Landry Architecture LLC
1618 St. Charles Ave
New Orleans, LA 70115
peggy@landryarch.com

10.03.23

Addendum No. 2: Response to Request for Information in connection with The Invitation to Bid Construction Services: ITB No. 08-79-05624, Historical Museum of South Padre Renovation Project.

Attached hereto are the:

1. Geotech report.
2. Photos of the cabinets: Contact Dennis Franke, at (956)761-0044, for any and all information regarding the Display Cabinets.

3. Older set of drawings of the current building.

Please contact Peggy Landry @ peggylandry@landryarch.com for any questions or clarifications.

Kind regards,

Margaret M. Landry
504.319.7344

ADDENDUM NO. 2

October 03, 2023

PROJECT:	Invitation to Bid Construction Services: ITB No. 08-79-05624 Historical Museum of South Padre Renovation Project
OWNER:	CITY OF SOUTH PADRE ISLAND 4601 PADRE BLVD. SOUTH PADRE ISLAND, TX 78597
BID OPENING:	Tuesday, October 10, 2023 @ 2:00 p.m.

TO ALL BIDDERS BIDDING ON THE ABOVE PROJECT:

Prospective bidders are hereby notified of the above modifications to the Invitation to Bid documents. These modifications shall become part of the contract documents. The provisions of the contract documents not specifically affected by the addendum shall remain unchanged.

This Addendum forms a part of the Bidding Documents and will be incorporated into Contract Documents, as applicable. Insofar as the original Project is consistent, this Addendum governs, Acknowledge receipt of this Addendum by signing.

_____ _____

Randy Smith Date

Acknowledge receipt by signing and returning to the City Manager's Office at NSoto@myspi.org.

SUBMITTING FIRM ACKNOWLEDGEMENT

_____ _____

Date

MEG GEOTECHNICAL ENGINEERING REPORT

PROPOSED
HISTORICAL MUSEUM OF SOUTH PADRE ISLAND
RENOVATIONS

SOUTH PADRE ISLAND, CAMERON COUNTY, TEXAS

Geotechnical Engineering • Construction Materials Engineering & Testing
Environmental • Consulting • Forensics

GEOTECHNICAL ENGINEERING REPORT
FOUNDATION RECOMMENDATIONS
PROPOSED HISTORICAL MUSEUM OF SOUTH PADRE ISLAND RENOVATIONS
SOUTH PADRE ISLAND, CAMERON COUNTY, TEXAS

Prepared For
Historical Museum of South Padre Island
c/o George Mendoza
Mendoza Engineering, PLLS

MEG Report No. 02-23-29124

August 25, 2023

MILLENNIUM ENGINEERS GROUP, INC.
TBPE FIRM NO. F-3913
5804 N. GUMWOOD AVENUE
PHARR, TEXAS 78577
TEL:956-702-8500
FAX:956-702-8140
WWW.MEGENGINEERS.COM

August 25, 2023

Historical Museum of South Padre Island
c/o George Mendoza
Mendoza Engineering, PLLC
(956)631-4906
george@mendozaengineering.com

Subject: **Geotechnical Engineering Report**
MEG Report No. 02-23-29124
Foundation Recommendations
Proposed Historical Museum of South Padre Island Renovations
South Padre Island, Cameron County, Texas

Dear Mr. Mendoza:

Millennium Engineers Group, Inc. is pleased to submit the enclosed geotechnical engineering report that was prepared for the above subject project. This report addresses the procedures and findings of our geotechnical engineering study. Our recommendations should be incorporated into the design and construction documents for the proposed development.

We want to emphasize the importance that all our recommendations presented in this report and/or addendums to this report be followed. We look forward to continuing our involvement in the project by providing construction monitoring in accordance with the report recommendations and materials testing services during construction. We strongly recommend that we be a part of the preconstruction meeting to address any specific issues that are pertinent to this project.

Thank you for the opportunity to be of service to you in this phase of the project and we would like the opportunity to assist you in the upcoming phases of the project. If you have any questions, please contact our office at the address, telephone, fax or electronic address listed below.

Cordially,
Millennium Engineers Group, Inc.
TBPE Firm No. F-3913

STATE OF TEXAS
QUYET THANG PHAM
131836
LICENSED PROFESSIONAL ENGINEER

Amos Emerson, P.E.
Geotechnical Department Manager

Quyet Thang Pham, Ph.D, P.E.
Geotechnical Engineer

The seal appearing on this document was authorized by Quyet, Pham, Ph.D., P.E. 131836 on August 25, 2023. Alteration of a sealed document without proper notification to the responsible engineer is an offence under the Texas Engineering Practice Act

Cc: 1 Original and PDF Document

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APPENDIX

1.0 INTRODUCTION

Millennium Engineers Group, Inc. (MEG) has completed and is pleased to submit this document that presents our findings as a result of a geotechnical engineering study of this project to our client. The project site is located at 610 Padre Boulevard, UNIT 2 in South Padre Island, Cameron County, Texas. The project location is shown on the Project Location Map, found in the Appendix section of this report. This report briefly describes the procedures utilized during this study and presents our findings along with our recommendation, for foundation design and construction considerations.

Our scope of services for the project was outlined in MEG proposal No. 02-23-116GR, dated July 05, 2023 and approved on July 06, 2023.

2.0 PROJECT DESCRIPTION

It is our understanding that the proposed site will accommodate the renovation of a recreational structure. It is also our understanding that the proposed renovated recreational structure site will consist of a one (1) story structure. The site construction for the proposed structure is anticipated to be on a slab-on-grade or on-fill foundation provided expansive, soil-related movements will not impair the performance of the structure.

3.0 SCOPE AND LIMITATIONS OF STUDY

This engineering report has been prepared in accordance with accepted geotechnical engineering practices currently exercised by geotechnical engineers in this area. No warranty, expressed or implied, is made or intended. This report is intended for the exclusive use by the client and client's authorized project team for use in preparing design and construction documents for this project only. This report may only be reproduced in its entirety for inclusion in construction documents. This report in its entirety shall not be reproduced or used for any other purposes without the written consent of our firm. This report may not contain sufficient information for purposes of other parties or other uses and is not intended for use in determining construction means and methods.

The recommendations presented in this report are based on data obtained from the soil borings drilled at this site and our understanding of the project information provided to us by our client and other project team members, and the assumption that site grading will result in only minor changes in the existing topography. Subsurface soil conditions have been observed and interpreted at the boring locations only.

This report may not reflect the actual variations of the subsurface conditions across the subject site. It is important to understand that variations may occur due to real geologic conditions or previous uses of the site. The nature and extent of variations across the subject site may not become evident until specific design locations are identified and/or construction commences. The construction process itself may also alter subsurface conditions. If variations appear evident at the time during the design phase and/or

construction phase, we should be notified immediately to determine if our opinions, conclusions and recommendations need to be reevaluated. It may be necessary to perform additional field and laboratory tests and engineering analyses to establish the engineering impact of such variations. These services are additional and are not a part of our project scope.

The engineering report was conducted for the proposed project site described in this report. The conclusions and recommendations contained in this report are not valid for any other project sites. If the project information described in this report is incorrect, is altered, or if new information becomes available, we should be retained to review and modify our recommendations. These services are additional and are not a part of our project scope.

Our scope of services was limited to the proposed work described in this report, and did not address other items or areas. The scope of our geotechnical engineering study does not include environmental assessment of the air, soil, rock or water conditions on or adjacent to the site. No environmental opinions are presented in this report. If the client is concerned with environmental risk at this project site, the client should perform an environmental site assessment.

If final grade elevations are significantly different from existing grades at the time of our field activities (more than plus or minus one (1) foot), our office should be informed about these changes. If desired, we will reexamine our analyses and make supplemental recommendations.

4.0 FIELD EXPLORATION PROCEDURES

Subsurface conditions at the subject site were evaluated by two (2) 20-foot soil borings. The Borings were drilled at the locations shown on the Borings Location Map, found in the Appendix section of this report. This location is approximate and distances were measured using a measuring wheel, tape, angles, and/or pacing from existing references. The structural soil borings were drilled in general accordance with American Society of Testing Materials (ASTM) D 420 procedures.

As part of our sampling procedures, the samples were collected in general conformance with ASTM D 1586 procedures. Representative portions of the samples were sealed in containers to reduce moisture loss, identified, packaged, and transported to our laboratory for subsequent testing. In the laboratory, each sample was evaluated and visually classified by a member of our Geotechnical Engineering staff. The geotechnical engineering properties of the strata were evaluated by a series of laboratory tests. The results of the laboratory and field-testing are tabulated on the boring logs and Summary of Soil Sample Analyses which are found in the Attachments section of this report.

Standard penetration test results are noted on the boring logs as blows per 12 inches of penetration. Two 6 inch increments are performed for each standard penetration test. The sum of the blows for the two 6 inch increments is considered the “standard penetration resistance value” or “N-value.” Where hard or very dense materials were

encountered, the tests are terminated as follows: (1) when a total of 50 blows have been applied in any of the 6 inch increments, or (2) when a total of 100 blows have been applied, or (3) when there is no observed advance of the sampler in the application of 10 successive blows. The boring logs in the case of hard or very dense materials will be noted as follows: 50/3", where 50 is the number of blows applied in 3 inches of penetration, or 100/7½" where 100 is the number of blows applied in a total of 7 ½ inches of penetration, or 10/0", where 10 is the number of blows applied in 0 inches of penetration.

Samples will be retained in our laboratory for 30 days after submittal of this report. Other arrangements may be provided at the request of the Client.

5.0 GENERAL SITE CONDITIONS

5.1 Site Description

The project site is located at 610 Padre Boulevard, UNIT 2 in South Padre Island, Cameron County, Texas. The project location is shown on the Project Location Map, found in the Appendix section of this report. At the time of our field operations, the subject site can be described to have an existing structure and parking area. The general topography of the site is relatively flat sloping down to the south with a visually estimated vertical relief of less than 3 feet. Surface drainage is visually estimated to be poor to fair.

5.2 Site Geology

According to the Soil Survey of Cameron County, Texas, published by the United States Department of Agriculture – Soil Conservation Service, the project site appears to be located within the Galveston fine sand soil association.

- These soils consist of deep, somewhat excessively drained, loose soils. These soils are in hummocky areas adjacent to and on the leeward side of the coastal dunes on Padre Island and Brazos Island. Areas of this soil are irregularly shaped and range from less than 10 acres to 400 acres in size. Slopes are mainly 0 to 6 percent and are convex. Permeability is rapid, and runoff is very slow. The corresponding soil symbol is GA, Galveston fine sand, hummocky.

5.3 Subsurface Conditions

On the basis of our borings, two (2) generalized strata that possess similar physical and engineering characteristics can describe the subsurface stratigraphy at this site. Table 5.3.a summarizes the approximate strata range in our boring logs. These were prepared by visual classification and were aided by laboratory analyses of selected soil samples. The lines designating the interfaces between strata on the boring logs represent approximate boundaries. Transitions between strata may be gradual details for each of the borings can be found on the boring logs in the appendix of this report.

Table 5.3.a Approximate Subsurface Stratigraphy Depths.

Stratum	Range in Depth, ft[1]	Stratum Description[1]
I	0 – 15	poorly graded SAND, brown to gray, moist to wet, very loose to med. dense
II	15 – 20	lean CLAY w/ sand, gray, wet, med. stiff

Note 1: The stratum thickness and depths to strata interfaces are approximate. Our measurements are rounded off to the nearest foot increment and are referenced from ground surface at the time of our drilling activities. Subsurface conditions may vary between the boring locations.

5.4 Groundwater Conditions

The dry auger drilling technique was used to complete the soil borings in an attempt to observe the presence of subsurface water. **During our drilling operations we encountered the groundwater table to be at approximately four (4) feet below natural ground elevation for short term conditions.** Table 5.4.a summarizes the approximate groundwater and cave in depths measured in our explorations. It should be noted that the groundwater level measurements recorded are accurate only for the specific dates on which measurement were obtained and does not show fluctuations throughout the year.

Fluctuations in Groundwater levels are influenced by variations in rainfall and surface water run-off from season to season. The construction process itself may also cause variations in the groundwater level. If the subsurface water elevation is critical to the construction process the contractor should check the subsurface water conditions just prior to construction excavation activities.

Table 5.4.a Approximate Groundwater and Cave-in Depths.

Boring No.	Depth to Subsurface Water, Ft[1]	Depth to Cave-In, Ft[1]
	Time of Drilling	Time of Drilling
B-1	6	3
B-2	4	5

Note 1: Subsurface water levels and cave-in depths have been rounded to the nearest foot.

Based on the findings in our borings and on our experience in this region, we believe that groundwater seepage is will be encountered during site earthwork activities. **Groundwater seepage will be encountered during drilled pier construction activities.** If groundwater seepage is encountered during site earthwork activities, it may be controlled using temporary earthen berms and/or conventional sump-and-pump dewatering methods.

6.0 ENGINEERING ANALYSIS AND RECOMMENDATIONS

6.1 General

The analysis and recommendations presented in this report are applicable specifically to the proposed foundation structure. The data gathered from both the field and laboratory testing programs on soil samples obtained from the borings was utilized to establish geotechnical engineering parameters to develop recommendations for the proposed structure. The foundation system(s) considered in this report to provide support for the proposed structure must meet two independent criteria. One of the criteria is that the movement below the foundation structure due to compression (consolidation) or expansion (swell) of the underlying soils must be within tolerable limits. This criterion is addressed in the Soil Related Movements section of this report. The other criterion is that the dead and live loads must be distributed appropriately and the foundation structure designed with an acceptable factor of safety to minimize the potential for bearing capacity failure of the underlying soils.

Geotechnical and structural engineers in this general area consider soil movements or Potential Vertical Rise (PVR) of approximately one (1) inch or less to be within acceptable structural design tolerances for most structures but may be different depending on structure use and the desired performance of the foundation. Therefore, movements of the underlying soils are not eliminated and thus one should expect a slab foundation structure to exhibit differential vertical movements. However, structural engineers design slab foundations for the expected magnitude of soil movements without failure of the structure. More stringent soil movement criteria may be established but the owner should consider the exponential increase in cost required to design and construct a structure for such soil movements. Data obtained in this study indicate that the soils at this site have strength characteristics capable of supporting the foundation and structure if designed appropriately. Stratum I is composed of poorly graded sand to clayey sand and has no to low potential to exhibit volumetric changes (contraction and expansion). The potential for soil volumetric changes is dependent on variations in moisture contents of the underlying soils. Based on this data, this site is suitable for a slab foundation provided the subgrade is modified in accordance with the recommendations established in this report to reduce the potential for these soil volumetric changes.

6.2 Soil-Related Movements

The anticipated ground movements due to swelling of the underlying soils at this site were estimated for slab foundation construction using the Texas Department of Transportation (TxDOT) procedures of test method TEX-124-E for determining Potential Vertical Rise (PVR). A PVR value of one (1) inch or less was estimated for the stratigraphic conditions encountered in our subsurface borings. A surcharge of 1 pound per square inch for the concrete slab, an active zone of 10 feet, and dry subsurface moisture conditions were assumed in estimating the above PVR values.

The following methods are generally acceptable for use in modifying the subgrade to reduce the potential for soil movements and volumetric changes below the foundation structure.

Excavate expansive clay soils and replace with select fill.
Chemical injection of expansive clay soils.
A combination of methods 1 and 2.

The method to be used is dependent on specific site conditions. At this site the grade will most likely need to be raised to obtain the proposed Finished Floor Elevation (FFE). **As of the date of this report the CLIENT/OWNER has provided the proposed FFE to be 7.45 feet AMSL. We recommend that the project civil engineer evaluate the proposed FFE with our recommendations to ensure that the subgrade modifications presented in the report are not diminished or compromised.** Adding select fill is generally the most cost effective method for reducing the potential for soil related movements. Therefore, we only discuss this method in this report but we can provide details for the other methods if requested.

Based on the data obtained, the proposed FFE of 7.45 feet AMSL, information provided by our client and our analysis of the site, we recommend the following modification (Table 6.2.a Subgrade Modifications) of the subgrade at this area to accomplished finish floor elevation of the subgrade at this site. This method will maintain the potential for soil related movements to an approximate PVR value of less than one (1) inch, which is generally desired for projects of this type.

Table 6.2. Subgrade Modifications

Item	Description
1	See and adhere to the Site Preparation Recommendations section of this report.
2	Excavate existing soils to a depth of 4.00 feet AMSL elevation in accordance with the Site Preparation Recommendations section of this report.
3	Condition and compact twelve (12) inches of subgrade below excavated soils in accordance with the Site Preparation Recommendations section of this report.
4	Place **select fill,** condition and compact up to the proposed FFE of 7.45 feet AMSL with a minimum of three (3) feet select fill in accordance with the Select Fill Recommendations section of this report.

The PVR method of estimating expansive, soil-related movements is based on empirical correlations utilizing the measured plasticity indices and assuming typical seasonal fluctuations in moisture content. If desired, other methods of estimating expansive, soil-related movements are available, such as estimations based on swell tests and/or soil-suction analyses. However, the performance of these tests and the detailed analyses of expansive, soil-related movements were beyond the scope of the current study. It should also be noted that actual movements can exceed the calculated PVR values as a result

of isolated changes in moisture content (such as leaks, landscape watering, etc.) or if water seeps into the soils to greater depths than the assumed active zone depth due to deep trenching and/or excavations.

6.3 IBC Site Classification and Seismic Design Coefficients

Section 1613 of the International Building Code (2012) requires that every structure be designed and constructed to resist the effects of earthquake motions, with the seismic design category to be determined in accordance with Minimum Design Loads for Buildings and Other Structures / ASCE 7. Site classification according to the ASCE 7 is based on the soil profile encountered to 100-foot depth. The stratigraphy at the site location was explored to a maximum of 20-foot depth as per Client scope of services for this study. Site classification is based on the available information from this study.

On the basis of the site class definitions included in ASCE 7, Table 20.3-1 and the encountered generalized stratigraphy, we characterize the site as Site Class E.

Seismic design coefficients were determined using the on-line software, OSHPD Seismic Design Maps accessed at (http://seismicmaps.org). Analyses were performed considering the 2012 International Building Code. Input included zip code 78597 and Site Class E. Seismic design parameters for the site are summarized in the following table:

Table 6.3.a IBC Site Classification and Seismic Design Coefficients

Site Classification	F_a	F_v	S_s	S_1
E	2.4	4.2	0.038g	0.013g

Where: F_a = Site coefficient
F_v = Site coefficient
S_s = Mapped spectral response acceleration for short periods
S_1 = Mapped spectral response acceleration for a 1-second period

6.4 Lateral Earth Pressures

Presented below are at-rest, active and passive earth pressure coefficients for various backfill types adjacent to below-grade walls or site retaining walls. At-rest earth pressures are recommended in cases where little wall yield is expected (such as structural below-grade walls). Active earth pressures may be utilized in cases where the walls can exhibit a certain degree of horizontal movements (such as cantilevered retaining walls).

Table 6.4.a Earth Pressures

Backfill Type	Estimated Total Unit Weight (pcf)	Angle of Internal Friction Ø, deg	Active Condition		Passive Condition		At rest Condition	
			Earth Pressure Coefficient K_a	Equivalent Fluid Density (pcf)	Earth Pressure Coefficient K_p	Equivalent Fluid Density (pcf)	Earth Pressure Coefficient K_o	Equivalent Fluid Density (pcf)
Washed Gravel	135	33	0.29	40	3.39	460	0.45	60
Crushed Limestone	145	38	0.24	35	4.20	610	0.38	55
Clean Sand	120	30	0.33	40	3.00	360	0.50	60
Pit Run Clayey Gravels or Sands	135	31	0.32	45	3.12	425	0.48	65
On-Site Clayey Sand	115	30	0.33	38	3.00	345	0.50	58
Compacted On-Site Clayey Sand	125	41	0.21	26	4.76	595	0.34	43

The above values do not include a hydrostatic or ground-level surcharge component. To prevent hydrostatic pressure build-up, retaining walls should incorporate functional drainage (via free-draining aggregate or manufactured drainage mats) within the backfill zone. The effect of surcharge loads, where applicable, should be incorporated into wall pressure diagrams by adding a uniform horizontal pressure component equal to the applicable lateral earth pressure coefficient times the surcharge load, applied to the full height of the wall. The structure walls should be designed for hydrostatic pressures if drainage cannot be provided. Ports/weepholes for release of hydrostatic pressure need to be provided during construction. The ports/weepholes should be filled with filter cloth to reduce the loss of soil fines.

The compactive effort should be controlled during backfill operations adjacent to walls. Over-compaction can produced lateral earth pressures in excess of at-rest magnitudes. Compaction levels adjacent to walls should be maintained between 95 and 100 percent of standard proctor (ASTM D 698) maximum dry density.

A wall drain (consisting of freely-drained aggregate or manufactured drainage mat, along with outlet piping) is recommended for collection and removal of surface water percolation behind the walls. Proper control of surface water percolation will help to prevent buildup of higher wall pressures. In unpaved areas, the final 12 inches of backfill should preferably consist of clayey soils to help reduced percolation of subsurface water in to the backfill.

6.5 Floor Slabs (In Conjunction with Concrete Pier Foundation)

Two alternatives are available to construct the floor slab system. The owner may select the alternative best satisfying the required performance criteria.

- **Alternative No. 1:** Floor slabs which have a high performance criteria or which are movement sensitive in nature, may be structurally suspended. A positive void space of at least 6 inches, preferably more, should be provided between the slab and the underlying soils.

- **Alternative No. 2:** Floor slabs within the superstructure may be ground supported provided the anticipated movements discussed under the Soil Related Movements section of these report will not impair the performance of the floor, frame, or roof systems.

  If differential movements between the slab and the structure are objectionable, soil supported floor slabs could be dowelled to the perimeter grade beams. Dowelled slabs that are subjected to heaving will typically crack and developed a plastic hinge along a line which will be approximately 5 to 10 feet inside and parallel to the grade beams. Slabs cast independent of the grade beams, interior columns and partitions should experience minimum cracking, but may create difficulties at critical entry points such as doors and may impact interior partitions that are secured to exterior walls.

  We recommend that a vapor barrier comprised of polyethylene or polyvinyl chloride (PVC) sheeting be placed between the supporting select fill and the concrete floor slab.

7.0 PIER FOUNDATION RECOMMENDATIONS

7.1 Straight Sided Concrete Piers

Items influencing the type of foundation selected for the proposed recreational structure include the design axial and lateral foundation loads, the presence of poorly graded sands, lean clays, and the presence of groundwater. More specifically, the final pier dimensions, particularly to include the required length of pier, will be determined based on the foundation design loads, the depth of the active zone, the potential uplift force imposed by the soils within the active zone and the available side friction capacity and end bearing capacity allotted to the subsurface stratigraphy. Straight-sided piers bearing at a minimum elevation of 15 feet below natural ground may support vertical loads for the proposed structure**. The poorly graded sands, lean clays, and the water table elevation at this site may require that the concrete piers be placed with casing or the slurry displacement method to prevent collapse of the shaft boring walls.** Based on our depth of exploration at an elevation of approximately 20 feet below natural ground and the type of structures, pier depths should not exceed a depth of 15 feet below natural ground. The allowable capacities are provided in an attachment in the Appendix section of this report, titled *Allowable Axial Capacity*. For straight sided piers, the contribution of the soils for the top 5 feet of soil embedment and for a length equal to at least 1 pier diameter from the bottom of the shaft should be neglected in the determination of friction capacity. The recommended design parameters include a factor of safety of 2 for skin friction and of 3 for end bearing. The minimum embedment depth was selected to locate the pier base within a specified desired bearing stratum. If the piers are subject to water action, scour may occur. If this is the case, the pier length should be referenced from the level of the maximum scour depth. Likewise, the LPILE analysis should neglect the contribution of soils down to the maximum scour depth.

7.2 Uplift Forces

Within the active zone the concrete piers may be subjected to potential uplift forces. Alternate drying and wetting conditions of the expansive soils surrounding the concrete pier create these uplift forces. The uplift force acting on the piers may be estimated by the following relationship:

Uplift force (tons) = 0.5 x shaft diameter (feet) (without subgrade modifications)

Other uplift forces due to other factors may need to be taken into consideration.

7.3 Allowable Uplift Resistance

The potential uplift forces that may be created by the swelling soils may be resisted by the dead load of the concrete pier plus the allowable uplift resistance provided by the friction between the soil and pier interface. The allowable uplift resistance are provided in an attachment in the Appendix section of this report, titled *Allowable Uplift Resistance*. These values have been estimated with a factor of safety of two (2). Design requirements for reinforcing and for pier penetration derived from compression or uplift loading for the structure is usually sufficient to overcome any effects of expansive soils. However, we recommend that the cross sectional area of the reinforcing steel should not be less than

one (1) percent of the gross cross sectional area of the drilled pier shaft. The reinforcing steel should extend from the top to the bottom of the shaft to resist axial tension forces. The final reinforcing requirements should be determined by the project structural engineer.

7.4 Pier Lateral Criteria

Lateral pile analysis including capacity, maximum shear, and maximum bending moment should be evaluated by the project structural engineer using LPILE or similar software. In the following table, MEG presents geotechnical input parameters for the encountered soils. Please note that the depths to the top and bottom of each layer were interpreted using the data at the explored boring locations and layer boundaries as shown on the boring logs:

Table 7.1. Drilled Pier Geotechnical Input Parameters for LPILE Analysis

Depth	Material	Y_e	C_u	Φ	K	e_{50}
0 to 5	poorly graded SAND (SP)	Neglect contribution				
5 to 8 (WT at 6 feet)	poorly graded SAND (SP)	60	-	29	K = 20	-
8 to 15	poorly graded SAND (SP)	60	-	<28	K < 20	-

Where: Y_e = Effective Soil Unit Weight, pcf
C_u = Undrained Soil Shear Strength, psf
Φ = Angle of internal friction, degrees
e_{50} = 50% strain value
K = Modulus of subgrade reaction, pci

7.5 Spacing for Concrete Piers

Concrete pier spacing should be at least three (3) shaft diameters from edge to edge to eliminate any reduction in load carrying capacity of the individual piers.

When utilizing a pier group and the pier spacing is less than three (3) times the pier diameter from edge to edge, the following reduction factors for bearing capacity and skink friction shall apply:

- The minimum recommended pier spacing shall be one and a half (1.5) times the pier diameter from edge to edge. The reduction factor for this spacing is 0.5.

- The reduction factor for pier spacing less than three (3) times the pier diameter but more than one and a half (1.5) times the pier diameter from edge to edge shall be linearly interpolated from the reduction factor values provided herein.

For straight-sided concrete piers, the total settlements based on the bearing pressures are estimated to generally be in the order of one (1) inch or less for properly designed and constructed drilled piers. At this site, the underlain soils exhibit low shear strengths and potential settlements can best be estimated when site grading, foundation dimensions and loads have been established. Most of the settlement beneath each individual pier should occur during the construction phase. Differential settlement between piers can be expected and should be in the order of 50 to 75 percent of the total pier settlement. For properly designed and constructed piers we estimate the differential settlement between adjacent piers to be in the order of three-fourths (¾) of an inch. A detailed estimate of settlement is outside the scope of this service report. The quality of construction will affect the settlement process of drilled piers more than the soil-structure interaction. Poor drilled pier construction could result in settlements significantly higher than what we have estimated in this report. Utilizing soil-bearing pressures higher than the allowable values presented in this report can also produce significantly higher settlements at individual piers and differential settlement between adjacent piers.

8.0 CONSIDERATIONS DURING CONSTRUCTION

8.1 Site Grading Recommendations

Site grading plans can result in changes in almost all aspects of foundation recommendations. We have prepared the foundation recommendations based on the existing ground surface; there is no surcharge addition for the stratigraphic conditions encountered at the time of our study. If site grading plans differ from existing grades by more than plus or minus 1 foot, we must be retained to review the site grading plans prior to bidding the project for construction. This will enable us to provide input for any changes in our original recommendations that may be required as a result of site grading operations or other considerations.

8.2 Site Drainage Recommendations

Drainage is one of the most important aspects to be addressed to ensure the successful performance of any foundation. Positive surface drainage should be implemented prior to, during and maintained after construction to prevent water ponding at or adjacent to the building facilities. It is recommended that the building and site design include rain gutters, downspouts and concrete gutters to channel runoff to paving or storm drains.

8.3 Site Preparation Recommendations

Building areas and all area to support select fill should be stripped of all vegetation and organic topsoil up to a minimum of 3 ft. beyond the building perimeters. After stripping, remove at least six (6) inches of on-site soil as measured from existing grade when excavation of existing subgrade is not recommended in other sections of this report. The excavated material, if free of organic and/or deleterious material, may be stockpiled for

use in the non-structural areas of the site. Where excavation of the subgrade is recommended in this report, the bottom of the excavation will extend at least five (5) feet beyond the limits of the planned building perimeter including canopies and sidewalks. Exposed subgrades should be thoroughly proof rolled in order to locate and compact any weak, compressible and soft spots. Proof rolling shall be in accordance with TxDOT 2014 Specification Item 216. Proof rolling operations should be observed by the Geotechnical Engineer or his representative to document subgrade condition and preparation. Weak or soft areas identified during proof rolling or areas where large tree roots have been removed within the limits of excavation should be removed and replaced with a suitable, compacted select fill in accordance with the recommendations presented under the Select Fill Recommendations section of this report. Proof rolling operations and any excavation/backfill activities should be observed by **MEG** representatives to document subgrade preparation.

Prior to fill placement, the exposed subgrade shall be prepared based on what option is selected from the foundation and pavement recommendations. The exposed subgrade should be prepared, moisture-conditioned by scarifying to a minimum depth as recommended in the foundation and pavement recommendations and recompacting to a minimum 98 percent of the maximum dry density as determined in accordance with ASTM D 698, moisture-density relationship. The moisture content of the subgrade should be maintained within the range of minus two (-2) percentage points below optimum to plus four (+2) percentage points above the optimum moisture content until the fill is permanently covered. The soil should be properly compacted in accordance with these recommendations and tested by **MEG** personnel for compaction as specified.

8.4 Select Fill Recommendations

Materials used for select fill shall meet the following requirements:

1. Material shall conform to TxDOT 2014 Specification Item 247, Flexible Base; Type A, Grades 1 through 3.
2. Material shall conform to TxDOT 2014 Specification Item 247, Flexible Base, Types B or C, Grades 1 through 5 with a minimum plasticity index of 7.
3. Material shall conform to TxDOT 2014 Specification Item 247, Flexible Base, Type E, Grade 4 with a plasticity index between and inclusive of 7 and 15. Type E material shall be defined as Caliche (argillaceous limestone, calcareous or calcareous clay particles) and may contain stone, conglomerate, gravel, sand or granular materials when these materials are in situ with the caliche. Flexible Base (Type E, Grade 4) shall conform to the following requirements:

Table 8.4a Type E, Grade 4 Requirements

Retained on Sq. Sieve	Percent Retained
2”	0
½”	20-60
No. 4	40-75
No. 40	70-90
Max. PI:	15
Max. Wet Ball PI:	15
Wet Ball Mill Max Amount:	50
Wet Ball Increase, Max Passing No. 40 sieve	20

4. Soils classified according to USCS as SM, SC, GM, GC, CL, ML and combinations of these soils. The soils shall be relatively free of organic matter. In addition to the USCS classification, select materials shall have a liquid limit of less than 40 and a plasticity index between and inclusive of 12 and 19.
5. Soils classified, as CH, MH, OH, OL and PT, under the USCS are not considered suitable for use as select fill materials at this site.

Select fill shall be placed in loose lifts not to exceed 8 inches (6 inches compacted) and compacted to a minimum 98 percent of the maximum dry density as determined in accordance with ASTM D 698. The moisture content of the fill shall be maintained within the range of minus two (-2) percentage points below optimum to plus two (2) percentage points above the optimum moisture content until the fill is permanently covered. The select fill should be properly compacted in accordance with these recommendations and tested by MEG personnel for compaction as specified.

8.5 Site Fill Recommendations

Site fill shall be placed in loose lifts not to exceed 8 inches (6 inches compacted) and compacted to a minimum 98 percent of the maximum dry density as determined in accordance with ASTM D 698. The moisture content of the fill shall be maintained within the range of minus (-2) percentage points below optimum to plus two (+2) percentage points above the optimum moisture content until the fill is permanently covered. The site fill should be properly compacted in accordance with these recommendations and tested by **MEG** personnel for compaction as specified.

8.6 Utility Considerations

Utilities that project through the slab-on-grade, slab-on-fill, floating floor slabs, or any other rigid unit should be designed with some degree of flexibility or with sleeves. Such features will help reduce the risk of damage to utility facilities from soil movements related to shrinkage and expansion.

8.7 Utility Trench Recommendations

Bedding and initial backfill are buried around utility lines to support and protect the utility. The secondary backfill above the initial backfill also helps protect and support the foundation and/or pavement above. To ensure that settlement is not excessive in this secondary backfill we recommend the following:

1) If possible, trench and install utilities prior to work such as lime treatment and/or compaction of subgrade or placement of other fills or bases.
2) Place, moisture condition and compact the secondary backfill in accordance with the pertinent project requirements. Within the footprint of a building pad the secondary backfill should meet the same compaction requirements for select fill. Within the footprint of a pavement structure the secondary backfill should meet the same compaction requirements for the subgrade. When compaction of the subgrade is not specified it should meet the same compaction level of the adjacent natural ground. An alternative to compaction of secondary backfill is the use of flowable fill where secondary backfill is to be placed. If properly designed, the flowable fill can be excavated easily at a later date if necessary. No compaction and no testing is required when properly designed flowable fill is used.

8.8 Excavation, Sloping and Benching Considerations

If trenches are to extend to or below a depth of five (5) ft., the contractor or persons doing the trenching should adhere to the current Occupational Health and Safety Administration (OSHA) guidelines on trench excavation safety and protection measures. Other industry standards may be applicable. The collection of specific geotechnical data and development of a plan for trench safety, sloping, benching or various types of temporary shoring, is beyond the scope of this study.

8.9 Shallow Foundation Excavation Considerations

The Geotechnical Engineer or his representative prior to the placement of reinforcing steel and concrete should observe shallow foundation excavations. This is necessary to verify that the bearing soils at the bottom of the excavations are similar to those encountered during the subsurface soil exploration phase and that excessive loose materials and water are not present in the excavations. If soft pockets of soil are encountered in the foundation excavations, they should be removed and replaced with a compacted non-expansive fill material or lean concrete up to the design foundation bearing elevation.

8.10 Landscaping Considerations

Even though landscaping is a vital aesthetic component of any project, the owner, client and design team should be aware that placing trees or large bushes adjacent to any structure may distress the structure in the future. It is recommended that if any landscaping is to be placed adjacent to the structure in this project, it should be limited to small plants and shrubs. Trees and large bushes should be placed at a distance such that at their mature height, their canopy or “drip line” does not extend over the structures.

The owner, client and design team should also be aware that if any watering is to be done in connection with the landscaping for this project it should be controlled, consistent and timely. Excessive or prolonged watering is not recommended. If watering is part of the landscaping plan, termination of watering for any extended period of time may also be detrimental to the structure. It is important that the moisture level in the subsurface soils remain constant so that shrinking and swelling of soils may be mitigated.

8.11 Perimeter Foundation Cap

We recommend that a cap of impervious fill be placed around the perimeter of the foundation to mitigate the intrusion of moisture into the soils surrounding the foundation. The top eighteen inches of fill around the foundation structure should be a low permeance clay cap to keep surface water away from the foundation. The low permeance clay cap should be sloped away from the foundation at a minimum slope of 2% and the surrounding areas should have positive drainage. The low permeance clay shall meet the USCS classification of CL and meeting the requirements in Tables 7.11a Gradation Requirements and Table 7.11b Atterberg Limits Requirements. The low permeance clay shall be compacted to minimum of 95 percent of the maximum dry density as determined in accordance with ASTM D 698. The moisture content of the subgrade should be maintained within the range of optimum to four (4) percentage points above the optimum moisture. If plantings are intended, add 4 to 6 inches of loam on top of the clay cap.

Table 8.11a. Gradation Requirements

Sieve Size	Percent Passing (by dry weight)
1/2 inch	100
No 4	70-100
No. 200	50 – 100

Table 8.11b. Atterberg Limits Requirements

Test / ASTM	Requirement
Atterberg Limits D4318	LL ≤ 45 20 ≤ PI ≤ 30

8.12 Pier Excavation Considerations

The following general considerations are important to ensure that the drilled piers are properly constructed. Pier excavations should be augured and constructed in a continuous process from beginning to end. Steel and concrete are to be placed in the pier excavation immediately after drilling and evaluation for proper bearing, embedment and cleanliness. Under no circumstances should a pier excavation remain open overnight. We recommend monitoring of installation by a representative of **MEG.**

We recommend that the foundation contractor verify the subsurface water level prior to beginning pier excavation. We recommend that he be prepared to control water intrusion and sloughing of soils into the pier excavation should these conditions occur. Typically the methods available to control these conditions are the casing method, slurry displacement method or a combination of the two. We recommend that the foundation contractor submit a plan for approval by the designer for the construction of concrete piers outlining and including proposed methods of excavation, preparations for dealing with ground water and sloughing, slurry methods and type (mineral or polymer), methods of cleaning excavation, methods for concrete placement and other procedures or materials important to the successful construction and performance of a drilled pier.

If water is encountered during the drilling operations in excess of 6 inches it should be pumped out prior to steel and concrete placement. If the water is left, a closed end tremie should be used to place the concrete completely to the bottom of the pier excavation in a controlled manner to properly displace the water. If water is not present, the concrete should be placed with a tremie if the free fall distance exceeds five (5) feet. The concrete should not be placed in a manner that causes the concrete to hit the excavated pier walls or reinforcing steel. Removal of casing should be done with extreme care and with proper supervision. Rapid removal of the casing can cause mixing of surrounding soil with the fresh concrete and/or develop a suction that will cause soil to intrude into the concrete pier and thus reduce its effective diameter and/or expose its reinforcement. An insufficient head of concrete in the casing during withdrawal could also cause the same conditions.

For this project we recommend that the concrete should be designed to achieve a minimum 28-day compressive strength of 3600 psi when placed at a seven (7) inch slump with a plus or minus one (1) inch tolerance. The concrete should be designed to meet the requirements of Texas Department of Transportation 2014 Standard Specification Item 421, Class C or SS concrete or American Concrete Institute (ACI) 318-11 – Building Code Requirements for Structural Concrete. If a high range water-reducing admixture is used to achieve the slump requirements, a span of slump retention should be thoroughly investigated for the concrete design to be used. Compatibility with other concrete admixtures should also be considered. We recommend that a technical representative of the admixture supplier be consulted with the use of these admixtures.

The concrete pier design and construction should be performed as discussed in this report and as described in the publications entitled: ACI 336.1 – 98 Standard Specification for the Construction of Drilled Piers, ACI 336.3R-93 Suggested Design and Construction Procedures for Pier Foundations, Drilled Shafts: Construction Procedures and Design Methods by Michael W. O'Neill and Lymon C. Reese, Publication No. FHWA-IF-99-025, August 1999 and Texas Department of Transportation 2014 Standard Specification Item 416 for Dilled Shaft Foundations. Concrete pier construction should be carefully monitored to ensure that the construction activities comply with the project specifications. The following items in particular among others need to be considered during the concrete pier construction process.

1. Proper drilling rig with proper equipment (including augers, casing, slurry holding tanks with appurtenances);
2. Pier locations, vertical alignment, competent bearing;
3. Reinforcing steel cages tied to meet project specifications;
4. Proper scheduling and ordering of concrete;
5. Concrete properties and placement, steel placement;
6. Proper casing seal for subsurface water control, proper slurry properties and proper casing removal; and
7. Monitoring of installation by a representative of **MEG.**

9.0 PROJECT REVIEW AND QUALITY CONTROL

Each project site is unique and it is important that the appropriate design data, construction drawings, specifications, change orders and related documents be reviewed by the respective design and construction professionals participating in this project. The performance of foundations, construction building pads and/or parking areas for this project will depend on correct interpretation of our geotechnical engineering report and proper compliance of and adherence to our geotechnical recommendations and to the construction drawings and specifications.

It is important that **MEG** be provided the opportunity to review the final design and construction documents to check that our geotechnical recommendations are properly interpreted and incorporated in the design and construction documents. We cannot be responsible for misinterpretations of our geotechnical recommendations if we have not had the opportunity to review these documents. This review is an additional service and not part of our project scope.

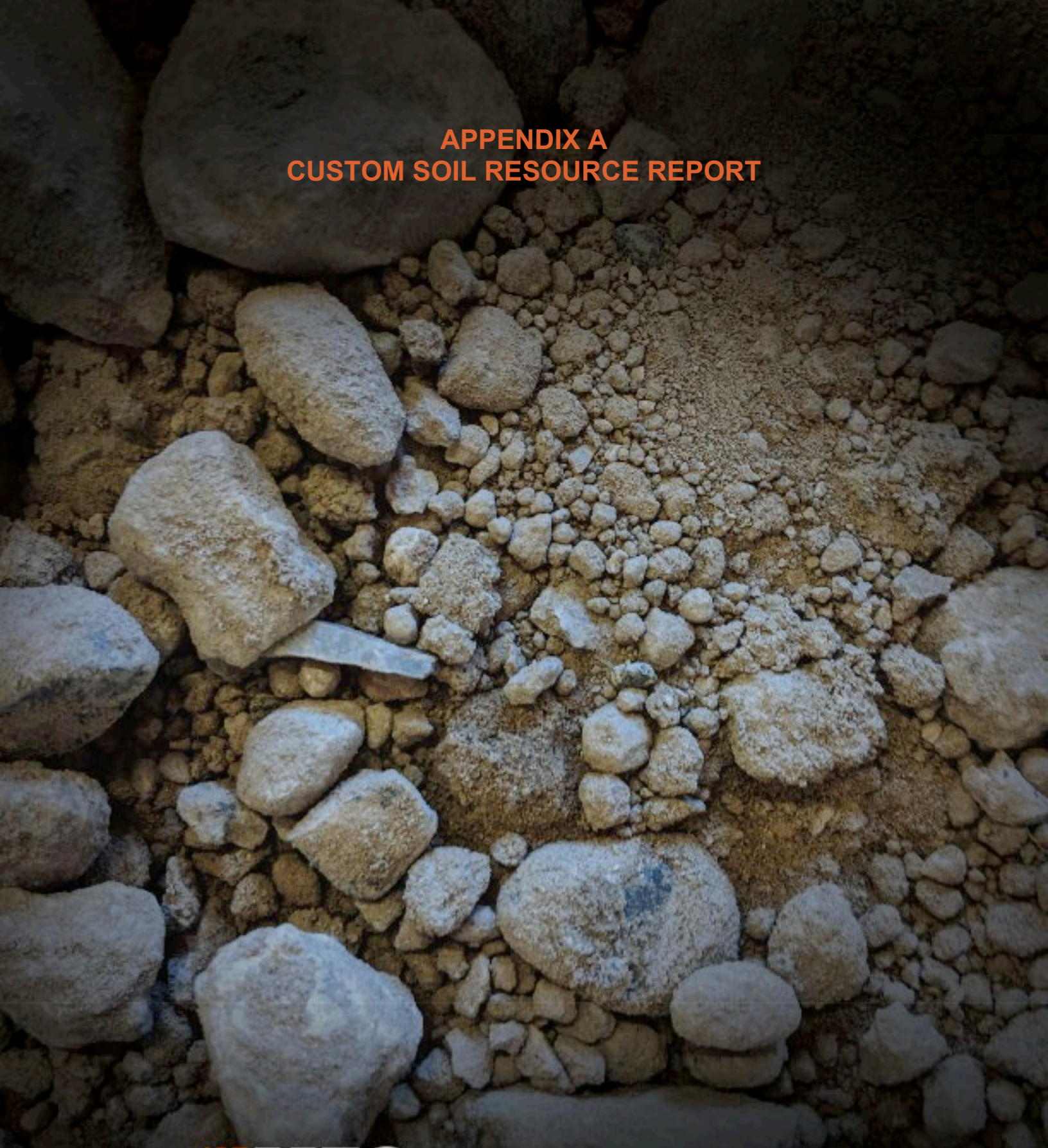
MEG should be retained to provide construction materials testing and observation services during all phases of the construction process of this project. As the Geotechnical Engineer of Record, it is important to let our technical personnel provide these services to make certain that our recommendations are interpreted properly and to ensure that actual field conditions are those described in our geotechnical report. Since our personnel are familiar with this project, **MEG**'s participation during the construction phase of this project would help mitigate any problems resulting from variations or anomalies in subsurface conditions, which are among the most prevalent on construction projects and often lead to delays, changes, costs overruns, and disputes. If the client does not follow all of our recommendations presented in this report and/or addendums to this report, the client assumes the responsibility and liability of such actions and will hold our firm harmless and without responsibility and liability for client's actions.

A construction testing frequency plan and budget needs to be developed for the required construction materials engineering and testing services for this project. Before construction, we recommend that **MEG**, the project design team members and the project general contractor meet and jointly develop the testing plan and budget, as well as review the testing specifications as it pertains to this project. **A failure to implement a complete**

testing plan will negate the recommendations provided in this report.

MEG looks forward to the opportunity to provide continued support on this project.

APPENDIX A
CUSTOM SOIL RESOURCE REPORT



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Soil Map—Cameron County, Texas
(02-23-29124 proposed Historical Museum of SPI)

Map Scale: 1:465 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 20 40 80 120

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cameron County, Texas
Survey Area Data: Version 19, Aug 24, 2022

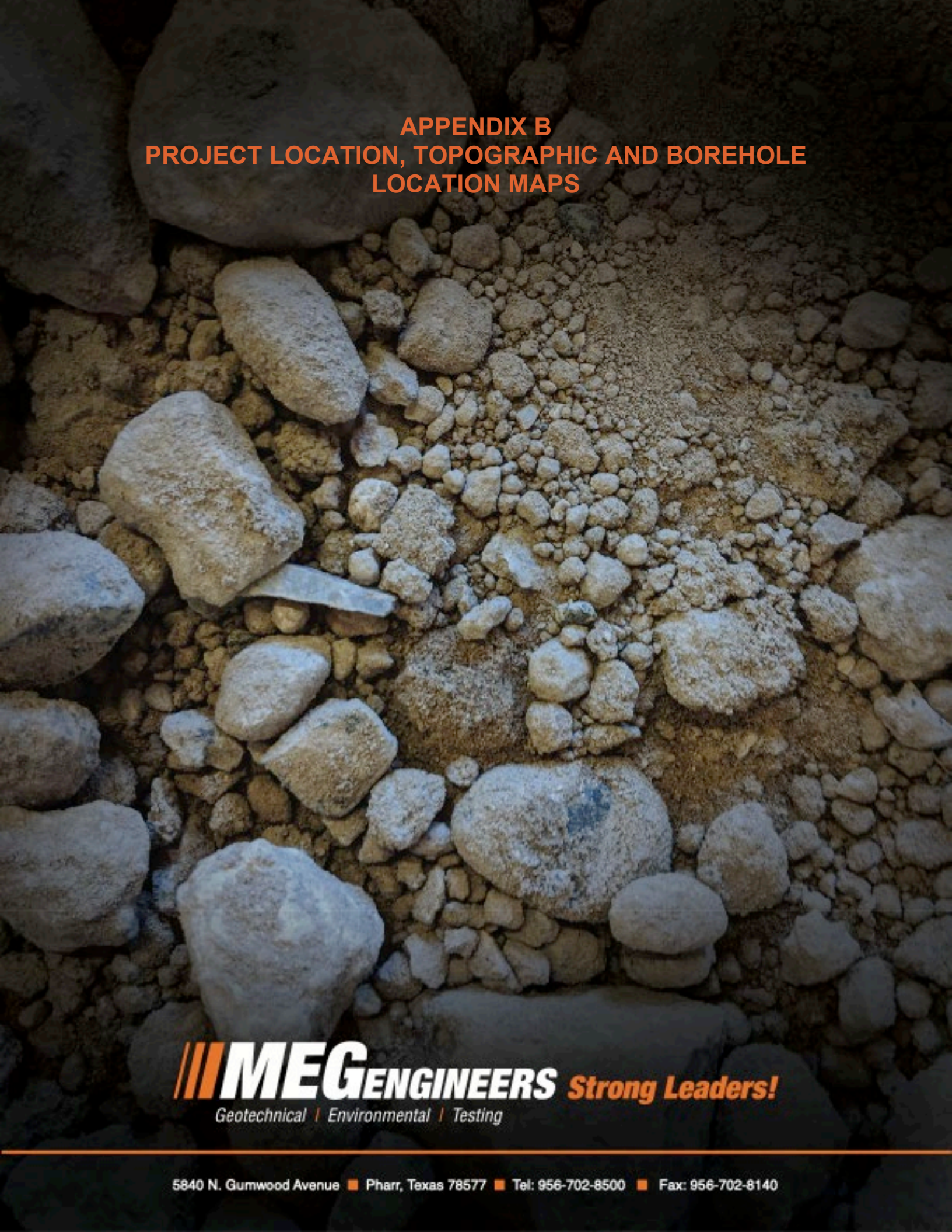
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 21, 2021—Mar 2, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GA	Galveston fine sand, hummocky, occasionally flooded	0.9	100.0%
Totals for Area of Interest		**0.9**	**100.0%**



APPENDIX B
PROJECT LOCATION, TOPOGRAPHIC AND BOREHOLE LOCATION MAPS

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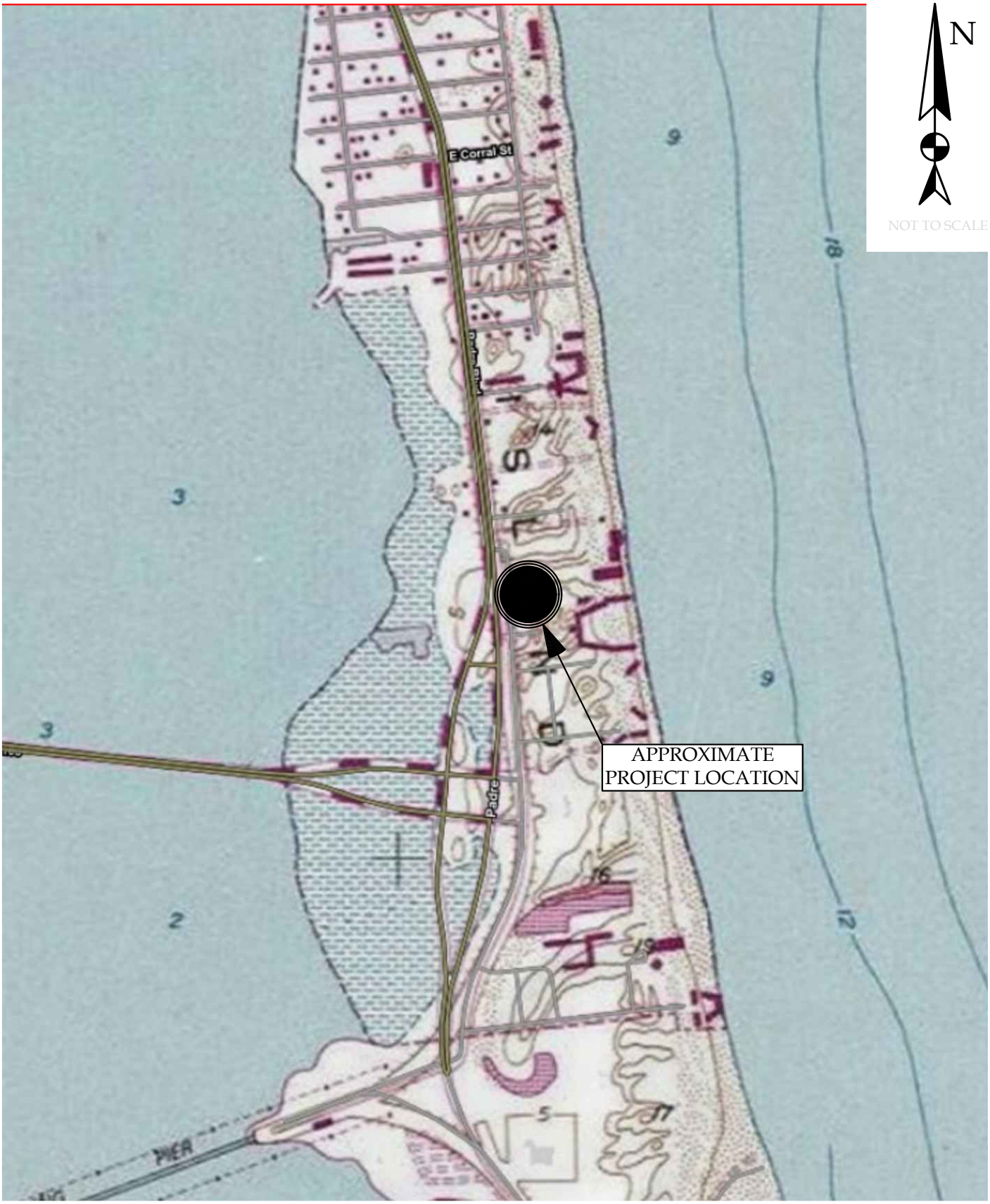
PROJECT SITE LOCATION MAP

PROPOSED
HISTORICAL MUSEUM OF SOUTH PADRE ISLAND
SOUTH PADRE ISLAND, CAMERON COUNTY, TEXAS

MILLENNIUM ENGINEERS GROUP, INC.
5804 N. GUMWOOD AVENUE
PHARR, TEXAS 78577
WWW.MEGENGINEERS.COM
TEL: 956-702-8500
FAX: 956-702-8140

MEG PROJECT: 01-23-29124 / DATE: 8/24/2023 / APPROVED BY: A. PALMA / DRAWN BY: L. PUENTES



PROJECT TOPOGRAPHY MAP

PROPOSED
HISTORICAL MUSEUM OF SOUTH PADRE ISLAND
SOUTH PADRE ISLAND, CAMERON COUNTY, TEXAS

MILLENNIUM ENGINEERS GROUP, INC.
5804 N. GUMWOOD AVENUE
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FAX: 956-702-8140

MEG PROJECT: 01-23-29124 / DATE: 8/24/2023 / APPROVED BY: A. PALMA / DRAWN BY: L. PUENTES

N

NOT TO SCALE

BOREHOLE DEPTH

= 20'

PROJECT BOREHOLE LOCATION MAP

PROPOSED
HISTORICAL MUSEUM OF SOUTH PADRE ISLAND
SOUTH PADRE ISLAND, CAMERON COUNTY, TEXAS

MILLENNIUM ENGINEERS GROUP, INC.
5804 N. GUMWOOD AVENUE
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TEL: 956-702-8500
FAX: 956-702-8140

MEG PROJECT: 01-23-29124 / DATE: 8/24/2023 / APPROVED BY: A. PALMA / DRAWN BY: L. PUENTES

APPENDIX C
PROJECT BORING LOGS AND PROFILE

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Project: **Proposed Historical Museum of SPI**
Project Location: **South Padre Islamd, Cameron County, Texas**
Project Number: **02-23-29124**

Log of Boring B-1
Sheet 1 of 1

Date(s) Drilled **7/31/2023**	Logged By **A. Guerrero**	Checked By **Raul Palma**
Drilling Method **Straight Flight**	Drill Bit Size/Type **4" soil bit**	Total Depth of Borehole **20 feet bgs**
Drill Rig Type **Simco 2800**	Drilling Contractor **RGV Drilling**	Approximate Surface Elevation
Groundwater Level and Date Measured **6 feet ATD**	Sampling Method(s) **SPT**	Hammer Data **140 lb., 30 in. drop, auto trip**
Borehole Backfill **Subgrade Cuttings**	Location **See Boring Location Map**	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	LL, %	PI, %	Percent Fines	UC, ksf
	0				SP		poorly graded SAND, brown to gray, moist to wet, very loose to med. dense					
	1		1	15				15		LS = 0		
	2											
	3		2	19				22			1	
	4											
	5		3	6				22		LS = 0		
	6						ATD ▽					
	7		4	13				35		LS = 0		
	8											
	9		5	6				21				
	10											
	11											
	12											
	13											
	14		6	2				24			6	
	15				CL		lean CLAY w/ sand, gray, wet, med. stiff					
	16											
	17											
	18											
	19		7	5				21	21	11		
	20						Bore Termination					
	21											
	22											
	23											
	24											
	25											
	26											
	27											
	28											
	29											
	30											
	31											
	32											
	33											
	34											
	35											

Project: **Proposed Historical Museum of SPI**
Project Location: **South Padre Islamd, Cameron County, Texas**
Project Number: **02-23-29124**

Log of Boring B-2
Sheet 1 of 1

Date(s) Drilled **7/31/2023**	Logged By **A. Guerrero**	Checked By **Raul Palma**
Drilling Method **Straight Flight**	Drill Bit Size/Type **4" soil bit**	Total Depth of Borehole **20 feet bgs**
Drill Rig Type **Simco 2800**	Drilling Contractor **RGV Drilling**	Approximate Surface Elevation
Groundwater Level and Date Measured **4 feet ATD**	Sampling Method(s) **SPT**	Hammer Data **140 lb., 30 in. drop, auto trip**
Borehole Backfill **Subgrade Cuttings**	Location **See Boring Location Map**	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	LL, %	PI, %	Percent Fines	UC, ksf
	0				SP		poorly graded SAND, brown to gray, moist to wet, very loose to med. dense					
	1		1	22				23			12	
	2											
	3		2	8				12		LS = 0		
	4						ATD ▽					
	5		3	11				21		LS = 0		
	6											
	7		4	7				21			2	
	8											
	9		5	2				21				
	10											
	11											
	12											
	13											
	14		6	2				21		LS = 0		
	15				CL		lean CLAY w/ sand, gray, wet, med. stiff					
	16											
	17											
	18											
	19		7	5				19				
	20						Bore Termination					
	21											
	22											
	23											
	24											
	25											
	26											
	27											
	28											
	29											
	30											
	31											
	32											
	33											
	34											
	35											

Project: **Proposed Historical Museum of SPI**
Project Location: **South Padre Islamd, Cameron County, Texas**
Project Number: **02-23-29124**

Key to Log of Boring
Sheet 1 of 1

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	LL, %	PI, %	Percent Fines	UC, ksf
1	2	3	4	5	6	7	8	9	10	11	12	13

COLUMN DESCRIPTIONS

1 Elevation (feet): Elevation (MSL, feet).
2 Depth (feet): Depth in feet below the ground surface.
3 Sample Type: Type of soil sample collected at the depth interval shown.
4 Sample Number: Sample identification number.
5 Sampling Resistance, blows/ft: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log.
6 Material Type: Type of material encountered.
7 Graphic Log: Graphic depiction of the subsurface material encountered.
8 MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
9 Water Content, %: Water content of the soil sample, expressed as percentage of dry weight of sample.
10 LL, %: Liquid Limit, expressed as a water content.
11 PI, %: Plasticity Index, expressed as a water content.
12 Percent Fines: The percent fines (soil passing the No. 200 Sieve) in the sample. WA indicates a Wash Sieve, SA indicates a Sieve Analysis.
13 UC, ksf: Unconfined compressive strength, in kips per square foot.

FIELD AND LABORATORY TEST ABBREVIATIONS

CHEM: Chemical tests to assess corrosivity
COMP: Compaction test
CONS: One-dimensional consolidation test
LL: Liquid Limit, percent
PI: Plasticity Index, percent
SA: Sieve analysis (percent passing No. 200 Sieve)
UC: Unconfined compressive strength test, Qu, in ksf
WA: Wash sieve (percent passing No. 200 Sieve)

MATERIAL GRAPHIC SYMBOLS

Lean CLAY, CLAY w/SAND, SANDY CLAY (CL)
Poorly graded SAND (SP)

TYPICAL SAMPLER GRAPHIC SYMBOLS

Auger sampler
Bulk Sample
3-inch-OD California w/ brass rings
CME Sampler
Grab Sample
Hand auger sampler
2.5-inch-OD Modified California w/ brass liners
Pitcher Sample
2-inch-OD unlined split spoon (SPT)
Texas Cone Penetrometer
Shelby Tube (Thin-walled, fixed head)

OTHER GRAPHIC SYMBOLS

Water level (at time of drilling, ATD)
Water level (after waiting, AW)
Minor change in material properties within a stratum
Inferred/gradational contact between strata
Queried contact between strata

GENERAL NOTES

1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

Figure B-1


APPENDIX D
SIEVE ANLYSIS DATA
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Sieve Analysis Data Sheet

ASTM D-2487

Project Name: Historical Museum of SPI **Tested By:** Molly G. **Date:** 8/4/2023

Project No.: 02-23-29124

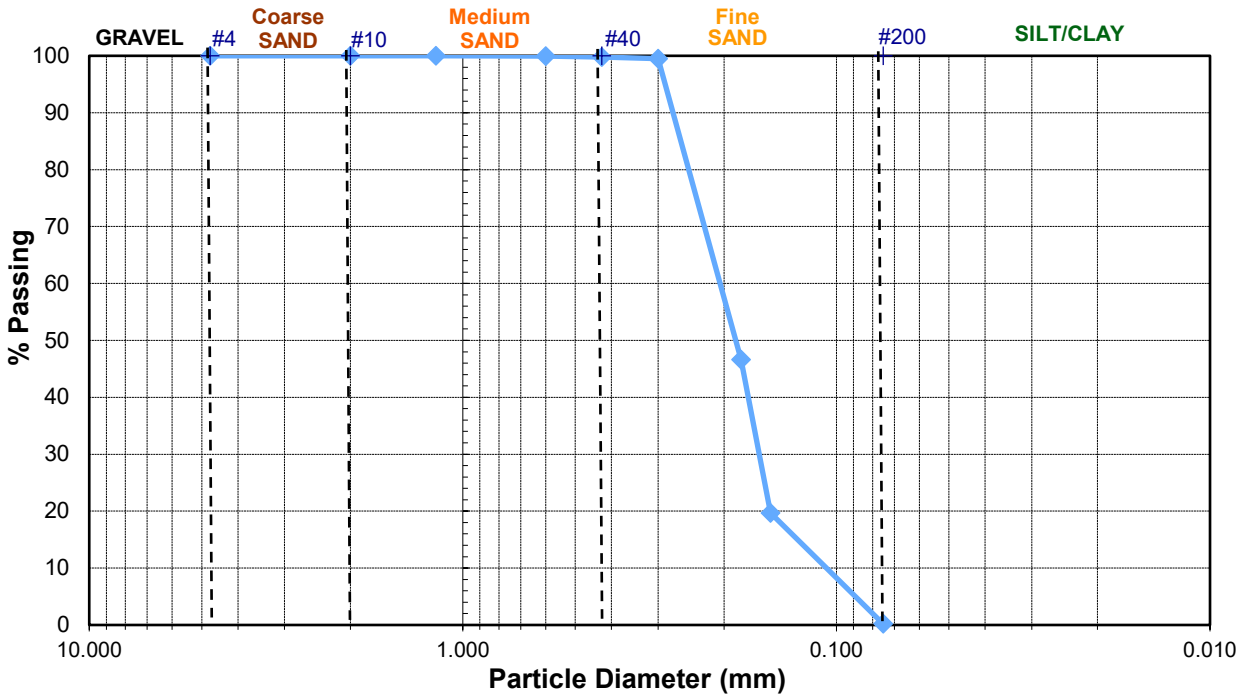
Location: South Padre Island, Texas

Borehole No.: B-1 **Depth** 2.5 - 4

Weight of Container (g): 100.0 **Weight of Container & Soil (g):** 335.4

Weight of Dry Sample (g): 235.4

Sieve Number	Diameter (mm)	Mass of Empty Sieve (g)	Mass of Sieve & Soil (g)	Soil Retained (g)	Soil Retained (%)	Soil Passing (%)
4	4.750	513.6	513.6	0.0	0.0	100.0
10	2.000	680.5	680.5	0.0	0.0	100.0
16	1.180	427.7	427.7	0.0	0.0	100.0
30	0.600	399.3	399.5	0.2	0.1	99.9
40	0.425	269.3	269.6	0.3	0.1	99.8
50	0.300	256.6	257.3	0.7	0.3	99.5
80	0.180	245.3	369.8	124.5	52.9	46.6
100	0.150	235.2	298.7	63.5	27.0	19.7
200	0.075	218.6	264.4	45.8	19.5	0.2
Pan +	-200 washed	490.5	491.0	0.5	0.2	0.0
			TOTAL:	**235.4**	**100.0**	



Grain Size Distribution Curve Results:

% Gravel: 0.0 **D_{10}:** 0.113 **C_u:** 1.87

% Sand: 99.8 **D_{30}:** 0.161 **C_c:** 1.10

% Fines: 0.2 **D_{60}:** 0.210

Sieve Analysis Data Sheet

ASTM D-2487

Project Name: Historical Museum of SPI **Tested By:** Molly G. **Date:** 8/4/2023

Project No.: 02-23-29124

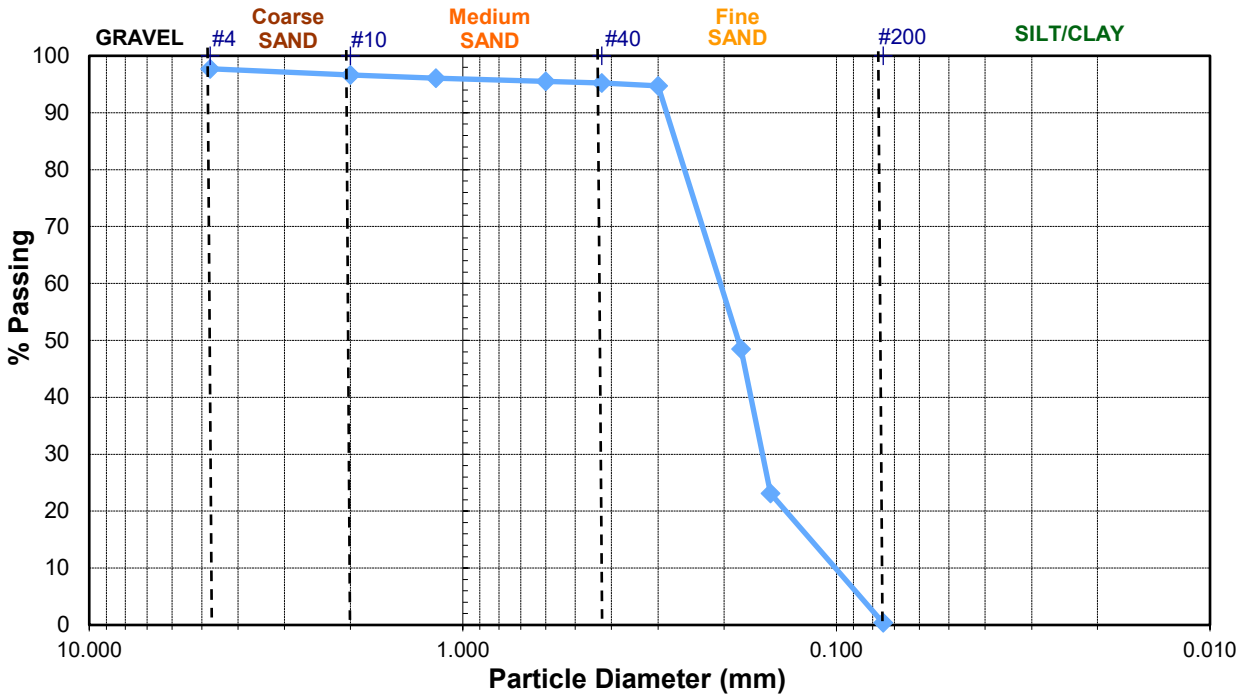
Location: South Padre Island, Texas

Borehole No.: B-1 **Depth** 13.5 - 15

Weight of Container (g): 100.0 **Weight of Container & Soil (g):** 332.3

Weight of Dry Sample (g): 232.3

Sieve Number	Diameter (mm)	Mass of Empty Sieve (g)	Mass of Sieve & Soil (g)	Soil Retained (g)	Soil Retained (%)	Soil Passing (%)
4	4.750	513.6	518.9	5.3	2.3	97.7
10	2.000	680.5	683.1	2.6	1.1	96.6
16	1.180	427.7	428.9	1.2	0.5	96.1
30	0.600	399.3	400.6	1.3	0.6	95.5
40	0.425	269.3	269.9	0.6	0.3	95.2
50	0.300	256.6	257.8	1.2	0.5	94.7
80	0.180	245.3	352.7	107.4	46.2	48.5
100	0.150	235.2	294.1	58.9	25.3	23.1
200	0.075	218.6	271.5	52.9	22.8	0.4
Pan +	-200 washed	490.5	491.4	0.9	0.4	0.0
			TOTAL:	**232.3**	**100.0**	



Grain Size Distribution Curve Results:

% Gravel: 2.3 **D_{10}:** 0.107 **C_u:** 1.97

% Sand: 97.4 **D_{30}:** 0.158 **C_c:** 1.12

% Fines: 0.4 **D_{60}:** 0.210

Sieve Analysis Data Sheet

ASTM D-2487

Project Name: Historical Museum of SPI **Tested By:** Molly G. **Date:** 8/4/2023

Project No.: 02-23-29124

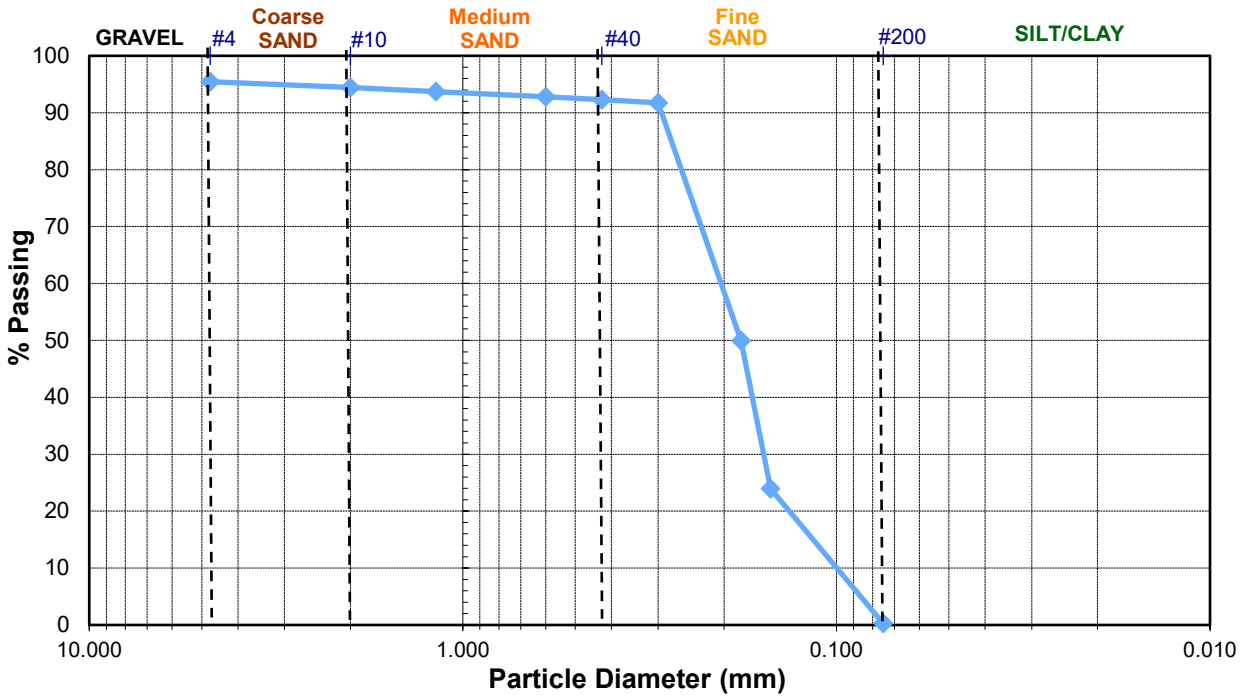
Location: South Padre Island, Texas

Borehole No.: B-2 **Depth** 0.5 - 2

Weight of Container (g): 100.0 **Weight of Container & Soil (g):** 258.8

Weight of Dry Sample (g): 158.8

Sieve Number	Diameter (mm)	Mass of Empty Sieve (g)	Mass of Sieve & Soil (g)	Soil Retained (g)	Soil Retained (%)	Soil Passing (%)
4	4.750	513.6	520.8	7.2	4.6	95.4
10	2.000	680.5	682.1	1.6	1.0	94.4
16	1.180	427.7	428.8	1.1	0.7	93.7
30	0.600	399.3	400.8	1.5	0.9	92.8
40	0.425	269.3	270.1	0.8	0.5	92.3
50	0.300	256.6	257.5	0.9	0.6	91.7
80	0.180	245.3	311.7	66.4	41.8	49.9
100	0.150	235.2	276.4	41.2	26.0	24.0
200	0.075	218.6	256.2	37.6	23.7	0.3
Pan +	-200 washed	490.5	491.0	0.5	0.3	0.0
			TOTAL:	**158.8**	**100.0**	



Grain Size Distribution Curve Results:

% Gravel: 4.6 **D_{10}:** 0.106 **C_u:** 1.98

% Sand: 95.2 **D_{30}:** 0.157 **C_c:** 1.11

% Fines: 0.3 **D_{60}:** 0.209

Sieve Analysis Data Sheet

ASTM D-2487

Project Name: Historical Museum of SPI **Tested By:** Molly G. **Date:** 8/4/2023

Project No.: 02-23-29124

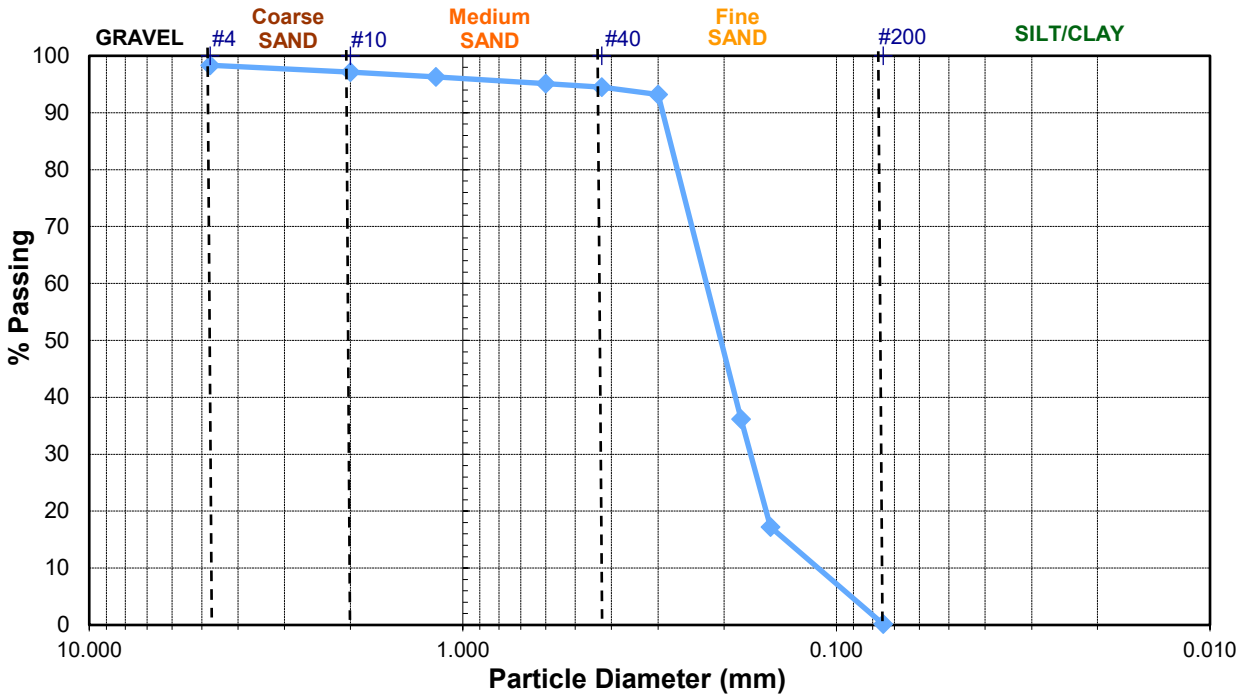
Location: South Padre Island, Texas

Borehole No.: B-2 **Depth** 6.5 - 8

Weight of Container (g): 100.0 **Weight of Container & Soil (g):** 267.1

Weight of Dry Sample (g): 167.1

Sieve Number	Diameter (mm)	Mass of Empty Sieve (g)	Mass of Sieve & Soil (g)	Soil Retained (g)	Soil Retained (%)	Soil Passing (%)
4	4.750	513.6	516.4	2.8	1.7	98.3
10	2.000	680.5	682.5	2.0	1.2	97.1
16	1.180	427.7	429.1	1.4	0.8	96.3
30	0.600	399.3	401.3	2.0	1.2	95.1
40	0.425	269.3	270.4	1.1	0.6	94.5
50	0.300	256.6	258.7	2.1	1.3	93.2
80	0.180	245.3	340.6	95.3	57.0	36.2
100	0.150	235.2	266.9	31.7	19.0	17.2
200	0.075	218.6	247.1	28.5	17.0	0.2
Pan +	-200 washed	490.5	490.7	0.2	0.1	0.0
			TOTAL:	**167.1**	**100.0**	



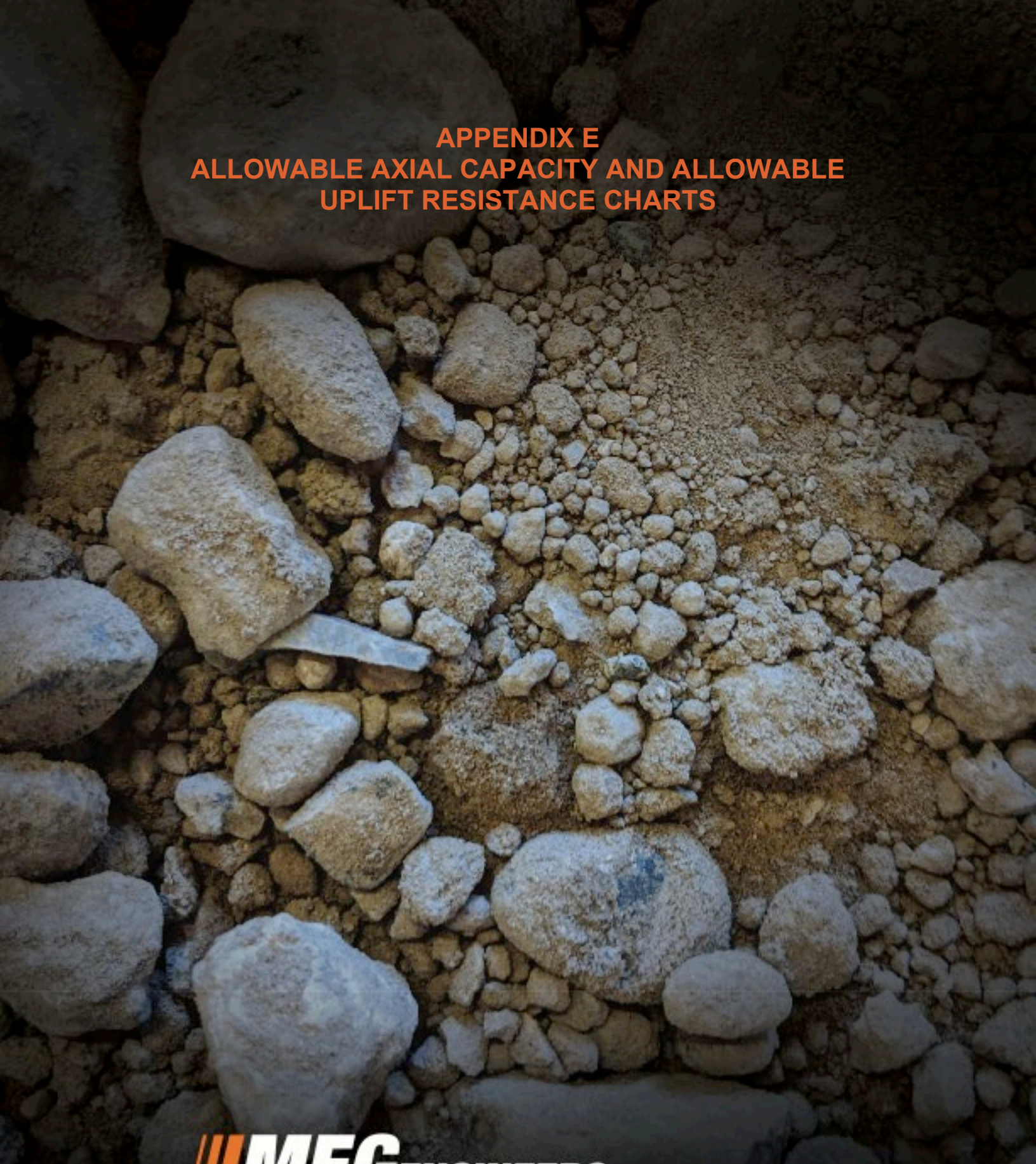
Grain Size Distribution Curve Results:

% Gravel: 1.7 **D_{10}:** 0.118 **C_u:** 1.95

% Sand: 98.2 **D_{30}:** 0.170 **C_c:** 1.06

% Fines: 0.1 **D_{60}:** 0.230

APPENDIX E
ALLOWABLE AXIAL CAPACITY AND ALLOWABLE UPLIFT RESISTANCE CHARTS



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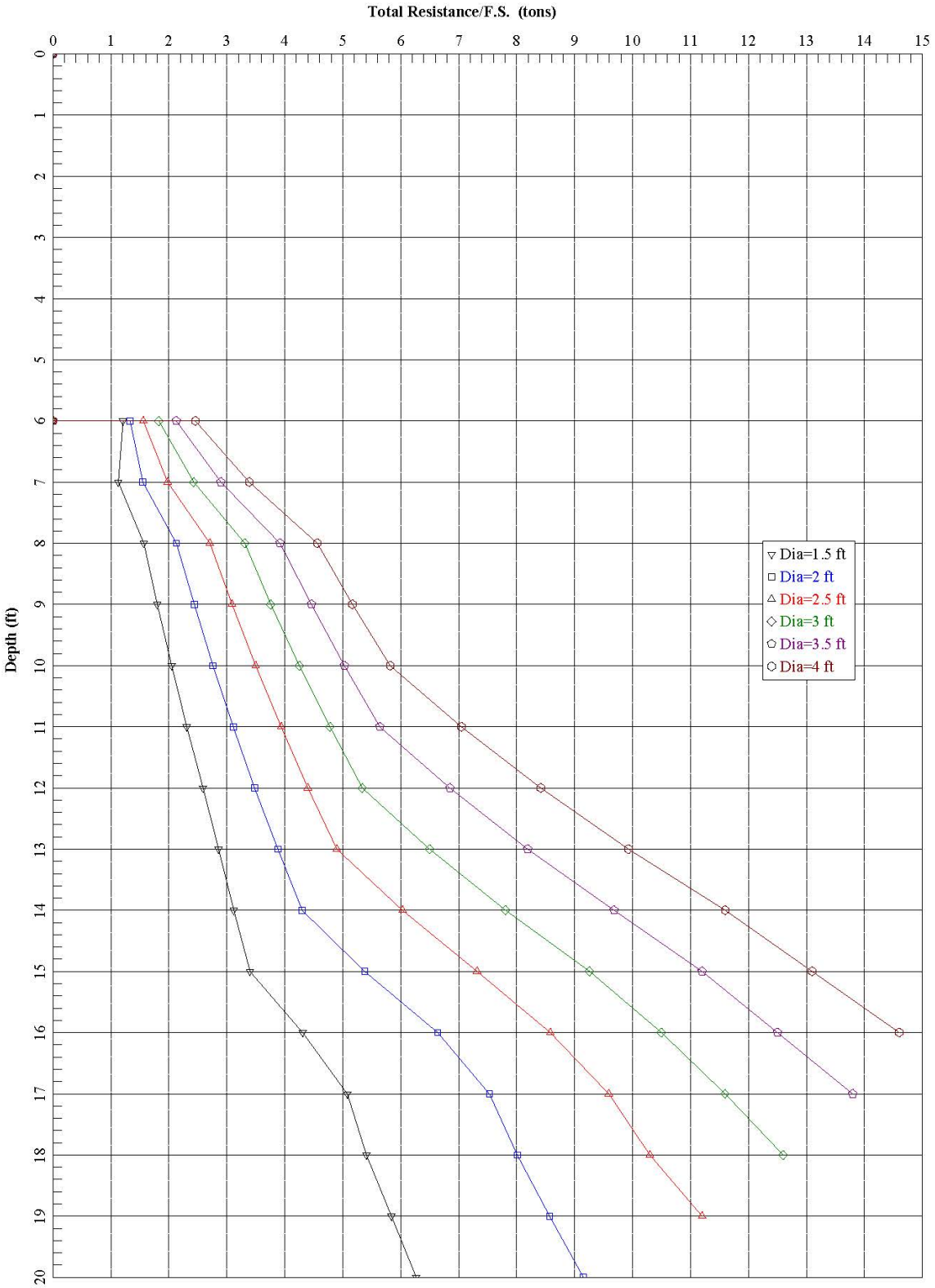
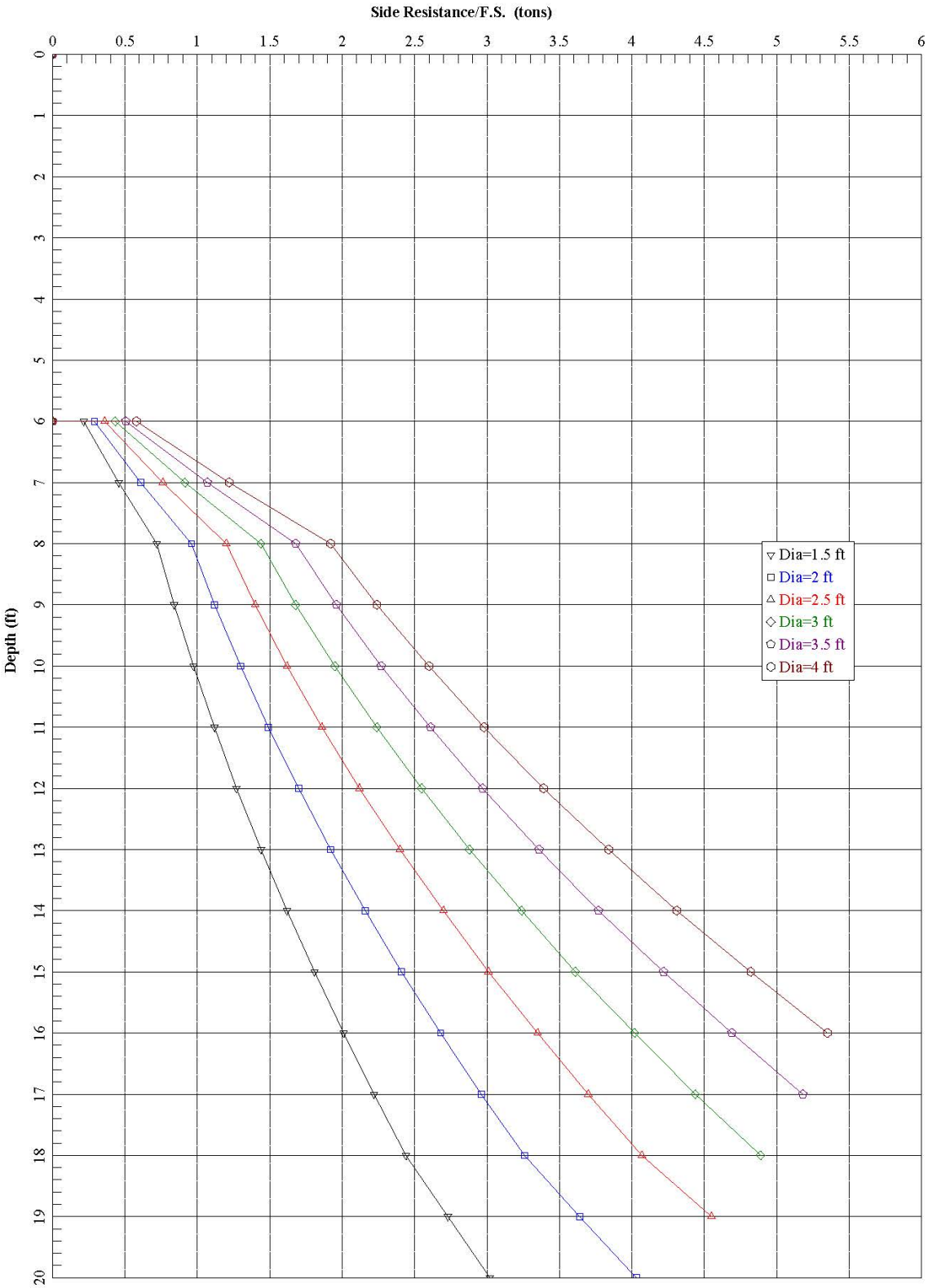


ALLOWABLE AXIAL CAPACITY

PROPOSED
HISTORICAL MUSEUM OF SOUTH PADRE ISLAND
SOUTH PADRE ISLAND, CAMERON COUNTY, TEXAS

MILLENNIUM ENGINEERS GROUP, INC.
5804 N. GUMWOOD AVENUE
PHARR, TEXAS 78577
WWW.MEGENGINEERS.COM
TEL: 956-702-8500
FAX: 956-702-8140

MEG PROJECT: 02-23-29124 / DATE: 8/24/2023 / APPROVED BY: A. PALMA / DRAWN BY: L. PUENTES



ALLOWABLE UPLIFT RESISTANCE

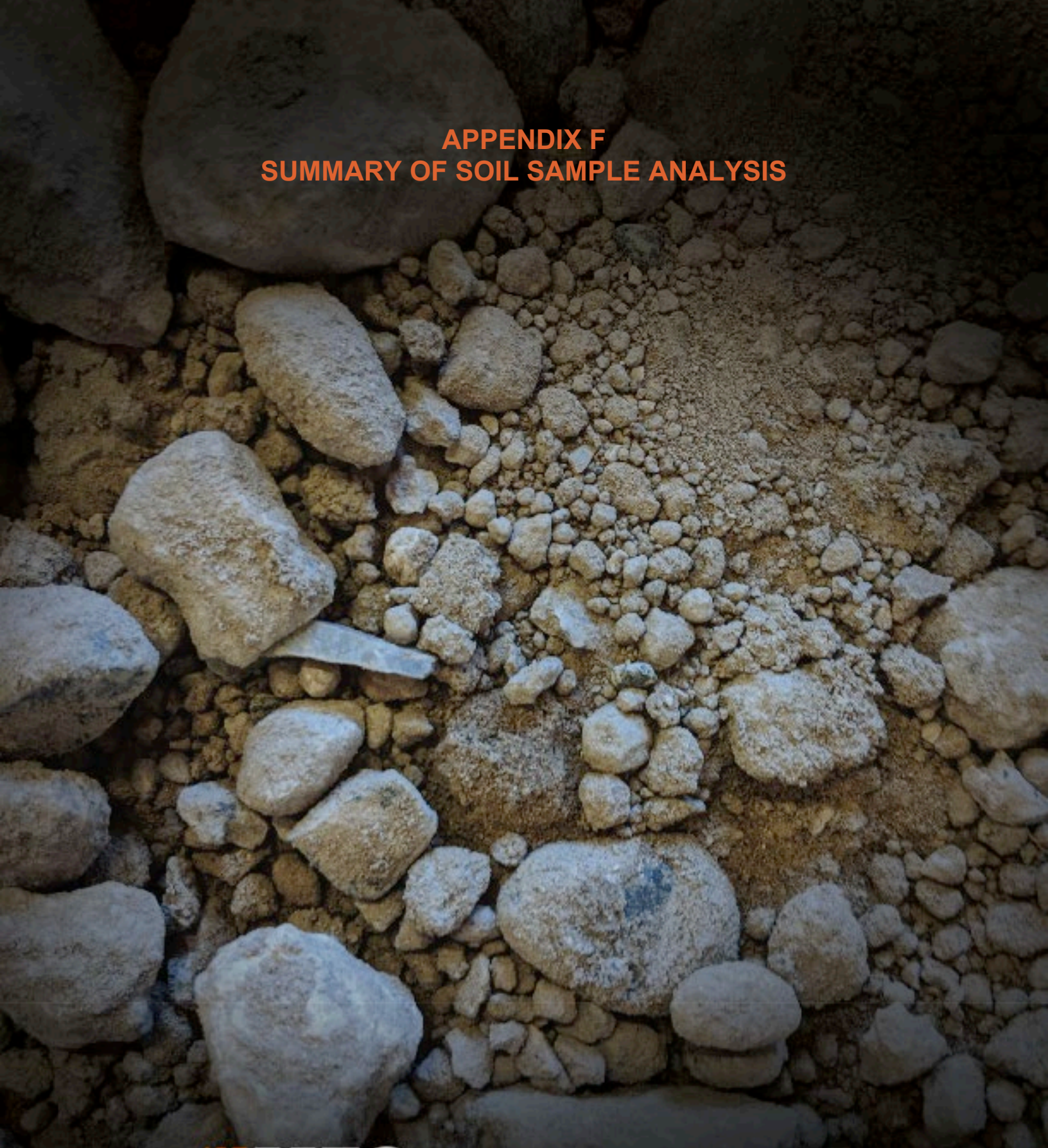
PROPOSED
HISTORICAL MUSEUM OF SOUTH PADRE ISLAND

SOUTH PADRE ISLAND, CAMERON COUNTY, TEXAS

MILLENNIUM ENGINEERS GROUP, INC.
5804 N. GUMWOOD AVENUE
PHARR, TEXAS 78577
WWW.MEGENGINEERS.COM
TEL: 956-702-8500
FAX: 956-702-8140

MEG PROJECT: 02-23-29124 / DATE: 8/24/2023 / APPROVED BY: R. PALMA / DRAWN BY: L. PUENTES

APPENDIX F
SUMMARY OF SOIL SAMPLE ANALYSIS



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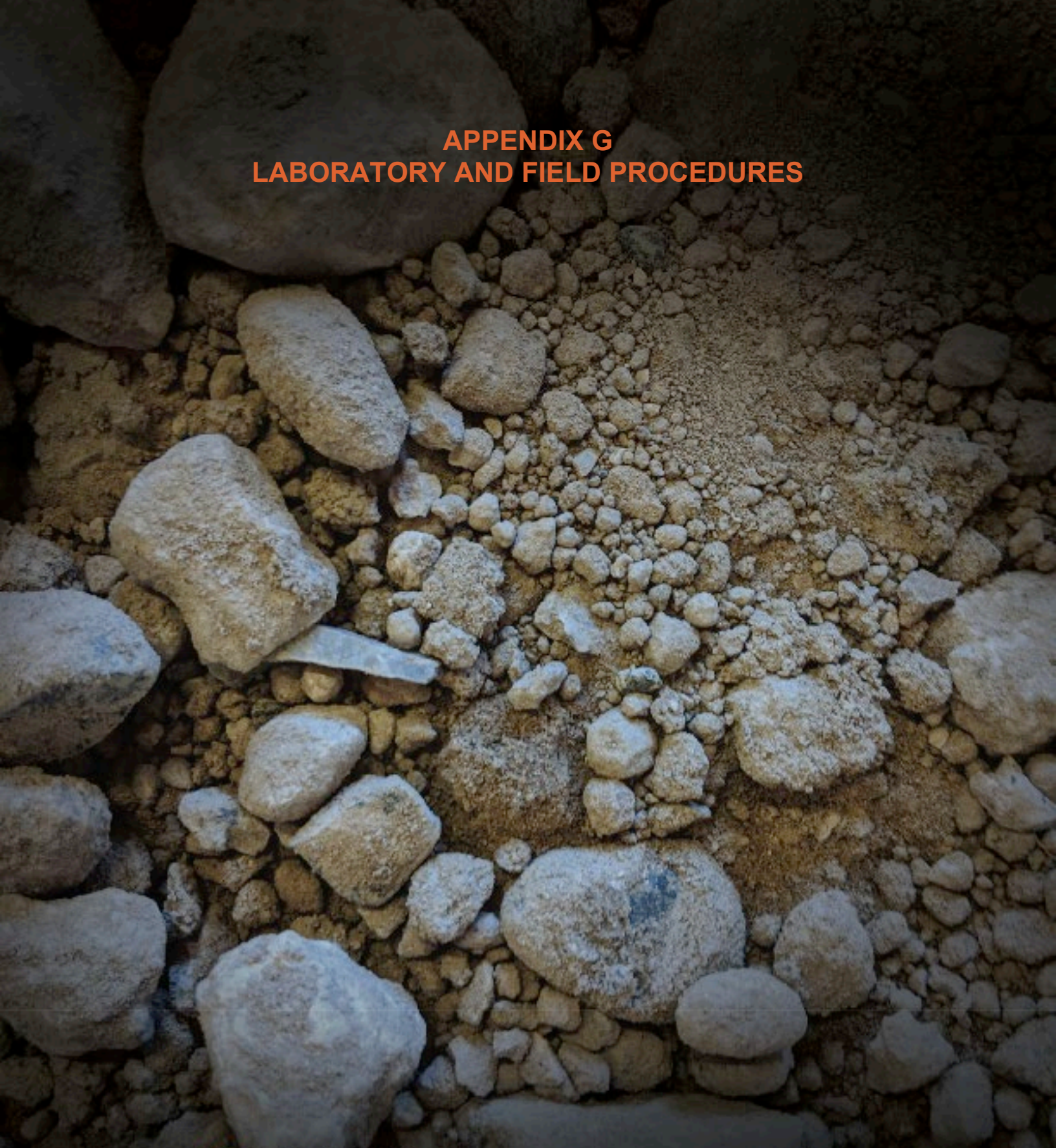
Summary of Soil Sample Analyses

Project Name: Proposed Historical Museum of South Padre Island Renovations

Boring No.	Sample Depth (ft)	Blows Per (ft)	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	-200% Sieve	Shear Strength (tsf)	Dry Unit Weight (pcf)	USCS
B-1	.5 - 2	15	15			LS = 0				SP
	2.5 - 4	19	22				1			
	4.5 - 6	6	22							
	6.5 - 8	13	35			LS = 0				SP
	8.5 - 10	6	21							
	13.5 - 15	2	24				6			
	18.5 - 20	5	21	21	11	11				CL
B-2	.5 - 2	22	23				12			
	2.5 - 4	8	12			LS = 0				SP
	4.5 - 6	11	21			LS = 0				SP
	6.5 - 8	7	21				2			
	8.5 - 10	2	21							
	13.5 - 15	2	21			LS = 0				SP
	18.5 - 20	5	19							

LS = Linear Shrinkage

APPENDIX G
LABORATORY AND FIELD PROCEDURES



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Laboratory and Field Test Procedures

Soil Classification Per ASTM D2487-93:

This soil-testing standard was used for classifying soils according to the Unified Soil Classification System. The soil classifications of the earth materials encountered are as noted in the attached boring logs.

Soil Water Content Per ASTM D2216-92:

This test determines the water content of soil or rock expressed as a percentage of the solid mass of the soil. The test results are listed under **MC** in the attached boring logs.

Soil Liquid Limit Per ASTM D4318-93:

The soil Liquid Limit identifies the upper limit soil water content at which the soil changes from a moldable (plastic) physical state to a liquid state. The Liquid Limit water content is expressed as a percentage of the solid mass of the soil. The test results are listed under **LL** in the attached boring logs.

Soil Plastic Limit Per ASTM D4318-93:

The soil Plastic Limit identifies lower limit soil water content at which the soil changes from a moldable (plastic) physical state to a non-moldable (semi-solid) physical state. The Plastic Limit water content is expressed as a percentage of the solid mass of the soil. The test results are listed under **PL** in the attached boring logs.

Plasticity Index Per ASTM D4318-93:

This is the numeric difference between the Liquid Limit and Plastic Limit. This index also defines the range of water content over which the soil-water system acts as a moldable (plastic) material. Higher Plasticity Index (PI) values indicate that the soil has a greater ability to change in soil volume or shrink and swell with lower or higher water contents, respectively. The test results are listed under **PI** in the attached boring logs.

Standard Penetration Test (SPT) and Split Spoon Sampler (SS) per ASTM D 1586:

This is the standard test method for both the penetration test and split-barrel (spoon) sampling of soils. This sampling method is used for soils or rock too hard for sampling using Shelby Tubes. The method involves penetration of a split spoon sampler into the soil or rock through successive blows of a 140-pound hammer in a prescribed manner.

Blow Counts (N) per ASTM D 1586:

This is the number of blows required to drive a Split Spoon Sampler by means of a 140 pound hammer for a distance of 12 inches in accordance with the variables stated in the test procedures.

Shelby Tube (ST) per ASTM D 1587:

This procedure is for using a thin-walled metal tube to recover relatively undisturbed soil samples suitable for laboratory tests of physical properties.

Dry Density (DD) per ASTM D 2937:

This procedure is for the determination of in-place density of soil. The test results are measured in pounds per cubic foot, pcf.

Unconfined Compression Test (Uc) per ASTM D 2166:

This test method covers the determination of the unconfined compressive strength of cohesive soil in the undisturbed, remolded, or compacted condition, using strain-controlled application of the axial load.

Minus No. 200 Sieve per ASTM D 1140:

This test method covers determination of the amount of material finer than a Number 200 sieve by washing. The results are stated as a percent of the total dry weight of the sample.

Pocket Penetrometer (PP):

This test method is an accepted modification of ASTM D 1558 test method for establishing the moisture-penetration resistance relationships of fine-grained soils. The test results are measured in tons per square foot, tsf. The strength values provided by this method should be considered qualitatively.

Rock Quality Designation (RQD):

The measure of the quality of a rock mass defined by adding intact rock core pieces greater than four inches in length by the total length of core advance.

Recovery Ratio (REC):

The Recovery Ratio is equal to the total length of core recovered divided by the total length of core advance.

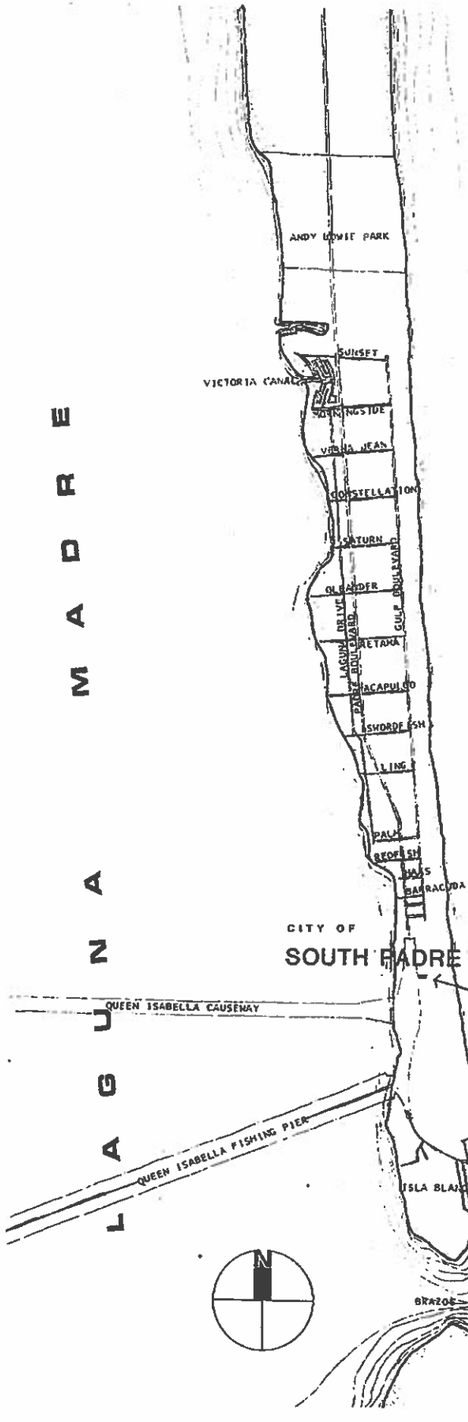
Boring Logs:

This is a summary of the above-described information at each boring location.

Exhibits Now on Display

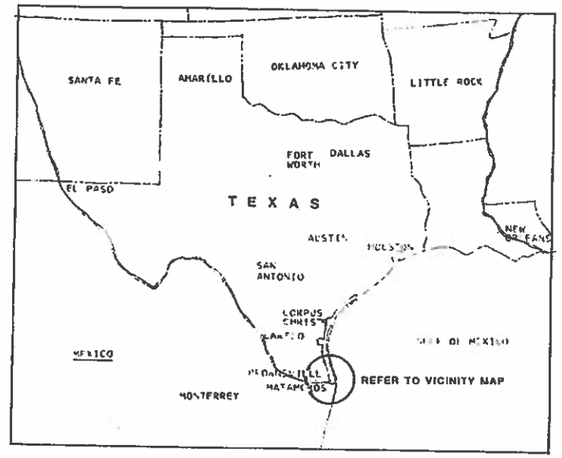
at the Visitors Center


Casino at Tarpon Beach

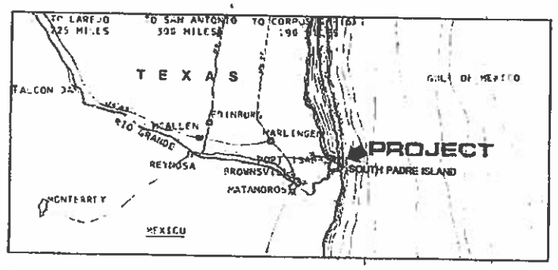


LOCATION MAP

SCALE: 1" = 100'



GEOGRAPHIC AREA N.T.S.



VICINITY MAP N.T.S.

TOWN OF SOUTH PADRE ISLAND
BUILDING OFFICIAL
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TOURIST BUREAU OFFICE EXPANSION

SOUTH PADRE ISLAND, TEXAS

INDEX

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TOWN OF SOUTH PADRE ISLAND
BUILDING OFFICIAL
12 NOV 82
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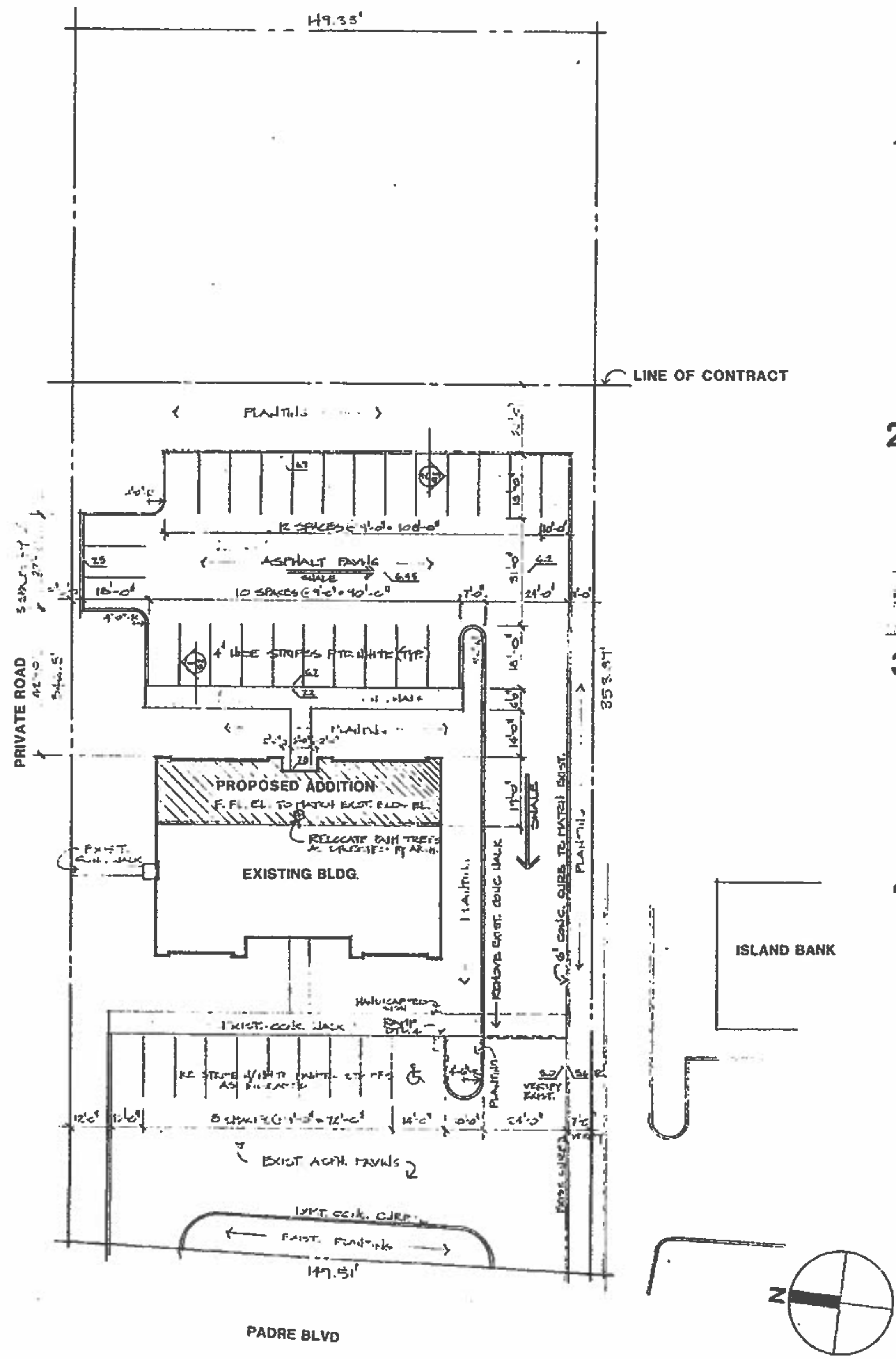
115 WEST VAN BUREN HARLINGEN, TEXAS 78550 (512) 428 - 4334

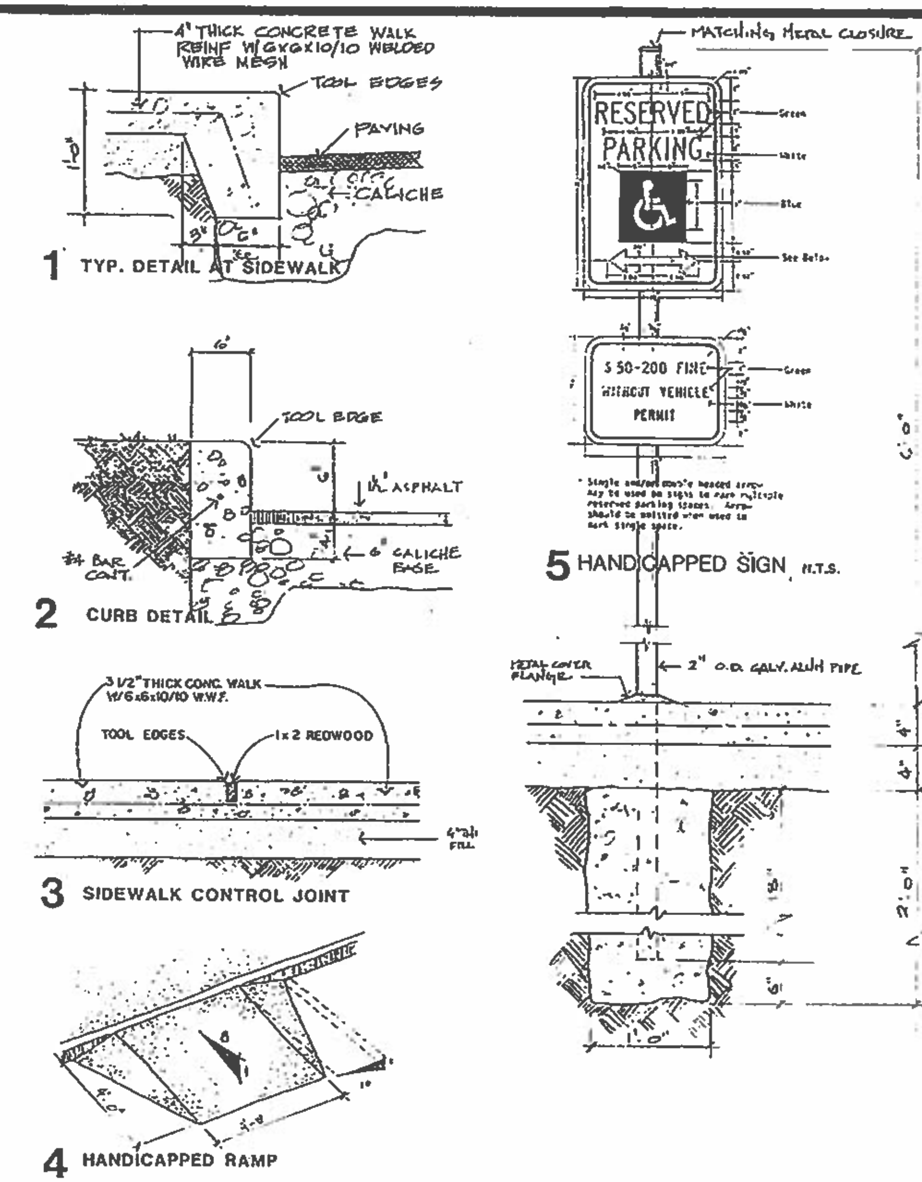
PROJECT NO. 82040
TOURIST BUREAU
OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN: HJW
CHD:
REV. 1 11/5/82

SHEET NO. G1 OF 2
DATE 9/1/82



SITE PLAN
SCALE 1": 20'-0"



GENERAL NOTES

1. ALL AREAS NOT COVERED BY STRUCTURES, PAVING WALKS, ETC. SHALL BE CONSIDERED PLANTING AREAS.
2. ALL PLANTING AREAS SHALL RECIEVE MINIMUM 6" GOOD TOP SOIL.
3. UNLESS OTHERWISE NOTED, ALL WALKS SHALL BE 4'-0" IN WIDTH.
4. PROVIDE HOSE BIBBS @ MIN. 75' O.C. AT BLD'G. EXTERIOR & @ ALL CORNERS.
5. COORDINATE LOCATIONS OF EQUIPMENT FOR UNDERGROUND ELECTRIC SUPPLY WITH C.P.L., WATER & SEWER TAPS WITH C.C.F.W.S. #1 & TELEPHONE EQUIPMENT WITH SOUTHWESTERN BELL TELEPHONE CO.

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PROJECT NO. 82040
TOURIST BUREAU
OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN. LABUNSKI
CHD.
REV.

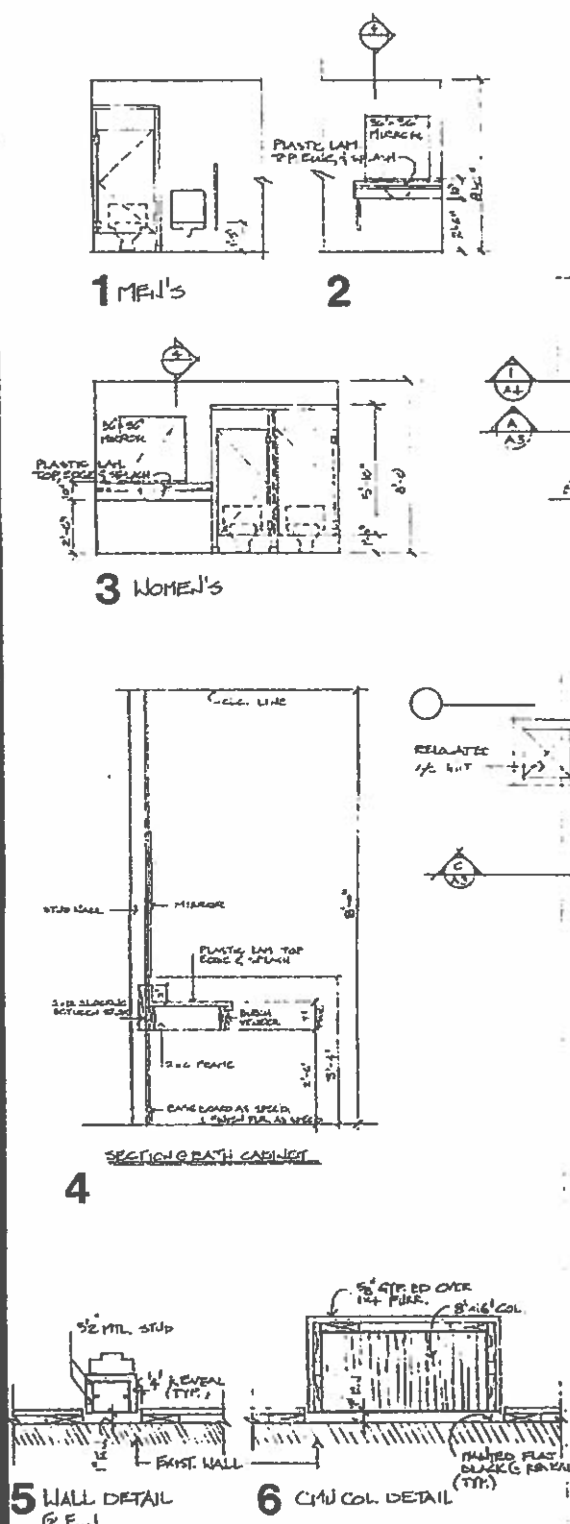
SHEET NO. G2 OF 2
DATE 6/3/82

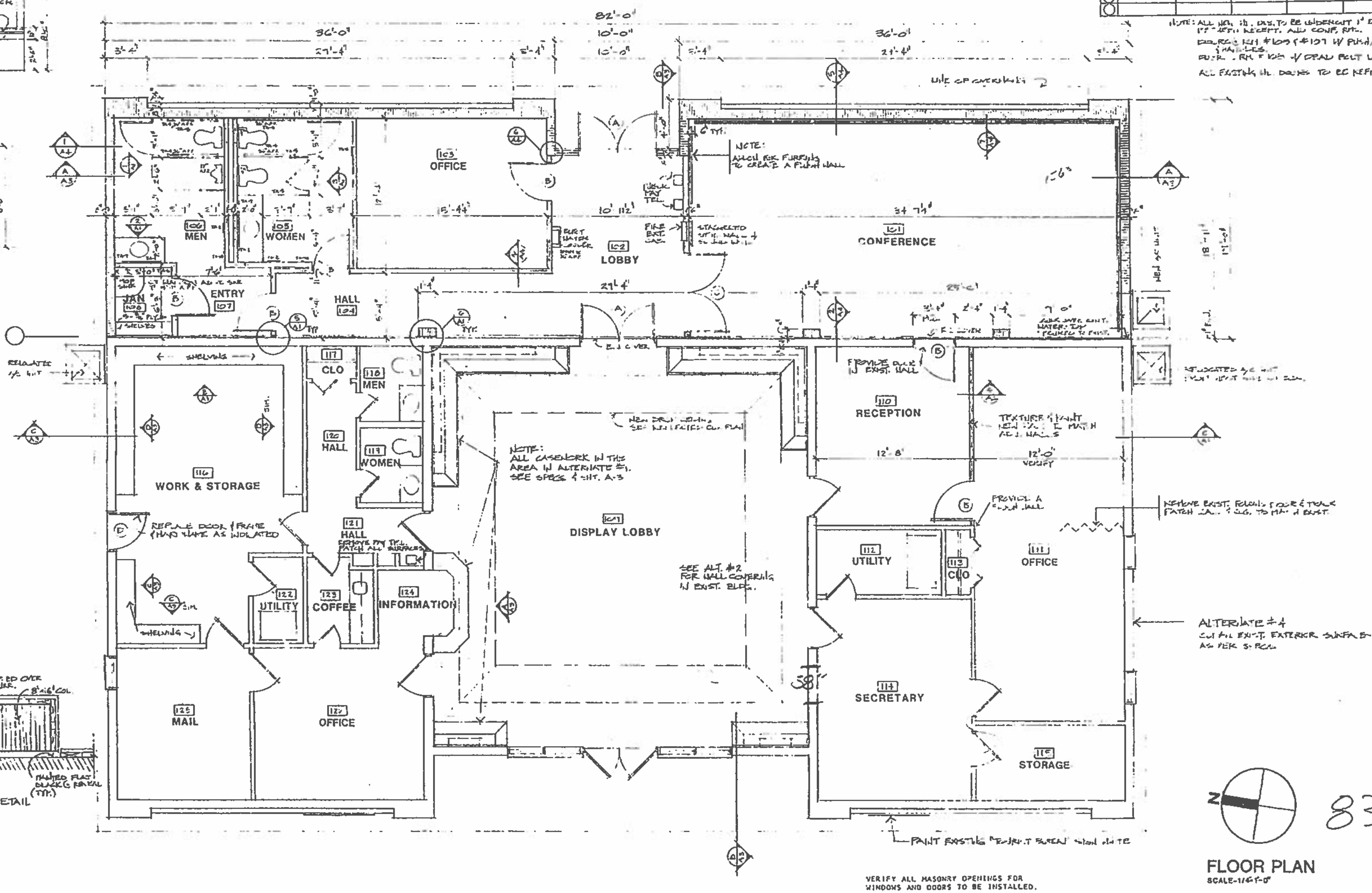
116 WEST VAN BUREN HARLINGEN, TEXAS 78550 (512) 428 - 4334

DOOR SCHEDULE

MARK	SIZE	MATERIAL	CORE	FRAME	REMARKS
A	PR 3'x7'	BRONZE ALUM			MATCH EXIST. ENTRY DOORS
B	3'x6'8"x1¾	WOOD	S.C.	H.M.	MATCH EXIST. WOOD DOORS
C	PR. 3'x7'	WOOD	S.C.	H.M.	15 PANEL DOORS
D	3'x6'8"x1¾	H.M.		H.M.	

NOTE: ALL NEW INT. DRS. TO BE UNDERCUT 1" EXCEPT @ DOOR 117 ... RECEPT. ALL CONF. RM.
DOUBLE ... #105 & #107 W/ PUSH/PULL PLATES & HANDLES.
... RM # 105 W/ DEAD BOLT LOCK & PULL
ALL EXISTING INT. DOORS TO BE REFINISHED





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FLOOR PLAN
SCALE-1/4"=1'-0"

VERIFY ALL MASONRY OPENINGS FOR WINDOWS AND DOORS TO BE INSTALLED.

VERIFY ALL CABINET OPENINGS BEFORE INSTALLATION.

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PROJECT NO. 82040
TOURIST BUREAU OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN: labunski
CHK:
REV: 9-1-82, 11-8-82

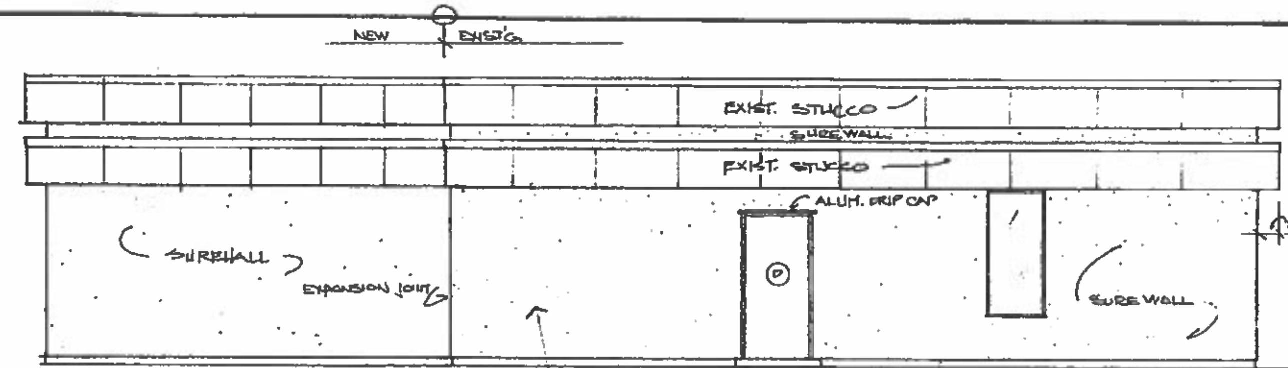
SHEET NO. A1 of 5
DATE: 7/1/82

ROOM FINISH SCHEDULE

ROOM NO	ROOM DESCRIPTION	FLOOR: EXIST.	FLOOR: EXPOSED CONC.	FLOOR: CER. TILE	FLOOR: CARPET	FLOOR: —	BASE: EXIST.	BASE: COMPO.	BASE: CER. TILE	BASE: —	NORTH: PAINT EXIST.	NORTH: PTD. TEXT GYP. BD.	NORTH: VINYL FABRIC	NORTH: —	SOUTH: PAINT EXIST.	SOUTH: PTD. TEXT GYP. BD.	SOUTH: VINYL FABRIC	SOUTH: —	EAST: PAINT EXIST.	EAST: PTD. TEXT GYP. BD.	EAST: VINYL FABRIC	EAST: ALUM. STOREFRONT	WEST: PAINT EXIST.	WEST: PTD. TEXT GYP. BD.	WEST: VINYL FABRIC	CEIL'G: EXIST.	CEIL'G: 1x1 ACOUST. LAY-IN	CEIL'G: EXPOSED [illegible]	CEIL'G: [illegible]	CLG. HT: 8'-0"	CLG. HT: 9'-0"	CLG. HT: 11'-0"	REMARKS
101	CONFERENCE				●			●					●				●				●				●		●			●			
102	LOBBY			●					●				●				●				●	●			●		●				●		CEIL. T. TO MATCH EXIST. CEIL. T.
103	OFFICE				●			●					●				●				●				●		●			●			
104	HALL			●					●				●				●				●				●		●				●		CEIL. T. TO MATCH EXIST. CEIL. T.
105	WOMEN			●					●				●				●				●				●			●		●			DO
106	MEN			●					●				●				●				●				●			●		●			DO
107	ENTRY			●					●				●				●				●				●			●		●			DO
108	JANITOR		●					●				●				●				●				●				●		●			CER. T. WAINSCOT AS INDICATED
109	DISPLAY LOBBY	●					●				●				●				●				●				●		●		●	●	
110	RECEPTION	●					●				●				●				●				●			●				●			
111	OFFICE	●					●				●				●				●				●			●				●			
112	UTILITY & STORAGE	●					●				●				●				●				●			●							
113	CLOSET	●					●				●				●				●				●			●							
114	SECRETARY	●					●				●				●				●				●			●							
115	STORAGE	●					●				●				●				●				●			●							
116	WORK & STORAGE	●					●				●				●				●				●			●							
117	CLOSET	●					●				●				●				●				●			●							
118	MEN	●					●				●				●				●				●			●							
119	WOMEN	●					●				●				●				●				●			●							
120	HALL	●					●				●				●				●				●			●							
121	HALL	●					●				●				●				●				●			●							
122	UTILITY	●					●				●				●				●				●			●							
123	COFFEE	●					●				●				●				●				●			●							
124	INFORMATION	●					●				●				●				●				●			●							
125	MAIL	●					●				●				●				●				●			●							
126	OFFICE	●					●				●				●				●				●			●							

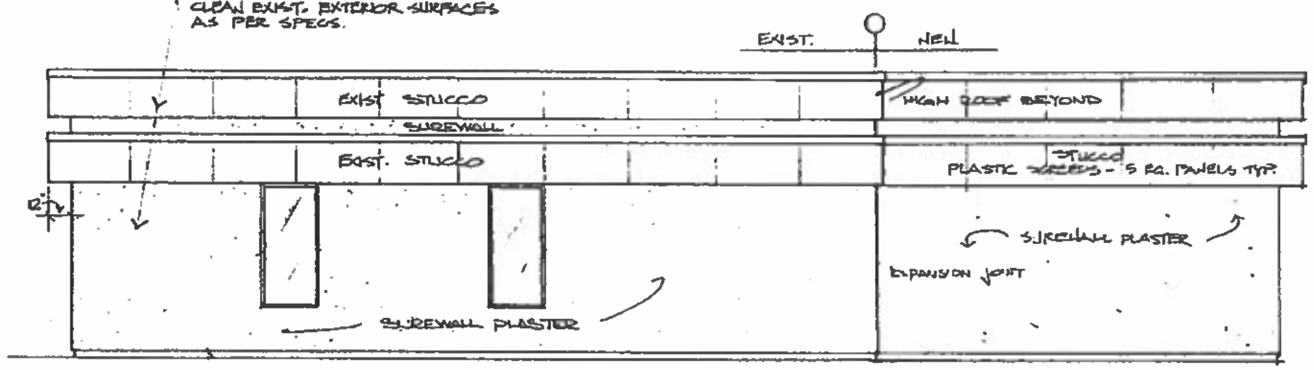
NOTE:
1. VINYL FABRIC #1: GENON, "STRIA" AS SELECTED BY ARCH. ROOM 101, ABOVE CHAIR RAIL
2. VINYL FABRIC #2: GENON, "STRIA" AS SELECTED BY ARCH. ROOM 101, BELOW CHAIR RAIL & WEST HALL
3. VINYL FABRIC #3: GENON, "MAYA" AS SELECTED BY ARCH. ROOM 102 THRU 107, 109 THRU 111, 114 & 124

4. SEE ALTERNATE #2 FOR WALL COVERING IN EXIST. BLDG. PROVIDE COMPO BASE W/ ALT. #2.

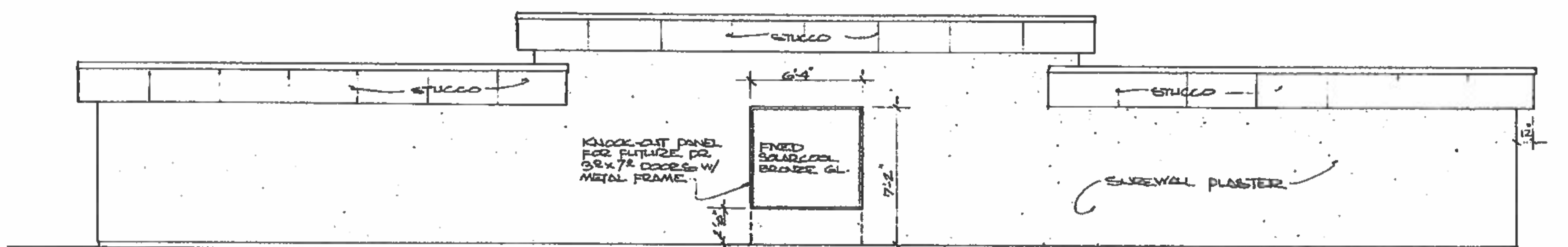


NORTH ELEVATION

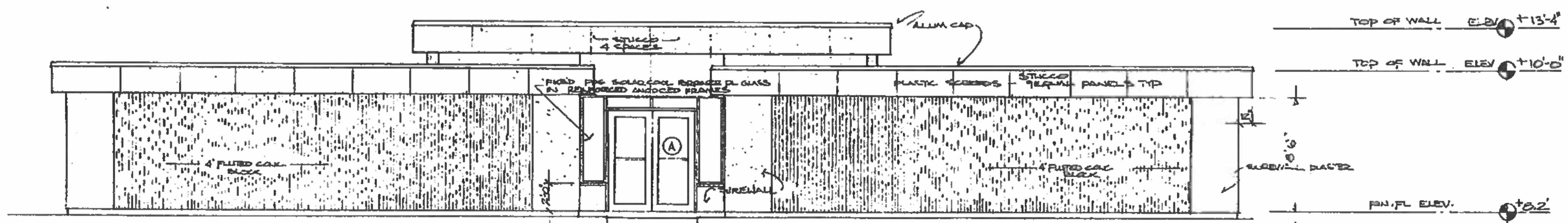
ALTERNATE #4
CLEAN EXIST. EXTERIOR SURFACES AS PER SPECS.



SOUTH ELEVATION



EXISTING - EAST ELEVATION



NEW EAST ELEVATION
SCALE: 1/4" = 1'-0"

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NOTE:
ALL EXTERIOR FINISHES TO MATCH EXIST. EXTERIOR FINISHES

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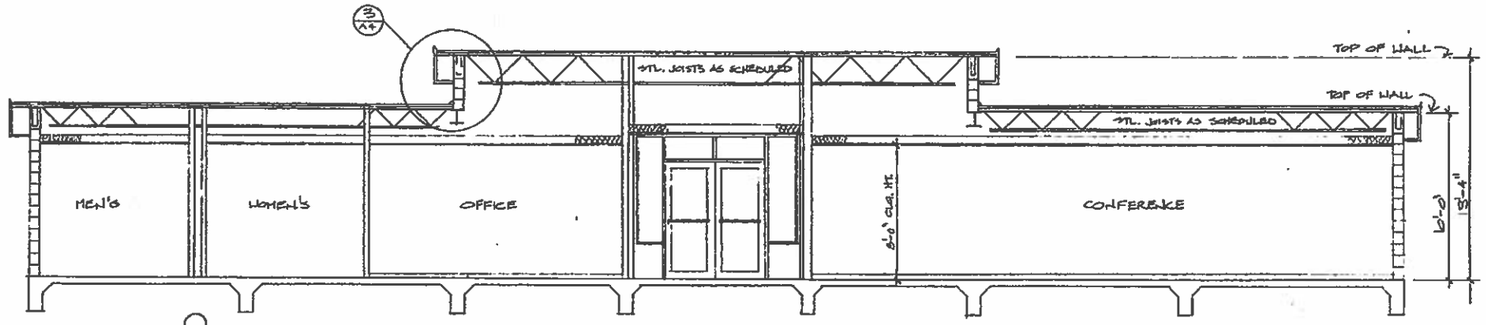
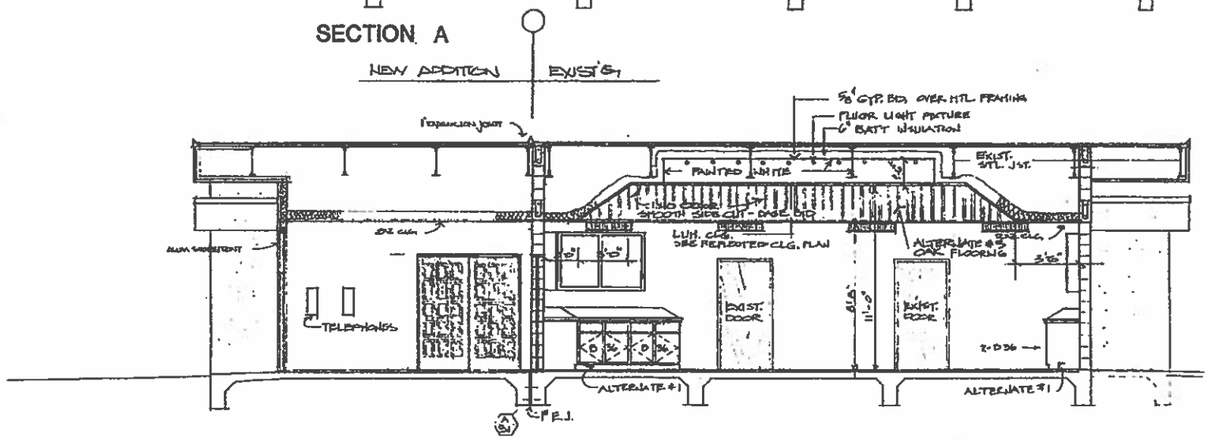
PROJECT NO. 82040
TOURIST BUREAU OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN. / CKD. / REV. 1 11/27/82 11/5/82

SHEET NO. A2 of 5
DATE 8/3/82



SECTION A

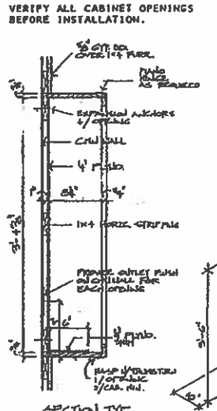


SECTION B

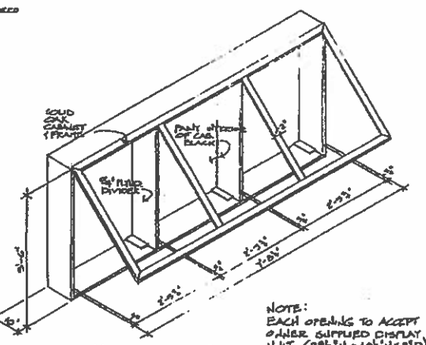
ALTERNATE #1

1. SEE SPECS FOR ALTERNATE REQUIREMENTS.
2. BASE CABINETS SHALL BE "C.M.I." MODEL BY MERILLAT.
3. ALL PLASTIC LAM. SHALL MATCH PLASTIC LAM. ON BASE CABINETS.
4. ALL OAK TRIM AS NOTED SHALL MATCH BASE CABINET OAK TRIM IN DETAIL.

VERIFY ALL CABINET OPENINGS BEFORE INSTALLATION.

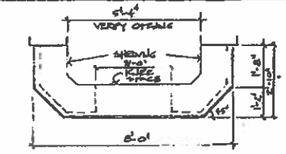


SECTION TYP. @ DISPLAY CABINET

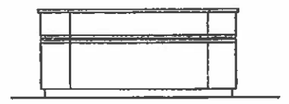


5 UNIT DISPLAY CABINET

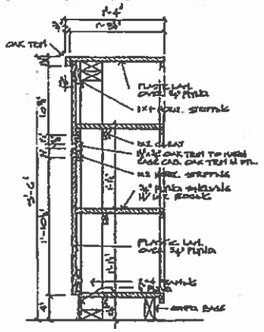
NOTE:
EACH OPENING TO ACCEPT OWNER SUPPLIED DISPLAY UNIT. (29½"W x 10½"H x 8"D)
PROVIDE A TOTAL OF 15 OPENINGS



DESK PLAN



A DESK ELEVATION



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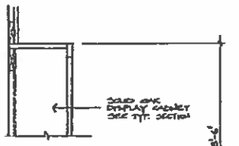
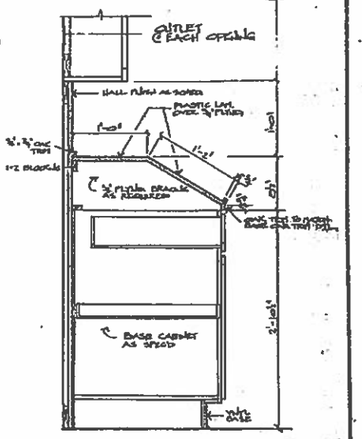
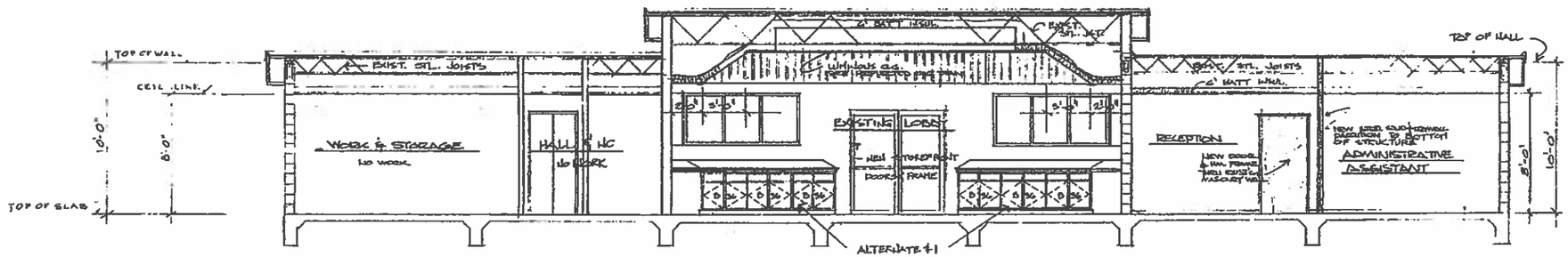
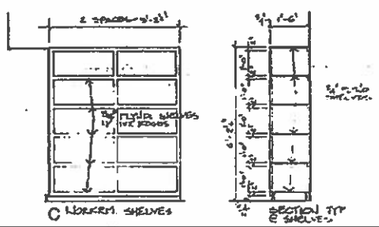




SECTION @ DISPLAY CABINET

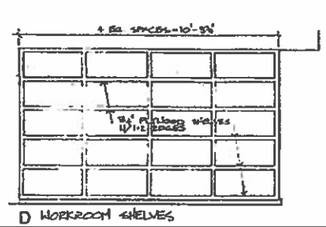


SECTION C

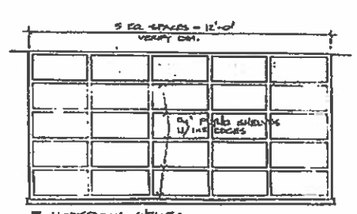


C WORKRM. SHELVES

SECTION TYP @ SHELVES



D WORKROOM SHELVES



E WORKROOM SHELVES

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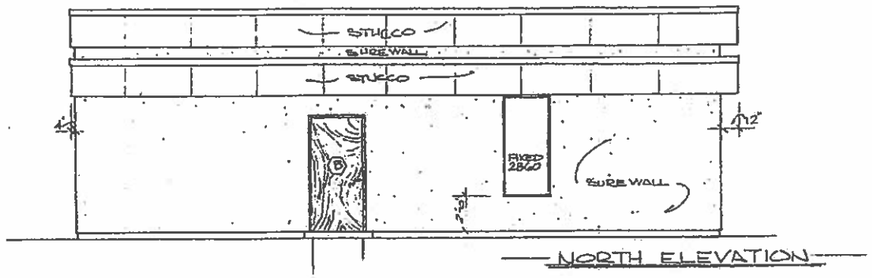
PROJECT NO. 8204D
TOURIST BUREAU
OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

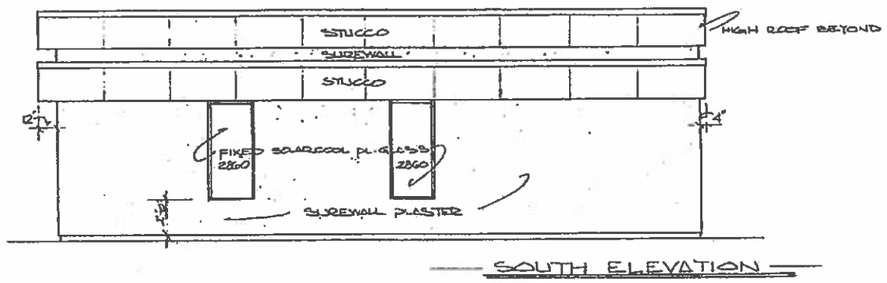
DWN : LAL
CHD :
REV : 1 ADD'L SHT'L 11/9/82

SHEET NO. A3 OF 5
DATE : 8/3/82

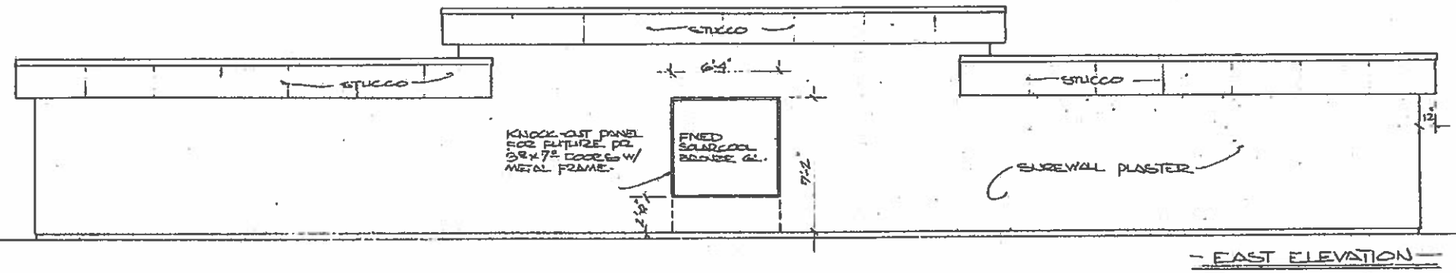
BRUNING 4023 35531



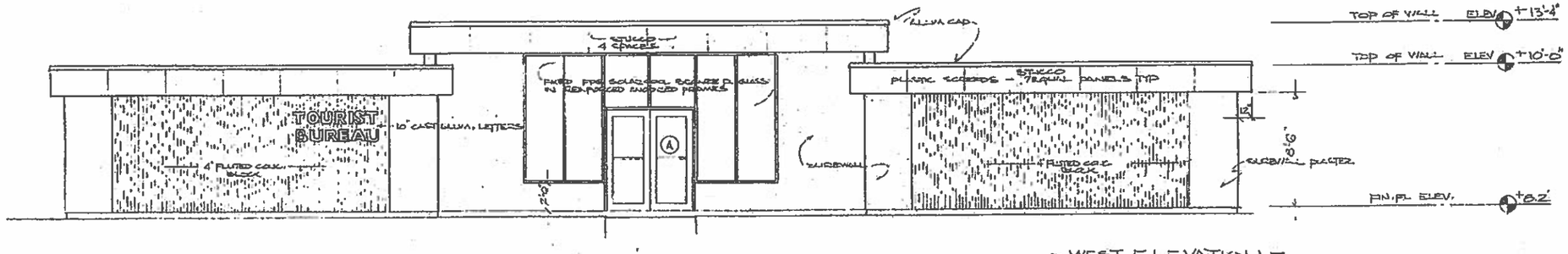
NORTH ELEVATION



SOUTH ELEVATION



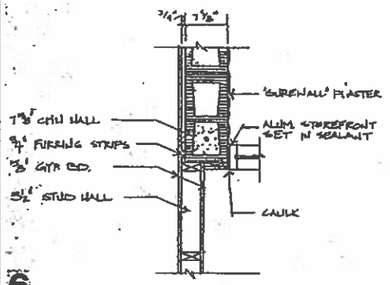
EAST ELEVATION



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

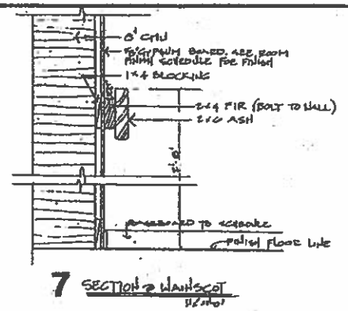
181

ARCHITECT RICK LABUNSKI RICHARD · GAIL STUDIOS P.O. BOX 2094, SOUTH PADRE ISLAND, TEXAS 78578, 943-5131	PROJECT TITLE: TOURIST CENTER OWNER: SOUTH PADRE ISLAND TOURIST DEVELOPMENT BUREAU	PROJECT NO.: 12-27-76 REFER TO NO.	SHEET TITLE: EXTERIOR ELEVATIONS CONTENTS	DRAWN BY: GAL CHECKED BY	DATE: 12/7/76 REVISED 1 12/8/76 2 3 4 5	SHEET	A3A OF .

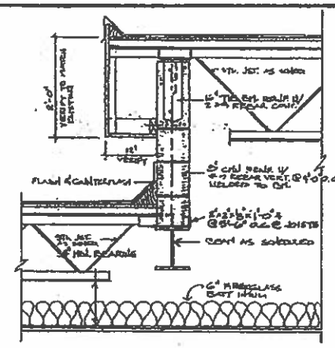


6

PLAN DETAIL AT CMU/STUD WALL INTERSECTION
SCALE 1"=1'-0"



7 SECTION @ WAINSCOT



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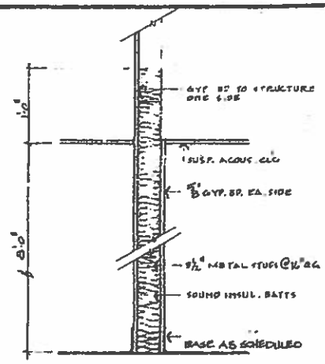

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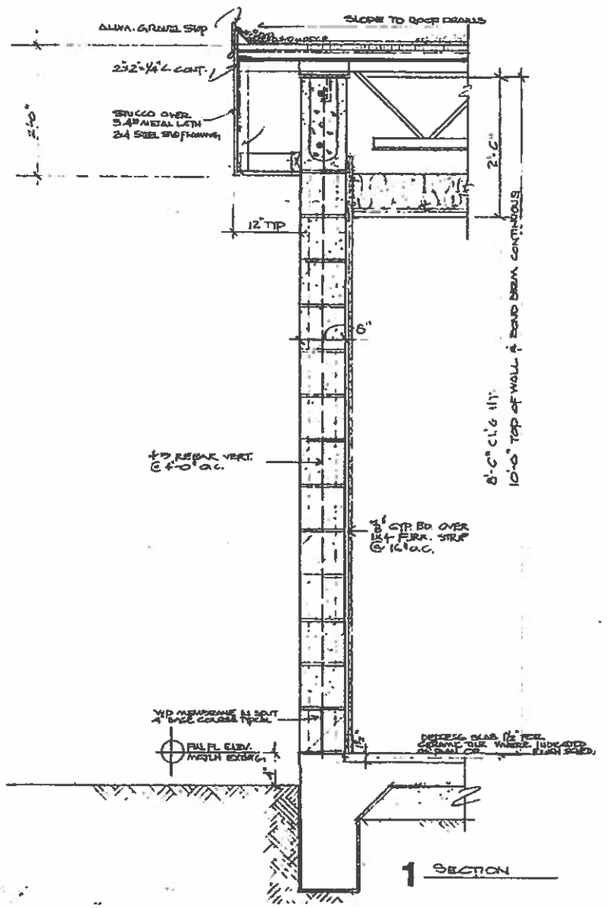
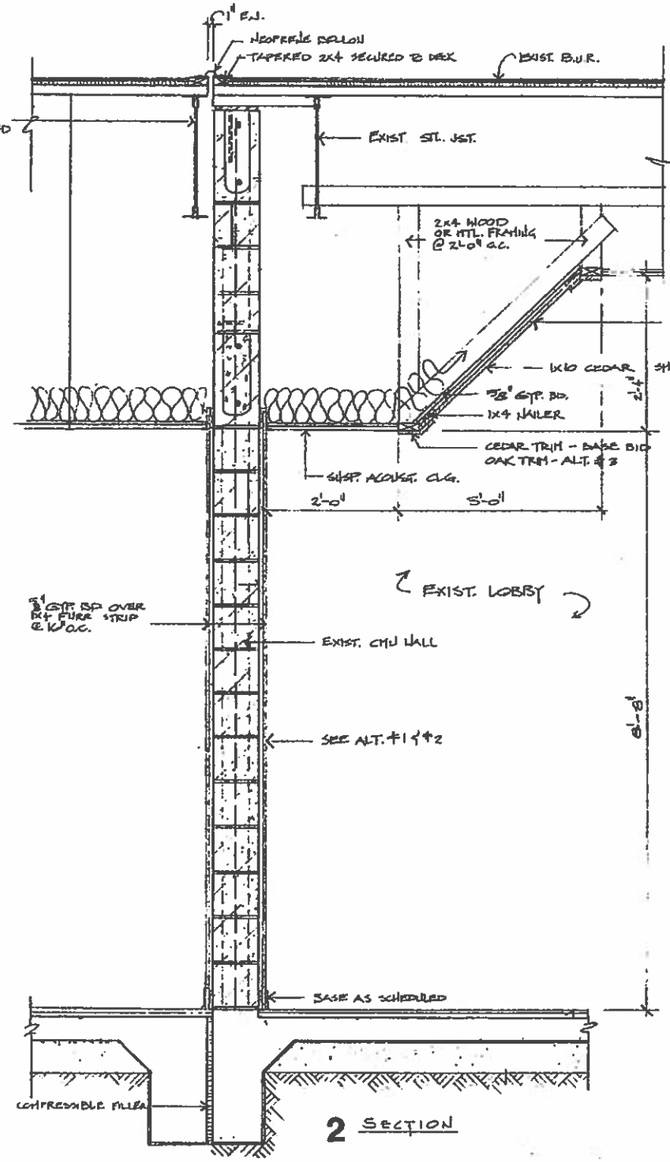


1 SECTION



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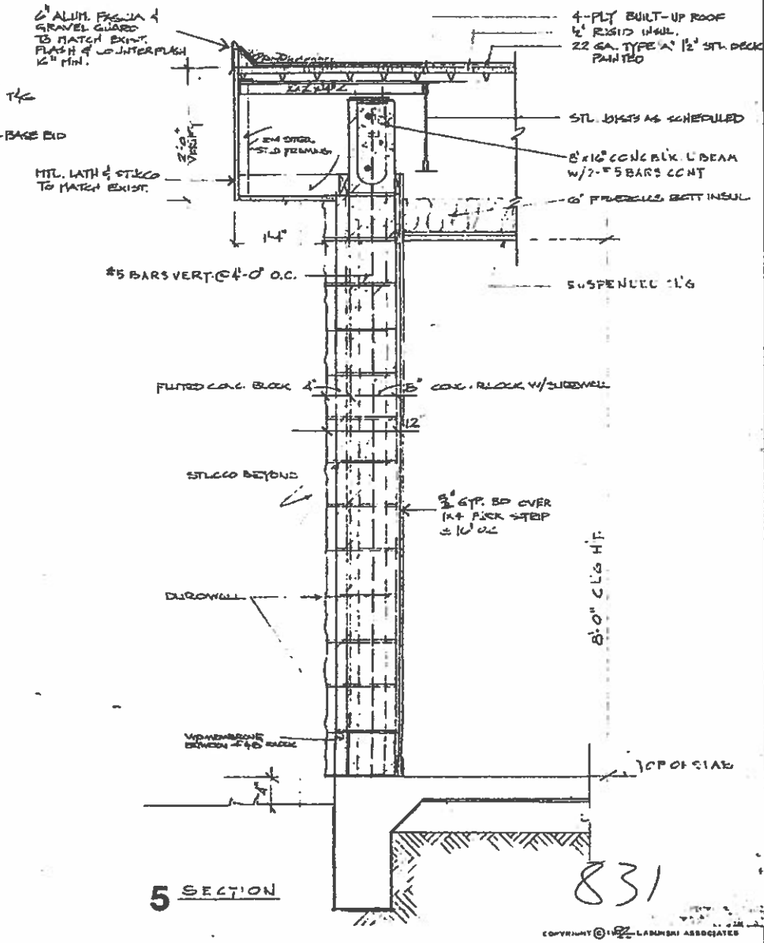

5 SECTION

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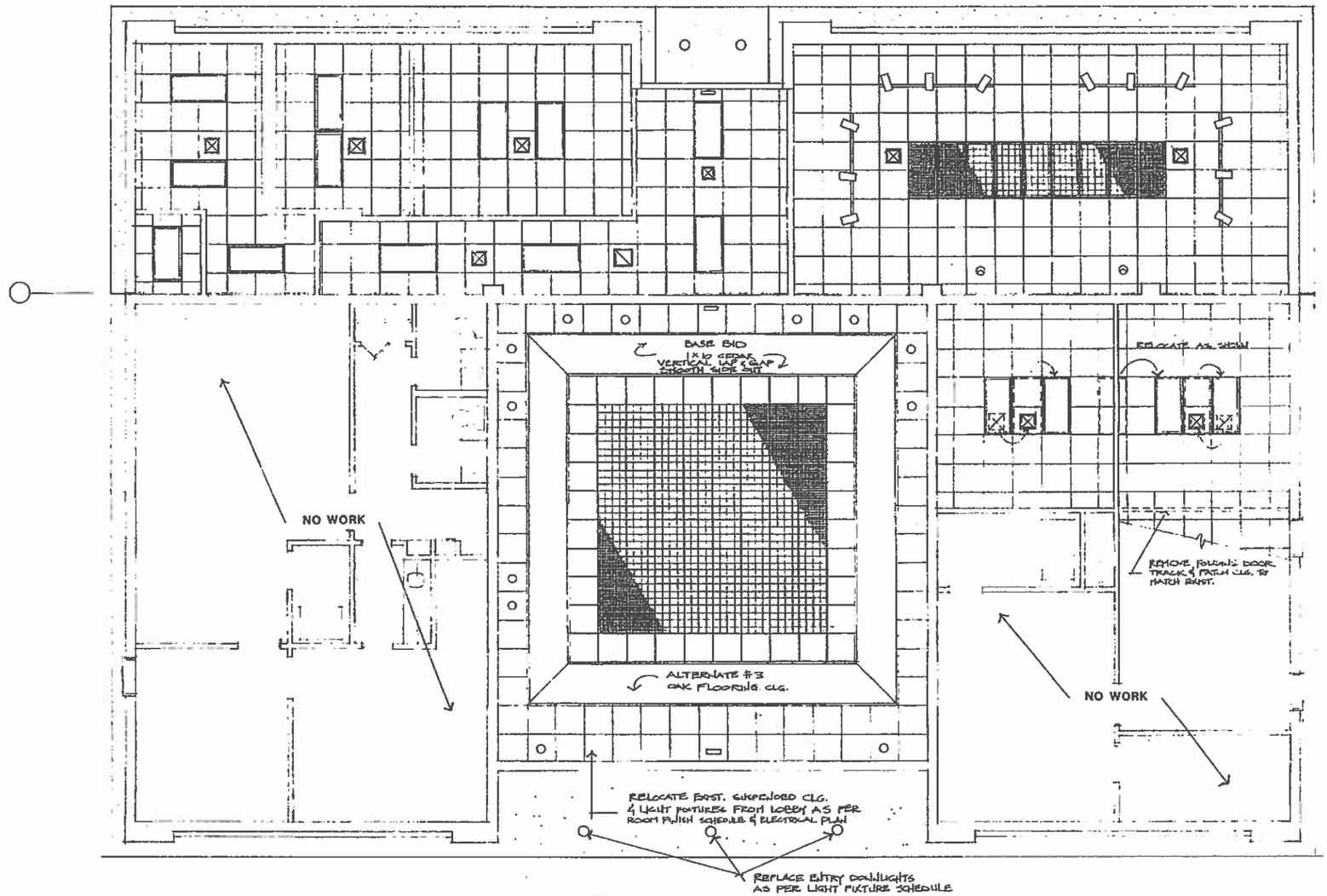
PROJECT NO. 8240
TOURIST BUREAU
OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN :
CKD :
REV. : 11/9/82

SHEET NO. A4 of 5
DATE : 8/3/82

BRUNING 49-22 52551



NOTE:
NEW CLG. AREAS SHALL BE
2'-0" x 2'-0" SUSPENDED ACOUST.
LAY-IN CLG., TEGULAR EDGE,
ON BLACK GRID
REFER TO ROOM FINISH SCHEDULE

LEGEND

- EXIST. TO REMAIN
- 2'-0" FLUOR. FIXTURE
- DIFFUSER R/A GRILLE
- TRACK LIGHTING
- DOWNLIGHT
- EXIT LIGHT FIXT.
- PARABOLIC LOUVER DIFFUSER

N

REFLECTED CEILING PLAN

SCALE: 1/4"-0"

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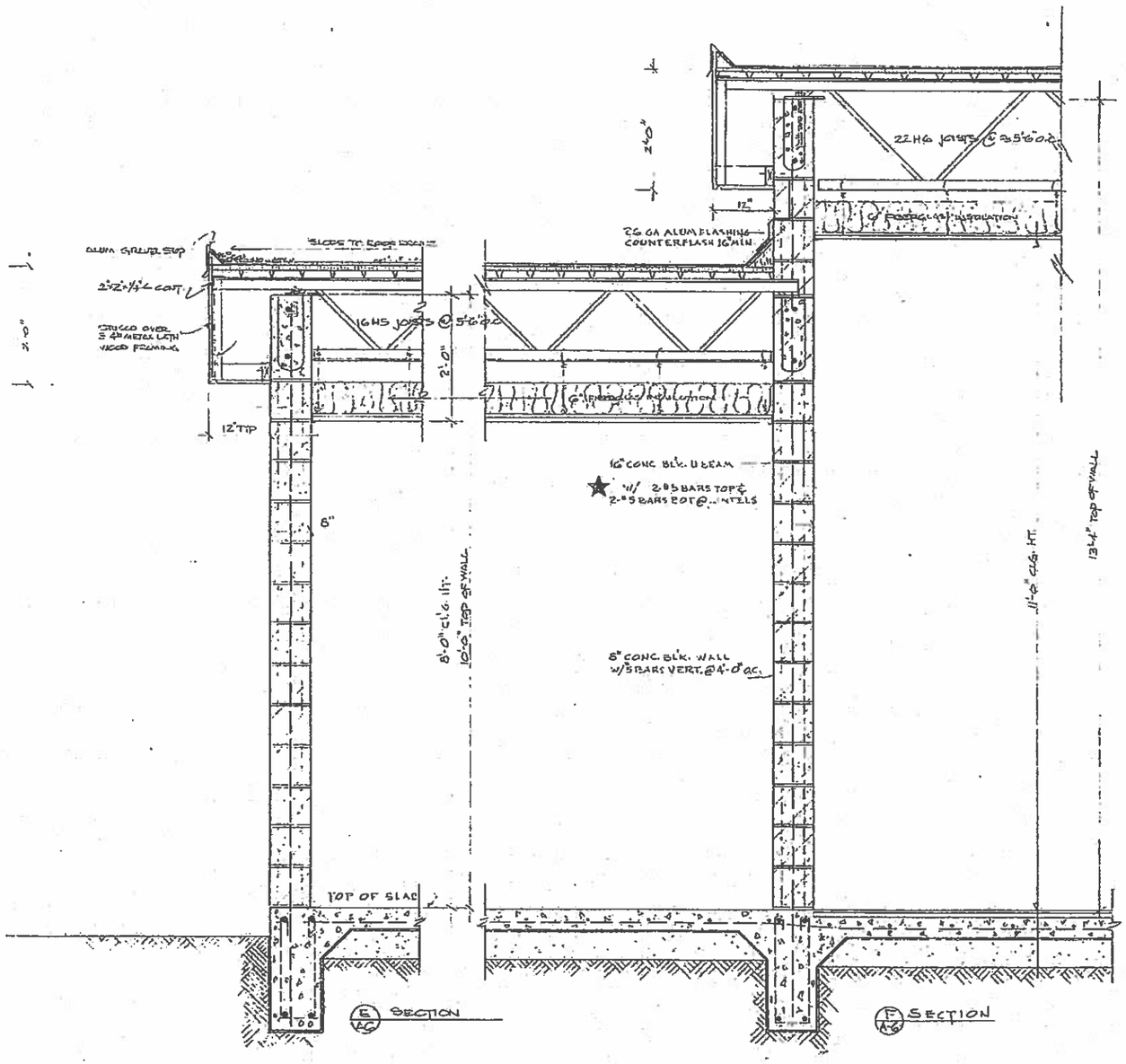
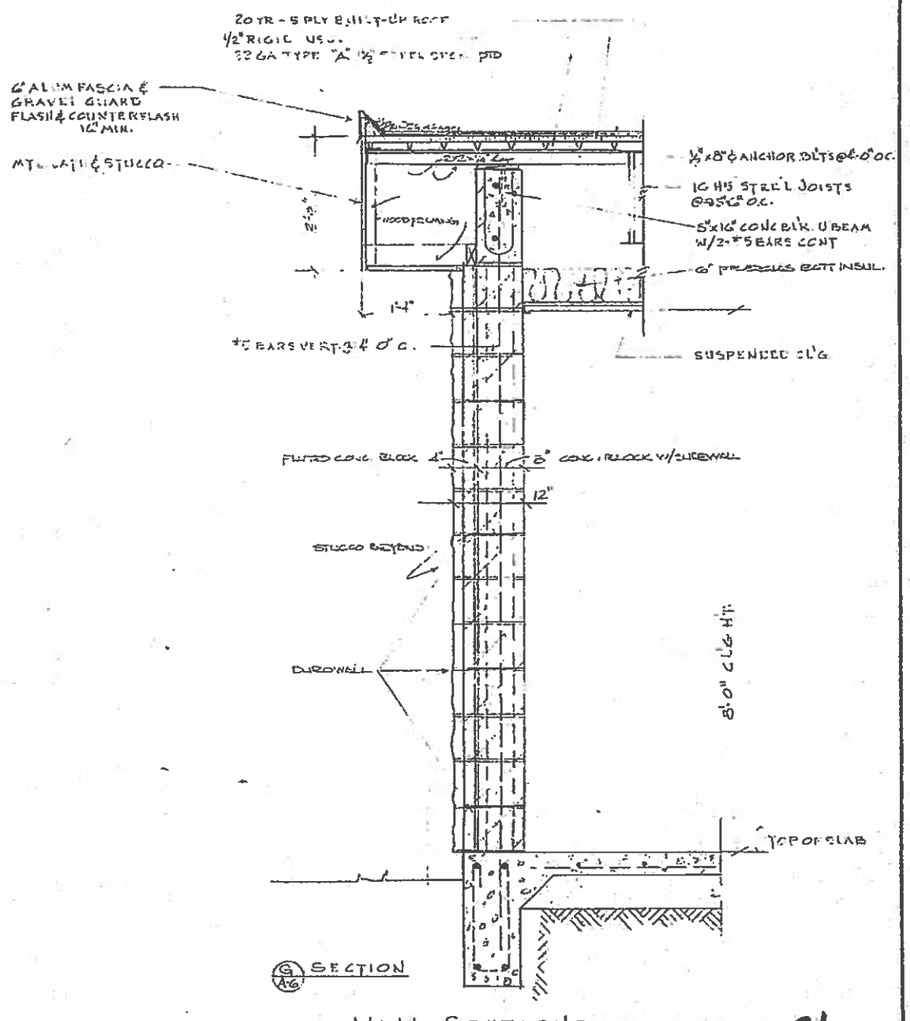
PROJECT NO. 82040
TOURIST BUREAU
OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN.:
CHD.:
REV.: 11/3/82

SHEET NO. A5
OF 15
DATE: 9/1/82

BRUNING 49-22 12231

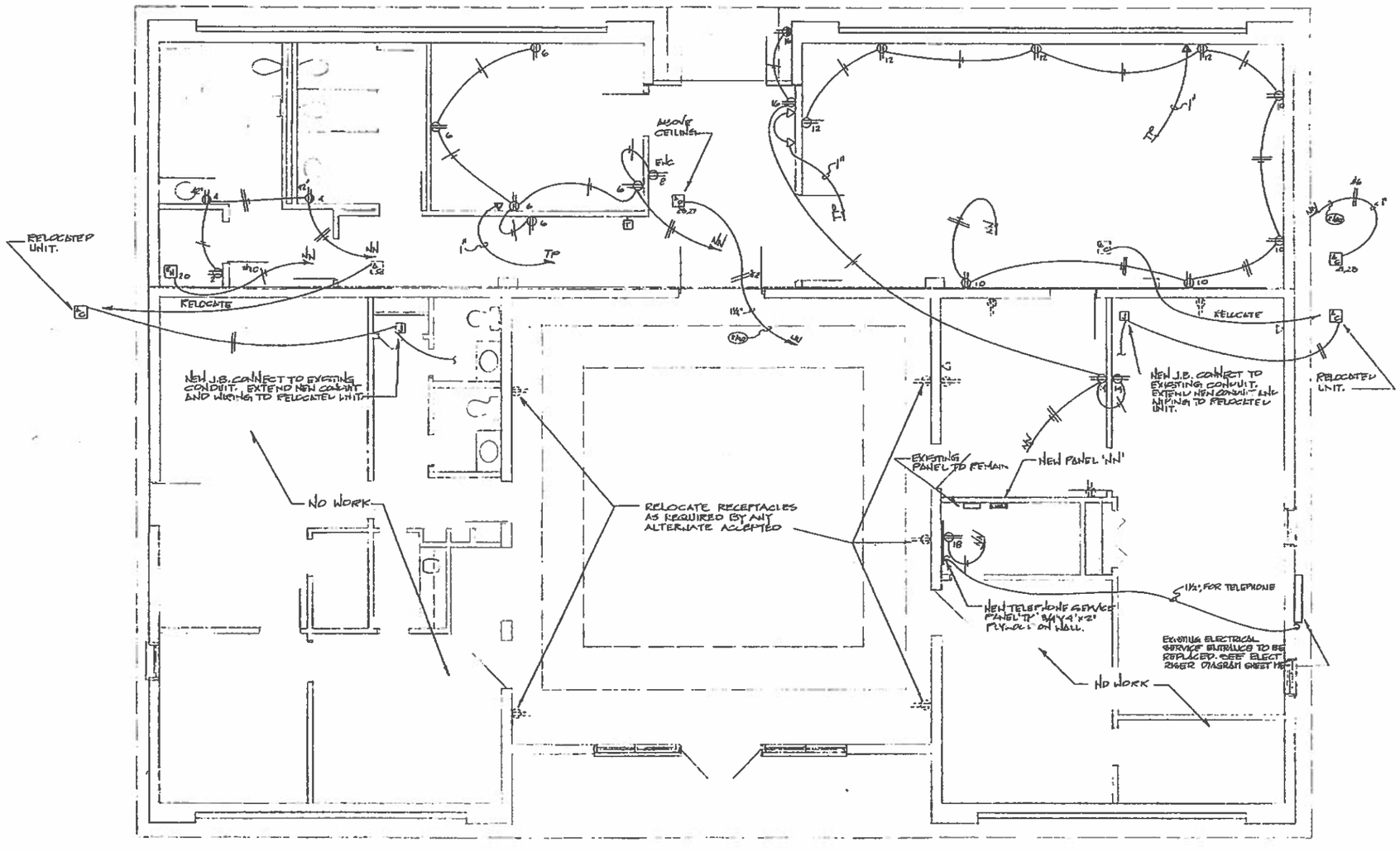




WALL SECTIONS
SCALE 1"=1'-0"

181

ARCHITECT RICK LABUNSKI RICHARD • GAIL STUDIOS P.O. BOX 2094, SOUTH PADRE ISLAND, TEXAS 78578, 943-5131	PROJECT TITLE: TOURIST CENTER OWNER: SOUTH PADRE ISLAND TOURIST DEVELOPMENT BUREAU	PROJECT NO.: 71-127-76 REFER TO NO.	SHEET TITLE: WALL SECTIONS & DETAILS CONTENTS	DRAWN BY: K.E.G. CHECKED BY: RAL	DATE: Blank REVISED 12/9/76 2 3 4 5	SHEET: A-6 OF 7



ELECTRICAL LEGEND

- HOMERUN TO PANEL INDICATED
- NEUTRAL CONDUCTOR
- PHASE CONDUCTOR
- #6 — WIRE SIZE IF OTHER THAN #12
- 1" — CONDUIT SIZE IF OTHER THAN ½"
- 3/20 — CIRCUIT BREAKER SIZE IF OTHER THAN 1P20A.
- 120V., 1Φ EQUIPMENT CONNECTION
- 240V., 1Φ EQUIPMENT CONNECTION
- NON-FUSIBLE DISCONNECT, SIZE AND TYPE AS INDICATED OR REQUIRED
- DUPLEX RECEPTACLE, 24" A.F.F. UNLESS INDICATED OTHERWISE
- DUPLEX RECEPTACLE, GFI TYPE, 24" A.F.F. OR GRADE
- DUPLEX RECEPTACLE, 10" ABOVE COUNTERTOP
- S — SINGLE POLE SWITCH, 20A., 120V.
- S_D — SINGLE POLE DIMMER SWITCH, ELECTRONIC, DECORATOR
- S_3 — THREE WAY SWITCH, 20A., 120V.
- CONDUIT CONCEALED ABOVE CEILING OR IN WALLS
- CONDUIT CONCEALED IN FLOOR SLAB OR WALLS
- CONDUIT UNDERGROUND
- TELEPHONE OUTLET, 54" A.F.F. FOR PAYPHONE, SINGLE GANG BOX WITH 1" CONDUIT TO ACCESSIBLE SPACE OR AS INDICATED ON PLANS
- TELEPHONE OUTLET, 24" A.F.F. SINGLE GANG BOX WITH 1" CONDUIT TO ACCESSIBLE SPACE OR AS INDICATED ON PLANS
- EWH — ELECTRIC WATER HEATER CONNECTION
- PE — PHOTO ELECTRIC SWITCH
- JUNCTION BOX CONCEALED ABOVE CEILING OR IF NO CEILING, MOUNT AT ROOF LEVEL, SIZE AND TYPE AS REQD
- WALL MOUNT JUNCTION BOX, SIZE AND TYPE AS REQUIRED, HEIGHT AS INDICATED
- AC — AIR COOLED CONDENSING UNIT CONNECTION. PROVIDE NEMA 3R ENCLOSED NON-FUSIBLE DISCONNECT, SIZE AND TYPE AS REQUIRED
- AH — AIR HANDLING UNIT AND ELECTRIC HEATER CONNECTION, PROVIDE NEMA 1 ENCLOSED MAGNETIC STARTER FOR BLOWER AND NEMA 1 ENCLOSED NON-FUSIBLE DISCONNECT FOR UNIT, SIZE AND TYPE AS REQUIRED
- UP — LETTERS UP BY OUTLET OR EQUIPMENT INDICATES WEATHERPROOF
- 9 — NUMBER BY OUTLET OR EQUIPMENT INDICATES CIRCUIT NUMBER
- S — EXISTING SWITCH OUTLET. REMOVE EXISTING SWITCH AND PLATE INSTALL NEW SWITCH AND COVER AND REPLACE PLATE.
- EXISTING DUPLEX RECEPTACLE TO REMAIN.
- EXISTING TELEPHONE OUTLET TO REMAIN
- AC — EXISTING AIR COOLED CONDENSING UNITS TO BE RELOCATED AS INDICATED. DISCONNECT AND REMOVE ALL WIRING SWITCHES AND CONDUIT TO INSIDE OF BUILDING.
- V — VENT FAN, 120VOLT CONNECTION
- T — THERMOSTAT, PROVIDE SINGLE GANG BOX WITH ¾" CONDUIT TO ABOVE CEILING.

PANELBOARD SCHEDULE

ALL PANELS SHALL HAVE COPPER BUS

PANEL 'NN' — SURFACE MOUNT, 120/240 VOLT, 1Φ, 3W., 400 AMP M.L.O., WITH 28-1P20A, 1-2P30A, & 1-2P20A CKT. BKRS. 10-1P SPACES. PANEL SHALL HAVE UL. LISTED MIN. INTEGRATED EQUIPMENT SHORT CIRCUIT RATING OF 10,000A RMS SYM.

DIST. PNL. 'DP' — SURFACE MOUNT, NEMA 3R, 120/240 VOLT, 1Φ, 3W., 400AMP M.L.O. 70% NEUTRAL, PROVIDE GROUND BUS. PANEL SHALL HAVE UNDERWRITERS LABORATORIES LISTED MINIMUM INTEGRATED EQUIPMENT SHORT CIRCUIT RATING OF 22,000 AMPS RMS SYM. PANEL SHALL HAVE THE FOLLOWING PLUG-IN SUITABLES:

SERVING:	SWITCH	FUSE
PANEL 'NN'	2P400A.	2-LPN-RK250A.
EXIST. PANEL	2P400A.	2-LPN-RK250A.
EXIT LIGHTS	2P30A.	1-LPN-RK20A.

ELECTRICAL POWER PLAN

SCALE: ¼"=1'-0"

N

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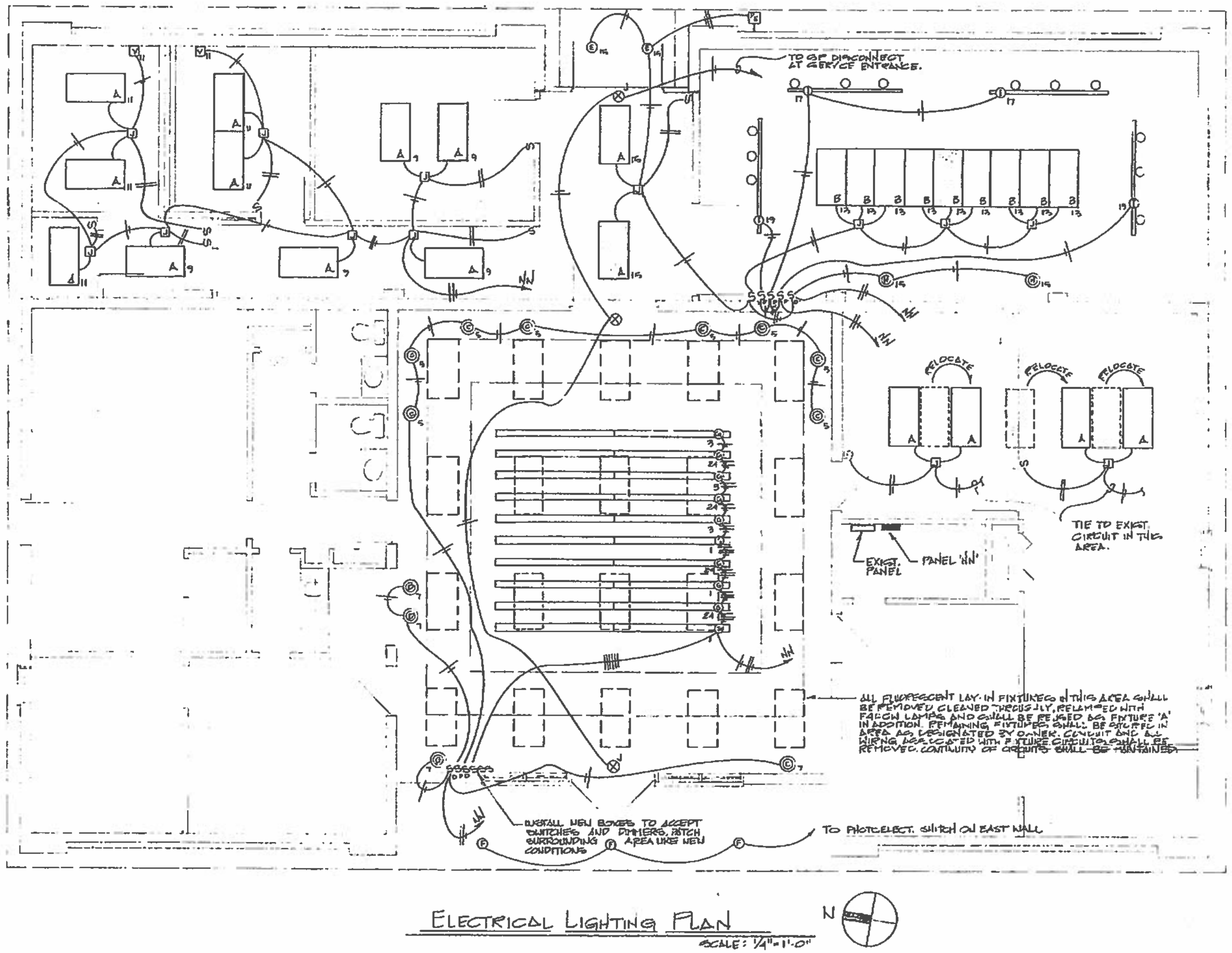
PROJECT NO. 82040
TOURIST BUREAU
OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN. I.G.V.
CKD. J.LABUNSKI
REV. :

SHEET NO. E1 OF 2
DATE :



ELECTRICAL LIGHTING PLAN

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

LIGHT FIXTURE SCHEDULE

A	EXISTING FIXTURES 2'x4'-4 LAMP FLUORESCENT TO BE RELOCATED. SEE NOTE THIS SHEET.
B	FLUORESCENT LAY-IN 2'x4'-4 LAMP, BENJAMIN #SGR94-44-4 WITH PARASQUARE SUB SILVER, 4-F40CW LAMPS.
©	RECESSED INCANDESCENT DOWNLIGHT, CAPRI # R10X-RM40 1-50W R40 LAMP
Ⓒ	RECESSED INCANDESCENT DOWNLIGHT, CAPRI # R10X-RMS40-C 1-150W R40 LAMP
E	CONTRACTOR TO MATCH NEW FIXTURES AT WEST ENTRANCE
Ⓕ	EXISTING FIXTURE TO BE REPLACED W/ MATCHING FIXTURE W/ ALUMINUM HOUSING & ALUM. TRIM RING
G	FLUORESCENT STRIP, 4 LAMP, 2 ROW, 8', BENJAMIN #9-24-9, 4-F40CW LAMPS
H	RECESSED INCANDESCENT WALL WASH, CAPRI # R10X-RM45, 1-75WR30 LAMP
J	SURFACE SINGLE CIRCUIT TRACK, CAPRI # CT-5-BLK, C9 1-22, AND 3-CT-32-BLK FIXTURES, 3-75WR30 LAMPS.
⊗J	EXIT LIGHT, PERFECLITE # R623

GENERAL NOTES:

1. SHADED FIXTURES SHALL HAVE TWO OF THE F40CW LAMPS ON EMERGENCY BATTERY PACKS. SWITCH ONLY THE SECONDARY, BATTERY CHARGER REMAINS ENERGIZED AT ALL TIMES

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STATE OF TEXAS — PROFESSIONAL ENGINEER

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115 WEST VAN BUREN HARLINGEN, TEXAS 78550 (512) 428 - 4334

PROJECT NO. 82040

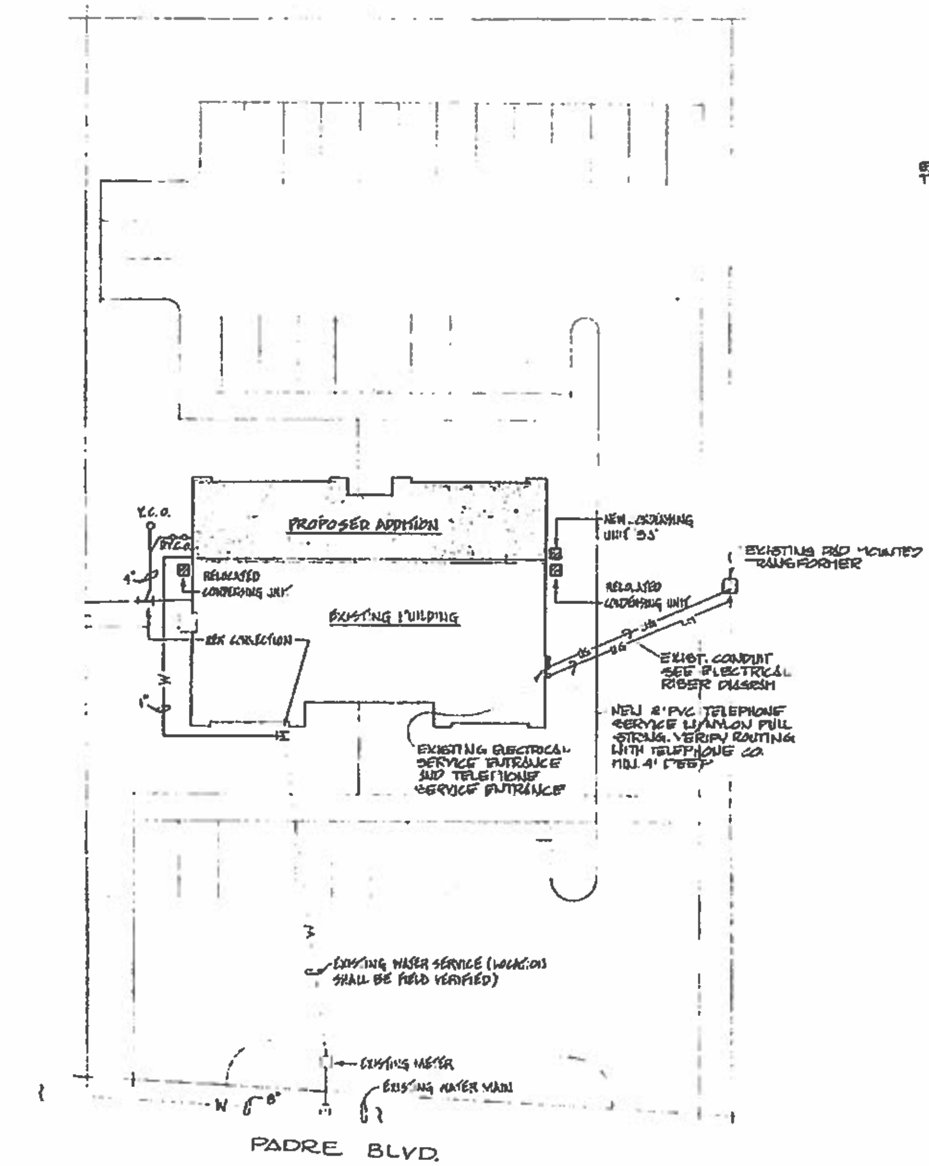
TOURIST BUREAU OFFICE EXPANSION

SOUTH PADRE ISLAND, TEXAS

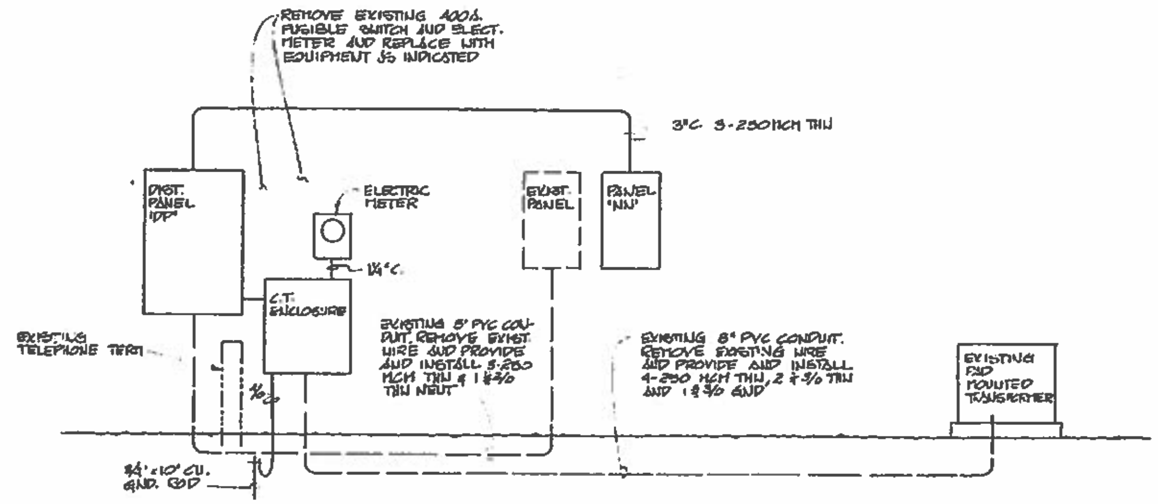
DWN: LCJ
CKD: BCW
REV.:

SHEET NO. E2 OF 2

DATE:



MECH. & ELECT. SITE PLAN
SCALE: 1" = 20'-0"



ELECTRICAL RISER DIAGRAM

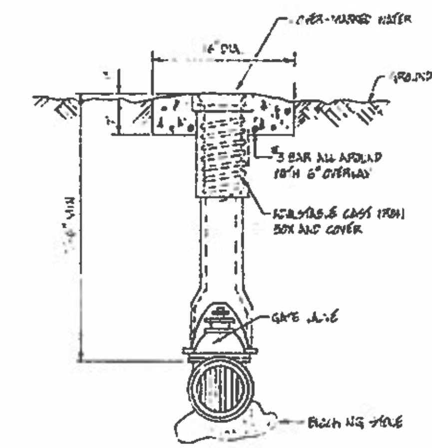
NO SCALE

ELECTRICAL NOTES AND SPECIFICATIONS

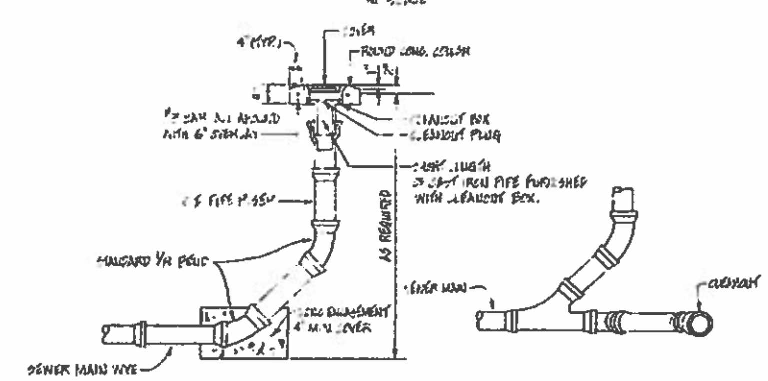
1. ALL SLEEVES, FLOOR PENETRATIONS, ETC. SHALL BE SEALED SOLID WITH NON-SHRINKING GROUT IMMEDIATELY UPON THE FILLING OF THAT OPENING WITH PIPE OR CONDUIT.
2. THE ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS RELATED TO HIS WORK.
3. PORTIONS OF THIS WORK WILL BE PERFORMED IN OPERATING AREAS OF THE BUILDING. THIS WORK SHALL BE COORDINATED WITH THE OWNER AND SHALL BE PERFORMED ONLY WHEN THE OWNER INDICATES THE WORK AREA IS AVAILABLE. ALL WORK SHALL BE PERFORMED SO AS TO CREATE THE LEAST AMOUNT OF INTERFERENCE WITH THE OWNERS OPERATION. ALL ELECTRICAL POWER OUTAGES SHALL BE SCHEDULED WITH THE OWNER AND C.P.L. THERE SHALL BE NO DEVIATIONS FROM THE OWNERS SPECIFIED TIME ALLOWED FOR POWER OUTAGES. POWER OUTAGES SHALL BE REQUESTED IN WRITING A MINIMUM OF 72 HOURS IN ADVANCE.
4. THE ELECTRICAL CONTRACTOR AND HIS EMPLOYEES SHALL PERFORM THEIR WORK IN A SAFE MANOR AND MAINTAIN ADEQUATE PROTECTION OF THE WORK, THE OWNERS PROPERTY, AND ALL PERSONS ON THE SITE FROM INJURY, DAMAGE, OR LOSS.
5. MAINTAIN CONTINUITY TO ALL CIRCUITS REMAINING IN THE REMODELED AREA.

LEGEND (THIS SHEET ONLY)

— SS —	SANITARY SEWER
— W —	WATER
Y.C.O.	YARD CLEANOUT
D.Y.C.O.	DOUBLE YARD CLEANOUT
	EXISTING LINES AS SHOWN



VALVE BOX DETAIL
NO SCALE



ELEVATION

PLAN

CONSTRUCTION NOTE
DOUBLE CLEANOUT SIMILAR TO CLEANOUT EXCEPT, SHALL BE IN BOTH DIRECTIONS

TYPICAL CLEANOUT DIAGRAM
NO SCALE

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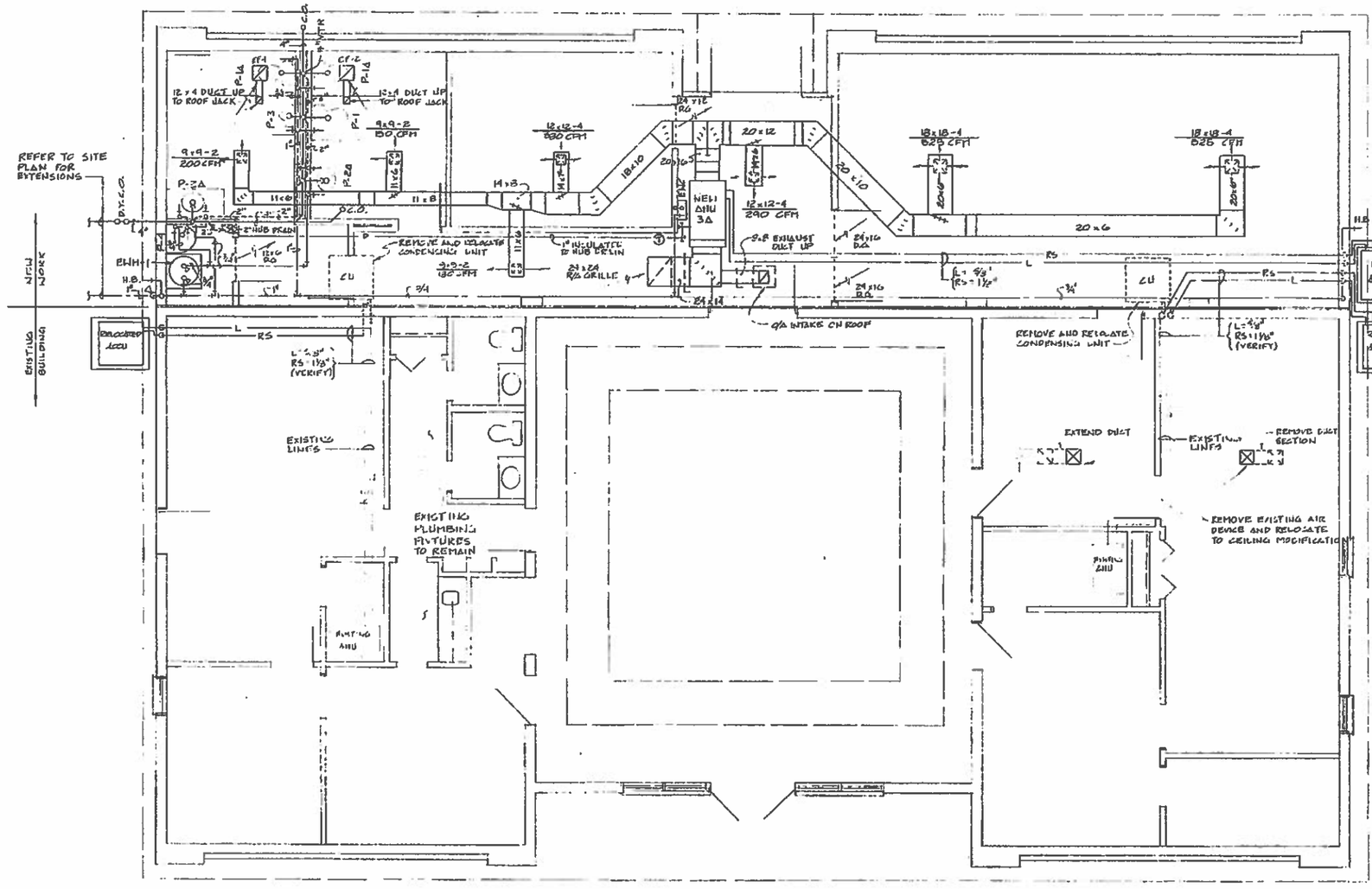
PROJECT NO. 82040
TOURIST BUREAU
OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN.
CHK.
REV.:

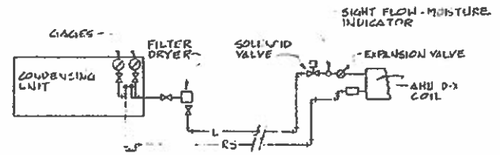
SHEET NO.
ME 1
OF 1
DATE:

115 WEST VAN BUREN HARLINGEN, TEXAS 78550 (512) 428 - 4334



MECHANICAL FLOOR PLAN

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



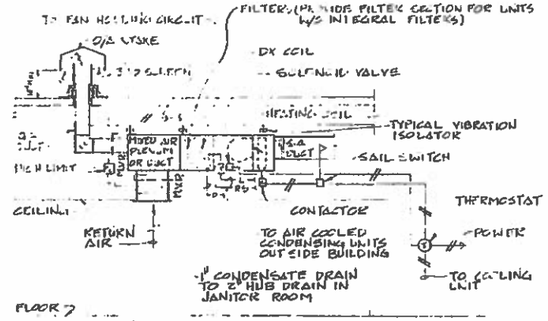
AHU REFRIGERANT PIPING DIAGRAM

NO SCALE

NOTES: 1. TYPICAL ARRANGEMENT. REFER TO FLOOR PLAN FOR ACTUAL LAYOUT.

LEGEND

- ELECTRICAL CIRCUITS
- MANUAL VOLUME DAMPER (OPPOSED BLADE TYPE)



FLOOR 7

CONTROL DIAGRAM - AH UNIT 3A

NO SCALE

SEQUENCE OF CONTROL

1. CONTROLS ARE ENERGIZED BY FAN SELECTION: ON-AUTO.
2. HIGH LIMIT (H) SHALL SHUT DOWN FAN WHENEVER RETURN TEMPERATURE RISES ABOVE ITS LIMIT.
3. MODE OF SYSTEM OPERATION IS SELECTED BY SYSTEM SELECTION: HEAT-OFF-AUTO. "AUTO" CHANGES OVER FROM HEATING TO COOLING AND THE REVERSE AUTOMATICALLY.
4. THERMOSTAT (T) PROVIDES 1ST 2 STAGE COOLING AND HEATING WHEN REQUIRED TO MAINTAIN ROOM TEMPERATURE

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PROJECT NO. 82040
TOURIST BUREAU
OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN.: BS
CHD.: CLG
REV.:

SHEET NO. M1 OF 2
DATE:

AIR HANDLING UNIT SCHEDULE

	DESCRIPTION	AHU # 3A	REMARKS
FAN	TOTAL AIR C.F.M	2250	ONE NEW UNIT ONLY
FAN	OUTSIDE AIR C.F.M.	240	
FAN	EXTERNAL S.P. / IN. H2O	0.5	
COOLING COIL	ENTERING AIR D.B. °F	80	
COOLING COIL	ENTERING AIR W.B °F	67	
COOLING COIL	COIL TOTAL BTUH	62,000	
COOLING COIL			
COOLING COIL			
COOLING COIL			
HEATING	TOTAL AIR C.F.M.	2250	
HEATING	ENTERING AIR D.B. °F	75°	
HEATING	ELECTRIC HEATING CKT AMPS	52	
HEATING	CAPACITY KW	15	
MOTOR	MIN. FAN HP	3/4	
MOTOR	POWER V/Φ/HZ	230/1/60	
OTHERS	FILTERS (THROW AWAY)	1"	
OTHERS	REHEAT KW	——	
OTHERS	HUMIDIFICATION LB/HR	——	
OTHERS	MATCHING UNIT	ACCU - 3	
OTHERS	REF. MFG. MODEL NO.	YORK NE24H20N06 W/MKC66-3 COIL	

NOTES:

1. EXTERNAL STATIC PRESSURE INCLUDES DUCTS, AIR DEVICES AND 0.2" H2O FOR DIRTY FILTER.
2. AHU-3A IS TO BE SUSPENDED HORIZONTALLY.

CONDENSING UNIT SCHEDULE

MARK	CAPACITY (BTUH) (NET)	AMBIENT °F	FLA	POWER V/Φ/HZ	MATCHING UNIT NO.	MFG. MODEL NO.	KW	REMARKS
ACCU-3A	62 000	95°	38	230/1/60	AHU # 3A	HL D060A06	7.56	ONE NEW UNIT ONLY

NOTES:

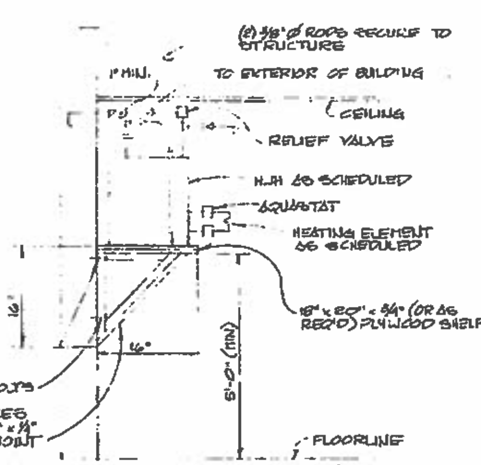
1. CALCULATE COOLING CAPACITIES AT ARI CONDITIONS WITH MATCHING COILS OR USE MANUFACTURERS ARI RATINGS.
2. PROVIDE FILTER DRYERS, SIGHT GLASSES, VALVES AND GAGE COCKS AT UNIT.
3. SPACE UNITS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. ACCESSORIES FOR UNITS: ACCU #3A SHALL HAVE HIGH AND LOW PRESSURE CONTROLS, CRANK CASE HEATER, COMPRESSOR INTERNAL MOTOR PROTECTION AND LOW VOLTAGE AND ANTI-SHORT CYCLE PROTECTION.
5. AHU # 3A TO HAVE 2KLG6501525 ELECTRICAL HEATING COILS AND HORIZONTAL SUSPENSION AND DRAIN PAN KITS.

EXHAUST FAN SCHEDULE

MARK	TYPE	AIR FLOW (C.F.M)	EXT. S.P. (IN W.G)	MOTOR HP	MOTOR V	MOTOR Φ	MFG.	MODEL	SONES	REMARKS
EF 1 & 2	CEILING FAN	20	0.1	30W	115	1	LOREN COOK	4-15	3.2	

NOTES:

1. FURNISH EF 1 & 2 WITH ROOF JACKS.
2. SWITCH WITH LIGHT SWITCH.



WATER HEATER ARRANGEMENT (TYP)
NO SCALE

GENERAL MECHANICAL NOTES & SPECIFICATIONS

1. GENERAL NOTES APPLY TO ALL SHEETS.
2. VERIFY ALL DIMENSIONS AT JOB SITE.
3. IN ANY CASE WHERE A PIPE OR DUCT SHOWN ON A PLAN SHEET DIFFERS FROM THAT SHOWN ON A SCHEMATIC OR DETAIL, USE THE LARGER OF THE TWO SIZES SHOWN.
4. ESTABLISH, WITH ENGINEERS APPROVAL, FINAL LOCATION OF ALL EQUIPMENT, DUCTS, ETC. NOT SHOWN ON DRAWINGS.
5. ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED STEEL OR 1" FIBERGLASS DUCT BOARD IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT CONSTRUCTION METHODS.
6. DUCT SIZES SHOWN ARE SHEET METAL NET INSIDE DIMENSIONS. INCREASE DUCT SIZE WHERE INTERNAL DUCTWORK INSULATION OR ACCOUSTICAL LINING IS SHOWN OR SPECIFIED. INTERNAL INSULATION SHALL BE 1½ LB/FT³ DENSITY ACOUSTICAL LINER WITH HEAVY VINYL COATING ON AIR STREAM SIDE.
7. CEILING DIFFUSER SIZES AS SHOWN ON PLANS INDICATES NECK OR DUCT CONNECTION SIZE.
8. ALL SUPPLY AND RETURN AND EXHAUST DUCTWORK SHALL BE INSULATED UNLESS OTHERWISE INDICATED. PROVIDE DUCT LINING WHERE INDICATED. EXTERIOR INSULATION SHALL BE DELETED WHERE DUCT LINER IS USED. EXTERNALLY INSULATE WITH 1½ LB/FT³ DENSITY, 1" THK. INSULATION APPLIED WITH VAPOR BARRIER TO THE OUTSIDE.
9. SEAL AIRTIGHT WHERE DUCTS PASS THRU WALLS, FLOORS, ROOF, OR DUCT CHASES.
10. MOUNT ALL THERMOSTATS 60" ABOVE FLOOR UNLESS OTHERWISE NOTED.
11. ALL H.V.A.C. WORK SHALL CONFORM TO THE CITY OR OTHER CONTROLLING AGENCY CODES. OBTAIN PERMITS AND PAY ALL FEES.
12. ALL AIR HANDLING UNITS WITH FAN CAPACITY BETWEEN 2000 CFM AND 15000 CFM SHALL HAVE A FIRESTAT SET AT 135°F INTERLOCKED WITH FAN MOTOR.
13. VERIFY AT JOB SITE THE EXACT LOCATION OF EXISTING STRUCTURAL MEMBERS SUCH AS BAR JOISTS AND CROSS BRIDGING, ETC. TO LOCATE A/C UNITS AND DUCTS. COORDINATE LOCATION OF AIR DEVICES WITH CEILING GRID AND LIGHTING ARRANGEMENT.
14. VERIFY AT JOB SITE ALL GENERAL WORK TO BE DONE AS SPECIFIED, AS NOTED, OR AS REQUIRED FOR THE INSTALLATION OF THE VARIOUS AIR CONDITIONING SYSTEMS PRIOR TO THE SUBMISSION OF BIDS.
15. REFER TO OTHER SHEETS FOR OTHER DETAILS, SYMBOLS, AND ABBREVIATIONS.
16. COORDINATE WORK WITH OTHER TRADES SO THAT AIR CONDITIONING WORK IS PERFORMED WHEN SPACE IS AVAILABLE.
17. WATER LINES SHALL BE SCHEDULE 40 PVC PIPE EXTERIOR TO THE BUILDING. WITHIN THE BUILDING ALL WATER LINES SHALL BE TYPE 'L' COPPER ABOVE GRADE AND TYPE 'K' COPPER BELOW GRADE IF REQ'D. HOT WATER LINES, AND COLD WATER LINES ABOVE CEILINGS, SHALL BE INSTALLED W/1" MOLDED PIPE INSULATION.
18. VENT LINES SHALL BE SCHEDULE 40 PVC OR ABS PLASTIC PIPE WITH 4 LB. LEAD FLASHING AT ROOF
19. HUB DRAINS SHALL BE ZURN Z-326, SHOKTROLS SHALL BE MINIMUM 12" AIR LEG.
20. SANITARY WASTE SEWER PIPE SHALL BE SERVICE WEIGHT CAST IRON, SCHEDULE 40 PVC OR ABS PLASTIC PIPE. DRAINAGE PIPE AND FITTING MATERIALS FROM FIXTURES TO SANITARY SYSTEM SHALL BE LEAD, CAST IRON, COPPER OR BRASS.
21. EXPOSED FIXTURE TRIM SHALL BE CHROME PLATED BRASS. PROVIDE INDIVIDUAL STOPS FOR EACH HOT AND COLD WATER CONNECTION TO FIXTURES.
22. PRIOR TO PLACING ANY WATER SYSTEM IN SERVICE THE CONTRACTOR SHALL STERILIZE THE SYSTEM.
23. ALL MODEL NUMBERS INDICATED ARE PROVIDED TO ESTABLISH THE QUALITY LEVEL AND FEATURES REQUIRED. LISTED MANUFACTURERS, AND OTHER APPROVED EQUALS MAY BE SUBSTITUTED WHEN PROVIDED WITH EQUAL FEATURES, EITHER STANDARD OR AS ACCESSORIES. SUBSTITUTED AIR DEVICES AND PLUMBING FIXTURES MUST BE SIMILAR IN APPEARANCE TO THE ITEM SPECIFICALLY INDICATED.

MECHANICAL LEGEND

- ELBOW TURNING VANES
- SPLITTER DAMPER
- BRANCH DUCT WITH EXTRACTOR
- INTERNAL ACOUSTICAL DUCT LINER
- EXTERNALLY INSULATED DUCT
- SUPPLY DUCT SECTION
- EXHAUST OR RETURN DUCT SECTION
- REDUCER
- CEILING DIFFUSER WITH OPPOSED BLADE DAMPER
- SIZE — 15x15-4 — STYLE (THROW); 500 CFM — AIR QUANTITY
- C.O. — CLEANOUT
- Y.C.O — YARD CLEANOUT
- D.Y.C.O — DOUBLE YARD CLEANOUT
- VALVE IN CAST IRON BOX
- GATE VALVE
- TEE TURNED DOWN
- WASTE LINE
- VENT LINE
- COLD WATER
- HOT WATER
- V.T.R. — VENT THRU ROOF
- THERMOSTAT AND CONTROLS
- DG — DOOR GRILLE
- H.B. — HOSE BIBB
- F.D. — FLOOR DRAIN

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	PIPE SIZE (INCHES) WASTE	VENT	COLD WATER	HOT WATER	REMARKS
P-1	WATER CLOSET	4	2	1	——	NO. 2109.180 FLOOR MOUNTED FLOOR OUTLET AND C.P. CAPNUTS
P-1A	WATER CLOSET HANDICAP HT.	4	2	1	——	NO. 2108.190 V.C. FLOOR MOUNTED FLOOR OUTLET W C.P. CAPNUTS, ELONG. BOWL, TANK TYPE
P-2A	LAVATORY, HANDICAP	2	1¼	½	½	NO. 0476.028 V.C. 20"x17" SELF-RIMMING, COUNTER TOP, W/REAR OFFSET TRIP, INSULATED TRIP & H.W.
P-3	URINAL	2	1½	½	——	NO. 6501.010 WALL MOUNTED TOP SPUD, WASHOUT TYPE WITH WALL HANGER
P-4	SERVICE SINK	3	1½	¾	3/4	FLORWELL NO. 7740.020 C.I. ENAMELED SINK W/ NO. 7745.011 RIM GUARD & NO. 7721.038 DRAIN WITH STRAINER
EWC	ELECTRIC WATER COOLER	2	1¼	½	——	HALSEY TAYLOR HBW-13A

FITTINGS, TRIM, AND ACCESSORIES

P-1 / P-1A — FURNISH WITH BACKFLOW PREVENTOR, WATER CONTROL WITH VOLUME REGULATOR, C.P. CAPNUTS, FLUSH VALVE, AND TRIP LEVER, CHURCH 5330 065 SEAT.

P-2A — TRIM NO. 2288.129, C.P. GOOSENECK FAUCET WITH 4" WRIST HANDLES, GRID DRAIN AND TAILPIECE, TRAP AND SUPPLIES.

P-3 — FURNISH WITH SLOAN ROYAL 186 FLUSH VALVE AND SCREWDRIVER STOP.

GENERAL: ALL FIXTURES SHALL BE MOUNTED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

NOTE: ALL FIXTURE, TRIM, ETC. MODEL NUMBERS REFER TO AMERICAN STANDARD OR AS NOTED. ALL FIXTURES AND FITTINGS SHALL BE COMPLETE WITH ALL ACCESSORIES AND APPERTENANCES REQUIRED TO FURNISH A COMPLETE AND OPERATING SYSTEM.

ELECTRIC WATER HEATER SCHEDULE

DESCRIPTION	EWH-1	REMARKS
STORAGE CAP. MIN. (GAL.)	20	JETGLAS M20JPS-5
HEATING CAPACITY (KW)	1.5	
GLASS-LINED TANK	YES	
MAGNESIUM ANODE	YES	
FULLY INSULATED JACKET	YES	
T & P PRESSURE RELIEF	YES	
WORKING PRESS. (PSI)	150	
STANDARDS	UL	
OPERATING TEMP. (°F)	140	
POWER (V/Φ/HZ)	115/1/60	
WARRANTY (YRS)	3	

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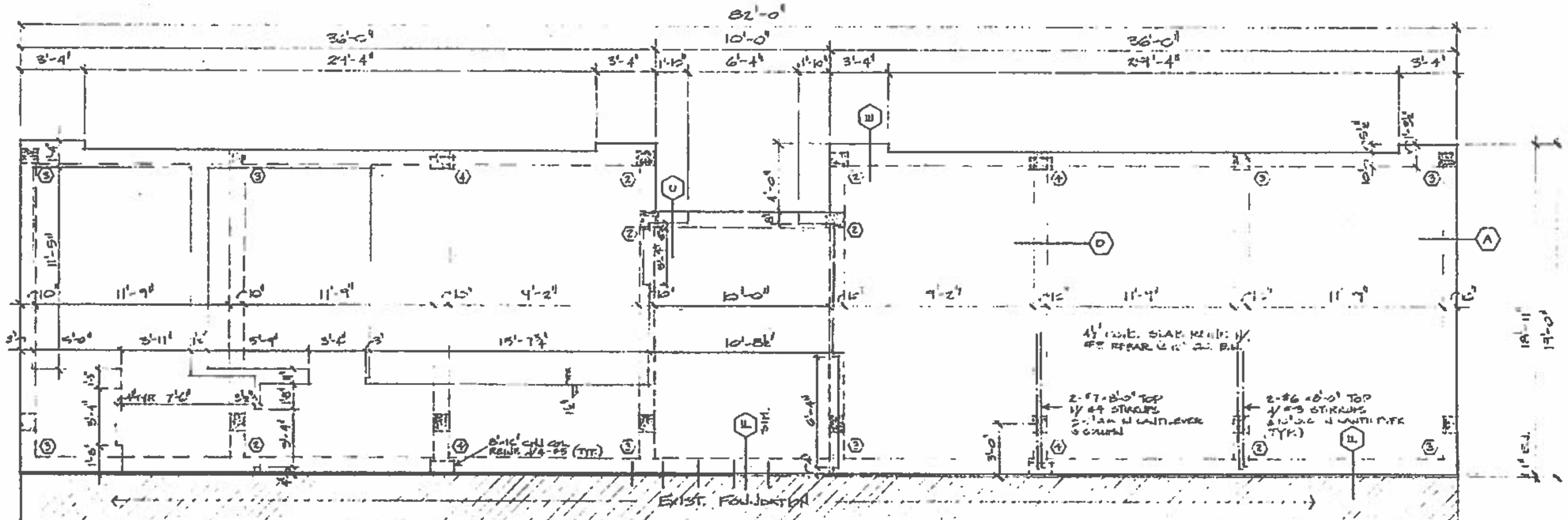
PROJECT NO. 82040
TOURIST BUREAU OFFICE EXPANSION
SOUTH PADRE ISLAND, TEXAS

DWN. [illegible]
CHK. [illegible]
REV.:

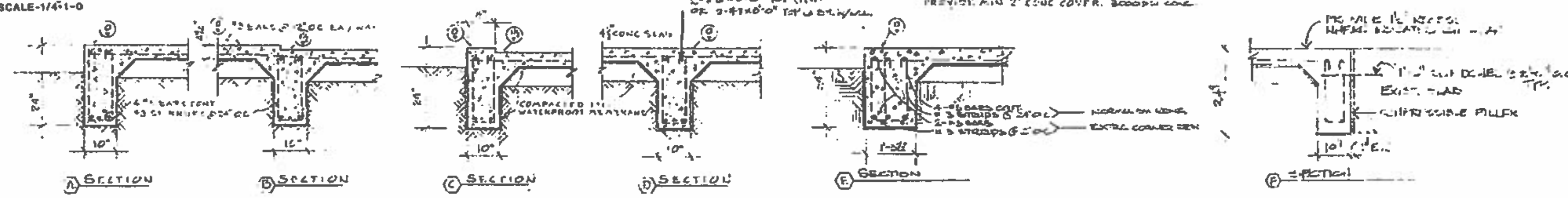
SHEET NO. M 2 OF 2
DATE:

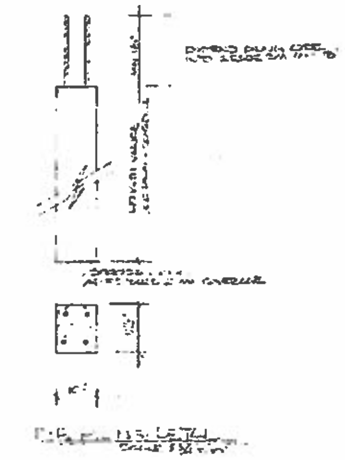
115 WEST VAN BUREN HARLINGEN, TEXAS 78550 (512) 428 - 4334

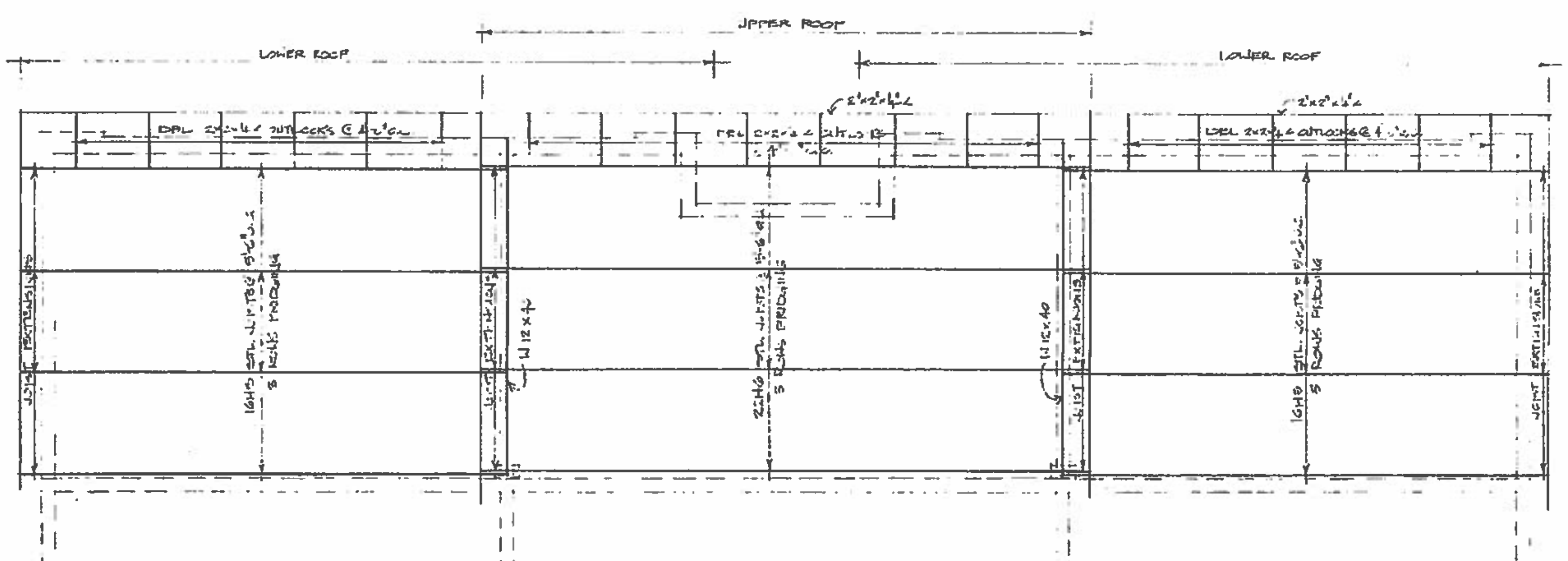
PILING SCHEDULE			
MARK	LENGTH	[illegible]	DEPTH [illegible]
1	10'-0"	[illegible]	2'-0" BELOW FND.
2	13'-0"	DO	DO
3	17'-0"	DO	DO
4	20'-0"	DO	DO



FOUNDATION PLAN
SCALE-1/4"=1'-0"







ROOF FRAMING
SCALE-1/4"=1'-0"

Williams & Schneider, Inc. consulting engineers
San Antonio, Texas

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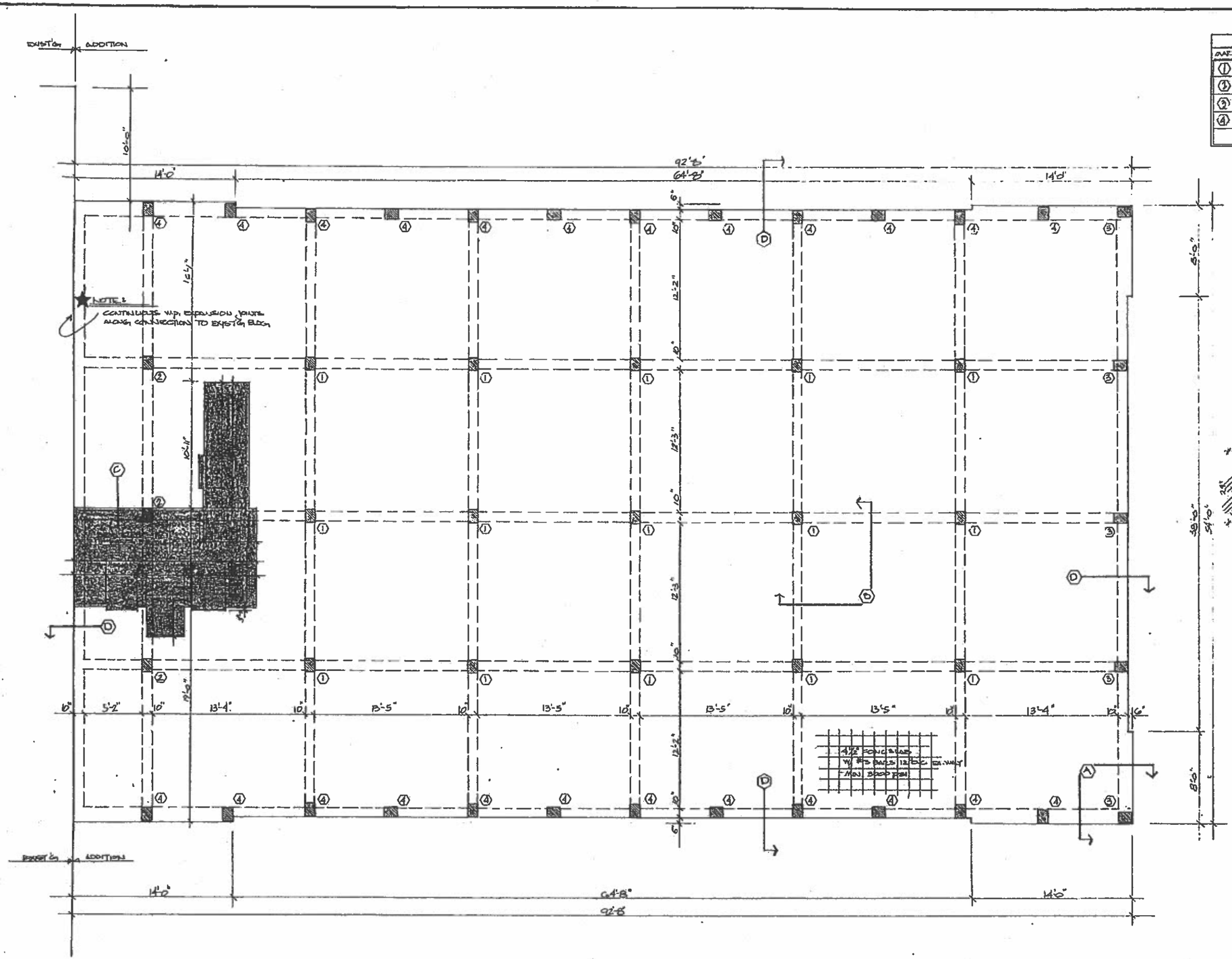
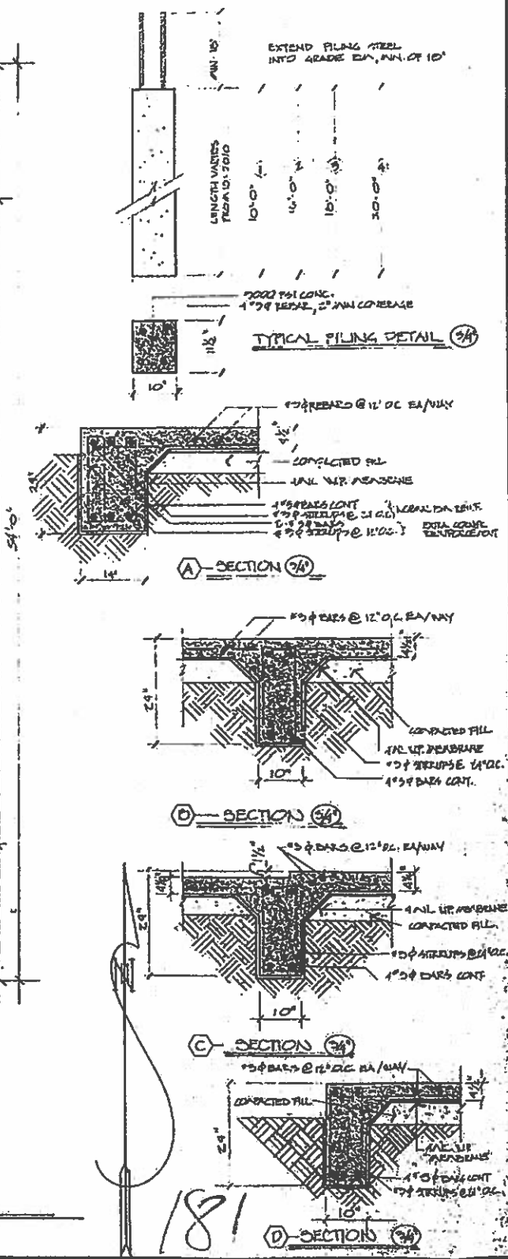
PROJECT NO. 82040 TOURIST BUREAU OFFICE EXPANSION SOUTH PADRE ISLAND, TEXAS	DWN. CKD. REV.	SHEET NO. S1 DATE 8/27/82

116 WEST VAN BUREN HARLINGEN, TEXAS 78550 (512) 428 - 4334

PILING SCHEDULE			
MARK	LENGTH	REINFORCING	DEPTH SET
①	10'-0"	4-#9 BARS CONT. ANN 2" COVERED	2'-0" BELOW FIN. FL.
①	14'-0"	D.O.	D.O.
②	12'-0"	D.O.	D.O.
④	10'-0"	D.O.	D.O.



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



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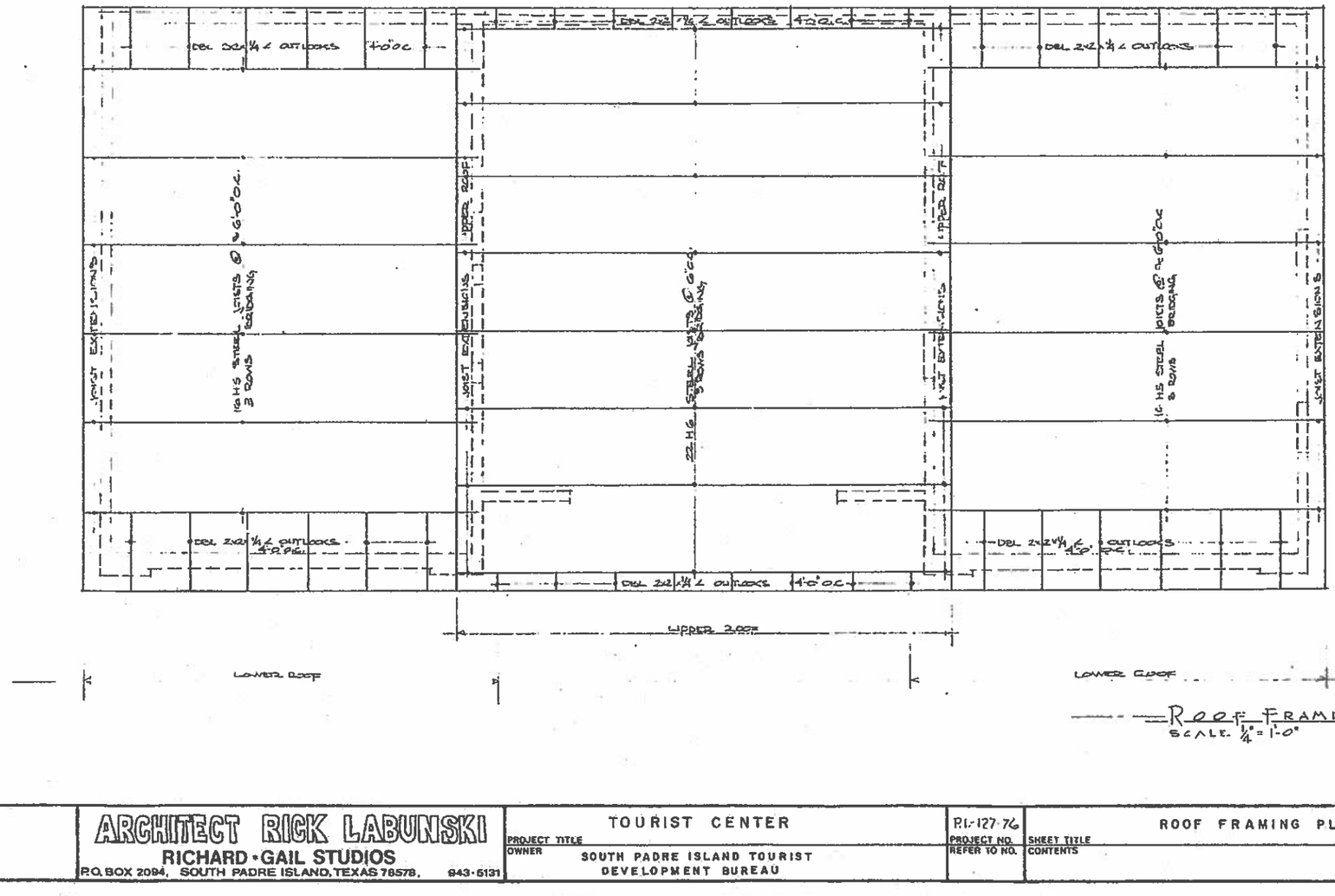
ARCHITECT RICK LABUNSKI RICHARD • GAIL STUDIOS P.O. BOX 2094, SOUTH PADRE ISLAND, TEXAS 78578, 943-5131	TOURIST BUREAU RECREATION ADDITION PROJECT TITLE: 6004 PADRE BLVD., SOUTH PADRE ISLAND, TEXAS OWNER: TOWN OF SOUTH PADRE ISLAND, TEXAS	PP-1397 PROJECT NO. REFER TO NO.	FOUNDATION PLAN & DETAILS SHEET TITLE CONTENTS	RAL DRAWN BY: CHECKED BY: DATE: 5/31/77 REVISED: 6/6/77 6/20/77 SHEET: S1 OF TWO



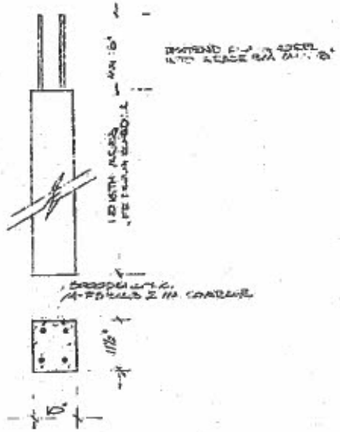
ROOF FRAMING PLAN

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

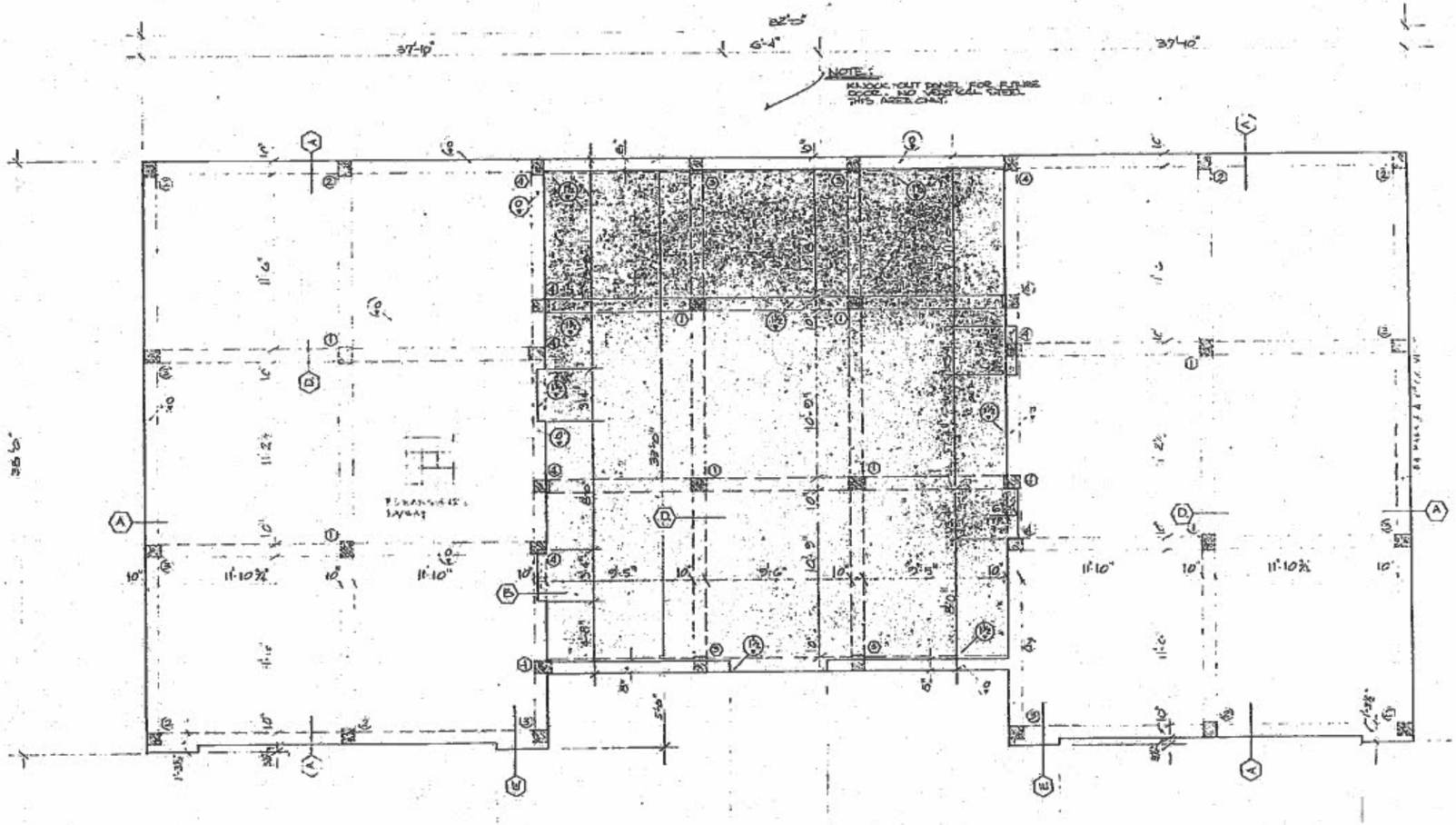
181

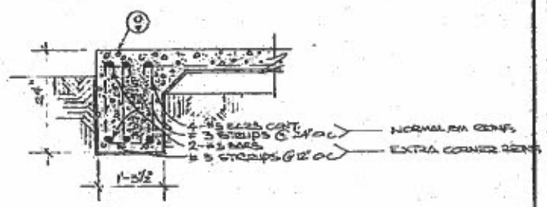
ARCHITECT RICK LABUNSKI RICHARD · GAIL STUDIOS P.O. BOX 2094, SOUTH PADRE ISLAND, TEXAS 78578. 943-5131	TOURIST CENTER PROJECT TITLE OWNER SOUTH PADRE ISLAND TOURIST DEVELOPMENT BUREAU	P.I.-127-76 PROJECT NO. REFER TO NO.	ROOF FRAMING PLAN SHEET TITLE CONTENTS	K.E.G. DRAWN BY CHECKED BY RAL	DATE 8/30/76 REVISED 1 12/8/76 2 3 4 5	SHEET S-2 OF 2

PILING SCHEDULE			
MARK	LENGTH	REINFORCING	DEPTH SET
1	10'-0"	4-#5 BARS CONT AND #3 TIES @ 12" O.C.	2'-0" BELOW FIN. FL.
2	15'-0"	D.O.	D.O.
3	17'-0"	D.O.	D.O.
4	20'-0"	D.O.	D.O.



TYP. PILING DETAIL
SCALE: 1/2" = 1'-0"





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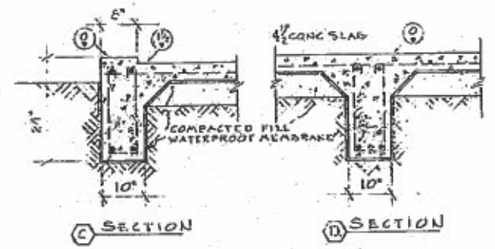
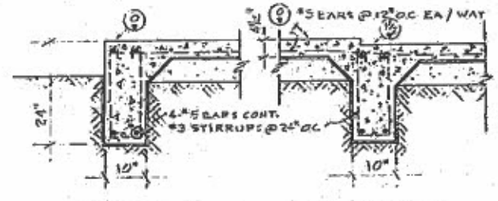


C SECTION

D SECTION

NOTE: ALL REINF'G. SHALL BE LOCATED TO PROVIDE MIN. 2" CONC. COVER. 3000PSI CONC.



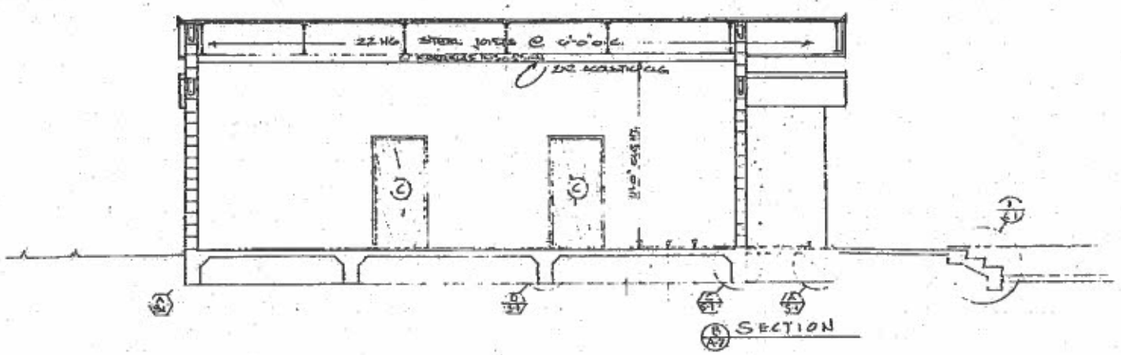
A SECTION

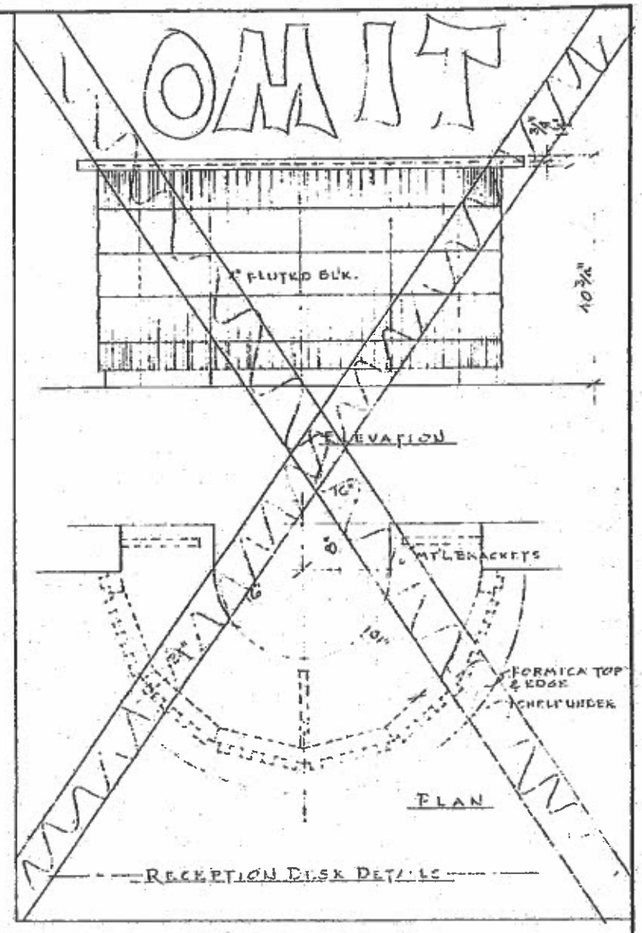
B SECTION

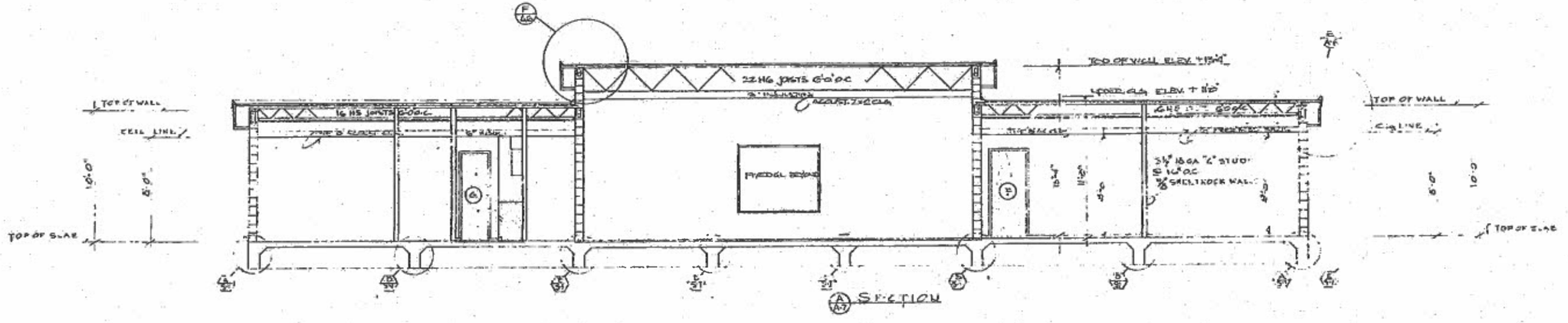
FOUNDATION DETAILS
SCALE: 3/4" = 1'-0"

18

ARCHITECT RICK LABUNSKI RICHARD • GAIL STUDIOS P.O. BOX 2094, SOUTH PADRE ISLAND, TEXAS 78578, 943-5131	TOURIST CENTER PROJECT TITLE OWNER SOUTH PADRE ISLAND TOURIST DEVELOPMENT BUREAU	R1-127-76 PROJECT NO. REFER TO NO.	FOUNDATION PLAN & DETAILS SHEET TITLE CONTENTS	K.E.G. DRAWN BY CHECKED BY	DATE REVISED 12/15/76 1 2 3 4 5	SHEET S-1 OF 2







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ARCHITECT RICK LABUNSKI RICHARD • GAIL STUDIOS P.O. BOX 2094, SOUTH PADRE ISLAND, TEXAS 78578, 943-5131	TOURIST CENTER PROJECT TITLE OWNER SOUTH PADRE ISLAND TOURIST DEVELOPMENT BUREAU	E1-127-76 PROJECT NO. REFER TO NO.	1/4" BLDG. SECTIONS SHEET TITLE CONTENTS	KT. G DRAWN BY CHECKED BY DATE 8/13/76 REVISED 10/11/76 SHEET A-7 OF 7 /