TO CONSTRUCTION, THE CONTRACTOR OR SUBCONTRACTOR SHALL CONSTRUCT AND MAINTAIN A PROTECTIVE FENCING AS SHOWN ON THE PLANS, ENCLOSING THE OUTER LIMITS OF THE CANOPY DRIP-LINE OF THE TREES TO PROTECT THEM FROM CONSTRUCTION ACTIVITY. ALL PROTECTIVE FENCING SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY SITE WORK AND REMAIN IN PLACE UNTIL ALL EXTERIOR WORK HAS BEEN COMPLETED.

   B. TREES TO BE REMOVED SHOULD BE REMOVED FROM THE SITE IN A MANNER TO AVOID INJURY TO REMAINING TREES. HEAVY EQUIPMENT SHALL NOT ENCROACH ON THE ROOT SYSTEMS OF TREES TO BE RETAINED OR OTHER TREES OF HIGH VALUE. IF NECESSARY, TREES SHOULD BE REMOVED MANUALLY WITH CHAIN SAWS.

   C. WHERE EXCAVATIONS ARE NECESSARY WITHIN THE CANOPY DRIP-LINE OF TREES, TRENCHING SHOULD BE PERFORMED MANUALLY, OR BY USING A VIBRATORY PLOW, DIRECTIONAL BORER, OR BY AIR SPADING. WHEN TRENCHING OR MODIFICATION OF THE ROOT ZONE ENCROACHES HEAVILY ONTO ESTABLISHED TREES, A ROOT PRUNING METHOD SHOULD BE EMPLOYED ONLY WHERE DEEMED NECESSARY BY, AND UNDER THE DIRECTION OF, A CERTIFIED ARBORIST. TEARING OF ROOTS IS TO BE AVOIDED. SUPPLEMENTAL IRRIGATION SHALL BE IMPLEMENTED IF NEEDED. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH TO THE SOIL AND SEALED USING SEALING COMPOUND OR APPROVED EQUAL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE (I.E. WITHIN THE SAME WORKDAY). IF ROOTS ARE NOT BACKFILLED WITHIN THIS TIME, THEY SHALL BE COVERED WITH ORGANIC MATERIAL SUCH AS COMPOSTED MULCH TO A DEPTH OF 4 INCHES, WHICH WILL REDUCE TEMPERATURE AND MINIMIZE WATER LOSS DUE TO EVAPORATION.

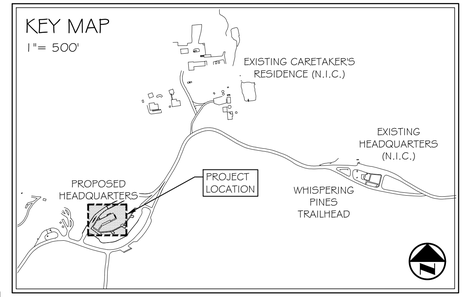
5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO TREES THAT ARE TO REMAIN. CONTRACTOR TO INSTALL NEW TREE OF EQUIVALENT SIZE IF DAMAGED DURING CONSTRUCTION.

TREE REMOVAL SUMMARY (PROPOSED HEADQUARTERS)

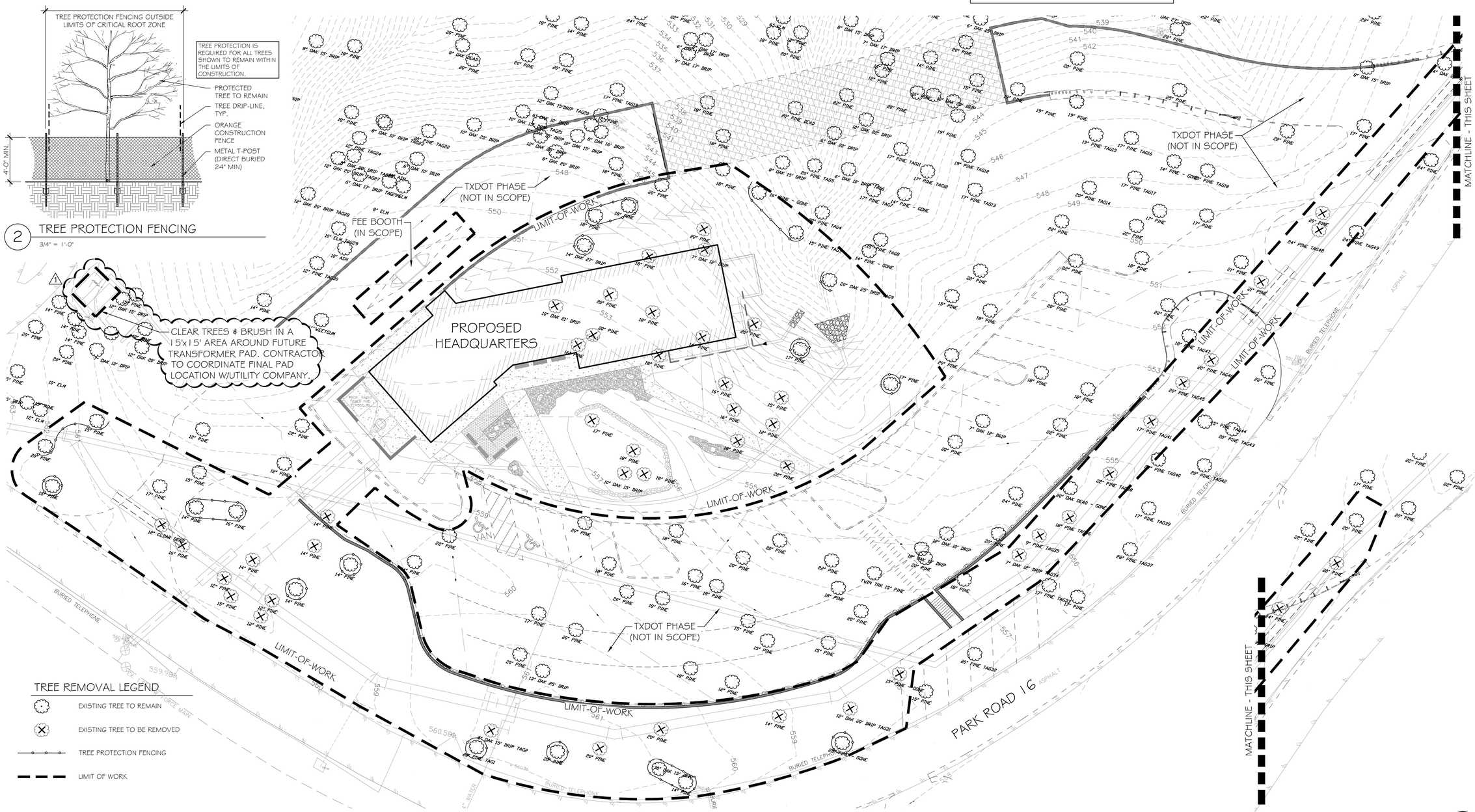
TREE SPECIES	CUT & STOCKPILE (>20" DIA. EACH)	CUT & HAUL (≤20" DIA. EACH)
ASH	0	0
CEDAR	0	1
ELM	0	0
OAK	0	5
PINE	5	34
SWEETGUM	0	0
TOTAL	5	40

CONTRACTOR TO COORDINATE LOCATION OF TREE STOCKPILE WITH TEXAS PARKS & WILDLIFE DEPARTMENT PRIOR TO TREE REMOVAL.

NO TREE REMOVAL AT WHISPERING PINES TRAILHEAD



2 TREE PROTECTION FENCING
3/4" = 1'-0"



TREE REMOVAL LEGEND
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING
- LIMIT OF WORK

1 PROPOSED HEADQUARTERS
1" = 20'-0"

0 10 20 40 60
GRAPHIC SCALE IN FEET

TEXAS PARKS & WILDLIFE

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REGISTERED LANDSCAPE ARCHITECT KENDALL HANCEY 3366 STATE OF TEXAS 07/03/2020

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SAN ANTONIO, TEXAS 78229-5815
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LA10100900

TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: KJH
DRAWN BY: KJH
REVIEWED BY: MRC

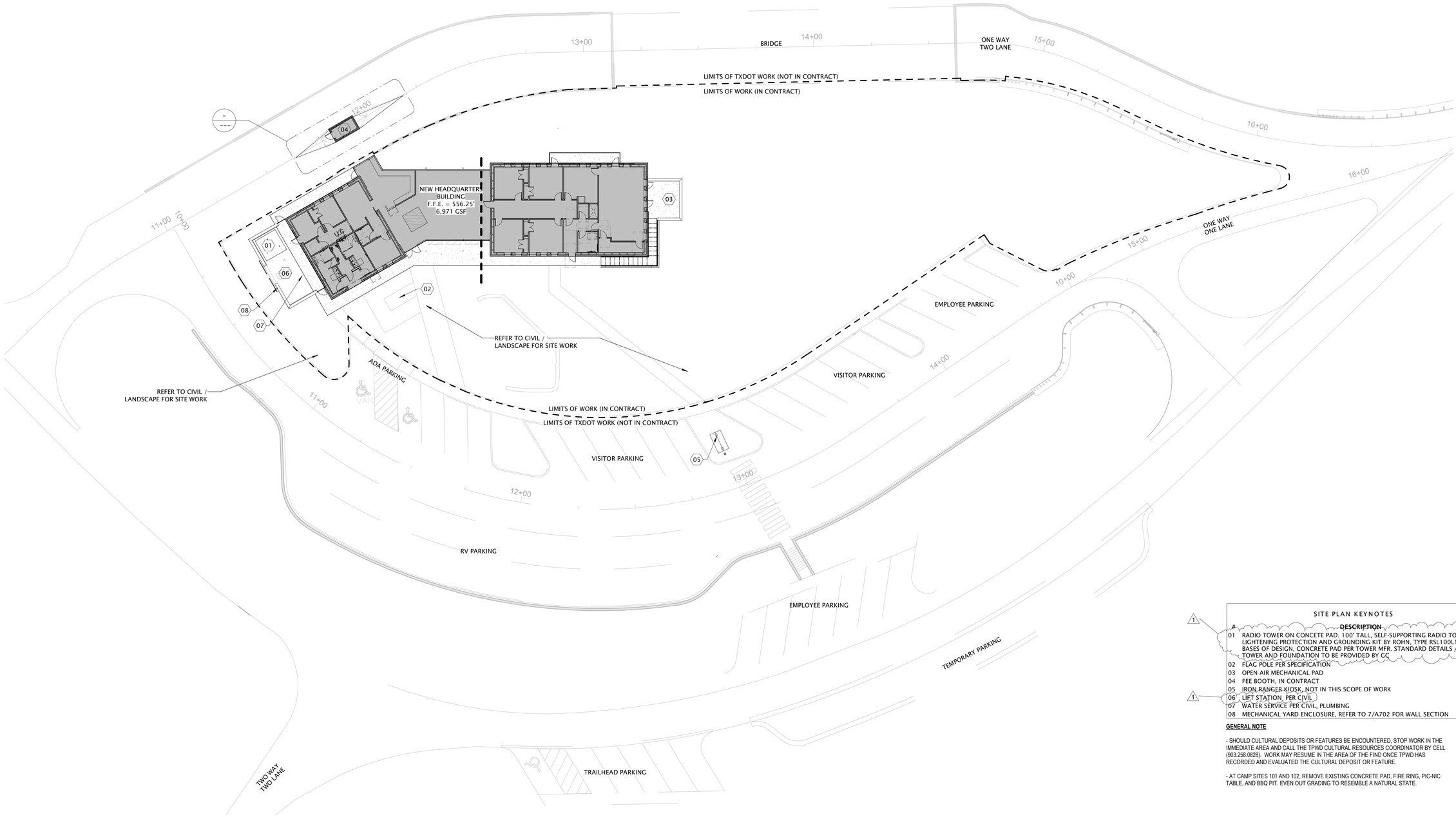
no.	revision	date
1	ADDENDUM #3	10/07/2020

SHEET TITLE
TREE REMOVAL, PROTECTION, AND SALVAGE PLAN

SHEET NUMBER
L101

CONSTRUCTION DOCUMENTS

PATH: M:\DWG-39\3914-17.00\CTWG\Landscape C3D Files\Sheets\Phase 1 - Prop. HQ, Utilities, & Site.dwg
DATE: 3/19/2020



1 SITE PLAN
SCALE: 1" = 20'-0"

TRUE NORTH

PLAN NORTH

SITE PLAN KEYNOTES

#	DESCRIPTION
01	RADIO TOWER ON CONCETE PAD. 100' TALL, SELF-SUPPORTING RADIO TOWER W/ LIGHTENING PROTECTION AND GROUNDING KIT BY ROHN, TYPE RSL100L10 BASES OF DESIGN, CONCRETE PAD PER TOWER MFR. STANDARD DETAILS / TOWER AND FOUNDATION TO BE PROVIDED BY GC
02	FLAG POLE PER SPECIFICATION
03	OPEN AIR MECHANICAL PAD
04	FEE BOOTH, IN CONTRACT
05	IRON RANGER KIOSK, NOT IN THIS SCOPE OF WORK
06	LIFT STATION, PER CIVIL
07	WATER SERVICE PER CIVIL, PLUMBING
08	MECHANICAL YARD ENCLOSURE, REFER TO 7/A702 FOR WALL SECTION

GENERAL NOTE

- SHOULD CULTURAL DEPOSITS OR FEATURES BE ENCOUNTERED, STOP WORK IN THE IMMEDIATE AREA AND CALL THE TPWD CULTURAL RESOURCES COORDINATOR BY CELL (903.258.0828). WORK MAY RESUME IN THE AREA OF THE FIND ONCE TPWD HAS RECORDED AND EVALUATED THE CULTURAL DEPOSIT OR FEATURE.

- AT CAMP SITES 101 AND 102, REMOVE EXISTING CONCRETE PAD, FIRE RING, PIC-NIC TABLE, AND BBQ PIT. EVEN OUT GRADING TO RESEMBLE A NATURAL STATE.

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REGISTERED ARCHITECT
RACHEL L. H. WRIGHT
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STATE OF TEXAS

TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: SG/RW
DRAWN BY: EK
REVIEWED BY: SG/RW

no.	revision	date
1	ADD. 03	10-07-20

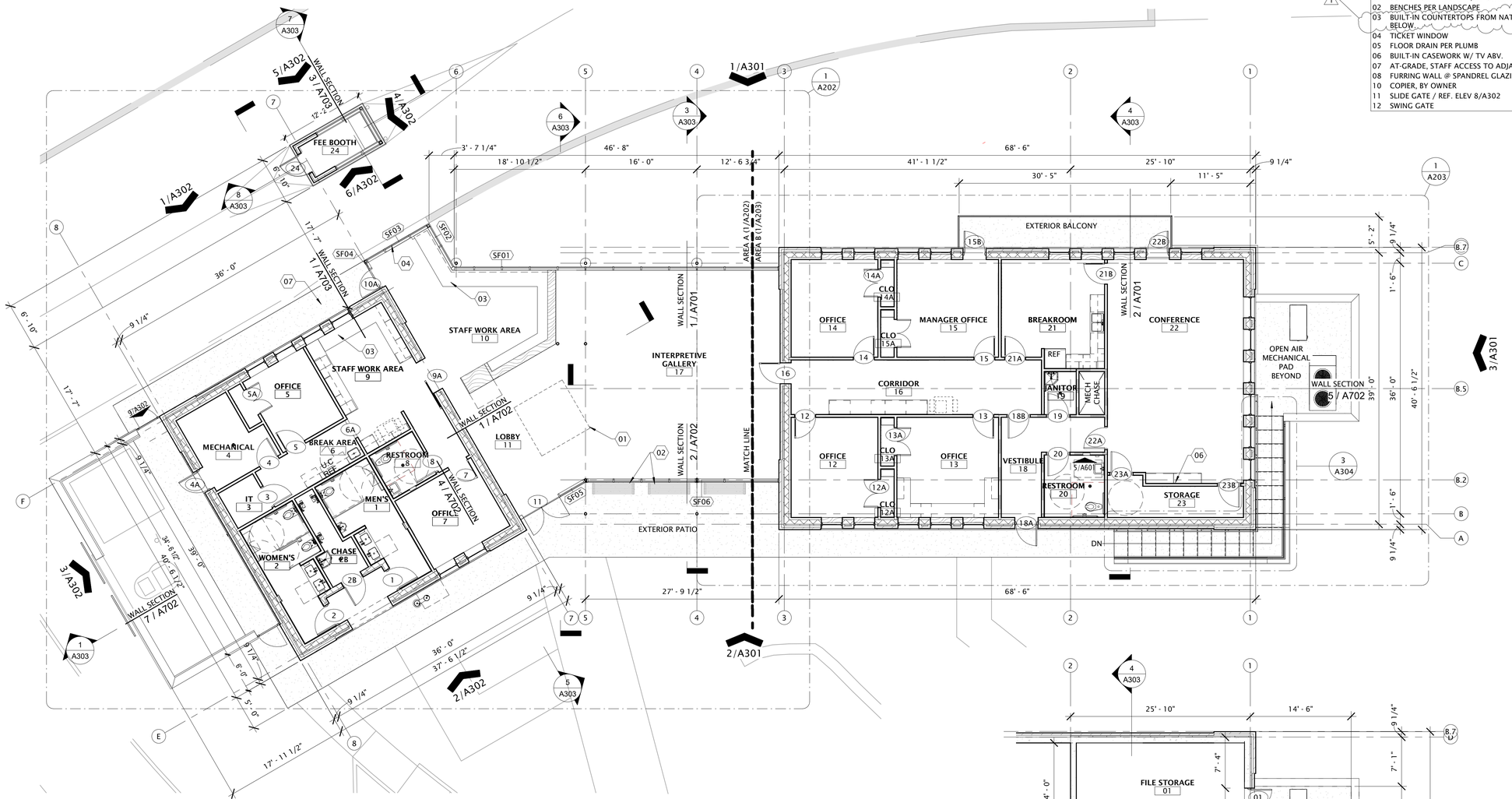
SHEET TITLE
SITE PLAN

SHEET NUMBER
A101

CONSTRUCTION DOCUMENTS

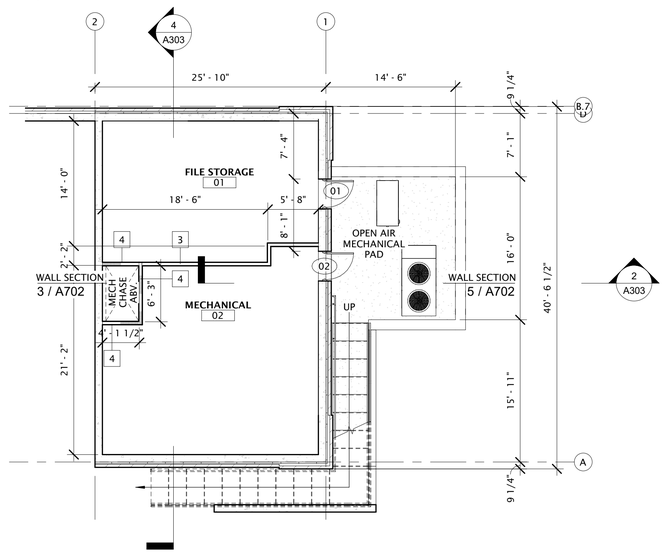
FLOOR PLAN KEYNOTES

#	DESCRIPTION
01	SCALE MODEL DISPLAY, BY OWNER
02	BENCHES PER LANDSCAPE
03	BUILT-IN COUNTERTOPS FROM NATURAL EDGE TEXAS PECAN SLABS, WITH BUILT-IN CASEWORK BELOW.
04	TICKET WINDOW
05	FLOOR DRAIN PER PLUMB
06	BUILT-IN CASEWORK W/ TV ABV.
07	AT-GRADE, STAFF ACCESS TO ADJACENT ROAD
08	FURRING WALL @ SPANDREL GLAZING BELOW WORK TOP
10	COPIER, BY OWNER
11	SLIDE GATE / REF. ELEV 8/A302
12	SWING GATE



1 FIRST FLOOR OVERALL
SCALE: 1/8" = 1'-0"

TRUE NORTH PLAN NORTH



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

TRUE NORTH PLAN NORTH

TEXAS PARKS & WILDLIFE

FORD POWELL &CARSON
Architects & Planners, Inc.
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1138 East Commerce Street
San Antonio, Texas 78205
210/226-1246
FPC# 92705

REGISTERED ARCHITECT RACHEL L. H. WRIGHT 20940 STATE OF TEXAS

TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: Designer
DRAWN BY: EK
REVIEWED BY: SG/RW

no.	revision	date
1	ADD. 03	10-07-20

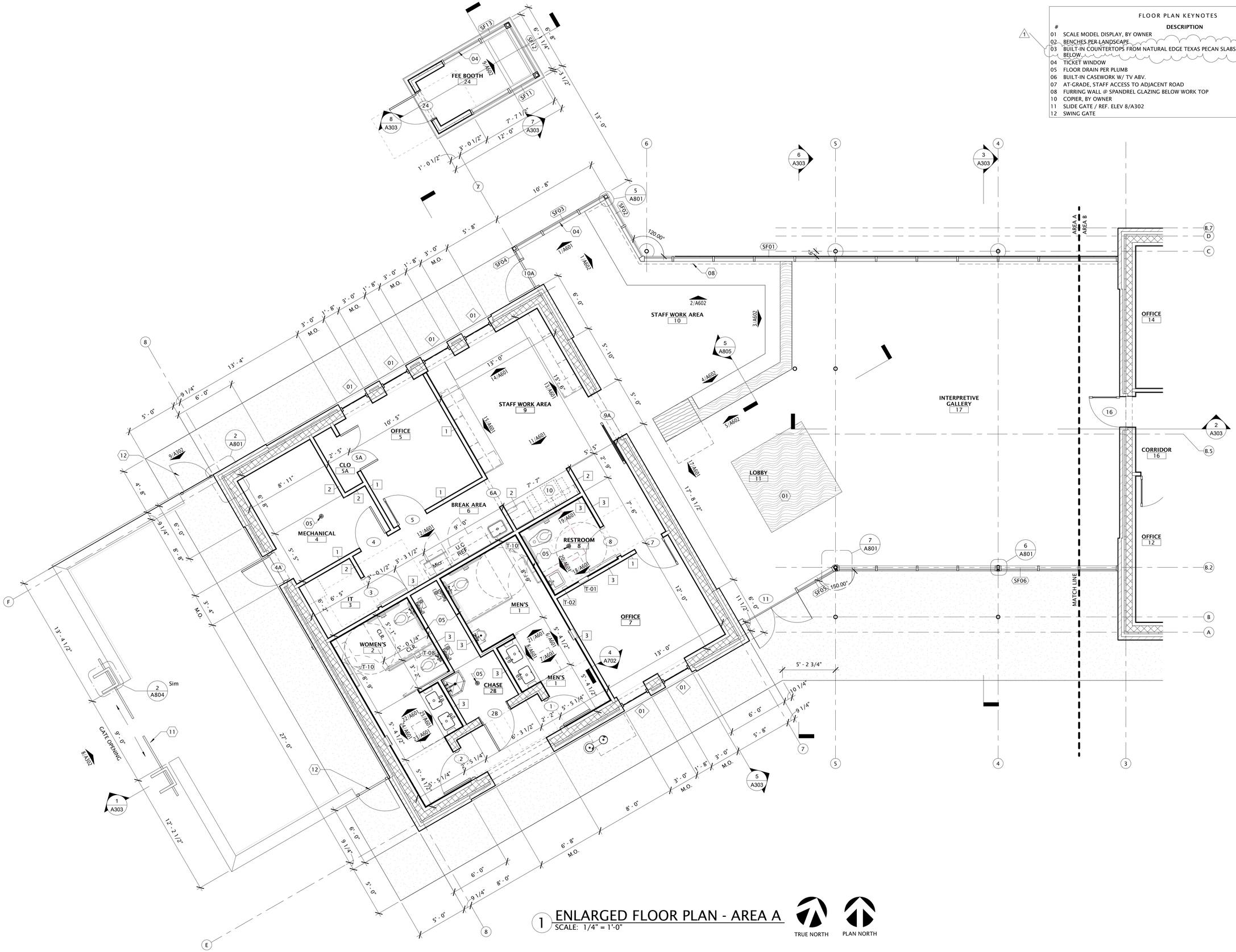
SHEET TITLE
FLOOR PLANS

SHEET NUMBER
A201

CONSTRUCTION DOCUMENTS

FLOOR PLAN KEYNOTES

#	DESCRIPTION
01	SCALE MODEL DISPLAY, BY OWNER
02	BENCHES PER LANDSCAPE
03	BUILT-IN COUNTERTOPS FROM NATURAL EDGE TEXAS PECAN SLABS, WITH BUILT-IN CASEWORK BELOW
04	TICKET WINDOW
05	FLOOR DRAIN PER PLUMB
06	BUILT-IN CASEWORK W/ TV ABV.
07	AT-GRADE, STAFF ACCESS TO ADJACENT ROAD
08	FURRING WALL @ SPANDREL GLAZING BELOW WORK TOP
10	COPIER, BY OWNER
11	SLIDE GATE / REF. ELEV 8/A302
12	SWING GATE



1 ENLARGED FLOOR PLAN - AREA A

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

TRUE NORTH PLAN NORTH

TEXAS PARKS & WILDLIFE

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REGISTERED ARCHITECT
RACHEL L. H. WRIGHT
20948
STATE OF TEXAS

TYLER STATE PARK

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1	ADD. 03	10-07-20

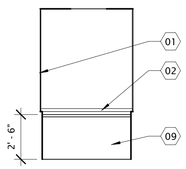
SHEET TITLE

ENLARGD FLOOR PLAN - AREA A

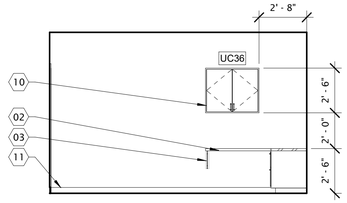
SHEET NUMBER

A202

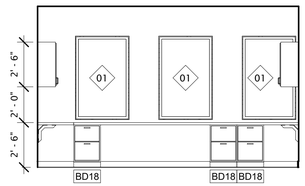
CONSTRUCTION DOCUMENTS



9 FEE BOOTH NE
1/4" = 1'-0"



7 OFFICE 13 E
1/4" = 1'-0"



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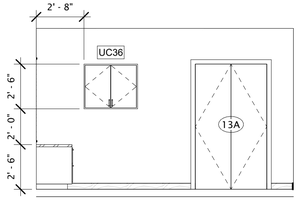

26 OFFICE 13 W
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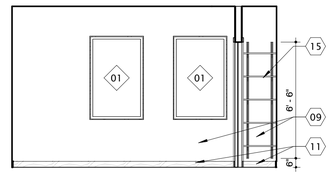

10 TYPICAL OFFICE / CLOSET
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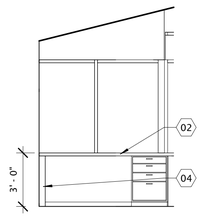

1 STAFF 10 NE
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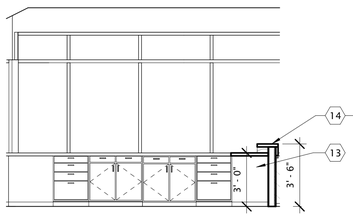

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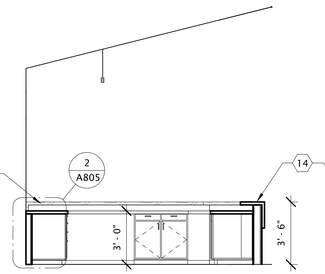

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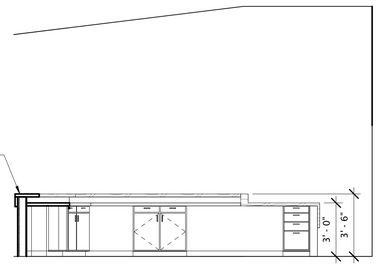
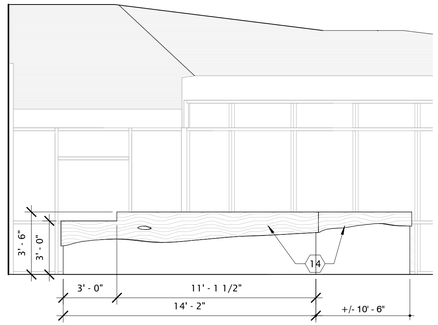


4 STAFF 10 SE
1/4" = 1'-0"



5 STAFF 10 NW
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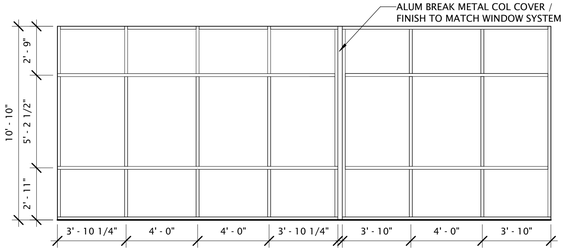

22 ALUM WINDOW SYSTEM SF06
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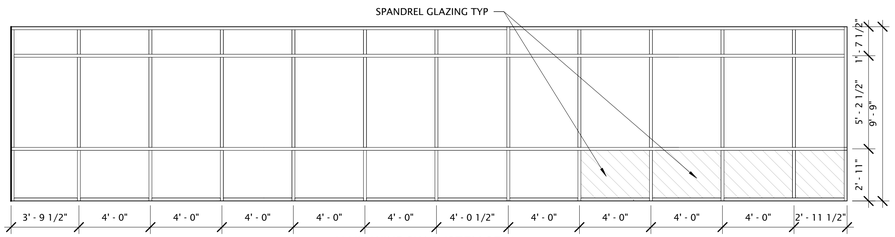

13 ALUM WINDOW SYSTEM SF01
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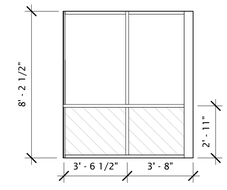
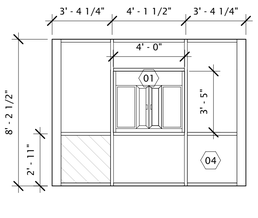
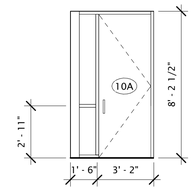


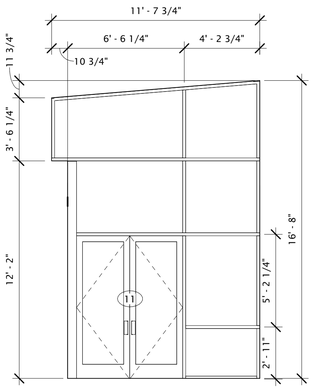
14 ALUM WINDOW SYSTEM SF02
1/4" = 1'-0"



15 ALUM WINDOW SYSTEM SF03
1/4" = 1'-0"

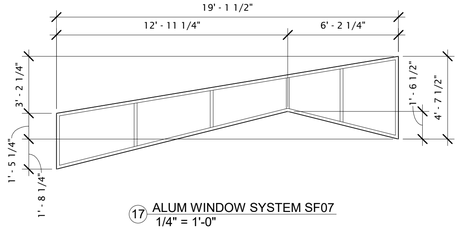


16 ALUM WINDOW SYSTEM SF04
1/4" = 1'-0"



21 ALUM WINDOW SYSTEM SF05
1/4" = 1'-0"

1 CURTAIN WALL WINDOW SYSTEM



17 ALUM WINDOW SYSTEM SF07
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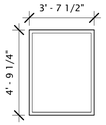
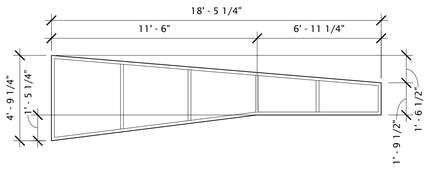


18 ALUM WINDOW SYSTEM SF08
1/4" = 1'-0"



19 ALUM WINDOW SYSTEM SF09
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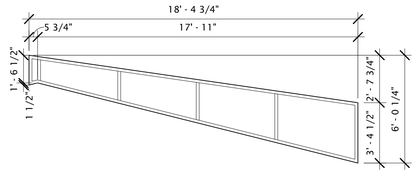
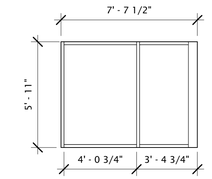
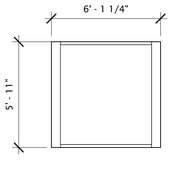


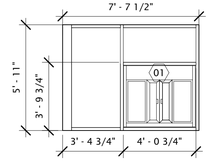
20 ALUM WINDOW SYSTEM SF10
1/4" = 1'-0"



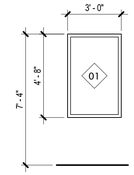
8 ALUM WINDOW SYSTEM SF11
1/4" = 1'-0"



24 ALUM WINDOW SYSTEM SF12
1/4" = 1'-0"



25 ALUM WINDOW SYSTEM SF13
1/4" = 1'-0"



23 ALUM. FRAMED WINDOW 01 TYP.
1/4" = 1'-0"

GENERAL NOTES

ALL "ALUMINUM WINDOW SYSTEMS" ARE COMPRISED OF ALUMINUM ANODIZED FRAMES WITH 1" INSULATED GLASS, SEE SPECIFIATIONS FOR MORE INFORMATION.

CONTRACTOR MUST FIELD VERIFY ALL CONDITIONS AND PROVIDE SHOP DRAWINGS FOR ARCHITECT APPROVAL PER SPECIFICATIONS.

DO NOT SCALE FROM DRAWINGS AND INFORM ARCHITECT OF ANY DISCREPENCIES BETWEEN DIMENSIONS SHOWN HERE AND ACTUAL FIELD CONDITIONS.

SAFETY GLAZING - TEMPERED GLASS SHALL BE PROVIDED PER SECTION 2406 OF THE IBC.

-ALL GLAZING IN DOORS

-ALL GLAZING ADJACENT TO DOORS

-ALL GLAZING IN WINDOWS MEETING ALL OF THE FOLLOWING CONDITIONS:

-EXPOSED AREA OF WINDOW IS GREATER THAN 9 SF

-THE BOTTOM EDGE OF GLAZING IS LESS THAN 18" ABOVE THE FLOOR

-THE TOP EDGE OF THE GLAZING IS GREATER THAN 36" ABOVE THE FLOOR AND ONE OR MORE WALKING SURFACES ARE WITHIN 36" MEASURED HORIZONTALLY AND IN A STRAIGHT LINE OF THE PLANE OF THE GLAZING.

*THIS LIST IS PROVIDED FOR REFERENCE ONLY AND ALL REQUIREMENTS FOR SAFETY GLAZING ARE NOT EXPLICITLY STATED HERE.

INTERIOR KEYNOTES

#	DESCRIPTION
01	TICKET WINDOW IN ALUM FRAMED WINDOW SYSTEM
02	COUNTER TOP AS SCHED.
03	COUNTER SUPPORT / PROVIDE BLOCKING IN WALL @ 36" O.C. MAX
04	KNEE WALL @ SPANDREL GLASS
05	COPIER, BY OWNER
07	SURFACE MOUNTED SLINDING DOOR AS SCHED.
08	DOOR AND FRAME AS SCHED.
09	WALL FINISH AS SCHED.
10	CUSTOM MILLWORK / FINISH AS SCHED.
11	BASE AS SCHED.
12	REFRIGERATOR BY CONTRACTOR / PROVIDE WATER LINE
13	TAS COMPLIANT KNEE SPACE / PIPE COVERS
14	COUNTERTOPS FROM NATURAL EDGE SLABS OF TEXAS PECAN, WITH BUILT-IN CASEWORK BELOW / PECAN SLABS BASIS OF DESIGN IS SIM TO THOSE PROVIDED BY BERDOLL SAWMILL OR EQUAL.
15	FIVE 3/4" PLASTIC LAMINATE SHELVES ON HEAVY DUTY STANDARDS AND BRACKETS

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REGISTERED ARCHITECT
RACHEL L. H. WRIGHT
20940
STATE OF TEXAS
07/03/20

TYLER STATE PARK

HEADQUARTERS REPLACEMENT PHASE 1

PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: Designer
DRAWN BY: EK
REVIEWED BY: SG/RW

no.	revision	date
1	ADD. 03	10-07-20

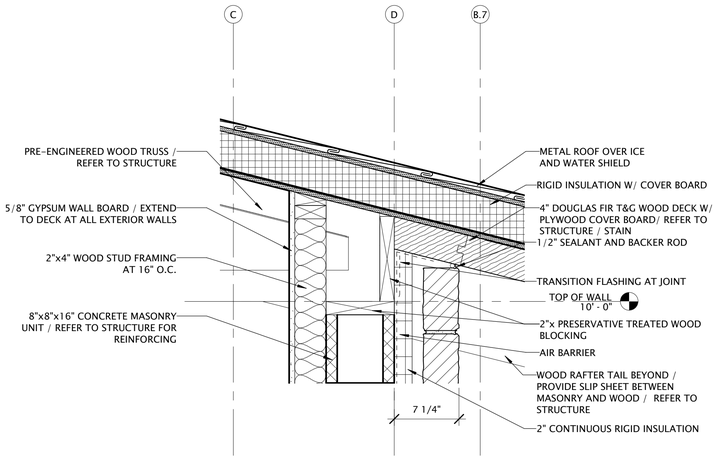
SHEET TITLE

INTERIOR / STOREFRONT ELEVATIONS

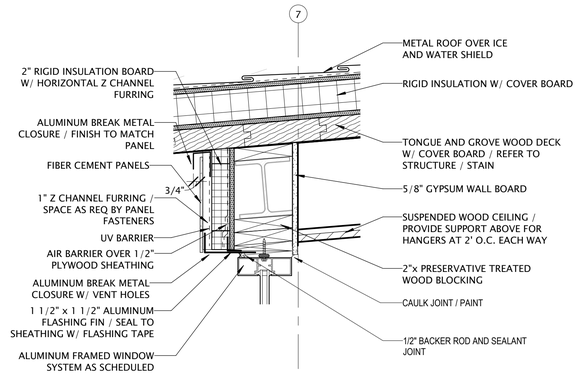
SHEET NUMBER

A602

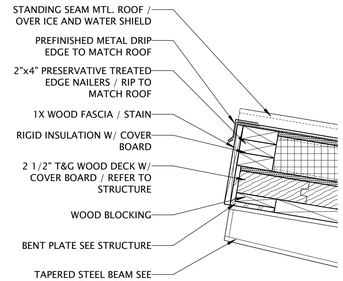
CONSTRUCTION DOCUMENTS



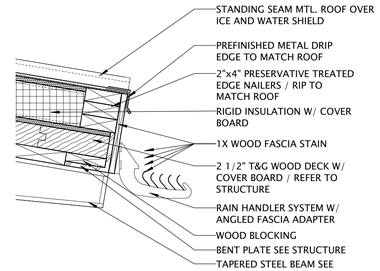
1 TRANSVERSE SECTION @ CONFERENCE / MECH - Callout 1 - Callout 5
1 1/2" = 1'-0"



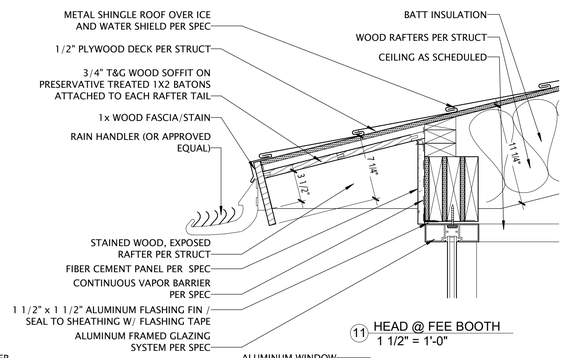
2 HEAD @ CLERESTORY
1 1/2" = 1'-0"



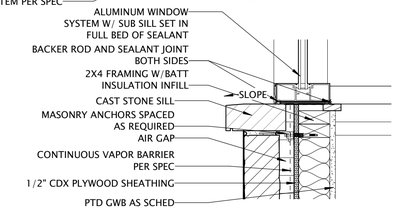
3 POP UP ROOF NORTH
1 1/2" = 1'-0"



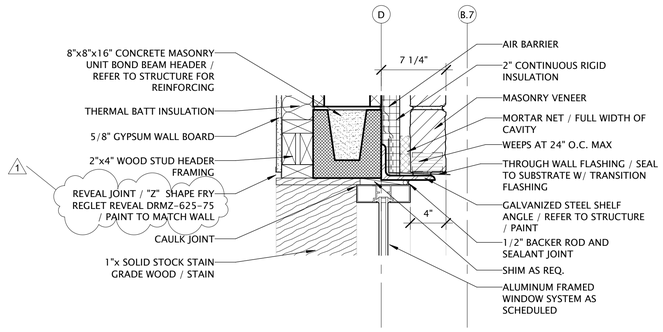
6 POP UP ROOF SOUTH
1 1/2" = 1'-0"



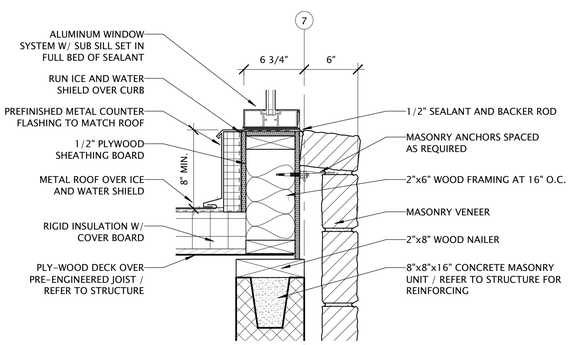
11 HEAD @ FEE BOOTH
1 1/2" = 1'-0"



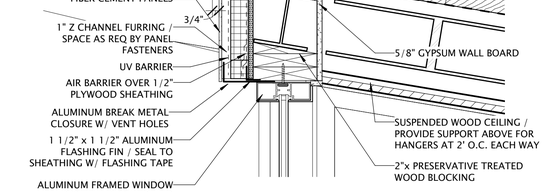
12 SILL @ FEE BOOTH
1 1/2" = 1'-0"



4 WINDOW HEAD @ STONE WALL
1 1/2" = 1'-0"



5 CURB @ CLERESTORY
1 1/2" = 1'-0"



9 CLERESTORY NORTH HEAD
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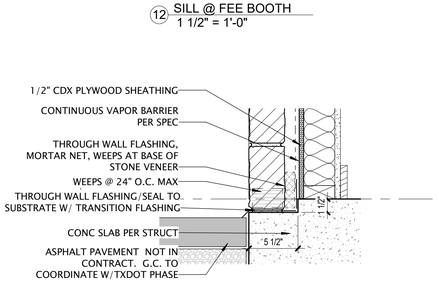

13 WALL BASE @ FEE BOOTH
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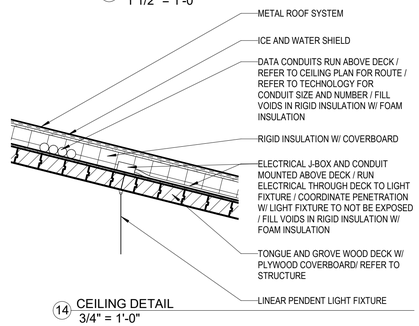
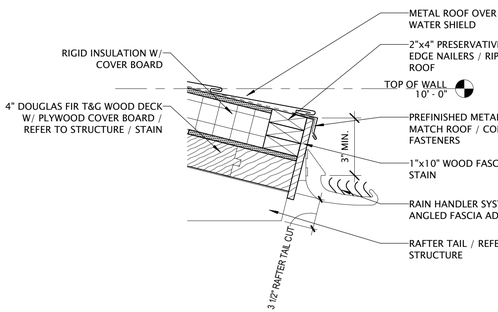


14 CEILING DETAIL
3/4" = 1'-0"



7 TYPICAL ROOF EDGE
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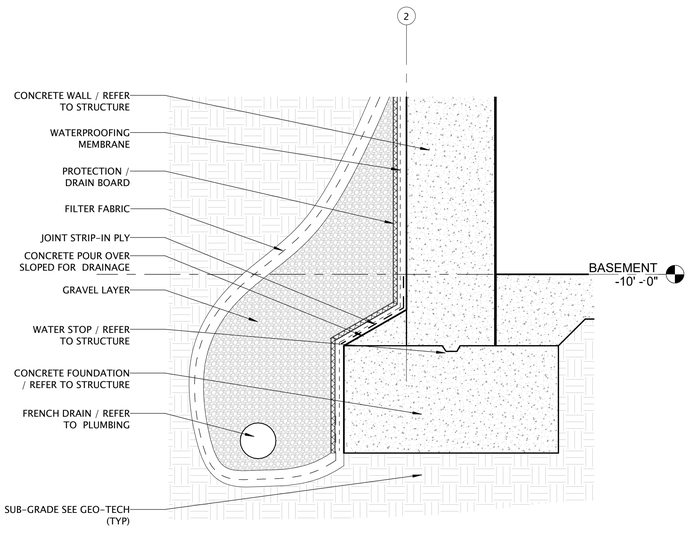
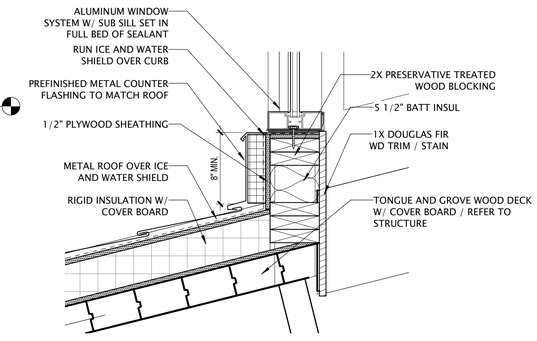


8 FRENCH DRAIN @ BASEMENT
1 1/2" = 1'-0"



10 CLERESTORY NORTH SILL
1 1/2" = 1'-0"

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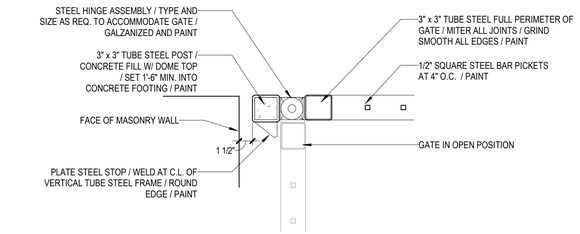
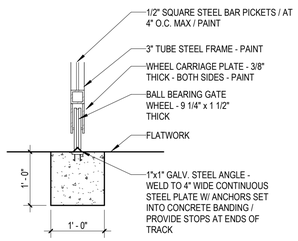
SHEET TITLE
SECTION DETAILS

SHEET NUMBER
A803

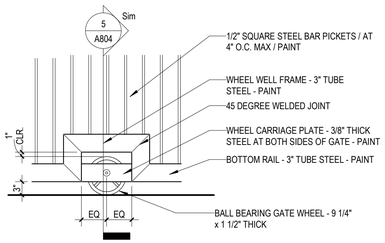
CONSTRUCTION DOCUMENTS



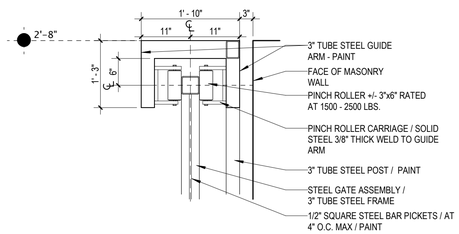
6 PLAN DETAIL - SWING GATE
1 1/2" = 1'-0"



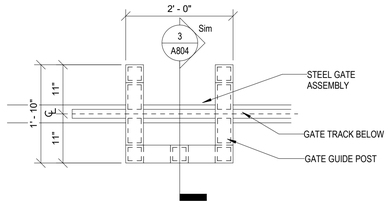
5 SECTION DETAIL - GATE TRACK
3/4" = 1'-0"



4 ELEVATION DETAIL - GATE WHEEL
3/4" = 1'-0"

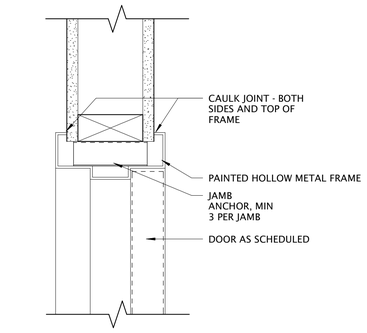


3 SECTION DETAIL - GUIDE ARM
3/4" = 1'-0"



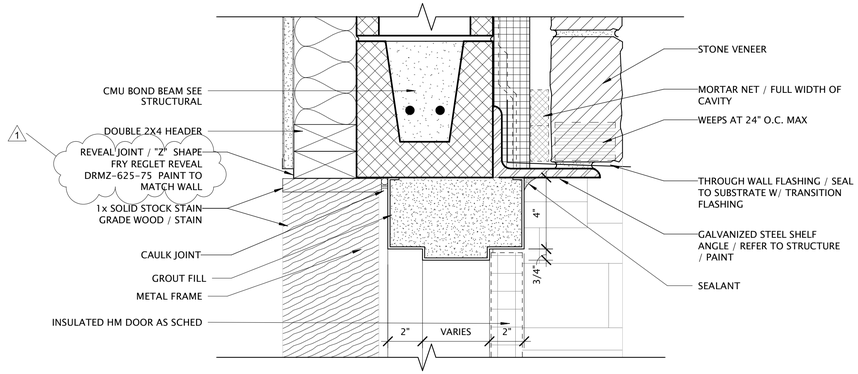
2 PLAN DETAIL - GUIDE POST
3/4" = 1'-0"

TYP. INTERIOR HOLLOW METAL HEAD

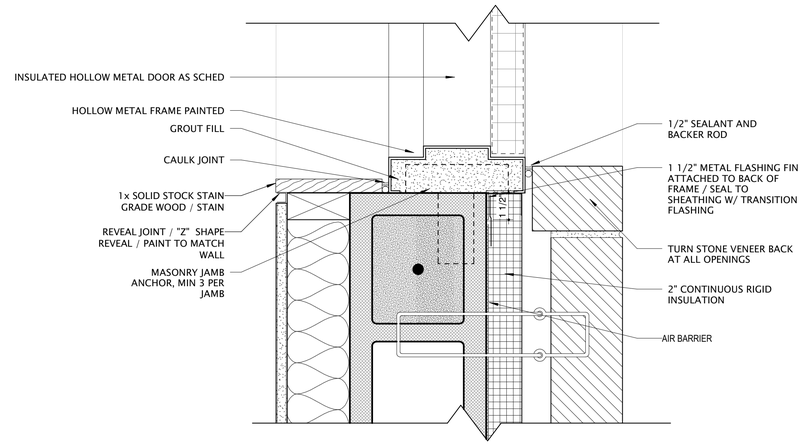


TYP. INTERIOR HOLLOW METAL JAMB

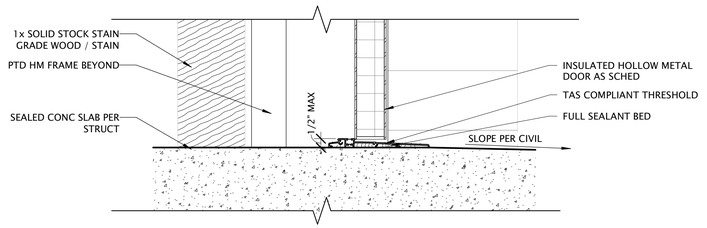
1 DOOR DETAILS
3" = 1'-0"



TYP. EXTERIOR HOLLOW METAL HEAD



TYP. EXTERIOR HOLLOW METAL JAMB



TYP. EXTERIOR HOLLOW METAL SILL

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REGISTERED ARCHITECT
RACHEL L. H. WRIGHT
20948
STATE OF TEXAS
07/17/20

TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

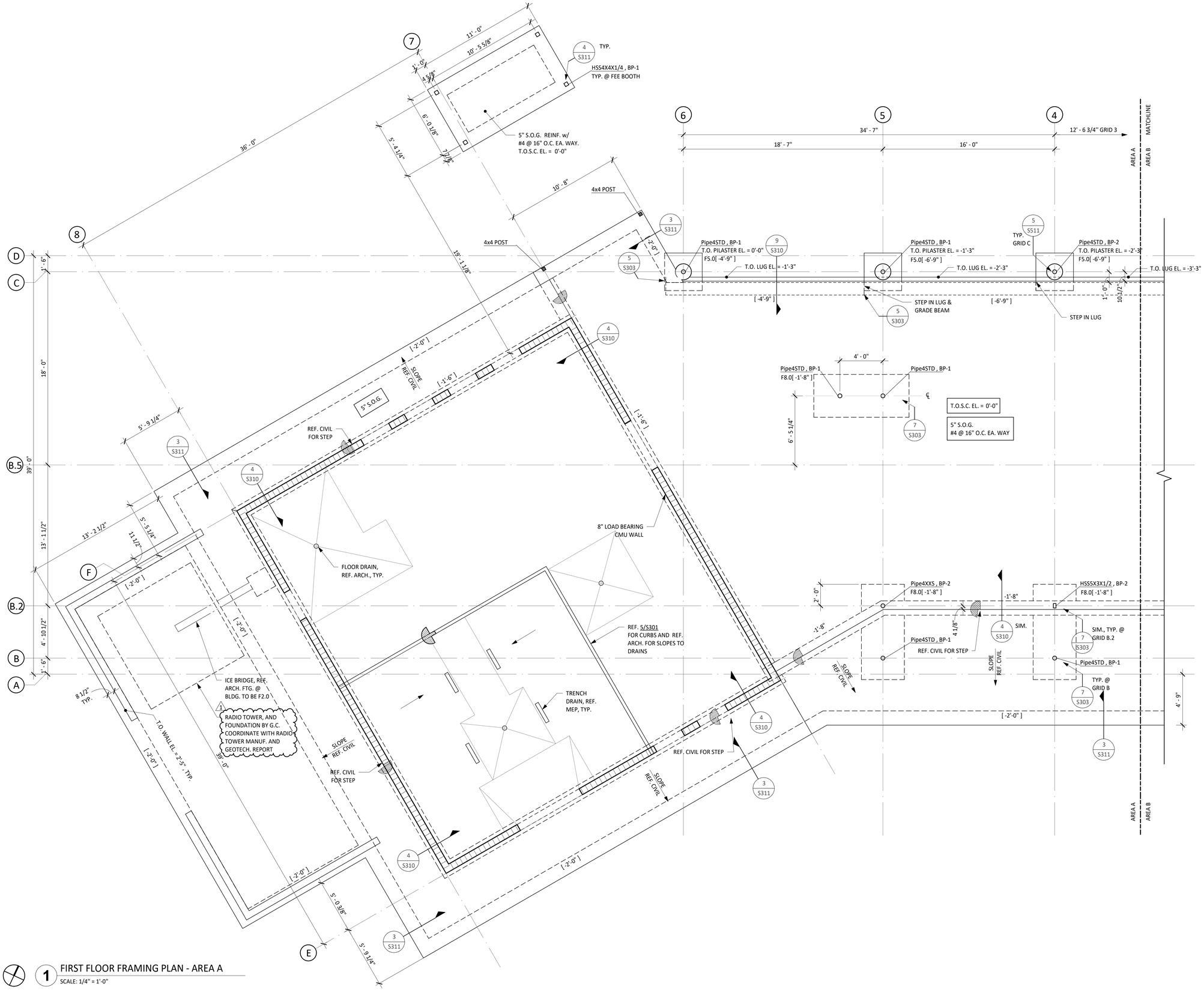
DATE: 07/03/2020
DESIGNED BY: Designer
DRAWN BY: EK
REVIEWED BY: SG/RW

no.	revision	date
1	ADD. 03	10-07-20

SHEET TITLE
DOOR DETAILS

SHEET NUMBER
A804

CONSTRUCTION DOCUMENTS



1 FIRST FLOOR FRAMING PLAN - AREA A

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

PLAN LEGEND:

- INDICATES CONCRETE WALL
- INDICATES LOAD BEARING CMU WALL, REF. 3/S401
- INDICATES WOOD STUD WALL, 2X4 @ 16" O.C.
- INDICATES STRUCTURAL CONCRETE SLAB STEP
- [X' - XX"] INDICATES BOTTOM OF FOOTING OR GRADE BEAM

FOUNDATION PLAN NOTES:

1. TOP OF STRUCTURAL CONCRETE ELEVATION IS DENOTED AS FOLLOWS UNLESS OTHERWISE NOTED:
   - T.O.S.C. EL.=XXX'-XX" (AREA ELEVATION)
   - T.O.S.C. EL.=XXX'-XX" (SPOT ELEVATION)
2. FOR FINISH FLOOR ELEVATIONS (F.F. EL.), REFER TO ARCHITECTURAL DRAWINGS. ELEVATIONS NOTED ON PLAN ARE FOR REFERENCE ONLY. REFER TO AND VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
3. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF FLOOR RECESSES, DROPS AND SLOPES NOT DIMENSIONED ON PLAN.
4. REFER TO ARCHITECTURAL DRAWINGS FOR CONTROL JOINT LOCATIONS.
5. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATIONS AND DIMENSIONS OF PENETRATIONS NOT SHOWN OR DIMENSIONED ON PLAN.
6. REFER TO 4/SS01 FOR BASEPLATE SCHEDULE AND DETAILS.
7. COLUMNS ARE NOTED ON PLAN AS FOLLOWS:
   - COLUMN MARK, BASEPLATE MARK
   - FOOTING MARK, B.O. FTG. EL.

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KARINA TRIBBLE
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TYLER STATE PARK

HEADQUARTERS REPLACEMENT PHASE 1

PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: KT
DRAWN BY: EV
REVIEWED BY: KT

no.	revision	date
1	ADDENDUM 3	10/07/2020

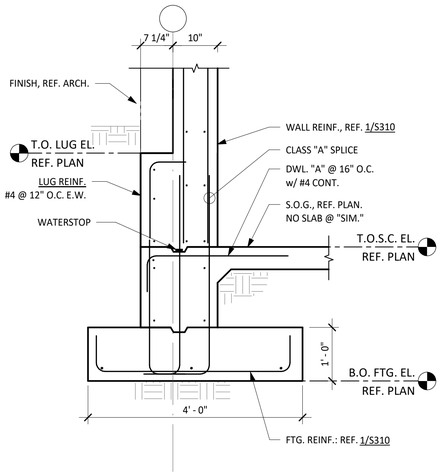
SHEET TITLE

FIRST FLOOR FRAMING PLAN - AREA A

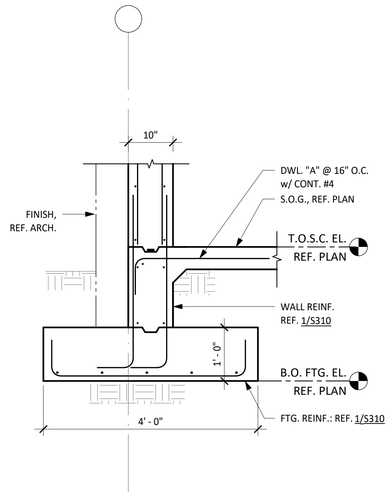
SHEET NUMBER

S202

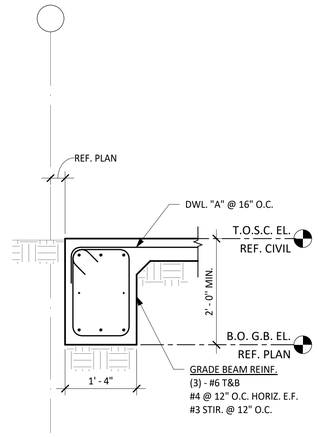
CONSTRUCTION DOCUMENTS



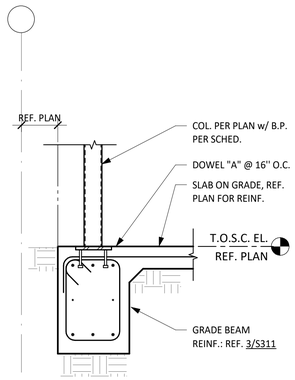
1 SECTION - DEEP FOOTING WITH LUG
SCALE: 3/4" = 1'-0"



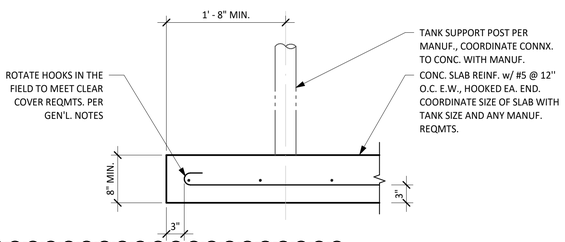
2 SECTION - DEEP FOOTING
SCALE: 3/4" = 1'-0"



3 SECTION - GRADE BEAM
SCALE: 3/4" = 1'-0"



4 SECTION - FEE BOOTH GRADE BEAM
SCALE: 3/4" = 1'-0"



5 SECTION - UNDERGROUND TANK FOUNDATION
SCALE: 1" = 1'-0"

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AEC JOB#: 17007

TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

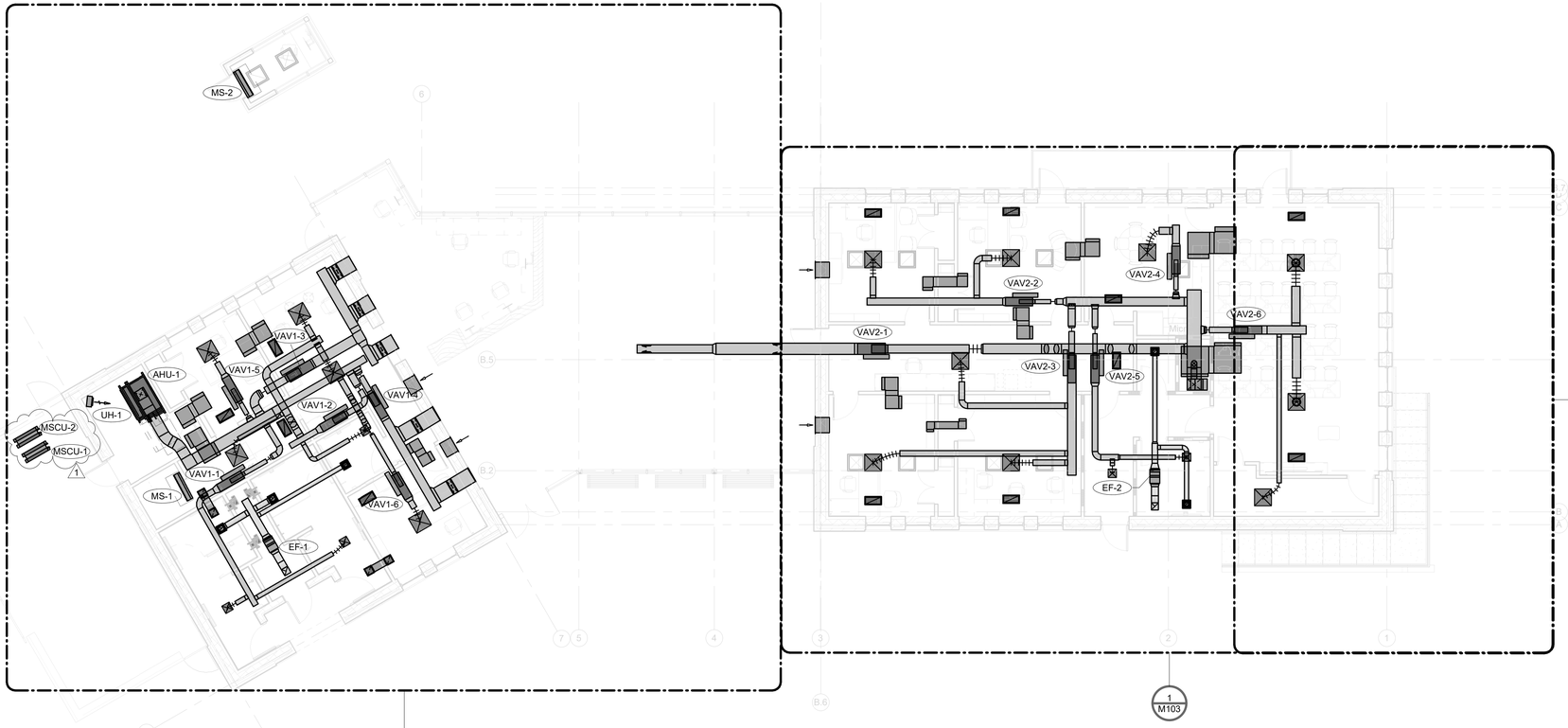
DATE: 07/03/2020
DESIGNED BY: KT
DRAWN BY: EV
REVIEWED BY: KT

no.	revision	date
1	ADDENDUM 3	10/07/2020

SHEET TITLE
CONCRETE DETAILS

SHEET NUMBER
S311

CONSTRUCTION DOCUMENTS



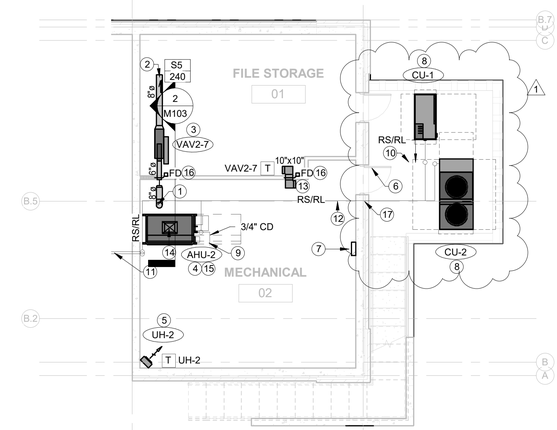
1 MECHANICAL FLOOR PLAN - 1ST FLOOR

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

TRUE NORTH

KEYED NOTES (THIS SHEET ONLY)

1. 8" DUCT ROUTED IN CHASE FROM LEVEL ABOVE. RE:#1/M103 FOR CONTINUATION.
2. EXPOSED DUCTWORK SHALL BE DOUBLE WALL SPIRAL WITH PAINT-GRIP FINISH. COORDINATE DUCT ROUTING WITH STRUCTURAL ELEMENTS. RE: STRUCTURAL DRAWINGS.
3. MAINTAIN UNOBSTRUCTED ACCESS DOOR SWING AND LOWER PANEL REMOVAL FOR SERVICING INTERNAL PARTS. PROVIDE 12"x12" ACCESS DOOR IN STRAIGHT DUCTWORK JUST DOWNSTREAM OF THE ELECTRIC HEATING COIL FOR CLEANING. COORDINATE EXACT TERMINAL UNIT LOCATION WITH STRUCTURE, DUCTWORK, AND LIGHTING. CONTROL PANEL CLEARANCES SHALL BE MAINTAINED. PROVIDE ANY ADDITIONAL 2"x2"x1/4" STEEL ANGLES SECURED TO STRUCTURE AS REQUIRED TO SUSPEND UNIT.
4. LOCATE AIR HANDLING UNIT ON EQUIPMENT SUPPORTS. RE: SCHEDULE FOR REQUIREMENTS.
5. SUSPEND UNIT HEATER FROM STRUCTURE. LOCATE BOTTOM OF UNIT HEATER AT 8'-6" A.F.F.
6. 24"x14" LOUVER ON DOOR FOR OUTSIDE AIR INTAKE SERVING AIR HANDLER. PROVIDE OPPOSED BLADE DAMPER IN LOUVER FACE FOR OUTSIDE AIR BALANCING. RE: ARCHITECTURAL DRAWINGS FOR DOOR TYPE.
7. CENTRAL CONTROLLER FOR HVAC SYSTEM. FIELD COORDINATE EXACT LOCATION.
8. LOCATE CONDENSING UNIT ON EQUIPMENT SUPPORTS. RE: SCHEDULE FOR REQUIREMENTS.
9. ROUTE 3/4" INSULATED CONDENSATE DRAIN TO HUB DRAIN. FIELD COORDINATE EXACT CONDENSATE DRAIN ROUTING. RE: PLUMBING DRAWINGS FOR HUB DRAIN LOCATION.
10. SIZE AND ROUTE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATION.
11. RE: #1/M103 FOR PIPING CONTINUATION.
12. ROUTE REFRIGERANT PIPING TIGHT TO STRUCTURE.
13. LINED RETURN AIR TRANSFER DUCT. LOCATE AS HIGH AS POSSIBLE. COORDINATE LOCATION WITH ALL OTHER TRADES.
14. 16"x20" DUCT ROUTED IN CHASE TO LEVEL ABOVE. RE: #1/M103 FOR CONTINUATION.
15. RETURN AIR OPENING OPEN TO SPACE.
16. PROVIDE TWO-HOUR RATED FIRE DAMPER IN DUCT WORK. PROVIDE ACCESS PANEL IN DUCT AND CEILING. RE:#5/M302 FOR INSTALLATION.
17. COORDINATE EXTERNAL WALL PENETRATION WITH STRUCTURE.



2 MECHANICAL FLOOR PLAN - BASEMENT

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

TRUE NORTH

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PROJECT # 17012

TYLER STATE PARK

HEADQUARTERS REPLACEMENT PHASE 1

PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: MMK
DRAWN BY: MMK
REVIEWED BY: MEB

no.	revision	date
1	ADD #3	10/07/20

SHEET TITLE

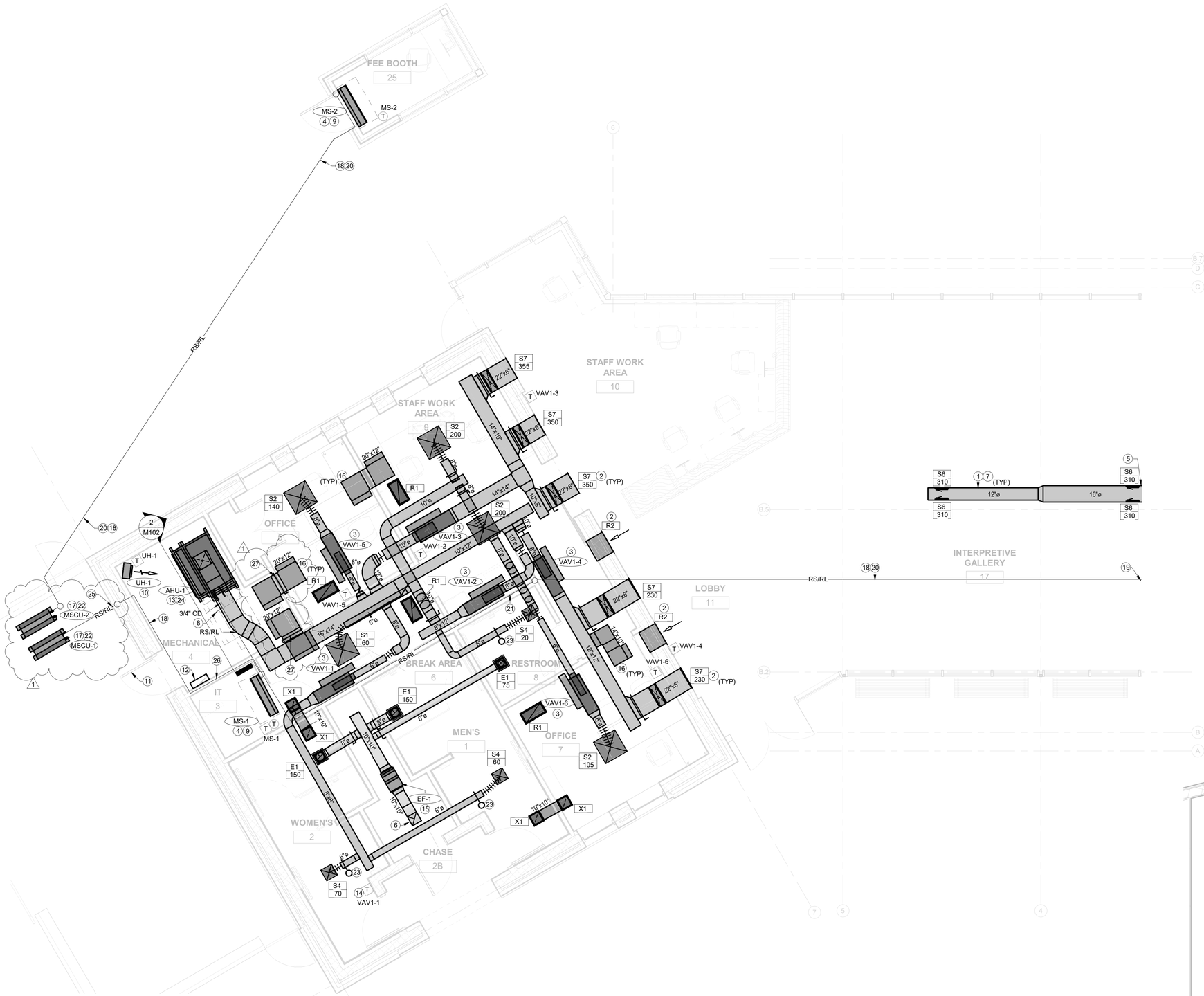
MECHANICAL FLOOR PLANS

SHEET NUMBER

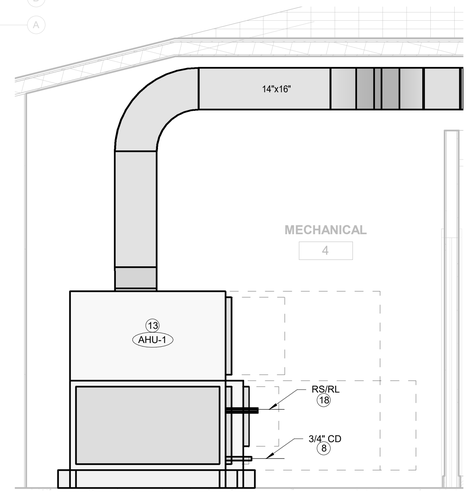
M101

CONSTRUCTION DOCUMENTS

DATE: 10/7/2020 11:15:02 AM PATH: RM 360;//17-012 Tyler State Park Visitor Center Replacement/17012 Tyler - M19.rvt



1 MECHANICAL ENLARGED FLOOR PLAN - AREA A
SCALE: 1/4" = 1'-0"



2 AHU-1 SECTION
SCALE: 1/2" = 1'-0"

KEYED NOTES (THIS SHEET ONLY)

1. LOCATE BOTTOM OF DUCT AT 11'-6" A.F.F. ROUTE DUCT IN BETWEEN STRUCTURAL JOISTS.
2. LOCATE CENTER OF AIR DEVICE AT 10'-0" A.F.F.
3. MAINTAIN UNOBSTRUCTED ACCESS DOOR SWING AND LOWER PANEL REMOVAL FOR SERVICING INTERNAL PARTS. PROVIDE 12"x12" ACCESS DOOR IN STRAIGHT DUCTWORK JUST DOWNSTREAM OF THE ELECTRIC HEATING COIL FOR CLEANING. COORDINATE EXACT TERMINAL UNIT LOCATION WITH STRUCTURE, DUCTWORK, AND LIGHTING. CONTROL PANEL CLEARANCES SHALL BE MAINTAINED. PROVIDE ANY ADDITIONAL 2"x2"x1/4" STEEL ANGLES SECURED TO STRUCTURE AS REQUIRED TO SUSPEND UNIT.
4. LOCATE MINISPLIT ABOVE DOOR AS HIGH AS POSSIBLE.
5. RE: #1/M103 FOR DUCT CONTINUATION.
6. 10"x10" DUCT UP THROUGH ROOF. COORDINATE PENETRATION WITH STRUCTURE. PROVIDE WITH ROOF CAP EQUAL TO COOK M#PR-12 OR APPROVED EQUAL WITH INSECT SCREEN.
7. EXPOSED DUCTWORK SHALL BE DOUBLE WALL SPIRAL WITH PAINT-GRIP FINISH. COORDINATE DUCT ROUTING WITH STRUCTURAL ELEMENTS. RE: STRUCTURAL DRAWINGS.
8. ROUTE 3/4" CONDENSATE DRAIN TO NEAREST FLOOR SINK IN ROOM. FIELD COORDINATE CONDENSATE DRAIN ROUTING. RE: PLUMBING DRAWINGS FOR FLOOR DRAIN LOCATION.
9. MINISPLIT CONDENSATE PIPING ROUTED TO IN-WALL DRAIN BOX. RE: PLUMBING DRAWINGS FOR EXACT LOCATION.
10. SUSPEND UNIT HEATER FROM STRUCTURE. LOCATE BOTTOM OF UNIT HEATER AT 8'-6" A.F.F.
11. 24"x14" LOUVER ON DOOR FOR OUTSIDE AIR INTAKE SERVING AIR HANDLER. PROVIDE OPPOSED BLADE DAMPER IN LOUVER FACE FOR OUTSIDE AIR BALANCING. RE: ARCHITECTURAL DRAWINGS FOR DOOR TYPE.
12. CENTRAL CONTROLLER FOR HVAC SYSTEM: FIELD COORDINATE EXACT LOCATION.
13. LOCATE AIR HANDLING UNIT ON EQUIPMENT SUPPORTS. RE: SCHEDULE FOR REQUIREMENTS.
14. PROVIDE LOCKABLE BOX OVER ADJUSTABLE TEMPERATURE SENSOR.
15. SUSPEND EXHAUST FAN FROM STRUCTURE. LOCATE BOTTOM OF EXHAUST FAN AT 10'-3" A.F.F.
16. LINED RETURN AIR TRANSFER DUCT. LOCATE AS HIGH AS POSSIBLE. COORDINATE LOCATION WITH ALL OTHER TRADES.
17. LOCATE CONDENSING UNIT ON EQUIPMENT SUPPORTS. RE: SCHEDULE FOR REQUIREMENTS.
18. SIZE AND ROUTE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATION.
19. RE: #1/M103 FOR PIPING CONTINUATION.
20. ROUTE REFRIGERANT PIPING UNDERGROUND. PROVIDE 8" PVC SLEEVE. SEAL BOTH ENDS OF SLEEVE.
21. ROUTE REFRIGERANT PIPING TIGHT TO STRUCTURE.
22. LOCATE MINISPLIT CONDENSING UNIT IN MECHANICAL YARD. FIELD COORDINATE FINAL LOCATION. ENSURE MANUFACTURER-RECOMMENDED CLEARANCES ARE MET.
23. PROVIDE REMOTE CABLE ACTUATED DAMPER EQUAL TO ROTOTWIST. DAMPER SHALL BE OPERABLE FROM AIR DEVICE FACE.
24. RETURN AIR OPENING OPEN TO SPACE.
25. COORDINATE EXTERNAL WALL PENETRATION WITH STRUCTURE.
26. ROUTE REFRIGERANT PIPING IN WALL.
27. PROVIDE MANUAL DAMPER IN RETURN AIR TRANSFER FOR RETURN AIR BALANCING.

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PROJECT # 17012

TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: MMK
DRAWN BY: MMK
REVIEWED BY: MEB

no.	revision	date
1	ADD #3	10/07/20

SHEET TITLE
MECHANICAL ENLARGED FLOOR PLAN - AREA A

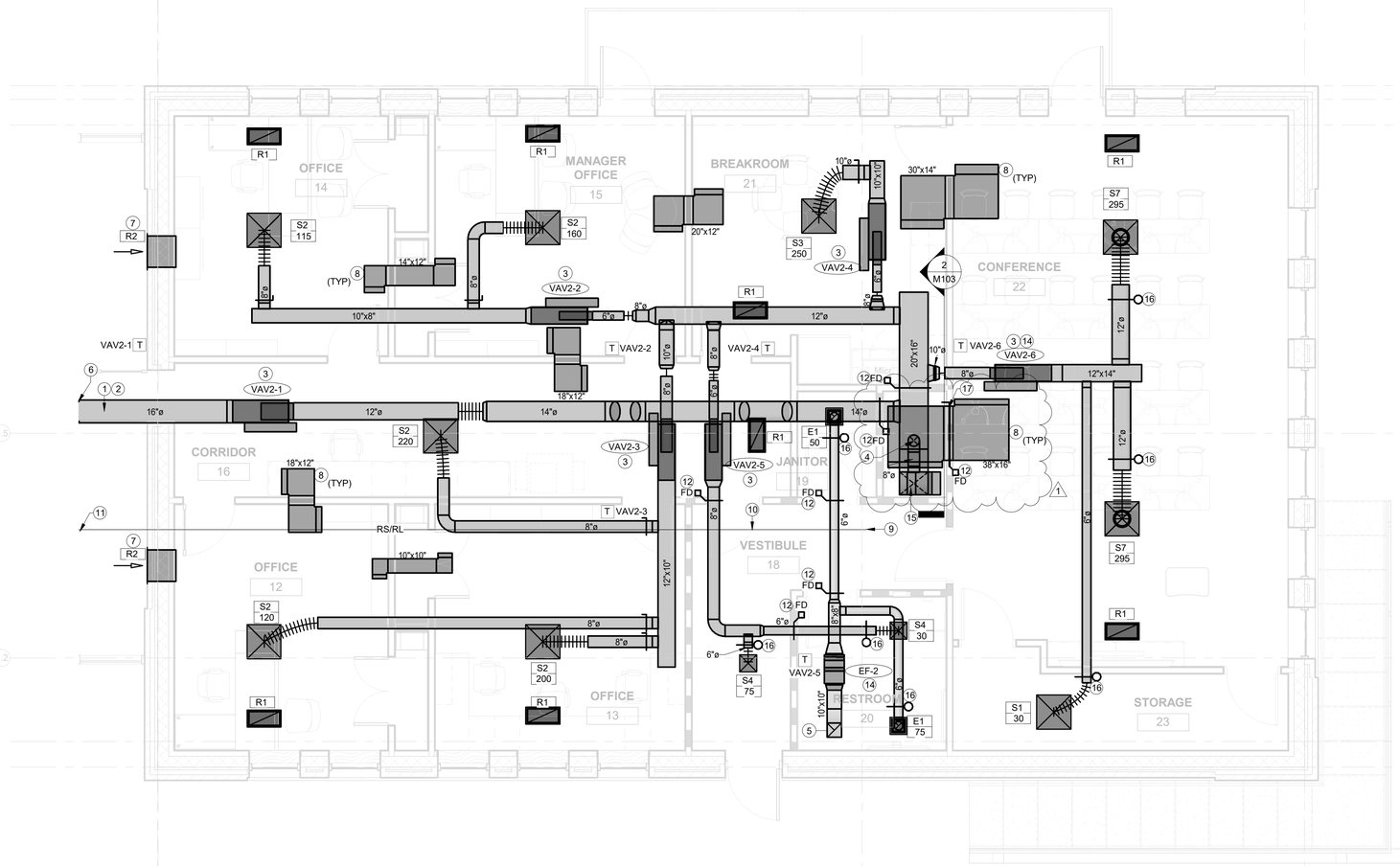
SHEET NUMBER
M102

CONSTRUCTION DOCUMENTS

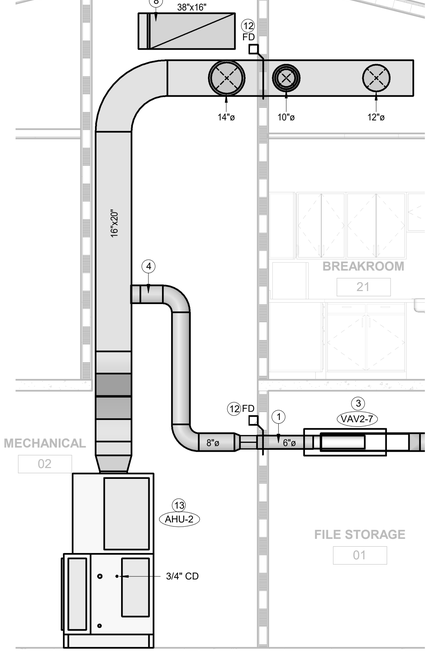
DATE: 10/7/2020 9:37:14 AM PATH: RIM 360://17-012 Tyler State Park Visitor Center Replacement/17012 Tyler - M13.rvt

KEYED NOTES (THIS SHEET ONLY)

1. EXPOSED DUCTWORK SHALL BE DOUBLE WALL SPIRAL WITH PAINT-GRIP FINISH. COORDINATE DUCT ROUTING WITH STRUCTURAL ELEMENTS. RE: STRUCTURAL DRAWINGS.
2. LOCATE BOTTOM OF DUCT AT 11'-6" A.F.F. ROUTE DUCT IN BETWEEN STRUCTURAL JOISTS.
3. MAINTAIN UNOBSTRUCTED ACCESS DOOR SWING AND LOWER PANEL REMOVAL FOR SERVICING INTERNAL PARTS. PROVIDE 12"x12" ACCESS DOOR IN STRAIGHT DUCTWORK JUST DOWNSTREAM OF THE ELECTRIC HEATING COIL FOR CLEANING. COORDINATE EXACT TERMINAL UNIT LOCATION WITH STRUCTURE, DUCTWORK, AND LIGHTING. CONTROL PANEL CLEARANCES SHALL BE MAINTAINED. PROVIDE ANY ADDITIONAL 2"x2"x1/4" STEEL ANGLES SECURED TO STRUCTURE AS REQUIRED TO SUSPEND UNIT.
4. 8" DUCT ROUTED IN CHASE TO LEVEL BELOW. RE: #2/M101 FOR DUCT CONTINUATION.
5. 10"x10" DUCT UP THROUGH ROOF. COORDINATE PENETRATION WITH STRUCTURE. PROVIDE WITH ROOF CAP EQUAL TO COOK M#PR-12 OR APPROVED EQUAL WITH INSECT SCREEN.
6. RE: #1/M102 FOR DUCT CONTINUATION.
7. LOCATE CENTER OF AIR DEVICE AT 10'-0" A.F.F.
8. LINED RETURN AIR TRANSFER DUCT. LOCATE AS HIGH AS POSSIBLE. COORDINATE LOCATION WITH ALL OTHER TRADES.
9. RE: #2/M101 FOR PIPING CONTINUATION.
10. ROUTE REFRIGERANT PIPING UNDERGROUND. PROVIDE 8" PVC SLEEVE. SEAL BOTH ENDS OF SLEEVE.
11. RE: #1/M102 FOR PIPING CONTINUATION.
12. PROVIDE TWO-HOUR RATED FIRE DAMPER IN DUCT WORK. PROVIDE ACCESS PANEL IN DUCT AND CEILING. RE:#5/M302 FOR INSTALLATION.
13. LOCATE AIR HANDLING UNIT ON EQUIPMENT SUPPORTS. RE: SCHEDULE FOR REQUIREMENTS.
14. PROVIDE 18"x18" ACCESS PANEL IN HARD CEILING FOR SERVICING MECHANICAL EQUIPMENT ABOVE. LOCATE ACCESS PANEL DIRECTLY UNDERNEATH EQUIPMENT'S SERVICEABLE PARTS. FIELD COORDINATE EXACT LOCATION.
15. 16"x20" DUCT ROUTED IN CHASE FROM LEVEL BELOW. RE: #2/M101 FOR CONTINUATION.
16. PROVIDE REMOTE CABLE ACTUATED DAMPER EQUAL TO ROTOTWIST. DAMPER SHALL BE OPERABLE FROM AIR DEVICE FACE.
17. PROVIDE MANUAL DAMPER IN RETURN AIR TRANSFER FOR RETURN AIR BALANCING.



1 MECHANICAL ENLARGED FLOOR PLAN - AREA B
SCALE: 1/4" = 1'-0"



2 AHU-2 SECTION
SCALE: 3/8" = 1'-0"

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PROJECT # 17012

TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: MMK
DRAWN BY: MMK
REVIEWED BY: MEB

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1	ADD #3	10/07/20

SHEET TITLE
MECHANICAL ENLARGED FLOOR PLAN - AREA B

SHEET NUMBER
M103

CONSTRUCTION DOCUMENTS

PATH: RIM 360://17-012 Tyler State Park Visitor Center Replacement/17012 Tyler - M19.rvt
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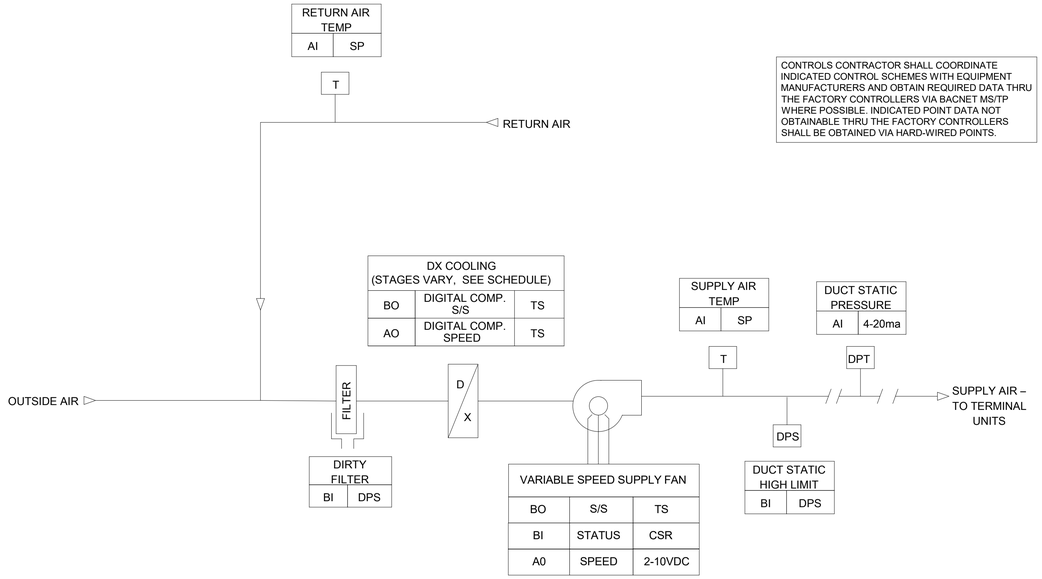


1 VAV DX SYSTEM CONTROL DIAGRAM

NO SCALE

VAV DX SYSTEM SEQUENCE OF OPERATION:

THE SYSTEM SHALL RUN SUBJECT TO THE OCCUPIED AND UNOCCUPIED SCHEDULES ADJUSTED FOR OPTIMAL START.

OPTIMAL START:
DURING OPTIMAL START, THE BAS SHALL START/MODULATE THE SUPPLY FAN AND STAGE/MODULATE THE COMPRESSORS TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT AS SPECIFIED.
THE BAS SHALL AUTOMATICALLY ADJUST THE DAILY START TIME OF THE SYSTEM TO ACHIEVE OCCUPIED SETPOINTS JUST PRIOR TO THE SCHEDULED OCCUPIED PERIOD.

OCCUPIED MODE:
UNIT START: THE BAS SHALL SOFT START THE SUPPLY FAN, AND STAGE/MODULATE THE COMPRESSORS TO MAINTAIN LEAVING AIR TEMPERATURE SET POINT.

DX COOLING: THE BAS SHALL STAGE/MODULATE THE COMPRESSORS TO MAINTAIN A STEADY AND CONSISTENT 55F DISCHARGE AT THE DISCHARGE OF THE UNIT.

DEHUMIDIFICATION MODE: THE BAS SHALL CONTINUOUSLY MONITOR THE ZONE HUMIDITY LEVELS. ANYTIME THE HUMIDITY, AS MEASURED AT A SPACE MOUNTED HUMIDITY SENSOR, EXCEEDS 60%, THE BAS SHALL RESET THE SUPPLY AIR DISCHARGE SETPOINT TO 52°F AND THE TERMINAL UNITS SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE AS SPECIFIED. THE BAS SHALL TERMINATE THE DEHUMIDIFICATION MODE WHEN THE SPACE HUMIDITY LEVEL REACHES 55%.

SUPPLY DUCT STATIC PRESSURE CONTROL: THE BAS SHALL SMOOTHLY MODULATE THE SPEED OF THE SUPPLY FAN IN RESPONSE TO THE DUCT STATIC PRESSURE SET POINT. THE DUCT STATIC PRESSURE SET POINT SHALL BE RESET BASED ON ZONE AIR FLOW REQUESTS DERIVED FROM DAMPER POSITION AND MEETING AIRFLOW AND SPACE TEMPERATURE REQUIREMENTS AS FOLLOWS:

WHEN ALL ZONE DAMPERS ARE THROTTLING CLOSED: DAMPER ACTUATORS ARE LESS THAN 90% OPEN AND ACTUAL/MAX DESIGN AIRFLOW RATIO IS GREATER THAN 95%. THE DUCT STATIC PRESSURE SET POINT SHALL BE INCREMENTALLY RESET DOWN BY 0.10"WC AT A FREQUENCY OF 10 MINUTES TO A MINIMUM OF 0.50"WC OR THE FAN HAS REACHED ITS LOWEST OPERATING SPEED LIMIT.

WHEN AIRFLOW REQUESTS INCREASE: AT LEAST ONE ZONE DAMPER IS GREATER THAN 99% OPEN AND ACTUAL/MAX DESIGN AIRFLOW RATIO IS LESS THAN 90% AND SPACE TEMPERATURE IS NOT SATISFIED THE DUCT STATIC PRESSURE SET POINT SHALL INCREMENTALLY RESET UP BY 0.10"WC AT A FREQUENCY OF 3 MINUTES TO A MAXIMUM OF 3.0"WC.

SUPPLY AIR RESET: THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET BASED ON OUTSIDE AIR TEMPERATURE AS MEASURED BY THE BAS. WHEN THE BAS REGISTERS AN OUTSIDE AIR TEMPERATURE BELOW 57°F (ADJ.), THE SUPPLY AIR DISCHARGE TEMPERATURE SHALL BE PROPORTIONALLY RESET HIGHER UP TO A MAXIMUM LEAVING AIR TEMPERATURE OF 60°F (ADJ.). SPECIFICALLY, THE SUPPLY AIR TEMPERATURE SHALL BE RESET HIGHER 1°F FOR EVERY 2°F DROP IN AMBIENT TEMPERATURE BELOW 57°F. IN THE EVENT THAT THE SUPPLY AIR TEMPERATURE HAS BEEN ACTIVELY RESET AND TWO OR MORE ZONES ARE REPORTING A SPACE TEMPERATURE > 2°F ABOVE SET POINT, THE SUPPLY AIR TEMPERATURE SHALL BE RESET 1°F LOWER IN 10 MINUTE INTERVALS UNTIL EITHER THE ZONE TEMPERATURES ARE WITHIN 1°F OF SETPOINT OR THE SUPPLY AIR TEMPERATURE SETPOINT HAS RETURNED TO 55°F. THE RESET SCHEDULE, INTERVAL RESET POINTS AND TIME DELAYS SHALL ALL BE ADJUSTABLE.

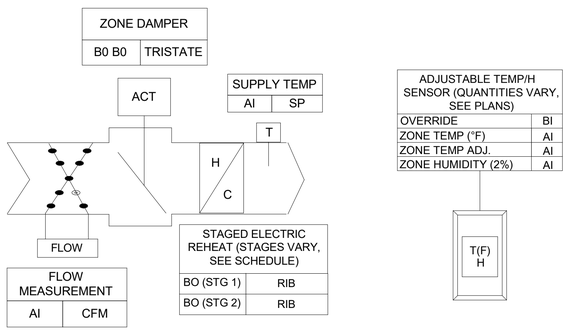
DUCT STATIC HIGH LIMIT: THE BAS SHALL MONITOR THE MANUAL RESET DUCT STATIC HIGH LIMIT. IF THE DUCT STATIC HIGH LIMIT SWITCH MAKES, THE FAN SHALL BE STOPPED AND REQUIRE RESET BY THE OPERATOR. INITIAL SETPOINT SHALL BE 3.0"W.C.

UNIT STOP: ANYTIME THE UNIT IS COMMANDED TO SHUTDOWN THE COMPRESSORS SHALL BE OFF AND THE SUPPLY FAN SHALL BE OFF.

FILTER STATUS (AUTO RESET): THE BAS SHALL MONITOR THE STATUS OF THE UNIT FILTER BANK VIA DIFFERENTIAL PRESSURE SWITCH AND SHALL ALARM WHEN THE FILTER DIFFERENTIAL PRESSURE EXCEEDS 0.6 IN. W.G.

ALARMS: FAN FAILURE, DE-HUMIDIFICATION SEQUENCE ACTIVE, VFD IN ALARM, DUCT STATIC HIGH LIMIT, HIGH SUPPLY AIR TEMPERATURE, DIRTY FILTER.

UNOCCUPIED MODE:
DURING UNOCCUPIED MODE, THE SUPPLY FAN SHALL BE OFF AND THE COMPRESSORS SHALL BE OFF. THE BAS SHALL CONTINUOUSLY MONITOR ZONE TEMPERATURES AND HUMIDITY. THE BAS SHALL OPERATE THE SUPPLY FAN AND COMPRESSORS TO MAINTAIN THE UNOCCUPIED SPACE TEMPERATURE AND HUMIDITY AS REQUIRED.



2 VAV TERMINAL UNIT WITH ELECTRIC RE-HEAT CONTROL DIAGRAM

NO SCALE

VAV TERMINAL UNIT SEQUENCE OF OPERATION:

OCCUPIED/UNOCCUPIED SCHEDULE: THE BAS SHALL AUTOMATICALLY CHANGE THE ZONE HEATING AND COOLING SETPOINTS TO FOLLOW THE OCCUPIED AND UNOCCUPIED SCHEDULE AS REQUIRED. THE BAS SHALL START THE AHU/RTU AS NEEDED DURING THE UNOCCUPIED SCHEDULE.

ZONE TEMPERATURE ABOVE SETPOINT (CALL FOR COOLING):ON A RISE IN ZONE TEMPERATURE ABOVE THE COOLING SETPOINT, THE BAS SHALL RESET THE AIR FLOW SETPOINT HIGHER RESULTING IN MODULATION OF THE PRIMARY AIR DAMPER INCREASING AIRFLOW TO THE SPACE.

ZONE TEMPERATURE BELOW SETPOINT (CALL FOR HEATING): ON A FALL IN SPACE TEMPERATURE BELOW SETPOINT, THE TERMINAL UNIT CONTROLLER SHALL RESET THE SUPPLY AIR LOWER, FURTHER CLOSING THE AIR DAMPER, UNTIL SETPOINT IS SATISFIED. ONCE THE SUPPLY AIR DAMPER IS AT MINIMUM POSITION AND THE ZONE TEMPERATURE IS 0.5F BELOW SETPOINT, THE BAS SHALL STAGE/MODULATE (AS APPLICABLE) THE ELECTRIC HEATER TO SATISFY SPACE TEMPERATURE SETPOINT. THE ELECTRIC HEATER SHALL NOT ENERGIZE UNLESS THE PRIMARY AIR DAMPER IS AT THE HEATING AIRFLOW POSITION AND THE PRIMARY SUPPLY AIR FAN IS OPERATING.

MINIMUM AIR FLOW: TERMINAL UNIT DAMPER SHALL NOT CLOSE BELOW MINIMUM AIRFLOW SETTING.

DEHUMIDIFICATION MODE: THE BAS SHALL MONITOR THE ZONE HUMIDITY LEVEL AT ALL TIMES. IF HUMIDITY EXCEEDS 60% RH, THE BAS SHALL OPERATE THE ASSOCIATED AHU/RTU IN DEHUMIDIFICATION MODE AS DESCRIBED IN THE VAV DX SYSTEM SEQUENCE OF OPERATION. THE TERMINAL UNIT PRIMARY AIR DAMPER SHALL OPEN TO COOLING DESIGN AIRFLOW SET POINT AND SPACE TEMPERATURE SHALL BE MAINTAINED BY STAGING/MODLATING THE TERMINAL UNIT ELECTRIC REHEAT. THE BAS SHALL TERMINATE THE DEHUMIDIFICATION MODE WHEN THE HUMIDITY LEVEL REACHES 55%. DURING UNOCCUIPED DEHUMIDIFCATION MODE, THE BAS SHALL UTILIZE OCCUPIED COOLING SET POINTS AND REVERT BACK TO UNOCCUPIED SET POINTS UPON ACHIEVEMENT OF THE DEHUMIDIFICATION SET POINT.

DEADBAND: IF THE ZONE TEMPERATURE IS BETWEEN THE HEATING AND COOLING SETPOINT, THE ZONE ELECTRIC HEAT SHALL BE OFF AND THE PRIMARY AIR DAMPER SHALL BE AT MINIMUM FLOW SETTING.

OVERRIDE: THE TEMPERATURE SENSOR SHALL BE PROVIDED WITH AN OVERRIDE PUSHBUTTON. ONCE THE OVERRIDE PUSHBUTTON IS DEPRESSED THE BAS SHALL OPERATE THE ZONE AT OCCUPIED SETPOINTS FOR 2 HOURS.

ZONE SETPOINT ADJUSTMENT: OCCUPANT SHALL BE ABLE TO ADJUST ZONE TEMPERATURE PLUS OR MINUS 2°F FROM SETPOINT.

ALARMS: ZONE TEMPERATURE (HIGH AND LOW), HIGH SUPPLY AIR TEMPERATURE.

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1	ADD #3	10/07/20

SHEET TITLE
MECHANICAL CONTROLS

SHEET NUMBER
M402

CONSTRUCTION DOCUMENTS

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ELECTRICAL SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT. REFER TO SPECIFICATIONS MANUAL FOR ADDITIONAL REQUIREMENTS.

POWER SYMBOLS

- MOTOR, HP AS INDICATED
- CONTROLLER FURNISHED UNDER OTHER DIVISION AND INSTALLED BY DIVISION 26
- DISCONNECT SWITCH
- MAGNETIC MOTOR STARTER
- COMBINATION MOTOR STARTER
- C — CONTACTOR
- J — JUNCTION BOX, CEILING MOUNTED
- J — JUNCTION BOX, WALL MOUNTED
- R — RELAY
- SIMPLEX RECEPTACLE
- GFCI / WP — DUPLEX RECEPTACLE
  - GFI = GROUND FAULT CIRCUIT INTERRUPTER
  - WP = WEATHERPROOF
  - IG = ISOLATED GROUND
  - XX" = MOUNTING HEIGHT
- DOUBLE DUPLEX (QUADRUPLEX) RECEPTACLE
- FLOOR OUTLET DUPLEX RECEPTACLE
- FLOOR OUTLET SIMPLEX RECEPTACLE
- FLOOR OUTLET QUADRUPLEX RECEPTACLE
- D — DROP CORD RECEPTACLE
- SPECIAL PURPOSE OUTLET AS DESIGNATED
- SINGLE FACE PEDESTAL
- DOUBLE FACE PEDESTAL RECEPTACLE
- EQUIPMENT CONNECTION
- CONNECT TO EXISTING

LIGHTING CONTROL SYMBOLS

- S_S — SINGLE POLE SWITCH, LOWERCASE SUBSCRIPT INDICATES ASSOCIATED CONTROL CIRCUITRY
- S_D — DIMMABLE SWITCH
- S_2 — DOUBLE POLE SWITCH
- S_3 — THREE-WAY SWITCH
- S_4 — FOUR-WAY SWITCH
- S_K — KEY OPERATED SWITCH
- S_P — SWITCH WITH PILOT LIGHT IN HANDLE
  - P = PILOT LIGHT, ILLUMINATED WITH LOAD ON
  - NL = NIGHT LIGHT, ILLUMINATED WITH LOAD OFF
- S_{WP} — WEATHERPROOF SWITCH
- S_M S_{MT} — MANUAL MOTOR STARTER
  - T = THERMAL OVERLOAD, SIZED FOR MOTOR
- DS — DOOR SWITCH
- S_T — TIME SWITCH
- S_{SC} — SPEED CONTROL
- S_{PB} — PUSH BUTTON
- SWITCH, OCCUPANCY SENSOR, WALL MOUNT
- S_{LV} — MOMENTARY CONTACT OVERRIDE SWITCH
- OS — OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY. PROVIDE WITH REQUIRED POWER PACK(S) AND WIRING.
- OCCUPANCY SENSOR WALL MOUNTED, DUAL TECHNOLOGY. PROVIDE WITH REQUIRED POWER PACK(S) AND WIRING.

LIGHTING SYMBOLS

- INCANDESCENT OR HID FIXTURE, CEILING MOUNTED
- INCANDESCENT OR HID FIXTURE, WALL MOUNTED
- FLUORESCENT TROFFER, RECESSED OR SURFACE MOUNTED
- EXIT SIGN - SINGLE FACE
- EXIT SIGN - SINGLE FACE WITH ONE-WAY DIRECTIONAL ARROW
- EXIT SIGN - SINGLE FACE WITH TWO-WAY DIRECTIONAL ARROWS
- EXIT SIGN - DOUBLE FACE
- EXIT SIGN - DOUBLE FACE WITH 2 ONE-WAY DIRECTIONAL ARROWS
- EMERGENCY LIGHT, BATTERY TYPE WITH CHARGER
- EXTERIOR FLOOD LIGHT
- POLE MOUNTED LUMINAIRE (SQUARE)
- POLE MOUNTED LUMINAIRE (ROUND)
- TRACK LIGHT WITH HEADS AS INDICATED
- LC — LIGHTING CONTACTOR
- PP — POWER PACK

ELECTRICAL RACEWAYS

- CONDUIT CONCEALED IN WALL OR CEILING
- CONDUIT UNDER FLOOR OR UNDERGROUND
- SWITCH LEG
- SURFACE MOUNTED RACEWAY WITH ALL REQUIRED FITTINGS AND HARDWARE. PROVIDE RECEPTACLES AS INDICATED.
- SURFACE MOUNTED RACEWAY RISER SECTION WITH ALL REQUIRED FITTINGS AND HARDWARE
- BUS DUCT WITH TAKE OFF DEVICE
- — UGE — UNDERGROUND ELECTRICAL (APPROXIMATE LOCATION, CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD)
- — UGT — UNDERGROUND TELEPHONE (APPROXIMATE LOCATION, CONTRACTOR TO VERIFY EXACT LOCATION IN FIELD)
- PIA-2,4,6 — BRANCH CIRCUIT HOMERUN SUBSCRIPT 'PIA' INDICATES PANEL AND 2,4,6 INDICATES BREAKER POSITION

PANELS AND RELATED EQUIPMENT

- PANELBOARD SURFACE MOUNTED (REFER TO PANEL SCHEDULE)
- PANELBOARD FLUSH MOUNTED (REFER TO PANEL SCHEDULE)
- TRANSFORMER, WITH CONCRETE HOUSEKEEPING PAD (REFER TO ONE-LINE DIAGRAM)
- ATS — AUTOMATIC TRANSFER SWITCH (REFER TO ONE-LINE DIAGRAM)

FIRE ALARM SYSTEM SYMBOLS

- FACP — FIRE ALARM CONTROL PANEL
- ANN — REMOTE ANNUNCIATOR PANEL
- F — MANUAL PULL STATION (G=VANDAL PROOF GUARD)
- HORN/STROBE ANNUNCIATOR (G=VANDAL PROOF GUARD)
- STROBE ANNUNCIATOR WALL MOUNTED (G=VANDAL PROOF GUARD)
- SMOKE DETECTOR CEILING MOUNTED
- STROBE ANNUNCIATOR CEILING MOUNTED (G=VANDAL PROOF GUARD)
- SD D — SMOKE DETECTOR, DUCT MOUNTED
- HEAT DETECTOR (G=VANDAL PROOF GUARD)
- SMOKE FIRE DAMPER
- AIM FS — FLOW SWITCH
- AIM TS — TAMPER SWITCH
- AIM PS — FIRE SPRINKLER PRESSURE SWITCH
- FS — FLOW SWITCH
- MAGNETIC DOOR HOLDER
- H — WALL MOUNTED AUDIBLE ANNUNCIATOR (HORN) (G= VANDAL PROOF GUARD, WP=WEATHERPROOF)

TELECOM. / TELEPHONE / DATA SYSTEM SYMBOLS

- PLYWOOD TELEPHONE BACKBOARD
- TELEPHONE OUTLET IN WALL, ROUGH-IN ONLY, 1" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH BUSHINGS AND PULL-STRING UNLESS INDICATED OTHERWISE.
- 2 — DATA OUTLET IN WALL, ROUGH-IN ONLY, 1" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH BUSHINGS AND PULL-STRING UNLESS INDICATED OTHERWISE.
- (2) REPRESENTS THE QUANTITY OF PORTS IN OUTLET
- 2 — PHONE AND DATA OUTLET IN WALL, ROUGH-IN ONLY, 1" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH BUSHINGS AND PULL-STRING UNLESS INDICATED OTHERWISE.
- FLOOR TELEPHONE AND DATA OUTLET, POKE-THRU TYPE
- T — THERMOSTAT
- CABLE TELEVISION OUTLET, ROUGH-IN ONLY. 15" A.F.F. UNLESS INDICATED OTHERWISE.
- FLOOR CABLE TELEVISION OUTLET
- WAP — WIRELESS ACCESS POINT
- ANTENNA

ONE-LINE DIAGRAM SYMBOLS

- H-O-A SELECTOR SWITCH
- STOP/START PUSHBUTTON STATION
- LIGHTING ARRESTER AND SURGE CAPACITOR
- TRANSFORMER
- TRANSFORMER (SHIELDED)
- M — MOTOR STARTER RELAY AND CONTACTOR
- ETM — ELAPSED (RUNNING) TIME METER
- CONTROL POWER TRANSFORMER
- MCP — CIRCUIT BREAKER (MOTOR CIRCUIT PROTECTOR)
- DISCONNECT SWITCH
- BUS STAB
- CT — CURRENT TRANSFORMER
- MOTOR RESISTANCE TYPE WINDING HEATER
- THERMAL OVERLOAD CIRCUIT
- BREAKER (THERMAL MAGNETIC TYPE)
- FUSE
- CONTACT (NORMALLY OPEN)
- CONTACT (NORMALLY CLOSED)
- PUSHBUTTON (NORMALLY OPEN)
- PUSHBUTTON (NORMALLY CLOSED)
- LIMIT SWITCH (NORMALLY OPEN)
- TIME DELAY CONTACT
- PILOT LIGHT W/COLOR INDICATED (A-AMBER ,G-GREEN ,R-RED)
- S — SOLENOID VALVE
- DIFFERENTIAL PRESSURE SWITCH
- AUTOMATIC TRANSFER SWITCH
- DISCONNECT SWITCH 400/3/400AF/N3R INDICATES FRAME SIZE/POLES/FUSE AMPACITY/ENCLOSURE

ABBREVIATIONS

A	AMPERE
AC	ABOVE COUNTER; ALTERNATING CURRENT
A/C	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
CKT	CIRCUIT
CONN	CONNECT; CONNECTION
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DIST	DISTRIBUTION
EA	EACH
EF	EXHAUST FAN
ELEC	ELECTRIC; ELECTRICAL
EMER	EMERGENCY
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE CONDUIT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT (CIRCUIT) INTERRUPTER
GFPE	GROUND FAULT PROTECTION FOR EQUIPMENT
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HVAC	HIGH VOLUME AIR CONDITIONING
J-BOX	JUNCTION BOX
kVA	KILOVOLT AMPERE
kVAR	KILOVOLT AMPERE REACTIVE
kCM	THOUSAND CIRCULAR MILS
kV	KILOVOLT
kW	KILOWATT
LTG	LIGHTING
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MIN	MINIMUM
MFG	MANUFACTURER
MH	METAL HALIDE
MLO	MAIN LUG ONLY
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NTS	NOT TO SCALE
Ø	PHASE
OCPD	OVERCURRENT PROTECTIVE DEVICE
OCFI	OWNER FURNISHED, CONTRACTOR INSTALLED
OL	OVERLOAD
OVHD	OVERHEAD
PA	PUBLIC ADDRESS
SC	SPLIT CIRCUIT
SFD	SMOKE FIRE DAMPER
SW	SWITCH
T/D	TELEPHONE AND DATA
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UC	UNDER COUNTER
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
V	VOLTS
W	WATTS
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER
XFER	TRANSFER

1. REFER TO UTILITY STANDARDS AND PROJECT SPECIFIC REQUIREMENTS FROM UTILITY PROVIDER. SOME REQUIREMENTS ARE IDENTIFIED TO ASSIST CONTRACTOR. VERIFY AND PROVIDE AN ELECTRICAL SERVICE THAT MEETS OR EXCEEDS UTILITY STANDARDS AND PROJECT SPECIFIC REQUIREMENTS FROM UTILITY PROVIDER. CONFLICTS SHALL BE RESOLVED AT NOT ADDITIONAL COST TO THE OWNER.

   NO SUB-SURFACE BORINGS HAVE BEEN DONE IN THE WORK AREA. CONTRACTOR IS RESPONSIBLE FOR THE DIRECTIONAL HORIZONAL BORES IN ALL MATERIALS ENCOUNTERED

   ESTABLISH NEW ELECTRICAL SERVICE AND PROVIDE NECESSARY COORDINATION EFFORTS WITH UTILITY PROVIDER. UTILITY PROVIDER WILL:
   - FURNISH TRANSOCKET METER CABINET AND PAD-MOUNTED TRANSFORMER.
   - FURNISH AND INSTALL THE PRIMARY CONDUCTORS.

   OWNER WILL:
   - PAY UTILITY PROVIDER ASSOCIATED FEES FOR PERMANENT POWER SERVICE.

   CONTRACTOR SHALL:
   - PROVIDE BORING AND INSTALLATION OF PRIMARY CONDUIT DUCTBANK.
   - PROVIDE NEW TRANSFORMER PAND AND PIERS PER ONCOR REQUIREMENTS.
   - INSTALL TRANSOCKET METER CABINET.
   - PROVIDE SECONDARY CONDUIT DUCTBANK AND CONDUCTORS.
   - PROVIDE TEMPORARY POWER AS REQUIRED.

   CONTACT PERSON FOR ONCOR: ERIC CARRINGTON, (903) 203-1869.

GENERAL NOTES (APPLIES TO ALL SHEETS)

1. COMPLETE WORK IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND INTERPRETATIONS OF AHJ.
2. COORDINATE WORK WITH OTHER TRADES AS REQUIRED TO PROVIDE COMPLETE SYSTEMS AND AVOID CONFLICTS.
3. MOUNT LIGHT SWITCHES AT 44" AFF, AS MEASURED FROM BOTTOM OF BOX.
4. MOUNT RECEPTACLES AND DATA OUTLETS AT 18" AFF, AS MEASURED FROM BOTTOM OF BOX, EXCEPT WHERE ALTERNATIVE HEIGHT IS INDICATED.
5. MOUNT RECEPTACLES AND DATA OUTLETS DESIGNATED "AC" (ABOVE COUNTER) 3" ABOVE BACK SPLASH, AS MEASURED FROM BOTTOM OF BOX.
6. SUPPORT FIXTURES IN LAY-IN GRID CEILINGS INDEPENDENTLY OF GRID BY A MINIMUM OF FOUR #9 GALVANIZED WIRES ATTACHED TO THE FIXTURE AT EACH CORNER.
7. COORDINATE INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR PLUMBING AND MECHANICAL EQUIPMENT, BOTH CURRENT AND FUTURE. ROUTE CONDUITS TIGHTS TO STRUCTURE OR THROUGH STRUCTURAL TRUSSES WHEREVER POSSIBLE.
8. COORDINATE LOCATIONS OF SWITCHES, RECEPTACLES, AND DATA OUTLETS WITH FURNITURE AND CASEWORK PRIOR TO COMMENCING DEVICE ROUGH-IN TO AVOID CONFLICTS.
9. COORDINATE LOCATION OF DISCONNECT SWITCHES TO ENSURE THAT ALL NEC MINIMUM WORKING CLEARANCES ARE MAINTAINED.
10. SINGLE HOMERUNS ARE SHOWN FOR CIRCUIT IDENTIFICATION ONLY. CIRCUITS MAY BE GROUPED UP TO THREE (3) PHASE CONDUCTORS PER RACEWAY, UNLESS NOTED OTHERWISE.
11. MULTI-WIRED (SHARED NEUTRAL) BRANCH CIRCUITS SHALL NOT BE INSTALLED. PROVIDE DEDICATED NEUTRAL CONDUCTORS FOR ALL SINGLE-PHASE BRANCH CIRCUITS.
12. HOMERUNS AND RUNS BETWEEN JUNCTION BOXES SHALL BE MINIMUM OF 3/4" CONDUIT AND SHALL INCLUDE #10 (MINIMUM) CONDUCTORS AND INSULATED GREEN GROUNDING CONDUCTOR. CIRCUIT SHALL EXTEND FROM OCPD TO A JUNCTION BOX IN THE AREA OF THE RECEPTACLES OR UTILIZATION EQUIPMENT. DROPS TO INDIVIDUAL 20-AMP WIRING DEVICES SHALL INCLUDE #12 (MINIMUM) CONDUCTORS.
13. VOLTAGE DROP TO LAST DEVICE ON BRANCH CIRCUITS SHALL NOT EXCEED 3 PERCENT FROM PANEL. INCREASE BRANCH CIRCUIT CONDUCTOR SIZES AS REQUIRED TO ALLOW FOR CIRCUIT LENGTH.
14. DO NOT LOCATE JUNCTION BOXES ABOVE HARD CEILINGS. ALL CONNECTIONS TO FIXTURES IN A HARD CEILING WILL COME FROM A JUNCTION BOX LOCATED IN AN ACCESSIBLE AREA OUTSIDE OF THE ROOM.
15. FIXTURES SHALL NOT BE DAISY CHAINED TOGETHER. EACH FIXTURE SHALL HAVE ONLY ONE FLEXIBLE CONDUIT CONNECTION FROM A JUNCTION BOX LOCATED WITHIN 6 FEET.
16. FMC SHALL BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES, IN RUNS UP TO 6 FEET LONG.
17. FMC OR LFMC SHALL BE USED FOR CONNECTIONS TO VIBRATION PRODUCING EQUIPMENT, SUCH AS MOTORS, TRANSFORMERS, AND HVAC EQUIPMENT. LFMC SHALL BE USED IN DAMP AND WET LOCATIONS.
18. TERMINATED DATA CONDUITS, SLEEVES AND STUBS WITH PLASTIC BUSHINGS.
19. FEEDER AND BRANCH CIRCUIT WIRING SHALL BE COPPER.
20. LIGHT FIXTURES, WIRING DEVICES, AND EQUIPMENT SHALL BE LISTED AND LABELED BY A NRTL.
21. PROVIDE UL LISTED FIRE STOP SYSTEMS AT ALL PENETRATIONS THROUGH RATED PARTITIONS.
22. MARK JUNCTION BOX COVERS USING PERMANENT MARKER INDICATING THE PANEL AND CIRCUIT NUMBERS SERVING THE JUNCTION BOX.
23. MARK SWITCH AND RECEPTACLE COVERPLATES USING APPROVED LABEL MAKER INDICATING THE PANEL AND CIRCUIT NUMBERS SERVING THE SWITCH(ES).
24. PROVIDE CEILING ACCESS DOORS TO GAIN ACCESS TO EQUIPMENT ABOVE HARD CEILINGS.
25. CIRCUIT EXIT SIGNS, EMERGENCY EGRESS FIXTURES, AND EMERGENCY BALLASTS TO LIGHTING CIRCUIT IN THE SPACE AND CIRCUIT AHEAD OF CONTROL DEVICES.
26. CIRCUIT EXTERIOR LIGHTS THROUGH PHOTOCELL/TIMECLOCK-CONTROLLED LIGHTING CONTACTOR.
27. ROUTE CONDUIT FROM DATA OUTLET TO AREA ABOVE ACCESSIBLE CEILING.
28. COMMUNICATION CABLES SHALL BE PLENUM RATED.
29. DO NOT INSTALL COMMUNICATION CABLES PARALLEL TO ELECTRICAL CONDUITS. CROSS ELECTRICAL CONDUITS WITH COMMUNICATION CABLES AT 90-DEGREE ANGLE.
30. COMMUNICATION BACK BOXES SHALL BE 4-INCH SQUARE, STEEL WITH SINGLE-GANG RING.
31. COMMUNICATION CONDUITS SHALL BE 1" MINIMUM.
32. PROJECTOR CEILING PLATES: OWNER-PROVIDED; CONTRACTOR-INSTALLED. INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
33. PROVIDE PHENOLIC LABELS FOR ALL DISTRIBUTION EQUIPMENT, PANELBOARDS, AND DISCONNECT SWITCHES. LABELS SHALL BE BLACK, ETCHED TO REVEAL WHITE LETTERS ON BLACK BACKGROUND.
34. COORDINATE WORK IN THE CONSTRUCTION AREAS WITH OWNER, TO AVOID CONFLICT WITH OTHER ACTIVITIES OR FUNCTIONS THAT REQUIRE ACCESS TO THE AREA.
35. REQUEST UTILITY LOCATING SERVICE TO IDENTIFY ALL UNDERGROUND UTILITIES IN THE VICINITY OF UNDERGROUND WORK. VERIFY WITH UTILITY LOCATING SERVICE THAT MARKING IS COMPLETE PRIOR TO COMMENCING WORK.
36. PROVIDE AND PLACE TEMPORARY BARRIERS, WARNING CONES, AND OTHER SUITABLE DEVICES TO PROTECT THE PUBLIC FROM HAZARDS PRESENTED BY THE WORK, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: STORAGE OF MATERIALS AND EQUIPMENT, OPERATION OF TRENCHING EQUIPMENT AND MOTOR VEHICLES, OPEN TRENCHES AND POLE BASE CORE DRILLS, EXCAVATED MATERIAL, AND CONCRETE DELIVERY.

LIGHTING FUNCTIONAL TESTING AND COMMISSIONING PLAN (APPLIES TO ALL SHEETS)

1. CONTRACTOR SHALL ENGAGE A 3RD PARTY CERTIFIED COMMISSIONING AGENT TO COMPLETE THE TASKS BELOW TO VERIFY THE LIGHTING CONTROLS ARE OPERATING AS PRESCRIBED BY THE PROJECT DOCUMENTS AND APPLICABLE CODES. WRITTEN DOCUMENTATION SHALL BE PROVIDED TO THE ARCHITECT UPON COMPLETION AND SHALL INCLUDE THE FOLLOWING INFORMATION FOR EACH TASK: DATE PERFORMED, PERSON COMPLETING THE TASK, INITIAL SETTINGS OBSERVED, AND FINAL SETTING UPON COMPLETION.
2. CONTRACTOR SHALL COMPLETE AND DOCUMENT THE FOLLOWING TASKS:
   A.ENSURE LIGHT FIXTURES ARE INSTALLED AND OPERATIONAL.
   B.PERFORM OPERATIONAL TESTING OF EMERGENCY EXIT AND EGRESS LIGHTING COMPONENTS AS REQUIRED BY NFPA 101 FOR ANNUAL TESTING.
   C.ENSURE OCCUPANCY SENSORS ARE INSTALLED AND OPERATIONAL.
   D.ENSURE DAYLIGHT PHOTOSENSORS ARE INSTALLED AND OPERATIONAL.
3. TEST OF OCCUPANCY SENSOR DEVICES SHALL ENSURE THE FOLLOWING:
   A.LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS,
   B.DEVICE STATUS INDICATORS ARE FUNCTIONING,
   C.FIXTURES ARE SWITCHED OR DIMMED AS INDICATED IN THE DRAWINGS,
   D.TIME DELAYS ARE SET APPROPRIATELY, AND
   E.MOVEMENT OUTSIDE OF THE SPACE DOES NOT CAUSE THE SENSOR TO OPERATE.
4. TEST OF DAYLIGHT PHOTOSENSOR DEVICES SHALL ENSURE THE FOLLOWING:
   A.LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS,
   B.DEVICE STATUS INDICATORS ARE FUNCTIONING,
   C.FIXTURES ARE DIMMED AS INDICATED IN THE DRAWINGS,
   D.TIME DELAYS AND RATE OF DIMMING ARE SET APPROPRIATELY TO AVOID ABRUPT LIGHT LEVEL CHANGES, AND
   E.FEEDBACK FROM ARTIFICIAL LIGHTING WITHIN THE SPACE DOES NOT CAUSE UNNECESSARY OMISSION.
5. IN CORRIDOR, OCCUPANCY SENSOR CONTROL SHALL TURN LIGHTING ON TO FULL LIGHT OUTPUT UPON DETECTION OF OCCUPANT. ALL OTHER AREAS, OCCUPANCY SENSOR CONTROL SHALL TURN LIGHTING ON TO NOT MORE THAN 50 PERCENT OF LIGHTING POWER OR BE MANUAL ON.
6. TEST ON/OFF SYSTEM WHERE APPLICABLE FOR CORRECT OPERATION.
7. CONTRACTOR SHALL ENSURE THE STEPS ABOVE ARE COMPLETED PRIOR TO SUBSTANTIAL COMPLETION TO AVOID POTENTIAL DELAYS IN OBTAINING CERTIFICATE OF OCCUPANCY. CONTRACTOR SHALL PROVIDE ALL DOCUMENTATION AS REQUIRED BY THE AHJ TO SATISFY ALL PERMITTING OBLIGATIONS.

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PROJECT # 17012

TYLER STATE PARK
HEADQUARTERS PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: LE
DRAWN BY: LE
REVIEWED BY: RAR

no.	revision	date
1	ADD #3	10/07/20

SHEET TITLE
ELECTRICAL SYMBOLS & ABBREVIATIONS

SHEET NUMBER
E001

CONSTRUCTION DOCUMENTS

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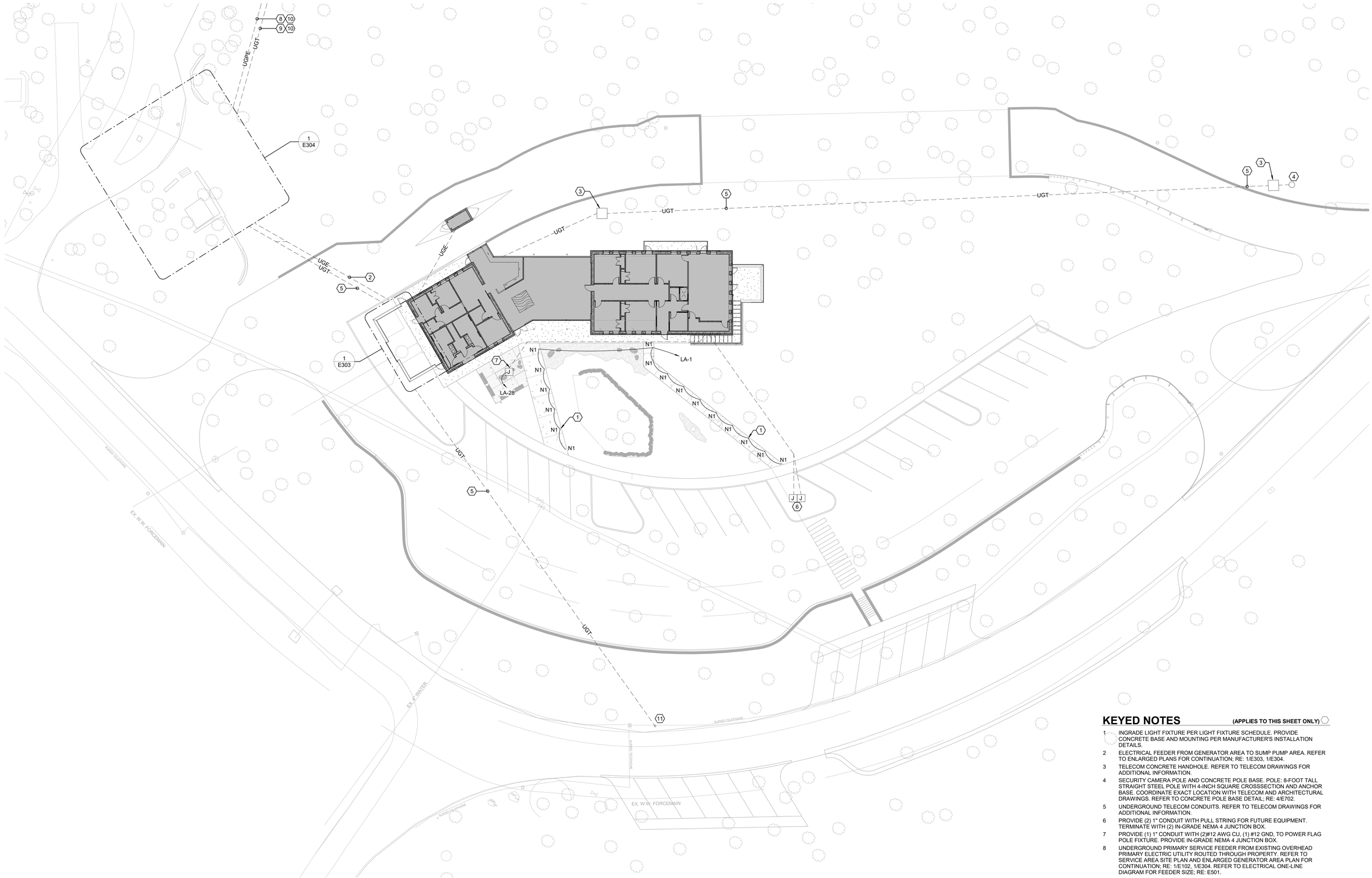

1 ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

TRUE NORTH

KEYED NOTES (APPLIES TO THIS SHEET ONLY)

1. INGRADE LIGHT FIXTURE PER LIGHT FIXTURE SCHEDULE. PROVIDE CONCRETE BASE AND MOUNTING PER MANUFACTURER'S INSTALLATION DETAILS.
2. ELECTRICAL FEEDER FROM GENERATOR AREA TO SUMP PUMP AREA. REFER TO ENLARGED PLANS FOR CONTINUATION; RE: 1/E303, 1/E304.
3. TELECOM CONCRETE HANDHOLE. REFER TO TELECOM DRAWINGS FOR ADDITIONAL INFORMATION.
4. SECURITY CAMERA POLE AND CONCRETE POLE BASE. POLE: 8-FOOT TALL STRAIGHT STEEL POLE WITH 4-INCH SQUARE CROSSSECTION AND ANCHOR BASE. COORDINATE EXACT LOCATION WITH TELECOM AND ARCHITECTURAL DRAWINGS. REFER TO CONCRETE POLE BASE DETAIL; RE: 4/E702.
5. UNDERGROUND TELECOM CONDUITS. REFER TO TELECOM DRAWINGS FOR ADDITIONAL INFORMATION.
6. PROVIDE (2) 1" CONDUIT WITH PULL STRING FOR FUTURE EQUIPMENT. TERMINATE WITH (2) IN-GRADE NEMA 4 JUNCTION BOX.
7. PROVIDE (1) 1" CONDUIT WITH (2)#12 AWG CU, (1) #12 GND, TO POWER FLAG POLE FIXTURE. PROVIDE IN-GRADE NEMA 4 JUNCTION BOX.
8. UNDERGROUND PRIMARY SERVICE FEEDER FROM EXISTING OVERHEAD PRIMARY ELECTRIC UTILITY ROUTED THROUGH PROPERTY. REFER TO SERVICE AREA SITE PLAN AND ENLARGED GENERATOR AREA PLAN FOR CONTINUATION; RE: 1/E102, 1/E304. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR FEEDER SIZE; RE: E501.
9. PROVIDE (2) 4" EMPTY CONDUITS ROUTED ALONG SAME PATH WITH UNDERGROUND PRIMARY SERVICE FEEDER. REFER TO TELECOM DRAWINGS FOR ADDITIONAL INFORMATION.

1 10. COORDINATE EXACT ROUTING OF UNDERGROUND ELECTRICAL PRIMARY AND COMMUNICATIONS DUCTBANK. VERIFY FINAL ROUTING IN THE FIELD WITH DESIGNATED OWNER'S REPRESENTATIVE. AN EASEMENT OF 5 FEET ON EACH SIDE OF THE PRIMARY DUCTBANK WILL BE ESTABLISHED. REMOVE TREES AT THE UTILITY RISER POLE AND AT THE PAD-MOUNTED TRANSFORMER LOCATION PER ONCOR'S REQUEST WITHIN AND RESTRICTED TO THE EASEMENT SETBACKS.

11. EXISTING TELECOM PEDESTAL. COORDINATE ROUTING AT THE SITE WITH EXACT LOCATION OF PEDESTAL.

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PROJECT # 17012

TYLER STATE PARK
HEADQUARTERS PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: LE
DRAWN BY: LE
REVIEWED BY: RAR

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1	ADD #3	10/07/20

SHEET TITLE
ELECTRICAL SITE PLAN

SHEET NUMBER
E101

CONSTRUCTION DOCUMENTS

DATE: 10/7/2020 12:43:37 PM PATH: BIM 360://17-012 Tyler State Park Visitor Center Replacement/17012 Tyler - E19.rvt

KEYED NOTES (APPLIES TO THIS SHEET ONLY)

1. EXISTING OVERHEAD PRIMARY ELECTRIC UTILITY, FROM ONCOR. COORDINATE WITH EXACT LOCATION OF POWERPOLES AT THE SITE.
2. APPROXIMATE LOCATION OF EXISTING POWER POLE FOR OVERHEAD PRIMARY ELECTRIC UTILITY. ROUTE NEW UNDERGROUND PRIMARY DUCTBANK AND TELECOM CONDUITS TO POLE. COORDINATE INSTALLATION WITH UTILITY STANDARDS.
3. PROVIDE SEPARATE HORIZONTAL DIRECTIONAL BORE FOR ONCOR PRIMARY DUCTBANK. MAINTAIN MINIMUM OF 24-ICH EARTH COVER. INSTALL (2) 4" CONDUITS FOR PRIMARY CONDUCTOR INSTALLATION BY ELECTRIC UTILITY COMPANY. EXTEND DUCTBANK FROM BORE TO UTILITY RISER POLE AND PROPOSED PAD-MOUNTED TRANSFORMER LOCATION.
4. PROVIDE CONDUITS FOR FEEDER TO DIST PANEL 'MDP' AND PROVIDE (2) 4" CONDUITS FOR INSTALLATION OF TELECOM SERVICE CABLING. CONDUITS SHALL BE INSTALLED BY BORING FROM GENERATOR SERVICE AREA TO BUILDING, APPROXIMATELY AS SHOWN. MAINTAIN MINIMUM 24-INCH SEPARATION BETWEEN POWER AND TELECOM DUCTBANKS.
5. PROVIDE SEPARATE HORIZONTAL DIRECTIONAL BORE FOR COMMUNICATION DUCTBACK. MAINTAIN 12-INCH SEPARATION FROM ELECTRICAL PRIMARY DUCTBANK AND MAINTAIN MINIMUM OF 24-ICH EARTH COVER. BORE SHALL BE WITHIN ONCOR PRIMARY DUCTBANK EASEMENT.
6. COORDINATE EXACT ROUTING OF UNDERGROUND ELECTRICAL PRIMARY AND COMMUNICATIONS DUCTBANK. VERIFY FINAL ROUTING IN THE FIELD WITH DESIGNATED OWNER'S REPRESENTATIVE. AN EASEMENT OF 5 FEET ON EACH SIDE OF THE PRIMARY DUCTBANK WILL BE ESTABLISHED. REMOVE TREES AT THE UTILITY RISER POLE AND AT THE PAD-MOUNTED TRANSFORMER LOCATION PER ONCOR'S REQUEST WITHIN AND RESTRICTED TO THE EASEMENT SETBACKS.

N
TRUE NORTH

1 ELECTRICAL SITE PLAN - OVERALL
SCALE: 1" = 20'-0"

DATE: 10/7/2020 12:43:39 PM PATH: BIM 360://17-012 Tyler State Park Visitor Center Replacement/17012 Tyler - E19.rvt

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TYLER STATE PARK
HEADQUARTERS PHASE 1
PROJECT NUMBER: 112741

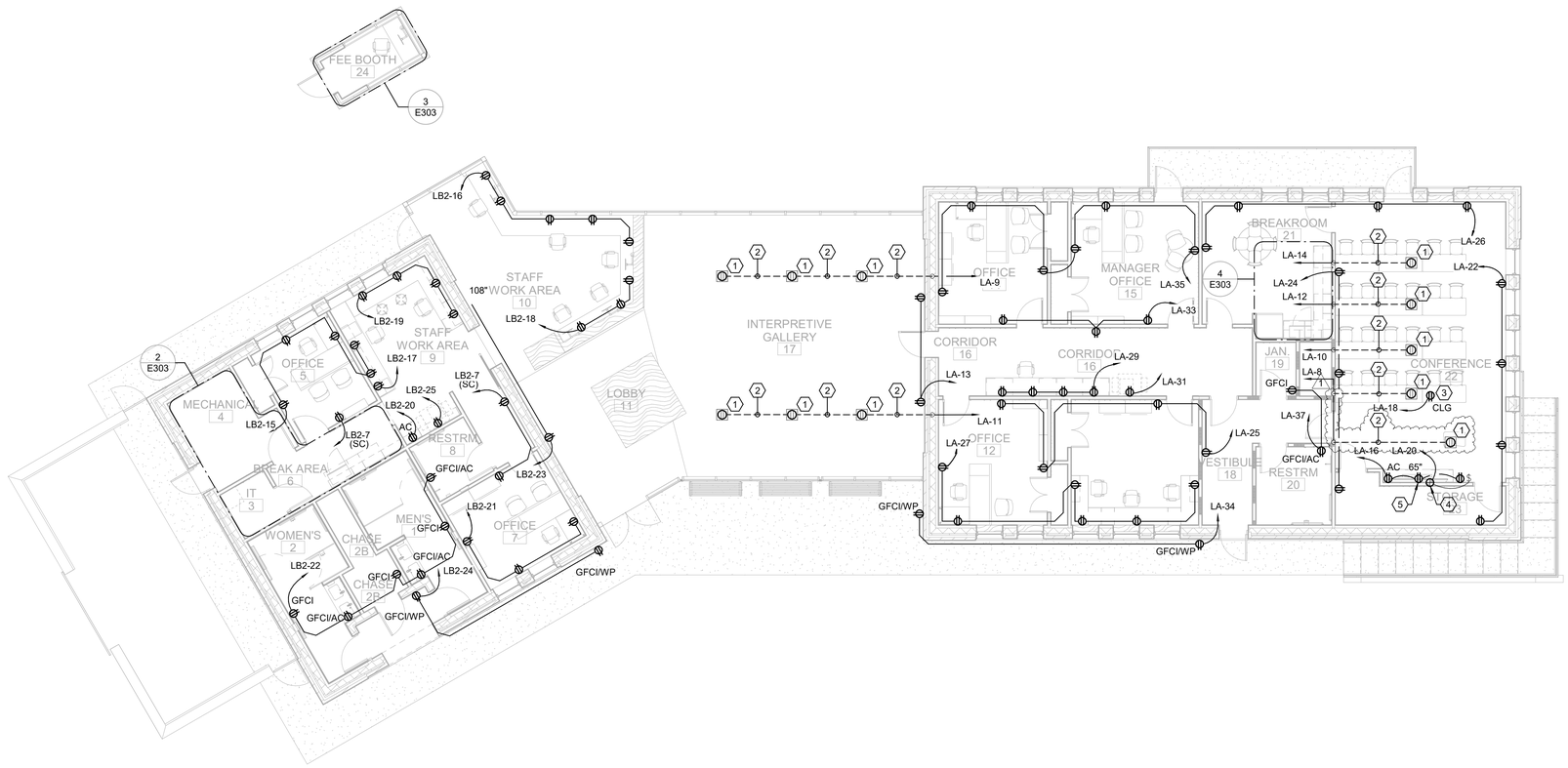
DATE: 07/03/2020
DESIGNED BY: Designer
DRAWN BY: Author
REVIEWED BY: Checker

no.	revision	date
1	ADD #3	10/07/20

SHEET TITLE
ELECTRICAL SITE PLAN - OVERALL

SHEET NUMBER
E102

CONSTRUCTION DOCUMENTS



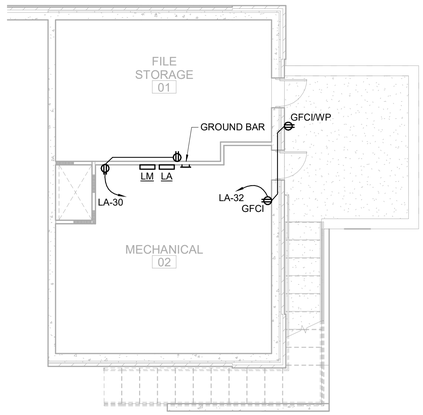
1 FIRST FLOOR PLAN - POWER

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

TRUE NORTH

KEYED NOTES (APPLIES TO THIS SHEET ONLY)

1. PROVIDE FLOOR BOX EQUAL TO LEGRAND MODEL #RFB2E. PROVIDE IN SLAB-FLOOR BOX WITH SEGREGATED POWER AND DATA COMPARMENTS, SUITABLE FOR CONDUIT SIZES INDICATED. PROVIDE ONE (1) 20A, 120V DUPLEX RECEPTACLES FOR POWER, WITH CAPACITY FOR ONE (1) CAT6 CABLE CONNECTIONS IN DATA SIDE. PROVIDE ALL APPURTENANCES NECESSARY FOR A COMPLETE SYSTEM INSTALLATION.
2. INSTALL (2) 1-1/4" CONDUITS, FOR POWER (1 CONDUIT) AND SPECIAL SYSTEM CABLING (1 CONDUIT). VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. COORDINATE INSTALLATION WITH STRUCTURAL ENGINEER.
3. PROVIDE CEILING MOUNTED RECEPTACLE TO POWER PROJECTOR. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
4. PROVIDE POWER TO MOTORIZED PROJECTOR SCREEN. PROVIDE ALL APPURTENANCES NECESSARY FOR A COMPLETE FUNCTIONAL SYSTEM.
5. PROVIDE POWER TO TV. VERIFY EXACT HEIGHT AND EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.



2 BASEMENT FLOOR PLAN - POWER

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

TRUE NORTH

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DRAWN BY: LE
REVIEWED BY: RAR

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SHEET TITLE
POWER FLOOR PLAN

SHEET NUMBER
E301

CONSTRUCTION DOCUMENTS

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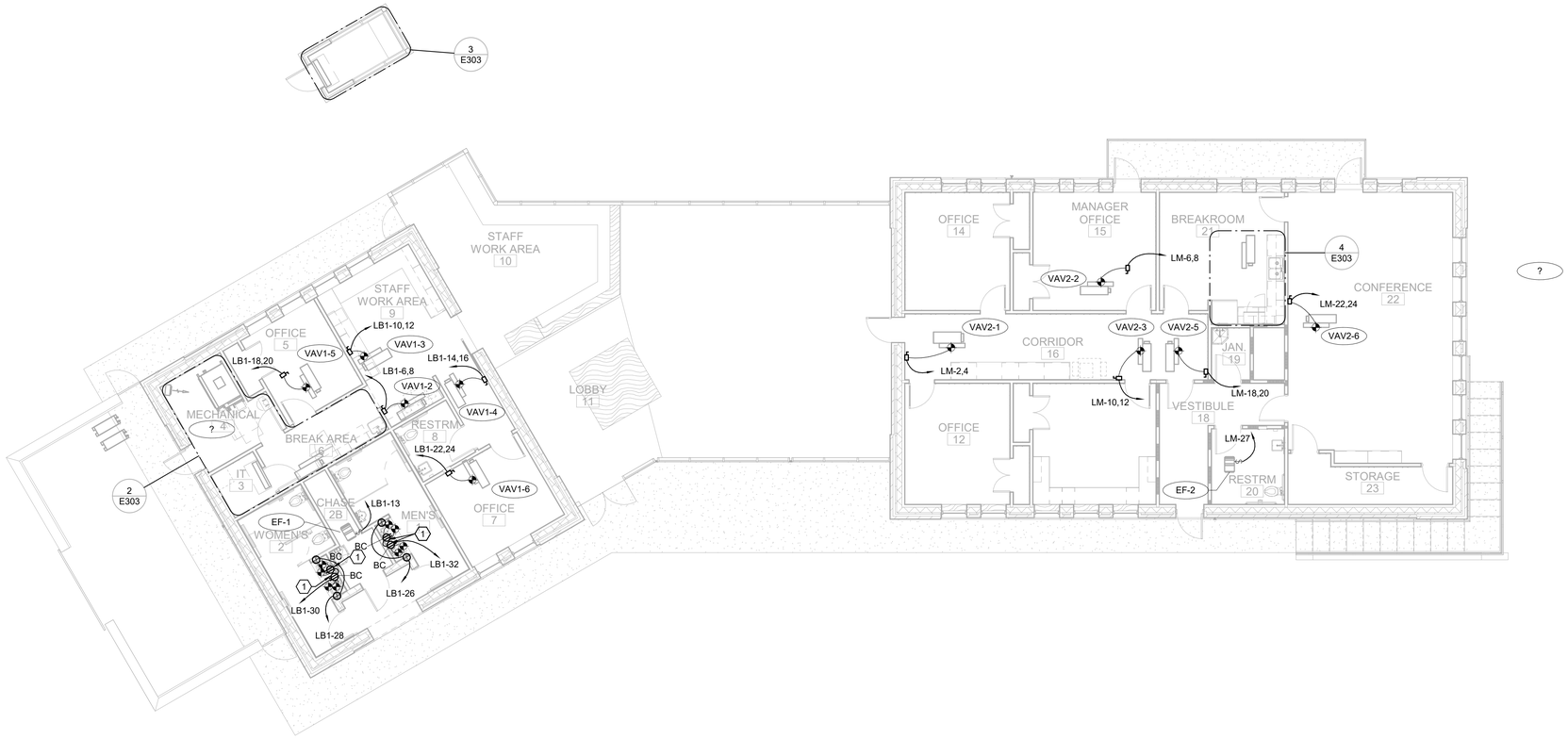


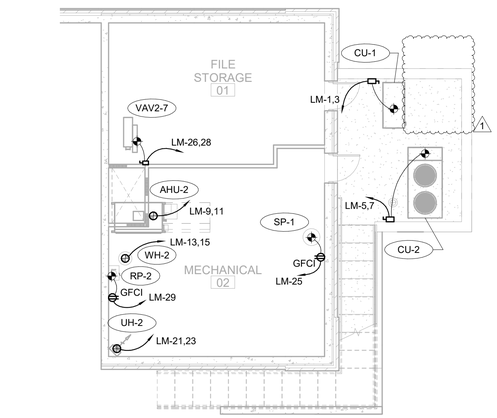
1 FIRST FLOOR PLAN - POWER (MECH. EQUIP.)

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

TRUE NORTH

KEYED NOTES (APPLIES TO THIS SHEET ONLY)

1 PROVIDE LOW-VOLTAGE CABLING AND EQUIPMENT CONNECTION TO SOAP DISPENSERS AND AUTOMATIC LAVATORIES. COORDINATE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.



2 BASEMENT FLOOR PLAN - POWER (MECH. EQUIP.)

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

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PROJECT NUMBER: 112741

DATE: 07/03/2020
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SHEET TITLE

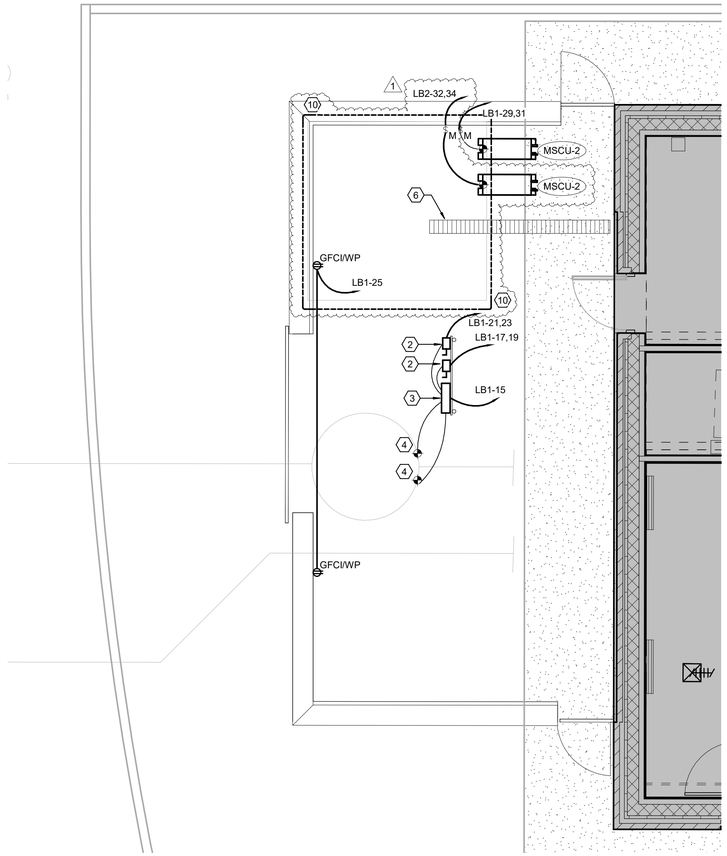
MECH. EQUIP. POWER FLOOR PLAN

SHEET NUMBER

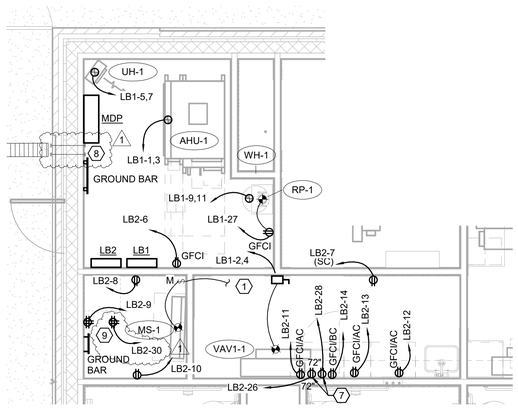
E302

CONSTRUCTION DOCUMENTS

DATE: 10/7/2020 12:43:47 PM PATH: BIM 360://17-012 Tyler State Park Visitor Center Replacement/17012 Tyler - E19.rvt



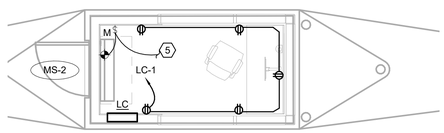
1 ENLARGED SUMP PUMP AREA - POWER
SCALE: 1/4" = 1'-0"
TRUE NORTH



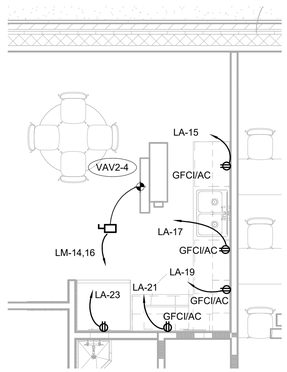
2 PARTIAL FLOOR PLAN - IT, MECH, BREAK ROOMS - POWER
SCALE: 1/4" = 1'-0"
TRUE NORTH

KEYED NOTES (APPLIES TO THIS SHEET ONLY)

1. HOMERUN THROUGH ASSOCIATED CONDENSING UNIT IN MECHANICAL YARD; RE: 2/E302. PROVIDE BRANCH CIRCUIT AND CONTROL WIRING PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. DISCONNECT SWITCH: 30-AMP, 2-POLE, NON-FUSED, 240-VOLT, NEMA 3R, HEAVY-DUTY SWITCH. MOUNT TO ELECTRICAL RACK STRUCTURE PER LIFT STATION DETAILS.
3. LIFT STATION CONTROL PANEL PER CIVIL DRAWINGS AND SPECIFICATIONS. CIRCUIT SUMP PUMPS THROUGH CONTROL PANEL PER LIFT STATION DETAILS.
4. EQUIPMENT CONNECTION TO LIFT STATION SUMP PUMPS. CONNECT AT BOTTOM OF PIT PER LIFT STATION DETAILS.
5. HOMERUN THROUGH ASSOCIATED CONDENSING UNIT IN RADIO TOWER YARD; RE: 1/E303. PROVIDE BRANCH CIRCUIT AND CONTROL WIRING PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
6. PROVIDE ICE-BRIDGE FOR ROUTING OF CONDUITS FROM RADIO TOWER TO BUILDING. MOUNT BRIDGE AT 8'-0". VERIFY EXACT HEIGHT AND EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE ALL APPURTENANCES NECESSARY FOR A COMPLETE SYSTEM INSTALLATION.
7. PROVIDE POWER CONNECTION TO RADIO AND RADIO ANTENNA. VERIFY EXACT HEIGHT AND EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
8. PROVIDE (2) 4" EMPTY CONDUITS FOR COMMUNICATION CABLING ROUTE THROUGH EXTERIOR WALL. SEAL CONDUITS AFTER CONDUCTOR INSTALLATION.
9. MOUNT RECEPTACLE TO TELECOM RACK. COORDINATE WITH TELECOM INSTALLER.
10. PROVIDE GROUND RING AROUND RADIO TOWER AND GROUNDING BUSBAR ON RADIO TOWER. GROUND RING SHALL INCLUDE DRIVEN GROUND RODS AT EACH OF FOUR CORNERS AND UNDERGROUND GROUND CONDUCTOR. GROUNDING BUSBAR SHALL BE BONDED TO RADIO TOWER, GROUND RING, CABLE TRAY, AND BUILDING GROUND.



3 PARTIAL FLOOR PLAN - FEE BOOTH 24 - POWER
SCALE: 1/4" = 1'-0"
TRUE NORTH



4 PARTIAL FLOOR PLAN - BREAKROOM 21 - POWER
SCALE: 1/4" = 1'-0"
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TYLER STATE PARK
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PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: LE
DRAWN BY: LE
REVIEWED BY: RAR

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1	ADD #3	10/07/20

SHEET TITLE
POWER ENLARGED FLOOR PLANS

SHEET NUMBER
E303

CONSTRUCTION DOCUMENTS

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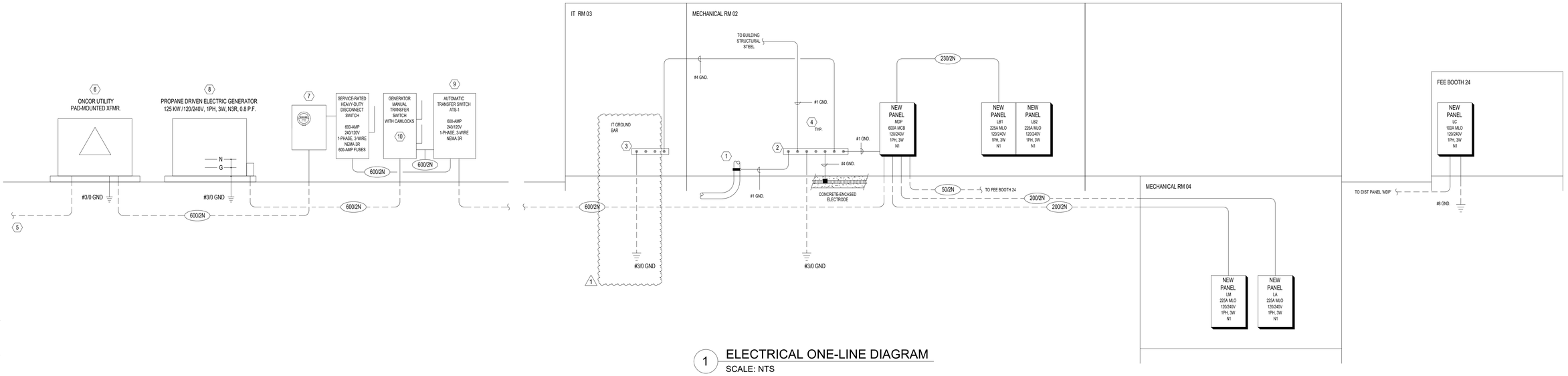
KEYED NOTES: (APPLIES TO THIS SHEET)

1. GROUNDING CONDUCTOR BONDED TO WATER PIPE. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE 1/4"x2"x24" CU MAIN GROUND BAR . MOUNT AT 24" AFF. BOND GROUNDING ELECTRODES AT THE BUILDING AND SERVICE GROUND CONDUCTOR TO BAR.
3. PROVIDE 1/4"x2"x12" CU GROUND BAR FOR IT ROOM . MOUNT AT 24" AFF. BOND TO MAIN GROUND BAR AT BUILDING AND PROVIDE DRIVEN GROUND ROD NEAR ROOM. IT RACK, SURGE PROTECTORS, COMMUNICATION EQUIPMENT, AND RADIO EQUIPMENT SHALL BE BONDED TO THIS GROUND BAR.
4. GROUNDING ELECTRODE CONDUCTORS MUST BE PROTECTED IF EXPOSED TO PHYSICAL DAMAGE. GROUNDING METHODS MUST COMPLY WITH NEC ARTICLE 250.
5. PRIMARY ELECTRICAL DUCTBANK: (2) 4" CONDUITS FOR POWER. PROVIDE BORING AND CONDUIT. ENSURE CONDUIT PATHWAYS ARE CLEAN AND PREPARED FOR INSTALLATION OF CONDUCTORS BY ELECTRIC UTILITY. REFER TO SITE PLAN FOR PROPOSED ROUTING, BORING REQUIREMENTS, AND ASSOCIATED COMMUNICATIONS DUCTBANK; RE: 1/E101, 1/E102.
6. UTILITY PAD-MOUNT TRANSFORMER. PROVIDE PIERS AND CONDUITS AS REQUIRED FOR ONCOR TO SET IN PLACE PRECAST TRANSFORMER PAD.
7. UTILITY TRANSSOCKET: FURNISHED BY ONCOR AND INSTALLED BY CONTRACTOR.
8. BACKUP GENERATOR. REFER TO SPECIFICATION SECTION 26 3213 FOR MATERIAL AND INSTALLATION REQUIREMENTS.
9. GENERATOR MANUAL TRANSFER SWITCH: 600-AMP, TWO-HANDLE, MANUAL TRANSFER SWITCH WITH CAMLOCKS FOR CONNECTION OF PORTABLE LOAD BANK AND TEMPORARY GENERATOR.
10. AUTOMATIC TRANSFER SWITCH. REFER TO SPECIFICATION SECTION 26 3600 FOR MATERIAL AND INSTALLATION REQUIREMENTS.



1 ELECTRICAL ONE-LINE DIAGRAM
SCALE: NTS

FEEDER SCHEDULE					
1 PHASE, 3 WIRE					
TAG	CONDUIT		PHASE CONDUCTORS	NEUTRAL CONDUCTORS	GROUND CONDUCTORS
50/2N	(1)3/4"	EACH WITH	(2) 8 AWG	(1) 8 AWG	(1) 10
200/2N	(1) 2"	EACH WITH	(2) 3/0 AWG	(1) 3/0 AWG	(1) 6
230/2N	(1) 2"	EACH WITH	(2) 4/0 AWG	(1) 4/0 AWG	(1) 4
600/2N	(2) 2-1/2"	EACH WITH	(2) 350 KCMIL	(1) 350 KCMIL	(1) 1
NOTES:					
1. CONDUIT SIZES ARE FOR CONDUIT INDICATED WITH THHN, THWN INSULATED COPPER CONDUCTORS WITH MAXIMUM 40% FILL. CONTRACTOR SHALL ADJUST CONDUIT SIZE AS REQUIRED PER NEC APPENDIX C, CONDUIT FILL TABLES FOR ALL OTHER CONDUIT AND INSULATION TYPES.					
2. REFER TO SPECIFICATIONS FOR ADDITIONAL CONDUIT APPLICATION AND INSTALLATION REQUIREMENTS.					
3. PROVIDE LUGS AS REQUIRED FOR FEEDERS INDICATED.					

Load Analysis: ELECTRICAL SERVICE

Voltage: 120/240V, 1PH, 3W

Serving:	Load VA
ATS-1	103400 VA

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand...	Panel Totals	
Cooling	10618 VA	100.00%	10618 VA		
Equipment	2112 VA	100.00%	2112 VA	**Total Conn. Load VA:**	106894 VA
Fan	1056 VA	125.00%	1320 VA	**Total Demand VA:**	**111648 VA**
Heating	27195 VA	100.00%	27195 VA	**Total Demand Amps:**	**434 A**
Lighting	3888 VA	125.00%	4860 VA		
Other	31236 VA	100.00%	31236 VA		
Receptacle	27340 VA	100.00%	27340 VA		
Interior Lighting per NEC	18000 VA	1.25%	22500 VA		

Notes:
1. <Interior Lighting per NEC> is obtained from NEC 220.12.
2. Totals use (<Existing Lighting> + <Lighting>) or <Interior Lighting per NEC>, whichever is larger.
3. Totals use <Cooling> or <Heating>, whichever is larger.

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PROJECT # 17012

TYLER STATE PARK
HEADQUARTERS PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: LE
DRAWN BY: LE
REVIEWED BY: RAR

no.	revision	date
1	ADD #3	10/07/20

SHEET TITLE
ELECTRICAL RISER DIAGRAM

SHEET NUMBER
E501

CONSTRUCTION DOCUMENTS

PATH: BIM 360://17-012 Tyler State Park Visitor Center Replacement/17012 Tyler - E19.rvt
DATE: 10/7/2020 12:43:53 PM

Lighting Fixture Schedule

Type	Manufacturer	Catalog Number	Description	Lamp Qty	Lamp Type	Ballast Qty	Ballast Type	Mounting	Voltage	Wattage
A1	COOPER	22CZ2-39-UNV-L835-CD-1-U	SPECIFICATION-GRADE, RECESSED 2' x 2' TROFFER WITH CENTER MOUNTED LIGHT SOURCE.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	30 VA
A1E	COOPER	22CZ2-39-UNV-EL14W-L835-CD-1-U	LUMINAIRE TO MATCH FIXTURE TYPE 'A1', BUT WITH INTEGRAL EMERGENCY BATTERY BACKUP	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	30 VA
A2	COOPER	22CZ2-44-UNV-L835-CD-1-U	SPECIFICATION-GRADE, RECESSED 2' x 2' TROFFER WITH CENTER MOUNTED LIGHT SOURCE.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	35 VA
A2E	COOPER	22CZ2-44-UNV-EL14W-L835-CD-1-U	LUMINAIRE TO MATCH FIXTURE TYPE 'A2', BUT WITH INTEGRAL EMERGENCY BATTERY BACKUP	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	35 VA
A3	COOPER	22CZ2-32-UNV-L835-CD-1-U	SPECIFICATION-GRADE, RECESSED 2' x 2' TROFFER WITH CENTER MOUNTED LIGHT SOURCE.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	26 VA
A3E	COOPER	22CZ2-32-UNV-EL14W-L835-CD-1-U	LUMINAIRE TO MATCH FIXTURE TYPE 'A3', BUT WITH INTEGRAL EMERGENCY BATTERY BACKUP	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	26 VA
C1	COOPER	4SNLED-LD5-37SL-LW-UNV-L835-CD-1-U; AYC-CHAIN/SET	4' SUSPENDED LENSED LED STRIPLIGHT.	1	LED 3500K	1	LED DRIVER	CHAIN / SURFACE	120 V	28 VA
C1E	COOPER	4SNLED-LD5-37SL-LW-UNV-EL14W-L835-CD-1-U; AYC-CHAIN/SET	LUMINAIRE TO MATCH FIXTURE TYPE 'C1', BUT WITH INTEGRAL EMERGENCY BATTERY BACKUP	1	LED 3500K	1	LED DRIVER	CHAIN / SURFACE	120 V	28 VA
D1	WAC	DS-CD05-F30-XX	SURFACE MOUNTED 5" DIAMETER LED CYLINDER DOWNLIGHT RATED FOR EXTERIOR APPLICATIONS. COORDINATE FINISHES WITH ARCHITEC.	1	LED 3000K	1	LED DRIVER	SURFACE CEILING	120 V	25 VA
D2	CAMMAN LIGHTING	P8800-36-LN-35K-CLV-1-XX-XX-AC	ARCHITECTURAL SUSPENDED LED LUMINAIRE WITH CYLINDRICAL ACRYLIC DIFFUSER AND CABLE SUSPENSION. COORDINATE FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	SUSPENDED	120 V	25 VA
D3	COOPER	LD6B-15-D010-EU6B-1020-8035-6LB-M-1-XX	6-INCH DIAMETER, RECESSED LED DOWNLIGHT. COORDINATE TRIM FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	16 VA
D3E	COOPER	LD6B-15-D010-IEMBOD-EU6B-1020-8035-6LB-M-1-XX	LUMINAIRE TO MATCH FIXTURE TYPE 'D3', BUT WITH INTEGRAL EMERGENCY BATTERY BACKUP.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	16 VA
D4	CAMMAN LIGHTING	P8800-24-LN-35K-CLV-1-XX-XX-AC	ARCHITECTURAL SUSPENDED LED LUMINAIRE WITH CYLINDRICAL ACRYLIC DIFFUSER AND CABLE SUSPENSION. COORDINATE FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	SUSPENDED	120 V	25 VA
D5	CAMMAN LIGHTING	P8800-48-LN-35K-CLV-1-XX-XX-AC	ARCHITECTURAL SUSPENDED LED LUMINAIRE WITH CYLINDRICAL ACRYLIC DIFFUSER AND CABLE SUSPENSION. COORDINATE FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	SUSPENDED	120 V	25 VA
F1	MP LIGHTING	L650L-C10-10-6-W30H-W-F-C72-WO-I	ARCHITECTURAL SUSPENDED LINEAR PENDANT IN 6-FOOT LENGTH WITH SOLID WHITE OAK LUMINAIRE HOUSING AND ADJUSTABLE CABLE SUSPENSION.	1	LED 3000K	1	LED DRIVER	SUSPENDED	120 V	60 VA
F2	COOPER	S124DR-S575D-835-XX-6F0-1-UDD-R-XX	4-INCH WIDE RECESSED DIRECT LINEAR FIXTURE IN 6-FOOT LENGTH. COORDINATE GRID TYPE AND FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	30 VA
F2E	COOPER	S124DR-S575D-835-XX-6F0-1B2-UDD-R-XX	LUMINAIRE TO MATCH FIXTURE TYPE 'F2', BUT WITH INTEGRAL EMERGENCY BATTERY BACKUP.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	30 VA
F3	COOPER	S124DR-H795D-835-XX-9F0-1-UDD-R-XX	4-INCH WIDE RECESSED DIRECT LINEAR FIXTURE IN 9-FOOT LENGTH. COORDINATE GRID TYPE AND FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	55 VA
F3E	COOPER	S124DR-H795D-835-XX-9F0-1B2-UDD-R-XX	LUMINAIRE TO MATCH FIXTURE TYPE 'F3', BUT WITH INTEGRAL EMERGENCY BATTERY BACKUP.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	55 VA
F4	COOPER	S124DR-S575D-835-XX-2F0-1-UDD-R-XX	4-INCH WIDE RECESSED DIRECT LINEAR FIXTURE IN 2-FOOT LENGTH. COORDINATE GRID TYPE AND FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	10 VA
F5	COOPER	S124DR-S575D-835-XX-4F0-1-UDD-R-XX	4-INCH WIDE RECESSED DIRECT LINEAR FIXTURE IN 4-FOOT LENGTH. COORDINATE GRID TYPE AND FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	19 VA
F5E	COOPER	S124DR-S575D-835-XX-4F0-1B2-UDD-R-XX	LUMINAIRE TO MATCH FIXTURE TYPE 'F5', BUT WITH INTEGRAL EMERGENCY BATTERY BACKUP.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	19 VA
F6	COOPER	S124DR-S575D-835-XX-5F0-1-UDD-R-XX	4-INCH WIDE RECESSED DIRECT LINEAR FIXTURE IN 5-FOOT LENGTH. COORDINATE GRID TYPE AND FINISH WITH ARCHITECT.	1	LED 3500K	1	LED DRIVER	RECESSED CEILING	120 V	24 VA
N1	ARCLUCE	O-ST1013US-31I	INGRADE LIGHT FIXTURE WITH STAINLESS STEEL BODY AND TRIM FOR LOW-LEVEL LIGHTING ONE ONE SIDE ALONG PATHWAYS. RATED FOR FOOT TRAFFIC AND EXTERIOR APPLICATIONS AND LISTED FOR WET LOCATIONS.	1	LED 3000K	1	LED DRIVER	INGRADE	120 V	4 VA
W1E	OCL	VEGA VA1-O10A-08-WF-XX-L3-30K-UNV-DM1	LED WALL SCONCE WITH MODIFIED CYLINDRICAL BODY. REMOTE EMERGENCY BALLAST IN ADJACENT SPACE. COORDINATE FINISHES WITH ARCHITECT.	1	LED 3000K	1	LED DRIVER	SURFACE WALL	120 V	25 VA
X1	LITHONIA	EDG EL	SINGLE FACE BATTERY BACKUP SIDE LITE LED EXIT SIGN. REFER TO PLANS FOR REQUIRED NUMBER OF FACES, ARROWS AND MOUNTING REQUIREMENTS(CEILING/WALL). VERIFY FINISH AND LED COLOR(RED/GREEN) WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	UNIVERSAL WALL/CEILING	277 V	11 VA
X2	LITHONIA	EDG EL	DOUBLE FACE BATTERY BACKUP SIDE LITE LED EXIT SIGN. REFER TO PLANS FOR REQUIRED NUMBER OF FACES, ARROWS AND MOUNTING REQUIREMENTS(CEILING/WALL). VERIFY FINISH AND LED COLOR(RED/GREEN) WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	UNIVERSAL WALL/CEILING	277 V	11 VA
X3	LITHONIA	LE S XX 1 XX 120/277	DIE-CAST SINGLE FACELED EXIT SIGN. REFER TO PLANS FOR REQUIRED NUMBER OF FACES, ARROWS AND MOUNTING REQUIREMENTS(CEILING/WALL). VERIFY FINISH AND LED COLOR(RED/GREEN) WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	UNIVERSAL WALL/CEILING	277 V	11 VA

Equipment Connection Schedule

HVAC Unit Designation	HP	FLA	MCA	MOCP	Total kW	Voltage	Ph	HVAC Unit Location: Space Name	HVAC Unit Location: Space #	Disconnect	Feeder Tag	Panel Name	Circuit #	Remarks
AHU-1		6.4 A	8.0 A	15 A	1.5 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	1,3	
AHU-2		11.9 A	14.9 A	20 A	2.9 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	9,11	
CU-1		28.0 A	35.0 A	60 A	6.7 kW	240 V	1			60A/2P/NF/N3R	(1) 1"C. EA. W/ (2)-#6,(1)-#6N, (1)-#8GND	LM	1,3	
CU-2		42.4 A	53.0 A	70 A	10.2 kW	240 V	1			100A/2P/NF/N3R	(1) 1"C. EA. W/ (2)-#4,(1)-#4N, (1)-#8GND	LM	5,7	
EF-1		4.4 A		15 A	0.5 kW	120 V	1			MOTOR RATED SWITCH	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND			
EF-2		4.4 A		15 A	0.5 kW	120 V	1			MOTOR RATED SWITCH	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LM	27	
MS-1		13.0 A	16.2 A	20 A	2.7 kW	208 V	1			MOTOR RATED SWITCH	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND			FED FROM OUTDOOR UNIT.
MS-2		13.0 A	16.3 A	20 A	3.1 kW	240 V	1			MOTOR RATED SWITCH	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND			FED FROM OUTDOOR UNIT. 1
MSCU-2		13.0 A	16.2 A	20 A	3.1 kW	240 V	1			MOTOR RATED SWITCH	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND			
PUMP-1		12.0 A		20 A	2.9 kW	240 V	1			30A/2P/NF/N3R	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LB1	17,19	
PUMP-2		12.0 A		20 A	2.9 kW	240 V	1			30A/2P/NF/N3R	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LB1	21,23	
UH-1		11.0 A	13.8 A	15 A	2.6 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	5,7	
UH-2		11.0 A	13.8 A	15 A	2.6 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	21,23	
VAV1-1		4.6 A	5.7 A	15 A	1.1 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	2,4	
VAV1-2		9.0 A	11.3 A	15 A	2.2 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	6,8	
VAV1-3		15.9 A	19.9 A	20 A	3.8 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	10,12	
VAV1-4		9.0 A	11.3 A	15 A	2.2 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	14,16	
VAV1-5		4.6 A	5.7 A	15 A	1.1 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	18,20	
VAV1-6		4.6 A	5.7 A	15 A	1.1 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	22,24	
VAV2-1		20.4 A	25.5 A	30 A	4.9 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#10,(1)-#10N, (1)-#10GND	LM	2,4	
VAV2-2		4.6 A	5.7 A	15 A	1.1 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	6,8	
VAV2-3		9.0 A	11.3 A	15 A	2.2 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	10,12	
VAV2-4		4.6 A	5.7 A	15 A	1.1 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	14,16	
VAV2-5		4.6 A	5.7 A	15 A	1.1 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	18,20	
VAV2-6		9.0 A	11.3 A	15 A	2.2 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	22,24	
VAV2-7		4.6 A	5.7 A	15 A	1.1 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	26,28	
WH-1		10.4 A	13.0 A	15 A	2.5 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12, (1)-#12GND	LB1	9,11	
WH-2		10.4 A	13.0 A	15 A	2.5 kW	240 V	1			30A/2P/NF/N1	(1) 3/4"C. EA. W/ (2)-#12,(1)-#12N, (1)-#12GND	LM	13,15	

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10/07/20
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PROJECT # 17012

TYLER STATE PARK
HEADQUARTERS PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: LE
DRAWN BY: LE
REVIEWED BY: RAR

no.	revision	date
1	ADD #3	10/07/20

SHEET TITLE
ELECTRICAL SCHEDULES

SHEET NUMBER
E601

CONSTRUCTION DOCUMENTS

PATH: BIM 360://17-012 Tyler State Park Visitor Center Replacement/17012_Tyler - E10.rvt
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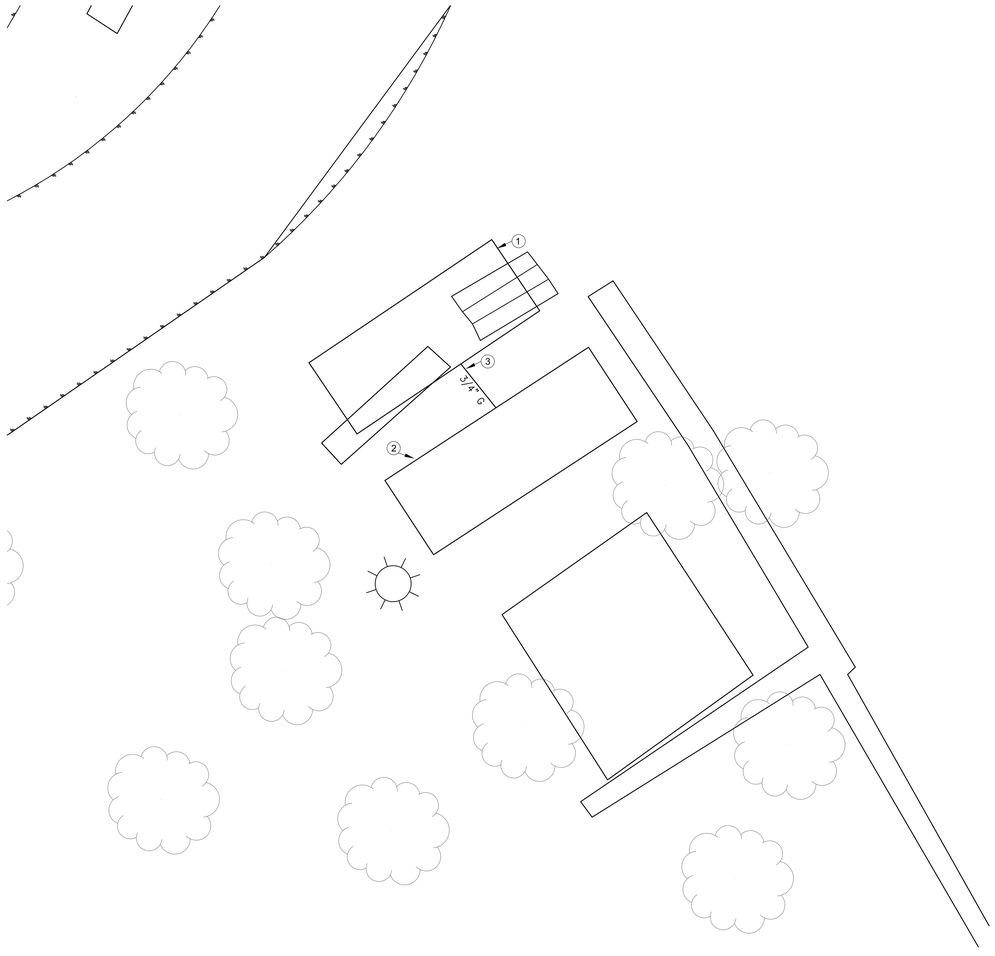
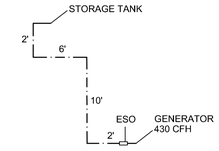


KEYED NOTES (THIS SHEET ONLY)

1. GENERATOR. RE: ELECTRICAL DRAWINGS.
2. CONTRACTOR-PROVIDED 1000 GAL PROPANE TANK, UNDERGROUND PER STATE OF TEXAS RAILROAD COMMISSION REQUIREMENTS. PROVIDE CORROSION PROTECTION SEALED BY A REGISTERED CORROSION PROTECTION ENGINEER, NACE CERTIFIED. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SOIL SAMPLES TO DETERMINE REQUIREMENTS. PROVIDE DETECTABLE TAPE ALONG EDGES OF TANK BELOW GROUND AND TRACING PIPING TO GENERATOR. PROVIDE SHOP DRAWINGS. PROVIDE HOLD DOWN CONCRETE FOUNDATION AND STRAPS. RE: #11/P402 FOR DETAIL.
3. ROUTE 3/4" GAS PIPING FROM PROPANE TANK TO GENERATOR. COORDINATE ROUTING WITH ON-SITE CONDITIONS.

MEP GAS LOAD (2PSI) TABULATION SCHEDULE		
EQUIPMENT	LOAD IN CFH	GPR OUTLET PRESSURE
GENERATOR	430	7" W.C.
ACTUAL DEVELOPED LENGTH=20 FT. (SIZING BASED ON ON 20 FT 2PSI @ 0.5 PRESSURE DROP.)	NOTE: PROVIDE GAS REGULATOR TO EQUIPMENT OR ON MAIN BRANCH SERVING EQUIPMENT	
TOTAL	430 CFH	



NOTES:

1. GAS PRESSURE REGULATORS (GPR) SHALL BE EQUIPPED WITH SCREENED VENT OPENINGS ORIENTED TO PREVENT THE ENTRANCE OF WATER OR OTHER FOULING MATERIALS. WHEN LOCATED INSIDE THE BUILDING VENTS SHALL BE PIPED TO THE BUILDING ROOF AND TERMINATED WITH A SCREENED OUTLET 90° ELBOW FITTING POINTED DOWNWARD. PROVIDE LINE SIZE PLUG OR BALL VALVE AND UNION ON INLET; AND TEE WITH TEST COCK DOWNSTREAM OF ALL REGULATOR ASSEMBLIES.
2. ALL GAS PIPE BELOW GRADE AND BELOW CONCRETE SLAB ABUTTING THE BUILDING BASE SLAB SHALL BE RUN IN A CONTINUOUS SLEEVE. SLEEVES SHALL BE OPEN AT EACH END. BURIED END; A MINIMUM OF 5'-0" BEYOND THE EDGE OF THE CONCRETE SLAB, AND ABOVE GRADE END; BELOW THE POINT OF ENTRY TO THE BUILDING ADJACENT TO REGULATORS OR ISOLATION VALVES WITH A GOOSENECK VENT.
3. GAS SLEEVES SHALL BE SCH 40 PVC BELOW GRADE AND WELDED SCH 40 STEEL ABOVE GRADE.
4. SLEEVES VENTED ABOVE GRADE SHALL BE GOOSENECK ASSEMBLIES WITH SCREENED INLETS AND SHALL BE SECURED IN A VANDAL PROOF MANNER.
4. NOTE: PIPE SIZING BASED ON 2018 IFGC, TABLE 402.4(2), AT DEVELOPED LENGTH OF 20 FT, INLET PRESSURE < 2.0 psi.

PLUMBING ENLARGED FLOOR PLAN - GENERATOR AREA

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

TRUE NORTH

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PROJECT # 17012

TYLER STATE PARK

HEADQUARTERS REPLACEMENT PHASE 1

PROJECT NUMBER: 112741

DATE: 07/03/2020
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DRAWN BY: MMK
REVIEWED BY: MEB

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1	ADD #3	10/07/20

SHEET TITLE

PLUMBING ENLARGED FLOOR PLAN - GENERATOR AREA

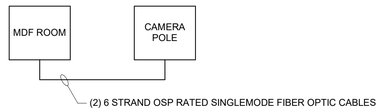
SHEET NUMBER

P107

CONSTRUCTION DOCUMENTS

PATH: BIM 360://17-012 Tyler State Park Visitor Center Replacement/17012 Tyler - P13.rvt
DATE: 5/21/2020 5:22:44 PM

1 T101 TECHNOLOGY SITE PLAN
1" = 30'-0"



2 T101 TECHNOLOGY RISER DIAGRAM
NOT TO SCALE

TECHNOLOGY SITE PLAN GENERAL NOTES

1. ALL CONDUIT PATHWAYS, ROUGH-INS, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
2. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH WALLS/STRUCTURES FOR TECHNOLOGY CABLING TO PREVENT WATER INFILTRATION INTO THE SPACE.
6. TECHNOLOGY CONDUITS SHALL MAINTAIN A MINIMUM OF 12-INCHES OF WELL TAMPED EARTH OR 3-INCHES OF CONCRETE SEPARATION BETWEEN ANY FOREIGN CONDUITS AND/OR PIPES THROUGHOUT THE ENTIRE CONDUIT PATHWAY. A 12-INCH SEPARATION FOR HORIZONTAL DIRECTIONAL BORING SHALL BE MAINTAINED.
7. CONDUIT SEGMENTS SHALL BE NO MORE THAN 600-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
8. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
9. CONTRACTOR SHALL PROVIDE DETECTABLE WARNING TAPE 12-INCHES BELOW GRADE ON TOP OF ALL CONDUITS THROUGHOUT THE ENTIRE CONDUIT TRENCH.
10. CONTRACTOR SHALL COORDINATE ALL CONDUIT PATHWAYS WITH THE ARCHITECT AND LANDSCAPE PLAN PRIOR TO BEGINNING ANY TRENCHING.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. CONTRACTOR SHALL REFERENCE THE UTILITY REQUIREMENTS FOR UTILITY PROVIDER SOME REQUIREMENTS ARE SHOWN TO ASSIST THE CONTRACTOR.IT IS UP TO THE CONTRACTOR TO VERIFY AND PROVIDE AND ELECTRICAL SERVICE THAT MEETS OR EXCEEDS ALL UTILITY REQUIREMENTS PER UTILITY PROVIDER REQUIREMENTS. IF A CONFLICT OCCURS CONTRACTOR SHALL PROVIDE THE INSTALLATION PER THE UTLITY PROVIDERS REQUIREMENTS WITH NO ADDITIONAL COMPENSATION.
14. NO SUBSURFACE BORING HAVE BEEN DONE IN THE WORK AREA. THE CONTRACTOR IS RESPONSIBLE FOR THE DIRECTIONAL HORIZONTAL BORES IN ALL MATERIALS ENCOUNTERED.

TECHNOLOGY SITE PLAN GENERAL NOTES

1. REFER TO DIVISION 26 DRAWINGS FOR ROUTING THE HORIZONTAL DIRECTIONAL BORING TO PULL IN (2) (4)-INCH CONDUITS. (BY DIV 26)
2. (24)-INCH X (24)-INCH X (24)-INCH DEEP HAND HOLE WITH LOCKABLE COVER RATED FOR ENVIRONMENT STAMPED WITH TELECOMMUNICATIONS. COVER OF HANDHOLE SHALL BE FLUSH WITH FINAL FINISHED GRADE. (BY DIV 26)
3. (2) (4)-INCH SCHEDULE 80 PVC CONRETE ENCASED CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM NEW LOCKABLE COMMUNICATIONS HAND HOLE TO THE NEW LOCKABLE COMMUNICATIONS HAND HOLE. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. CONTRACTOR SHALL REFER TO THE ELECTRICAL DRAWINGS FOR EXACT ROUGH IN DETAILS. CONTRACTOR SHALL SHARE THE SAME TRENCH WITH ELECTRICAL. LOW VOLTAGE CONDUITS MUST BE ON TOP OF OTHER UTILITIES AND MAINTAIN A 12-INCH COMPACTED SOIL SEPARATION FROM ALL OTHER UTILTIES. (BY DIV 26)
4. (2) 4-INCH SCHEDULE 80 PVC CONRETE ENCASED CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM HANDHOLE TO THE EXISTING UTILITY POLE. THE UTILITY POLE CONDUIT RISERS SHALL BE TERMINATED 10 FEET ABOVE FINISHED GRADE AT THE POLE. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. THESE CONDUITS SHALL BE RESERVED FOR SERVICE PROVIDER USE ONLY. CONTRACTOR SHALL REFER TO THE ELECTRICAL DRAWINGS FOR EXACT ROUGH IN DETAILS. CONTRACTOR SHALL SHARE THE SAME TRENCH WITH ELECTRICAL. LOW VOLTAGE CONDUITS MUST BE ON TOP OF OTHER UTILITIES AND MAINTAIN A 12-INCH COMPACTED SOIL SEPARATION FROM ALL OTHER UTILTIES. (BY DIV. 26)
5. APPROXIMATE LOCATION OF EXISTING UTILITY POLE.
6. (2) (2)-INCH SCHEDULE 80 PVC CONRETE ENCASED CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM THE MDF TO THE NEW TICKET BOOTH. CONDUITS SHALL BE TERMINATED 4-INCHES A.F.F AND NO FARTHER THAN 2-INCHES FROM THE WALL IN THE MDF. CONDUITS SHALL BE TERMINATED 4-INCHES A.F.F AND NO FARTHER THAN 2-INCHES FROM THE WALL IN THE TICKET BOOTH. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. CONTRACTOR SHALL REFER TO THE ELECTRICAL DRAWINGS FOR EXACT ROUGH IN DETAILS. (BY DIV 26)
7. (2) 1 1/4-INCH SCHEDULE 80 PVC CONRETE ENCASED CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM HANDHOLE TO THE NEW UTILITY/CAMERA POLE. CONTRACTOR SHALL REFER TO TS-SHEETS FOR EXACT ROUGH IN DETAILS AT THE POLE. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. THESE CONDUITS SHALL BE RESERVED FOR LOW VOLTAGE USE ONLY. CONTRACTOR SHALL REFER TO THE ELECTRICAL DRAWINGS FOR EXACT ROUGH IN DETAILS. CONTRACTOR SHALL SHARE THE SAME TRENCH WITH ELECTRICAL. LOW VOLTAGE CONDUITS MUST BE ON TOP OF OTHER UTILITIES AND MAINTAIN A 12-INCH COMPACTED SOIL SEPARATION FROM ALL OTHER UTILITIES. (BY DIV. 26)
8. APPROXIMATE LOCATION OF NEW UTILTIY/CAMERA POLE. (BY DIV 26)
9. (3) (4)-INCH SCHEDULE 80 PVC CONRETE ENCASED CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM THE MDF TO THE NEW HANDHOLE. CONDUITS SHALL BE TERMINATED 4-INCHES A.F.F AND NO FARTHER THAN 2-INCHES FROM THE WALL IN THE MDF. CONDUITS SHALL STUB INTO THE SIDE OF THE HANDHOLE. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. CONTRACTOR SHALL REFER TO THE ELECTRICAL DRAWINGS FOR EXACT ROUGH IN DETAILS. (BY DIV 26)
10. APPROXIMATE LOCATION OF EXISTING SERVICE PROVIDER MANHOLE/PEDESTAL. CONTRACTOR SHALL PERFORM AND SITE TOUR AND COORDINATE WITH THE SERVICE PROVIDER PRIOR TO TERMINATING CONDUITS INTO THE EXISTING HANDHOLE/PEDESTAL. (BY DIV 26)
11. (2) (4)-INCH SCHEDULE 80 PVC CONRETE ENCASED CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM NEW LOCKABLE COMMUNICATIONS HAND HOLE TO THE EXISTING SERVICE PROVIDE COMMUNICATIONS MAN HOLE. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. CONTRACTOR SHALL REFER TO THE ELECTRICAL DRAWINGS FOR EXACT ROUGH IN DETAILS. CONTRACTOR SHALL SHARE THE SAME TRENCH WITH ELECTRICAL. LOW VOLTAGE CONDUITS MUST BE ON TOP OF OTHER UTILITIES AND MAINTAIN A 12-INCH COMPACTED SOIL SEPARATION FROM ALL OTHER UTILITIES. (BY DIV 26)
12. (4) (4)-INCH SCHEDULE 80 PVC CONRETE ENCASED CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM THE MDF TO THE NEW HANDHOLE. CONDUITS SHALL BE TERMINATED 4-INCHES A.F.F AND NO FARTHER THAN 2-INCHES FROM THE WALL IN THE MDF. CONDUITS SHALL STUB INTO THE SIDE OF THE HANDHOLE. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. CONTRACTOR SHALL REFER TO THE ELECTRICAL DRAWINGS FOR EXACT ROUGH IN DETAILS. (BY DIV 26)

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TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: DR
DRAWN BY: PM
REVIEWED BY: DR

no.	revision	date
1	ADD 3	10-7-2020

SHEET TITLE
TECHNOLOGY SITE PLAN

SHEET NUMBER
T101

CONSTRUCTION DOCUMENTS

DATE: 10/7/2020 2:35:41 PM PATH: G:\Projects - San Antonio - Active\Tyler Texas State Park\3 - Drawings\4 - Archive\3_1 - Addendum 3 - 2020-10-07\92705-Tyler SP Bldg_TECH_v2019.rvt

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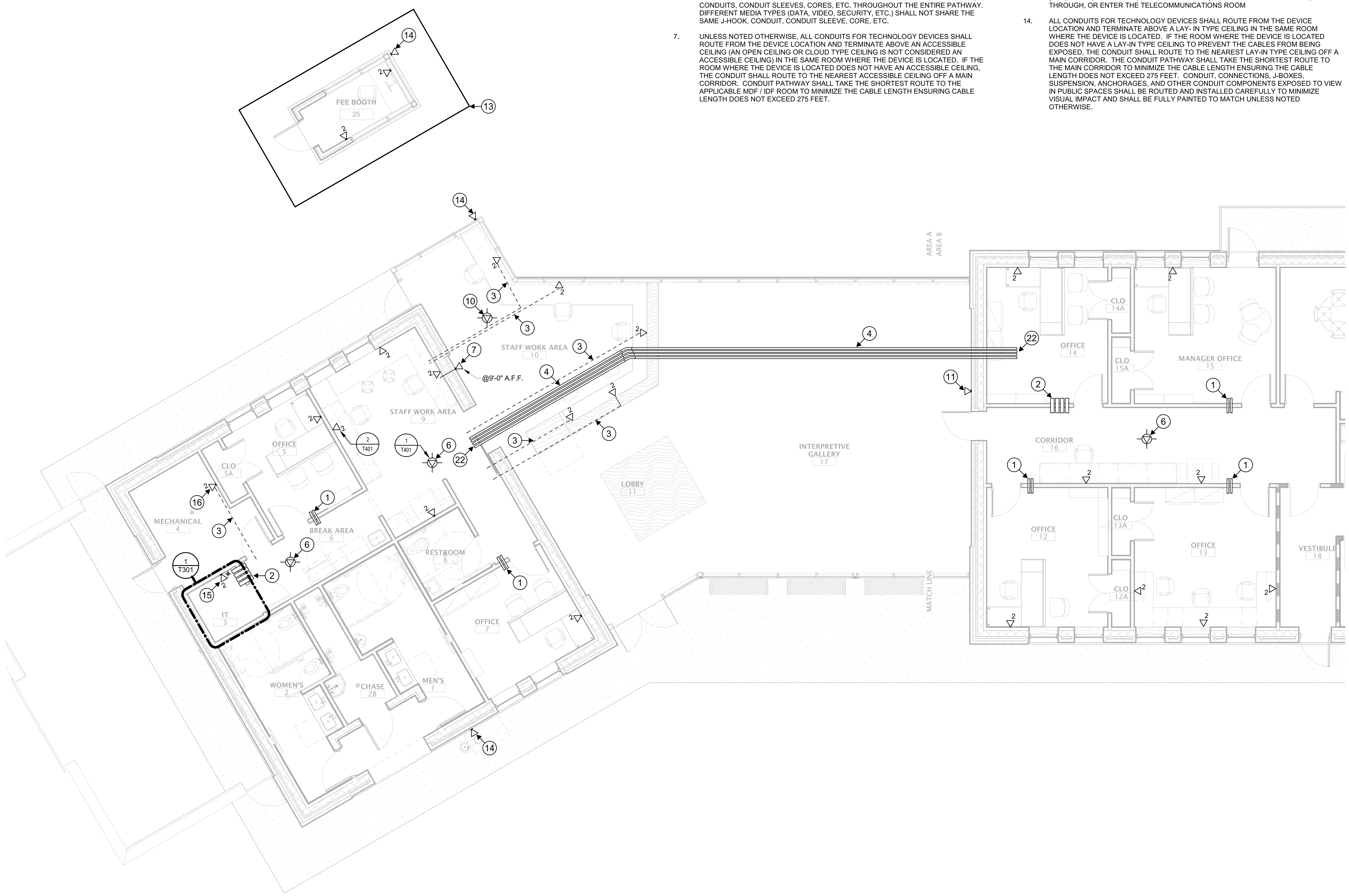
TECHNOLOGY FLOOR PLAN GENERAL NOTES

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES / ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY- IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY-IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.



1 TECHNOLOGY ENLARGED FLOOR PLAN AREA A
T202 3/16" = 1'-0"

TECHNOLOGY FLOOR PLAN KEYED NOTES

(1) (2) 2-INCH EMT CONDUIT SLEEVES ABOVE ACCESSIBLE CEILING WITH NYLON BUSHING ON EACH END AND SECURED TO WALL. CONDUIT SLEEVES SHALL BE USED FOR LOW VOLTAGE TECHNOLOGY CABLE ONLY. (BY DIV 26)

(2) (4) 4-INCH EMT CONDUIT SLEEVES ABOVE ACCESSIBLE CEILING WITH NYLON BUSHINGS ON EACH END AND SECURED TO WALL. CONDUIT SLEEVES SHALL BE USED FOR LOW VOLTAGE TECHNOLOGY CABLE ONLY. (BY DIV 26)

(3) APPROXIMATE ROUTE CONDUIT SHALL TAKE TO A LAY- IN TYPE CEILING. THE CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE WALLS AND IN THE MOST DIRECT MANNER POSSIBLE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR TO MINIMIZE THE CABLE LENGTH, ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. (BY DIV 26)

(4) (4) 2-INCH EMT CONDUITS WITH LARGE SWEEPS FROM THE ABOVE CEIING SPACE OF THE PLAN EAST SIDE TO THE ABOVE CEILING SPACE OF THE PLAN WEST SIDE. ARCHITECT SHALL HIDE CONDUITS INSIDE THE PREFABIRICATED WOOD TRUSS. CONTRACTOR SHALL REFER TO ARCHITECTUAL PLAN FOR EXACT ROUGH IN REQUIREMENTS. NO PULL BOXES SHALL BE INSTALLED. UPON COMPLETION OF THE CABLE INTALL CONTRACTOR SHALL PROVIDE PULL STRINGS IN CONDUITS FOR OWNERS FUTURE ADDS MOVES AND CHANGES. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUITS. THESE CONDUITS SHALL BE RESERVED FOR LOW VOLTAGE CABLE ONLY. CONTRACTOR SHALL REFER TO THE ELECTRICAL AND ARCHITECTUL DRAWINGS FOR EXACT ROUGH IN DETAILS. (BY DIV. 26)

(5) FLOOR BOX AS SPECIFIED AND INSTALLED BY DIVISION 26. PROVIDE (2) 1-1/4-INCH CONDUITS DEDICATED FOR LOW VOLTAGE FROM THE FLOOR BOX THROUGH TO ABOVE ACCESSIBLE CEILING AS SHOWN IN THE TECHNOLOGY DRAWINGS. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR EXACT LOCATION AND ADDITIONAL CONDUIT ROUGH-IN REQUIREMENTS PRIOR TO INSTALLATION. (BY DIV 26)

(6) DATA CABLE WITH 20-FEET OF SLACK NEATLY COILED AND STORED ON J-HOOK ABOVE ACCESSIBLE CEILING FOR OWNER PROVIDED / OWNER INSTALLED CEILING MOUNTED WIRELESS ACCESS POINT. CONTRACTOR SHALL PLACE A GREEN ADHESIVE DOT AND A LABEL MIRRORING THE LABEL ON THE SURFACE MOUNTED BOX ON THE CEILING GRID DIRECTLY BELOW THE OUTLET LOCATION FOR FUTURE IDENTIFICATION OF THE OUTLET LOCATION. (BY DIV 27)

(7) DATA CABLE FOR OWNER PROVIDED / OWNER INSTALLED INTERIOR WALL MOUNTED WIRELESS ACCESS POINT WHERE THERE IS NOT AN ACCESSIBLE CEILING. DATA CABLE SHALL BE TERMINATED WITH A SURFACE MOUNTED BOX LOCATED INSIDE THE CAMERA ROUGH-IN. REFER TO ELECTRICAL DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(8) EMPTY ROUGH IN LOCATION FOR OWNER PROVIDED / OWNER INSTALLED WALL MOUNTED INPUT FACEPLATE. ROUGH IN SHALL BE RESERVED FOR THE OWNER TO INSTALL THEIR OWN HDMI CABLE TO THE OWNER PROVIDED OWNER INSTALLED WALL MOUNTED MONITOR. ALL FACEPLATES, HDMI INSERTS AND HDMI CABLES SHALL BE OWNER PROVIDED/OWNER INSTALLED. (BY DIV 26/OWNER)

(9) DATA CABLE FOR OWNERS PREFERRED CONTRACTOR PROVIDED / OWNER PREFERRED CONTRACTOR INSTALLED WALL MOUNTED MONITOR WHERE THERE IS AN ACCESSIBLE CEILING. DATA CABLE SHALL BE TERMINATED WITH A SURFACE MOUNTED BOX LOCATED INSIDE THE WALL MOUNTED MONITOR ROUGH-IN. (ROUGH IN BY DIV 26, MONITOR BY WILL ACQUIRED THROUGH THE FF&E PROGRAM)

(10) DATA CABLE WITH 20-FEET OF SLACK NEATLY COILED AND STORED ON J-HOOK ABOVE ACCESSIBLE CEILING FOR CONTRACTOR PROVIDED / CONTRACTOR INSTALLED CEILING MOUNTED VIDEO SURVEILLANCE CAMERA. CONTRACTOR SHALL PLACE A YELLOW ADHESIVE DOT AND A LABEL MIRRORING THE LABEL ON THE SURFACE MOUNTED BOX ON THE CEILING GRID DIRECTLY BELOW THE OUTLET LOCATION FOR FUTURE IDENTIFICATION OF THE OUTLET LOCATION. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 27)

(11) DATA CABLE FOR CONTRACTOR PROVIDED / CONTRACTOR INSTALLED INTERIOR WALL MOUNTED VIDEO SURVEILLANCE CAMERA WHERE THERE IS NOT AN ACCESSIBLE CEILING. DATA CABLE SHALL BE TERMINATED WITH A SURFACE MOUNTED BOX LOCATED INSIDE THE CAMERA ROUGH-IN. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(12) ALL LOW VOLTAGE CONDUITS IN THIS AREA SHALL BE ROUTED AND STUB INTO THE ABOVE CEILING SPACE OF CONFERENCE ROOM ABOVE. (BY DIV 26)

(13) ALL LOW VOLTAGE CABLES IN THE TICKET BOOTH SHALL BE INSTALLED USING OSP RATED CABLE AND RAN IN THE MOST DIRECT MANNER TO THE IDF ROOM. (BY DIV 26/27)

(14) DATA CABLE FOR CONTRACTOR PROVIDED / CONTRACTOR INSTALLED EXTERIOR WALL MOUNTED VIDEO SURVEILLANCE CAMERA WHERE THERE IS NOT AN ACCESSIBLE CEILING. DATA CABLE SHALL BE TERMINATED WITH A SURFACE MOUNTED BOX LOCATED INSIDE THE CAMERA ROUGH-IN. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(15) DATA CABLES FOR CONTRACTOR PROVIDED / CONTRACTOR INSTALLED ACCESS CONTROL SECURITY PANEL. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(16) DATA CABLE FOR MECHANICAL / ELECTRICAL CONTROLS. REFER TO MECHANICAL / ELECTRICAL DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(17) FLOOR BOX AS SPECIFIED BY DIVISION 27 BUT PROVIDED AND INSTALLED BY DIV 26. SEE 2/T402. PROVIDE (2) 1-1/4-INCH CONDUITS DEDICATED FOR LOW VOLTAGE FROM THE FLOOR BOX THROUGH TO ABOVE ACCESSIBLE CEILING AS SHOWN IN THE TECHNOLOGY DRAWINGS. CONTRACTOR SHALL PROVIDE AND INSTALL (1) HDMI FACEPLATE WITH (1) HDMI INPUT AND (1) HDMI CABLE TO THE OP/OI FLAT PANEL DISPLAY AND CONNECT TO HDMI SOURCE #2. CONTRACTOR SHALL LABEL THE HDMI CABLE AND FACEPLATE WITH THE HDMI SOURCE NUMBER. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR EXACT LOCATION AND ADDITIONAL CONDUIT ROUGH-IN REQUIREMENTS PRIOR TO INSTALLATION. (BY DIV 26/27)

(18) MULTI-MEDIA FACEPLATE WITH (1) HDMI INPUT. MOUNT 18-INCHES A.F.F. TO VERTICAL CENTER WITH (2) 1-INCH CONDUITS TO THE ABOVE CEILING SPACE. CONTRACTOR SHALL PROVIDE AND INSTALL (1) HDMI FACEPLATE WITH (1) HDMI INPUT AND (1) HDMI CABLE TO THE OP/OI FLAT PANEL DISPLAY AND CONNECT TO HDMI SOURCE #1. CONTRACTOR SHALL LABEL THE HDMI CABLE AND FACEPLATE WITH THE HDMI SOURCE NUMBER. (BY DIV 26/27)

(19) MULTIMEDIA ROUGH IN WITH (1) PASS THROUGH FACEPLATE TO SUPPORT THE ROUTING OF HDMI CABLES FROM THE HDMI WALL PLATE AND FLOOR BOX TO THE OP/OI FLAT PANEL DISPLAY. MOUNT 65-INCHES A.F.F. TO VERTICAL CENTER WITH (2) 1-INCH CONDUITS TO THE ABOVE CEILING SPACE. (BY DIV 26/27)

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(20) MULTI-MEDIA FACE PLATE WITH (1) HDMI INPUT INSIDE THE FLOOR BOX. CONTRACTOR SHALL PROVIDE AND INSTALL (1) HDMI FACEPLATE WITH (1) HDMI INPUT AND (1) HDMI CABLE TO THE OP/OI FLAT PANEL DISPLAY AND CONNECT TO HDMI SOURCE #2. CONTRACTOR SHALL LABEL THE HDMI CABLE AND FACEPLATE WITH THE HDMI SOURCE NUMBER. REFER TO DIVISION 26 DRAWINGS FOR FLOOR BOX POWER REQUIREMENTS. (BY DIV 26/27)

(21) DATA CABLE FOR MECHANICAL / ELECTRICAL CONTROLS. REFER TO MECHANICAL / ELECTRICAL DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(22) APPROXIMATE LOCATION CONDUIT SHALL DROP DOWN TO THE ABOVE CEILING SPACE. CONDUIT SHALL TERMINATE NO FARTHER THAN 2 FEET FROM THE DROP TILE CEILING. (BY DIV 26)

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TYLER STATE PARK

HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

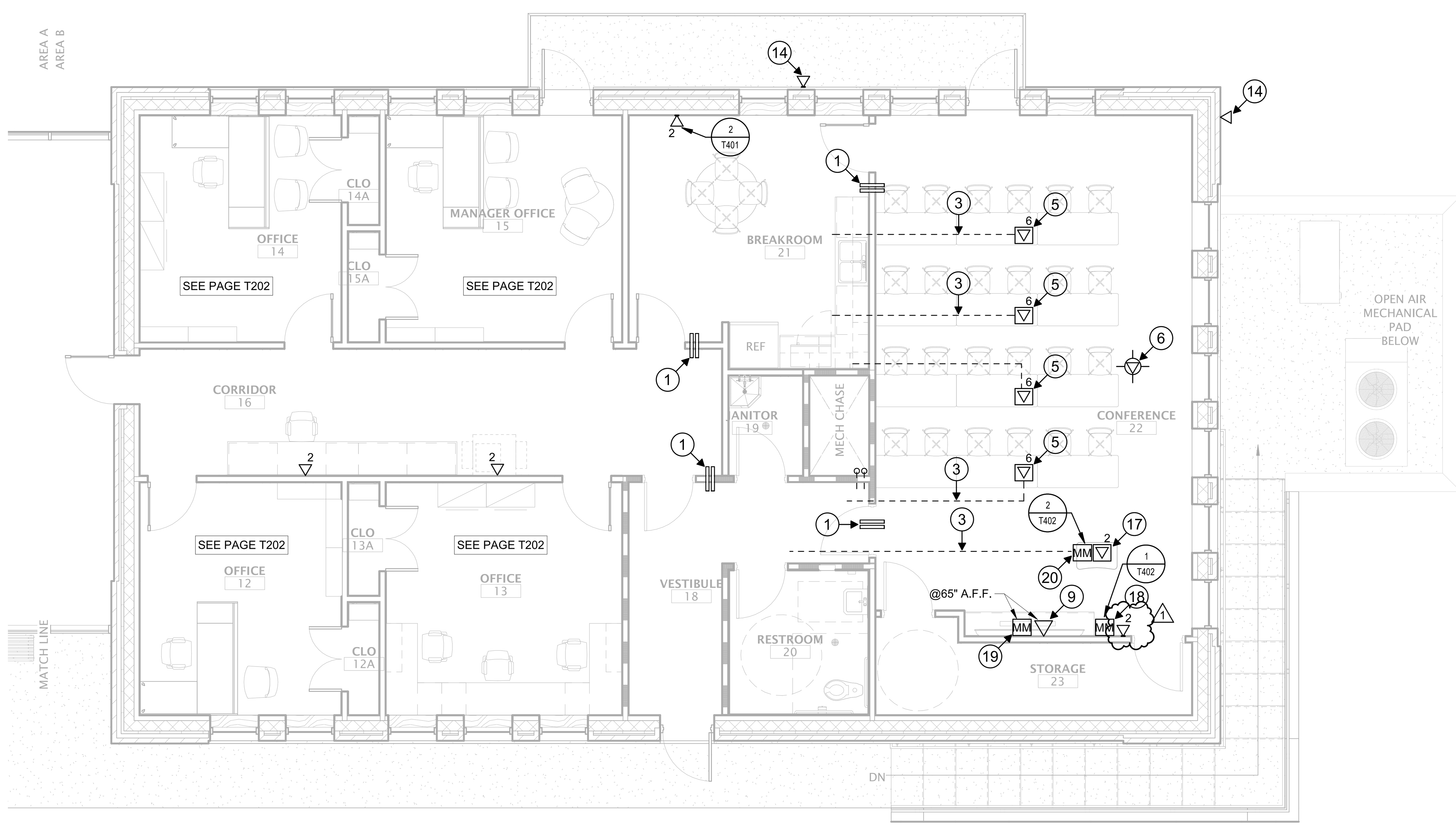
DATE: 07/03/2020
DESIGNED BY: DR
DRAWN BY: PM
REVIEWED BY: DR

no.	revision	date
1	ADD 3	10-7-2020

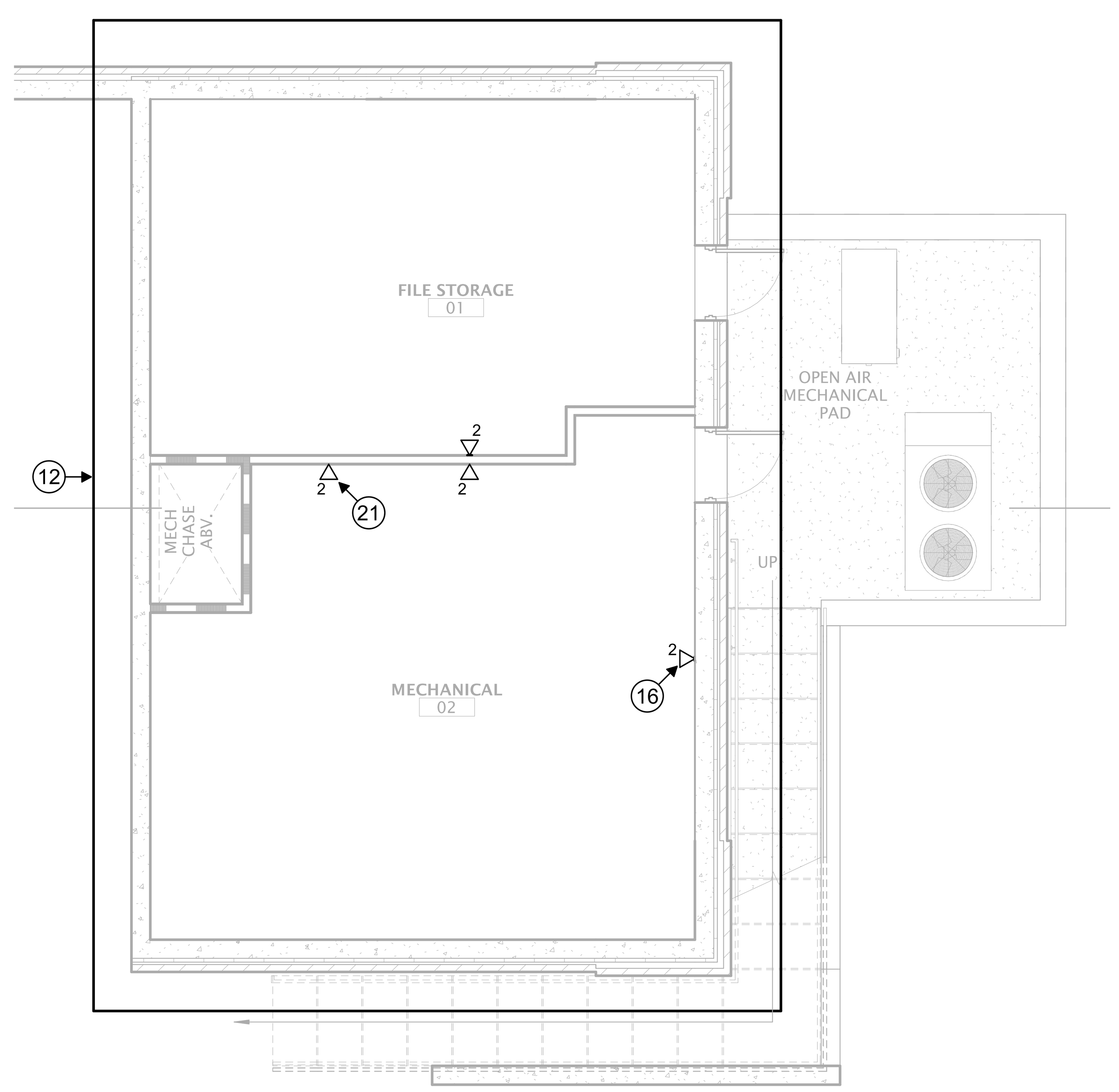
SHEET TITLE
TECHNOLOGY FLOOR PLANS

SHEET NUMBER
T202

CONSTRUCTION DOCUMENTS



1 T203 TECHNOLOGY ENLARGED FLOOR PLAN AREA B
3/16" = 1'-0"



2 T203 TECHNOLOGY BASEMENT
3/16" = 1'-0"

TECHNOLOGY FLOOR PLAN GENERAL NOTES

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2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
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5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES / ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY- IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY-IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.

TECHNOLOGY FLOOR PLAN KEYED NOTES

(1) (2) 2-INCH EMT CONDUIT SLEEVES ABOVE ACCESSIBLE CEILING WITH NYLON BUSHING ON EACH END AND SECURED TO WALL. CONDUIT SLEEVES SHALL BE USED FOR LOW VOLTAGE TECHNOLOGY CABLE ONLY. (BY DIV 26)

(2) (4) 4-INCH EMT CONDUIT SLEEVES ABOVE ACCESSIBLE CEILING WITH NYLON BUSHINGS ON EACH END AND SECURED TO WALL. CONDUIT SLEEVES SHALL BE USED FOR LOW VOLTAGE TECHNOLOGY CABLE ONLY. (BY DIV 26)

(3) APPROXIMATE ROUTE CONDUIT SHALL TAKE TO A LAY- IN TYPE CEILING. THE CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE WALLS AND IN THE MOST DIRECT MANNER POSSIBLE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR TO MINIMIZE THE CABLE LENGTH, ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. (BY DIV 26)

(4) (4) 2-INCH EMT CONDUITS WITH LARGE SWEEPS FROM THE ABOVE CEIING SPACE OF THE PLAN EAST SIDE TO THE ABOVE CEILING SPACE OF THE PLAN WEST SIDE. ARCHITECT SHALL HIDE CONDUITS INSIDE THE PREFABIRICATED WOOD TRUSS. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLAN FOR EXACT ROUGH IN REQUIREMENTS. NO PULL BOXES SHALL BE INSTALLED. UPON COMPLETION OF THE CABLE INTALL CONTRACTOR SHALL PROVIDE PULL STRINGS IN CONDUITS FOR OWNERS FUTURE ADDS MOVES AND CHANGES. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUITS. THESE CONDUITS SHALL BE RESERVED FOR LOW VOLTAGE CABLE ONLY. CONTRACTOR SHALL REFER TO THE ELECTRICAL AND ARCHITECTUL DRAWINGS FOR EXACT ROUGH IN DETAILS. (BY DIV. 26)

(5) FLOOR BOX AS SPECIFIED AND INSTALLED BY DIVISION 26. PROVIDE (2) 1-1/4-INCH CONDUITS DEDICATED FOR LOW VOLTAGE FROM THE FLOOR BOX THROUGH TO ABOVE ACCESSIBLE CEILING AS SHOWN IN THE TECHNOLOGY DRAWINGS. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR EXACT LOCATION AND ADDITIONAL CONDUIT ROUGH-IN REQUIREMENTS PRIOR TO INSTALLATION. (BY DIV 26)

(6) DATA CABLE WITH 20-FEET OF SLACK NEATLY COILED AND STORED ON J-HOOK ABOVE ACCESSIBLE CEILING FOR OWNER PROVIDED / OWNER INSTALLED CEILING MOUNTED WIRELESS ACCESS POINT. CONTRACTOR SHALL PLACE A GREEN ADHESIVE DOT AND A LABEL MIRRORING THE LABEL ON THE SURFACE MOUNTED BOX ON THE CEILING GRID DIRECTLY BELOW THE OUTLET LOCATION FOR FUTURE IDENTIFICATION OF THE OUTLET LOCATION. (BY DIV 27)

(7) DATA CABLE FOR OWNER PROVIDED / OWNER INSTALLED INTERIOR WALL MOUNTED WIRELESS ACCESS POINT WHERE THERE IS NOT AN ACCESSIBLE CEILING. DATA CABLE SHALL BE TERMINATED WITH A SURFACE MOUNTED BOX LOCATED INSIDE THE CAMERA ROUGH-IN. REFER TO ELECTRICAL DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(8) EMPTY ROUGH IN LOCATION FOR OWNER PROVIDED / OWNER INSTALLED WALL MOUNTED INPUT FACEPLATE. ROUGH IN SHALL BE RESERVED FOR THE OWNER TO INSTALL THEIR OWN HDMI CABLE TO THE OWNER PROVIDED OWNER INSTALLED WALL MOUNTED MONITOR. ALL FACEPLATES, HDMI INSERTS AND HDMI CABLES SHALL BE OWNER PROVIDED/OWNER INSTALLED. (BY DIV 26/OWNER)

(9) DATA CABLE FOR OWNERS PREFERRED CONTRACTOR PROVIDED / OWNER PREFERRED CONTRACTOR INSTALLED WALL MOUNTED MONITOR WHERE THERE IS AN ACCESSIBLE CEILING. DATA CABLE SHALL BE TERMINATED WITH A SURFACE MOUNTED BOX LOCATED INSIDE THE WALL MOUNTED MONITOR ROUGH-IN. (ROUGH IN BY DIV 26, MONITOR BY WILL ACQUIRED THROUGH THE FF&E PROGRAM)

(10) DATA CABLE WITH 20-FEET OF SLACK NEATLY COILED AND STORED ON J-HOOK ABOVE ACCESSIBLE CEILING FOR CONTRACTOR PROVIDED / CONTRACTOR INSTALLED CEILING MOUNTED VIDEO SURVEILLANCE CAMERA. CONTRACTOR SHALL PLACE A YELLOW ADHESIVE DOT AND A LABEL MIRRORING THE LABEL ON THE SURFACE MOUNTED BOX ON THE CEILING GRID DIRECTLY BELOW THE OUTLET LOCATION FOR FUTURE IDENTIFICATION OF THE OUTLET LOCATION. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 27)

(11) DATA CABLE FOR CONTRACTOR PROVIDED / CONTRACTOR INSTALLED INTERIOR WALL MOUNTED VIDEO SURVEILLANCE CAMERA WHERE THERE IS NOT AN ACCESSIBLE CEILING. DATA CABLE SHALL BE TERMINATED WITH A SURFACE MOUNTED BOX LOCATED INSIDE THE CAMERA ROUGH-IN. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(12) ALL LOW VOLTAGE CONDUITS IN THIS AREA SHALL BE ROUTED AND STUB INTO THE ABOVE CEILING SPACE OF CONFERENCE ROOM ABOVE. (BY DIV 26)

(13) ALL LOW VOLTAGE CABLES IN THE TICKET BOOTH SHALL BE INSTALLED USING OSP RATED CABLE AND RAN IN THE MOST DIRECT MANNER TO THE IDF ROOM. (BY DIV 26/27)

(14) DATA CABLE FOR CONTRACTOR PROVIDED / CONTRACTOR INSTALLED EXTERIOR WALL MOUNTED VIDEO SURVEILLANCE CAMERA WHERE THERE IS NOT AN ACCESSIBLE CEILING. DATA CABLE SHALL BE TERMINATED WITH A SURFACE MOUNTED BOX LOCATED INSIDE THE CAMERA ROUGH-IN. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(15) DATA CABLES FOR CONTRACTOR PROVIDED / CONTRACTOR INSTALLED ACCESS CONTROL SECURITY PANEL. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(16) DATA CABLE FOR MECHANICAL / ELECTRICAL CONTROLS. REFER TO MECHANICAL / ELECTRICAL DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(17) FLOOR BOX AS SPECIFIED BY DIVISION 27 BUT PROVIDED AND INSTALLED BY DIV 26. SEE 2/T402. PROVIDE (2) 1-1/4-INCH CONDUITS DEDICATED FOR LOW VOLTAGE FROM THE FLOOR BOX THROUGH TO ABOVE ACCESSIBLE CEILING AS SHOWN IN THE TECHNOLOGY DRAWINGS. CONTRACTOR SHALL PROVIDE AND INSTALL (1) HDMI FACEPLATE WITH (1) HDMI INPUT AND (1) HDMI CABLE TO THE OP/OI FLAT PANEL DISPLAY AND CONNECT TO HDMI SOURCE #2. CONTRACTOR SHALL LABEL THE HDMI CABLE AND FACEPLATE WITH THE HDMI SOURCE NUMBER. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR EXACT LOCATION AND ADDITIONAL CONDUIT ROUGH-IN REQUIREMENTS PRIOR TO INSTALLATION. (BY DIV 26/27)

(18) MULTI-MEDIA FACEPLATE WITH (1) HDMI INPUT. MOUNT 18-INCHES A.F.F. TO VERTICAL CENTER WITH (2) 1-INCH CONDUITS TO THE ABOVE CEILING SPACE. CONTRACTOR SHALL PROVIDE AND INSTALL (1) HDMI FACEPLATE WITH (1) HDMI INPUT AND (1) HDMI CABLE TO THE OP/OI FLAT PANEL DISPLAY AND CONNECT TO HDMI SOURCE #1. CONTRACTOR SHALL LABEL THE HDMI CABLE AND FACEPLATE WITH THE HDMI SOURCE NUMBER. (BY DIV 26/27)

(19) MULTIMEDIA ROUGH IN WITH (1) PASS THROUGH FACEPLATE TO SUPPORT THE ROUTING OF HDMI CABLES FROM THE HDMI WALL PLATE AND FLOOR BOX TO THE OP/OI FLAT PANEL DISPLAY. MOUNT 65-INCHES A.F.F. TO VERTICAL CENTER WITH (2) 1-INCH CONDUITS TO THE ABOVE CEILING SPACE. (BY DIV 26/27)

1

(20) MULTI-MEDIA FACE PLATE WITH (1) HDMI INPUT INSIDE THE FLOOR BOX. CONTRACTOR SHALL PROVIDE AND INSTALL (1) HDMI FACEPLATE WITH (1) HDMI INPUT AND (1) HDMI CABLE TO THE OP/OI FLAT PANEL DISPLAY AND CONNECT TO HDMI SOURCE #2. CONTRACTOR SHALL LABEL THE HDMI CABLE AND FACEPLATE WITH THE HDMI SOURCE NUMBER. REFER TO DIVISION 26 DRAWINGS FOR FLOOR BOX POWER REQUIREMENTS. (BY DIV 26/27)

(21) DATA CABLE FOR MECHANICAL / ELECTRICAL CONTROLS. REFER TO MECHANICAL / ELECTRICAL DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS. (BY DIV 26)

(22) APPROXIMATE LOCATION CONDUIT SHALL DROP DOWN TO THE ABOVE CEILING SPACE. CONDUIT SHALL TERMINATE NO FARTHER THAN 2 FEET FROM THE DROP TILE CEILING. (BY DIV 26)

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TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: DR
DRAWN BY: PM
REVIEWED BY: DR

no.	revision	date
1	ADD 3	10-7-2020

SHEET TITLE
TECHNOLOGY FLOOR PLANS

SHEET NUMBER
T203

CONSTRUCTION DOCUMENTS

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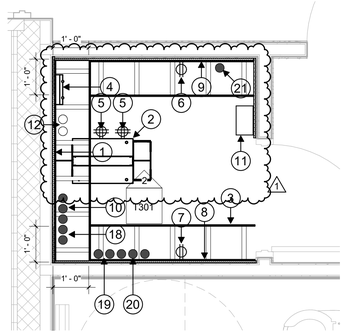
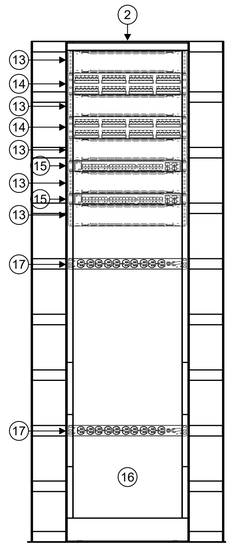


1 / T301 IT ROOM LAYOUT - MTC
1/2" = 1'-0"



2 / T301 IT ROOM EQUIPMENT RACK ELEVATION - MTC
1" = 1'-0"

MDF/IDF ROOM LAYOUT KEYED NOTES

1. 4-FEET X 8-FEET X 3/4-INCH A-B GRADE, VOID FREE, FIRE RATED PLYWOOD INSTALLED VERTICALLY STARTING AT 24-INCHES ABOVE FINISHED FLOOR ON ALL PERIMETER WALLS. PAINT WITH (2) COATS OF FIRE RETARDANT PAINT. (BY DIV. 27)
2. 19-INCH X 84-INCH EQUIPMENT RACK WITH VERTICAL D RIND TYPE WIRE MANAGERS. (BY DIV. 27)
3. 12-INCH LADDER RACK MOUNTED AT 87-INCHES ABOVE FINISHED FLOOR. (BY DIV. 27)
4. GROUND BUS BAR MOUNTED AT 84-INCHES ABOVE FINISHED FLOOR BY DIV 27. DIV 27 SHALL GROUND THE RACKS, AND LADDER RACK TO THIS GROUND BUS BAR. THE DIV 26 CONTRACTOR SHALL PROVIDE GROUND CABLE FROM THIS GROUND BUS BAR TO THE BUILDING SERVICE GROUND. (BY DIV. 26/27) (1)
5. DEDICATED 20 AMP QUAD CIRCUIT WITH SIMPLEX NEMA 5-20R RECEPTACLE MOUNTED TO LADDER RACK AT REAR SIDE OF EQUIPMENT RACKS. (BY DIV. 26)
6. 20 AMP CIRCUIT WITH DUPLEX NEMA 5-20R RECEPTACLE FLUSH MOUNTED TO THE FINISHED WALL SURFACE AT 18-INCHES ABOVE FINISHED FLOOR. MAXIMUM OF (6) PER CIRCUIT. (BY DIV.26)
7. DEDICATED 20 AMP CIRCUIT HARDWIRED TO ACCESS CONTROL SECURITY PANEL. (BY DIV. 26)
8. 48-INCHES WIDE X 84-INCHES HIGH RESERVED FOR ACCESS CONTROL SYSTEM. (BY DIV. 27 / 28)
9. 48-INCHES WIDE X 84-INCHES HIGH RESERVED FOR SERVICE PROVIDER TERMINATION. (BY DIV. 27 / 28)
10. (3) 4-INCH CONDUITS TO 36-INCH X 36-INCH X 36-INCH MANHOLE FOR SERVICE PROVIDERS. TERMINATE CONDUITS 4-INCHES ABOVE FINISHED FLOOR AND NO FARTHER THAN 4-INCHES FROM THE WALL INSIDE THE MDF/IDF ROOM AND PROVIDE NYLON BUSHINGS, PULL STRING AND CAPS ON EACH END. (BY DIV. 26)
11. APPROXIMATE LOCATION OF SPLIT AC UNIT (BY DIV 26)
12. (2) 4-INCH CONDUIT SLEEVES FROM THE ABOVE CEILING SPACE TO ABOVE THE CABINET. CONTRACTOR SHALL SECURE CONDUIT SLEEVES TO THE WALL. (BY DIV 26)
13. (1) RU HORIZONTAL WIRE MANAGER (BY DIV 27)
14. CATEGORY 6 48 PORT PATCH PANEL. (BY DIV 27)
15. 48 PORT SWITCH (BY OWNER)
16. SPACED RESERVED FOR POWER OVER FIBER EQUIPMENT. (BY DIV 27/28)
17. RACK MOUNT HORIZONTAL POWER STRIP. (BY DIV 27)
18. (2) 2-INCH CONDUITS TO THE TICKET BOOTH. TERMINATE CONDUITS 4-INCHES ABOVE FINISHED FLOOR AND NO FARTHER THAN 4-INCHES FROM THE WALL INSIDE THE MDF/IDF ROOM AND PROVIDE NYLON BUSHINGS, PULL STRING AND CAPS ON EACH END. (BY DIV. 26)
19. (2) 1 1/4 -INCH CONDUITS TO THE POLE MOUNTED CAMERAS. TERMINATE CONDUITS 4-INCHES ABOVE FINISHED FLOOR AND NO FARTHER THAN 4-INCHES FROM THE WALL INSIDE THE MDF/IDF ROOM AND PROVIDE NYLON BUSHINGS, PULL STRING AND CAPS ON EACH END. (BY DIV. 26)
20. (3) 4-INCH CONDUITS TO 36-INCH X 36-INCH X 36-INCH MANHOLE FOR SERVICE PROVIDERS. TERMINATE CONDUITS 4-INCHES ABOVE FINISHED FLOOR AND NO FARTHER THAN 4-INCHES FROM THE WALL INSIDE THE MDF/IDF ROOM AND PROVIDE NYLON BUSHINGS, PULL STRING AND CAPS ON EACH END. (BY DIV. 26)
21. GROUNDING ROD INTO THE DECK TO SUPPORT THE SERVICE PROVIDER ALL FIELD. THE SERVICE PROVIDER SHALL USE THIS GROUND ROD TO GROUND THEIR EQUIPMENT. (BY DIV. 26) (1)

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TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: DR
DRAWN BY: PM
REVIEWED BY: DR

no.	revision	date
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SHEET TITLE
TECHNOLOGY ENLARGED PLANS & ELEVATIONS

SHEET NUMBER
T301

CONSTRUCTION DOCUMENTS

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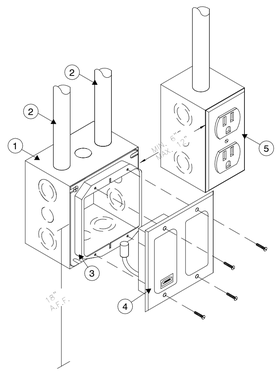
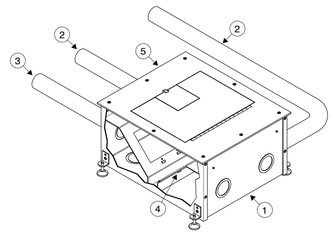


KEYED NOTES:

1. 4-11/16" X 4-11/16" X 2-1/8" RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM BACK BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED (BY DIV 26).
3. DOUBLE-GANG PLASTER RING - DEVICE OPENING MUST HAVE RIGHT-ANGLE CORNERS TO AVOID PHYSICAL CONFLICTS WITH A|V DEVICE(S) (BY DIV 26).
4. AUDIO VISUAL INPUTS - HDMI INPUT PLATE - MANUFACTURER/MODEL NUMBER AS SPECIFIED. PROVIDE PLENUM-RATED RUNNER CABLES AND FLYING LEADS AS REQUIRED TO REACH FROM INPUT PLATE LOCATION TO DISPLAY/PROJECTOR LOCATION. REFER TO DRAWINGS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION (BY DIV 27). COORDINATE FINISH WITH ARCHITECT.
5. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

1 / T402 TYPICAL ABOVE CEILING SINGLE DATA OUTLET
N.T.S.

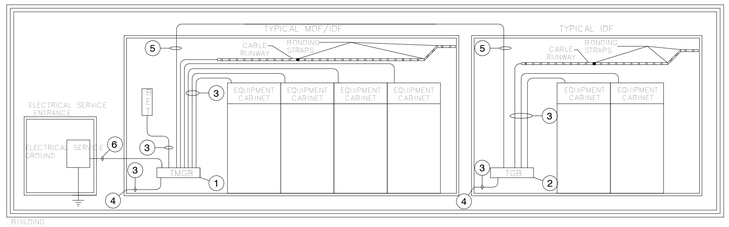


KEYED NOTES:

1. FSR FL-500P-4-B IN-SLAB 4" DEEP FLOOR BOX. CONFIGURE BOX DIVIDER TO SEPARATE HIGH VOLTAGE AND LOW VOLTAGE. USE FSR FL-GRD4 AS REQUIRED FOR ON GRADE APPLICATIONS. INSTALL TEMPORARY COVER BASED ON FLOOR FINISH INSTALLATION TYPE, SHIM AS REQUIRED, REFER TO MANUFACTURER INSTRUCTIONS. SUPPLIED BY DIVISION 27 AND INSTALLED BY DIVISION 26.
2. 1-1/4" INCH EMT CONDUIT WITH 200LB PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED UNLESS OTHERWISE NOTED. (BY DIVISION 26).
3. ELECTRICAL POWER PROVIDED AND INSTALLED BY DIVISION 26. PROVIDE DUPLEX ELECTRICAL OUTLET AND COVER PLATE. FINISH COLOR WHITE UNLESS OTHERWISE SPECIFIED WITH THE ARCHITECT. REFER TO DRAWINGS, SCHEDULES AND SPECIFICATIONS FOR POWER REQUIREMENTS.
4. MULTIMEDIA PLATES, REFER TO FACEPLATE DETAIL DRAWINGS. PROVIDE MOUNTING HARDWARE AS REQUIRED. REFER TO DRAWINGS, SCHEDULES, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION (BY DIVISION 27).
5. FSR COVER PLATE FL-500P-BLK-C UNLESS OTHERWISE SPECIFIED. COORDINATE FINISH WITH ARCHITECT. (BY DIVISION 27)

2 / T402 TYPICAL ABOVE CEILING SINGLE DATA OUTLET
N.T.S.

1. TELECOMMUNICATIONS MAIN GROUNDING BUS BAR (TMGB).
2. TELECOMMUNICATIONS GROUNDING BUS BAR (TGB).
3. TELECOMMUNICATIONS BONDING CONDUCTOR (TBC).
4. CONNECT TO GROUNDED BUILDING STEEL WHEN EXPOSED IN ROOM.
5. TELECOMMUNICATIONS BONDING BACKBONE (TBB).
6. TELECOMMUNICATIONS BONDING CONDUCTOR (TBC). BY ELECTRICAL CONTRACTOR.
7. GROUNDING EQUALIZER CONDUCTOR (GEC).



3 / T402 TYPICAL ABOVE CEILING SINGLE DATA OUTLET
N.T.S.

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TYLER STATE PARK
HEADQUARTERS REPLACEMENT PHASE 1
PROJECT NUMBER: 112741

DATE: 07/03/2020
DESIGNED BY: Designer
DRAWN BY: Author
REVIEWED BY: Checker

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SHEET TITLE
TECHNOLOGY TYPICAL DETAILS

SHEET NUMBER
T402

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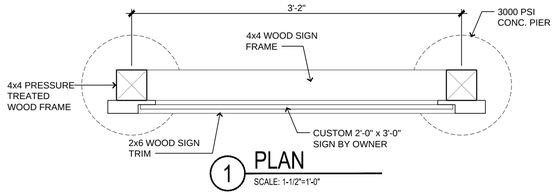
GENERAL NOTES:

A. BOLT & GLUE FRAME
B. PRESSURE TREATED WOOD
C. PRIME AND PAINT
D. COORDINATE SIGN LOCATION WITH PARK SUPERINTENDENT



1 PLAN
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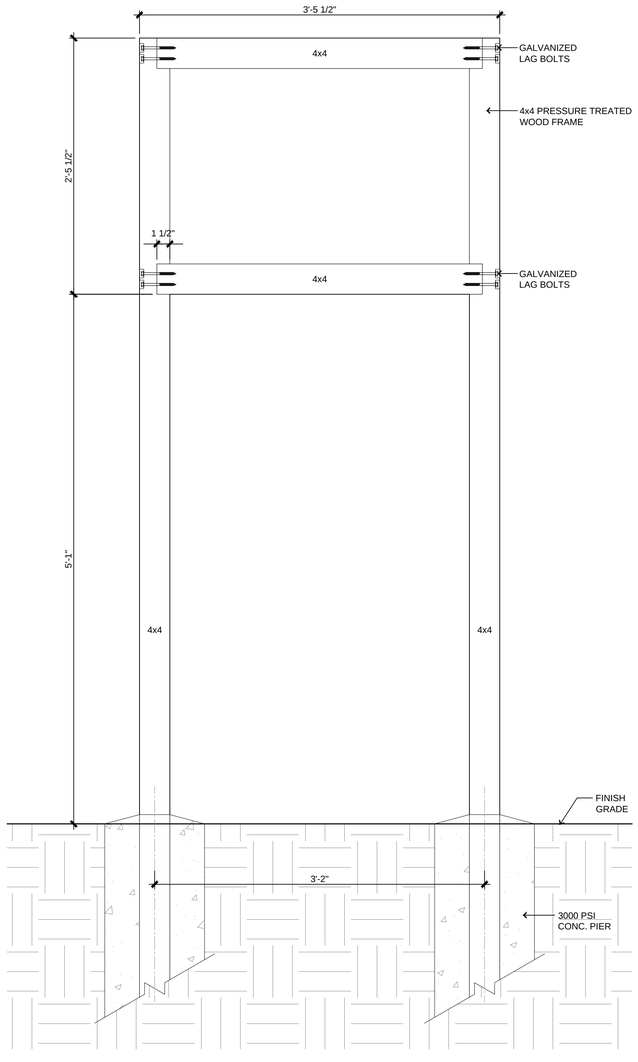
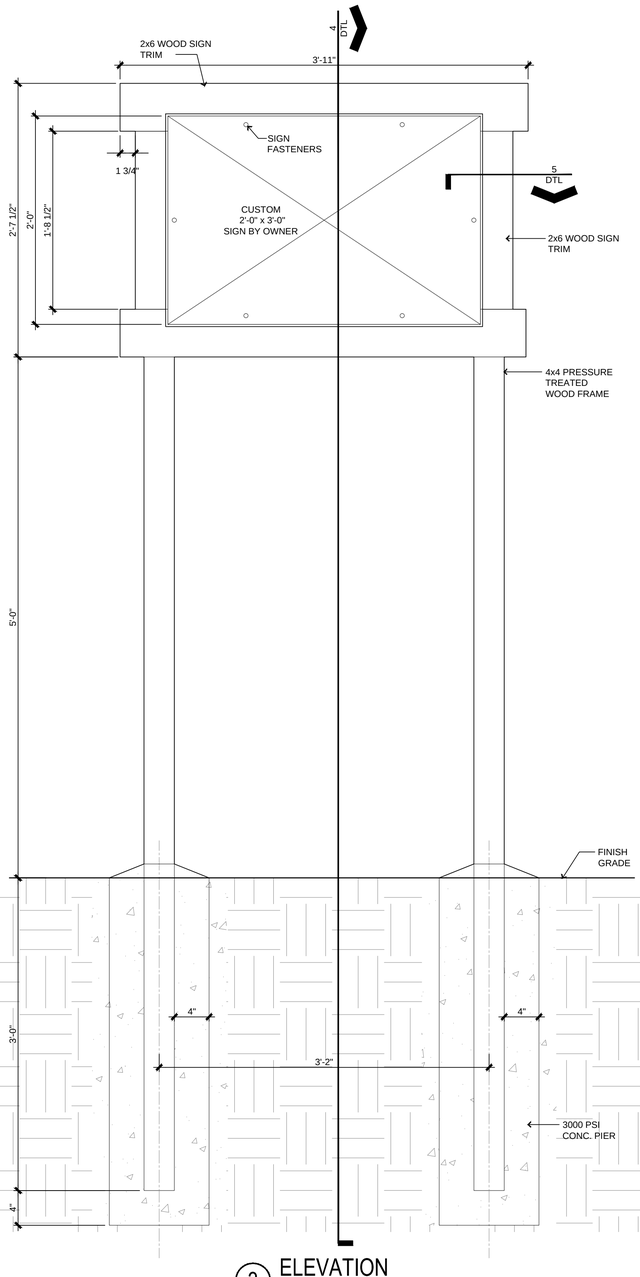
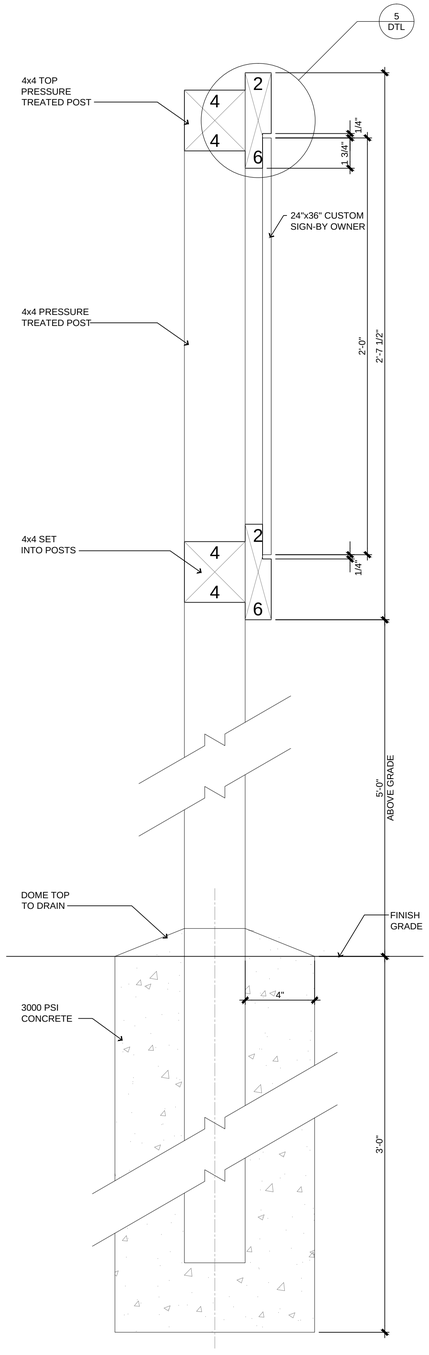


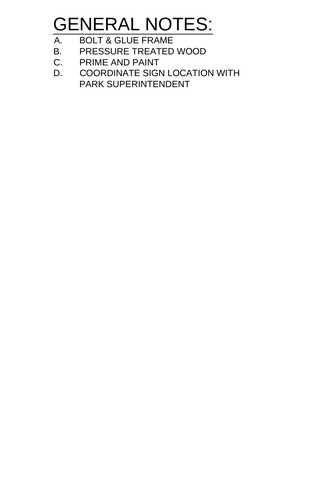
2 SUB FRAME
SCALE: 1-1/2"=1'-0"



3 ELEVATION
SCALE: 1-1/2"=1'-0"



4 SECTION
SCALE: 3"=1'-0"



5 DETAIL
FULL SCALE

TEXAS PARKS & WILDLIFE

STATE PARKS IMPROVEMENTS
SIGNAGE FRAME TEMPLATE

DATE: 01.19.2017
DESIGNED BY: TPWD
DRAWN BY: AC/JK
REVIEWED BY: GC/CP
REVISED:
REVISED:
REVISED:

SHEET TITLE
SITE IMPROVEMENT SIGNAGE FRAME

SHEET NUMBER
SIGN

PATH: P:\92702_TPWD MFVC\Project sign\Project Sign-Typical.dwg