THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Military and Veterans Affairs

FMO Design and Construction
57024 Roosevelt Rd
PO Box 5169
JBER, AK 99505

Email: gavin.fairbanks@alaska.gov

Issue Date: August 5, 2025

ATTN: Vendors

RE: **Project Name:** CC - 57226 Barracks Remodel
Project Number: 02A7823017
Project Location(s): Camp Carroll, Joint Base Elmendorf-Richardson, Alaska

Mandatory Return Addendum # One (1)

This addendum forms a part of the contract documents and modifies the original drawings and/or specifications for the subject work. In case of conflicts between this addendum and previously issued documents, this addendum shall take precedence. This addendum WILL be submitted with the contractors bid package.

The following administrative changes have been made to this ITB:

1. This addendum is being issued to correct incorrect labeling for the following documents:
    - EEO-1 Certification (25A-304, pg. 31 of the ITB) – VETERNAS was corrected to VETERANS
    - CONTACT REPORT (25A-321A, pg. 32 of the ITB) – VETERNAS was corrected to VETERANS; signature block at bottom of page was corrected from *DOT&PF Reviewer* to *DMVA Reviewer*
    - PRIME CONTRACTOR'S WRITTEN DBE COMMITMENT (25A-326, pg. 34 of the ITB) – DOT&PF logo updated to SOA logo
    - SUMMARY OF GOOD FAITH EFFORT DOCUMENTATION (25A-332A, pg. 35 of the ITB) – DOT&PF logo updated to SOA logo
    - BUY AMERICAN REQUEST FOR TYPE 3 WAIVER (25D-153, pg. 37 of the ITB) – DOT&PF logo updated to SOA logo; FAA references were removed
    - Buy American Percentage (25D-155, pg. 39 of the ITB) – FAA references were removed
    - Buy American Preferences – Final Assembly Questionnaire (25D-156, pg. 40 of the ITB) – FAA references were removed and updated to reflect DMVA
    - CERTIFICATION OF OFFEROR/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS (25D-159, pg. 41 of the ITB) – DOT&PF logo updated to SOA logo; FAA references were removed and updated to reflect DMVA
    - BUY AMERICAN CERTIFICATE (25D-61, pg. 48 of the ITB) – FAA references were removed and updated to reflect DMVA
    - CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY (25D-151, pg. 51 and 52 of the ITB) - FAA references were removed and updated to reflect DMVA
    - Certificate of Buy American Compliance for Manufactured Products (25D-152, pg. 53 and 54 of the ITB) - FAA references were removed and updated to reflect DMVA
    - DOCUMENT 00700 (pg. 66 of the ITB) – Header updated to reflect Department of Military and Veterans Affairs
    - DEPARTMENT (pg. 72 of the ITB) – Section updated to reflect Department of Military and Veterans Affairs

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Email: gavin.fairbanks@alaska.gov

2. This addendum is being issued to reschedule the walkthrough date from Monday August 18, 2025 to Tuesday August 19, 2025 at 10:00am Alaska Time.

Questions and Answers:

1. Can any available as-builts be provided for this project in both PDF & CAD?
   A. We do not have CAD as-builts available. Please see attached .pdf as-builts.

2. Can you tell me if there will be a need for new furnishings for these barracks remodel projects? If so, will that be part of this ITB or will it be procured under a separate contract?
   A. No, contractor shall remove, store and reinstall existing furniture once the project has been completed.

3. This is a good time to mention that these two ITBs appear to be missing the Disadvantaged Business Enterprise form 25A-325C.
   A. This has been noted. As stated on page 21 of the ITB, Preferences WILL NOT be used in this solicitation as it is one hundred percent (100%) federally funded and thus the form will not be provided as it is not applicable under this solicitation.

4. How do we register for the walkthrough as it is on base? What is the procedure?
   A. Interested bidders shall provide the project manager with the first and last name of the individual(s) attending the pre-bid walkthrough no later than 48 hours before the walkthrough. Bidders will be required to pick up their passes at the FT Rich Visitor Center on August 19, 2025. The Visitor Center is open between 9:00am and 4:30pm.
   (please note: each company interested in the walkthrough shall be limited to 3 participants due to the number of passes allowed to be issued at any given time)

Please contact me if you have any questions.

Sincerely,

Gavin M. Fairbanks
Building Management Specialist
(907) 428-7187

Name of Company: _____

Signature: _____

Date: _____

End of Addendum

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

EEO-1 CERTIFICATION

Federal-Aid Contracts

CC - 57226 Barracks Remodel

02A7823017

This certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor [41 CFR 60-1.7 (b) (1)] and must be completed by the successful Bidder and each proposed Subcontractor participating in this contract.

PLEASE CHECK APPROPRIATE BOXES

The ☐ Bidder ☐ Proposed Subcontractor hereby CERTIFIES:

PART A. Bidders and proposed Subcontractors with 50 or more year-round employees and a federal contract amounting to $50,000 or more are required to submit one federal Standard Report Form 100 during each year that the two conditions exist (50 employees and a $50,000 federal contract).

The company named below (Part C) is exempt from the requirements of submitting the Standard Report Form 100 this year.

[ ] NO (go to PART B) [ ] YES (go to PART C)

Instructions and blank Standard Report Form 100 may be obtained by contacting:

EEOC - Surveys Division
131 M Street, NE - Room 4SW22G
Washington, D.C. 20507
Telephone number: (877)392-4647 or (866)286-6440

PART B. The company named below has submitted the Standard Report Form 100 this year.

[ ] NO [ ] YES

Note: Bidders and proposed Subcontractors who have not filed the required Standard Report Form 100 and are not exempt from filing requirements will not be awarded this contract or subcontract until Form 100 has been filed for the current year ending June 30.

PART C.

Signature of Authorized Company Representative

Title

Company Name

Company Address (Street or PO Box, City, State, Zip)

Date

( )
Phone Number

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

CONTACT REPORT

Federal-Aid Contracts

CC - 57226 Barracks Remodel

02A7823017

Project Name and Number

Specific Work or Materials (by pay Item): _____

DBE Firm Contacted:

_____ _____ ( ) _____

Name **Address** **Phone Number**

A. INITIAL CONTACT: (See important contact information on instruction sheet)

1. Date _____ Method: ☐Phone ☐Publication ☒Email ☐FAX ☐Other
2. Person Contacted _____ _____
   Name Title
3. DBE's Response: Date: _____ Method: ☐ Phone ☐ Email ☐ FAX ☐ Other
   - ☐ Submitted an acceptable sub-bid. (If sub-bid accepted, *skip to Section D*)
   - ☐ Not interested: Indicate Reason(s) _____
   - ☐ Needs more information: Date Prime provided requested information _____
   - ☐ Will provide quote by: Date _____
   - ☐ Received unacceptable sub-bid (*complete Section C*)

B. FOLLOW-UP CONTACT:

1. Date _____ Method: ☐Phone ☐Publication ☐Email ☐FAX ☐Other
2. Person Contacted _____ _____
   Name Title
3. DBE's Response: Date: _____ Method: ☐ Phone ☐ Email ☐ FAX ☐ Other
   - ☐ Submitted an acceptable sub-bid. (If sub-bid accepted, *skip to Section D*)
   - ☐ Received unacceptable sub-bid (*complete Section C*)
   - ☐ Other result: _____

C. EXPLANATION OF FAILURE TO ACHIEVE AN ACCEPTABLE SUB-BID:

1. Were the following required efforts made?
   a. ☐ Yes ☐ No Identified specific items of work, products, materials, etc. when asking for quote(s).
   b. ☐ Yes ☐ No Offered assistance in acquiring necessary bonding, insurance, and business development related assistance.
   c. ☐ Yes ☐ No Provided all appropriate information concerning the specific work items or materials.
2. Was the DBE's quote non-competitive? ☐ Yes ☐ No
3. Was the DBE unable to perform in some capacity? ☐ Yes ☐ No If "Yes", explain: _____

D. CERTIFICATION: I certify that the information provided above is accurate and that efforts to solicit sub-bids were made in good faith.

Signature of Company Representative	**Title**	**Date**
Name of DMVA Reviewer	**Title**	**Date**

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
Civil Rights Office – DBE Program

PRIME CONTRACTOR'S WRITTEN DBE COMMITMENT

Federal-Aid Contracts

CC - 57226 Barracks Remodel

02A7823017

Project Name and Number

All firms bidding on Alaska Department of Military and Veterans Affairs projects must have a written commitment from each DBE firm to be subcontracted. Please complete this form for each DBE firm and submit to the DMVA Compliance Officer.

If you have any questions, please call (907) 428-7187.

Name of DBE Firm: _____

Street Address: _____

Mailing Address: _____ City: _____

State: _____ Zip Code: _____

Telephone Number: _____ Fax number: _____

Description of the work that DBE firm will perform: _____

_____

_____

_____

_____

_____

Please provide additional information on a separate sheet of paper.

The dollar amount of participation by the DBE firm: $ _____

Signatures of Authorized representatives of the Prime Contractor and the DBE firm below represent the written commitment by the Prime Contractor to subcontract with the DBE firm as described above and a written commitment by the DBE firm to subcontract for the work described above:

_____ _____

Prime Contractor Signature Date DBE Firm Signature Date

Prime Contractor Firm: _____

Address: _____

_____

_____

Telephone Number: _____ Fax number: _____

Form 25A-332A (8/01)

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERNAS AFFAIRS

SUMMARY OF GOOD FAITH EFFORT DOCUMENTATION

Federal-Aid Contracts

CC - 57226 Barracks Remodel

02A7823017

Project Name and Number

Contractor: _____

List **all** items considered for DBE utilization. GFE requires at a minimum that the Contractor consider **all** items identified on Form 25A-324.

a. MATERIAL OR SPECIFIC ITEM OF WORK (SPECIFY PAY ITEM)	b. ACCEPTABLE DBE QUOTE RECEIVED[1]	c. # OF DBEs CONTACTED IN DBE DIRECTORY	d. # OF DBEs THAT RESPONDED[2]	e. # OF DBE QUOTES RECEIVED
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

1. Check if acceptable DBE quote was received (if so, skip c, d, and e)
2. Attach completed Contact Reports, Form 25A-321A

LIST ADDITIONAL ITEMS ON REVERSE SIDE

Form 25A-332A (8/01)

a. MATERIAL OR SPECIFIC ITEM OF WORK (SPECIFY PAY ITEM)	b. ACCEPTABLE DBE QUOTE RECEIVED[1]	c. # OF DBEs CONTACTED IN DBE DIRECTORY	d. # OF DBEs THAT RESPONDED[2]	e. # OF DBE QUOTES RECEIVED
9.				
10.				
11.				
12.				
13.				
14.				
15.				

1. Check if acceptable DBE quote was received (if so, skip c, d, and e)
2. Attach completed Contact Reports, Form 25A-321A

Comments:

BUY AMERICAN REQUEST FOR TYPE 3 WAIVER

Federal-Aid Contracts

Project Name and Number:

CC - 57226 Barracks Remodel

02A7823017

TYPE 3 WAIVER			
LIST MATERIAL OR EQUIPMENT	**COST OF U.S. STEEL AND MANUFACTURED GOODS (US)**	**COST OF NON-DOMESTIC STEEL OR MANUFACTURED GOODS (NON)**	**COST OF US STEEL OR GOODS DIVIDED BY TOTAL COST, WRITTEN AS A PERCENTAGE US/(US+NON)X(100) %**

I certify under penalty of law that all steel and manufactured goods furnished for this project are produced in the United States, and comply with the requirements of 49 USC § 50101 and Contract subsection GCP 60-09 Buy American Preference; except for those steel and manufactured goods that are listed on this Request for Waiver. I understand that if Department of Military and veterans Affairs (DMVA) does not approve this Request for Waiver, I agree to fully comply with the requirements of 49 USC § 50101.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Date _____ Signature _____

Company Name _____ Title _____

Form Instructions:

1. Select Type 3 Waiver to request waiver of 100% Buy American Preferences if the cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components of the facility or equipment, and final assembly of the facility or equipment has occurred in the United States.
    a. List all product components and subcomponents that are not comprised of 100% US domestic content (Exclude products listed on the DMVA Nationwide Buy American Waivers Issued listing and products excepted by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
    b. Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture (Department Form 25D-155).
    c. Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture (Department and Form 25D-156).
2. All waiver requests must be submitted to DMVA within 5 working days after date of notification of apparent low bidder, or as directed by the Contracting Officer.

Buy American Percentage

Company

Date:

Point of Contact (Provide name, address, telephone, fax, e-mail)

PRODUCT STRUCTURE
Multi-Level Bill of Materials through level 2 only

Item:
DMVA Item Number

Address of Final Assembly Location:

Total Material Cost	
US Content, %	
Other, %	

						US Origin*		Other	
Level (0, 1, 2)	Part Number	Description	Quantity Per Unit	Unit of Measure	Price/Unit of Measure	Price/Unit of Measure	Cost/Each	Price/Unit of Measure	Cost/Each

Level Descriptions: Level 0 is the final product, Level 1 are components, and Level 2 are sub-components.

* Items Listed in Federal Acquisition Regulation Part 25.104 may be counted as US Origin, however should include note stating that item is exempt in 25.104

Form 25D-155 (3/18)

Buy American Preferences - Final Assembly Questionnaire

Federal-Aid Contracts

To assist the Department of Military and Veterans Affairs (DMVA) in making the determination of whether final assembly of the product occurs in the United States, please complete and submit this questionnaire when requesting a Buy American Waiver under 49 U.S.C. 50101(b)(3)(A).

1. **Describe the assembly process occurring at the specified final location in the United States.**
   Please describe the final assembly process and its various operations.

   How long does the final assembly process take to complete?

2. **Describe the resources used to conduct the assembly of the product at the specified location in the United States.**
   How many employees are involved in the final assembly process and what is the general skill level of those employees?

   What type of equipment is used during the final assembly process?

   What is a rough estimate of the associated cost to conduct final assembly of the product at the specified location in the United States?

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

Region

Project Name: CC - 57226 Barracks Remodel

As a condition of bid responsiveness on Federal funded projects, the bidder must complete, sign, date, and submit this certification statement with their proposal. As a condition of approval of Subcontracts on Federal funded projects, the Subcontractor or Lower Tier Subcontractor must complete, sign, and date the certification statements and the Contractor must submit the certifications with the subcontracts for approval.

The Applicant must complete the following two certification statements. **The Applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. If** the Contract is awarded, the Applicant agrees it will incorporate this provision for certification in all subcontracts and lower tier subcontracts.

Certifications

a) The Applicant represents that it is ☐ is not ☐ a corporation that has any Federal Tax Delinquency, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

b) The Applicant represents that it is ☐ is not ☐ a corporation that has a Felony Conviction under any Federal law within the preceding 24 months.

Note

If an Applicant responds in the affirmative to either of the above representations, the Applicant is ineligible to receive an award (or a proposed subcontract award, as applicable) unless the Department has received notification from the DMVA suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the Department about its tax liability or conviction to the Department.

Definitions

Applicant: The Bidder before award of contract. The Contractor, Subcontractor, and Lower Tier Subcontractor after award.

Suspension and Debarment Official (SDO): An official in the DMVA Office that has authority to determine whether an Applicant is suspended or debarred from performing the federally funded work.

Felony conviction: Felony conviction means a conviction within the preceding twenty four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Department of Military and Veterans Affairs and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

_____	_____
Date	Signature
_____	_____
Company Name	Title

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

BUY AMERICAN CERTIFICATE

Federal-Aid Contracts

CC - 57226 Barracks Remodel

02A7823017

By submitting a bid under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment, the offeror certifies that steel and each manufactured product is produced in the United States (as defined in Subsection 60-09, Buy American Steel and Manufactured Products for Construction Contracts) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

Attach manufacturer's mill test reports with the Buy American Certification signed by the manufacturer.

Articles, materials, and supplies excepted from this provision are listed on the reverse of this form.

PRODUCT[1]	COUNTRY OF ORIGIN

Contractor

Signature of Contractor's Representative

Date

1. Enter "NONE" on the first line if there are no exceptions.

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY

CC - 57226 Barracks Remodel

02A7823017

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with its proposal. The bidder or offeror must indicate how it intends to comply with 49 USC § 50101 by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e. not both) by inserting a checkmark (✓) or the letter "X".

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States;

b) Installing manufactured products for which the Department of Military and Veterans Affairs has issued a waiver as indicated by inclusion on the current DMVA Nationwide Buy American Waivers Issued listing; or

c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

d) To provide to the Department evidence that documents the source and origin of the steel and manufactured product (accompanied by Department Form 25D-154).

e) To faithfully comply with providing U.S. domestic products.

f) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the DMVA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for a Type 3 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

a) To submit to the Department within 5 working days after date of notification of apparent low bidder, a formal waiver request (using Department Form 25D-153) and required documentation that supports the type of waiver being requested.

b) That failure to submit the required documentation within the specified timeframe is cause for a nonresponsible determination that may result in rejection of the proposal.

c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the DMVA.

d) To furnish U.S. domestic product for any waiver request that the DMVA rejects.

e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the DMVA determines justified.

Required Documentation

Type 3 Waiver - The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "facility". Use Department Forms 25D-153, 25D-155 and 25D-156 to summarize product data. The required documentation for a Type 3 waiver is:

a) Listing of all manufactured products that are not comprised of 100 percent U.S. domestic content (excludes products listed on the DMVA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).

b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.

c) Percentage of non-domestic component and subcomponent cost as compared to total "facility" component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

False Statements: Per USC § 47126, this certification concerns a matter within the jurisdiction of the Department of Military and Veterans Affairs and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date	Signature
Company Name	Title

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

Certificate of Buy American Compliance for Manufactured Products

CC - 57226 Barracks Remodel

02A7823017

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States;
b) Installing manufactured products for which the Department of Military and Veterans Affairs has issued a waiver as indicated by inclusion on the current DMVA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

d) To provide to the Department evidence that documents the source and origin of the steel and manufactured product (accompanied by Department Form 25D-154);
e) To faithfully comply with providing U.S. domestic product;
f) To furnish U.S. domestic product for any waiver request that the DMVA rejects; and
g) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the DMVA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for a Type 3 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

a) To submit to the Department within 5 working days after date of notification of apparent low bidder, a formal waiver request (using Department Form 25D-153) and required documentation that supports the type of waiver being requested.
b) That failure to submit the required documentation within the specified timeframe is cause for a nonresponsible determination that may result in rejection of the proposal.
c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the DMVA.
d) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the DMVA determines justified.

Required Documentation

Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "item". Use Department Forms 25D-153, 25D-155 and 25D-156 to summarize product data. The required documentation for a Type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the DMVA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

False Statements: Per USC § 47126, this certification concerns a matter within the jurisdiction of the Department of Military and Veterans Affairs and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date	Signature
Company Name	Title

STATE OF ALASKA
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
DOCUMENT 00700 - ISSUED DECEMBER 2011

GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT FOR BUILDINGS

Contract Documents - The Contract form, Addenda, the bidding requirements and CONTRACTOR's bid (including all appropriate bid tender forms), the bonds, the Conditions of the Contract and all other Contract requirements, the Specifications, and the Drawings furnished by the DEPARTMENT to the CONTRACTOR, together with all Change Orders and documents approved by the Contracting Officer, for inclusion, modifications and supplements issued on or after the Effective Date of the Contract.

Contracting Officer - The person authorized by the Commissioner to enter into and administer the Contract on behalf of the DEPARTMENT. He has authority to make findings, determinations and decisions with respect to the Contract and, when necessary, to modify or terminate the Contract. The Contracting Officer is identified on the construction Contract.

CONTRACTOR - The individual, firm, corporation or any acceptable combination thereof, contracting with the DEPARTMENT for performance of the Work.

Contract Price - The total moneys payable by the DEPARTMENT to the CONTRACTOR under the terms of the Contract Documents.

Contract Time - The number of Calendar Days following issuance of Notice-to-Proceed in which the project shall be rendered Substantially Complete, or if specified as a calendar date, the Substantial Completion date specified in the Contract Documents

Controlling Item - Any feature of the Work on the critical path of a network schedule.

Defective - Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents.

DEPARTMENT - The Alaska Department of Military and Veterans Affairs. References to "Owner", "State", "Contracting Agency", mean the DEPARTMENT.

Directive - A written communication to the CONTRACTOR from the Contracting Officer interpreting or enforcing a Contract requirement or ordering commencement of an item of Work.

Drawings - The Drawings which show the character and scope of the Work to be performed and which have been furnished by the DEPARTMENT or the DEPARTMENT's Consultant and are by reference made a part of the Contract Documents.

ENGINEER - The DEPARTMENT'S authorized representative of the Contracting Officer, as defined in the DEPARTMENT'S *delegation of authority letter* to be issued after notice-to-proceed, who is responsible for administration of the contract.

Equipment - All machinery together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the work.

Final Acceptance - The DEPARTMENT's written acceptance of the Work following Final Completion and the performance of all Contract requirements by the CONTRACTOR.

Final Completion - The Project (or specified part thereof) has progressed to the point that all required Work is complete as determined by the Contracting Officer.

Furnish - To procure, transport, and deliver to the project site materials, labor, or equipment, for installation or use on the project.

General Requirements - Sections of Division 1 of the Specifications which contain administrative and procedural requirements as well as requirements for temporary facilities which apply to Specification Divisions 2 through 16.

BUILDING #57226 ADDITION

CONTRACT # W91ZRU-10-D-0006-0010

ALASKA ARMY NATIONAL GUARD
CAMP CARROLL, JBER, ALASKA

RECORD DRAWINGS

DRAWING INDEX

PROJECT TEAM

PROJECT MANAGEMENT & GENERAL CONSTRUCTION
H. WATT & SCOTT INC.
10360 Nigh Road
Anchorage, Alaska 99515
Project Mgr: Craig Watts
TEL: (907) 344-6628
FAX: (907) 344-5360
EMAIL: craig@hwatt.com

ARCHITECTURE
GDM, INC.
4600 Business Park Blvd., Suite 24
Anchorage, Alaska 99503-7152
TEL: (907) 562-0422
FAX: (907) 562-0448
EMAIL: gdmanc@ak.net

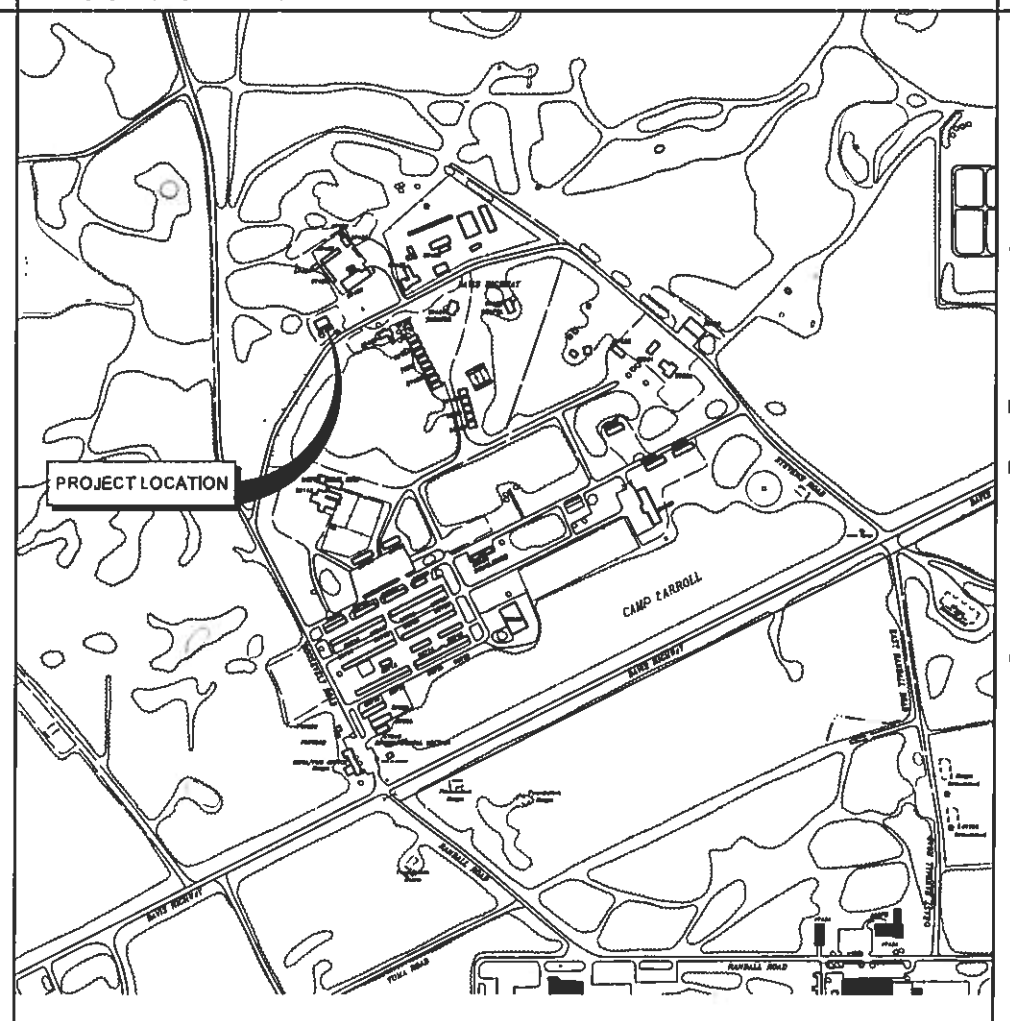
STRUCTURAL ENGINEERING
OIEN ASSOCIATES, INC
16922 Hanson Drive
Eagle River, Alaska 99577
TEL: (907) 694-0507
FAX: (907) 694-0508
EMAIL: boien@alaska.net

MECHANICAL & ELECTRICAL ENGINEERING
RSA ENGINEERING, INC.
181 Swanson Avenue, Suite 101
Wasilla, AK 99654
TEL: (907) 357-1521
FAX: (907) 257-1751

FIRE PROTECTION
CHINOOK FIRE PROTECTION, INC.
12651 Old Seward Highway
Anchorage, Alaska 99515
TEL: (866) 616-9909
FAX: (907) 344-3411
EMAIL: jeff@chinooklira.com

FIRE ALARM
GMW FIRE PROTECTION, INC.
6108 MacKay Street
Anchorage, AK 99518
TEL: (907) 336-5000
FAX: (907) 336-5050

LOCATION MAP



JBER, ALASKA
N.T.S.

CODE DATA

BUILDING CODE ANALYSIS

A. OCCUPANCY CLASSIFICATION:	RESIDENTIAL GROUP R-1	
B. OCCUPANCY SEPARATIONS:	PER IBC 2009 PAR. 420.2 FIRE PARTITIONS REQUIRED BETWEEN SLEEPING UNITS	
C. ALLOWABLE FLOOR AREA FOR NON-SPRINKLERED BUILDING (TABLE 503):	7,000 SF	
D. AREA INCREASE FOR SPRINKLERED BUILDING (506.3):	21,000 SF (1 STORY)	
ACTUAL BUILDING AREAS OF THIS PROJECT:	NEW 1st FLOOR	2,840 SF
	EXISTING 1st FLOOR	1,950 SF
	TOTAL	4,790 SF
E. ALLOWABLE NO. OF STORIES: (TABLE 503)	TYPE V B CONSTRUCTION ALLOWABLE STORIES: 2	
F. ALLOWABLE HEIGHT:	TYPE V B CONSTRUCTION ALLOWABLE: 40 FT AVERAGE ROOF HEIGHT = 13'-7"	

THE AVERAGE HEIGHT CALCULATION ESTIMATED FROM DESIGN DRAWINGS FOR NEW STRUCTURE (SLIGHTLY HIGHER THAN EXISTING) BETWEEN GRADE PLANE AND THE AVERAGE HEIGHT OF SLOPING ROOF.

G. FIRE RESISTANCE RATING REQUIREMENTS PER TABLE 601:
TYPE V B – CONSTRUCTION
STRUCTURAL FRAME 0 HR
BEARING WALLS (EXT.) 1 HR
(TABLE 602 - SEPARATION 6 FT.)
BEARING WALLS (INT.) 0 HR
NON-BEARING EXT. WALLS 1 HR
(TABLE 602 FIRE SEPARATION 6 FT.)
NON-BEARING INT. WALLS 30 MIN.
(PER 420.2 WITH SPRINKLER SYSTEM PER NFPA 13)
FLOOR CONSTRUCTION 0 HR
ROOF CONSTRUCTION 0 HR

CODES AND STANDARDS

BUILDING CODES & STANDARDS ADOPTED BY THE STATE OF ALASKA AS ADOPTED AND AMENDED.

INTERNATIONAL BUILDING CODE (IBC) 2009 EDITION WITH STATE OF ALASKA AMENDMENTS. 13 AAC 50.010 (www.dps.state.ok.us/tire)
INTERNATIONAL FIRE CODE (IFC) 2009
INTERNATIONAL FUEL GAS CODE 2009
INTERNATIONAL MECHANICAL CODE (IMC) 2009

CODES AND STANDARDS

UNIFORM PLUMBING CODE (IAPMO) 2009 EDITION WITH STATE OF ALASKA DEPARTMENT OF LABOR AMENDMENTS
NATIONAL ELECTRICAL CODE (NEC) 2009 WITH STATE OF ALASKA DEPARTMENT OF LABOR AMENDMENTS
ARCHITECTURAL BARRIERS ACT (ALASKA STATUTE 35.10.015)
TITLE 17 ALASKA ADMINISTRATIVE CODE 50.010
18 AAC 30, ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
APPLICABLE FEDERAL LAWS, REGULATIONS AND OTHER NATIONAL ASSOCIATION STANDARDS:
AMERICANS WITH DISABILITIES ACT (PUBLIC LAW 101-336) 2010 STANDARDS FOR ACCESSIBILITY DESIGN
NATIONAL FIRE PREVENTION ASSOCIATION (NFPA) STANDARDS AS REFERENCED IN THE TECHNICAL SPECIFICATION SECTIONS OR ON THE DRAWINGS
OSHA GENERAL INDUSTRY SAFETY AND HEALTH STANDARDS (29 CFR 1910) PUBLICATION V2206
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (40 CFR, PART 61)
ENVIRONMENTAL PROTECTION AGENCY (EPA) FINAL RULE (40 CFR, PART 761)

UNIFIED FACILITIES CRITERIA (UFC):
3-600-01 FIRE PROTECTION ENGINEERING FOR FACILITIES
4-010-01 DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS
3-530-01 DESIGN: INTERIOR AND EXTERIOR LIGHTING AND CONTROLS
3-310-04 SEISMIC DESIGN FOR BUILDINGS
3-301-01 STRUCTURAL ENGINEERING
AR-190-51 SECURITY OF ARMY PROPERTY (SENSITIVE AND NONSENSITIVE)
NG PAM 415-5 ARMY NATIONAL GUARD GENERAL FACILITIES INFORMATION DESIGN GUIDE
NG PAM 415-12 ARMY NATIONAL GUARD FACILITIES ALLOWANCES

THE FOLLOWING INDUSTRY INSTITUTE AND ASSOCIATION PUBLICATIONS SHALL BE USED AS MINIMAL STANDARDS WHERE APPLICABLE.
AMERICAN IRON AND STEEL INSTITUTE
AMERICAN INSTITUTE FOR STEEL CONSTRUCTION
AMERICAN SOCIETY FOR TESTING AND MATERIALS
AMERICAN WELDING SOCIETY
PORTLAND CEMENT ASSOCIATION
NATIONAL BOARD OF FIRE UNDERWRITERS
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NATIONAL FIRE PROTECTION AGENCY
UNDERWRITERS LABORATORY STANDARDS FOR SAFETY

RECORD DRAWINGS

GDM inc. ARCHITECTURE • PLANNING

CAMP CARROLL, JBER
BUILDING #57226 ADDITION
COVER SHEET

JOB NO. 13015
G1
DATE: 13 OCT 2014

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

SECTION 05 40 00

COLD-FORMED METAL FRAMING

STEEL STUDS, JOISTS, TRACKS, BRACING, BRIDGING AND ACCESSORIES

Framing components shall comply with ASTM C 955 and the following.

Studs and Joists of 16 Gage (0.0598 inch) and Heavier

Galvanized steel, ASTM A 653/A 653M; or carbon steel, ASTM A 1011/A 1011M, Grade 50, painted.

Studs and Joists of 18 Gage (0.0478 inch) and Lighter

Studs and Joists of 18 Gage (0.0478 inch) and Lighter, Track, and Accessories (All Gages): Galvanized steel, ASTM A 653/A 653M, G60; or carbon steel, ASTM A 1008/A 1008M, Grade C, painted.

Sizes, Gages, Section Modulus, and Other Structural Properties

Size and gage as indicated.

CONNECTIONS

Screws for steel-to-steel connections shall be self-drilling tapping in compliance with SAE J78 of the type, size, and location as shown on the drawings. Electroplated screws shall have a Type II coating in accordance with ASTM B 633. Screws, bolts, and anchors shall be hot-dipped galvanized in accordance with ASTM A 123/A 123M or ASTM A 153/A 153M as appropriate. Screws bolts, and anchors shall be hot dipped galvanized in accordance with ASTM A 123/A 123M or ASTM A 153/A 153M as appropriate.

FASTENING

Fasten framing members together by using self-drilling or self-tapping screws.

Screws

Screws shall be self-drilling self-tapping type, size, and location shown on the drawings or specified. Screw penetration through joined materials shall not be less than three exposed threads. Minimum spacings and edge distances for screws shall be as specified in AISI SG02-1. Screws covered by sheathing materials shall have low profile heads.

SECTION 07 21 00

LOOSE FILL INSULATION

INSULATION

Climate Pro loose fill fiberglass insulation having a flame spread rating of 25 or less and a smoke developed rating of 150 or less when tested in accordance with ASTM E 84. Insulation to be installed in existing attic over existing batt insulation.

Thermal Resistance Value (R-VALUE)

R-30 (in addition to existing fiberglass batt)

Prohibited Materials

Do not provide asbestos-containing materials.

BAFFLES

Eave baffles constructed of plastic, cardboard, or other approved materials. Use only non-combustible materials meeting the requirements of ASTM E 136 for blocking around chimneys and heat producing devices.

SECTION 07 22 00

FOUNDATION INSULATION

INSULATION

Insulfoam R-Tech Expanded Polystyrene Board with polymeric laminate facers: ASTM C 578, Type I, 1.0# density.

INSULATION THICKNESS

Thickness shall be 2".

SECTION 07 19 00

BELOW SLAB VAPOR RETARDER

VAPOR RETARDER

Polyethylene sheeting, 6.0 mil. complying with ASTM D-4397-84E. Vapor rating of 0.10 perms or less (ASTM E96): Ten-foot minimum X continuous roll length.

Accessories: Primers, adhesives, solvents, battens, staples, clips, trim and other accessories recommended by vapor retarder manufacturer and necessary for a complete installation.

EXAMINATION

Examine Drawing details and field conditions to receive work for defects that will adversely affect the completed installation, and for deviations beyond allowable tolerances.

Substrate surfaces shall be free of sharp projections or holes over which the vapor retarder sheet can be applied without tearing or puncturing.

INSTALLATION

Installation shall be continuous, without gaps, holes or tears. Installation may be beneath a layer of sand for V.R. protection and curing of concrete.

PROTECTION

The Contractor shall protect installed retarder in all areas so that construction activities and traffic across the retarder will not result in punctures or other forms of damage and deterioration. The continuity and vapor resistance integrity of the vapor retarder is an extremely important element of the Project construction.

SECTION 07 46 30

STEEL ROOFING

MANUFACTURER

Varco Pruden

ROOFING PANELS

SSR, standing seam 22 or 24 gauge zinc aluminum coated steel.

MATERIALS

Finish to be manufacturer's standard coating. Color to be selected from Manufacturer's standard colors.

TRIM

Provide trim pieces as detailed on Drawings and per manufacturer's installation instructions as required for complete, weather tight, functional installation.

SECTION 07 41 00

INSULATED METAL WALL PANELS

MANUFACTURER

Kingspan.

INSULATED METAL WALL PANELS

Prefinished metal skins, polyurethane insulation, 4" thick, R-30

TRIM

Provide trim pieces as detailed on Drawings and per manufacturer's installation instructions as required for complete, weather tight, functional installation.

SECTION 07 60 00

FLASHING AND SHEET METAL

Materials shall conform to the requirements specified below and to the thickness and configurations established in SMACNA Arch. Manual

Exposed Sheet Metal items, Zinc-Coated (Galvanized)

Shall be of the same material. Minimum 24 ga.

Steel Sheet, Zinc-Coated (Galvanized)

ASTM A 653/A 653M. Minimum 24 ga.

Finish

Factory tinished to match adjacent building material color.

Fasteners

Use the same metal or a metal compatible with the item fastened. Use stainless steel fasteners to fasten dissimilar materials.

SECTION 07 92 00

JOINT SEALANTS

Materials shall conform to the requirements specified below. Provide sealants that are tested and suitable for the substrate. All sealants shall be low V.O.C.

Exterior Sealants

For joints in vertical surfaces, provide ASTM C 920, Type S or M, Grade NS, Class 25, Use NT. For joints in horizontal surfaces, provide ASTM C 920, Type S or M, Grade P, Class 25, Use T. Location(s) and color(s) of sealant shall be as follows:

	LOCATION	COLOR
a.	Joints and recesses formed where frames and subsills of windows, doors, louvers, and vents adjoin metal frames. Use sealant at both exterior and interior surfaces of exterior wall penetrations.	Match adjacent primary surface color
b.	Voids at penetrations where items pass through exterior walls and ceilings.	Match adjacent primary surface color
c.	Metal-to-metal joints where sealant is indicated or specified.	Match adjacent primary surface color
d.	Joints between ends of gravel stops, fascias, copings, and adjacent walls.	Match adjacent primary surface color

SECTION 08 11 13

STEEL DOORS AND FRAMES

Steel Door Systems

Exterior Steel doors shall have a core of polyurethane insulation; face sheets, edges, and frames of galvanized steel not lighter than 23 gauge, 16 gauge, and 16 gauge respectively; weather stripping; nonremovable-pin hinges; aluminum threshold; and door bottom. Doors and frames shall be galvanized. Doors shall have been tested in accordance with SDI/DOOR A250.4 and shall have met the requirements for Level C. Prepare doors to receive specified hardware. Doors shall be 1-3/4 inch thick.

Steel Frames

SDI/DOOR A250.8, Level 3, 16 gauge, except as otherwise specified. Form frames to sizes and shapes indicated, with welded corners. Provide steel frames for all doors.

Anchors

Provide anchors to secure the frame to adjoining construction. Provide steel anchors, zinc-coated or painted with rust-inhibitive paint, not lighter than 18 gauge. Provide 3 jamb anchors and 1 base anchor or 4 jamb anchors on both sides of frame.

SECTION 08 14 00

WOOD DOORS

DOORS

Provide doors of the types, sizes and designs indicated.

Interior Flush Doors

Provide particleboard core, Type II flush doors conforming to WDMA I.S. 1-A with faces of sound grade red oak hardwood for natural finish.

Finishes

Field Painting: Factory prime or seal doors and field paint.

Color

Provide door finish colors as selected by the Contracting Officer's representative.

SECTION 08 51 13

ALUMINUM WINDOWS

SCOPE

Replace existing windows to meet egress requirements of sleeping rooms and UFC 4-010-01 and UFC 4-010-02. Existing exterior walls are 2x6 load bearing wood studs with plywood sheathing. Building occupancy: Billeting Level of Protection: low Project is within a controlled perimeter.

PERFORMANCE REQUIREMENTS

A. Testing standards for air infiltration, water penetration and structural performance: AAMA/WDMA/CSA 101/I.S.2/A440 for each window type.

B. Air infiltration: Maximum 0.06 CFM per square foot of sash fixed area at a test pressure differential of 6.24 psf, ASTM E 283.

C. Water penetration: No water penetration at a pressure of 8 psf of fixed area, ASTM E 331.

D. Structural performance: Design all frames for static loads per ASTM F 1642. Members shall withstand design wind load and requirements of UFC 4-010-01 with Change 1.

E. Wind Requirements:
110 MPH (3 sec gust) wind speed.
Wind Pressure: 50 PSF.
Exposure: C.

F. Provide manufacturer's standard 10 year warranty on finish.

PRODUCTS

A. Desco Dark Bronze Anodized.

B. Solarban 60 tempered glass over 1/4" laminated.

MATERIALS

A. Mullions and Cover Plates: Shall be extruded aluminum of 6063-T5 alloy and temper of profile and dimensions indicated on the drawings.

B. Thermal Barrier: Neoprene, rigid vinyl or polyurethane conforming to AAMA 101.

GLASS AND GLAZING

A. Glass thickness and type shall be in accordance with manufacturer's recommendations for prescribed design pressure. Factory glazing shall be in accordance with manufacturer's standard requirements.

B. Factory glazed except where field glazing is required due to large window unit dimensions. Units shall be replaceable without dismantling sash framing.

C. Insulating Glass: ASTM E774, NAMI/IGCC, CBA Rated, Dual-Seal or Single-Seal as selected. Provide the window manufacturer's sealed insulating glazing material at least 1" overall in thickness.

Glass Characteristics: Manufacturer's standard clear float glass.

ACCESSORIES

A. Fasteners: Where exposed, shall be 300 Series, Stainless Steel.

B. Perimeter Anchors: Aluminum. When steel anchors are used, provide insulation between steel material and aluminum to prevent galvanic action.

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

RECORD DRAWINGS

THIS RECORD DRAWING HAS BEEN PREPARED FROM CONTRACTOR FURNISHED INFORMATION. GDM INC. DOES NOT CONFIRM THE ACCURACY OF THIS INFORMATION AND ASSUMES NO LIABILITY FOR ERRORS OR OMISSIONS IN THIS DRAWING.

GDM inc.
ARCHITECTURE • PLANNING

H.WATT AND SCOTT GENERAL CONTRACTORS

CAMP CARROLL, JBER
BUILDING #57226
ADDITION

SPECIFICATIONS

JOB NO. 13015

A1.1

DATE: 13 OCT 2014

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

SECTION 08 71 10

DOOR HARDWARE

DOOR HARDWARE

General: Provide door hardware for each door to comply with requirements in this Section, and the Door Hardware Schedule.

Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Schedule. Products are identified by using door hardware designations, as follows:
1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

HINGES AND PIVOTS

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Hinges:
    a. Baldwin Hardware Corporation (BH).
    b. Hager Companies (HAG).
    c. Lawrence Brothers, Inc. (LB).
    d. McKinney Products Company; Div. of ESSEX Industries, Inc. (MCK).
    e. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
    f. Stanley Commercial Hardware; Div. of The Stanley Works (STH).

LOCKS AND LATCHES

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Mechanical Locks and Latches:
    a. Best Lock Corporation (BLC).
    b. Corbin Russwin Architectural Hardware; Div. of Yale Security Inc. (CR).
    c. Hager Companies (HAG).
    d. McKinney Products Company; Div. of ESSEX Industries, Inc. (MCK).
    e. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
    f. Schlage Lock Company; an Ingersoll-Rand Company (SCH).
    g. Weiser Lock; Div. of Masco Building Products Corporation (WEI).

Backset: 2-3/4 inches (70 mm), unless otherwise indicated.

CYLINDERS AND KEYING

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Cylinders: Same manufacturer as for locks and latches.
2. Key Control System: Best
3. Interchangeable Cores: Core insert, removable by use of a special key, and usable with other manufacturers' cylinders.

Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
1. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.

CLOSERS

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Surface-Mounted Closers:
    a. Corbin Russwin Architectural Hardware; Div. of Yale Security Inc. (CR).
    b. DORMA Door Controls Inc.; Member of The DORMA Group (DC).
    c. LCN Closers; an Ingersoll-Rand Company (LCN).
    d. Norton Door Controls; Div. of Yale Security Inc. (NDC).
    e. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).

PROTECTIVE TRIM UNITS

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Metal Protective Trim Units:
    a. Baldwin Hardware Corporation (BH).
    b. IPC Door and Wall Protection Systems, Inc. (IPC).
    c. Ives: H. B. Ives (IVS).
    d. NT Quality Hardware; an Ingersoll-Rand Company (NTQ).
    e. Triangle Brass Manufacturing Company, Inc. (TBM).
    f. Wilkinson Company, Inc. (WIL).

Materials: Fabricate protection plates from the following:
1. Stainless Steel: 0.050 inch (1.3 mm) thick; beveled top and 2 sides.

Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine or self-tapping screws.

Furnish protection plates sized 1-1/2 inches (38 mm) less than door width on push side and 1/2 inch (13 mm) less than door width on pull side, by height specified in Door Hardware Schedule.

DOOR GASKETING

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Door Gasketing:
    a. National Guard Products, Inc. (NGP).
    b. Pemko Manufacturing Co., Inc. (PEM).
    c. Reese Enterprises, Inc. (RE).
    d. Sealeze Corporation (SEL).
    e. Zero International, Inc. (ZRO).
2. Door Bottoms:
    a. National Guard Products, Inc. (NGP).
    b. Pemko Manufacturing Co., Inc. (PEM).
    c. Reese Enterprises, Inc. (RE).
    d. Zero International, Inc. (ZRO).

THRESHOLDS

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. National Guard Products, Inc. (NGP).
2. Pemko Manufacturing Co., Inc. (PEM).
3. Reese Enterprises, Inc. (RE).
4. Zero International, Inc. (ZRO).

MISCELLANEOUS DOOR HARDWARE

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Baldwin Hardware Corporation (BH).
2. Hager Companies (HAG).
3. Ives: H. B. Ives (IVS).
4. Triangle Brass Manufacturing Company, Inc. (TBM).

FINISHES

Standard: Comply with BHMA A156.18, and match existing building hardware finishes.

DOOR HARDWARE SCHEDULE

H01 – DOORS 116A AND 116B
Hardware by pre-engineered metal building manufacturer.

H02 – DOOR 117

3ea	Hinges	HA	BB1279 4 ½" x 4 ½" x 612
1ea	Lockset	BE	93K7AB15D x S3 x 612
1ea	Kickplate	RW	K1050 10" x 34" x 0.050" x 612
1ea	Wall Stop	RW	409 x 612
1ea	Sound Seal	PE	S88D

SECTION 09 29 00

GYPSUM BOARD

Gypsum Board

ASTM C 36/C 36M and ASTM C 1396/C 1396M.

Mold and mildew resistant. ASTM D 3273 panel score of 8, 5/8 inch Type X.

Finish

Tape and finish gypsum board in accordance with ASTM C 840, GA 214 and GA 216. All gypsum board walls, partitions and ceilings shall be an orange peel texture. Provide joint, fastener depression, and corner treatment.

Fire-Resistant Assemblies

Wherever fire-rated construction is indicated, provide materials and application methods, including types and spacing of fasteners, wall and ceiling framing in accordance with the specifications contained in UL Fire Resist Dir or WH Fire Resist Dir for the Design Number(s) indicated, or GA 600 for the File Number(s) indicated. Joints of fire-rated gypsum board enclosures shall be closed and sealed in accordance with UL test requirements, WH test requirements, or GA requirements. Penetrations through rated partitions and ceilings shall be sealed tight in accordance with tested systems. Fire ratings shall be as indicated in the drawings.

SECTION 09 65 30

RESILIENT WALL BASE AND ACCESSORIES

RESILIENT WALL BASE

A. Manufacturer: Burke.

B. Type: Rubber.

C. Group: Type TS or TP.

D. Style: Cove (with top-set toe).

E. Minimum Thickness: 0.125 inch.

F. Height: 4 inches

G. Lengths: Cut lengths 48 inches long or rolls in manufacturer's standard length.

H. Outside Corners: Job formed or pre-molded.

I. Inside Corners: Job formed or pre-molded.

J. Surface: Smooth.

K. Color: to be determined.

INSTALLATION MATERIALS

Troweiable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic cement based formulation provided or approved by resilient product manufacturers for applications indicated.

Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.

All installation materials shall be low V.O.C.

SECTION 09 90 00

PAINTS AND COATINGS

INTERIOR PAINT TABLES

DIVISION 5: INTERIOR METAL, FERROUS AND NON-FERROUS PAINT TABLE

INTERIOR STEEL / FERROUS SURFACES

A. Door Frames –

1. Latex (Semigloss)
   Primer: Sherwin Williams Procryl Primer (omit if factory primed)
   Intermediate: Sherwin Williams Industrial Acrylic Semi-Gloss
   Topcoat: Sherwin Williams Industrial Acrylic Semi-Gloss

B. Miscellaneous non-ferrous metal items not otherwise specified except floors, hot metal surfaces, and new prefinished equipment. Match surrounding finish:

1. Latex (Semigloss)
   Primer: N/A
   Intermediate: Sherwin Williams Industrial Acrylic Semi-Gloss
   Topcoat: Sherwin Williams Industrial Acrylic Semi-Gloss

DIVISION 9: INTERIOR GYPSUM BOARD, TEXTURED SURFACES PAINT TABLE

A. New Wallboard not otherwise specified:

1. Latex (Eggshell)
   Primer: Sherwin Williams ProMar 200 Primer
   Intermediate: Sherwin Williams ProMar 400 Eggshell
   Topcoat: Sherwin Williams ProMar 400 Eggshell

SECTION 10801

TOILET ACCESSORIES

MANUFACTURERS and PRODUCTS

Manufacturers and products are limited to those indicated in the Toilet Accessory Schedule.

INSTALLATION

Coordinate accessory locations with other work for anchor blocking installation, to prevent interference with door and fixture clearances, ADAAG required clearances proper installation, operation, cleaning and servicing of accessories. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate. Install units level, plumb, and firmly anchored in locations and at heights indicated. Adjust accessories for unencumbered, smooth operation and verify that mechanisms function properly. Remove temporary labels and protective coatings. Clean and polish exposed surfaces according to manufacturer's written recommendations. Turn keys over to Owner.

TOILET ACCESSORY SCHEDULE

Toilet Tissue Dispenser:
A. Basis of Design: Georgia Pacific Model 59009.
B. Type: Jumbo double-roll dispenser, Surface mounted.

Towel Dispenser:
A. Basis of Design: Georgia Pacific Model 59460.
B. Type: Automated Roll Towel Dispenser, Touchless, Hands Free, Battery Operated, Surface Mounted.

Soap Dispenser:
A. Basis of Design: GOJO Model 5150.
B. Type: Vertical-Tank Type, Push Operation, Surface-mounted.

Grab Bar:
A. Basis of Design: Bobrick B-6806 Series.
B. Type: Stainless-Steel 1¼" o.d. tubing with satin finish.
C. Mounting: Concealed flange and anchors with manufacturer's snap flange cover.

Mirror Unit:
A. Basis of Design: Bobrick B-165 Series. Size: 24"w x 16"h.
B. Type: Stainless-Steel, Channel-Framed Mirror.

RECORD DRAWINGS

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GDM inc.
ARCHITECTURE • PLANNING

GENERAL CONTRACTORS H. WATT AND SCOTT ALASKA

CAMP CARROLL, JBER

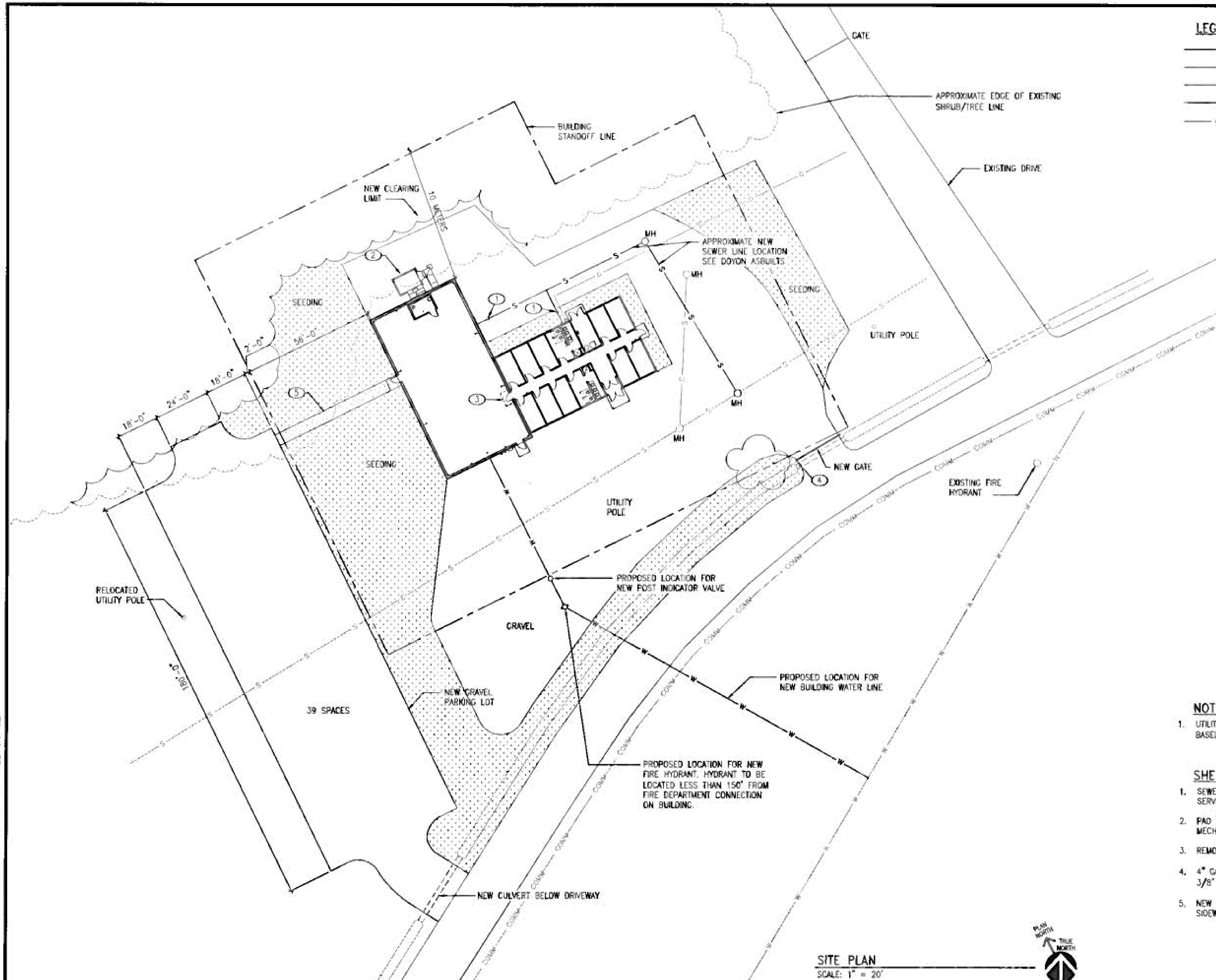
BUILDING #57226 ADDITION

SPECIFICATIONS

JOB NO. 13015

A1.2

DATE: 13 OCT 2014



SITE PLAN
SCALE: 1" = 20'

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

LEGEND:

- ——G—— GAS LINE
- ——S—— SEWER LINE
- ——E—— ELECTRICAL LINE
- ——W—— WATER LINE
- ——COMM—— COMMUNICATIONS LINE(S)

NOTES:

1. UTILITY LOCATIONS SHOWN ARE APPROXIMATE BASED ON JBER UTILITY DRAWINGS

SHEET NOTES: ◯

1. SEWER CLEANOUT. ROUTE OF EXISTING SEWER SERVICE IS NOT KNOWN.
2. PAD MOUNTED AIR HANDLING UNIT. SEE MECHANICAL.
3. REMOVE CONCRETE LANDING
4. 4" GALVANIZED STEEL PIPE EACH END WITH 3/8" DIAMETER STEEL CABLE.
5. NEW 5'-0" WIDE x 4" THICK CONCRETE SIDEWALK.

RECORD DRAWINGS

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GDM inc.
ARCHITECTURE • PLANNING

GENERAL H. WATT AND SCOTT ALASKA CONTRACTORS

CAMP CARROLL, JBER

BUILDING #57226
ADDITION

SITE PLAN

JOB NO. 13015

A2.1

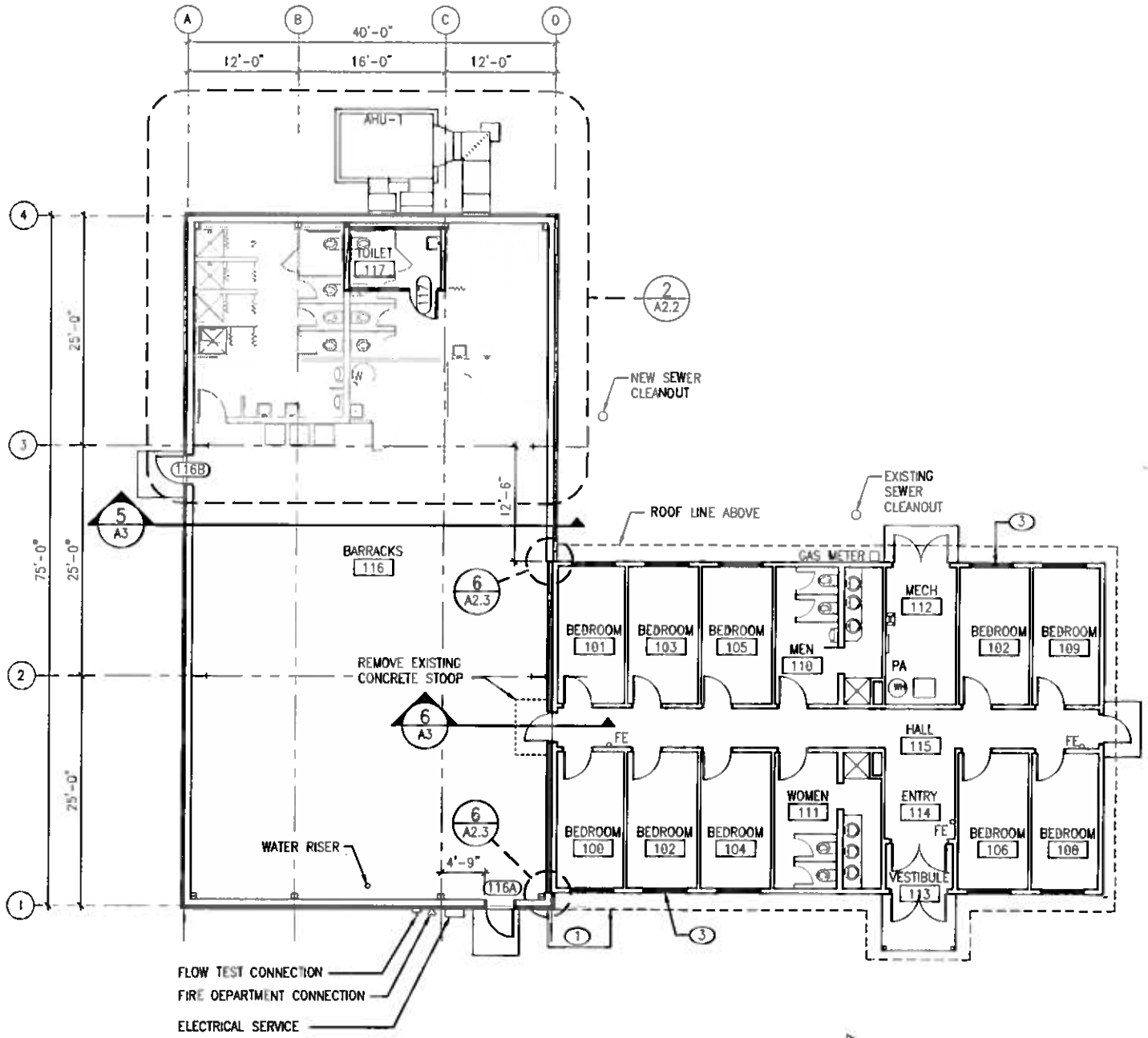
DATE: 13 OCT 2014

NOTES:

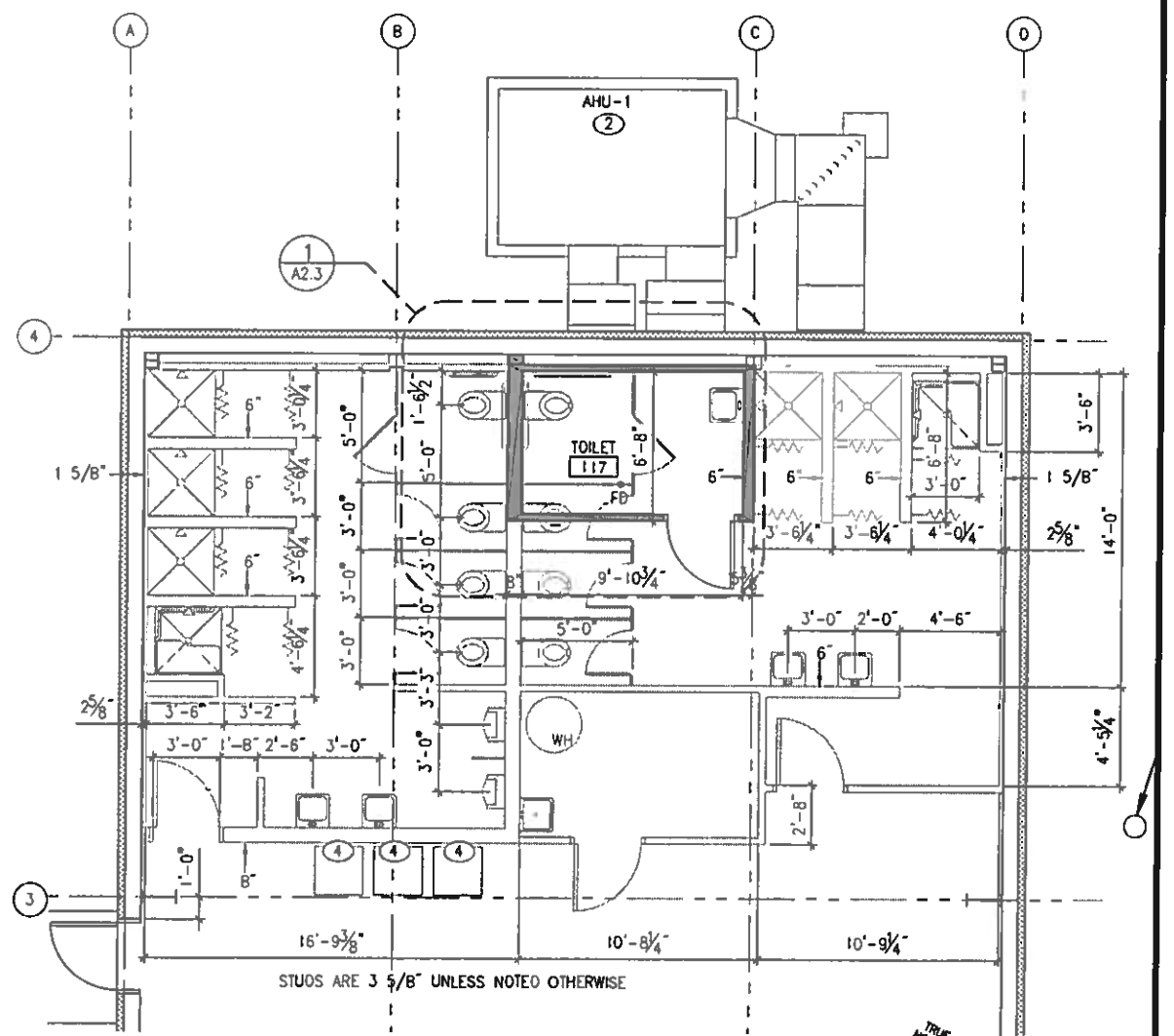
1. ALL DIMENSIONS ARE TO FACE OF PANEL, FACE OF STEEL OR FACE OF STUD.
2. CONSTRUCT NEW TOILET 117 PARTITIONS FULL HEIGHT TO BOTTOM OF ROOF PANELS ABOVE.
3. SCREENED WALLS AND FIXTURES IN NEW BUILDING ADDITION ARE FUTURE CONSTRUCTION.

SHEET NOTES: ⬭

1. ALIGN FACE OF SIDING ON NEW ADDITION WITH FACE OF EAVE ON EXISTING BUILDING.
2. PAD MOUNTED AIR HANDLING UNIT. SEE MECHANICAL FOR GAS LINE AND DUCTWORK CONNECTIONS TO BUILDING.
3. REPLACE EXISTING WINDOWS TO MEET SLEEPING ROOM EGRESS REQUIREMENTS AS WELL AS UFC 4-010-01 AND UFC 4-010-02.
4. FUTURE STACKING WASHER/DRYER



1 A2.2 FLOOR PLAN
1/8" = 1'-0"



2 A2.2 LARGE SCALE PLAN
1/4" = 1'-0"

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

RECORD DRAWINGS

GDM inc. ARCHITECTURE • PLANNING

GENERAL H. WATT AND SCOTT CONTRACTING

CAMP CARROLL, JBER

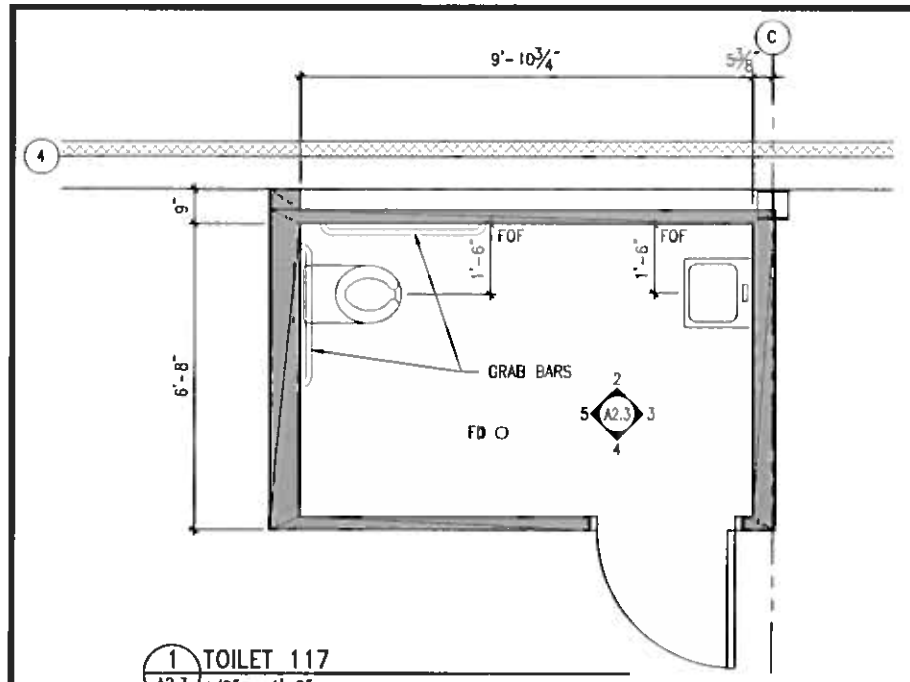
BUILDING #57226 ADDITION

FLOOR PLAN

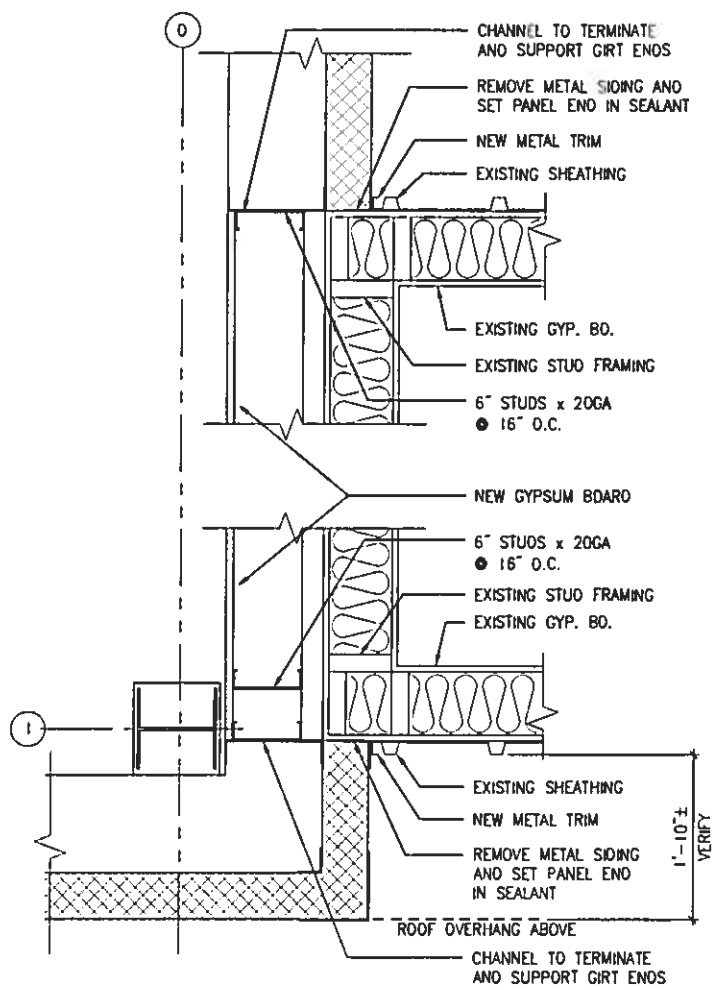
JOB NO. 13015

A2.2

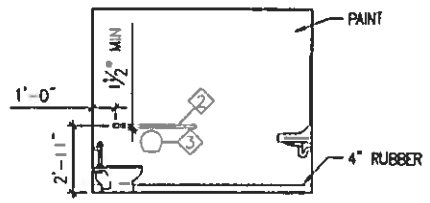
DATE: 13 OCT 2014



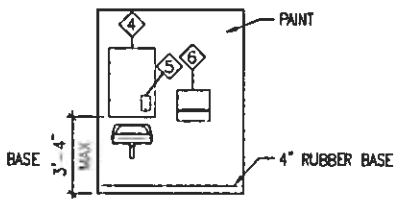
1 A2.3 TOILET 117
1/2" = 1'-0"



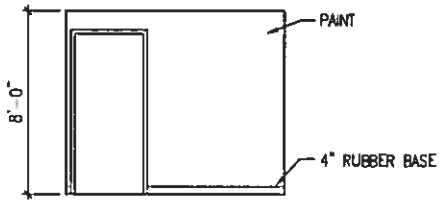
6 A2.3 EXTERIOR CORNERS
1 1/2" = 1'-0"



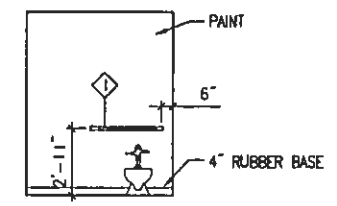
2 A2.3 INTERIOR ELEVATION
1/4" = 1'-0" NORTH



3 A2.3 INTERIOR ELEVATION
1/4" = 1'-0" EAST



4 A2.3 INTERIOR ELEVATION
1/4" = 1'-0" SOUTH



5 A2.3 INTERIOR ELEVATION
1/4" = 1'-0" WEST

FIXTURE NOTES:

1. PROVIDE 2x BLOCKING FOR ALL PLUMBING FIXTURES & ACCESSORIES.
2. COORDINATE FINAL LOCATION AND MOUNTING HEIGHT OF ALL TOILET ROOM FIXTURES AND ACCESSORIES WITH OWNERS REPRESENTATIVE.
3. PROVIDE HOT WATER AND DRAIN PIPE INSULATION ON ALL LAVATORIES. COORDINATE INSULATION TYPE AND WASHABLE COVER WITH MECHANICAL.

FIXTURE SCHEDULE

1. GRAB BAR 36"
2. GRAB BAR 42"
3. TOILET PAPER HOLDER (24" MIN. FROM FLOOR TO BOTTOM)
4. MIRROR 24" W.x 36" H.
5. SOAP DISPENSER
6. PAPER TOWEL DISPENSER

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

RECORD DRAWINGS

GDM inc.
ARCHITECTURE • PLANNING

GENERAL H. WATT AND SCOTT INC. CONTRACTOR

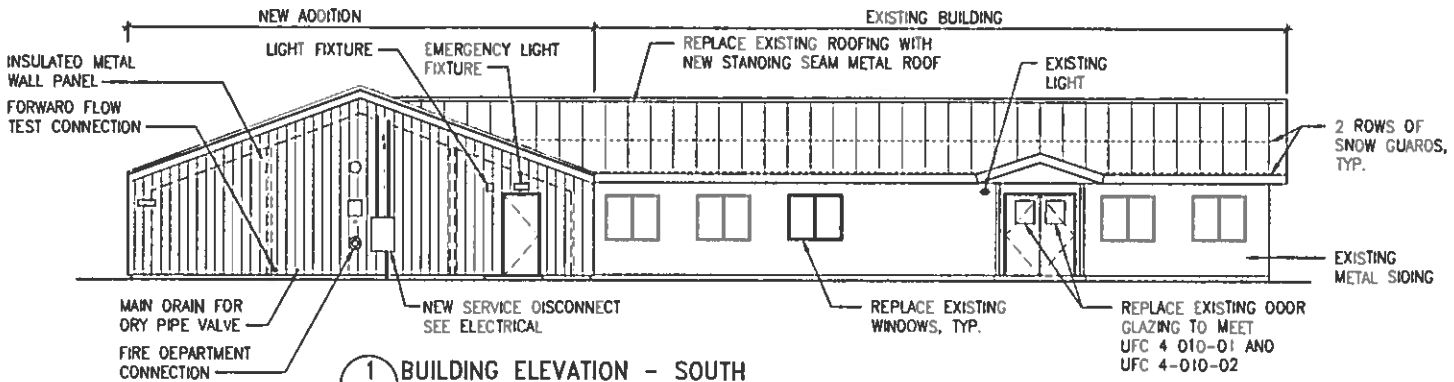
CAMP CARROLL, JBER
BUILDING #57226 ADDITION

ENLARGED FLOOR PLAN AND DETAILS

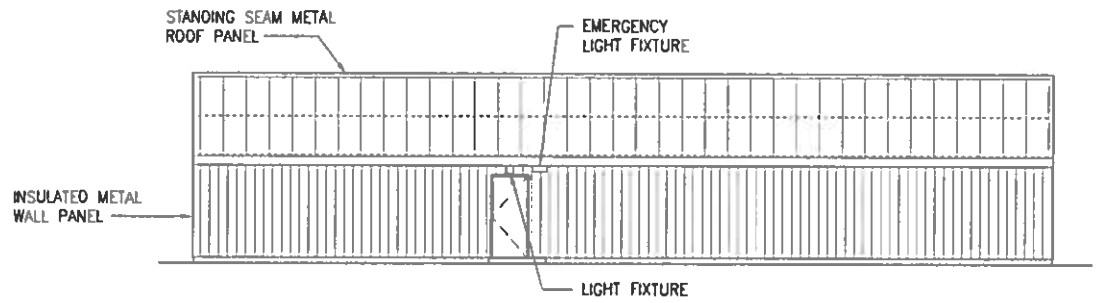
JOB NO. 13015

A2.3

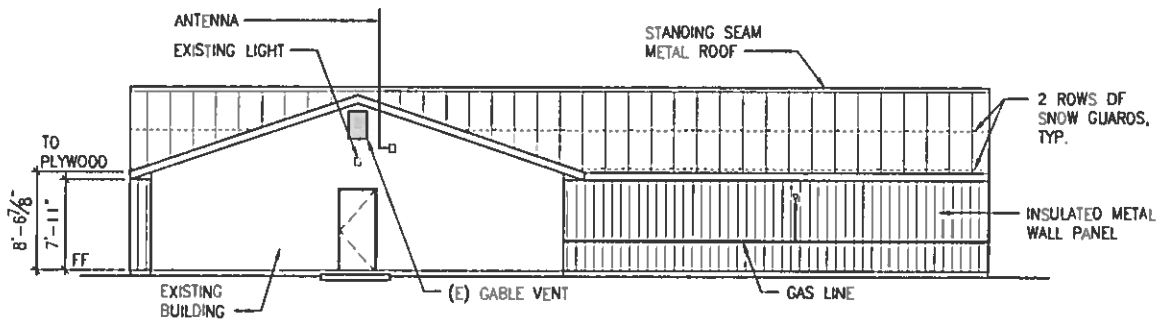
DATE: 13 OCT 2014



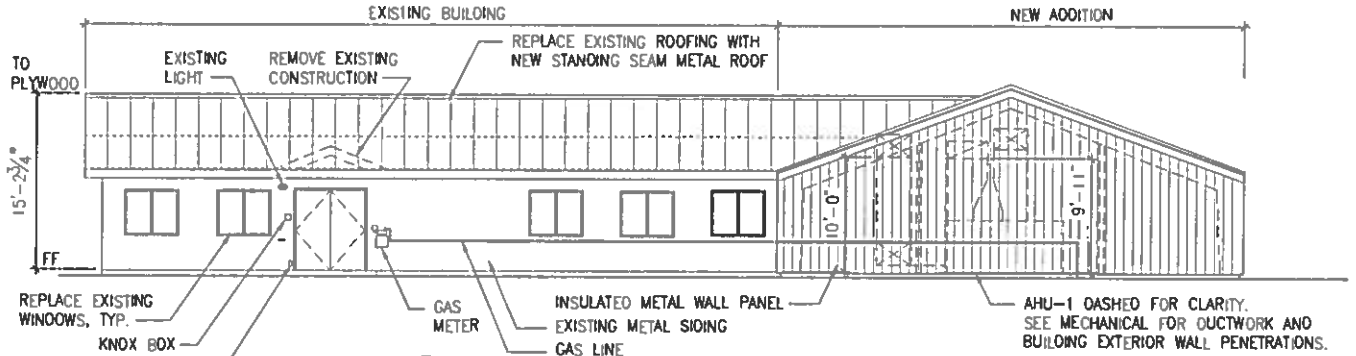
1 A3 BUILDING ELEVATION - SOUTH
1/8" = 1'-0"



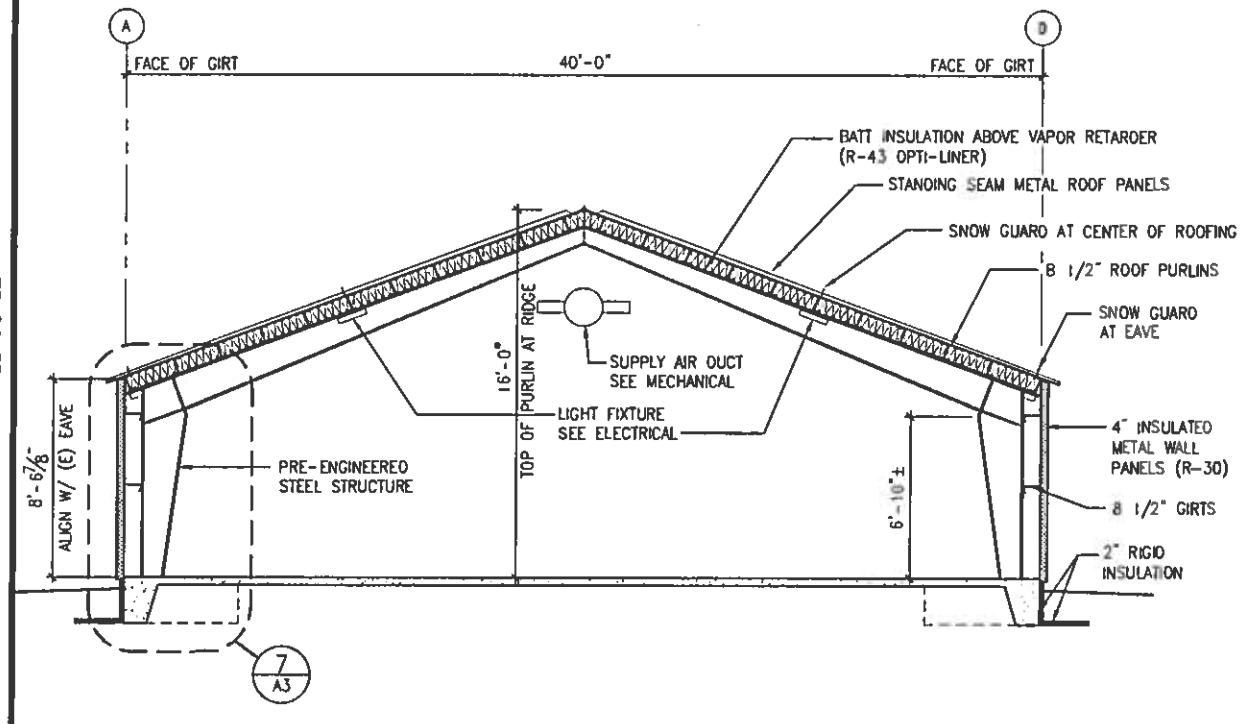
2 A3 BUILDING ELEVATION - WEST
1/8" = 1'-0"



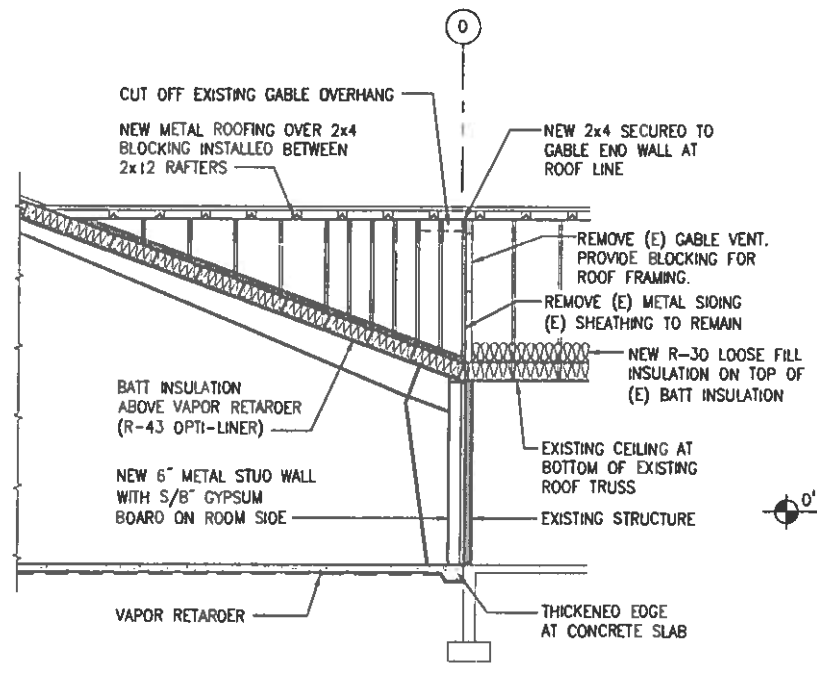
3 A3 BUILDING ELEVATION - EAST
1/8" = 1'-0"



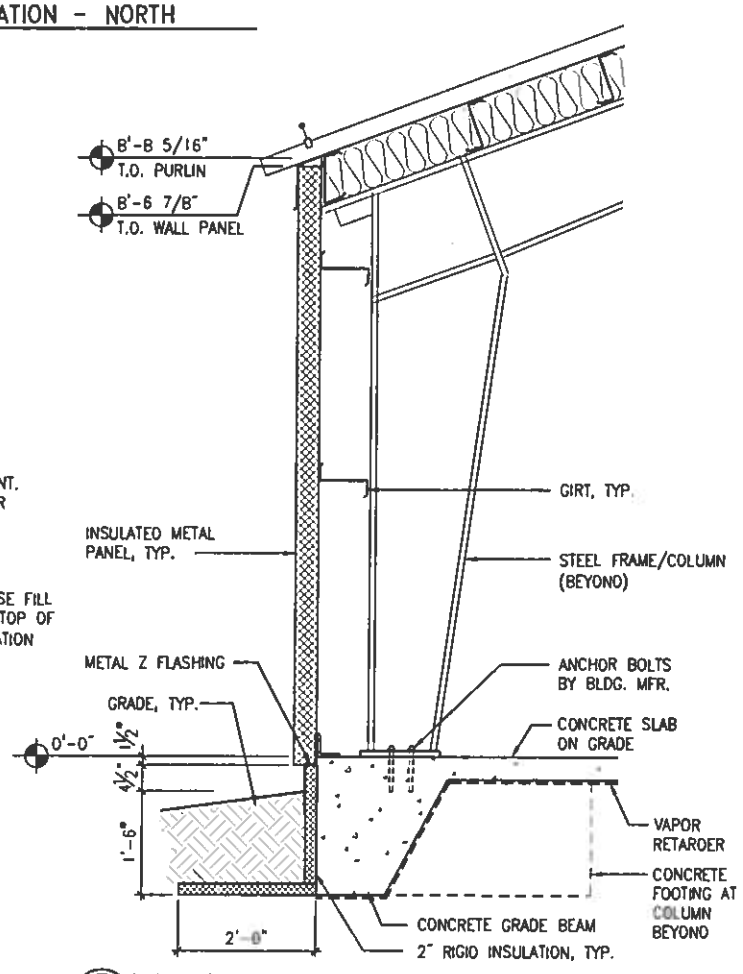
4 A3 BUILDING ELEVATION - NORTH
1/8" = 1'-0"



5 A3 BUILDING SECTION
1/4" = 1'-0"



6 A3 PARTIAL BUILDING SECTION
1/4" = 1'-0"



7 A3 WALL SECTION
3/4" = 1'-0"

RECORD DRAWINGS

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

THIS RECORD DRAWING HAS BEEN PREPARED FROM CONTRACTOR FURNISHED INFORMATION. GDM INC. DOES NOT CONFIRM THE ACCURACY OF THIS INFORMATION AND ASSUMES NO LIABILITY FOR ERRORS OR OMISSIONS IN THIS DRAWING.

GDM inc. ARCHITECTURE • PLANNING

H. WATT AND SCOTT GENERAL CONTRACTORS

CAMP CARROLL, JBER
BUILDING #57226 ADDITION

EXTERIOR ELEVATIONS AND SECTIONS

JOB NO. 13015

A3

DATE: 13 OCT 2014

ROOM FINISH SCHEDULE

EXISTING BUILDING

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING HEIGHT	CEILING	REMARKS
100	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
101	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
102	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
103	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
104	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
105	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
106	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
107	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
108	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
109	BEDROOM	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
110	MEN	SV	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
111	WOMEN	SV	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
112	MECH	EXIST	-	EXIST	EXIST	EXIST	EXIST	8'-0"	GB	
113	VESTIBULE	SV	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
114	ENTRY	SV	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	
115	HALL	CPT	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	

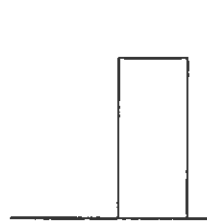
NEW ADDITION

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING HEIGHT	CEILING	REMARKS
116	BARRACKS	SC	-	-	-	-	-	VARIES	-	
117	TOILET	SC	RB	GB/PT	GB/PT	GB/PT	GB/PT	8'-0"	GB/PT	

DOOR SCHEDULE

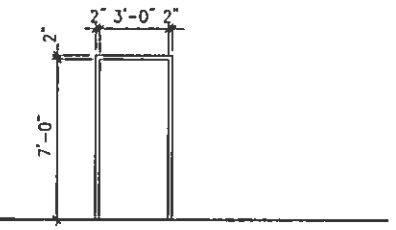
DOOR NO.	SIZE W	H	T	DOOR TYPE	OOOR FINISH	FRAME TYPE	FRAME FINISH	HDW. GROUP	U.L. LABEL	HEAD	DETAILS JAMB	THRESHOLD	REMARKS
116A	3'-0"	x7'-0"		1	PAINT	A	PAINT	H01	-	-	-	-	BY METAL BUILDING MANUFACTURER
116B	3'-0"	x7'-0"		1	PAINT	A	PAINT	H01	-	-	-	-	BY METAL BUILDING MANUFACTURER
117	3'-0"	x7'-0"		2	CLEAR	B	PAINT	H02	-	-	-	-	

DOOR TYPES



1. INSULATED HOLLOW METAL, BLAST RESISTANT
2. SOLID CORE WOOD

FRAME TYPES



A. INSULATED HOLLOW METAL FRAME
B. HOLLOW METAL FRAME

LEGEND:

CPT	CARPET
PT	PAINT
GB	GYPSUM BOARD
RB	RUBBER BASE
SC	SEALED CONCRETE
SV	SHEET VINYL
(E)	EXISTING
-	NO FINISH

NOTES:

1. GYPSUM BOARD (GB) CALLED OUT IN THE SCHEDULE IS EXISTING EXCEPT WHERE PATCHING IS REQUIRED.
2. ALL INTERIOR FINISHES ARE NEW.

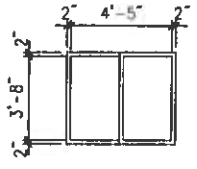
MATERIALS / COLORS

INTERIOR DOORS:	EXISTING
PT-1:	TO MATCH ICI WHITE WHISPER
CARPET:	MILLIKEN CARPET TILES, COLOR – TO BE SELECTED
BASE:	BURKE - COLOR TO BE SELECTED
SHEET VINYL:	MANUFACTURER – COLOR TO BE SELECTED
EXTERIOR METAL PANELS:	KINGSPAN 4" INSULATED WALL PANELS COLOR: BEIGE TO MATCH EXISTING BUILDING
METAL ROOFING:	VARCO PRUDEN STANDING SEAM SSR - DARK BROWN
METAL FLASHING:	MATCH NEW ROOFING COLOR
EXTERIOR DOORS:	PAINT OUTSIDE OF DOOR TO MATCH EXISTING EXTERIOR DOORS. PAINT INTERIOR DOOR FACES TO MATCH PT-1.
EXTERIOR DOOR FRAMES:	PAINT EXTERIOR SIDE OF FRAME TO MATCH EXISTING. PAINT INTERIOR FACE OF FRAME TO MATCH PT-1.

NOTES

1. ALL EXTERIOR DOOR FRAMES SHALL BE FIELD INSULATED.
2. ALL EXTERIOR DOORS SHALL BE PROVIDED WITH THRESHOLDS.

WINDOW TYPES



1. REPLACEMENT ALUMINUM FRAME OPERABLE WINDOW TO MEET SLEEPING ROOM EGRESS REQUIREMENTS

ISSUED FOR CONSTRUCTION

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

STATE OF ALASKA 49TH JAMES S. BLAIR No. A 7725 DATE 4/20/14 REGISTERED PROFESSIONAL ENGINEER

GDM inc. ARCHITECTURE • PLANNING

H. WATT AND SCOTT GENERAL CONTRACTORS

CAMP CARROLL, JBER
BUILDING #57226 ADDITION

SCHEDULES
DOOR & WINDOW TYPES

JOB NO. 13015

A4

DATE: 14 APRIL 2014

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

STRUCTURAL NOTES

THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS AMONG THE DRAWINGS BEFORE STARTING ANY WORK OR FABRICATION. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, SITE CONDITIONS, SPECIFICATIONS AND THESE NOTES SHALL BE REPORTED TO THE ARCHITECT/ ENGINEER AT ONCE.

ALL CONSTRUCTION SHALL COMPLY WITH THE 2009 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE LOCAL BUILDING OFFICIAL.

SAFETY - THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL OSHA AND DOSH SAFETY STANDARDS. THE CONTRACTOR IS IN CHARGE OF ALL SAFETY MATTERS ON AND AROUND THE JOB SITE. PROVIDE TEMPORARY ERECTION BRACING AND SHORING AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

CODE

2009 INTERNATIONAL BUILDING CODE (IBC)

DESIGN LIVE LOADS

FLOOR LOADS - FLOOR LIVE LOAD - 250 PSF MAIN FLOOR, WITH A SLAB ON GRADE

SNOW

GROUND SNOW LOAD : 50 PSF
ROOF SNOW LOAD - 40 PSF
SNOW EXPOSURE FACTOR, Ce : 0.90
SNOW LOAD IMPORTANCE FACTOR - 1.0
THERMAL FACTOR, Ct - 1.0

WIND DESIGN DATA

VELOCITY - 110 MPH HOUR 3 SECOND GUST
IMPORTANCE FACTOR, Iw - 1.0
EXPOSURE B
INTERNAL PRESSURE COEFFICIENT, GCpi : ± 0.18
COMPONENTS AND CLADDING PER ASCE 7-05

SEISMIC DESIGN DATA

Ie - 1.0
Ss - 1.50g, S1 : 0.55g, SDS - 1.009, SD1 - 0.67
SITE CLASS D
SEISMIC DESIGN CATEGORY D
SEISMIC RESISTING SYSTEM - PER PEMB
SEISMIC BASE SHEAR - Vs - PER PEMB
EQUIVALENT LATERAL FORCE PROCEDURE

FOUNDATION DESIGN

FOUNDATION BASED ON AN ASSUMED SOIL BEARING PRESSURE OF 2500 PSF, WITH THE EXISTING SOIL TO BE FREE OF ORGANICS, AND NON-FROST SUSCEPTIBLE MATERIAL THROUGHOUT. CONTRACTOR TO NOTIFY OWNER ONCE EXCAVATION HAS BEGUN TO VERIFY WITH A BOTTOM OF THE HOLE INSPECTION THAT THE ACTUAL SITE CONDITIONS COMPLY WITH THESE ASSUMPTIONS.

ALL ORGANIC, FROZEN OR OTHER UNSUITABLE MATERIALS SHALL BE REMOVED FROM SUB-GRADE AND REPLACED WITH COMPACTED GRANULAR NON-FROST SUSCEPTIBLE (NFS) FILL. ALL FOOTINGS SHALL BE FOUNDED UPON UNDISTURBED, NATURAL SUB GRADE OR COMPACTED NFS BACK FILL WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 2500 PSF.

NON FROST SUSCEPTIBLE SOILS SHALL CONSIST OF INORGANIC SOILS CONTAINING LESS THAN 3 PERCENT BY WEIGHT OF PARTICLES SMALLER THAN .02MM.

ALL FOOTINGS AND SLAB SUB-GRADES SHALL BE COMPACTED TO 95 % MAXIMUM DENSITY AS MEASURED WITH ASTM D1557. BACK FILL AROUND AND ABOVE ALL FOUNDATION ELEMENTS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY.

DISCHARGE ROOF RUNOFF AWAY FROM THE FOUNDATION. PROVIDE SITE DRAINAGE AWAY FROM THE FOUNDATION. PROVIDE FOUNDATION WALL WATERPROOFING/DAMP PROOFING WHEN REQUIRED BY THE CODE AS SHOWN ON THE ARCHITECTURAL PLANS.

NO CONSTRUCTION SHALL BEGIN UNTIL ALL SEASONAL FROST HAS THAWED OR BEEN REMOVED. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY STEPS TO PREVENT ANY FROST OR ICE FROM FORMING UNDER ANY FOOTING OR SLAB UNTIL THE PERMANENT STRUCTURE IS ENCLOSED AND HEATED.

CONCRETE

ALL CONSTRUCTION SHALL BE PER THE AMERICAN CONCRETE INSTITUTE ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND IBC, LATEST EDITIONS. SUBMIT CHECKED SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT PRIOR TO FABRICATION.

MATERIALS:

f'c FLOOR SLABS 3000 psi
f'c OTHER 3000 psi
SLUMP 4" MAX
W/C RATIO - 0.45 MAX
AIR ENTRAINMENT = 5% (WHERE WEATHER EXPOSED)
PORTLAND CEMENT - ASTM C150 TYPE I/II
AGGREGATE, 1" MAX - ASTM C94, SECTION 4.13
EPOXY GROUT - ASTM C881
DEFORMED REINFORCEMENT - ASTM A614 G60
WELDED WIRE FABRIC - ASTM A185 OR A497
NON-SHRINK NONMETALLIC GROUT - ASTM C1107

ALL CONCRETE PERMANENTLY EXPOSED TO THE WEATHER SHALL CONTAIN AN AIR-ENTRAINING ADMIXTURE COMPLYING WITH ASTM C260. CHAMFER ALL EXPOSED CORNERS ¾" UNLESS NOTED OTHERWISE. A CURING COMPOUND SHALL BE APPLIED (PER MANUFACTURER'S SPECIFICATIONS) TO ALL EXPOSED CONCRETE SURFACES UPON INITIAL SET OR PULLING OF FORMS.

COLD WEATHER CONCRETE SHALL CONFORM TO ACI 306 (ALL COLD WEATHER CONCRETE SHALL CONTAIN AIR ENTRAINMENT PER ACI TABLE 4.1.1) CALCIUM CHLORIDE SHALL NOT BE USED. MAINTAIN A MINIMUM OF 45 DEGREES F BEFORE, DURING AND FOR 7 DAYS AFTER ALL CONCRETE PLACEMENT.

ALL CONCRETE REINFORCING SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE LATEST EDITIONS OF ACI 318 AND ACI 315. LAP BARS WITH A CLASS B SPLICE AND 40 DIAMETER MINIMUM. MECHANICALLY CONSOLIDATE CONCRETE.

ALL CONDUITS AND PIPES EMBEDDED IN CONCRETE SHALL CONFORM WITH ALL PROVISIONS SPECIFIED IN ACI 318, SECTION 6.3 AND THE FOLLOWING. ALL PIPES AND CONDUITS THRU FOOTINGS AND WALLS MUST BE ISOLATED WITH DIAMETER +4" SLEEVES SPACED NO CLOSER THAN 6" O.C. PIPE AND CONDUITS MAY BE PLACED IN S.O.G. GREATER THAN 4.5" - DIAMETER MUST NOT EXCEED 1.5". PLACE IN MIDDLE THIRD OF THICKNESS - DO NOT DISPLACE REINFORCEMENT. SPACE AT 6" O.C. MINIMUM. SLEEVES, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES, DEPRESSIONS SHALL BE PROVIDED AS SHOWN ON THE MECHANICAL AND ARCHITECTURAL DRAWINGS AND AS REQUIRED BY THE EQUIPMENT MANUFACTURERS. INSTALLATION OF THESE ITEMS SHALL BE COORDINATED WITH SHOP DRAWINGS OF TRADES REQUIRING THESE ITEMS.

CONCRETE COVER:
FOOTINGS 3", WALLS 1" EXCEPT 1-½" WHERE EXPOSED TO WEATHER, AND 2" AGAINST EARTH. SLABS AND JOISTS 1", SLABS ON GRADE 1-½". DOWELS SHALL BATCH SIZE AND NUMBER OF MAIN REINFORCING, MINIMUM VERTICAL SPACING OF BARS IN A ROW MAXIMUM 1" OR BASE DIAMETER AND BARS MUST STACK. WELDING OF REINFORCEMENT IS NOT ALLOWED.

FOOTINGS:
PROVIDE REINFORCING AS SHOWN ON THE DRAWINGS. PROVIDE CORNER BARS OF SAME SIZE AND NUMBER AT CORNERS AND INTERSECTIONS, 40 BAR DIAMETERS OR 24" (WHICHEVER IS GREATER) EACH LEG. PROVIDE VERTICAL DOWELS SAME SIZE, NUMBER AND SPACING AS VERTICAL BARS WITH A 90 DEGREE STANDARD HOOK AT THE BOTTOM OF THE FOOTING, U.N.O.

SLAB ON GRADE:
FLOOR SLAB SHALL BE 4" THICK CONCRETE SLAB ON GRADE. REINFORCE SLAB WITH 6x6 W2.9xW2.9 WWM. REINFORCING SHALL BE SUPPORTED ON APPROVED CHAIRS. CONTRACTOR SHALL TAKE SPECIAL CARE TO ASSURE THAT REINFORCING IS SUPPORTED IN ITS PROPER LOCATION. PLACE MIN 6 MIL VAPOR BARRIER OVER PREPARED FILL IMMEDIATELY BENEATH THE SLAB. PROVIDE ONE OF THE FOLLOWING JOINTS ON THE CENTERLINES OF THE COLUMNS, EACH WAY, AND AT OTHER LOCATIONS AS SHOWN ON THE DRAWINGS, MAXIMUM SPACING OF 15'. 1) CONSTRUCTION JOINTS WHERE DETAILED ON THE DRAWINGS, 2) SAW CUT CONTROL JOINTS ELSEWHERE (SHALL BE A MINIMUM OF ¼ OF SLAB THICKNESS). A METAL CONSTRUCTION JOINT FORM MAY BE USED. REMOVE METAL FORMS BEFORE PLACING SECOND POUR.

AT CORNERS, PROVIDE CORNER BARS INTO OUTSIDE FACE OF SAME SIZE AND SPACING AS HORIZONTAL BARS, 40 DIAMETERS EACH LEG.

AT INTERSECTIONS, PROVIDE CORNER BARS IN OUTSIDE FACE OF SAME SIZE AND SPACING AS HORIZONTAL BARS OF INTERSECTING WALL, 40 DIAMETERS EACH LEG.

PRE-ENGINEERED METAL BUILDING

FOUNDATION DESIGN AND METAL BUILDING LAYOUT BASED ON THE VP METAL BUILDING DRAWINGS DATED 3-31-14, VP PROJECT NUMBER 14-000557. CONTRACTOR TO VERIFY THE BASE PLATE LAYOUT IS BASED ON THE LATEST SHOP DRAWINGS FROM THE MANUFACTURER, AND THESE DRAWINGS CONFORM TO THOSE DRAWINGS.

ABBREVIATIONS

E.W. - EACH WAY
IBC - INTERNATIONAL BUILDING CODE
I.S. - INSIDE
O.S. - OUTSIDE
F.O.S. - FACE OF STUD
HDG - HOT DIP GALVANIZED
MFG - MANUFACTURER
PEMB - PRE-ENGINEERED METAL BUILDING
SIM - SIMILAR TO
SIP - STRUCTURAL INSULATED PANELS
TYP. - TYPICAL
UNO - UNLESS NOTED OTHERWISE
W.T.E. - WITH THE EXCEPTION
WWM - WELDED WIRE MESH

AS-BUILT

THESE AS-BUILT DRAWINGS WERE PRODUCED FROM INFORMATION PROVIDED BY THE CONTRACTOR. OIEN ASSOCIATES INC. HAS NO RESPONSIBILITY FOR THE ACCURACY OF THESE AS-BUILTS

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email: boien@gci.net

CAMP CARROLL, JBER
BUILDING #57226
ADDITION

STRUCTURAL NOTES

JOB NO. 32523

S0.1

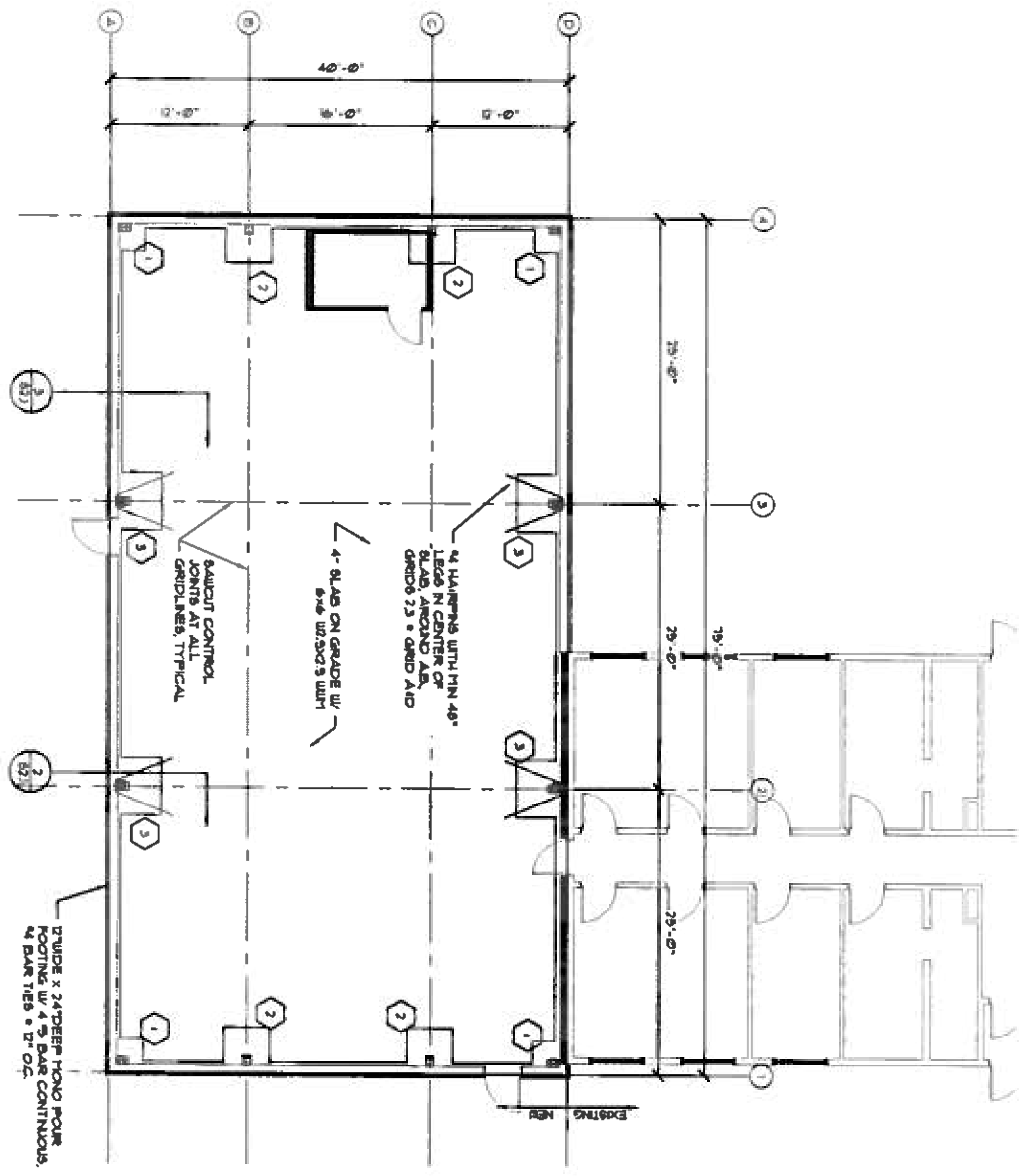
DATE: 10 OCT 2014

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

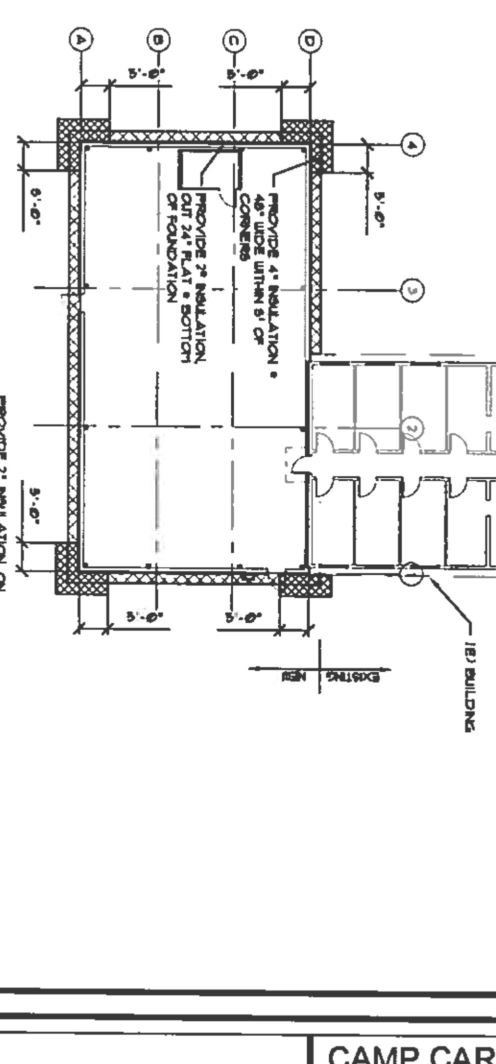
Pad And Pilaster Schedule

TYPE	Pad SIZE	Pad THICKNESS	Pad REINFORCEMENT	PILASTER SIZE	PILASTER REINFORCEMENT	PILASTER STIRRUPS
1	2'-0" SQUARE	24"	2 MATS 2 #5'S EACH WAY	SEE DETAIL S2.1	SEE DETAIL S2.1	3 EACH #3 BAR
2	4'-0" SQUARE	24"	2 MATS 4 #5'S EACH WAY			
3	5'-0" SQUARE	24"	2 MATS 6 #5'S EACH WAY			

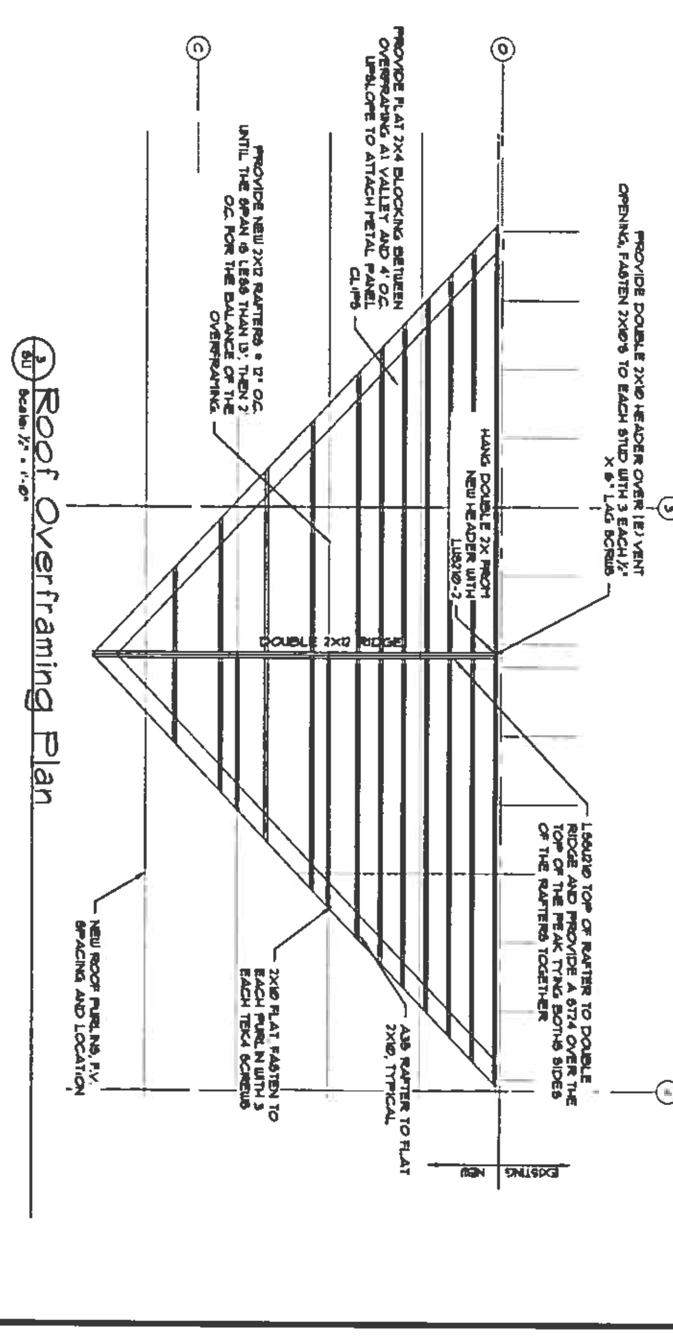
1 / S1.1 Foundation Plan
Scale: 1/8" = 1'-0"



2 / S1.1 Insulation Plan
Scale: 1/8" = 1'-0"



3 / S1.1 Roof Overframing Plan
Scale: 1/4" = 1'-0"



AS-BUILT
THESE AS-BUILT DRAWINGS WERE PRODUCED FROM INFORMATION PROVIDED BY THE CONTRACTOR. OIEN ASSOCIATES INC. HAS NO RESPONSIBILITY FOR THE ACCURACY OF THESE AS-BUILTS

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JOB NO. 32523
S1.1
DATE: 10 OCT 2014

FOUNDATION PLAN
INSULATION PLAN

CAMP CARROLL, JBER
BUILDING #57226
ADDITION

Oien Associates, Inc.
Construction Management Engineering Inspections
16922 Hanson Drive
Eagle River, AK 99577
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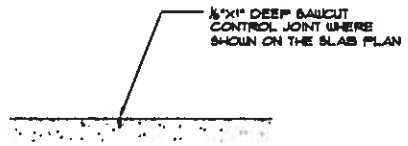
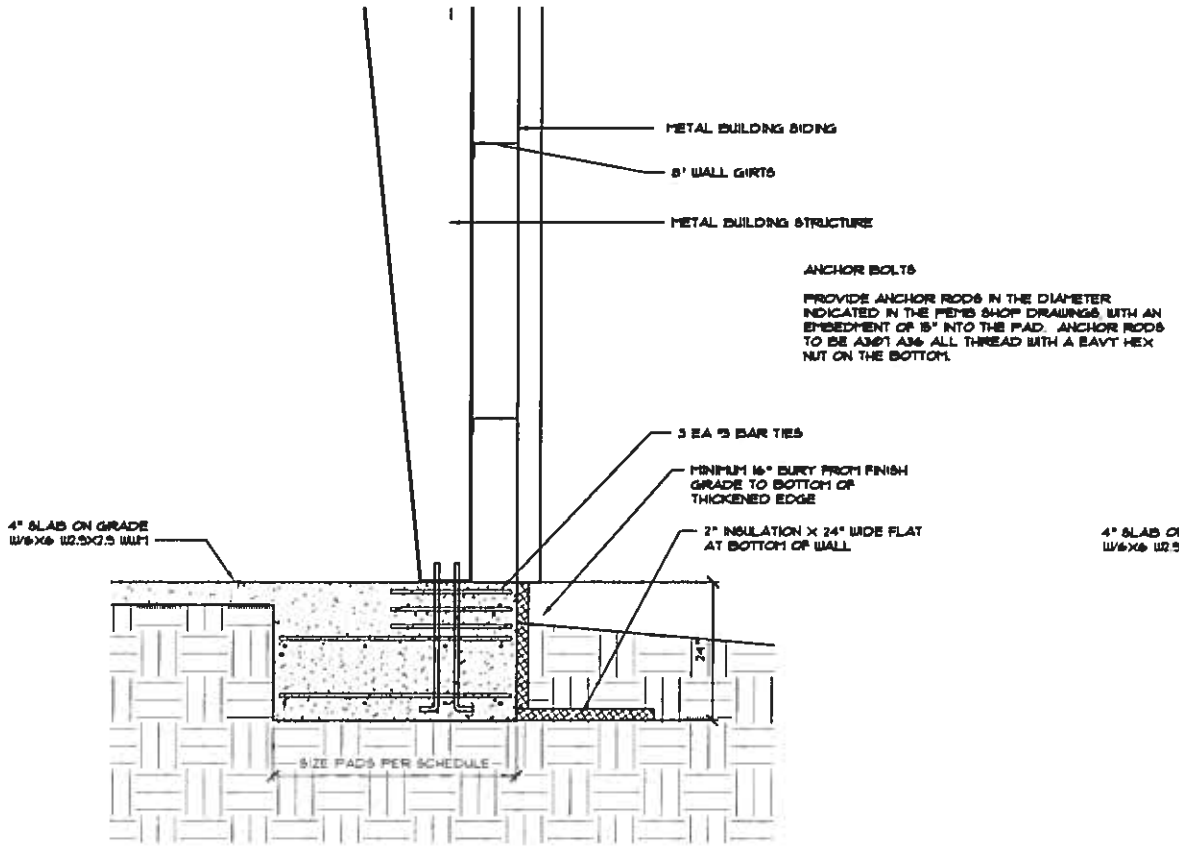
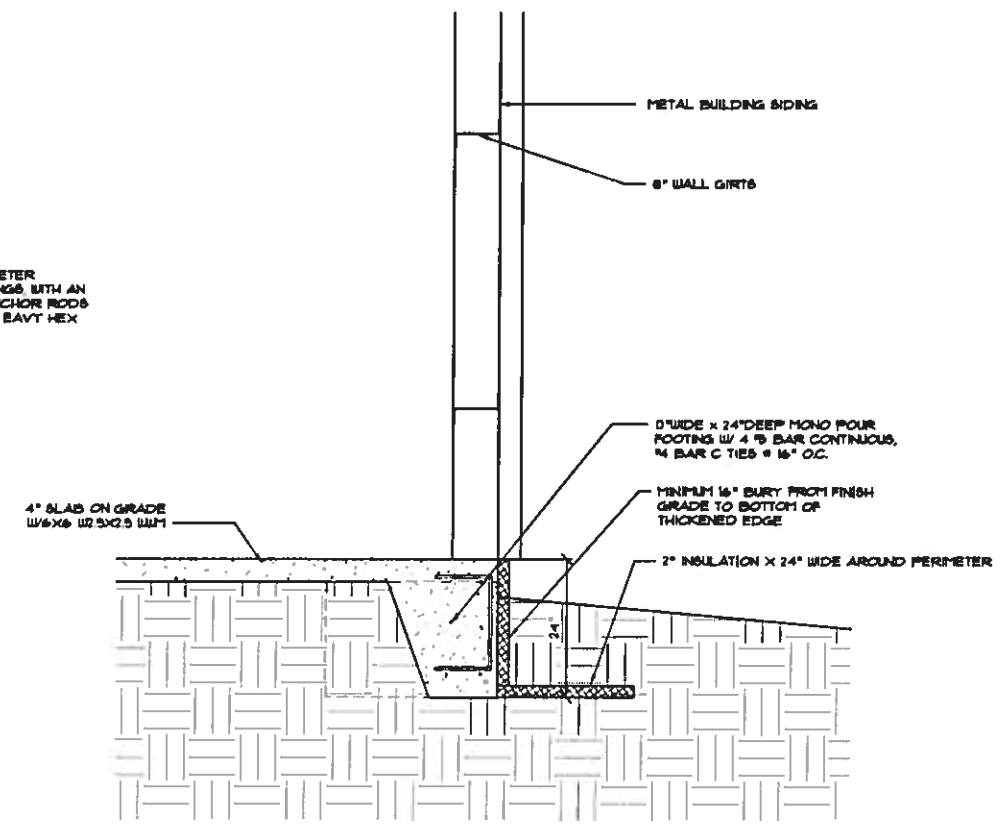
GDM inc.
ARCHITECTURE • PLANNING



1/621 CONTROL JOINT DETAIL
Scale: 3" = 1'-0"



2/621 Typical Pilaster Detail
Scale: 3" = 1'-0"



3/621 Typical Endwall/Grade Beam Detail
Scale: 3" = 1'-0"

AS-BUILT

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THIS DRAWING MEASURES 34"X22" AT FULL SCALE

GDM inc.
ARCHITECTURE • PLANNING

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CAMP CARROLL, JBER
BUILDING #57226
ADDITION

FOUNDATION DETAILS

JOB NO. 32523

S2.1

DATE: 10 OCT 2014

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

LEGEND

- WASTE
- VENT PIPING
- COLD WATER
- HOT WATER
- XXX — SEE ABBREVIATIONS FOR MEDIA
- PIPE UP
- PIPE DOWN
- TEE UP
- TEE DOWN
- CAP
- UNION
- DIRECTION OF FLOW
- BALL VALVE
- CHECK VALVE
- GAS SHUT-OFF VALVE
- PRESSURE/TEMPERATURE RELIEF VALVE
- CLEANOUT
- FLOOR CLEANOUT
- FLOOR DRAIN

DUCTWORK LEGEND

- EXHAUST AIR UP & DOWN
- SUPPLY AIR UP & DOWN
- RETURN AIR UP & DOWN
- ROUND DUCT UP & DOWN
- VOLUME DAMPER
- TURNING VANES
- 12/24 — DUCT SIZE (1ST FIGURE - SIDE SHOWN) (2ND FIGURE - SIDE NOT SHOWN)
- FLEXIBLE DUCT
- (1) THERMOSTAT

LOGIC

- 5 / M2 — DETAIL NUMBER / SHEET LOCATED ON
- TAG — SHEET NOTES
- CONNECTION — NECK SIZE
- X / CFM — CFM / DIFFUSER OR GRILLE TYPE

ABBREVIATIONS

ADA	AMERICAN WITH DISABILITIES ACT GUIDELINES
AFG	ABOVE FINISHED GRADE
AMPS	AMPERES
AHU-X	AIR HANDLING UNIT DESIGNATOR
APD	AIR PRESSURE DROP
ARCH	ARCHITECTURAL
BDD	BACKDRAFT DAMPER
BTUH	BRITISH THERMAL UNIT/HOUR
C/A	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
CU	COPPER
CW	COLD WATER
DEG	DEGREE
DIA	DIAMETER
DWG	DRAWING
E/A	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EGT	ENTERING GLYCOL TEMPERATURE
EF-X	EXHAUST FAN DESIGNATOR
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
F	FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FIRE DAMPER
FD-X	FLOOR DRAIN DESIGNATOR
FPM	FEET PER MINUTE
FT	FEET
G	NATURAL GAS
GA	GAUGE
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD
HP	HORSEPOWER
HW	HOT WATER
IBC	INTERNATIONAL BUILDING CODE
IN	INCHES
LAT	LEAVING AIR TEMPERATURE
MFGR	MANUFACTURER
MBH	THOUSAND BTUH
NC	NOISE CRITERIA
NTS	NOT TO SCALE
O/A	OUTSIDE AIR
P-X	PLUMBING FIXTURE DESIGNATOR
PD	PRESSURE DROP
PH	PHASE
PSI	POUND PER SQUARE INCH
RPM	ROTATIONS PER MINUTE
S/A	SUPPLY AIR
SP	STATIC PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UPC	UNIFORM PLUMBING CODE
V	VENT
VEL	VELOCITY
VTR	VENT THRU ROOF
W	WASTE
W.C.	WATER COLUMN
WCO	WALL CLEAN OUT
WG	WATER GAUGE
WHA	WATER HAMMER ARRESTOR
WPD	WATER PRESSURE DROP
YCO	YARD CLEAN OUT

WHA SCHEDULE

SYMBOL	SIZE	FIXTURE UNITS
WHA-A	1/2"	1-11
WHA-B	3/4"	12-32
WHA-C	1"	33-60

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	MOUNTING	CW	HW/TW	WASTE	VENT	TRAP	BASIS OF DESIGN	MODEL	COLOR	TRIM/REMARKS
P-1	WATER CLOSET-ADA	FLOOR	1	—	3	2	—	KOHLER	K-4368 HIGHCLIFF	WHITE	KOHLER K-4670-C ELONGATED OPEN FRONT SEAT, TOP INLET, SLOAN ROYAL 111-1.6 FLUSH VALVE, 1.6 GPF.
P-1A	WATER CLOSET-ADA	FLOOR	—	—	3	—	—	KOHLER	K-4368 HIGHCLIFF	WHITE	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.
P-1B	WATER CLOSET	FLOOR	—	—	3	—	—	FUTURE	—	—	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.
P-2	LAVATORY-ADA	WALL	1/2	1/2	2	1-1/2	1-1/4	KOHLER	K-2005-KINGSTON	WHITE	DELTA FAUCET MODEL# 22C101 WITH METAL GRID STRAINER, 0.5 GPM FLOW RATE, TRU-BRO LAVATORY SHIELD, OFFSET P-TRAP FOR ADA COMPLIANCE, PROVIDE POINT OF USE TEMPERING VALVE.
P-2A	LAVATORY	WALL	—	—	2	—	—	FUTURE	—	—	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.
P-3	URINAL	WALL	—	—	2	—	—	FUTURE	—	—	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.
P-4	SHOWER	FLOOR	—	—	2	—	2	FUTURE	—	—	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.
P-4A	SHOWER	FLOOR	—	—	2	—	2	FUTURE	—	—	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.
P-5	SERVICE SINK	FLOOR	—	—	3	—	—	FUTURE	—	—	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.
WB-1	WASHER BOX	WALL	—	—	2	—	—	FUTURE	—	—	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.
FD-1	FLOOR DRAIN	FLOOR	—	—	2	2	2	J.R.SMITH	2005-A	—	ROUND TOP, TRAP PRIMER CONNECTION.
FD-1A	FLOOR DRAIN	FLOOR	—	—	2	2	2	J.R.SMITH	2005-A	—	ROUGH IN UNDERFLOOR WASTE PIPING AS INDICATED ON PLANS.

ELECTRIC WATER HEATER SCHEDULE

SYMBOL	MFGR/MODEL	TYPE	POWER DATA WATTS	VOLTS	AMPS	PH	REMARKS
EWH-1	EEMAX/SP2412	ELEC	2400	120	2.4	1	POINT OF USE WATER HEATER, HARDWARE CONNECTION.

GAS FIRED PACKAGED UNIT SCHEDULE

SYMBOL	MFGR/MODEL	TONNAGE	LOCATION	AREA SERVED	EER (IEER)	COOLING CAPACITY EWB	EDB	TOTAL MBH	HEATING INPUT MBH	BLOWER CFM	ESP (IN. WC)	FAN RPM	INDOOR MOTOR HP	WEIGHT (LBS)	ELECTRICAL MCA	VOLTS	PHASE	REMARKS
AHU-1	TRANE/YSC092F	7.5	GROUND	BUILDING	13.00	62	75	93	200	3000	1.0	903	1.0	847.0	45.10	208	3	PROVIDE 7-DAY PROGRAMMABLE T-STAT W/ ECONOMIZER CONTROL. STANDARD EFFICIENCY UNIT. SEE NOTES BELOW. PROVIDE SINGLE POINT ELECTRICAL CONNECTION.

NOTES:
1. PROVIDE WITH HIGH GAS HEAT OPTION.
2. PROVIDE WITH ECONOMIZER, FREEZESTAT, CIRCUIT BREAKER, RETURN AIR SMOKE DETECTOR, THRU THE BASE ELECTRICAL.
3. UNITS OVER 2000 CFM SHALL INCLUDE SMOKE DETECTOR AND AUDIO VISUAL ALARM IN OCCUPIED SPACE. DETECTOR AND ALARM TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR TO COORDINATE SMOKE DETECTOR AND AUDIO VISUAL ALARM LOCATION WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.

FAN SCHEDULE

SYMBOL	MFGR/MODEL	TYPE	SERVICE	CFM	ESP IN W.C.	RPM	MOTOR DATA WATTS	VOLTS/PH	DRIVE	REMARKS
EF-1	COOK/GC-720	CEILING	RESTROOMS	350	0.50	1085	136	120/1	DIRECT	FAN SPEED CONTROLLER, PROVIDE GOOSENECK TERMINATION.

AIR INLET/OUTLET SCHEDULE

SYMBOL	MFGR/MODEL	TYPE	USE	MATERIAL	FINISH	CFM	FACE SIZE (IN)	NC	THROW	REMARKS
A	TITUS/DL-	DRUM LOUVER	S/A	STEEL	—	PER PLANS	18x6	<20	33 FT	DUCT MOUNTED EXPOSED DRUM LOUVER.
B	TITUS/300RL	SIDEWALL	S/A	STEEL	—	PER PLANS	PER PLANS	<20	—	
C	TITUS/350RL	SIDEWALL	R/A	STEEL	—	PER PLANS	38x14	<20	—	

PROJECT RECORD DRAWINGS

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RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS

GENERAL CONTRACTORS — H. WATT AND SCOTT

CAMP CARROLL, JBER
BUILDING #57226
ADDITION

MECHANICAL
LEGEND AND SCHEDULES

DR: SR
CK: JAB

JOB NO. L3238

M0.1

DATE: 15 APR 2014

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

GENERAL NOTES

PLANS - THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM. THE DRAWINGS ARE PARTLY DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL. CONTRACTOR TO COORDINATE EQUIPMENT LOCATION WITH ELECTRICAL PLANS TO AVOID CONFLICT.

COMPLETE PROJECT - THE INTENT OF THIS PROJECT IS TO LET ONE CONTRACT WHICH INCLUDES ALL WORK REQUIRED FOR A COMPLETE JOB. THIS INCLUDES ALL ELECTRICAL, CARPENTRY, PLUMBING, SHEET METAL, PAINTING, CLEAN UP, ETC. AS REQUIRED.

CODE - ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), INTERNATIONAL PLUMBING CODE (IPC) AND NATIONAL ELECTRICAL CODE (NEC) CODE (IBC), AS AMENDED BY THE STATE OF ALASKA.

WARRANTY - ALL WORK PERFORMED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.

ELECTRICAL WORK - ALL ELECTRICAL WORK IS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

EQUIPMENT SUBSTITUTIONS - ALL EQUIPMENT LISTED IS REPRESENTATIVE OF THE STANDARD SIZE, WEIGHT AND QUALITY OF EQUAL SUBSTITUTIONS WILL BE CONSIDERED IF THE SUBSTITUTES ARE SHOWN TO BE EQUAL OR BETTER QUALITY, INCLUDING EFFICIENCY OF PERFORMANCE, AS ACCEPTED BY THE OWNER.

MATERIALS - ALL MATERIALS SHALL BE NEW AND UNUSED, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND IN THE BEST PRACTICE OF THE CRAFT. OBTAIN OWNER'S APPROVAL OF ALL PRODUCTS PRIOR TO ORDERING OR INSTALLING ANY PART OF ANY SYSTEM.

OPERATION AND MAINTENANCE MANUAL - PROVIDE THE OWNER WITH AN OPERATING AND MAINTENANCE MANUAL, TO INCLUDE MANUFACTURER'S SPECIFICATIONS, OPERATING AND MAINTENANCE INSTRUCTIONS, WARRANTY INFORMATION ON EACH PIECE OF EQUIPMENT, AND SCHEMATIC DIAGRAMS OF CONTROL SYSTEMS AS-BUILT, AS WELL AS A SOURCE OF SUPPLY FOR SPARE PARTS AND SERVICE.

ACCESS - PROVIDE WORKABLE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT.

EQUIPMENT INSTALLATION: INSTALL ALL EQUIPMENT WHERE NOTED ON THE DRAWINGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE MISCELLANEOUS APPURTENANCES, ACCESSORIES, SUPPORTS AND CONTROL CONNECTIONS REQUIRED FOR COMPLETE AND OPERATING SYSTEMS. MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES.

BALANCE - THE CONTRACTOR SHALL BALANCE THE AIR SYSTEM TO THE SATISFACTION OF THE OWNER. AIRFLOWS ARE TO BE BALANCED TO WITHIN 10% OF INDICATED FLOWS PER AABC RECOMMENDED METHODS.

SEISMIC RESTRAINT - ALL EQUIPMENT INSTALLED UNDER THIS PROJECT SHALL BE BRACED FOR A SEISMIC EVENT IN ACCORDANCE WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE. CONTRACTOR TO PROVIDE SEISMIC CALCULATIONS AND SHOP DRAWINGS PREPARED AND SEALED BY A STRUCTURAL ENGINEER TO THE AUTHORITY HAVING JURISDICTION FOR REVIEW AND APPROVAL.

PIPING

BURIED WASTE AND VENT PIPING - ABS PIPE: ASTM D2751. FITTINGS: ABS. JOINTS: ASTM D2235, SOLVENT WELD.

ABOVE GRADE WASTE AND VENT PIPING: ABS PIPE: ASTM D2751. FITTINGS: ABS. JOINTS: ASTM D2235, SOLVENT WELD WHERE LOCATED IN A RETURN AIR PLENUM UTILIZE CAST IRON OR COPPER DWV MATERIAL.

DOMESTIC WATER PIPING BURIED - COPPER TUBING: ASTM B42, TYPE K ANNEALED. FITTINGS: ASME B16.22, WROUGHT COPPER. JOINTS: ASTM B32, SOLDER, GRADE 95TA; FLUX: ASTM B813.

DOMESTIC WATER PIPING, EXPOSED ABOVE GROUND - COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: ASME B16.18 CAST BRONZE OR ASME B16.22 WROUGHT COPPER. JOINTS: ASTM B32, LEAD FREE SOLDER, WATER SOLUBLE FLUX.

NATURAL GAS PIPING ABOVE GRADE - STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. FITTINGS: ASME B16, MALLEABLE IRON, OR ASTM A 234/A234M, FORGED STEEL WELDING TYPE. JOINTS: NFPA 54, SCREWED FOR PIPE 2 INCHES AND UNDER AND IF LOW PRESSURE, OR IF MEDIUM PRESSURE AND OUTSIDE BUILDING; ANSI B31.1, WELDED FOR PIPE OVER 2 INCHES.

PIPING SUPPORTS AND HANGERS - SIZED AND SPACED IN ACCORDANCE WITH THE UPC. INSTALLED AS PER THE MANUFACTURER'S INSTRUCTIONS.

VALVES AND UNIONS ETC.

BALL VALVES - UP TO 2 INCHES: CLASS 150, BRONZE TWO PIECE BODY, FULL PORT, FORGED BRASS, CHROME PLATED BALL, TEFLON SEATS AND STUFFING BOX RING, BLOW-OUT PROOF STEM, LEVER HANDLE, SOLDER OR THREADED ENDS.

SPRING LOADED CHECK VALVES - IRON BODY, BRONZE TRIM, STAINLESS STEEL SPRING, REMOVABLE COMPOSITION DISC, SCREWED, WAFER OR FLANGED ENDS.

DIELECTRIC CONNECTIONS: UNION WITH GALVANIZED OR PLATED STEEL THREADED END, COPPER SOLDER END, WATER IMPERVIOUS ISOLATION BARRIER; CLEAR FLOW PRODUCTS ALLOWED.

FLANGES, UNIONS, AND COUPLINGS - 150 PSIG MALLEABLE IRON UNIONS FOR THREADED FERROUS PIPING; BRONZE UNIONS FOR COPPER PIPE, SOLDERED JOINTS.

GAS ISOLATION VALVE - UP TO 2 INCHES: BRONZE TWO PIECE BODY, FULL PORT, FORGED BRASS, CHROME PLATED BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE THREADED ENDS, AGA LISTED.

INSULATION

PIPING: TYPE A: GLASS FIBER, RIGID, MOLDED, NON-COMBUSTIBLE INSULATION; ANSI/ASTM C547; 'K' VALUE OF 0.24 AT 750 DEG F, RATED TO 850 DEG F, VAPOR RETARDER JACKET OF KRAFT PAPER BONDED TO ALUMINUM FOIL; JOHNS-MANVILLE "MICRO-LOK" OR EQUAL.

PIPING	TYPE	SIZE, IN	INSULATION THICKNESS, IN
DOMESTIC WATER	A	ALL SIZES	1"
PLUMBING VENT THROUGH ROOF	A	ALL SIZES	1"
PIPING EXPOSED TO FREEZING	A	ALL SIZES	2"
BURIED PIPING	A	ALL SIZES	1"

VAPOR BARRIER JACKETS - KRAFT REINFORCED FOIL VAPOR BARRIER WITH SELF SEALING ADHESIVE JOINTS.

DUCT INSULATION: TYPE B: EXTERIOR FSK DUCT WRAP: FLEXIBLE GLASS FIBER; ANSI/ASTM/C552; COMMERCIAL GRADE; K-VALUE OF 0.27 AT 75 DEG F; RIGID FIBER BOARD; ANSI/ASTM C612, K VALUE OF 0.24 AT 75 DEG F.0.00035 INCH FOIL SCRIM FACING. JOHNS-MANVILLE "MICROLITE" CERTAINTEED "IB BOARD" OR EQUAL.

TYPE C: DUCT LINER: FLEXIBLE GLASS FIBER; ANSI/ASTM C1071; 'K' VALUE OF 0.24 AT 75' F; COATED AIR SIDE FOR MAXIMUM 5,000 FT./MIN. AIR VELOCITY, UL LISTED ADHESIVE GALVANIZED STEEL PINS. JOHNS-MANVILLE "PERMACOTE UNACOUSTIC" OR APPROVED EQUAL.

DUCTWORK	TYPE	FINISH	INSULATION THICKNESS, IN
EXHAUST AND RELIEF DUCTS	B	FSK	2"
SUPPLY AND RETURN PLENUMS	C	—	2"

EXTERIOR DUCTWORK: SEAL DUCTWORK WATERTIGHT.

IDENTIFICATION

IDENTIFICATION - LABEL ALL EQUIPMENT WITH HEAT RESISTANT LAMINATED PLASTIC LABELS HAVING ENGRAVED LETTERING 1/2" HIGH. IF ITEMS ARE NOT SPECIFICALLY LISTED ON THE SCHEDULES, CONSULT THE ENGINEER CONCERNING DESIGNATION TO USE. SETON ENGRAVED SETON-PLY NAMEPLATES OR EQUAL. IDENTIFY PIPING TO INDICATE CONTENTS AND FLOW DIRECTION OF EACH PIPE EXPOSED TO VIEW BY A LABELED SLEEVE OR PIPE MARKER IN LETTERS READABLE FROM FLOOR AT LEAST ONCE IN EACH ROOM AND AT INTERVALS OF NOT MORE THAN 20' APART AND ON EACH SIDE OF PARTITION PENETRATIONS. COLORING SCHEME IN ACCORDANCE WITH ANSI A13.1-1981, SETON OPTI-CODE OR EQUAL.

DUCTWORK

LOW PRESSURE DUCTWORK - FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS AND ASHRAE HANDBOOKS, EXCEPT AS INDICATED. PROVIDE DUCT MATERIAL, GAUGES, REINFORCING, AND SEALING FOR OPERATING PRESSURES INDICATED.

DUCTWORK - PROVIDE GALVANIZED SHEET METAL RECTANGULAR OR ROUND DUCT WHERE CALLED OUT ON THE PLANS. SEAL ALL DUCT SEAMS AND JOINTS AIRTIGHT. USE TURNING VANES IN ALL SQUARE ELBOWS AND FLAT OVAL ELBOWS. INSTALL VOLUME DAMPERS WHERE SHOWN ON THE DRAWINGS. ALL SHEET METAL WORK TO BE CONSTRUCTED, INSTALLED, TESTED AND BALANCED IN ACCORDANCE WITH SMACNA STANDARDS. SUPPORT LOW AND MEDIUM PRESSURE DUCTWORK PER SMACNA GUIDELINES.

VOLUME DAMPER - FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

SEQUENCE OF OPERATION

AHU-1: DAY AND NIGHT MODE OF OPERATION WILL BE CONTROLLED BY SEVEN (7) DAY PROGRAMMABLE THERMOSTAT. THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES.

EF-1: FAN SHALL OPERATE BY MEANS OF A WALL MOUNTED FAN SPEED CONTROLLER.

PROJECT RECORD DRAWINGS

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RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS

GENERAL H. WATT AND SCOTT CONTRACTORS

CAMP CARROLL, JBER

BUILDING #57226
ADDITION

MECHANICAL
SPECIFICATIONS

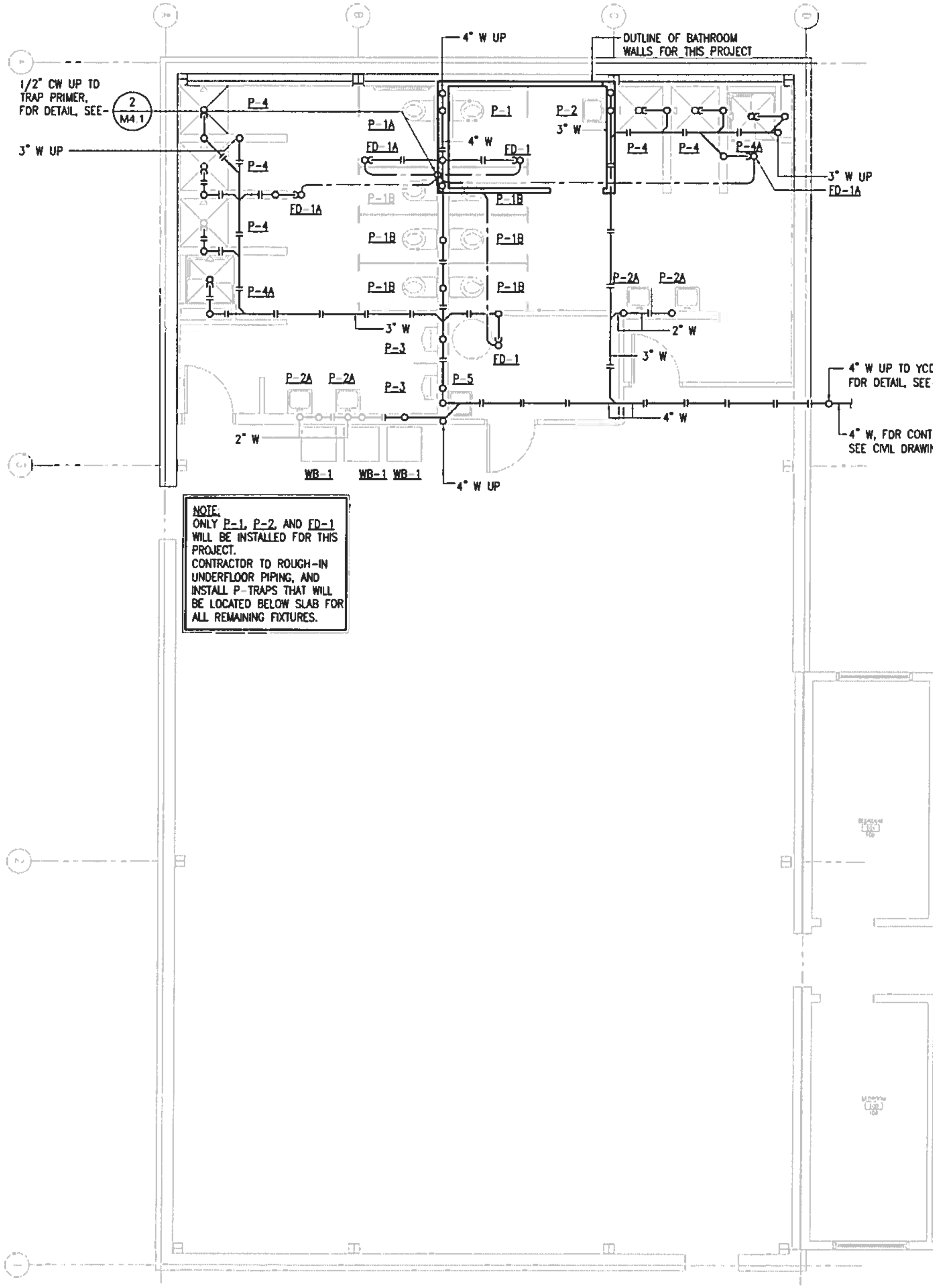
DR: SR
CK: JAB

JOB NO. L3238

M0.2

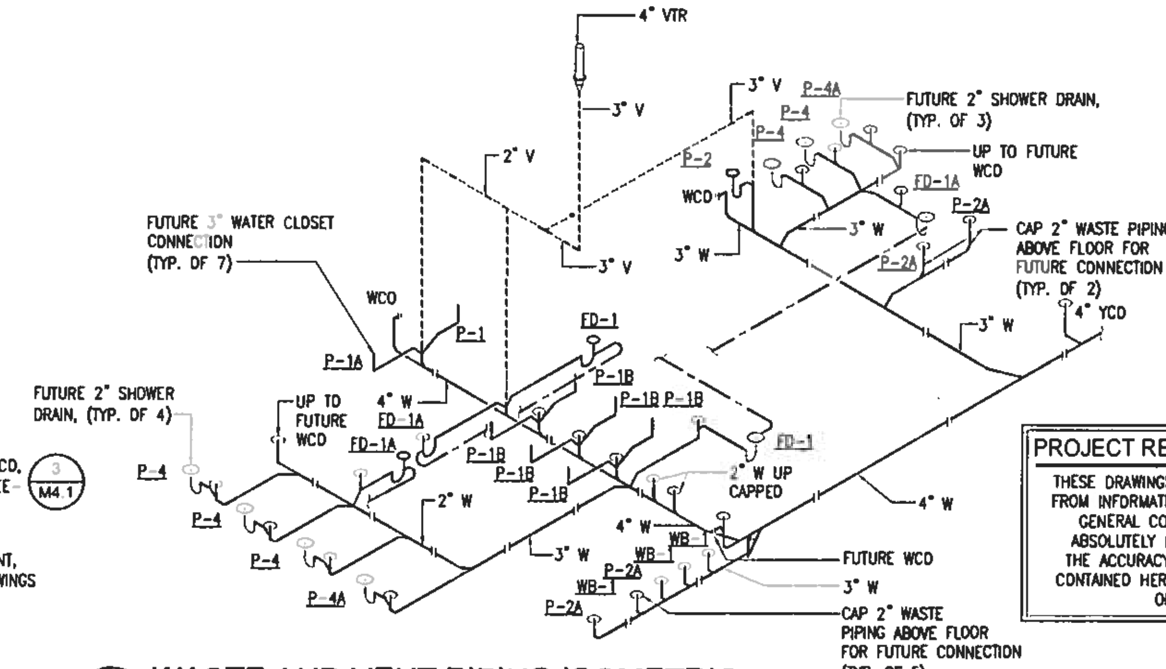
DATE: 15 APR 2014

THIS DRAWING MEASURES 34"x22" AT FULL SCALE



NOTE:
ONLY P-1, P-2, AND FD-1 WILL BE INSTALLED FOR THIS PROJECT.
CONTRACTOR TO ROUGH-IN UNDERFLOOR PIPING, AND INSTALL P-TRAPS THAT WILL BE LOCATED BELOW SLAB FOR ALL REMAINING FIXTURES.

1 UNDER FLOOR PLUMBING PLAN
1/4" = 1'-0"



2 WASTE AND VENT PIPING ISOMETRIC
NO SCALE

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SHEET NOTES:

1. EXISTING 1-1/4" CW RISER, ABANDON IN PLACE.

RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS

GENERAL H. WATT AND SCOTT CONTRACTORS

CAMP CARROLL, JBER
BUILDING #57226 ADDITION

UNDER FLOOR PLUMBING PLAN

DR: SR
CK: JAB
JOB NO. L3238

M1.1

DATE: 15 APR 2014

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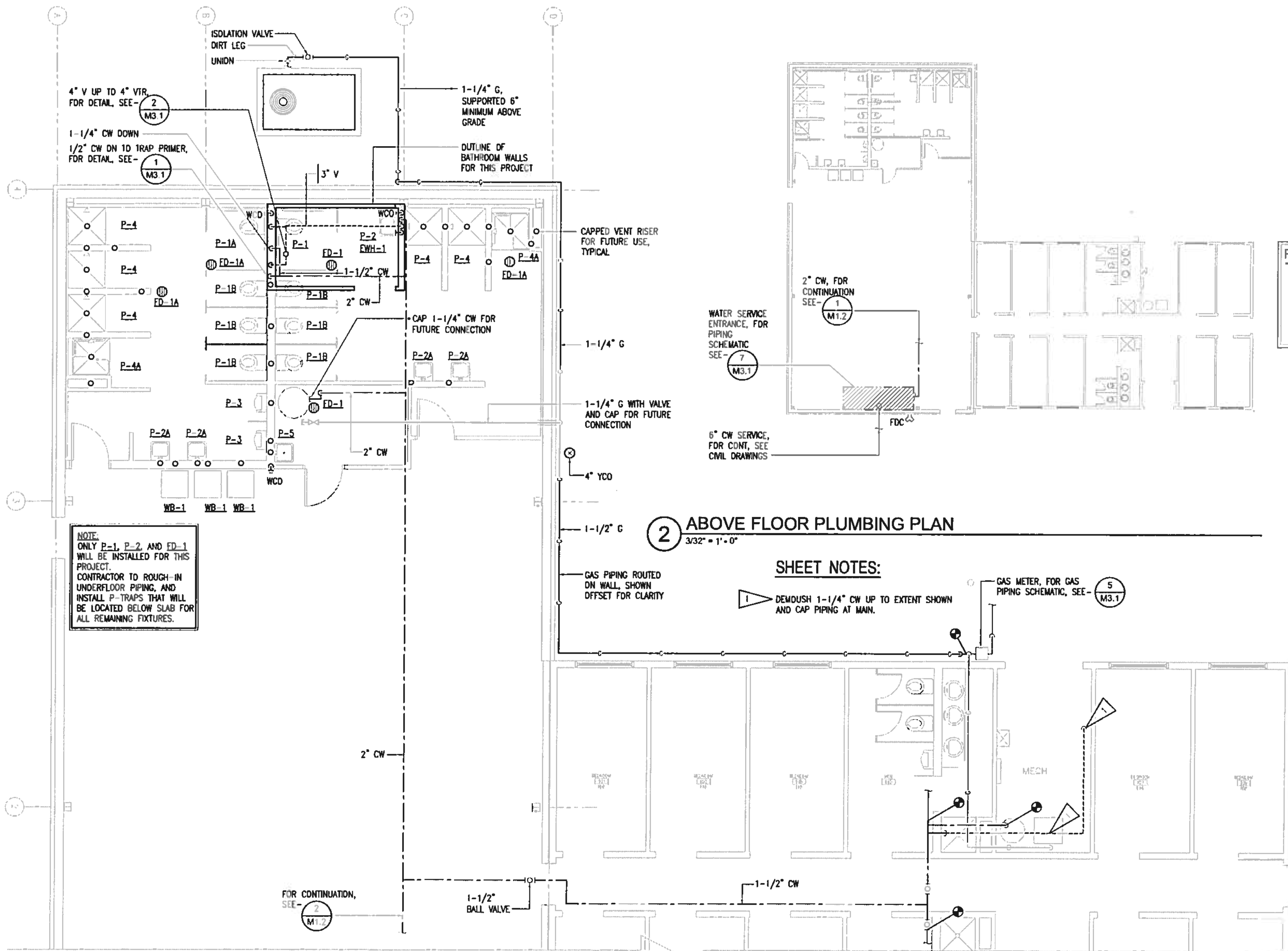

NOTE:
ONLY P-1, P-2, AND FD-1 WILL BE INSTALLED FOR THIS PROJECT.
CONTRACTOR TO ROUGH-IN UNDERFLOOR PIPING, AND INSTALL P-TRAPS THAT WILL BE LOCATED BELOW SLAB FOR ALL REMAINING FIXTURES.

2 ABOVE FLOOR PLUMBING PLAN
3/32" = 1'-0"

SHEET NOTES:

1. DEMOLISH 1-1/4" CW UP TO EXTENT SHOWN AND CAP PIPING AT MAIN.

1 ABOVE FLOOR PLUMBING PLAN
1/4" = 1'-0"

PROJECT RECORD DRAWINGS
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RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS

H. WATT AND SCOTT GENERAL CONTRACTORS

CAMP CARROLL, JBER
BUILDING #57226 ADDITION

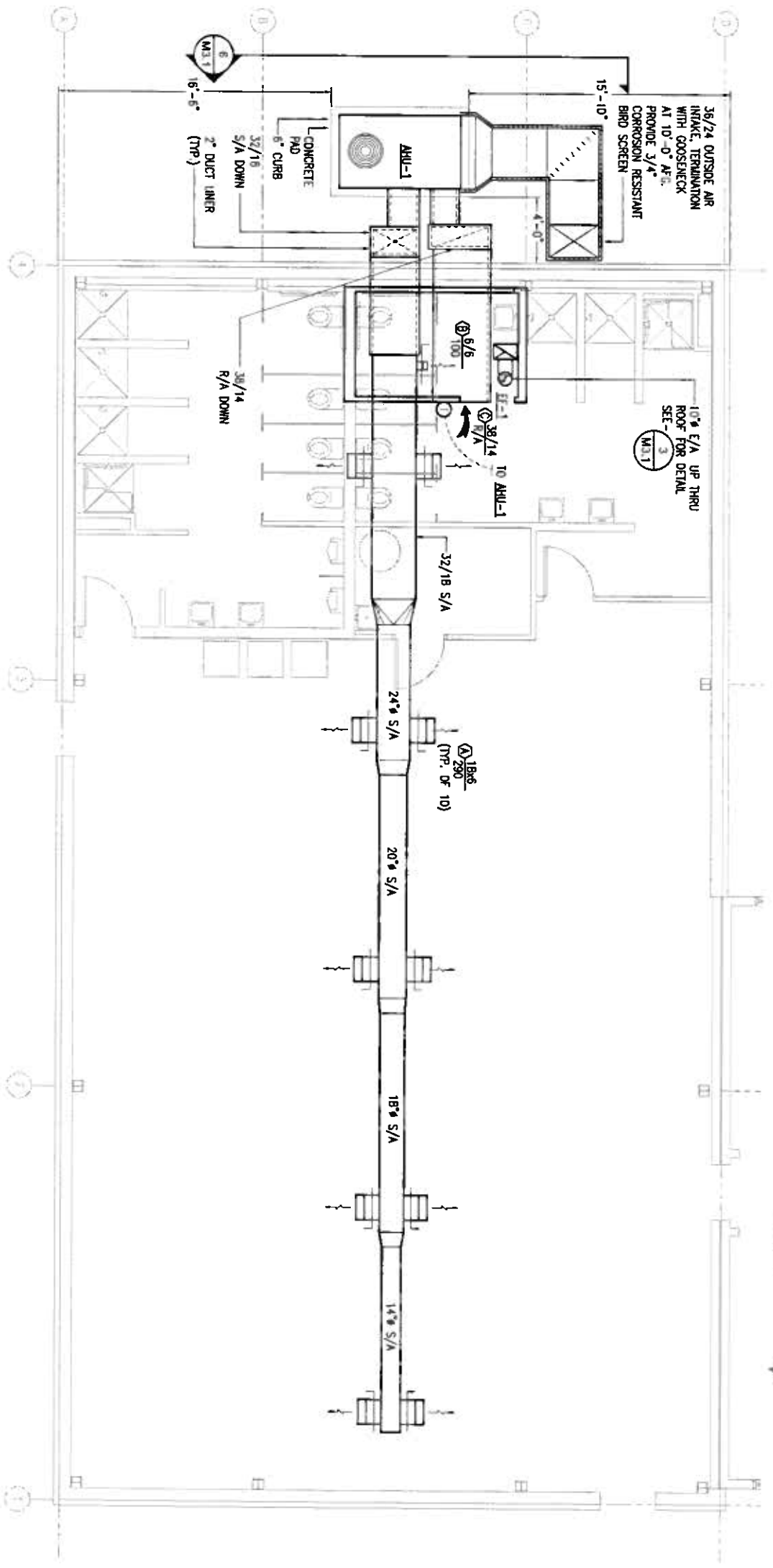
ABOVE FLOOR PLUMBING PLAN

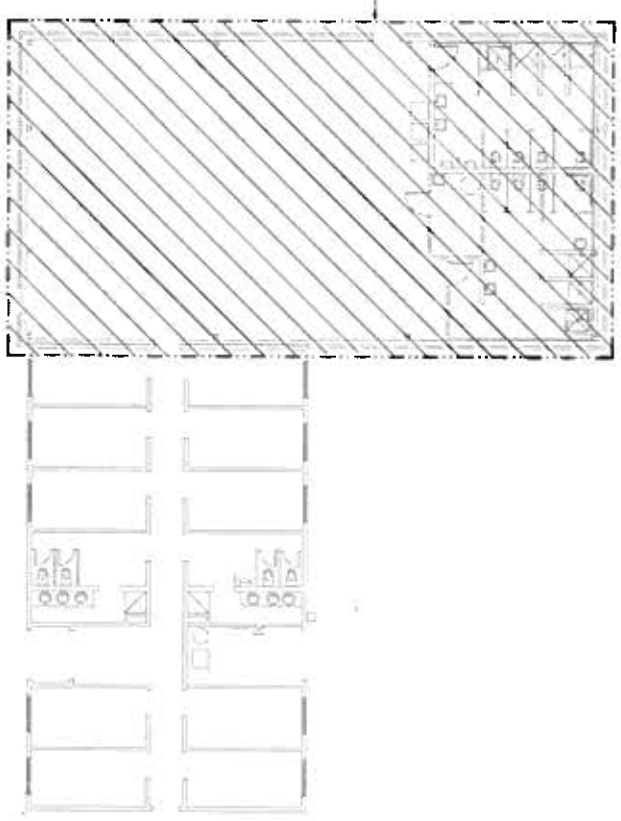
DR: SR
CK: JAB
JOB NO. L3238
M1.2
DATE: 15 APR 2014

THIS DRAWING MEASURES 34"x22" AT FULL SCALE

1 VENTILATION PLAN

1/4" = 1'-0"





KEYPLAN
NO SCALE

PROJECT RECORD DRAWINGS

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DR: SR
CK: JAB

JOB NO. L3238

M2.1

DATE: 15 APR 2014

VENTILATION PLAN

CAMP CARROLL, JBER

BUILDING #57226
ADDITION

GENERAL CONTRACTORS H. WATT AND SCOTT ALASKA

RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS
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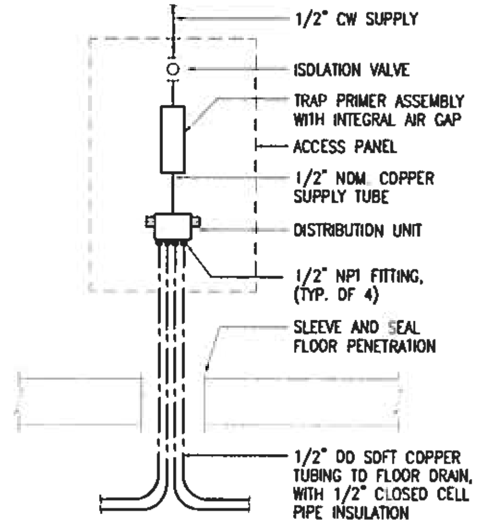
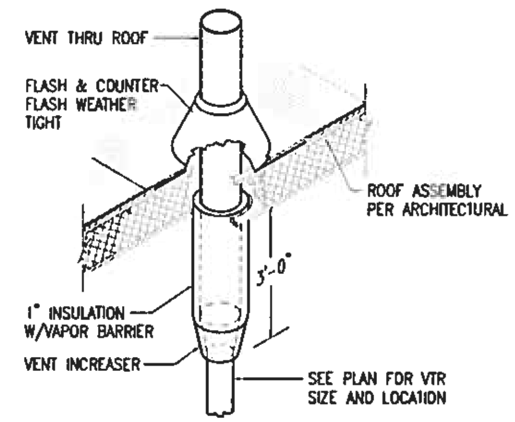
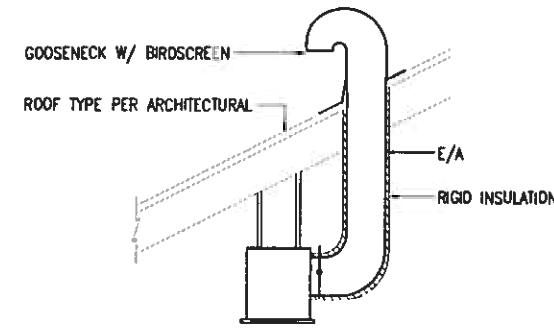
Wasilla, Alaska 99654 (907) 357-1521



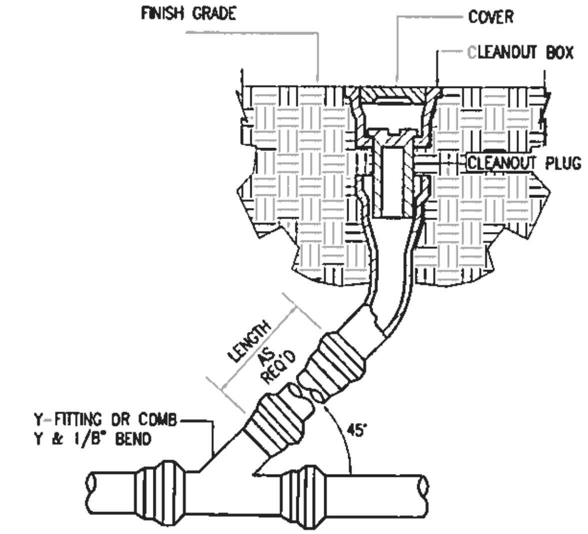
1 TRAP PRIMER DETAIL
NO SCALE



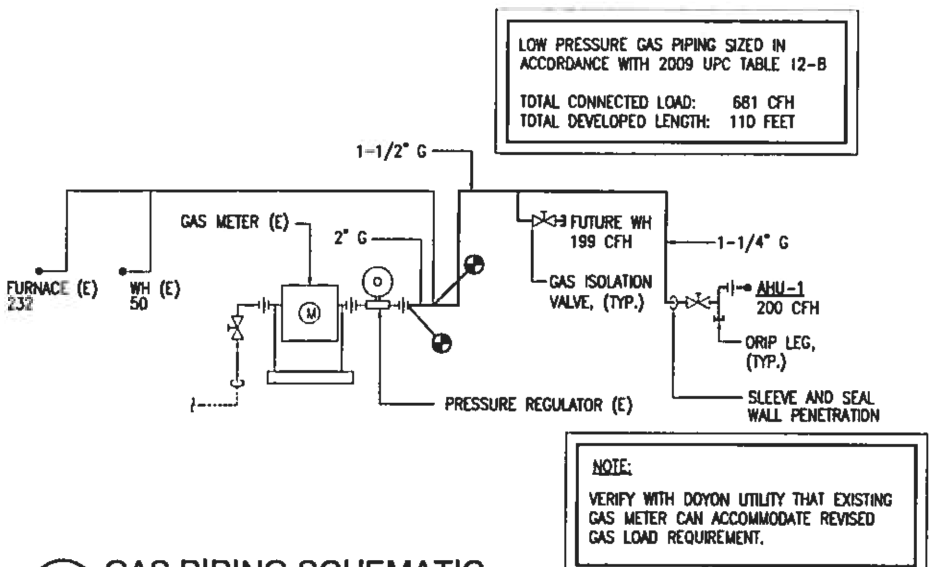
2 VENT THRU ROOF DETAIL
NO SCALE



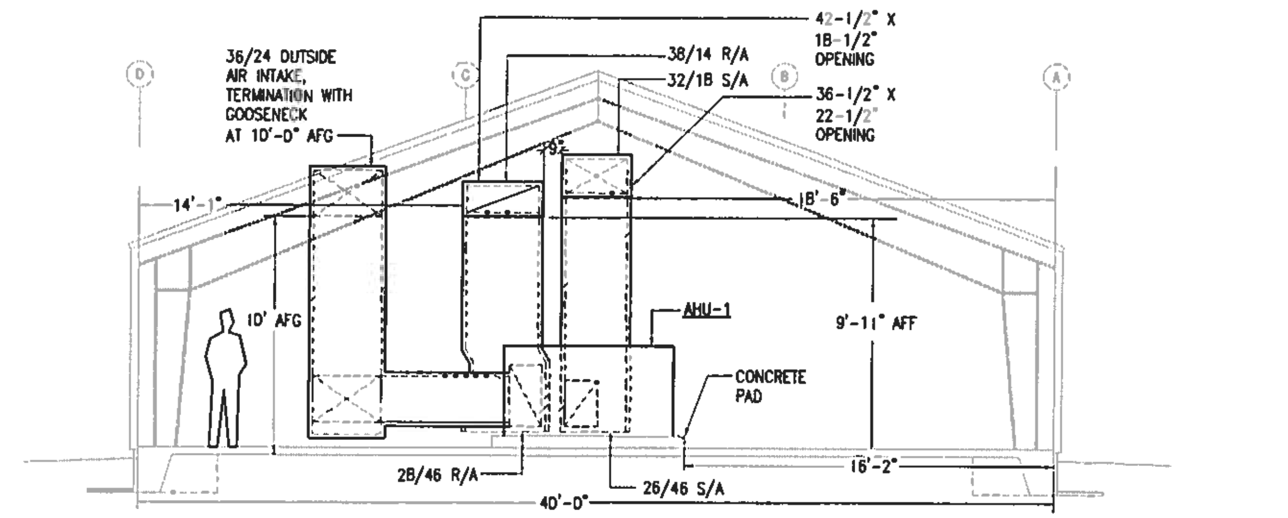
3 EXHAUST FAN DETAIL (TYP.)
NO SCALE



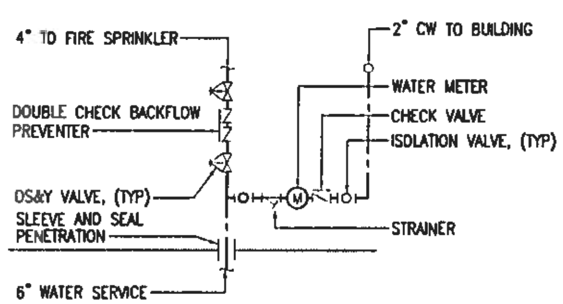
4 YARD CLEANOUT DETAIL
NO SCALE



5 GAS PIPING SCHEMATIC
NO SCALE



6 MECHANICAL ELEVATION
NO SCALE



7 WATER SERVICE SCHEMATIC
NO SCALE

PROJECT RECORD DRAWINGS

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RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS

H. WATT AND SCOTT GENERAL CONTRACTORS

CAMP CARROLL, JBER
BUILDING #57226 ADDITION

MECHANICAL DETAILS

DR: SR
CK: JAB
JOB NO. L3238

M3.1

DATE: 15 APR 2014

LUMINAIRE SCHEDULE

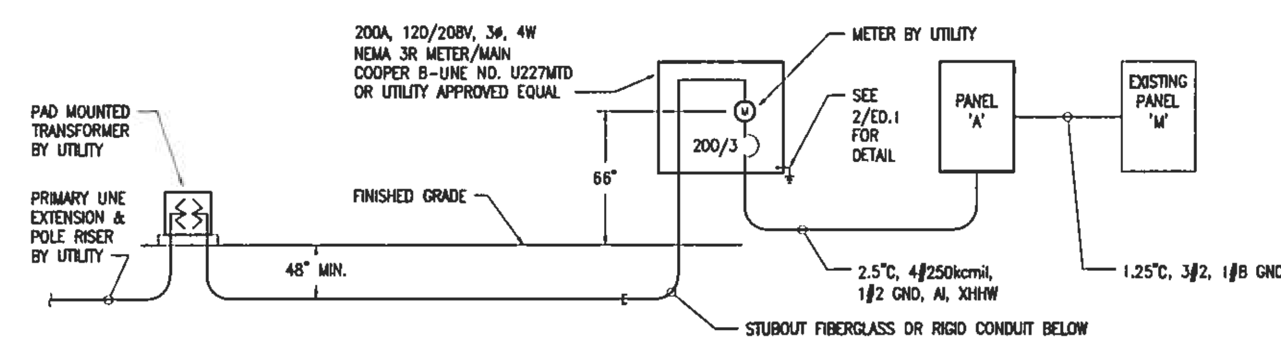
TYPE	LOCATION	MANUFACTURER AND CATALOG NUMBER (OR APPROVED EQUAL)	LUMINAIRE DESCRIPTION	MOUNTING TYPE	MOUNTING HEIGHT	LAMPS NO.	LAMPS WATTS	BALLAST NO.	BALLAST TYPE	INPUT WATTS
A	MULTI PURPOSE AREA	COLUMBIA # WCW4-332-3EPU	16" X 48" FLUORESCENT WRAPAROUND, WIDE DISTRIBUTION, PRISMATIC DIFFUSER, UNIVERSAL VOLTAGE HIGH POWER FACTOR ELECTRONIC BALLAST, WHITE ENAMEL FINISH.	SURFACE	CEILING	3	32T8 3000 K	1	(1) 3 LAMP ELECTRONIC	109
B	LOCKER/ SHOWER/ TOILET	COLUMBIA # LU4-232-EPU	1X4 SURFACE FLUORESCENT, CORROSION RESISTANT FIBERGLASS HOUSING, GASKETED LENS, UNIVERSAL VOLTAGE ELECTRONIC BALLAST.	SURFACE	CEILING OR WALL 8'-0"	2	32T8 3000 K	1	2 LAMP ELECTRONIC	68
C	EXTERIOR	LUMARK # XTOR3A-N-PC1	LED WALL PACK, DIE-CAST HOUSING, HINGED/GASKETED DOOR, FULL CUTOFF OPTICAL ASSEMBLY, 2649 LUMEN OUTPUT, INTEGRAL PHOTOCELL, DARK BRONZE FINISH.	SURFACE	WALL SEE PLAN	N/A	30 LED	1	SOLID STATE ELECTRONIC DRIVER	35
ER	EXIT DISCHARGE AREAS	COOPER # UEL1SD	SELF-CONTAINED EXTERIOR EMERGENCY LIGHTING UNIT, DIE-CAST GASKETED HOUSING, SILVER FINISH, SELF-DIAGNOSTICS, NI-CAD BATTERY.	SURFACE	WALL 9'-0" AFG	2	12 MR16	N/A	NICKEL CADMIUM BATTERY	10.8
X	EXITS	COOPER # LPX7-BK-SD	LED EXIT SIGN, POLYCARBONATE HOUSING, UNIVERSAL VOLTAGE, MOUNTING AND DIRECTIONAL ARROWS, SELF-DIAGNOSTIC ELECTRONICS.	SURFACE	WALL 7'-6" AFF	N/A	N/A	1	SOLID STATE ELECTRONIC DRIVER	1.0

LEGEND

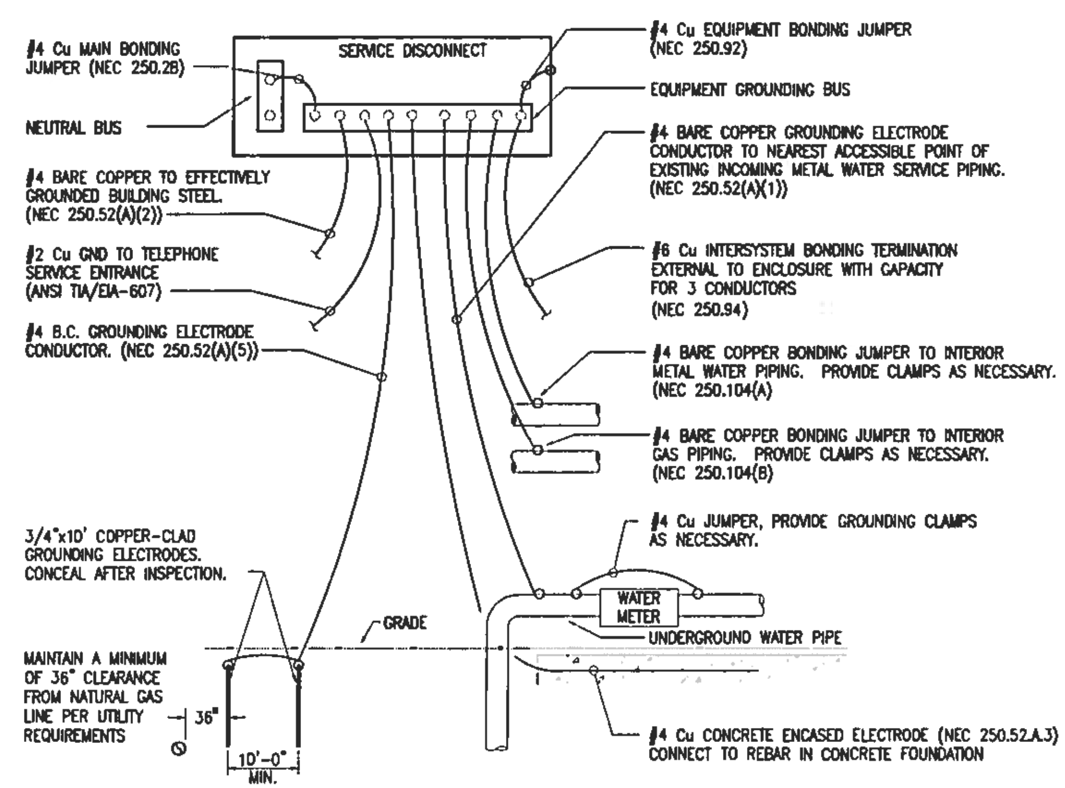
	EMERGENCY EXIT LIGHT - SURFACE MTD WALL
	EMERGENCY LIGHT - SURFACE MTD
	REMOTE EMERGENCY FIXTURE - WALL MTD
	FLUORESCENT - WALL MTD
	FLUORESCENT FIXTURE - SURFACE MTD
	WALL MOUNTED EXTERIOR FIXTURE
(A)	FIXTURE TAG (LETTER INDICATES TYPE)
	MOTOR (SIZED AS NOTED)
	DISCONNECT SWITCH
	COMBINATION DISCONNECT/MAGNETIC MOTOR STARTER
$F	FRACTIONAL HORSEPOWER MOTOR STARTER
$	SINGLE POLE SWITCH
$3	3-WAY SWITCH
$4	4-WAY SWITCH
	CONDUIT, CONCEALED
#10	NUMBER AND SIZE OF WIRES (NO MARKS = 3 #12)
A-2	HOMERUN TO PANEL (PANEL AND CIRCUIT No.)
	PANEL
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
	QUADRUPLEX RECEPTACLE
	JUNCTION BOX - POWER
C	JUNCTION BOX - TELECOMMUNICATIONS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
Al	ALUMINUM
B.C.	BARE COPPER
C	CONDUIT
CO	CONDUIT ONLY
Cu	COPPER
EA	EACH
EM	DENOTES EMERGENCY POWER
FACP	FIRE ALARM CONTROL PANEL
GND	GROUND
IMC	INTERMEDIATE METAL CONDUIT
MCA	MINIMUM CIRCUIT AMPACITY
MDP	MAIN DISTRIBUTION PANEL
MTD	MOUNTED
TYP	TYPICAL
WP	WEATHERPROOF

BEFORE YOU DIG CALL FOR FREE UNDERGROUND LOCATION

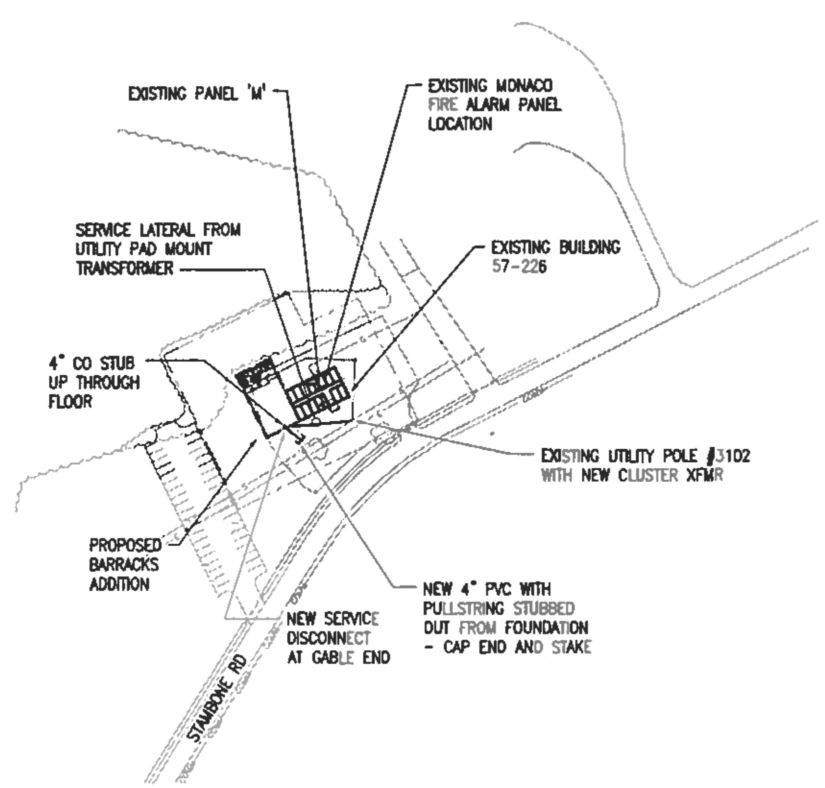
Locate Call Center of Alaska
Anchorage Area..........278-3121
Statewide..........800-478-3121
who will notify subscribed utilities only. Other utilities need to be contacted individually.



1 POWER DISTRIBUTION ONE-LINE DIAGRAM
NO SCALE



2 SERVICE GROUNDING DETAIL
NO SCALE



3 ELECTRICAL SITE PLAN
SCALE: 1" = 100'

PROJECT RECORD DRAWINGS

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RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS

GENERAL CONTRACTORS H. WATT AND SCOTT

CAMP CARROLL, JBER
BUILDING #57226 ADDITION

ELECTRICAL LEGEND, SCHEDULE, SITE PLAN AND DETAILS

JOB NO. L3238

E0.1

DATE: 14 APR 2014

SECTION 16010
SCOPE OF WORK - FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT FOR A COMPLETE AND WORKABLE ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.

STANDARDS, CODES AND REGULATIONS - COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, INTERNATIONAL BUILDING CODE, AND INTERNATIONAL FIRE CODE INCLUDING ALL STATE AND LOCAL AMENDMENTS TO THESE CODES.

DRAWINGS - THE DRAWINGS ARE DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. UNLESS SPECIFICALLY DIMENSIONED. REVIEW THE DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT FURNISHED BY OTHER CRAFTS BUT INSTALLED IN ACCORDANCE WITH THIS SECTION. BRING QUESTIONABLE OR OBSCURE ITEMS, APPARENT CONFLICTS BETWEEN PLANS AND SPECIFICATIONS, COVERNING CODES OR UTILITIES REGULATIONS TO THE ATTENTION OF THE ARCHITECT. CODES, ORDINANCES, REGULATIONS, MANUFACTURER'S INSTRUCTIONS OR STANDARDS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.

RECORD DRAWINGS - MARK UP A CLEAN SET OF DRAWINGS AS THE WORK PROGRESSES TO SHOW THE DIMENSIONED LOCATION AND ROUTING OF ALL ELECTRICAL WORK WHICH WILL BECOME PERMANENTLY CONCEALED. SHOW ROUTING OF WORK IN PERMANENTLY CONCEALED BLIND SPACES WITHIN THE BUILDING. SHOW COMPLETE ROUTING AND SIZING OF ANY SIGNIFICANT REVISIONS TO THE SYSTEMS SHOWN.

WORKMANSHIP - INSTALLATION OF ALL WORK SHALL BE MADE SO THAT ITS SEVERAL COMPONENT PARTS SHALL FUNCTION AS A WORKABLE SYSTEM COMPLETE WITH ALL ACCESSORIES NECESSARY FOR ITS OPERATION. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, INSTRUCTIONS AND/OR INSTALLATION DRAWINGS AND IN ACCORDANCE WITH NECA STANDARDS. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM WITH APPLICABLE INDUSTRY STANDARDS, NEMA STANDARDS AND UNDERWRITERS LABORATORIES STANDARDS WHERE APPLICABLE.

OPERATION AND MAINTENANCE MANUALS - PROVIDE OPERATION AND MAINTENANCE MANUALS FOR TRAINING OF THE OWNER'S PERSONNEL. DESCRIBE THE PROCEDURES NECESSARY TO OPERATE THE SYSTEM INCLUDING START-UP, OPERATION, EMERGENCY OPERATION AND SHUTDOWN. PROVIDE INSTRUCTIONS AND A SCHEDULE OF PREVENTIVE MAINTENANCE IN TABULAR FROM FOR ALL ROUTINE CLEANING, INSPECTION AND LUBRICATION WITH RECOMMENDED LUBRICANTS. PROVIDE INSTRUCTIONS FOR MINOR REPAIR OR ADJUSTMENTS REQUIRED FOR PREVENTIVE MAINTENANCE ROUTINES. PROVIDE MANUFACTURER'S DESCRIPTIVE LITERATURE INCLUDING APPROVED SHOP DRAWINGS COVERING DEVICES USED IN ANY CONTRACTOR-PROVIDED EQUIPMENT OR SYSTEMS WITH ILLUSTRATION, EXPLODED VIEWS, ETC.

WARRANTY - THE CONTRACTOR SHALL GUARANTEE ALL WORK EXECUTED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM BENEFICIAL OCCUPANCY. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.

PERMITS - SECURE AND PAY FOR ALL FEES, PERMITS, ETC. REQUIRED BY LOCAL AND STATE AGENCIES AND ALL LOCAL UTILITY COMPANIES. COSTS OF LINE EXTENSIONS TO THE METER ARE TO BE PAID BY THE OWNER.

REFERENCE SYMBOLS - THE ELECTRICAL "LEGEND" ON THE DRAWINGS IS A STANDARDIZED VERSION, AND ALL SYMBOLS SHOWN MAY NOT BE USED. USE THE "LEGEND" AS A REFERENCE FOR THE SYMBOLS USED ON THE DRAWINGS.

IDENTIFICATION - PROVIDE PRINTED ADHESIVE TAPE LABELS WITH BLACK LETTERS ON A CLEAR BACKGROUND TO IDENTIFY ALL ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT, LOADS SERVED AND AS NOTED ON THE DRAWINGS. LETTER HEIGHTS SHALL BE 1/8 INCH FOR INDIVIDUAL SWITCHES, MOTOR STARTERS AND LOADS SERVED AND 1/4 INCH ON PANELBOARDS.

CONDUITS: MARK ALL CONDUITS ENTERING OR LEAVING PANELBOARDS WITH INDELIBLE BLACK MARKER WITH THE CIRCUIT NUMBERS OF THE CIRCUITS CONTAINED INSIDE.

JUNCTION BOXES: MARK ALL CIRCUIT NUMBERS OF WIRING ON ALL JUNCTION BOXES WITH SHEET STEEL COVERS. MARK WITH INDELIBLE BLACK MARKER. ON EXPOSED JUNCTION BOXES IN PUBLIC AREAS, MARK ON INSIDE OF COVER. MARK ALL FIRE ALARM SYSTEM JUNCTION BOXES WITH SHEET STEEL COVERS WITH "FA" MARK WITH INDELIBLE RED MARKER. MARK ALL OTHER SPECIAL SYSTEM JUNCTION BOXES WITH SHEET STEEL COVERS.

WIRE IDENTIFICATION: PROVIDE WIRE MARKERS ON EACH CONDUCTOR IN PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND AT LOAD CONNECTION. MARKERS SHALL BE LOCATED WITHIN ONE INCH OF EACH CABLE END, EXCEPT AT PANELBOARDS, WHERE MARKERS FOR BRANCH CIRCUIT CONDUCTORS SHALL BE VISIBLE WITHOUT REMOVING PANEL DEADFRONT.

DEVICE PLATES: LABEL EACH RECEPTACLE DEVICE PLATE OR POINT OF CONNECTION DENOTING THE PANELBOARD NAME AND CIRCUIT NUMBER. INSTALL LABEL ON THE TOP OF EACH PLATE.

EQUIPMENT CONNECTIONS - PROVIDE WIRING AND CONNECTION OF EQUIPMENT REQUIRING ELECTRICAL POWER BUT SPECIFIED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS. EQUIPMENT SHALL INCLUDE BUT IS NOT LIMITED TO MOTORS, PUMPS, HVAC EQUIPMENT, ETC. REVIEW EQUIPMENT SUBMITTALS PRIOR TO INSTALLATION AND ELECTRICAL ROUGH-IN. VERIFY LOCATION, SIZE, TYPE OF CONNECTIONS, AND THAT EQUIPMENT IS READY FOR ELECTRICAL CONNECTION. MAKE WIRING CONNECTIONS IN CONTROL PANEL OR IN WIRING COMPARTMENT OF PREWIRED EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE INTERCONNECTING WIRING AND DISCONNECTS WHERE REQUIRED.

ARC-FLASH SIGNAGE - ALL MOTOR STARTERS, PANELBOARDS AND DISCONNECTS SHALL HAVE SIGNAGE FOR ARC HAZARD INSTALLED. THE MARKING SHALL BE LOCATED TO BE CLEARLY VISIBLE TO QUALIFIED PERSONNEL BEFORE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE OF THE EQUIPMENT. AT A MINIMUM THE 3-LINE SIGNAGE SHALL STATE THE FOLLOWING: WARNING - ARC FLASH AND SHOCK HAZARD - APPROPRIATE PPE REQUIRED.

PENETRATIONS OF FIRE BARRIERS - ALL ELECTRICAL PENETRATIONS THROUGH FIRE RATED BARRIERS SHALL BE SEALED IN ACCORDANCE WITH NEC ARTICLE 300-21 AND THE FOLLOWING:

ALL HOLES OR VOIDS CREATED TO EXTEND ELECTRICAL SYSTEMS THROUGH FIRE RATED FLOORS, WALLS OR CEILING SHALL BE SEALED WITH AN ASBESTOS-FREE INTUMESCENT FIRE STOPPING MATERIAL CAPABLE OF EXPANDING 8 TO 10 TIMES WHEN EXPOSED TO TEMPERATURES 250 DEGREES F OR HIGHER.

MATERIALS SHALL BE SUITABLE FOR THE FIRE STOPPING OF PENETRATIONS MADE BY STEEL, GLASS, PLASTIC AND SHALL BE CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME, SMOKE AND GASES IN COMPLIANCE WITH THE REQUIREMENTS OF ASTM E814, UL 1479 AND THE UL FIRE RESISTANCE DIRECTORY REQUIREMENTS FOR THROUGH-PENETRATION FIRESTOP DEVICES (XHCR).

THE RATING OF THE FIRE STOPS SHALL BE THE SAME AS THE TIME-RATED FLOOR, WALL OR CEILING ASSEMBLY.

INSTALL FIRE STOPPING MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

UNLESS PROTECTED FROM POSSIBLE LOADING OR TRAFFIC, INSTALL FIRE STOPPING MATERIALS IN FLOORS HAVING VOID OPENINGS OF FOUR (4) INCHES OR MORE TO SUPPORT THE SAME FLOOR LOAD REQUIREMENTS AS THE SURROUNDING FLOOR.

SECTION 16111
CONDUIT - ALL WIRING SHALL BE INSTALLED IN METALLIC RACEWAY. INSTALL AN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL RACEWAYS. UTILIZE GALVANIZED RIGID STEEL OR INTERMEDIATE METAL CONDUIT FOR SERVICE ENTRANCE, FEEDERS, IN WET LOCATIONS, IN DIRECT CONTACT WITH CONCRETE OR BELOW SLAB ON GRADE. ELECTRICAL METALLIC TUBING MAY BE USED IN ALL CONCEALED, DRY, INTERIOR LOCATIONS. UTILIZE SHORT EXTENSIONS (36 INCHES MAXIMUM) OF FLEXIBLE CONDUIT FOR CONNECTION OF ALL MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION. UTILIZE LIQUIDTIGHT FLEXIBLE CONDUIT FOR MOTOR AND EQUIPMENT CONNECTIONS IN WET LOCATIONS. COMPLETELY AND THOROUGHLY SWAB RACEWAY SYSTEM BEFORE INSTALLING CONDUCTORS. PROVIDE NYLON "JET-LINE" OR APPROVED EQUAL PULL STRING IN ALL EMPTY CONDUITS, EXCEPT SLEEVES AND NIPPLES. PROVIDE LABELS ON BOTH ENDS OF ALL PULL STRINGS.

SECTION 16120
CONDUCTORS - ALL CONDUCTORS #6 AWG AND SMALLER SHALL BE COPPER WITH TYPE XHHW, THWN, THW OR THHN INSULATION. MINIMUM BRANCH CIRCUIT CONDUCTOR SIZE SHALL BE #12 AWG. MINIMUM CONTROL CIRCUIT CONDUCTOR SIZE SHALL BE #18 AWG. WIRING IN LIGHTING FIXTURE CHANNELS SHALL BE COPPER WITH TYPE XHHW OR OTHER INSULATION RATED 90 DEGREES C OR HIGHER, 600 VOLT. ALL CONDUCTORS ON EXTERIOR OF BUILDING SHALL BE XHHW. PULL ALL CONDUCTORS INTO THE RACEWAY AT THE SAME TIME. USE UL LISTED WIRE PULLING LUBRICANT FOR PULLING #4 AWG AND LARGER WIRES. COLOR CODE CONDUCTORS AS FOLLOWS: 120/208 VOLT SYSTEMS: BLACK, RED, BLUE AND WHITE. USE PROPERLY SIZED INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR ALL CONDUCTORS #8 AWG AND SMALLER. TERMINATE #6 AWG AND LARGER CONDUCTORS WITH CRIMP OR COMPRESSION TYPE CONNECTORS INSTALLED WITH TOOL RECOMMENDED BY CONNECTION MANUFACTURER AND INSULATE WITH PROPERLY SIZED 600 VOLT RATED HEAT SHRINK TUBING.

SECTION 16130
OUTLET BOXES - PROVIDE GALVANIZED OR CADMIUM PLATED, ONE PIECE PRESSED OR WELDED STEEL OUTLET BOXES 4 INCH SQUARE OR OCTAGONAL, 1 1/2 INCHES DEEP MINIMUM SIZE FOR USE IN INTERIOR AREAS. PROVIDE CAST ALUMINUM OR FERALLOY TYPE BOXES WITH GASKETED COVER, THREADED HUBS AND NEMA 3R RATING FOR USE IN EXTERIOR OR WET LOCATIONS. PROVIDE FIXTURE OUTLETS WITH 1/2 INCH MALE FIXTURE STUDS AS REQUIRED. PROVIDE OUTLET BOXES AS SHOWN ON THE DRAWINGS, AND AS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, DEVICE INSTALLATION AND CODE COMPLIANCE. DO NOT INSTALL BOXES BACK-TO-BACK IN WALLS. PROVIDE A MINIMUM 6 INCH SEPARATION FOR MINIMUM SOUND TRANSMISSION. USE MULTIPLE-GANG BOXES WHERE MORE THAN ONE DEVICE ARE MOUNTED TOGETHER; DO NOT USE SECTIONAL BOXES. SUPPORT BOXES INDEPENDENTLY OF CONDUIT. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF OUTLETS MOUNTED ABOVE COUNTERS, BENCHES AND BACKSPLASHES.

SECTION 16141
RECEPTACLES - PROVIDE NEMA 5-20R DUPLEX GROUNDING TYPE RECEPTACLES WITH WHITE FINISH, MEETING ALL REQUIREMENTS OF FEDERAL SPECIFICATION WC-596F, UL NO. 498 APPROVED, SELF-GROUNDING, CERTIFIED TO COMPLY WITH NEMA WD-1-4.02 THROUGH 4.11, 1979 TESTS. SCREW TERMINAL OR SCREW CLAMP TYPE ONLY. SPRING CLAMPED TYPE TERMINATIONS ARE NOT ACCEPTABLE. PROVIDE DUPLEX CONVENIENCE RECEPTACLES WITH CLASS "A" INTEGRAL GROUND FAULT CURRENT INTERRUPTER WITH INTEGRAL LOCKOUT FUNCTION THAT MEETS UL 943 (2003) REQUIREMENTS. PROVIDE SPECIFIC-USE RECEPTACLES WHERE INDICATED ON THE DRAWINGS. UNLESS OTHERWISE NOTED ON THE DRAWINGS, INSTALL RECEPTACLES 18 INCHES ABOVE FINISH FLOOR, 4 INCHES ABOVE COUNTERS AND BACKSPLASHES WITH GROUNDING POLE ON BOTTOM. UNLESS OTHERWISE NOTED DIMENSIONS ARE TO CENTERLINE OF OUTLET.

SWITCHES - PROVIDE NEMA WD-1 20 AMPERE, 120/277 VOLT AC GENERAL-USE SNAP SWITCH, MEETING ALL REQUIREMENTS OF FEDERAL SPECIFICATION WS-896, UL NO. 20 LISTED, SELF-GROUNDING BINDING SCREW TYPE TERMINALS WITH WHITE TOGGLE, SINGLE POLE, THREE WAY OR FOUR WAY AS INDICATED ON THE DRAWINGS. INSTALL SWITCHES 48 INCHES ABOVE FINISHED FLOOR, OFF POSITION DOWN.

DEVICE PLATES - PROVIDE UL LISTED ONE PIECE ROUNDED EDGE "STREAMLINE" DESIGN FLUSH DEVICE PLATES OF SATIN FINISH 430 OR 302 STAINLESS STEEL WITH METAL, COUNTER SUNK SCREWS TO MATCH DEVICE PLATE. PROVIDE GALVANIZED DEVICE PLATES WHERE EXPOSED WIRING IS PERMITTED. PROVIDE UL LISTED, CAST ALUMINUM, HINGED OUTLET COVER/ENCLOSURE WITH GASKET BETWEEN THE ENCLOSURE AND THE MOUNTING SURFACE, SUITABLE FOR WET LOCATION WHILE IN USE FOR ALL OUTLETS ON THE EXTERIOR OF THE BUILDING. PROVIDE 1/2 INCH RAISED, SQUARE, GALVANIZED OR CADMIUM PLATED, PRESSED STEEL COVER PLATE SUPPORTING DEVICES INDEPENDENT OF THE OUTLET BOX FOR ALL EXPOSED WORK.

SECTION 16420
SERVICE ENTRANCE - COORDINATE WITH UTILITY COMPANY FOR PERMANENT ELECTRIC SERVICE. INSTALL SERVICE ENTRANCE IN ACCORDANCE WITH UTILITY COMPANY'S RULES AND REGULATIONS. COORDINATE WITH LOCAL UTILITY COMPANY FOR METERING REQUIREMENTS. PROVIDE GROUNDING AND BONDING AT SERVICE ENTRANCE AS SHOWN ON THE DRAWINGS.

SECTION 16440
DISCONNECT SWITCHES - PROVIDE UL LISTED 250V, HEAVY DUTY NON-FUSIBLE QUICK-MAKE, QUICK BREAK, LOAD INTERRUPTER, ENCLOSED KNIFE SWITCHES WITH EXTERNALLY OPERABLE HANDLE INTERLOCKED TO PREVENT OPENING FRONT COVER WITH SWITCH IN ON POSITION, HANDLE LOCKABLE IN OFF POSITION. ENCLOSURES SHALL BE NEMA 3R OR AS INDICATED ON THE DRAWINGS.

SECTION 16470
PANELBOARDS - PROVIDE DEAD-FRONT CIRCUIT BREAKER PANELBOARDS WITH BUS SIZE, SHORT CIRCUIT RATING, NUMBER AND SIZE OF BRANCH CIRCUITS AS SHOWN ON THE DRAWINGS. BUSSING SHALL BE COPPER. CABINETS SHALL BE 6 INCHES DEEP BY 20 INCHES WIDE MINIMUM. PROVIDE WITH SURFACE FRONTS, WITH CONCEALED TRIM CLAMPS, CONCEALED HINGE AND FLUSHLOCK WITH DOOR. FINISH IN MANUFACTURER'S STANDARD GRAY ENAMEL. MOLDED CASE CIRCUIT BREAKERS SHALL BE BOLT-ON THERMAL MAGNETIC TRIP TYPE WITH COMMON TRIP HANDLE FOR ALL POLES. PROVIDE CIRCUIT BREAKERS UL LISTED AS TYPE SWD FOR LIGHTING CIRCUITS SWITCHED AT THE PANELBOARD AND AS TYPE HCAR FOR AIR HANDLING/CONDITIONING CIRCUITS. PROVIDE UL CLASS A GROUND FAULT INTERRUPTER CIRCUIT BREAKERS FOR GFCI CIRCUITS AS INDICATED ON THE DRAWINGS. INSTALL PANELBOARDS PLUMB WITH TOP OF CABINET 6'-6" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON THE DRAWINGS. PROVIDE TYPED CIRCUIT DIRECTORIES FOR EACH PANELBOARD. MEASURE STEADY STATE LOAD CURRENTS OF EACH PANELBOARD FEEDER AND REARRANGE BRANCH CIRCUITS AS REQUIRED TO MAINTAIN A MAXIMUM 20 PERCENT DIFFERENCE BETWEEN PHASES. REVISE CIRCUIT DIRECTORY TO REFLECT CIRCUITING CHANGES REQUIRED TO BALANCE PHASE LOADS.

SECTION 16480
MOTOR STARTERS - PROVIDE MAGNETIC MOTOR STARTERS: NEMA ICS 2; AC GENERAL-PURPOSE CLASS A MAGNETIC CONTROLLER FOR INDUCTION MOTORS RATED IN HORSEPOWER. FULL VOLTAGE STARTING: NON-REVERSING TYPE. OVERLOAD RELAY SHALL BE THE MELTING ALLOY TYPE. COMBINE MOTOR STARTERS WITH MOTOR CIRCUIT PROTECTOR DISCONNECT IN COMMON ENCLOSURE. PROVIDE TWO FIELD CONVERTIBLE CONTACTS IN ADDITION TO SEAL-IN CONTACT. PROVIDE HAND/OFF/AUTO SELECTOR SWITCH AND A RED "RUN" LED INDICATOR LIGHT IN FRONT COVER. PROVIDE CONTROL POWER TRANSFORMERS AS REQUIRED. INSTALL MOTOR CONTROL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. SELECT AND INSTALL HEATER ELEMENTS IN MOTOR STARTERS TO MATCH INSTALLED MOTOR CHARACTERISTICS. MOTOR DATA: PROVIDE NEATLY TYPED LABEL INSIDE EACH MOTOR STARTER ENCLOSURE DOOR IDENTIFYING MOTOR SERVED, NAMEPLATE HORSEPOWER, FULL LOAD AMPERES, CODE LETTER, SERVICE FACTOR, AND VOLTAGE/PHASE RATING.

FRACTIONAL HORSEPOWER MANUAL STARTER - NEMA ICS 2; AC GENERAL-PURPOSE CLASS A MANUALLY OPERATED, NUMBER OF POLES AS REQUIRED BY THE LOAD SERVED, FULL-VOLTAGE CONTROLLER FOR FRACTIONAL HORSEPOWER INDUCTION MOTORS, WITH THERMAL OVERLOAD UNIT, RED LED PILOT LIGHT, AND TOGGLE OPERATOR.

SECTION 16510
LIGHTING EQUIPMENT - PROVIDE AND INSTALL ALL LIGHTING EQUIPMENT OR APPROVED EQUAL AS SHOWN ON THE DRAWINGS AND DESCRIBED IN THE "LUMINAIRE SCHEDULE". PROVIDE LIGHTING EQUIPMENT COMPLETE, WIRED, ASSEMBLED, WITH PROPER FLANGES, MOUNTING SUPPORTS, HARDWARE, ETC. PROVIDE ENERGY SAVING LAMPS AND ELECTRONIC BALLASTS WITH A MAXIMUM THD OF 20% AND A MINIMUM BALLAST FACTOR OF .88 FOR ALL FLUORESCENT FIXTURES. UNLESS OTHERWISE NOTED ON THE DRAWINGS, FLUORESCENT LAMPS SHALL BE TCLP COMPLIANT, 3500 DEGREE K, TRI-PHOSPHOR TYPE WITH A MINIMUM CRI OF 82.

FLUORESCENT LUMINAIRE DISCONNECT: UL LISTED, 4A, 600V, LUMINAIRE DISCONNECT WITH TIN-PLATED BRASS CONTACTS, FINGER-SAFE POLYCARBONATE FEMALE HOUSING, 105' C TEMPERATURE RATING, AND TWO OR THREE-POLE CONFIGURATION TO MATCH LOAD SERVED. IDEAL "POWERPLUG" SERIES OR APPROVED EQUAL.

PANEL 'A'

MFR/MODEL: SQUARE 'D' NQ — VOLTS: 120/208V,3PH,4W — ENCLOSURE: NEMA 1 — 225 A — MTG: SURFACE

NOTE	CIRC	POLE	AMPS	SERVICE	TYPE	VOLT-AMPS A		VOLT-AMPS B		VOLT-AMPS C		TYPE	SERVICE	AMPS	POLE	CIRC	NOTE
	1	1	20	RECPS NE ADDN	RECP	900	665					LTG	BARRACKS LTS	20	1	2	■
	3	1	20	RECPS E ADDN	RECP			720	70			LTG	EXTERIOR LTS	20	1	4	c,e
■	5	1	20	RECP COMM SE ADDN	RECP					360	665	LTG	BARRACKS LTS	20	1	6	■
■	7	1	20	RECP S ADDN	RECP	720							SPARE	20	1	8	
a	9	1	20	RECP SW ADDN	RECP			720					SPARE	20	1	10	
	11	1	20	EXTERIOR RECPS N & W	RECP					360			SPARE	20	1	12	
	13	1	20	EXTERIOR RECPS S & E	RECP	360							SPARE	20	1	14	
	15	1	25	EWH-1	HEAT			2400					SPARE	20	1	16	
	17	1	20	RECPS NW ADDN	RECP					720	272	LTG	RESTROOM LTS, EF-1	20	1	18	
	19	1	20	RECP N ADDN & RESTRM	RECP	540	180					RECP	BATHROOM RECP	20	1	20	
	21	1	20	SPARE									SPACE	-	1	22	
	23	1	20	SPARE									SPACE	-	1	24	
	25	1	20	SPARE									SPACE	-	1	26	
	27	1	20	SPARE									SPACE	-	1	28	
	29	1	20	SPARE									SPACE	-	1	30	
d	31	2	100	EXISTING PANEL 'M'	FEDR								SPACE	-	1	32	
d	33	2	100	^^	FEDR								SPACE	-	1	34	
b	35	3	60	AHU-1	MOTR					4683			SPACE	-	1	36	
b	37	3	60	^^^	MOTR	4683							SPACE	-	1	38	
b	39	3	60	^^^	MOTR			4683					SPACE	-	1	40	
■	41	1	20	FUTURE FA BOOSTER PNL	MISC					600			SPACE	-	1	42	
				TOTAL V-A			8048		8593		7660		24,301 VA				
				TOTAL AMPS			67		72		64		67 A				
				A.I.C. RATING: 10,000													

	LTG	RECP	MOTR	LGMT	MISC	KIT	HEAT	SPEC	TOTAL	AMPS
CONNECTED LOAD IN KVA (PANEL 'A')	1.67	5.58	14.05	3.51	0.60	0.00	2.40	0.00	24.3 KVA	67 A
CONNECTED LOAD IN KVA (BRANCH PANELS)									0.0 KVA	0 A
TOTAL CONNECTED LOAD IN KVA:	1.67	5.58	14.05	3.51	0.60	0.00	2.40	0.00	24.3 KVA	67 A
DEMAND LOAD IN KVA:	2.09	5.58	14.05	3.51	0.60	0.00	2.40	0.00	28.2 KVA	78 A

PANEL NOTES:
- ■ PROVIDE RED HANDLED BREAKER AND LOCK-ON DEVICE FOR CIRCUIT INDICATED
- b PROVIDE HACR RATED CIRCUIT BREAKER FOR LOAD INDICATED
- c PROVIDE SWD RATED CIRCUIT BREAKER FOR LOAD INDICATED
- d UTILITY DEMAND HISTORY NOT AVAILABLE FOR EXISTING SERVICE
- ■ HANDLE TIE - SHARED NEUTRAL

PANEL OPTIONS:
MAIN LUGS ONLY

PROJECT RECORD DRAWINGS

THESE DRAWINGS HAVE BEEN PREPARED FROM INFORMATION FURNISHED BY THE GENERAL CONTRACTOR. THERE IS ABSOLUTELY NO GUARANTEE AS TO THE ACCURACY OF THE INFORMATION CONTAINED HEREIN, EITHER EXPRESSED OR IMPLIED.

RSA Engineering, Inc.

GENERAL H. WATT AND SCOTT CONTRACTORS

CAMP CARROLL, JBER

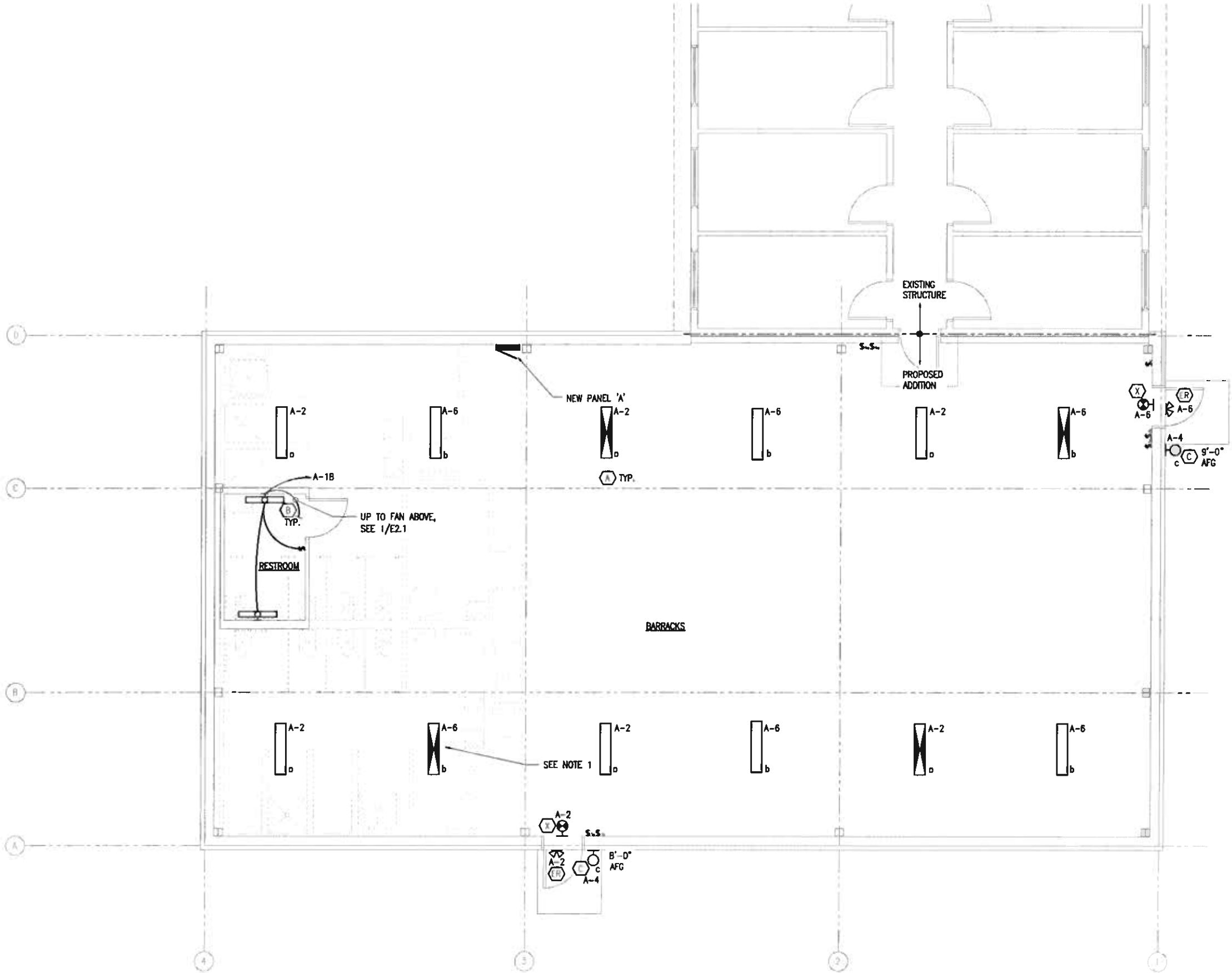
BUILDING #57226
ADDITION

ELECTRICAL SPECIFICATIONS AND SCHEDULE

JOB NO. L3238

E0.2

DATE: 14 APR 2014



GENERAL NOTES:

A. INTERIOR LIGHTING CONFIGURATION INDICATED ON PLAN HAS BEEN CALCULATED TO PROVIDE 22FC AVERAGE HORIZONTAL ILLUMINATION LEVEL, MINIMUM 13FC WITH A MAX/MIN UNIFORMITY LEVEL OF 2:1. UFC 3-530-01 TARGET OF 5FC FOR HOUSING (BARRACKS) IS ATTAINED WITHOUT THE AID OF TASK ILLUMINATION.

B. CONNECT EMERGENCY EXIT LIGHT AND REMOTE EMERGENCY FIXTURE TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT.

SHEET NOTES:

1. PROVIDE EL141 EMERGENCY INVERTER BALLAST FOR TYPE 'A' LUMINAIRES SHOWN AS EMERGENCY AND CONNECT TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT.

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

PROJECT RECORD DRAWINGS

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RSA Engineering, Inc.

H. WATT AND SCOTT GENERAL CONTRACTORS

CAMP CARROLL, JBER

BUILDING #57226 ADDITION

LIGHTING PLAN

JOB NO. L3238

E1.1

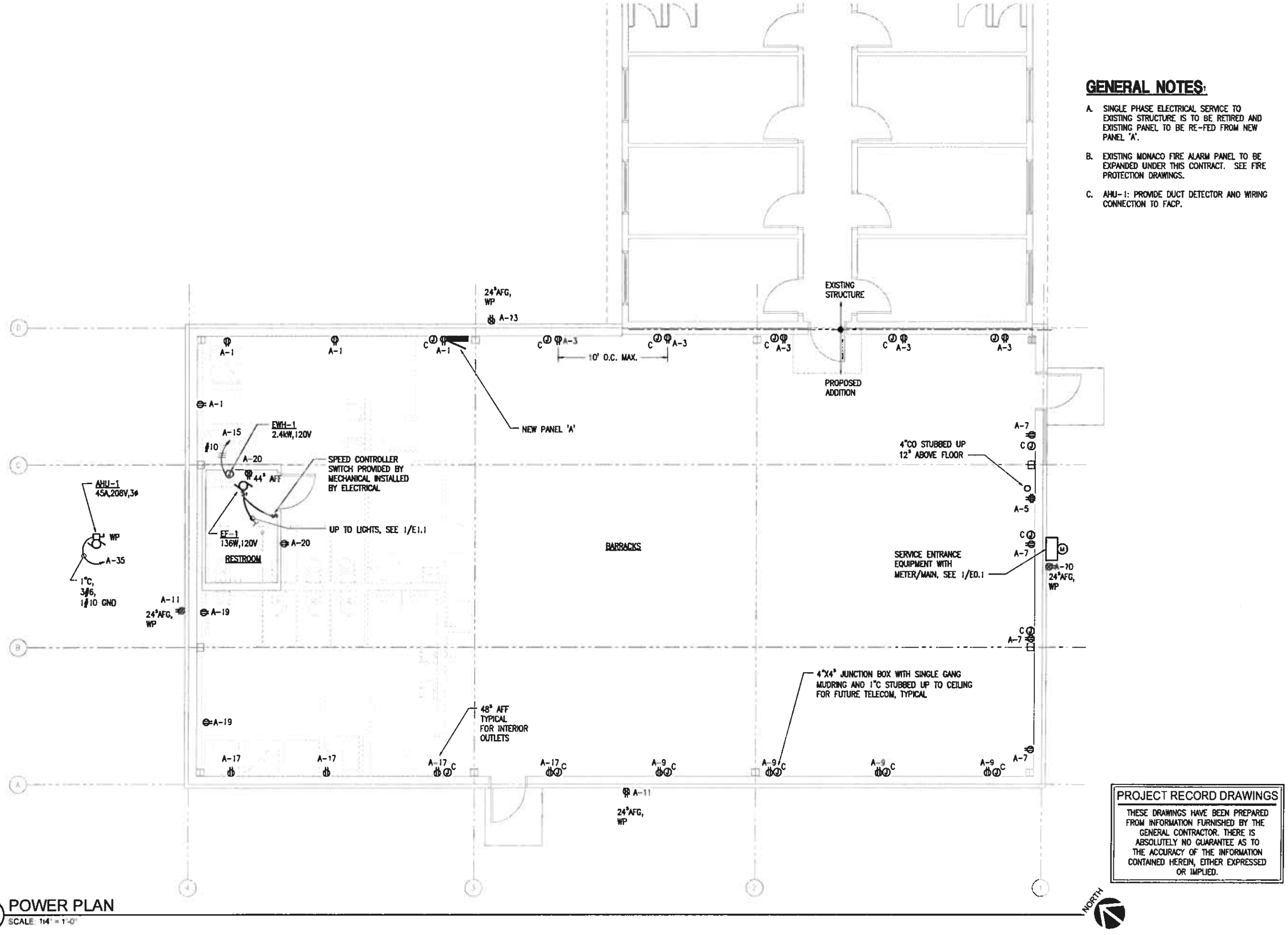
DATE 14 APR 2014

GENERAL NOTES:

A. SINGLE PHASE ELECTRICAL SERVICE TO EXISTING STRUCTURE IS TO BE RETIRED AND EXISTING PANEL TO BE RE-FED FROM NEW PANEL 'A'.

B. EXISTING MONACO FIRE ALARM PANEL TO BE EXPANDED UNDER THIS CONTRACT. SEE FIRE PROTECTION DRAWINGS.

C. AHU-1: PROVIDE DUCT DETECTOR AND WIRING CONNECTION TO FACP.



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

PROJECT RECORD DRAWINGS

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RISA Engineering, Inc.

GENERAL CONTRACTOR H. WATT AND SCOTT

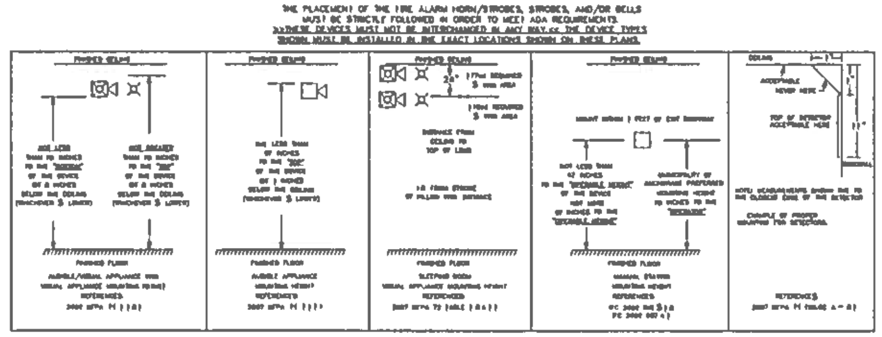
CAMP CARROLL, JBER
BUILDING #57226 ADDITION
POWER PLAN

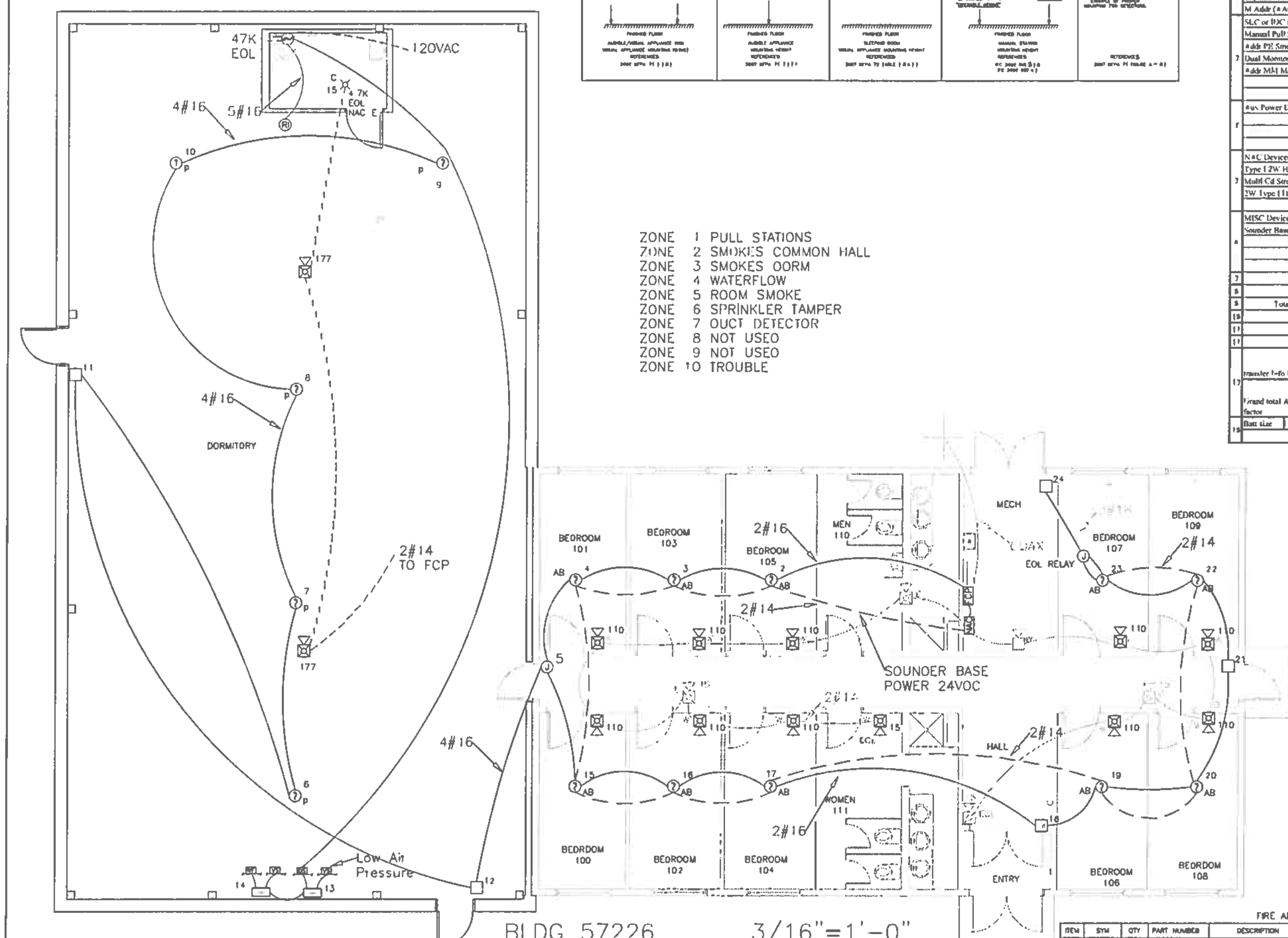
JOB NO. L3238

E2.1

DATE: 14 APR 2014

THE PLACEMENT OF THE FIRE ALARM HORN/STROBES, STROBES, AND/OR BELLS MUST BE STRICTLY FOLLOWED IN ORDER TO MEET ADA REQUIREMENTS. THESE DEVICES MUST NOT BE INTERCHANGED IN ANY WAY OR THE DEVICE TYPES SHOWN MUST BE INSTALLED IN THE EXACT LOCATIONS SHOWN ON THESE PLANS.





BLDG 57226 3/16"=1'-0"

NOTIFICATION APPLIANCE CIRCUIT(NAC) VOLTAGE DROP CALCULATIONS [illegible]

NOTIFICATION APPLIANCE CIRCUIT(NAC) VOLTAGE DROP CALCULATIONS [illegible]

	Monaco Fire Alarm Control Panel Battery Calculation;...Revised 8/2011						
1	Date: April 9, 2011	Bldg		57226	Contract #		
	Base JBER	Bld Name					
	Standby time Hrs 48	Alarm time Min	17		% Xtra Batt	25.0%	
	Columns	A	B	C	D	E	F
	FACP and Connected Devices	Dev Model or P/N	Quan	Standby Current (Amps)	Total Standby Current (BxC)	Alarm Current (Amps)	Total Alarm Current Amps (BxE)
2	Control Panel M-2 Addr					Alarm current will be calculated using the maximum allowable current (100% zones, 100% bells, 100% Aux power) that the selected panel can support.	
	Main Control Panel		1	0.2700	0.2700		
	Addressable Driver Card (ADC)	176-194-00		0.0450	0.0000		
	Expansion cards						
	M Addr (AC)	176-191-00	1	0.0500	0.0500		
3	SLC or IDC type input devices (* req Aux power source)						
	Manual Pull Station	708-000-01	0	0.0000	0.0000		
	Addr PE Smoke Det	723-333-00	13	0.0001	0.0050		
	Dual Monitor Module	729-182-00	2	0.0008	0.0017		
	Addr MM Module	729-147-00	6	0.0006	0.0033		
4	Aux Power Devices (* req Aux power source)						
5	NAC Devices NAC device currents are the hi ratings. Check device literature.						
	Type 12W H/S Red	285-077-01	1			0.2290	1.1450
	Multi Cd Strobe	362-051-00	1			0.1610	0.1010
	2W Type 11KS Wall Red	283-012-00	10			0.2290	2.2900
6	MISC Devices (* req Aux power source)						
	Sounder Base*	129-129-00	10	0.0010	0.0100	0.0000	0.0000
7	Avg Transmit Current per Hour (M Series Only)				0.0700		
8	Sum Column D: Standby Load in Amps (Al)				0.3598		
9	Total Standby time (Standby time Hrs x Standby Load Amps) =(Ah)				17.27		
10	BELL BOOSTER REQUIRED				Alarm Load Amps (A)		3.60
11	Max Alarm Current used for calculation						5.0
12	Total Alarm Time (Alarm Current X (Alarm minutes/60 for Alarm hours)= (Ah)						1.25
13	transfer info from above.		Total Standby Time Ah	Total Alarm Time Ah	B + C Required Ah	Multiply Safety Factor	D x E Total Ah Req
	Grand total Amp Hour requirement including safety factor		17.27	1.25	18.52	1.25	23.14
			B	C	D	E	F
14	Batt size	Recharg Current		4	Recharge time Hrs		#N/a
				C	Recharge Current x 0.78		H

GENERAL NOTES:

1. DO NOT INSTALL DETECTOR/SENSOR WITHIN 3'-0" OF AIR SUPPLY DIFFUSER (2001 NFPA 72 5.7.4.1*) or (2010 NFPA 72 17.7.4.1).
2. RECORD ALL CHANGES TO WIRE AND CONDUIT ROUTING, DEVICE PLACEMENT, WIRING TERMINATIONS, ETC., ON REDLINE DRAWING SET. RETURN THE REDLINE DRAWING SET TO GMW FIRE PROTECTION, INC. FOR CONSTRUCTING AS-BUILTS.
3. NOTIFY GMW FIRE PROTECTION, INC. OF ANY DESIGN QUESTIONS OR CHANGES PRIOR TO INSTALLATION OR FABRICATION.
4. REFERENCE INSTRUCTION MANUAL DURING INSTALLATION OF FIRE CONTROL PANEL.

ELECTRICAL NOTES:

1. WIRING METHODS IDENTIFIED IN THESE NOTES ARE FOR GUIDANCE ONLY. ALL WIRING AND INSTALLATION METHODS MUST COMPLY WITH NFPA 70, NATIONAL ELECTRICAL CODE (NEC), STATE ADOPTED EDITION, NFPA 72, NATIONAL FIRE ALARM CODE, STATE ADOPTED EDITION, THE INTERNATIONAL BUILDING CODE (IBC), 2009 EDITION, AND THE INTERNATIONAL FIRE CODE (IFC), 2009 EDITION.
2. AC POWER SHALL NOT OCCUPY THE SAME RACEWAY AS THE FIRE ALARM CIRCUITS. WHERE AC WIRING IS USED TO CONNECT TO THE FIRE ALARM EQUIPMENT, A MINIMUM CLEARANCE OF 0.25 INCHES MUST BE MAINTAINED BETWEEN THE AC WIRING AND THE FIRE ALARM CIRCUITS UNLESS THE WIRING IS COMPLIANT WITH THE EXCEPTIONS NOTED IN NFPA 70, ARTICLE 760.
3. FIRE ALARM CIRCUIT CONDUCTORS SHALL NOT BE ATTACHED TO THE EXTERIOR OF ANY CONDUIT BY ANY MEANS.
4. ALL CABLE SHALL BE TYPE FPL, FPLR, OR FPLP EXCEPT AS ALLOWED BY SUBSTITUTION PER NFPA 70. TYPE FPL SHALL BE USED FOR GENERAL-PURPOSE FIRE ALARM CABLE WITH THE EXCEPTION OF RISERS, DUCTS, AND PLENUM SPACES. TYPE FPLP SHALL BE USED IN DUCT, PLENUM, OR OTHER AREAS USED FOR ENVIRONMENTAL AIR. TYPE FPLR SHALL BE USED FOR ALL VERTICAL RUNS FROM FLOOR TO FLOOR.
5. FIRE SYSTEM NOTIFICATION APPLIANCE CIRCUITS (NAC) AND INITIATING DEVICE CIRCUITS (IDC) SHALL NOT BE T-TAPPED (PARALLEL BRANCHED) TO INSURE MONITORING OF CIRCUIT INTEGRITY. CLASS B SIGNALING LINE CIRCUITS (SLC) MAY BE T-TAPPED WHERE ALLOWED BY SPECIFICATIONS.
6. MODIFICATIONS TO DEVICE PLACEMENT, WIRING TERMINATIONS MUST BE APPROVED BY GMW FIRE PROTECTION PRIOR TO INSTALLATION OR FABRICATION.
7. ALL FIELD WIRING SHALL BE CHECKED FOR GROUNDS AND SHORTS. ALL GROUNDS AND SHORTS MUST BE CORRECTED. IF THE SYSTEM WIRING IS MEGGAR TESTED, ALL DEVICES MUST MUST BE DISCONNECTED FROM THE WIRE PRIOR TO MEGGAR TESTING, WITH EACH INITIATING(IDC) AND INDICATING(NAC) CIRCUIT INSTALLATION CONDUCTOR PAIR SHORT-CIRCUITED AT THE FAR END, THE RESISTANCE OF EACH CIRCUIT SHALL BE MEASURED AND RECORDED.
8. THE FIRE ALARM PANEL 120 VAC POWER MUST BE A DEDICATED CIRCUIT. THE DEDICATED BRANCH CIRCUIT(S) AND CONNECTIONS SHALL BE MECHANICALLY PROTECTED. CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT." THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.
9. THE FIRE ALARM SYSTEM PANEL GROUND CONNECTION SHALL BE A CONTINUOUS GROUND WIRE CONNECTED TO THE SOURCE GROUND; CONDUIT GROUND IS NOT ACCEPTABLE.
10. RACEWAY OR WIRE ROUTING SHOWN ON THE DRAWINGS IS DIAGRAMMATIC. RACEWAY AND WIRING MAY BE RE-ROUTED AS DICTATED BY FIELD CONDITIONS AND COORDINATION WITH OTHER TRADES.
11. ALL WIRING SHALL BE IDENTIFIED WHERE SPLICED OR LANDED ON TERMINALS. MARKERS SHALL BE HEAT SHRINK WIRE MARKERS OR BY OTHER SUITABLE MEANS.
12. POWER SHALL NOT BE CONNECTED TO THE FIRE CONTROL PANEL UNTIL A REPRESENTATIVE OF GMW FIRE PROTECTION INC. IS PRESENT.
13. TO AVOID CONFLICTING SPACE REQUIREMENTS WITH THE SYSTEM BATTERIES, DO NOT PENETRATE THE BOTTOM OF THE FIRE CONTROL PANEL.
14. JUNCTION BOXES COVERS SHALL BE PAINTED RED
15. POWERING UP OR DOWN FACP OR BOOSTER PANELS
    Powering Up - 1. Apply AC Power
    2. Connect Batteries
    Powering Down - 1. Disconnect Batteries
    2. Disconnect AC Power

SHEET NOTES

1. SYSTEM SHALL BE INSTALLED PER NFPA 72.
2. ALL WIRING SHALL COMPLY WITH NFPA-70 SECTION 760-A, B.
3. PRIMARY AC WIRING TO BE #12 AWG (DASHED).
4. NOTIFICATION APPLIANCE (NAC) WIRE TO BE #16 MINIMUM AWG STRANDED (DASHED).
5. INITIATING CIRCUIT (IDC) WIRE TO BE #18 MINIMUM AWG STRANDED.
6. ADDRESSABLE INITIATING CIRCUIT (SLC) WIRE TO BE 1-UTP#18 MIN.
7. PANELS TO BE MOUNTED AT 72" TO TOP AFF.
8. DASHED DEVICES ARE EXISTING (NO CHANGE)
9. UTP=UNSHIELDED TWISTED PAIR, STP=SHIELDED TWISTED PAIR

2006 INTERNATIONAL FIRE CODE FIRE PROTECTION SYSTEMS

901.10.2 Audible alarms. Audible alarm notification appliances shall be provided and sound a distinctive sound that is not to be used for any purpose other than that of a fire alarm. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every occupied space within the building. The minimum sound pressure levels shall be: 70 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies. The maximum sound pressure level for audible alarm notification appliances shall be 120 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 105 dBA, visible alarm notification appliances shall be provided in accordance with NFPA72 and audible alarm notification appliances shall not be required.

Exception: Visible alarm notification appliances shall be allowed in lieu of audible alarm notification appliances in critical care areas of Group I-2 occupancies.

SCOPE OF WORK

1. ADD HORNS, STROBES OR HORNSTROBE TO MEET CURRENT SOUND LEVEL AND STROBE REQUIREMENTS
2. THE BUILDINGS ARE SPRINKLERED

Drawing Size ANSI D (22x34)

FIRE ALARM MATERIAL LIST 57226

ITEM	SYM	QTY	PART NUMBER	DESCRIPTION	MANUFACTURER	MOUNTING
1	FCP	1	M2	FIRE ALARM PANEL MAAP4	MONACO	REPLACE EXISTING WITH NEW LARGER PANEL
2	NAD	1	FCPS	BOOSTER PANEL	FIRELITE	60" ABOVE FINISHED FLOOR
3	$①_4$	3	723-353-00	SMOKE SENSOR W/BASE	MONACO	4" square 2-1/2" deep, 4" octagon, 1 gang
4	$①_{4S}$	10	723-353-00	SMOKE SENSOR W/SOUNDER BASE	MONACO	4" square 2-1/2" deep, 4" octagon, 1 gang
5	▢	5	270-SPO	MANUAL PULL STATION/MINI MODULE	EDWARD/MONACO	1 gang box 3-1/2" Deep
6	◎	1	-	END OF LINE RELAY/MINI MODULE	EDWARD/MONACO	4" square 2-1/2" deep, 4" octagon, 1 gang
7	⊸⊖	1	-	DUCT MOUNTED SMOKE DETECTOR	-	BY OTHERS
8	●	1	-	REMOTE RESET FOR DUCT SMOKE DETECTOR	-	BY OTHERS
9	✕ C	1	ZR-MC-W	STROBE	SIEMENS	1 gang, 2 gang, 4" square, 4" or 3-1/2"octagon
10	HS	11	ZH-MC-W	HORNSTROBE	SIEMENS	1 gang, 2 gang, 4" square, 3" or 3-1/2"octagon
11	DM	2	729-182-00	DUAL INPUT MODULE	MONACO	1 gang, 2 gang, 4" square, 3" or 3-1/2"octagon
12	WF	1	-	SPRINKLER SYSTEM WATERFLOW	BY OTHERS	-
13	TS	1	-	SPRINKLER SYSTEM SUPERVISORY	BY OTHERS	-
14	PS	1	-	SPRINKLER SYSTEM LOW AIR PRESSURE	BY OTHERS	-
15	DI	1	-	DUCT SMOKE DETECTOR INPUT	BY OTHERS	-

SYMBOL LEGEND

FCP	FIRE CONTROL PANEL
RSA	REMOTE ANNUNCIATOR
BPS	NAC BOOSTER PANEL
24V	POWER SUPPLY
ⓢp	SMOKE DETECTOR, P=PHOTO or I=ION
ⓢ=	DUCT MOUNTED SMOKE DETECTOR
ⓢAC	SMOKE ALARM 120VAC W/BATTERY
ⓢBT	SMOKE DETECTOR BEAM TX
ⓢBR	SMOKE DETECTOR BEAM RX
Ⓡ	REMOTE INDICATOR
ⓗR/F	HEAT DET (R OF R / FIXED)
ⓗR/C	HEAT DET (RATE COMPENSATED)
▢	MANUAL PULL STATION
MM	MONITOR MODULE
DM	DUAL MONITOR MODULE
SMM	SPRINKLER MONITOR MODULE
CR	CONTROL RELAY
AOM	AUDIBLE OUTPUT MODULE
MFC	MULTI-FUNCTION CABINET
PS	PRESSURE SWITCH
WF	FLOW SWITCH
TS	TAMPER SWITCH
	DOOR HOLDER
	HORNSTROBE, CEILING=C, W=WALL
	STROBE, C=CEILING, W=WALL
	HORN, C=CEILING, W=WALL
	BELL
Ⓙ	JUNCTION BOX
EX	DASHED DEVICES - EXISTING
(XXXX)	ADDRESS
	PRE-ACTION SOLENOID
#	DELETION
AB	ABOVE CEILING
EOL	END OF LINE
WP	WEATHERPROOF
STP	SHIELDED TWISTED PAIR

REVISIONS

- ADDED BLDG 60606 10/31/13
- REVISED FLOOR PLANS 2/21/14
- ADD ZONE LABELS TO ONELINE 4/4/14
- CHANGED TO AN ADDRESSABLE FIRE ALARM SYSTEM 4/11/14
- REFORMATTED DRAWING SET 4/18/13
- RELOCATED DOOR IN DOOR 57226 4/23/13
- AS-BUILT 10/21/14

AK Permit #96-005
Jim Luke
Jim Luke

DESIGN CRITERIA: NFPA 72

APPROVALS: ☐ CITY FM ☐ FM ☐ STATE FM ☐ ISO ☐ ARCH ☐ IRI ☐ OTHER ☐ WSRB

PROJECT NAME
-
57226 W912RU-10-0-0006-0010
Camp Carroll
JBER, AK
100% DRAWINGS

6108 MacKay Street
ANCHORAGE, AK. 99518
PHONE (907)336-5000
FAX (907)336-5050

S:\Logos\Company Logos\GMW logoEDITED.jpeg

DRAWING TITLE
5726
FLOOR PLANS

CONTRACT WITH
Megawott

JOB NO	SHEET NO	DATE	SCALE	DRAWN BY	FILE NAME	PLOT DATE	FILE FORMAT
13680	1 OF 3	10/31/13	AS-NOTED	JIM LUKE	-	04/23/14	ACAD 2014

NOTIFYING APPLIANCE CIRCUIT(NAC) VOLTAGE DROP CALCULATIONS

FCP
BLDG 57226

† - VOLTAGE DROP
R - RESISTANCE OF WIRE (LENGTH x OHMS/1000FT)
I - CURRENT DRAW OF CIRCUIT (PER DEVICE x NO. OF DEVICES)
FORMULA IS I x R = V (VOLTAGE DROP)

WIRE GUAGE =	18
OHMS PER 1000 FT. =	3.18
STARTING VOLTAGE =	20.8
VOLTAGE RANGE 16V TO 33V FWR	

		Horn/Strobes					Strobes					Horns						VOLTAGE				
DEVICE TYPE	-	ZH-MC-C	ZH-MC-C	ZH-MC	ZH-MC	ZH-HMC	ZR-MC-C	ZR-MC-C	ZR-MC-C	ZR-MC-C	ZR-HMC	ZH	R-20E	PAD-3			WIRE			EOL	%	NAC
		15cd	30cd	75cd	95	177	15cd	30cd	75cd	95	177cd	Horns	RELAY									
CURRENT DRAW	-	0.078	0.113	0.185	0.259	0.506	0.068	0.111	0.200	0.264	0.445	0.045	0.040	0.007	I =	CKT.	LENGTH	R =	DROP	VOLTAGE	VOLTAGE	Qty
NAC A	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0.007	A	500	1.570	0.011	20.389	0.05%	1
NAC B	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	B	500	1.570	0.000	20.400	0.00%	0
	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000		500	1.570	0.000	20.400	0.00%	0
	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	D	0	0.000	0.000	20.400	0.00%	0
AUS															0.500							
TOTAL	-	0	0	0	0	0	0	0	0	0	0	0	0	1	0.007	N/A	1500	N/A	N/A	N/A	N/A	

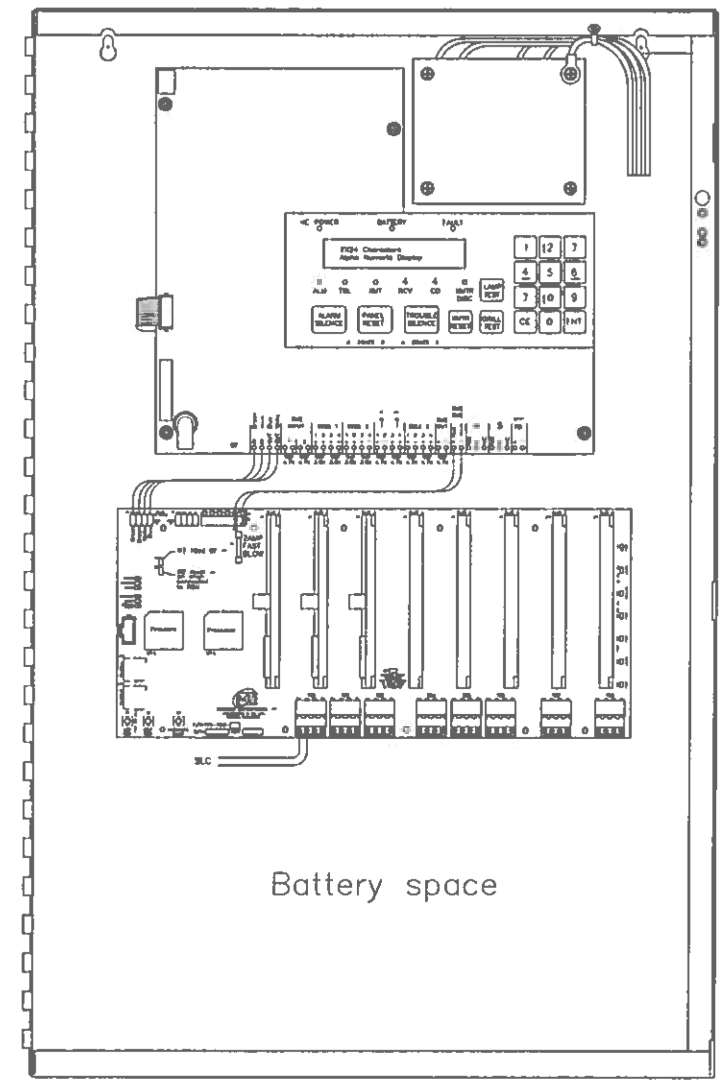
NOTIFYING APPLIANCE CIRCUIT(NAC) VOLTAGE DROP CALCULATIONS

NAC
BLDG 57226

† - VOLTAGE DROP
R - RESISTANCE OF WIRE (LENGTH x OHMS/1000FT)
I - CURRENT DRAW OF CIRCUIT (PER DEVICE x NO. OF DEVICES)
FORMULA IS I x R = † (VOLTAGE DROP)

WIRE GUAGE =	18
OHMS PER 1000 FT. =	3.18
STARTING VOLTAGE =	20.8
VOLTAGE RANGE 16V TO 33V FWR	

		Horn/Strobes					Strobes					Horns						VOLTAGE				
DEVICE TYPE	-	ZH-MC-C	ZH-MC-C	ZH-MC	ZH-MC	ZH-HMC	ZR-MC-C	ZR-MC-C	ZR-MC-C	ZR-MC-C	ZR-HMC	ZH	R-20E	SOUNDER			WIRE			EOL	%	NAC
		15cd	30cd	75cd	95	177	15cd	30cd	75cd	95	177cd	Horns	RELAY	BASE								
CURRENT DRAW	-	0.078	0.113	0.185	0.259	0.506	0.068	0.111	0.200	0.264	0.445	0.045	0.040	0.040	I =	CKT.	LENGTH	R =	DROP	VOLTAGE	VOLTAGE	Qty
NAC C	-	2	0	0	7	0	0	0	0	0	0	0	0	0	1.960	C	500	1.570	3.081	17.309	15.15%	9
NAC D	-	2	0	0	4	0	0	0	0	0	0	1	0	0	1.237	D	500	1.570	1.942	18.458	9.52%	7
NAC E	-	0	0	0	0	2	1	0	0	0	0	0	0	0	1.081	E	500	1.570	1.697	18.703	8.52%	3
NAC F	-	0	0	0	0	0	0	0	0	0	0	0	0	10	0.070	F	0	0.000	0.000	20.400	0.00%	10
AUS															0.500							
TOTAL	-	4	0	0	11	2	1	0	0	0	0	1	0	10	4.357	N/A	1500	N/A	N/A	N/A	N/A	



SYSTEM OUTPUTS

A - ACTUATE COMMON ALARM SIGNAL INDICATOR
B - ACTUATE AUDIBLE ALARM SIGNAL
C - ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR
D - ACTUATE AUDIBLE SUPERVISORY SIGNAL
E - ACTUATE COMMON TROUBLE SIGNAL INDICATOR
F - ACTUATE AUDIBLE COMMON TROUBLE SIGNAL
G - ACTUATE EVACUATION SIGNALS
H - TRANSMIT FIRE ALARM SIGNAL TO SUPERVISORY STATION
I - TRANSMIT SUPERVISORY SIGNAL TO SUPERVISORY STATION
J - TRANSMIT TROUBLE SIGNAL TO SUPERVISORY STATION
K - LOCAL ALARM IN BEDROOM
L - AIR HANDLING UNIT SHUTDOWN

SYSTEM INPUTS

		A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	MANUAL FIRE ALARM PULL STATION	X	X					X	X						
2	ANY SYSTEM SMOKE SENSOR	X	X					X	X						
3	ANY HEAT SENSOR	X	X					X	X						
4	ANY SMOKE ALARM				X					X		X			
5	DUCT MOUNTED SMOKE DETECTOR				X					X			X		
6															
7	SPRINKLER SYSTEM ALARM PRESSURE SWITCH	X	X					X	X						
8	SPRINKLER SYSTEM VALVES CLOSED			X	X					X					
9	SPRINKLER SYSTEM LOW AIR PRESSURE			X	X					X					
10															
11	FIRE ALARM AC POWER FAIL					X	X				X				
12	FIRE ALARM SYSTEM LOW BATTERY					X	X				X				
13	OPEN CIRCUIT					X	X				X				
14	GROUND FAULT					X	X				X				
14	NOTIFCATION APPLIANCE CIRCUIT(NAC) SHORT					X	X				X				

⚠CAUTION: Check that the installed product will have sufficient clearance and wiring room prior to installing backboxes and conduit, especially if sheathed multiconductor cable or 3/4" conduit fittings are used.

⚠CAUTION: DO NOT OVER TIGHTEN MOUNTING SCREWS. EXCESSIVE TORQUE CAN DISTORT THE BASE AND MAY AFFECT OPERATION.

MOUNTING OPTIONS:

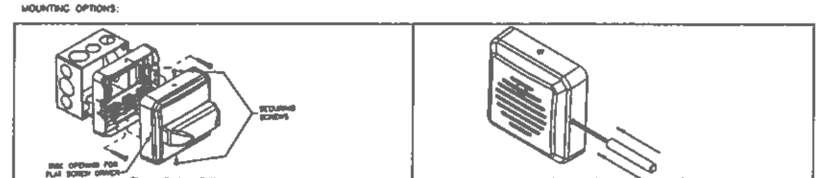


Figure 3: Installation

Figure 4: Removal (See step 8 below)

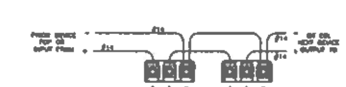
1. Install mounting plate as shown in figure 1 to a single-gang, double-gang, 4" square, 4" octagon, or a 3½" octagon backbox with the provided pan head screws. To remove dust cover, place thumb and index finger on top edges of cover and pull off cover.
2. Connect field wiring per figures 2 and 3.
3. Address wires back into backbox.
4. Place dust cover over mounting plate to protect the terminals while performing wiring continuity check.
5. Remove dust cover before snapping or installing the appliance onto the mounting plate per fig 3.
6. Important: Device only has one mounting orientation. Match the top of the base to the top of the device.
7. If it is desired to further secure the device to the base, then two optional screws are provided. To install these screws punch out the screw holes located at the top and bottom of the device.
8. To remove the appliance, push a small flat-bladed screwdriver into the side opening. The screwdriver must clear the snap release opening by 3/8" to disengage the snap. Do not pry off housing with the screw driver. Apply pressure with screw driver, inserted in either side opening, as shown in Fig 4 to release the housing.

NOTE: NFPA 72/ANSI 117.1 conform to ADAAG Equivalent Facilitation Guidelines in using fewer, higher intensity strobes within the same protected area.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) Reorient or relocate the receiving antenna. 2) Increase the separation between the equipment and receiver. 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, and 4) Consult the dealer or an experienced radio/TV technician for help.

Siemens Building Technologies, Inc.

P84880-001 F
Sheet 4 of 4



HORN, STROBE & HORNSTROBE WIRING

SYMBOL LEGEND

FCP	FIRE CONTROL PANEL
RSA	REMOTE ANNUNCIATOR
BPS	NAC BOOSTER PANEL
24V	POWER SUPPLY
P	SMOKE DETECTOR, P=PHOTO or I=ION
	DUCT MOUNTED SMOKE DETECTOR
AC	SMOKE ALARM 120VAC W/BATTERY
BT	SMOKE DETECTOR BEAM TX
BR	SMOKE DETECTOR BEAM RX
RI	REMOTE INDICATOR
R/F	HEAT DET (R OF R / FIXED)
R/C	HEAT DET (RATE COMPENSATED)
	MANUAL PULL STATION
MM	MONITOR MODULE
DM	DUAL MONITOR MODULE
SMM	SPRINKLER MONITOR MODULE
CR	CONTROL RELAY
AOM	AUDIBLE OUTPUT MODULE
MFC	MULTI-FUNCTION CABINET
PS	PRESSURE SWITCH
WF	FLOW SWITCH
VS	TAMPER SWITCH
	DOOR HOLDER
	HORNSTROBE, CEILING=C, W=WALL
	STROBE, C=CEILING, W=WALL
	HORN, C=CEILING, W=WALL
	BELL
J	JUNCTION BOX
LX	DASHED DEVICES - EXISTING
XXXX	ADDRESS
	PRE-ACTION SOLENOID
$	DELETION
AB	ABOVE CEILING
EOL	END OF LINE
WP	WEATHERPROOF
STP	SHIELDED TWISTED PAIR

REVISIONS

ADDED BLDG 60608 10/31/13
REVISED FLOOR PLANS 2/21/14
ADD ZONE LABELS TO ONELINE 4/4/14
CHANGED TO AN ADDRESSABLE FIRE ALARM SYSTEM 1/11/14
REFORMATED DRAWING SET 5/15/14
RELOCATED DOOR IN DOOR 57226 4/25/14
AS-BUILT 10/21/14

AK Permit #96-005
Jim Luke

Jim Luke

DESIGN CRITERIA: NFPA 72

APPROVALS
☐ CITY FM ☐ FM
☐ STATE FM ☐ ISO
☐ ARCH ☐ IRI
☐ OTHER ☐ WSRB

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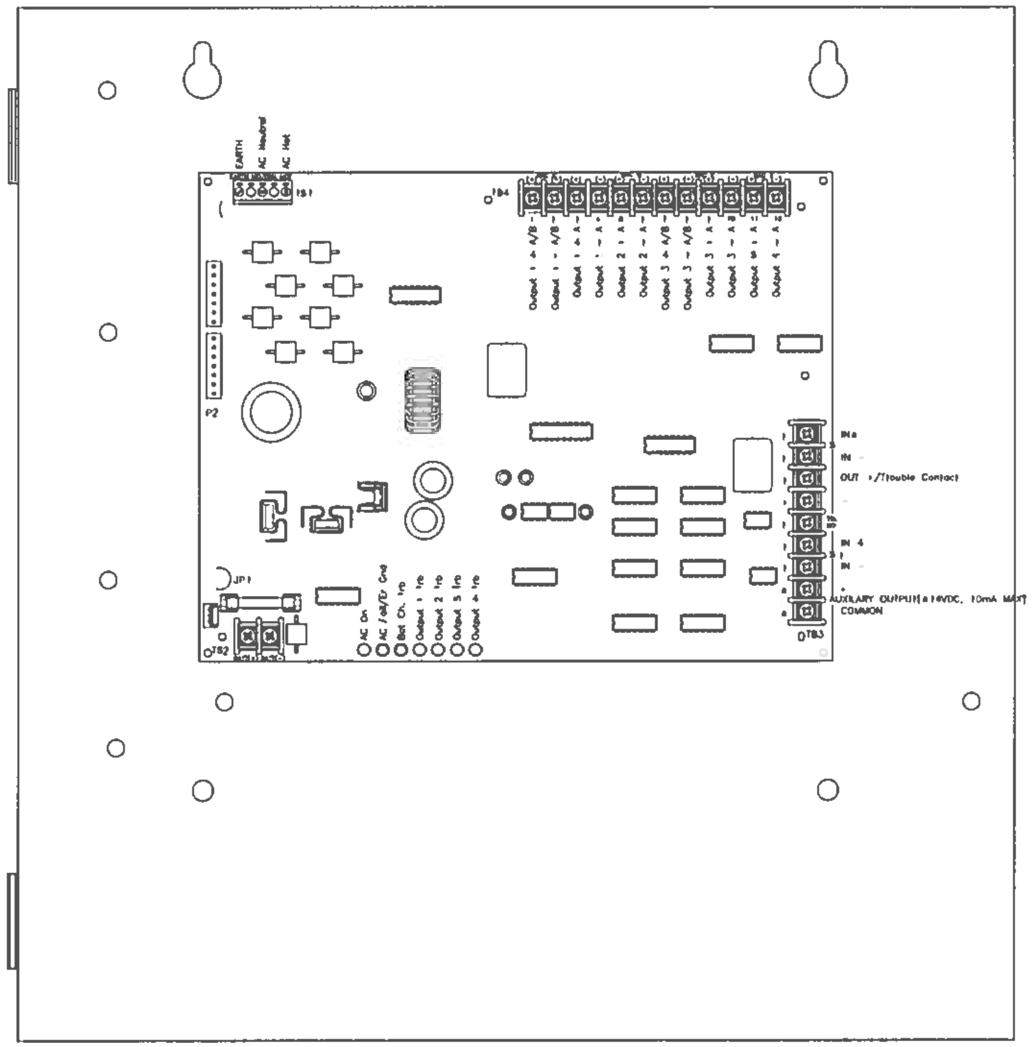
PROJECT NAME
–
57226 W91ZRU-10-D-0006-0010
Camp Carroll
JBER, AK
100% DRAWINGS

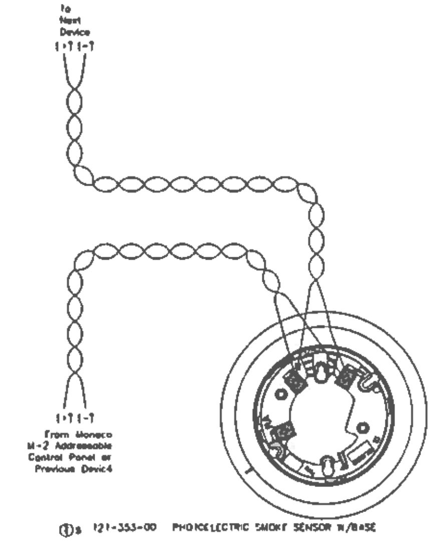
CONTRACT WITH
Megawatt

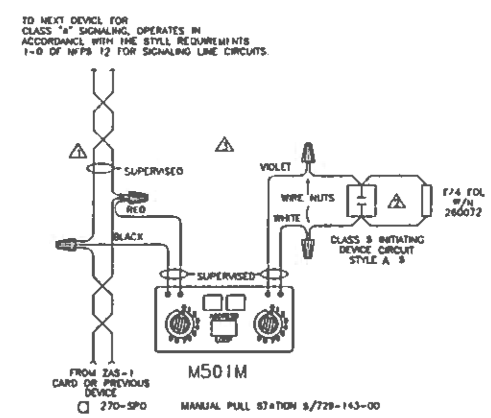
DRAWING TITLE
DETAIL PAGE A

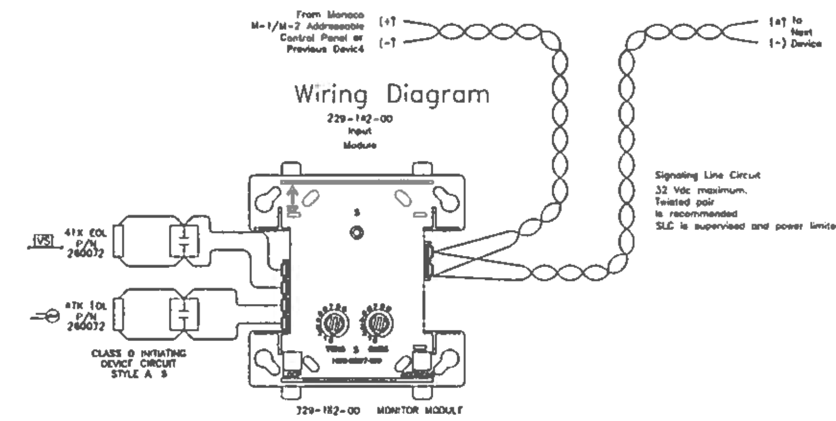
JOB NO	SHEET NO	DATE	SCALE	DRAWN BY	FILE NAME	PLOT DATE	FILE FORMAT
13680	2 OF 3	10/31/13	AS-NOTED	JIM LUKE	–	04/23/14	ACAD 2014

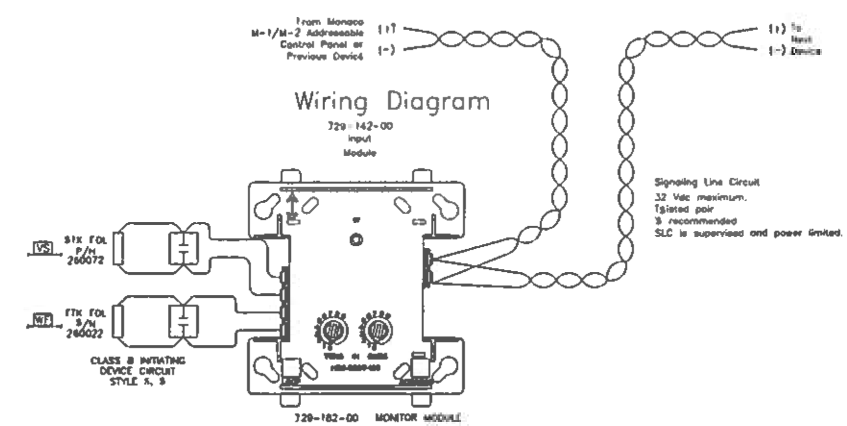


FCPS-24FS Power Supplies





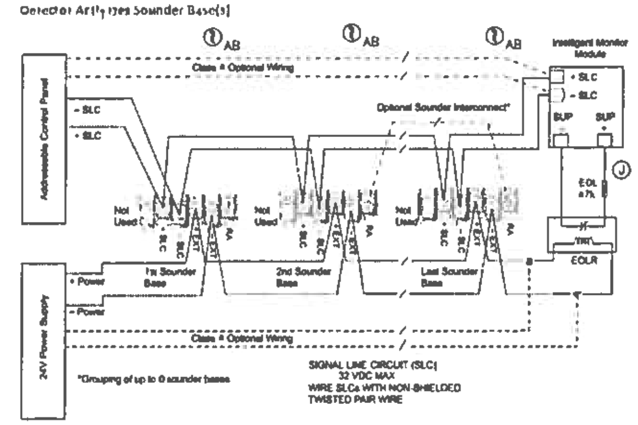


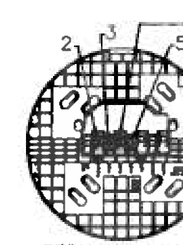


Part Number	Description
729-143-00	Intelligent mini-monitor module
799-013-01	End of line power supervision relay module, Non-polarized, 24 VDC

Wiring Diagrams

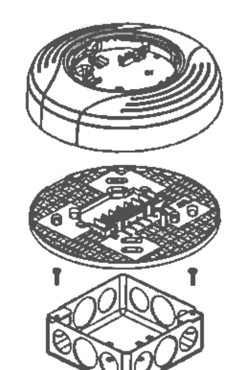
Detector Art/Types Sounder Base(s)



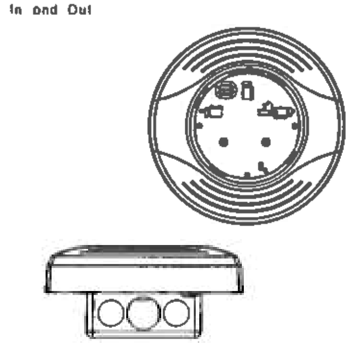


TERMINAL LAYOUT (1)AB

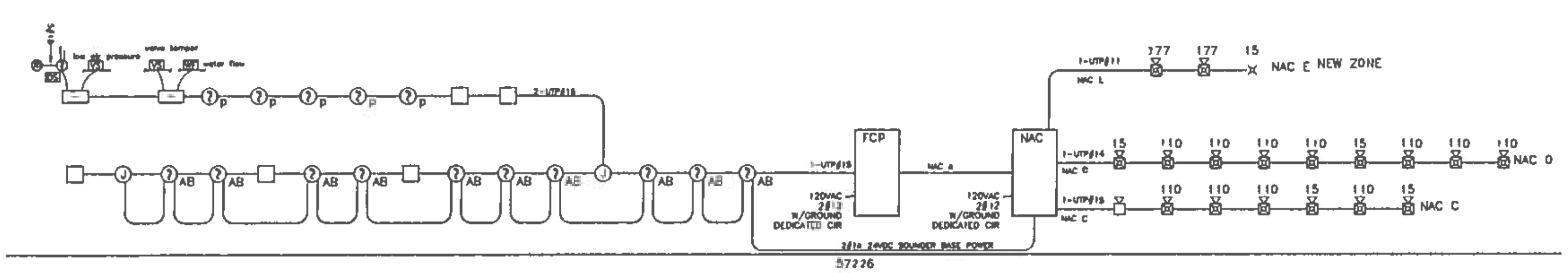
B200S TERMINALS
No. Function
1. Not Used
2. Positive (+) Comm. Line In and Out
3. Negative (-) Comm. Line In and Out
4. External Supply Positive (+) In and Out
5. External Supply Negative (-) In and Out
6. Remote Annunciator



MOUNTING



B200S SOUNDER BASE



SYMBOL LEGEND

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24V	POWER SUPPLY
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R	REMOTE INDICATOR
R/F	HEAT DET (R OF R / FIXED)
R/C	HEAT DET (RATE COMPENSATED)
	MANUAL PULL STATION
MM	MONITOR MODULE
DM	DUAL MONITOR MODULE
SMM	SPRINKLER MONITOR MODULE
CR	CONTROL RELAY
AOM	AUDIBLE OUTPUT MODULE
MFC	MULTI-FUNCTION CABINET
PS	PRESSURE SWITCH
WF	FLOW SWITCH
VS	TAMPER SWITCH
	DOOR HOLDER
	HORN/STROBE, CEILING-C, W-WALL
	STROBE, C-CEILING, W-WALL
	HORN, C-CEILING, W-WALL
	BELL
J	JUNCTION BOX
EX	DASHED DEVICES - EXISTING
	ADDRESS
	PRE-ACTION SOLENOID
X	DELETION
AB	ABOVE CEILING
EOL	END OF LINE
WP	WEATHERPROOF
STP	SHIELDED TWISTED PAIR

REVISIONS

ADDED BLDG 80606 10/31/13
REVISED FLOOR PLANS 2/21/14
ADD ZONE LABELS TO ONELINE 4/4/14
CHANGED TO AN ADDRESSABLE FIRE ALARM SYSTEM 4/11/14
REFORMATTED DRAWING SET 4/15/14
RELOCATED DOOR IN DOOR 07220 4/23/14
AS-BUILT 10/21/14

AK Permit #96-005
Jim Luke

DESIGN CRITERIA: NFPA 72

APPROVALS: ☐ CITY FM ☐ FM ☐ STATE FM ☐ ISO ☐ ARCH ☐ IRI ☐ OTHER ☐ WSRB

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ANCHORAGE, AK. 99518
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PROJECT NAME
–
57226 W91ZRU-10-D-0006-0010
Camp Carroll
JBER, AK
100% DRAWINGS

CONTRACT WITH
Megawatt

DRAWING TITLE
DETAIL PAGE B

JOB NO	SHEET NO	DATE	SCALE	DRAWN BY	FILE NAME	PLOT DATE	FILE FORMAT
13680	3 OF 3	10/31/13	AS-NOTED	JIM LUKE	–	04/23/14	ACAD 2014

SECTION 15300 - FIRE SPRINKLER SYSTEM

PART 1 - GENERAL

1.1 References

A. Provide fire protection in accordance with the minimum provisions of the following codes and standards
1. Latest UFC 3-600-01 Fire Protection Engineering For Facilities
2. NFPA #13 Fire Sprinkler Systems 2010 Edition

1.2 System Description

A. New 7,000 Square Foot One Story Building Addition to Existing 2,160 Square Foot One Story Building.

B. New 6" Underground Supply from existing water utility, see noted flow test information performed by Doyon Utilities prior to RFP

C. Dry Pipe System to protect the entire structure.

1.3 Submittals

A. Product Data

1. Submit product data for items specified in Part 2 and those products required by performance standards of this Section. Identify catalog designation and/or model number and neatly annotate each salient characteristic and design option of the product. Identify operation characteristics, performance curves and rated capacities of products and devices to show compliance with shop drawings and calculations.

2. Product data and shop drawings with calculations shall be jointly submitted for review.

B. Shop Drawings

1. Submit Fire Marshal approved sets of shop drawings and with calculations. Drawings and calculations shall include the NICET certification and State of Alaska Permit IIC number and signature or stamp of a licensed professional engineer and the fire protection Contractor's Alaska specialty license number.

2. As a minimum, shop drawings shall include piping within this project back to the cold water source as indicated in the hydraulic calculations.

3. Shop drawings shall be submitted with information in compliance with NFPA 13 and other performance standards of this Section. Shop drawings shall include but not limited to the following (whether new or existing to be reused):

a. Name of Contracting Agency, Occupant and Building Permit number.
b. Location, including street address and legal description.
c. Point of compass.
d. Fire Department connections.
f. Location of water source, type, routing, depth of bury, and size of supply piping. Identify location and size of city main and whether it is dead-end or circulating loop and distance to the flow data test hydrant.
g. Distribution system piping and outlets. Include pipe and fitting types.
h. Reflected ceiling plan showing ceiling heights, construction type, proposed location and type of sprinkler heads, and other ceiling devices such as HVAC diffusers, loud speakers, type and location of light fixtures, etc.
i. Interference control between sprinkler system and other trades.
j. Full height cross section, indicating basic building construction system, sprinkler piping arrangement, and elevation of highest sprinkler head.
k. Locations of partitions. Identification of full height walls and draft stops.
l. Location and size of unprotected concealed spaces.
m. Identification of unheated areas.
o. Make, model, type, orifice, finish, and temperature rating of sprinklers and their respective locations. Clearly mark out the design remote area.
p. The square footage area protected by each system.
q. Hydraulic node points.
r. Make, model, and size of fire protection control valves, alarm valves, check valves, hose valves and related equipment.
s. Identify low point drain and inspector test stations.
t. Indicate the type and location of piping hangers and equipment supports and seismic bracing.
u. Make, model, size and locations of pipe couplings, fittings, and flanges.
v. Make, model, size, power requirement, and location of alarm bells, buzzers, detectors, and/or alarm panels.
w. Provisions for flushing and backflow device system demand forward flow test and test discharge to safe location.
x. Name, address, and telephone number of the Contractor. If design is by a separate firm, include the name address, telephone number, and fax number of the design facility.
y. Complete legend of abbreviations and symbols indicated.
z. Complete schedule of room occupancies.
aa. Location of structural penetrations.
bb. Note the location of "exposed" piping.
cc. Location of fire rated walls.
dd. Total number of sprinklers on each dry-pipe system.

C. Design Data

1. Submit complete hydraulic calculations @ 65% Submittal which were used to prepare the design drawings.

2. Product data and shop drawings with calculations shall be jointly submitted for review @95% review.

3. Water flow information used for hydraulic calculations.

a. Waterflow performed by Doyon Utilities and Chinook Fire Protection (1-30-13). Results were as follows:
Static Pressure - 55 PSI
Residual Pressure - 47 PSI
GPM Flowing - 679
Hydrant # F6-9

b. Hydraulic calculations shall be accomplished in compliance with the procedures established in NFPA 13. In addition to minimum NFPA 13 standard, a minimum 10 percent pressure and flow buffers are required to be designed into the system.

D. Operation and Maintenance Manual

1. Include manufacturers' descriptive literature, operating instructions, installation instructions, maintenance and repair data, parts listings, and spare parts list.

E. Maintenance Information and Framed Building Plan

1. Coordinate with Section 16721 Addressable Fire Alarm System and provide information for a complete building floor plan showing system control valves, drain stations, alarm and control panels, test valves, and other primary fire protection devices. Indicate sprinkler zones, boundaries, and types of systems. Submit this plan prior to substantial completion for review by the Contracting Agency.

2. Provide three copies of the latest edition of NFPA 25

3. Include step-by-step procedures for required operations weekly/monthly/annual service and testing. Provide a complete report of field test operations and results prior to substantial completion.

F. Record Drawings

1. Maintain current and up-to-date As-built prints of the fire protection system at the job site.

2. Approved full size As-built drawings and electronic copy shall be submitted with O&M manuals.

"11X17 DRAWINGS ARE HALF THE INDICATED SCALE"

PART 2 - PRODUCTS

2.1 General

A. Provide only products that are a standard product of a manufacturer regularly engaged in the manufacture of fire protection equipment.

B. Glycol systems for fire protection shall not be used.

2.2 Labels and Approvals for products

A. Products UL or FM listed, labeled and specifically approved for the fire protection application where they are used.

2.3 Manufacturers

A. Sprinkler System Components:
1. Reliable.
2. Grinnell- Gem.
3. Viking
4. Kennedy.
5. Milwaukee.
6. Potter- Roemer
7. Croker.
8. Victaulic
9. Potter Electric.
10. Tolco.

2.4 Pipe and Fittings

A. Wet Pipe Sprinkler Systems
1. Any steel piping system currently recognized by NFPA 13 might be used, if listed for the intended service by UL or FM.

2. Whenever piping other than steel schedule 40 is utilized, submit a statement that the piping complies with NFPA 13 standards and that the piping strength is adequate for the application. Piping corrosion resistance ratio (CCR) shall be equal or greater than 1.0, equivalent to schedule 40 pipe. Include this CCR data in product submittal.

2.5 Fittings

A. Grooved Fittings, Couplings, and Mechanical Tees

1. Grooved Fittings: Victaulic, Gruvolk, Sprink, cast iron, ductile iron or equal.

2. Slip-Fit fittings and couplings utilized for joining branch piping to new main piping shall be "Victaulic" or "Gruvolk" brand as required.

B. Threaded Pipe Fittings: Cast iron 125 pound ANSI B16.4 or ductile iron 300 pound ANSI B16.3

C. Pipe Flanges: Cast iron Class 125 pound ANSI B16.5

D. Welded Pipe Fittings: Limited to Weld-o-lets, Thread-o-lets, Gruv-o-lets and welded flanges

2.6 Valves and Alarm Assemblies

A. Valves: UL or FM listed and labeled and specifically approved for the fire protection application where they are used

1. Control Valves: Fire protection system control valves shall be supervised with switches compatible with the fire alarm system or other methods in full compliance with NFPA 13.

a. OS&Y Gate Valves: Minimum working pressure 175 psi non-shock cold water. UL listed for fire protection

b. provide supervision of each fire protection control valve, compatible with fire alarm system. Potter Electric Signal Co. Model OSYS-B or approved equal.

c. Butterfly Valves: UL listed for fire protection 175-PSI non-shock cold water, with integrated supervisory switch. Grooved, threaded, or wafer type acceptable.

2. Backflow Device: Backflow assemblies and devices shall have successfully passed the laboratory and field evaluation tests conducted by the University of Southern California Foundation for Cross-Connection Control and provided in accordance with the Uniform Plumbing Code requirements.

B. Provide sprinkler alarm valve assemblies, appropriate to the system, complete with trimmings and accessories for proper alarm initiation and interface with fire alarm system. Include inlet and discharge pressure gauges, main drain, and inspectors test connection.

C. Dry Pipe Automatic Sprinkler Systems:
1. Riser Dry Pipe Valve Assemblies:
a. Provide sprinkler Dry Pipe valve assembly, appropriate to the system, complete with trimmings and accessories for proper alarm initiation and interface with fire alarm system.

b. Include inlet and outlet pressure gauges, and main drain with safe discharge to the outside.

2. Water Flow Detectors:
a. Provide pressure type water flow detectors installed at each system or zone control and for the main system header for multiple zone systems.

b. Potter electric Model PS10A and PS40A or equal.

D. Provide electrical alarm and control wiring in accordance with Division 16.

2.8 Sprinkler Heads

A. Fire sprinkler heads to be symmetrically laid out in each separate room or space

B. Provide sprinklers as required by NFPA 13 standards. Sprinkler finish and style as follows (note: Sprinklers shall be quick response type):

1. In areas with surface mounted light fixtures attached to finished suspended ceilings, provide standard spray pendant sprinklers, and escutcheons to position the sprinkler deflector below the light fixture. Sprinklers and escutcheons to be chrome finish.

2. In areas with recessed lighting flush to the suspended ceiling finish, provide recessed standard spray pendant sprinklers. Sprinklers and escutcheons to be chrome finish.

3. Sprinklers above ceilings and exposed ceiling areas shall be bronze finish, standard spray, upright or pendant type.

4. Sidewall sprinklers shall be bronze finish in service areas, and chrome through out public areas.

5. Dry pendant sprinklers protecting entry vestibules and other areas susceptible to freezing temperatures shall be chrome finish.

6. Sprinklers of correct temperature rating shall be installed according to NFPA 13.

7. Provide sprinkler wrench for each type of sprinkler.

8. Spare sprinkler cabinet to be red sheet steel manufactured by the sprinkler manufacturer. Size the cabinet in accordance with NFPA 13 standards. Provide sprinklers for the cabinet, representative of the assortment provided for the system. Mount cabinet on the wall within 60 inches of the sprinkler control riser.

9. Provide additional sprinklers as required by NFPA 13.

2.9 Pipe and Equipment Anchors, Bracing, Hangers and Supports

A. Provide seismic anchoring, bracing, supports, and clearance for equipment, piping and sprinkler heads per NFPA 13 and UFC 3-600-01. Most conservative criteria shall govern.

2.10 Inspectors Test Connections

A. Provide inspectors test connection for complete system testing

2.11 Dry System Air Compressor

A. Provide tank mounted air compressor sized per dry pipe system capacity. GAST Model or approved equal.

B. Electrical connection is described in Division 16 work.

PART 3 - EXECUTION

3.1 Contractor Coordination

A. The fire protection contractor shall coordinate his work with the work of other trades to assure timely installation and efficient use of mechanical areas.

3.2 Piping Installation

A. Install in accordance with codes and recommended practices for this type of work. Follow manufacturers' installation instructions.

B. Install piping to conserve building space and route piping around roof hatches, access panels and maintenance accesses.

C. Install low point drain stations in accordance with NFPA 13. Identify the location of drain and test stations with signs on access panels, ceiling panels, or walls adjacent to the station, visible from the floor. Discharge test pipes, backflow systems demand flow tests and system main drain to safe location outside.

D. Seismic protection for piping system shall be in accordance with NFPA 13 standards. Provide clearance at structural penetrations, structural elements, and equipment.

E. Piping shall be concealed in areas with finished ceilings when possible. Coordinate with the other trades to take timely advantage of available space above ceilings.

F. Provide penetrations where pipes pass through walls, floors, or ceilings. Penetrations shall be in accordance with UL Fire Resistance Directory for "Through Penetration Firestop Systems (XHEZ)"

3.3 Flushing and Testing

A. Flush underground service piping and distribution piping before connecting underground piping to sprinkler system.

B. Arrange for proper witnessing of tests, as required by Authority Having Jurisdiction and as specified elsewhere.

C. Conduct tests in accordance with applicable codes. Test piping at minimum 200 psig hydrostatic for two hours.

FIRE SPRINKLER LEGEND
Pipe
Fire Department Connection
Grooved Coupling
Grooved Cross
Grooved Elbow
Grooved Tee
Threaded Cross
Threaded Elbow
Threaded Tee
Flange
Flex Drop
Mechanical Tee
Angle Valve
Globe Valve
OS&Y Valve
Ball Valve
Backflow (Butterfly)
Backflow (OS&Y)
Check Valve
Butterfly Valve
Riser Manifold
Dry Valve
Pressure Reducing Valve
Electric Bell
Waterflow Detector
Gauge
Hanger
Hose Valve
Hose Rack
Hydrant
Pump
Sprinkler (Upright)
Sprinkler (Pendant)
Sprinkler (Sidewall)
Dry Barrel Sprinkler
Supply
Sway Brace
4-Way Sway Brace
Remote Area
Hydraulic Node

AS-BUILT 9-17-14

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CAMP CARROLL, JBER

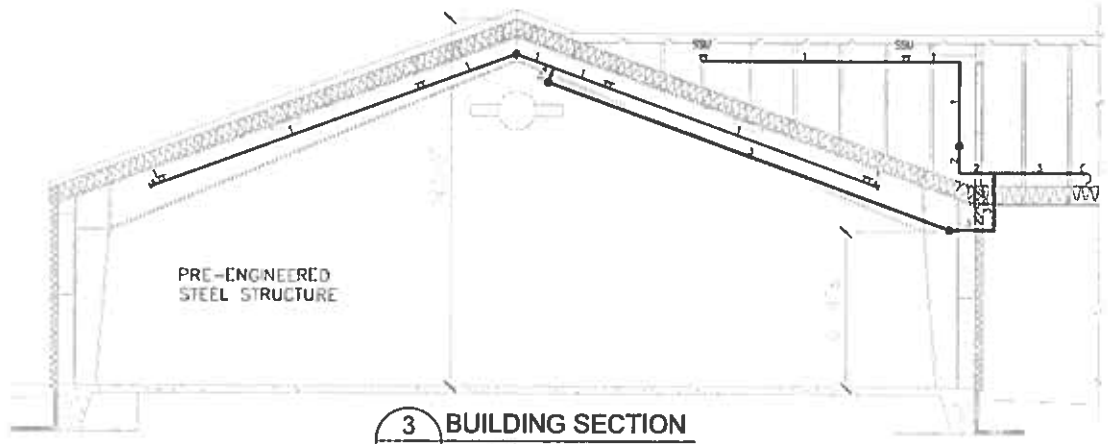
BUILDING #57226
ADDITION

FIRE SPRINKLER SPECIFICATIONS

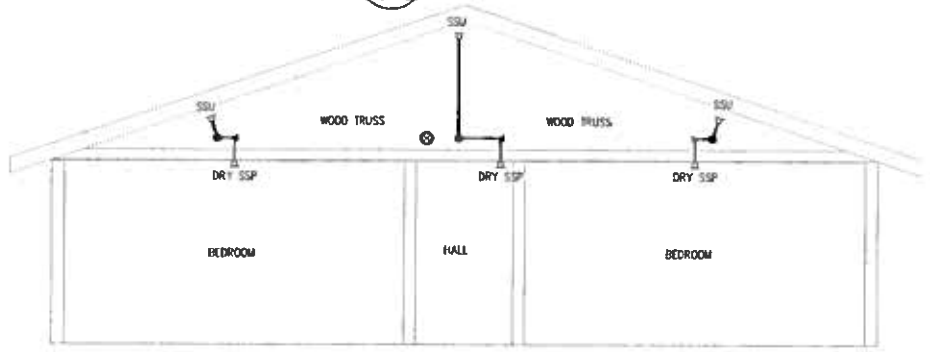
JOB NO. 13015

FP-1

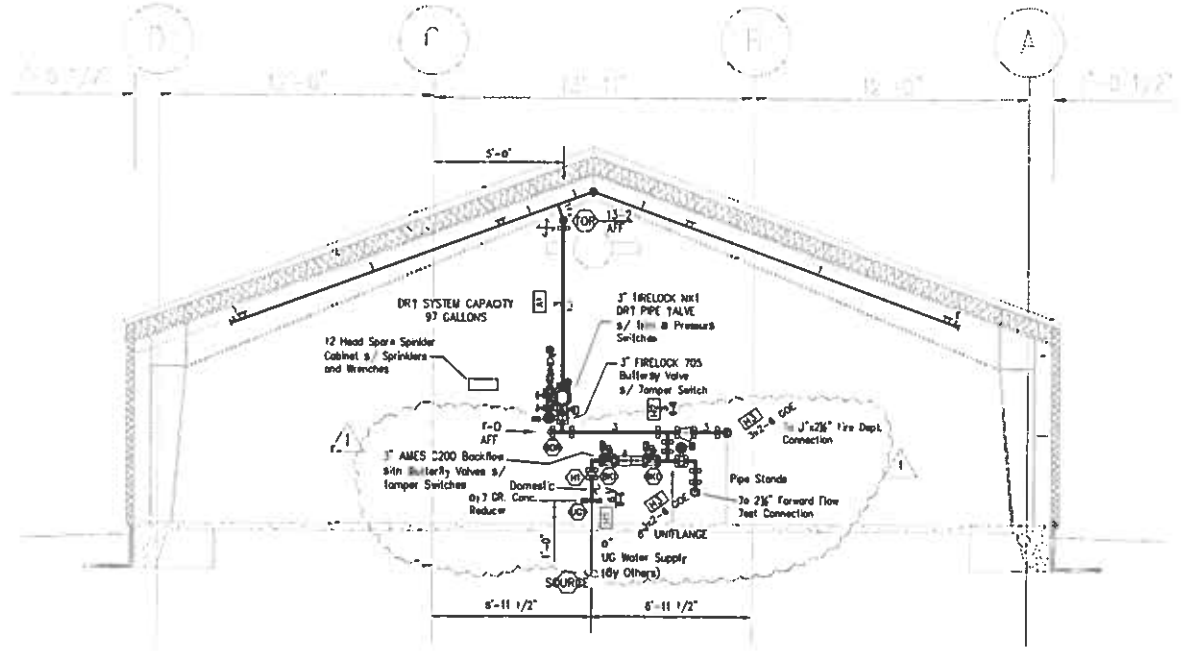
DATE 14 APRIL 2014



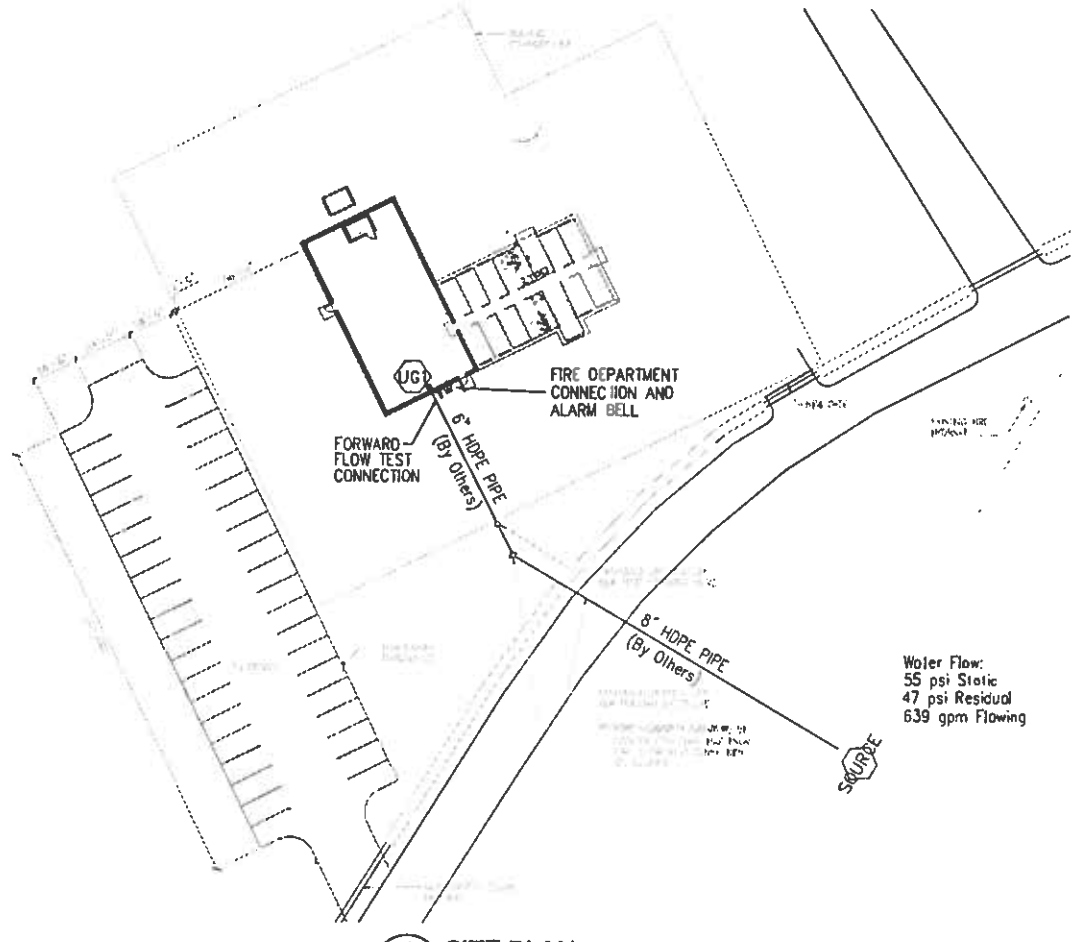
3 FP-2 **BUILDING SECTION**
1/4" = 1'-0"



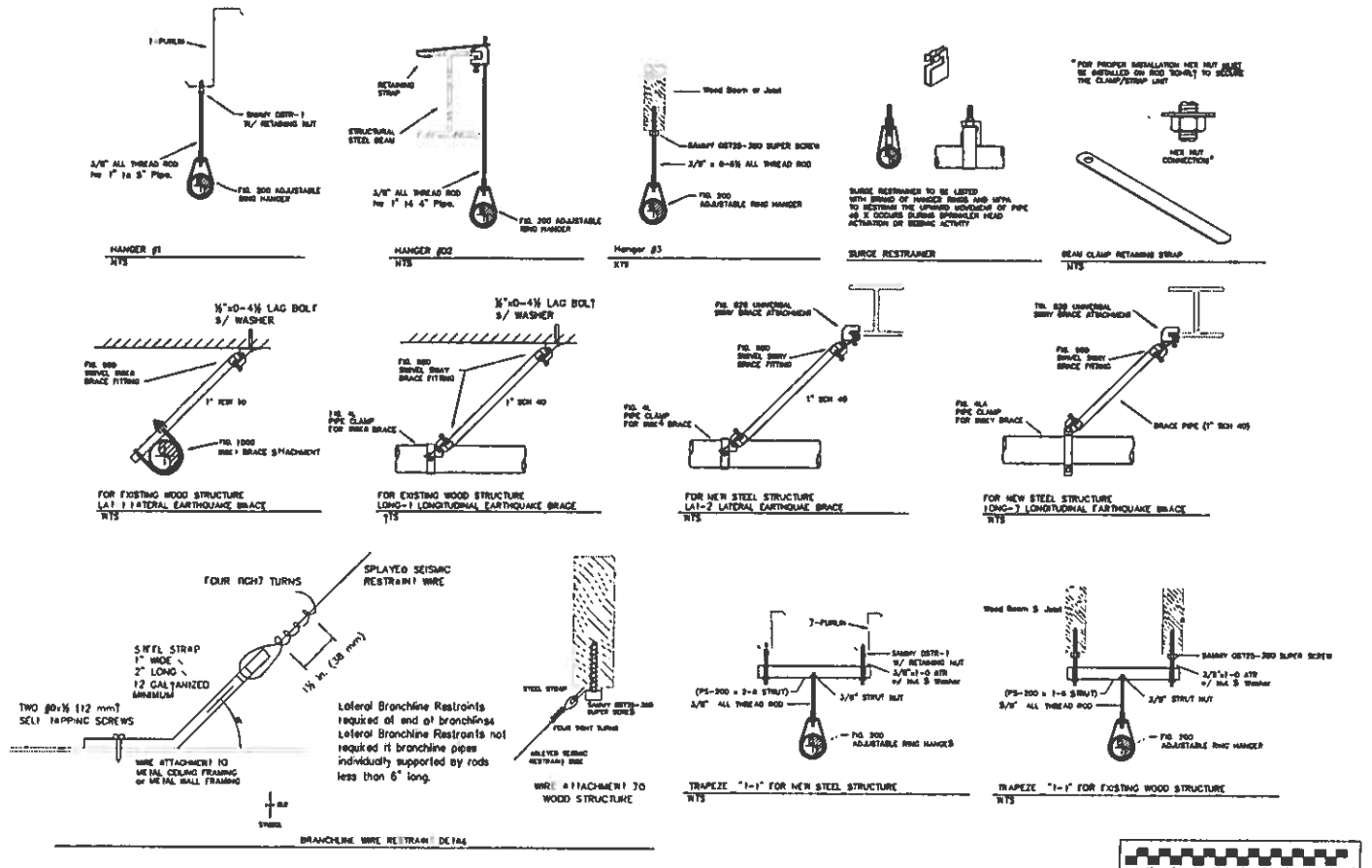
2 FP-2 **BUILDING SECTION**
1/4" = 1'-0"



4 FP-2 **RISER DIAGRAM**
1/4" = 1'-0"



1 FP-2 **SITE PLAN**
NTS



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

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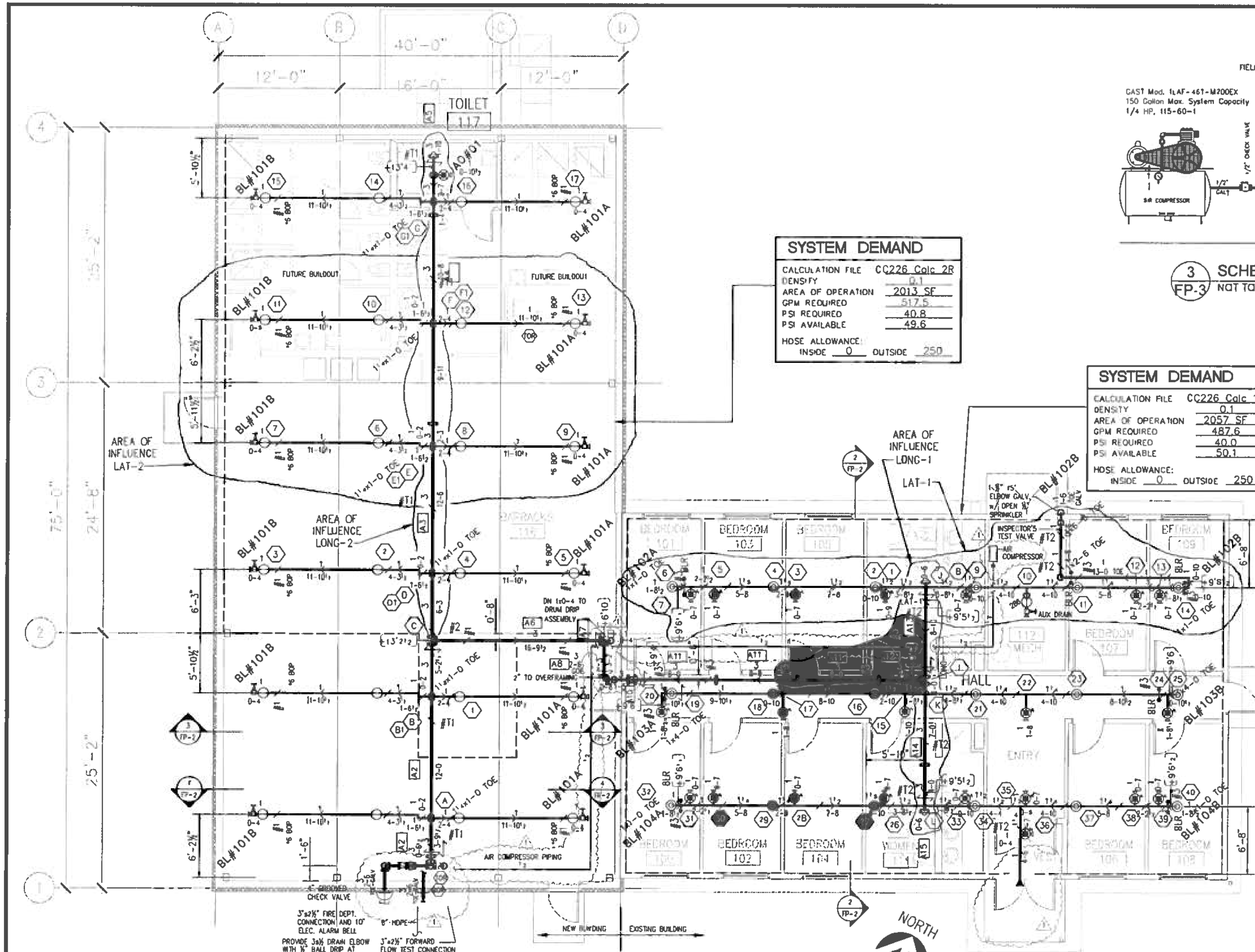
CAMP CARROLL, JBER
BUILDING #57226
ADDITION

SPRINKLER SITE PLAN,
BUILDING SECTION
AND DETAILS

JOB NO. 13015

FP-2

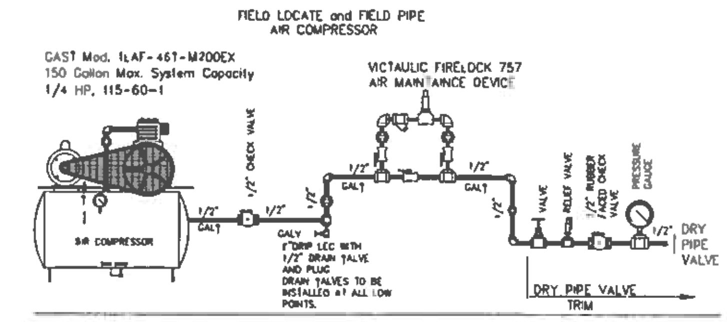
DATE: 14 APRIL 2014



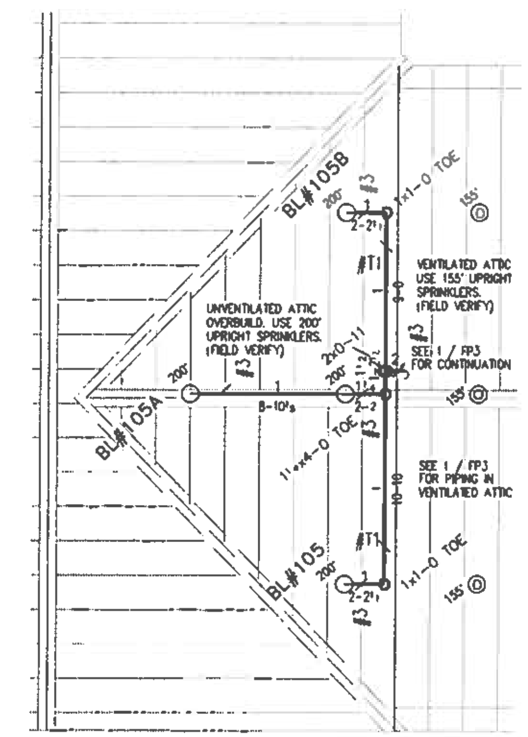
1 / FP-3 SPRINKLER PIPING PLAN 3/16" = 1'-0"

SYSTEM DEMAND	
CALCULATION FILE	CC226 Calc 2R
DENSITY	0.1
AREA OF OPERATION	2013 SF
GPM REQUIRED	517.5
PSI REQUIRED	40.8
PSI AVAILABLE	49.6
HOSE ALLOWANCE: INSIDE	0
OUTSIDE	250

SYSTEM DEMAND	
CALCULATION FILE	CC226 Calc 1R
DENSITY	0.1
AREA OF OPERATION	2057 SF
GPM REQUIRED	487.6
PSI REQUIRED	40.0
PSI AVAILABLE	50.1
HOSE ALLOWANCE: INSIDE	0
OUTSIDE	250



3 / FP-3 SCHEMATIC OF AIR COMPRESSOR
NOT TO SCALE



2 / FP-3 ROOF OVERBUILD SPRINKLER PIPING PLAN 3/16" = 1'-0"

ALL pipe to be Sch. 10 and 40 Black Steel Pipe. Use Gruvlok Grooved Fittings and Couplings, with Standard Orange Finish. Use AnvilStar CI or MI Threaded Pipe Fittings.

"11X17 DRAWINGS ARE HALF THE INDICATED SCALE"

HEAD COUNT

SPRINKLER TYPE	FINISH	ORIFICE	DEGREE	SYMBOL	QTY
TYCO TY-FRB Upright, QR, TY2131	Brass	1/2" (K = 4.2)	155, 200, 286		40, 6, 1
TYCO DS-1 DRY Pendent, QR, TY3235	Chrome 401	1/2" (K = 5.6)	155		23
TYCO TY-FRB HSW, QR, TY3331	Chrome	1/2" (K = 5.6)	155		1
					Total This Job = 71

DESIGN CRITERIA:
UFC 3-600-1 Change 3, 1 March 2015
Section 1-2.3.1 References NFPA #15 and FM Loss Prevention Data Sheet 2-26
Per FM Loss Prevention Data Sheet 3-26, Hazard Classification - HC-1, with a Design Density of 0.1 gpm/sq.ft. over 1500 sq.ft. for a Dry Pipe System.

OCCUPANCY CLASSIFICATION	SPRINKLER SYSTEM DESIGN DENSITY L/min/m² (GPM/ft²)	DESIGN AREA m² (ft²)	HOSE STREAM ALLOWANCE L/Min (GPM)	DURATION OF SUPPLY Minutes
Light Hazard	4.1 (0.10)	140 (1500)	950 (250)	60

UFC 3-600-01, Section 1-2.5.3, Sprinkler Design Area Adjustments for Slope.

REMOTE AREA = 1500 sq.ft. * 1.3 for Slope = 1950 sq.ft. Minimum

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

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CAMP CARROLL, JBER

BUILDING #57226 ADDITION

FIRE SPRINKLER LAYOUT

JOB NO. 13015

FP-3

DATE 14 APRIL 2014