



SOLICITATION FOR QUALIFICATIONS

Architectural and Engineering Design Services:

PIMA COUNTY FLEET SERVICES NEW FLEET SERVICES FACILITIES

FOR

PIMA COUNTY FACILITIES MANAGEMENT

TUCSON, ARIZONA

DECEMBER, 2010

**Pima County Procurement Department
Design & Construction Division**

130 W. Congress Street, 3rd Floor, Mail Stop DT-AB3-126, Tucson, Arizona 85701
(520) 740-3731 / Fax (520) 243-4434

Solicitation No. 1101303



**PIMA COUNTY PROCUREMENT DEPARTMENT
NOTICE OF SOLICITATION FOR QUALIFICATIONS #1101303**

**ARCHITECTURAL AND ENGINEERING DESIGN SERVICES:
PIMA COUNTY FLEET SERVICES NEW FLEET SERVICES FACILITIES**

Pima County is seeking Statements of Qualifications (SOQ) from qualified firms to provide Architectural and Engineering Design Services to design, produce construction documents and perform Construction Administration for a new operationally and energy efficient campus for the Fleet Services Department which will include administrative offices, operations crew support spaces, maintenance and shops, welding shop area, service bays, parts and equipment warehouse storage, delivery area, parking and vehicle storage yards, and site work for a new fueling station (by PCFM). A prime objective of the Project will be to consolidate the heavy equipment shop with the main facility and replace the aging fuel station located at Mission Road. Design and construction of the new fuel station will be completed by Pima County Facilities Management. However, the site design shall incorporate the infrastructure and grading to accomplish the fuel station work. This new project will be constructed in phases, and will replace outdated 40 year old facilities.

The County intends to award one contract for Architectural and Engineering services to the highest-ranking firm. Services shall include Pre-Design Services (Due Diligence), Schematic Design, Design Development, Construction Documentation in three steps (50% Review and 90% Review, and Permit/Procurement documents), Permit and Bidding, Commissioning, and Construction Administration Services through project close-out.

The construction budget for this project shall not exceed \$7,170,000.00, exclusive of Fixtures, Furnishing and Equipment (FFE's).

The services required by this solicitation for qualifications (SFQ) shall be performed under the full authority and responsible charge of a principal of the firm who holds a current Arizona Certificate of Registration issued by the Arizona Board of Technical Registration for the practice of Architecture in the State of Arizona.

Information regarding the submittal requirements of this solicitation may be obtained at the Design and Construction Division of the Procurement Department located at 130 W. Congress Street, 3rd Floor, Tucson, AZ, 85701. Contact Ms. Sue Aegerter regarding documents at (520) 740-3727, FAX: (520) 243-4434; Email: Sue.Aegerter@pima.gov. The entire information package can be downloaded from the Pima County Procurement Design and Construction website: <http://www.pima.gov/procure/ifbrfp-dc.htm>

PRE-SUBMITTAL CONFERENCE: A pre-submittal conference will be held Thursday, January 6, 2011 at 10:00 A.M. (Tucson Local Time) at the Pima County Department of Transportation, Safety Conference Room, located at 1313 S. Mission Rd., Tucson, AZ 85713. Attendance is optional, but encouraged.

SUBMITTAL DUE DATE, TIME AND LOCATION: The County will receive SOQs at or before 4:00 P.M. (Tucson Local Time), Thursday, January 20, 2011 at Pima County Procurement Department, Design & Construction Division, 130 W. Congress Street, 3rd Floor, Mail Stop DT-AB3-126, Tucson, Arizona 85701

Certified Small Business Enterprise (SBE) firms are encouraged to participate.

Publish – Daily Territorial December 17, 20, 21, 22 and 23, 2010

/s/ Melissa Hala'ufia

Melissa Hala'ufia, Commodity/Contracts Officer



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SECTION 1 – GENERAL INFORMATION & REQUIREMENTS

- 1.1 **GENERAL INFORMATION:** Pima County is soliciting statements of qualifications (“Qualifications”) for selection of a qualified firm to provide Architectural and Engineering Design Services for the **PIMA COUNTY FLEET SERVICES NEW FLEET SERVICES FACILITIES**, in accordance with the terms, conditions, and requirements set forth in this Solicitation for Qualifications.

This Solicitation for Qualifications (“SFQ”) is required for selecting an Architectural firm for the Project as provided by A.R.S. §34-603. The SFQ provides the information necessary to prepare and submit qualifications for consideration and ranking by the selection committee.

The Pima County MWBE Program has undergone substantial revisions in response to an updated disparity study accepted by the Board of Supervisors on October 7, 2008. The major change is the creation of a race and gender neutral Small Business Enterprise Program to encourage contracting with all small businesses.

Statements of Qualifications are to include Offeror’s completed *Attachment 1 – Project Team Member Utilization Form*. Evaluation points for the prime Firm’s utilization of certified Small Business Enterprise (SBE) subconsultants shall be per County policy. The City of Tucson’s SBE Business Directory is available at <http://www.tucsonaz.gov/eoo/sbedir.pdf> and contains the current listing of certified SBE firms that may potentially be used on this project. How the prime Firm utilizes SBE firms from these lists and in what areas is completely at the prime Firm’s discretion. Any questions regarding the SBE Program or the Project Team Member Utilization form may be directed to the Pima County SBE Program Coordinator at (520) 740-8465.

- 1.2 **CONFIDENTIALITY AND DISCLOSURE:** Responses to this solicitation shall be considered privileged communications as to technical, financial, and institutional Content until award of the contract. Until that time, pursuant to A.R.S. §34-603(H), only the names of the firms on the short list may be disclosed. In accordance with that section, limited material may be disclosed after award of the contract; after contract execution, all material is publicly available. **Any material that you consider to be trade secret or proprietary must be clearly identified and marked. Under 34 A.R.S. §34-603(H), the COUNTY must agree with your claim of confidentiality before any material may be withheld from disclosure. The County has initiated a new policy on confidential information that is reflected in the Public Information article of the attached sample contract. Respondents should familiarize themselves with that provision.**
- 1.3 **PRE-SUBMITTAL CONFERENCE:** A pre-submittal conference will be held at the date, time and location described in the Notice of Solicitation for Qualifications. The purpose of this conference will be to clarify the contents of this SFQ in order to prevent any misunderstandings. Questions regarding this SFQ may be asked of the County at this conference.
- 1.4 **NOTICE OF INTENT TO SUBMIT:** Firms that intend to submit proposals should notify the County as soon as possible of their intent by email to: **Melissa Hala’ufia, melissa.halaufia@pima.gov**
- 1.5 **PROFESSIONAL SERVICES CONTRACT:** Any contract resulting from this solicitation will be in the form of the County’s Standard Professional Services Agreement that the successful firm will enter into with County for the design phase, a copy of which is attached to this SFQ. By submission of a proposal, each Firm will be certifying to County that the contract is acceptable as written, unless exceptions are taken and specific alternate language proposed. County may consider proposed changes and negotiate terms or conditions if deemed in the interest of the County. However, County reserves the right to reject any proposal that takes exceptions or proposes alternate language unacceptable to County.



DECEMBER, 2010

- 1.6 **QUESTIONS:** Questions outside of the Pre-Submittal Conference shall be written and must be submitted by fax or Email to the Point-of-Contact listed in the Point of Contact section 1.9 below. While the County will make every effort to respond to all questions, those received later than five (5) calendar days in advance of the submittal due date may not be answered. Direct inquiries to either Pima County Fleet Services or Facilities Management concerning this solicitation or project may be grounds for rejection of a firm's SOQ.
- 1.7 **CLARIFICATIONS AND INTERPRETATIONS:** Any clarifications or interpretations of this SFQ that materially affect or change the scope or intent will be issued via addenda and posted by the County on the County's web site (<http://www.pima.gov/procure/ifbrfp-dc.htm>). Oral statements or clarifications shall be non-binding and without legal effect. County will make an effort to notify respondents by email of the posting of addenda. however, it cannot guarantee that every potential respondent will be notified each time. Therefore, **it is the responsibility of all respondents to check the website periodically for addenda and to obtain this information in a timely manner.** Failure to include acknowledgment of all addenda may be cause for rejection of the proposal.
- 1.8 **SUBMISSION OF QUALIFICATIONS:**
- 1.8.1 **DEADLINE AND LOCATION:** The County will receive Qualifications at the date, time and location described in the Notice of Solicitation for Qualifications.
- 1.8.2 Respondents shall submit **ONE (1) ORIGINAL, SEVEN (7) IDENTICAL COPIES, AND ONE (1) IDENTICAL ELECTRONIC COPY ON A CD IN .pdf FORMAT** of their Qualifications in the format described in the Required Submittal Information and Evaluation Criteria Section. An original signature must be included on Attachment '3' Section 3.1 Respondent's Statement of Interest and Ability To Undertake The Project" of the original document. Copy of this signature is acceptable for the seven copies.
- 1.8.3 Late received Qualifications will be returned to the respondent unopened. No late submittals will be accepted.
- 1.8.4 The County will not acknowledge or receive Qualifications that are delivered by telephone, facsimile (fax), or electronic mail (e-mail).
- 1.8.5 Properly submitted Qualifications will not be returned to respondents.
- 1.8.6 Qualifications materials must be enclosed in a sealed envelope (box or container) addressed to the Point of Contact person; the package must clearly identify the submittal deadline, the SFQ number, and the name and return address of the respondent.
- 1.9 **POINT-OF-CONTACT:** The County designates the following person as its representative and Point-of-Contact for this SFQ. Respondents shall restrict all contact with the County and direct all questions regarding this SFQ, including questions regarding terms and conditions, to the Point-of-Contact.

Melissa Hala'ufia, Commodity/Contract Officer
Pima County Procurement Department, Design & Construction Division
130 W. Congress Street, 3rd Floor, Mail Stop DT-AB3-126
Tucson, Arizona 85701
Phone: 520-740-3731; Fax: 520-243-4434
Email: melissa.halaufia@pima.gov



1.10 **EVALUATION and SELECTION:**

- 1.10.1 The evaluation of the Qualifications shall be based on the requirements described in this SFQ. All properly submitted Qualifications meeting the Minimum Qualifications will be reviewed, evaluated, and ranked by the selection committee. Qualifications shall not include any information regarding respondent's fees, pricing, person-hours or other cost information.
- 1.10.2 The selection committee will be comprised of two (2) architects from Pima County Facilities Management and three (3) representatives of other Pima County Departments. A Contracts Officer from the Pima County Procurement Department, Design & Construction Division will act as the non-scoring Chair of the selection committee.
- 1.10.3 This committee will review initial proposals, conduct interviews with at least three (3) but no more than five (5) short-listed firms, and recommend the most qualified firm or firms to provide the services based upon the criteria published in this SFQ. The selection committee may not consider fees, price, man-hours or any other cost information in the selection or order of preference.
- 1.10.4 A recommendation for award based on the final ranking will then be forwarded to the Pima County Board of Supervisors for approval. The recommendation will be faxed to each participating firm.
- 1.10.5 The County intends, but is not obligated, to negotiate fees for these services with the highest ranked firm. If an agreement cannot be reached with the highest ranked firm, the County intends to enter into negotiation with the next lower ranked firm, or firms, or reject all proposals. The County reserves the right to reject any or all qualification statements.
- 1.10.6 The following tentative schedule has been prepared for this project. Firms interested in this project must comply with the schedule and be available on the interview/presentation dates.

SFQ Pre-Submittal Conference	JANUARY 6, 2011
SOQ's due	JANUARY 20, 2011
Interviews	FEBRUARY 23, 2011

- 1.11 **COUNTY'S RESERVATION OF RIGHTS:** The County may evaluate the Qualifications based on the anticipated completion of all or any portion of the Project. The County reserves the right to divide the Project into multiple parts, to reject any and all Qualifications and re-solicit for new Qualifications, or to reject any and all proposals and temporarily or permanently abandon the Project. County makes no representations, written or oral, that it will enter into any form of agreement with any respondent to this SFQ for any project and no such representation is intended or should be construed by the issuance of this SFQ.
- 1.12 **ACCEPTANCE OF EVALUATION METHODOLOGY:** By submitting its Qualifications in response to this SFQ, respondent accepts the evaluation process and acknowledges and accepts that determination of the "most qualified" firm(s) will require subjective judgments by the County.
- 1.13 **NO REIMBURSEMENT FOR COSTS:** Respondent acknowledges and accepts that any costs incurred from the respondent's participation in this SFQ process shall be at the sole risk and responsibility and expense of the Respondent.
- 1.14 **WAIVER OF CLAIMS:** Each Respondent, in submitting a proposal is deemed to have waived any claims for damage by reason of the selection of another proposal and/or the rejection of its proposal.



- 1.15 **ELIGIBLE RESPONDENTS:** Only individual firms or lawfully formed business organizations may apply. (This does not preclude a respondent from using consultants.) The County will contract only with the individual firm or formal organization that submits a Qualification.
- 1.16 **JOINT VENTURES:** Respondents that submit a Proposal as a Joint Venture must include a copy of the Joint Venture Agreement at the time of submittal. The Introductory Letter must be executed by the Joint Venture Partners or by one Joint Venturer with a letter of authorization from the other Joint Venture Partners.
- 1.17 **SUSPENSION/DEBARMENT:** By submitting its Qualifications in response to this SFQ, respondent is certifying that neither it nor any of its principals are debarred or suspended or under consideration for suspension or debarment by any federal, state or local government or agency. If a respondent is not able to so certify, the respondent must submit a letter that identifies the agency involved and a contact and explains why respondent is suspended or debarred or being considered for suspension or debarment.
- 1.18 **PROTESTS:** Pima County's Protest Procedures are in Section 11.20.010 of the Pima County Procurement Code, available in the library at Municode.com.

End of Section 1



SECTION 2 – EXECUTIVE SUMMARY

2.1 PROJECT CONTRACT STRUCTURE:

The Design Contract for this project will be a Two Tier Agreement.

2.1.1 Tier I services shall include Preliminary Design Services (Due Diligence) including Program Review and Equipment Documentation, Assessment of Project Scope and Budget, and completion of a Storm Water Master Plan Report and Environmental Impact Assessment. Tier I will determine the full extent of project scope and evaluate the project construction budget.

2.1.2 Tier II services will be negotiated based on the outcome of Tier I Services and will include the remainder of design services through construction and move in including schematic design, design development, construction documents, services during the permit and bid phases, construction administration to substantial completion, and move-in and punch list items.

2.2 PROJECT SCHEDULE:

After the award of contract and issuance of a Notice to Proceed, the architect shall schedule meetings with the County Project Manager to develop a reasonable project schedule based on the Contract terms. The project is anticipated to run 52 weeks (pre-design through construction document phases) with 11 weeks for Tier I services and 41 weeks for Tier II services.

End of Section 2



SECTION 3 – REQUIREMENTS FOR STATEMENT OF QUALIFICATIONS

Respondents shall carefully read the information contained in the following criteria and submit a complete Statement of Qualifications to all questions in Section 3 and in Attachment '3'. Attachment '3' is available for respondent's use in a downloadable Microsoft Word™ format available on the Pima County Design and Construction website at <http://www.pima.gov/procure/ifbrfp-dc.htm>. Use of the Microsoft Word™ document is at respondent's sole risk. Respondent is responsible for updating the Microsoft Word™ document as applicable for any changes made by addendum. The following evaluation criteria will be used in the evaluation of design firms. The response should address each item in the order presented below. Incomplete Qualifications will be considered non-responsive and subject to rejection.

- 3.1 **Respondent's Statement of Interest and Availability to Undertake the Project** (5 points)
Respondent to fill out Attachment '3'
- 3.2 **Respondent's Ability to Provide Design Services** (10 points)
Respondent to fill out Attachment '3'
- 3.3 **Respondent's Past Representative Projects** (16 points)
Respondent to fill out Attachment '3'
- 3.4 **Past Performance Evaluation - References** (9 points)
 - Provide the Consultant Performance Inquiry form (Attachment '2') to **THREE (3) references that can support the three projects listed above for 3.3. (One reference for each project). At least one of the three references returned should be from the General Contractor on the project.**
 - **Request those references to fax that form DIRECTLY back to Pima County Procurement Department, Design and Construction Division at 520-243-4434 by the due date and time for the Solicitation, January 20, 2011 at 4:00 P.M. local Tucson time.**
 - References should be familiar with Respondent's work on these projects and be knowledgeable regarding Respondent's performance. **It is Respondent's responsibility to follow-up with references to ensure they submit the Consultant Performance Inquiry form by the deadline.** Late references will not be considered. References may be contacted for additional information.
- 3.5 **Qualifications of Design Team** (25 points)
 - 3.5.1 Respondent to complete questions on Attachment '3' – Sections 3.5.
 - 3.5.2 Submit resumes of key personnel of the Design Team that will be directly involved in the Project, stating certifications, training, and experience in providing the requested services. Include a summary of projects similar in type, scope and complexity. Demonstrate on the resumes that the Principal(s) of the firm possess current and valid Professional Registration in the State of Arizona, in the discipline being proposed. Resumes must not exceed two (2) pages each and may be placed in **Appendix '1'**.
 - 3.5.3 Identify all firms that are team members on the Project Team Member Utilization Form (Attachment '1'), and include in **Appendix '2'**.
- 3.6 **Respondent's Understanding of Scope of Work / Schedule** (20 points)
 - 3.6.1 Respondent to complete questions on Attachment '3' – Sections 3.6



3.7 **Respondent's Knowledge of Current A/E Methodologies, Technologies and Best Practices** (7 points)

3.7.1 Respondent to complete questions on Attachment '3' – Sections 3.7

3.8 **Small Business Enterprise (SBE) Utilization & Affirmative Action Participation (may be submitted in Appendix '2')**

3.8.1 Provide a statement asserting the firm's Affirmative Action Policy, or present a copy of current Affirmative Action Plan (1 point)

3.8.2. Percentage of SBE Utilization – **Complete Project Team Member Utilization Form (Attachment '1')** (7 points)

Note: The Pima County MWBE Program has undergone substantial revisions in response to an updated disparity study accepted by the Board of Supervisors on October 7, 2008. The major change is the creation of a race and gender neutral Small Business Enterprise Program to encourage contracting with all small businesses.

Evaluation criteria points for certified Small Business Enterprises (SBE) shall be as set forth by County policy. The County utilizes the City of Tucson's SBE Certified Business Directory as a listing certified SBE Enterprises. The City of Tucson's SBE Certified Business Directory is available at <http://www.tucsonaz.gov/eoo/sbedir.pdf> and contains the current listing of certified SBE firms that may potentially be used on this project. How the prime Firm utilizes SBE firms from these lists and in what areas is completely at the prime Firm's discretion. Any questions regarding the SBE Program or the Project Team Member Utilization form may be directed to the Pima County SBE Program Coordinator at (520) 740-8465.

3.9 **PRESENTATIONS / INTERVIEWS (100 points)**

3.9.1 Interviews will be held pursuant to ARS 34-603, and will be scored at 100 maximum points. Before interviews are held, firms selected for interviews will be provided with the selection criteria and relative weights of the selection criteria to be used in selection. The evaluation for SBE will be arrived at by assigning the same number of points attained in the written evaluation for those criteria. The total score for the written proposals will be added to the total score for the interviews and averaged to arrive at a final score to determine the highest ranked respondents.

3.9.2 Firm's selected for personal interviews should be prepared to present to the Selection Committee on the date stated in Section 1.10.6 of this Solicitation. The Procurement Department will advise the invited firms of the definitive time and place on or about 10 calendar days prior to interviews.

3.9.3 The County will provide an agenda or outline in advance of the interview covering any additional requirements to be addressed by the invited firms.

End of Section 3



SECTION 4 – FORMAT FOR STATEMENT OF QUALIFICATIONS

4.1 GENERAL INSTRUCTIONS:

- 4.1.1 Qualifications shall be prepared SIMPLY AND ECONOMICALLY, providing a straightforward, CONCISE description of the respondent's ability to meet the requirements of this SFQ. Emphasis shall be on the QUALITY, completeness, clarity of content, responsiveness to the requirements, and an understanding of County's needs.
- 4.1.2 Qualifications shall be a MAXIMUM OF 30 PRINTED PAGES.
 - The following do not count toward the 30 page count limitation: cover, table of contents, divider sheets, Resumes, Affirmative Action Statement, and Project Team Member Utilization Form.
 - **Appendix '1'** may contain Resumes (not more than 2 pages each) of key personnel, and any subconsultants who will perform these services.
 - **Appendix '2'** may contain the Affirmative Action Statement and the Project Team Member Utilization Form.
 - The County reserves the right to accept or reject proposals that deviate from the preferred page count.
- 4.1.3 All pages shall be printed on one side only. For typewritten pages, the minimum font size is 10 point. Black ink is preferred, but color may be used for specific emphasis.
- 4.1.4 Respondents shall carefully read the information contained in this SFQ and submit a complete response to all requirements and questions as directed. Incomplete Qualifications will be considered non-responsive and subject to rejection.
- 4.1.5 Qualifications and any other information submitted by respondents in response to this SFQ shall become the property of the County.
- 4.1.6 Qualifications that are qualified with conditional clauses, alterations, items not called for in the SFQ documents, or irregularities of any kind are subject to rejection by the County, at its option.
- 4.1.7 The County makes no representations of any kind that an award will be made as a result of this SFQ. The County reserves the right to accept or reject any or all Qualifications, waive any informalities or minor technical inconsistencies, or delete any item/requirements from this SFQ when deemed to be in County's best interest.
- 4.1.8 Qualifications shall consist of answers to questions identified in Section 3 of the SFQ as provided in Attachment '3'.
- 4.1.9 Failure to comply with all requirements contained in this Request for Qualifications may result in the rejection of the Qualifications.
- 4.1.10 The highest ranked firm selected for the negotiation phase will be asked to provide most recent audited Financial Statements.

4.2 PAGE SIZE, BINDING, DIVIDERS, AND INDEX TABS:

- 4.2.1 Qualifications shall be printed on letter-size (8-1/2" x 11") paper and assembled with comb or spiral-type bindings, binders, or staples. Larger sheets may be used if they are folded to not larger than 8-1/2 x 11 inches.



- 4.2.2 Additional attachments (except for Appendix '1' and Appendix '2') shall NOT be included with the Qualifications. **Only the responses provided by the respondent to the questions identified in Section 3 of this SFQ will be used by the County for evaluation. Additional pamphlets, brochures or other marketing material not labeled as answering a portion of the solicitation will not be considered for evaluation.**

4.3. TABLE OF CONTENTS:

- 4.3.1 Submittals should include a "Table of Contents" and give page numbers for each part the Qualifications.

4.4 PAGINATION:

- 4.4.1 Number all pages of the submittal sequentially using Arabic numerals (1, 2, 3, etc).

End of Section 4

DECEMBER, 2010

ATTACHMENT '1'

PROJECT TEAM MEMBER UTILIZATION FORM

(Complete and Return with Your Qualifications Statement in Appendix '2')

Project Name: Architectural and Engineering Design Services: **PIMA COUNTY FLEET SERVICES NEW FLEET SERVICES FACILITIES**

Firm Name:[illegible]

END OF ATTACHMENT '1'



DECEMBER, 2010

ATTACHMENT '2'
CONSULTANT PERFORMANCE INQUIRY
(Page 1 of 6)



PIMA COUNTY PROCUREMENT DEPARTMENT
DESIGN AND CONSTRUCTION DIVISION
PHONE: 520-740-8586
FAX: 520-243-4434

CONSULTANT: _____

PROJECT: **ARCHITECTURAL AND ENGINEERING DESIGN SERVICES: PIMA COUNTY FLEET SERVICES NEW FLEET SERVICES FACILITIES**

PIMA COUNTY, ARIZONA IS CONSIDERING THE ABOVE CONSULTANT'S APPLICATION TO PROVIDE PROFESSIONAL SERVICES TO PIMA COUNTY FOR THE ABOVE-REFERENCED PROJECT. PLEASE RANK THE CONSULTANT'S PAST PERFORMANCE IN THE CATEGORIES INDICATED ON PAGE 2, USING THE CATEGORIES INDICATED ON PAGE 2 AND THE DEFINITIONS ON PAGES 3 – 6. (note: the actual documents are numbered differently on the bottom of the page than that of this fax because they are taken directly from the solicitation.)

PLEASE FAX THIS SHEET AND YOUR COMPLETED QUESTIONNAIRE TO THE FOLLOWING ON OR BEFORE JANUARY 20, 2011 AT 4:00 PM Tucson Local Time:

ATTENTION: MELISSA HALAUFIA, CCO
Pima County Procurement Department
Design and Construction Division
Fax: 520-243-4434

NAME OF FIRM PROVIDING REFERENCE: _____

PERSON COMPLETING REFERENCE: _____

POSITION: _____

PHONE NUMBER: _____ **FAX NUMBER:** _____

E-MAIL ADDRESS: _____

DO YOU REPRESENT AN OWNER ☐ OR A GENERAL CONTRACTOR ☐?



ATTACHMENT '2'
CONSULTANT PERFORMANCE INQUIRY (Page 2 of 6)

1. Name and Address of Consultant or Joint Venture		2. Total	
		a. Design Contract Value:	
		b. Construction Contract Value:	
		3. Contract Completion Date:	
4. Type of Service Provided:			
5. Ratings: After commenting, score in column on the right, using 1 for unsatisfactory, 2 for marginal, 3 for satisfactory, 4 for very good, and 5 for exceptional.			
Technical Performance – Comments:			
Cost Control – Comments:			
Schedule/Timeliness – Comments:			
Business Relations – Comments:			
6.TOTAL SCORE: (sum of scores from above)			
7. Key personnel of Consultant:			
Name/Title:		Primary Responsibility:	
Name/Title:		Primary Responsibility	
Name/Title:		Primary Responsibility	
8. Did the consultant seem committed to customer satisfaction? ___Yes ___No WHY/HOW?			
9. Were the services brought in on time? ___Yes ___No WHY/HOW?			



ATTACHMENT '2'

CONSULTANT PERFORMANCE INQUIRY (Page 3 of 6)

CONSULTANT PERFORMANCE RATING GUIDELINES

1. Name and Address of Consultant or Joint Venture being evaluated. Identify the specific division being evaluated if there is more than one.
2. Total Contract value, including amendments or change orders.
3. Contract completion date. State date the project was completed. Describe any issues if the work was completed beyond the original expected completion date.
4. Type of Contract. Describe the purpose/services of the overall contract.
5. In the comment area, provide rationale for the rating in accordance with the guidance attached to this Guideline. Indicate the performance rating in the far right column.
6. Add the scores and place in this box.
7. Identify Consultant or Joint Venture key personnel who played a major role in the performance rating. Identify their area of primary responsibility and comment on their performance during this contract phase. Do not list personnel not employed long enough to affect performance. In some cases, more than one individual may have served in a key position. List persons that had an effect on the ratings.
8. The reference person should indicate whether the Consultant seemed to be committed to customer satisfaction.
9. Indicate here if the Consultant completed the project within the time constraints and within the proposed budget. Amendments adding to the scope of work are considered within time and budget unless a time extension was needed for consultant to finish the original scope of work.



ATTACHMENT '2'

CONSULTANT PERFORMANCE INQUIRY (Page 4 of 6)

These are suggested guidelines for assigning ratings on a consultant's compliance with the contract performance, cost, and schedule goals as specified in the Scope of Work. The rating for each category does not need to address all of the rating topics shown in the tables below.

Technical Performance (Quality of Product/Service)
Exceptional • Met all performance requirements / Experienced/knowledgeable staff retained on project throughout rating period • Minor problems / Highly effective corrective actions / Work and products greatly exceeded expectations • Excellent communication with client / Prompt follow up / Effective communications with outside agencies and public bodies Very Good • Met all performance requirements / Most staff remained throughout rating period. • Minor problems / Effective corrective actions / Work and products above expectations • Good communication with client / Good follow up / Good communications with outside agencies and public bodies Satisfactory • Met all performance requirements / Generally stable staff • Minor problems / Satisfactory corrective actions / Satisfactory work and products • Follow up and communications with client, outside agencies and public bodies met expectations Marginal • Some performance requirements not met / Some key staff reassigned during rating period • Performance reflects serious problem / Ineffective corrective actions / Work and products below expectations / Poor Quality Assurance/Quality Control • Poor follow up and/or communications with client, outside agencies and public bodies Unsatisfactory • Most performance requirements were not met / Most key staff reassigned during rating period • Recovery not likely / Work and products inadequate / No QA/QC evident • Follow up and/or communications with client, outside agencies and public bodies inadequate



ATTACHMENT '2'
CONSULTANT PERFORMANCE INQUIRY (Page 5 of 6)

Cost Control

Exceptional

- Significantly reduced costs while meeting all contract requirements
- Use of internal value engineering or other innovative management techniques
- Quickly resolved cost issues / Effective corrective actions facilitated cost reductions

Very Good

- Achieved overall cost reductions while meeting all contract requirements
- Used innovative management techniques in cost control
- Quickly resolved cost/price issues / Effective corrective actions to facilitate overall cost/price reductions

Satisfactory

- Met overall cost/price estimates while meeting all contract requirements

Marginal

- Do not meet cost/price estimates / Additional funds needed to complete some work
- Poor corrective action plans / No innovative techniques to bring overall expenditures within limits

Unsatisfactory

- Significant cost overruns
- Ineffective or no corrective action plan

Schedule (Timeliness)

Exceptional

- Significantly exceeded delivery schedules / Many deliverables submitted ahead of schedule
- Quickly resolved delivery issues / Highly effective corrective actions
- Communications with client and/or outside agencies anticipated and made ahead of need / Effectively communicates schedule changes
- Effectively communicates unanticipated problems and impacts on project

Very Good

- On-Time deliveries / Some deliverables submitted ahead of schedule
- Quickly resolved delivery issues / Effective corrective actions
- Some communications with client and/or outside agencies made ahead of need / Communicates schedule changes
- Communicates unanticipated problems and impacts on project

Satisfactory

- On-time deliveries / On time communications
- Minor scheduling problems / Did not effect overall schedule

Marginal

- Some late deliveries / Some communications late causing some schedule delays
- Poor corrective actions / Delays in correcting actions causing some cost impact

Unsatisfactory

- Many late deliveries / Communications inadequate and source of many delays
- Significant cost impact / Loss of capability for Client
- Ineffective or No corrective actions



ATTACHMENT '2'
CONSULTANT PERFORMANCE INQUIRY (Page 6 of 6)

Business Relations

Exceptional

- Highly professional / Responsive / Proactive / Effective use of Partnering
- Prompt and accurate invoicing/construction invoice approvals
- Early and accurate shop drawing review / Accurate submittal logs
- Minor changes made without cost impact / Limited in number / Anticipated early

Very Good

- Professional / Responsive / Use of Partnering
- Accurate invoicing/construction invoice approvals/submittal logs
- Prompt and accurate shop drawing reviews
- Few change proposals submitted on a timely schedule

Satisfactory

- Professional / Reasonably responsive
- Adequate invoicing/construction invoice approvals/submittal logs
- Timely shop drawing reviews
- Reasonable number of change proposals submitted without impact on work effort

Marginal

- Less Professionalism and Responsiveness
- Low user satisfaction / No attempts to improve relations / Some subconsultant complaints
- Unnecessary change proposals / Untimely change proposal submittals

Unsatisfactory

- Delinquent responses / Lack of cooperative spirit
- Unsatisfied user / Unable to improve relations / Significant subconsultant complaints
- Change proposals to correct poor management
- Inappropriate and/or very untimely change proposals / Significant work effort impact

END OF ATTACHMENT '2'



ATTACHMENT '3' – RESPONDENT'S STATEMENT OF QUALIFICATIONS

3.1 Respondent's Statement of Interest and Availability to Undertake the Project

Company Name:	
Street Address:	
Town, State, Zip Code:	
Phone Number:	
Fax Number:	
Point-of-Contact for Firm: Title: <i>(provide signature below)</i> Email:	
3.1.1 Provide Statement of Interest and Qualifications (100 words maximum):	
3.1.1 Response:	
3.1.2 List Key Contact Person from your firm who will manage this County Contract.	
3.1.2 Response:	
3.1.3 List and describe availability and commitment of the Respondent, it's Principal(s) and assigned professionals to undertake the Project and include number of Principal(s) current and valid Professional Registration in the State of Arizona:	
3.1.3 Response:	
3.1.4 Respondent's City and State of it's corporate headquarters:	
3.1.4 Response:	
3.1.5 Provide statement regarding acknowledgement of all issued addenda, if any, and agreement or exception to the terms contained in the attached Sample Contract. If exceptions are taken, propose specific alternate language.	
3.1.5 Response:	
Signator certifies that the information provided in this Statement of Qualifications is current and accurate to the best of the signator's knowledge. By signing this statement of interest and availability, Signator represents that the firm and assembled team have the financial resources and staff availability to complete this project within the required schedule.	_____ Signature
	_____ Date



3.2 Respondent's Ability to Provide Design Services

3.2.1 Describe Firm's history, including the name(s) of the proposed Design Team, address(es) of the corporate headquarters and local offices(s), and number of years in business.		
3.2.1 Response:		
Revenue total for past fiscal year (indicate when fiscal year commenced)		\$
Annual revenue totals for the past five years	2009	\$
	2008	\$
	2007	\$
	2006	\$
	2005	\$
3.2.2 Is your firm currently for sale or involved in any transaction to expand or become acquired by another business entity? (Y/N)		
3.2.2 Response:		
☐ YES ☐ NO		
If yes, please explain the impact both in organizational and directional term.		

3.3 Respondent's Past Representative Projects

3.3.1 Provide a LIST of Design Services Projects completed with the past ten (10) years that are relevant to this project type, scope and complexity. List the projects in order of priority, with most relevant projects listed first. Indicate when each Project was completed.
3.3.1 Response:
3.3.2 From the projects listed above, identify and describe THREE (3) completed projects. List the projects in order of priority below, with the most relevant project listed first. NOTE: Projects used as examples of similar work shall be clearly noted if the work was done by individuals while employed with other firms.
3.3.2 Response:

3.3.2 Project #1

Project Name			
Project Location (City, State)			
Contract Delivery Method (DDB, DB, CMAR, Other)			
Type of Construction (New, renovation, expansion)			
Final Project Size (Gross square feet)			
Initial GC Construction Cost	\$	Final GC Construction Cost	\$
Explain Difference in Cost above			
Original Project Start Date (month/year)		Original Project Completion Date (month/year)	
Actual Project Start Date for Design (month/year)		Actual Project Completion (month/year)	
Name of Project Manager			
Name of Project Architect			
Project #1 - Insert Color Image/s			



3.3.2 Project #2

Project Name			
Project Location (City, State)			
Contract Delivery Method (DDB, DB, CMAR, Other)			
Type of Construction (New, renovation, expansion)			
Final Project Size (Gross square feet)			
Initial GC Construction Cost	\$	Final GC Construction Cost	\$
Explain difference in Cost above			
Original Project Start Date (month/year)		Original Project Completion Date (month/year)	
Actual Project Start Date for Design (month/year)		Actual Project Completion (month/year)	
Name of Project Manager			
Name of Project Architect			
Project #2 - Insert Color Image/s			

3.3.2 Project #3

Project Name			
Project Location (City, State)			
Contract Delivery Method (DDB, DB, CMAR, Other)			
Type of Construction (New, renovation, expansion)			
Final Project Size (Gross square feet)			
Initial GC Construction Cost	\$	Final GC Construction Cost	\$
Explain difference in Cost above			
Original Project Start Date (month/year)		Original Project Completion Date (month/year)	
Actual Project Start Date for Design (month/year)		Actual Project Completion (month/year)	
Name of Project Manager			
Name of Project Architect			

Project #3 - Insert Color Image/s



3.4 Past Performance Evaluation – Evaluation Committee review of submittals of Attachment 2

3.5 Qualifications of Design Team

3.5.1.1 Unique qualifications of the Design Team’s Key Personnel, Project Manager, and all other proposed subconsultants relevant to the project. At a minimum, the individuals comprising the team shall include all sub-consultant services as required to provide a complete project in addition to the usual and customary architectural disciplines. Additional consultants may include (but not limited to) specialists in:

Civil Engineering
Structural Engineering
Mechanical Engineering
Electrical Engineering
Landscape Architecture
Industrial Consultant
‘Out of House’ Cost Estimating
Security Systems

3.5.1.1 Response:

3.5.1.2 Describe the proposed Project assignments and lines of authority and communication for each team member to be directly involved in the Project. Indicate the estimated percent of time these team members will be involved in the Project for each discipline.

3.5.1.2 Response:

3.5.1.3 Provide a statement as to the firm staff size of each Design Team member Firm. Compare anticipated workload to staffing requirements for this Project. Demonstrate that the proposed team members are able to make the time commitments required.

3.5.1.3 Response:

3.5.2 Submit resumes of key personnel of the Design Team that will be directly involved in the Project, stating certifications, training, and experience in providing the requested services. Include a summary of projects similar in type, scope and complexity. Demonstrate on the resumes that the Principal(s) of the firm possess current and valid Professional Registration in the State of Arizona, in the discipline being proposed. Resumes must not exceed two (2) pages each and may be placed in Appendix ‘1’.

3.5.3 Identify all firms that are team members on the Project Team Member Utilization Form (Attachment ‘1’), and include in Appendix ‘2’.



3.6 Respondent's Understanding of Scope of Work / Schedule

3.6.1 Firm shall demonstrate their expertise, knowledge and understanding of the scope of work. What significant challenges do you see to develop this project?

3.6.1 Response:

3.6.2 Describe how you develop and maintain work schedules during design and construction administration to coordinate with the County's project schedule. Describe your method of managing the schedule from the beginning of the project through completion of construction.

3.6.2 Response:

3.7 Respondent's Knowledge of Current A/E Methodologies, Technologies and Best Practices

3.7.1 Describe your quality assurance program. Explain the method you propose to use to ensure quality control during the design phase of this project. Provide specific examples of these techniques or procedures.

3.7.1 Response:



3.7.2 Describe your procedures for implementing industry's "best practices" for: • Establishing and tracking project objectives • Cost tracking - Describe your method for managing the construction cost for this project from the beginning • Document and constructability review and coordination • Total quality management for each phase, including close-out and commissioning
3.7.2 Response:
3.7.3 Firm's must have the capability to produce design drawings for projects in a format compatible with the Pima County Facilities Management Department's computer aided drafting (CAD) system. A copy of the PCFM CAD Standards is attached to this SFQ. • Provide an outline of software currently used by your firm and explain the significance of the software's relationship to the successful management of this project
3.7.3 Response:
3.7.4 Discuss your experience in design of municipal fleet services facilities or other similar facilities.
3.7.4 Response:
3.7.5 Discuss how your team will incorporate Pima County's minimum LEED Silver Certification standards, desert architectural concepts fitting the location and use of project and compatibility with the County's sustainability program.
3.7.5 Response:
3.7.6 Describe your plan for communicating with and involving Pima County key staff in the development of the project.
3.7.6 Response:

END OF ATTACHMENT '3'



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Attachment '4' Sample Contract

PIMA COUNTY PROJECT: [Official Project Name] CONSULTANT: Name Address City, State Zip Code AMOUNT: FUNDING: (As stated on BOS/PD Summary)	(STAMP HERE)
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CONSULTANT SERVICES CONTRACT

THIS CONTRACT is entered into between Pima County, a body politic and corporate of the State of Arizona, hereafter called COUNTY, and [CONSULTANT Name], hereafter called CONSULTANT, and collectively referred to as the Parties.

W I T N E S S E T H

WHEREAS, COUNTY requires the services of a CONSULTANT registered in the State of Arizona and qualified to provide Architectural and Engineering Design Services to design, produce construction documents and perform Construction Administration for Pima County Fleet Services New Services Facilities located at the 1301 S. Mission Road, Tucson, AZ; and

WHEREAS, CONSULTANT is qualified and willing to provide such services; and

WHEREAS, based on CONSULTANT's representations in response to Pima County Solicitation No.1101303, CONSULTANT was deemed to be the most qualified for this Project; and

WHEREAS, CONSULTANT has proposed to perform the work at a price acceptable to COUNTY.

NOW, THEREFORE, in consideration of the foregoing recitals and other valuable and good consideration the parties hereto agree as follows:

ARTICLE I – TERM AND EXTENSION/RENEWAL/CHANGES

This Contract shall commence upon execution by the Board of Supervisors, and shall terminate on [____], unless sooner terminated or further extended pursuant to the provisions of this Contract.

COUNTY shall have the option to extend the contract termination date for purposes of project completion. Any modification or extension of the contract termination date shall be by formal written amendment executed by the parties hereto.

ARTICLE II – SCOPE OF SERVICES

CONSULTANT agrees to provide Architectural and Engineering Design Services and other services related to contract administration for the COUNTY as described in **APPENDIX A: SCOPE OF WORK** [(____ pages)], an attachment to this contract, and to complete such services within the term and value of this contract as it may be modified in accordance with **Article V**.



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Amendments and changes to the Scope must be approved by the Board of Supervisors or the Procurement Director, as required by the Pima County Procurement Code, before the work under the amendment commences.

ARTICLE III - DEFINITIONS

Other Direct Costs. Other Direct Costs are those costs that can be specifically identified with this Contract, are required for performance of the Contract, and are actually incurred. Includes Subcontract/Subconsultant costs; reproduction, copy and printing costs; courier services; and similar costs specifically necessary for this Contract and approved by COUNTY.

Cost Plus Fixed Fee. The modified Cost Plus Fixed Fee (CPFF) applied here is a compensation method that provides compensation to the Consultant for actual costs of Direct Labor, Indirect, and Other Direct Costs incurred up to a not to exceed amount, plus a fixed Fee amount for the successful performance of the work. The Fee amount may initially be determined as a percentage of the estimated not-to-exceed costs. Once negotiated, the Fee amount becomes fixed and does not vary with actual costs. The Fee may only be in accordance with **Article V**.

Critical Path Method. The Critical Path Method (CPM) is a way of depicting the sequence of activities in a project, including interdependencies, and containing all activities needed for successful completion of the Work. Delay in the completion of activities on the critical path will extend the completion date.

Direct Labor Costs. Direct Labor Costs are the total number of allowable hours worked on the Project by each individual multiplied by the Labor Rate, identified in EXHIBIT 'B' - COMPENSATION SCHEDULE [(XX pages)].

Fee. Fee is the amount independent of actual costs that the CONSULTANT is allowed for assuming risk and to stimulate efficient contract performance. Fee includes compensation to CONSULTANT for both profit and unallowable costs. Efficient cost control will allow CONSULTANT to earn a higher profit margin without adjustment of the fee amount. Conversely, inefficient cost control will result in a lower profit margin.

Float. Float is the number of days by which an activity not on the critical path in a CPM network may be delayed before it extends the completion date.

Labor Rates. Labor rates are the actual cost of salary paid to employees of CONSULTANT and identified in EXHIBIT 'B' – COMPENSATION SCHEDULE.

Not to Exceed Cost. The Not to Exceed Cost for a task is the sum of the agreed Direct Labor costs, indirect costs, and other reimbursable costs of the task defined in the original Project Baseline. Actual Direct Labor costs may be invoiced based on hours worked, per discipline, per task, or a percent complete by task for the period. CONSULTANT assumes all risk for providing the requested task/deliverables at or below the original estimated cost, unless an equitable adjustment to the scope and/or fee are made by amendment to the Contract. Any costs incurred by CONSULTANT beyond the not-to-exceed amount identified which are not attributable to any change in the project baseline are unallowable. Unallowable costs are compensated through the CONSULTANT's fixed Fee.

Indirect Costs. Indirect costs shall be the overhead rate identified in EXHIBIT 'B' – COMPENSATION SCHEDULE.

Project Baseline. The agreed Contract scope of work, total Not-to-Exceed Cost plus Fixed-Fee (CPFF), the allocation thereof among Contract tasks, and the accompanying schedule and expectations/assumptions upon which the scope of work and schedule are based, collectively constitute the Project Baseline.



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ARTICLE IV – COMPENSATION AND PAYMENT

In consideration of the services specified in this Contract, the COUNTY agrees to pay CONSULTANT on a modified Not-to-Exceed Cost plus Fixed Fee (CPFF) basis, not to exceed the total amount of this Contract. The parties agree that Cost shall be comprised of CONSULTANT's Direct Labor Costs, Indirect Costs and Other Direct Costs and that CONSULTANT's fee shall remain fixed and may be adjusted only as provided in **ARTICLE V** and **ARTICLE VI**.

CONSULTANT's total CPFF shall be allocated among the major tasks contemplated by this Contract in such manner that each major deliverable will have associated with it a not-to-exceed cost, plus a fixed fee amount, incorporated herein as EXHIBIT 'B' – COMPENSATION SCHEDULE [(pages)]. CONSULTANT may invoice monthly for the actual costs incurred plus a pro-rata portion of one-half of the fee amount for each task. Invoice format shall be as directed by Pima County Project Manager. Actual costs shall be calculated by CONSULTANT based on actual hours spent, to which the agreed overhead rate may be applied, plus Other Direct Costs. Actual Costs may then be represented as percentage of the "not to exceed" cost amount associated with that task on the CONSULTANT's invoice for billing purposes. Calculations and supporting data shall be made available to COUNTY at any time, upon request. The cumulative payment for the actual costs of any task may not be more than the "not to exceed" cost amount associated with that task. Upon completion of a task, (including acceptance by COUNTY of all associated deliverables), the balance of the fee allocated to that task may be paid to CONSULTANT.

Hourly rates and all other rates included under this Contract shall remain fixed throughout the term of the contract. The COUNTY may consider adjustments to rates in connection with any extensions of the contract term.

The total of all payments to CONSULTANT for services provided under this Contract shall not exceed [Dollar Amount (\$xx.xx)].

COUNTY has a purchase order system that will be linked to this contract for accounting purposes only. CONSULTANT must cite the Purchase Order Number issued by COUNTY on all invoices. The pre-printed terms and conditions on the purchase order form do not apply to work performed under this Contract, which is to be governed by the terms of this Contract and all attached and referenced documents.

Unless otherwise agree, CONSULTANT shall submit invoices monthly. All invoices shall be accompanied by a narrative description of the work performed during the period covered by the invoice, time accounting information, and an allocation of all direct costs, including reimbursable costs and subconsultant charges, to the tasks identified in the Scope of Work for which those costs were incurred. The time accounting information should be sufficient to show the worker and hours worked by day for the period covered by the invoice. Subconsultant charges shall be supported by appropriate documentation with each separate invoice submitted.

CONSULTANT shall not perform work in excess of the Contract Amount without prior authorization by an amendment executed by COUNTY. Work performed in excess of the Contract Amount without prior authorization by amendment shall be at CONSULTANT'S own risk. Additional Services identified in EXHIBIT 'B' – COMPENSATION SCHEDULE, are services within the scope of this Contract but not included within the Tasks identified as of the effective date of this Contract. If ordered, Additional Services shall be invoiced at the rates incorporated into this Contract as EXHIBIT 'B' – COMPENSATION SCHEDULE. COUNTY may add additional services throughout the term of the Contract by providing notice in writing to CONSULTANT. Hourly billable rates shown in EXHIBIT 'B' – COMPENSATION SCHEDULE shall only be adjusted by written amendment to the Contract between the parties. The parties may add additional required professional classifications or disciplines to EXHIBIT 'B' – COMPENSATION SCHEDULE by written amendment at any time.



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COUNTY shall have 10 calendar days from the date of invoice to notify CONSULTANT of any invoicing discrepancies. The COUNTY and CONSULTANT shall meet to resolve any discrepancies before the invoice is approved or rejected for payment. All invoices shall be accompanied by a narrative description of the work performed during the period covered by the invoice, to the tasks identified in the Scope of

Work for which those costs were incurred. Subconsultant charges shall be supported by appropriate documentation upon request by COUNTY.

For the period of record retention required under **ARTICLE XXIV**, COUNTY reserves the right to question any payment made under this Article and to require reimbursement therefor by setoff or otherwise for payments determined to be improper or contrary to the Contract or law.

ARTICLE V – PROJECT BASELINE AND ADJUSTMENTS

- (A) COUNTY and CONSULTANT have agreed upon the Project scope, the total Cost Plus Fixed Fee and shall prepare a CPM-based schedule for the performance of the work. The schedule is based on assumptions and expectations agreed upon by COUNTY and the CONSULTANT. Schedule estimates for the timeframes associated with outside party activities, i.e. design and other reviews, and/or permits or other clearances do not represent commitments made by either outside agencies or the permit-granting entities of the County. It is the intent of the parties that this Project Baseline represent a firm commitment by CONSULTANT and COUNTY to complete the work within the schedule and total cost identified in the Baseline, subject to schedule variations by outside parties and other factors beyond the control of COUNTY and/or CONSULTANT.
- (B) COUNTY and CONSULTANT understand that although the Baseline reflects the best estimates and expectations of the parties at the time of agreement, there is an element of uncertainty associated with the design process that makes the actual schedule and effort required to complete the work difficult or impossible to establish in advance. COUNTY and CONSULTANT acknowledge that unusual citizen input, litigation, regulatory changes, significant delays by utilities or others, unforeseen decisions or commitments by policy makers, or other unanticipated events or factors beyond the control of the parties that differ materially from the expectations of COUNTY and CONSULTANT may delay or disrupt the schedule and/or require a change in the level of resources or effort. The parties agree, therefore, that the Project Baseline may be adjusted as follows:
- (1) A delay in the work attributable to a failure by COUNTY to adhere to its estimates with respect to schedule shall be deemed an excusable delay for which an adjustment may be made to the schedule. In any such case affecting a task on the critical path, the schedule of the affected task or activity may be extended one day for each day of COUNTY-caused delay; provided, however, that if the COUNTY-caused delay overlaps a period of delay attributable to any other cause, the extension for COUNTY-caused delay is limited to the number of nonoverlapped days of COUNTY-caused delay.
 - (2) There shall be no adjustment for any delay in the work attributable to a failure by CONSULTANT to adhere to its commitments with respect to schedule. In the event of a significant delay attributable to a failure by CONSULTANT to adhere to its schedule expectations, CONSULTANT will provide a recovery plan to COUNTY within five days of COUNTY's request. For the purposes of this paragraph, a delay arising from or attributable to a necessity for CONSULTANT to make more than two submissions of plans or documents for approval shall be deemed a failure by CONSULTANT to adhere to its schedule commitments. Effort associated with additional reviews shall be noncompensable.
 - (3) A delay in the work attributable to any other cause that differs materially from the expectations of COUNTY and CONSULTANT regarding that cause shall be deemed an excusable delay for which COUNTY and CONSULTANT agree to negotiate an appropriate schedule adjustment. If the period of delay attributable to any cause under



this paragraph overlaps a period of delay attributable to any other cause, the adjustment under this paragraph shall be made first and the delay attributed to such other cause shall be limited to that occurring outside of the overlap.

- (4) If any of the causes of delay in Paragraphs 1 or 3 above affects a task or activity on the critical path, then the schedule adjustment may include adjustment to the completion date. If the cause does not affect a task or activity on the critical path, then the adjustment shall be made from Float and the completion date shall not be changed.
 - (5) If any of the causes of delay in Paragraphs 1 or 3 above results in material provable additional costs to the affected task or tasks as a result of disruption of the schedule, then the parties agree to negotiate an equitable adjustment to the cost for the affected task or tasks, but not fee.
 - (6) COUNTY and CONSULTANT agree to negotiate an equitable adjustment of cost and fee for any task or tasks for which there is any significant change in the level of effort arising from additional or changed work requested or directed in writing by COUNTY that materially deviates from or adds to the baseline expectations/assumptions of the parties with respect to the work.
 - (7) If any action, comment, cause, decision, or other event attributable to any third party results in a change in requirements that differs materially from expectations, then COUNTY and CONSULTANT agree to negotiate in good faith an equitable adjustment in the cost and fee for the affected task or tasks.
- (C) CONSULTANT agrees to complete the work by the completion date in the schedule, as it may be adjusted under the preceding provisions of this Article. Costs incurred by CONSULTANT to complete the work after the completion date in the schedule shall not be reimbursable under this Contract.

ARTICLE VI – REALLOCATION OF FUNDS

Given the magnitude and complexity of the scope required by this Contract, COUNTY and CONSULTANT understand that the actual cost to perform specific tasks may vary from the estimates reflected in EXHIBIT 'A' - SCOPE OF WORK and EXHIBIT 'B' – COMPENSATION SCHEDULE.

The parties agree that if the actual cost to complete a task is less than the estimated amount for that task, the cost savings realized shall accrue to COUNTY. With the agreement of the parties, COUNTY may reallocate the cost savings to other tasks in EXHIBIT 'A' - SCOPE OF WORK and EXHIBIT 'B' – COMPENSATION SCHEDULE as follows:

- 1. Reallocation between subtasks in EXHIBIT 'A' - SCOPE OF WORK under any one of the major task categories in EXHIBIT 'B' – COMPENSATION SCHEDULE may be made between the COUNTY department representative and the CONSULTANT project manager by written agreement.
- 2. Reallocation among the major tasks in EXHIBIT 'B' – COMPENSATION SCHEDULE may be made by a Contract amendment executed by the Procurement Director, provided that the transfer does not increase the total amount of the Contract.
- 3. Any reallocation or adjustment in EXHIBIT 'A' - SCOPE OF WORK or EXHIBIT 'B' – COMPENSATION SCHEDULE that increases the total contract amount shall be made by a Contract Amendment executed by the Board of Supervisors

Costs and Fee may not be reallocated from any task on which work has not progressed significantly and which does not include actual or demonstrable savings or reductions in required effort such that the task may be completed for less than the balance of the task remaining after the transfer.



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ARTICLE VII – INSURANCE

CONSULTANT shall obtain and maintain at its own expense, during the entire term of this Contract the following type(s) and amounts of insurance:

Commercial General Liability - \$1,000,000

Comprehensive Automobile Liability - \$1,000,000 Combined single limit, or \$1,000,000 bodily injury and \$1,000,000 property damage

Professional Liability - \$1,000,000

If required by law, Statutory Workers' Compensation including Employer's Liability.

Insurance must be from carriers acceptable to COUNTY. CONSULTANT shall provide COUNTY with certificates of insurance for all required insurance. Pima County is to be named as an additional insured for all operations performed within the scope of the Contract between COUNTY and CONSULTANT. All certificates must provide for a 30 day advance notice of any modification, material change, non-renewal or cancellation.

ARTICLE VIII – INDEMNIFICATION

To the fullest extent permitted by law, CONSULTANT shall indemnify, defend, and hold harmless COUNTY, its officers, employees and agents from and against any and all suits, actions, legal administrative proceedings, claims or demands and costs attendant thereto, arising out of any omission, fault or negligence by the CONSULTANT, its agents, employees or anyone under its direction or control or on its behalf in connection with performance of this Contract. This obligation shall survive termination or expiration of this Contract. The obligations under this Article shall not extend to the negligence of COUNTY, its agents, employees or indemnitees.

ARTICLE IX – COMPLIANCE WITH LAWS

CONSULTANT shall comply with all applicable federal, state, and local laws, rules, regulations, standards and Executive Orders, without limitation to those designated within this Contract. The laws and regulations of the State of Arizona shall govern the rights of the parties, the performance of this Contract, and any disputes hereunder. Any action relating to this Contract shall be brought in Superior Court in Pima County. Any changes in the governing laws, rules, and regulations during the term of this Contract shall apply, but do not require an amendment.

ARTICLE X – STATUS OF CONSULTANT

The status of the CONSULTANT shall be that of an independent contractor and CONSULTANT shall not be considered an employee of Pima County and shall not be entitled to receive any of the fringe benefits associated with regular employment, and will not be subject to the provisions of the merit system. CONSULTANT will be responsible for payment of all Federal, State and Local taxes associated with the compensation received by CONSULTANT from COUNTY. CONSULTANT shall be responsible for program development and operation without supervision by COUNTY.

ARTICLE XI – CONSULTANT'S PERFORMANCE

CONSULTANT shall perform the work in accordance with the terms of the contract and with the degree of care and skill required of any similarly situated Arizona registrant. CONSULTANT shall employ suitably trained and skilled professional personnel to perform all required services under this Contract. Prior to changing any key personnel, especially those key personnel COUNTY relied upon in making this contract, CONSULTANT shall obtain the approval of COUNTY.



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CONSULTANT shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all its effort and other services furnished by CONSULTANT under this Agreement. Without additional compensation, CONSULTANT shall correct or revise any errors, omission, or other deficiencies in all products of its efforts and other services provided. This shall include resolving any deficiencies arising out of the acts or omissions of CONSULTANT found during or after the course of the services performed by or for CONSULTANT under this Agreement, regardless of COUNTY having knowledge of or condoning/accepting the products or the services. Correction of such deficiencies shall be at no cost to COUNTY.

ARTICLE XII – NON-WAIVER

The failure of COUNTY to insist in any one or more instance upon full and complete compliance with any of the terms and provisions of this Contract or to take any action permitted as a result thereof shall not be construed as a waiver or relinquishment of the right to insist upon full and complete performance of the same or any other covenant or condition either in the past or in the future. The acceptance by either party of sums less than may be due and owing it at any time shall not be construed as an accord and satisfaction.

ARTICLE XIII – SUBCONSULTANT

CONSULTANT will be fully responsible for all acts and omissions of its SUBCONSULTANT and of persons directly or indirectly employed by SUBCONSULTANT and of persons for whose acts any of them may be liable to the same extent that CONSULTANT is responsible for the acts and omissions of persons directly employed by it. Nothing in this Contract shall create any obligation on the part of COUNTY to pay or see to the payment of any money due any SUBCONSULTANT, except as may be required by law.

ARTICLE XIV – NON-ASSIGNMENT

CONSULTANT shall not assign its rights to this Contract in whole or in part, without prior written approval of the COUNTY. Assignment may be withheld at the sole discretion of the COUNTY, provided that such approval shall not be unreasonably withheld.

ARTICLE XV – NON-DISCRIMINATION

CONSULTANT agrees to comply with all provisions and requirements of Arizona Executive Order 2009-09 **including flow down of all provisions and requirements to any subconsultants**. Executive Order 2009-09 supersedes Executive order 99-4 and amends Executive order 75-5 and may be viewed and downloaded at the Governor of the State of Arizona's website http://www.azgovernor.gov/dms/upload/EO_2009_09.pdf which is hereby incorporated into this contract as if set forth in full herein. During the performance of this contract, CONSULTANT shall not discriminate against any employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin.

ARTICLE XXVI – AMERICANS WITH DISABILITIES ACT

CONSULTANT shall comply with all applicable provisions of the Americans with Disabilities Act (Public Law 101-336, 42 U.S.C. 12101-12213) and all applicable federal regulations under the Act, including 28 CFR Parts 35 and 36. If CONSULTANT is carrying out government programs or services on behalf of COUNTY, then CONSULTANT shall maintain accessibility to the program to the same extent and degree that

would be required of the COUNTY under 28 CFR Sections 35.130, 35.133, 35.149 through 35.151, 35.160, 35.161 and 35.163. Failure to do so could result in the termination of this Agreement.



ARTICLE XVII – CANCELLATION FOR CONFLICT OF INTEREST

This Contract is subject to the provisions of A.R.S. §38-511 which provides in pertinent part:

"The state, its political subdivisions or any department of either may, within three years after its execution, cancel any contract, without penalty or further obligation, made by the state, its political subdivisions, or any of the departments or agencies of either if any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the state, its political subdivisions or any of the departments or agencies of either is, at any time, while the contract or any extension of the contract is in effect, an employee or agent of any other party to the contract in any capacity or a CONSULTANT to any other party to the contract with respect to the subject matter of the contract."

ARTICLE XVIII – TERMINATION OF CONTRACT FOR DEFAULT

A. Upon a failure by CONSULTANT to cure a default under this Contract within 10 days of receipt of notice from COUNTY of the default, COUNTY may, in its sole discretion, terminate this Contract for default by written notice to CONSULTANT. In this event, COUNTY may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, or plant on the work site necessary for completing the work. The CONSULTANT and its sureties shall be liable for any damage to the COUNTY resulting from CONSULTANT's default, including any increased costs incurred by COUNTY in completing the work.

B. The occurrence of any of the following shall constitute an event of default:

1. Abandonment of or refusal or failure to prosecute the work or any separable part thereof with the diligence that will insure completion within the time specified in this contract, including any extension, or a failure to complete the work (or the separable part of the work) within the specified time;
2. Persistent or repeated refusal or failure to supply enough properly skilled workmen or materials to perform the work on schedule;
3. Failure to provide competent supervision at the site;
4. Failure to take down, rebuild, repair, alter or amend any defective or deficient work, or remove any defective or deficient Material
5. Failure to make prompt payment to subconsultants or suppliers for material or labor;
6. Loss of CONSULTANT, business or other required license or authority, or any curtailment or cessation for any reason of business or business operations that would substantially impair or preclude CONSULTANT's performance of this Contract;
7. Disregard of laws, ordinances, or the instructions of COUNTY or its representatives, or any otherwise substantial violation of any provision of the contract; or
8. If a voluntary or involuntary action for bankruptcy is commenced with respect to CONSULTANT, or CONSULTANT becomes insolvent, makes a general assignment for the benefit of creditors, or has a receiver or liquidator appointed in respect of its assets.

C. In the event of a termination for default:

1. All finished and unfinished as-builts, shop drawings, documents, data, studies, surveys, drawings, photographs, reports and other information in whatever form, including electronic, acquired or prepared by CONSULTANT for this project shall become COUNTY's property and shall be delivered to COUNTY not later than five (5) business days after the effective date of the termination;
2. COUNTY may withhold payments to CONSULTANT arising under this or any other Contract for the purpose of set-off until such time as the exact amount of damage due COUNTY from CONSULTANT is determined; and
3. Subject to the immediately preceding subparagraph (2), COUNTY's liability to CONSULTANT shall not exceed the reasonable value of work satisfactorily performed prior to the date of termination for which payment has not been previously made.



D. The Contract will not be terminated for default nor the CONSULTANT charged with damages under this Article, if—

(1) Excepting item (8) in paragraph B above, the event of default or delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the CONSULTANT. Examples of such causes include—

- (i) Acts of God or of the public enemy,
- (ii) Acts of the COUNTY in either its sovereign or contractual capacity,
- (iii) Acts of another CONSULTANT in the performance of a contract with the COUNTY,
- (iv) Fires,
- (v) Floods,
- (vi) Epidemics,
- (vii) Quarantine restrictions,
- (viii) Strikes,
- (ix) Freight embargoes,
- (x) Unusually severe weather, or

(xi) Delays of subconsultants or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the CONSULTANT and the subconsultants or suppliers; and

(2) The CONSULTANT, within three (3) days from the beginning of any event of default or delay (unless extended by COUNTY), notifies the COUNTY in writing of the cause(s) therefor. In this circumstance, the COUNTY shall ascertain the facts and the extent of the resulting delay. If, in the judgment of COUNTY, the findings warrant such action, the time for completing the work may be extended.

E. For the purposes of paragraph A above, "receipt of notice" shall include receipt by hand by CONSULTANT's onsite project manager, facsimile transmission, or under the Notices clause of this Contract.

F. If, after termination of the Contract for default, it is determined that the CONSULTANT was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the COUNTY.

G. The rights and remedies of COUNTY in this Article are cumulative and in addition to any other rights and remedies provided by law or under this contract.

ARTICLE XIX – TERMINATION FOR CONVENIENCE OF COUNTY

COUNTY may terminate this Contract at any time by giving written notice to CONSULTANT of such termination and specifying the effective date thereof, at least fifteen (15) days before the effective date of such termination. In that event, all finished or unfinished documents and other materials shall, at the option of the COUNTY, become its property. If the Contract is terminated by COUNTY as provided herein, CONSULTANT shall be paid an amount based on the time and expenses incurred by CONSULTANT prior to the termination date, however, no payment shall be allowed for anticipated profit on unperformed services.

ARTICLE XX – NON-APPROPRIATION OF FUNDS

Notwithstanding any other provision in this Contract, this Contract may be terminated if for any reason the Pima County Board of Supervisors does not appropriate sufficient monies for the purpose of maintaining this Contract. In the event of such termination, COUNTY shall have no further obligation to CONSULTANT, other than for services rendered prior to termination.

ARTICLE XXI – NOTICES

Any notice required or permitted to be given under this Contract shall be in writing and shall be served by delivery or by certified mail upon the other party as follows:

COUNTY:

CONSULTANT:



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ARTICLE XXII – OTHER DOCUMENTS

CONSULTANT and COUNTY in entering into this Contract have relied upon information provided in Solicitation for Qualifications # 1101303, and on representations and information in the CONSULTANT'S response to said SFQ. These documents are hereby incorporated into and made a part of this Contract as if set forth in full herein, to the extent not inconsistent with the provisions of this Contract. CONSULTANT shall perform services in accordance with the terms of the Contract and at a level of care consistent with prevailing industry standards. In the event any provision of this contract is inconsistent with those of any other document, the contract provisions will prevail.

ARTICLE XXIII – REMEDIES

Either party may pursue any remedies provided by law for the breach of this Contract, provided, however, that the procedures in **ARTICLE XXVI** are first exhausted. No right or remedy is intended to be exclusive of any other right or remedy and each shall be cumulative and in addition to any other right or remedy existing at law or at equity or by virtue of this Contract.

ARTICLE XXIV – BOOKS AND RECORDS

CONSULTANT shall keep and maintain proper and complete books, records and accounts, which shall be open at all reasonable times for inspection and audit by duly authorized representatives of COUNTY.

CONSULTANT shall retain all records relating to this contract at least five (5) years after its termination or cancellation or until any related pending proceeding or litigation has been closed, if later. Alternatively, CONSULTANT may, at its option, deliver such records to COUNTY for retention.

ARTICLE XXV – DELAYS

Neither party hereto shall be considered in default in the performance of its obligations hereunder to the extent that the performance of any such obligation is prevented or delayed by any cause, existing or future, which is beyond the reasonable control of such party.

ARTICLE XXVI – DISPUTES

In the event of a dispute between COUNTY and CONSULTANT regarding any part of this Contract or the Parties' obligations or performance hereunder, either Party may request a special meeting between their respective representatives to resolve the dispute. If the dispute remains unresolved, then either party may request escalation of the issue to a meeting between the Director of the Pima County Department administering this Contract and CONSULTANT'S counterpart official, such meeting to held within one week of the request, unless otherwise agreed. If the dispute is still not resolved after that meeting, then either Party may pursue such remedy or remedies as may be available to them under the laws of the State of Arizona.

The Parties shall continue performance of their respective obligations under this Contract notwithstanding the existence of any dispute.

ARTICLE XXVII – OWNERSHIP OF DOCUMENTS

All original drawings, field data, estimates, field notes, plans, specifications, documents, reports, calculations, and other information developed by CONSULTANT under this contract shall vest in and become the property of the COUNTY and shall be delivered to COUNTY upon completion or termination of the services, but CONSULTANT may retain and use copies thereof. The COUNTY agrees that the material will not be used for any project other than the project for which it was designed without the expressed permission of the CONSULTANT.



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ARTICLE XXVIII – PUBLIC INFORMATION

Pursuant to A.R.S. § 39-121 et seq., and A.R.S. § 34-603(G) in the case of construction or Architectural and Engineering services procured under A.R.S. Title 34, Chapter 6, all information submitted by CONSULTANT in any way related to this contract, including, but not limited to, pricing, product specifications, work plans, and any supporting data becomes public information and upon request, is subject to release and/or review by the general public including competitors.

Any records submitted related to this Contract that CONSULTANT believes constitutes proprietary, trade secret or otherwise confidential information must be appropriately and prominently marked as CONFIDENTIAL prior to submittal to COUNTY.

Notwithstanding the above provisions, in the event records marked CONFIDENTIAL are requested for public release pursuant to A.R.S. § 39-121 et seq., County shall release records marked CONFIDENTIAL ten (10) business days after the date of notice to the respondent of the request for release, unless respondent has, within the ten day period, secured a protective order, injunctive relief or other appropriate order from a court of competent jurisdiction, enjoining the release of the records. For the purposes of this paragraph, the day of the request for release shall not be counted in the time calculation. CONSULTANT shall be notified of any request for such release on the same day of the request for public release or as soon thereafter as practicable.

County shall not, under any circumstances, be responsible for securing a protective order or other relief enjoining the release of records marked CONFIDENTIAL, nor shall County be in any way financially responsible for any costs associated with securing such an order.

ARTICLE XXIX – LEGAL ARIZONA WORKERS ACT COMPLIANCE

CONSULTANT hereby warrants that it will at all times during the term of this Contract comply with all federal immigration laws applicable to CONSULTANT'S employment of its employees, and with the requirements of A.R.S. § 23-214 (A) (together the "State and Federal Immigration Laws"). CONSULTANT shall further ensure that each subconsultant who performs any work for CONSULTANT under this contract likewise complies with the State and Federal Immigration Laws.

COUNTY shall have the right at any time to inspect the books and records of CONSULTANT and any subconsultant in order to verify such party's compliance with the State and Federal Immigration Laws.

Any breach of CONSULTANT'S or any subconsultant's warranty of compliance with the State and Federal Immigration Laws, or of any other provision of this section, shall be deemed to be a material breach of this Contract subjecting CONSULTANT to penalties up to and including suspension or termination of this Contract. If the breach is by a subconsultant, and the subcontract is suspended or terminated as a result, CONSULTANT shall be required to take such steps as may be necessary to either self-perform the services that would have been provided under the subcontract or retain a replacement subconsultant, (subject to COUNTY approval if SBE or MWBE preferences apply) as soon as possible so as not to delay project completion.

CONSULTANT shall advise each subconsultant of COUNTY'S rights, and the subconsultant's obligations, under this Article by including a provision in each subcontract substantially in the following form:

"SUBCONSULTANT hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to SUBCONSULTANT's employees, and with the requirements of A.R.S. § 23-214 (A). SUBCONSULTANT further agrees that COUNTY may inspect the SUBCONSULTANT's books and records to insure that SUBCONSULTANT is in compliance with these requirements. Any breach of this paragraph by SUBCONSULTANT will be deemed to be a material breach of this contract subjecting SUBCONSULTANT to penalties up to and including suspension or termination of this contract."



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Any additional costs attributable directly or indirectly to remedial action under this Article shall be the responsibility of CONSULTANT. In the event that remedial action under this Article results in delay to one or more tasks on the critical path of CONSULTANT's approved construction or critical milestones schedule, such period of delay shall be deemed excusable delay for which CONSULTANT shall be entitled to an extension of time, but not costs.

ARTICLE XXX – SCRUTINIZED BUSINESS OPERATIONS

Pursuant to A.R.S. §§ 35-391.06 and 393.06, CONSULTANT hereby certifies that it does not have scrutinized business operations in Iran or Sudan. The submission of a false certification by CONSULTANT may result in action up to and including termination of this contract.

ARTICLE XXXI – SEVERABILITY

Each provision of this Contract stands alone, and any provision of this Contract found to be prohibited by law shall be ineffective to the extent of such prohibition without invalidating the remainder of this Contract.

ARTICLE XXXII – ENTIRE AGREEMENT

This document constitutes the entire agreement between the parties pertaining to the subject matter hereof, and all prior or contemporaneous agreements and understandings, oral or written, are hereby superseded and merged herein. This contract may be modified, amended, altered or extended only by a written Amendment signed by the parties.

IN WITNESS WHEREOF, the parties have affixed their signatures to this Contract on the dates written below.

PIMA COUNTY:

CONTRACTOR:

Chair, Board of Supervisors

Signature

Date

Name and Title (Please Print)

ATTEST:

Date

Clerk of the Board

APPROVED AS TO FORM:

Deputy County Attorney

Name (Please Print)

Date



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EXHIBIT 'A' SCOPE OF WORK PROFESSIONAL SERVICES REQUIRED

PIMA COUNTY FACILITIES MANAGEMENT
DESIGN AND CONSTRUCTION DIVISION
150 W. Congress, 5th Floor | Tucson, Arizona | 85701

SCOPE OF PROFESSIONAL SERVICES REQUIRED

DATE: December 1, 2010
PROJECT NAME: Pima County Fleet Services
New Services Facilities
ADDRESS: Pima County Mission Road Complex
Tucson, Arizona

A. SCOPE OF SERVICES TO BE PROVIDED BY THE CONSULTANT

1. General Provisions:

The COUNTY lacks the available resources for the Project, and has therefore, by this Agreement, seeks to employ a CONSULTANT. The Scope of Professional Services shall include all professional services required as described herein.

All work shall be performed by persons licensed in the State of Arizona for the type of Professional Services required, or by persons under direct supervision of the licensed Professional, for which the Licensed Professional(s) assumes responsibility. The names of the licensed Professional(s) shall be supplied. They shall be responsible for the drawings and specifications pertaining to the Professional Services they provide, by sealing and signing all drawings and specifications for which they are responsible.

If a responsive construction bid proposal for the Project is not received for an amount within the construction budget, the CONSULTANT shall, in consultation and approval with the COUNTY, revise the scope and/or quality of the project to obtain a satisfactory proposal to construct the project in accordance with Arizona Revised Statutes at no additional cost to the COUNTY, unless otherwise agreed upon by the COUNTY.

The CONSULTANT shall prepare minutes of all meetings for which they are an active participant as deemed appropriate by the County. Distribution of the meeting minutes by the CONSULTANT shall occur within 5 days after the meeting occurred. The CONSULTANT shall participate in all public meetings for the purpose of keeping the public informed as design progresses and manage public participation in the project.

During the design phase of the project the CONSULTANT shall prepare a Master Project Schedule to encompass the entire project including the anticipated construction phase for review and approval by the COUNTY's Project Manager. The CONSULTANT shall develop the baseline project schedule in Microsoft Project 2003 format. CONSULTANT shall then be responsible to maintain and update the schedule on a monthly basis until construction begins. The CONSULTANT shall submit each schedule revision to the COUNTY for review and approval.

Progress reports shall be sent to the COUNTY'S Project Manager on a bi-monthly basis.



2. Project Narrative:

Pima County Fleet Services Department is the agency directly responsible for the acquisition, maintenance, fueling and disposal of all County vehicles. Fleet Service's customers comprise most, if not all, Pima County departments and they have intergovernmental maintenance agreements with at least 15 other agencies around the County. The Department maintains in excess of 2,000 vehicles of varying sizing and needs including at this time:

- 762 Vans, Pickups and Light Trucks
- 61 Medium Trucks
- 83 Heavy Trucks
- 12 Truck Tractors
- 266 Sheriff Cars
- 436 Cars
- 1 Fire Truck
- 6 Busses
- 76 pieces of Off-Road Equipment
- 291 pieces of Miscellaneous Equipment
- 160 Non-Motorized Trailers

The Project's primary goal is to construct a new operationally and energy efficient campus for Fleet Services Department which will include administrative offices, operations crew support spaces, maintenance and shops, welding shop area, service bays, parts and equipment warehouse storage, delivery area, parking and vehicle storage yards, and site work for a new fueling station (by PCFM). A prime objective of the Project will be to consolidate the heavy equipment shop with the main facility and replace the aging fuel station located at Mission Road. Design and construction of the new fuel station will be completed by Pima County Facilities Management. However, the site design shall incorporate the infrastructure and grading to accomplish the fuel station work. This new project will be constructed in phases, and will replace outdated 40 year old facilities.

Proposed Phasing

The project currently is proposed to be constructed in phases. The CONSULTANT shall review the program, and scope of work to determine the best strategy for using the Project's initial budget amount. The following phases were developed during a study conducted by Pima County Facilities Management:

Phase 1

Install new roadway within the complex to provide access to 22nd Street, create staff parking and an auction yard. Tenant Improvements in Building #24.

Phase 2 (Demolition Package will be overseen by PCFM)

Relocate several DOT functions, and demolish Building #1 and 3

- **Building 1** (2,800 GSF) the "Old" Operations Building is currently used as locker room and toilet facilities for DOT Operations crews and contains 4 or 5 supervisor's offices
- **Building 3** (5,170 GSF) contains the Operations Warehouse and a repair shop
- Temporary relocation of Automotive Services Wash Rack

Phase 3

Complete new roadway work

Phase 4

Construct new Fleet Services Building and adjoining site work



Phase 5

Install new fuel island, tank yard, and complete remaining roadway. The fuel island and tank yard design and installation will be overseen by PCFM.

The Pima County Facilities Management Department in conjunction with Fleet Services recently completed several reports related to this project which are incorporated herein:

- **Appendix '1' to Exhibit 'A'** Facility Assessment and Master Plan for the Pima County Mission Road Complex prepared for Pima County Department of Transportation, dated August 16, 2010
- **Appendix '2' to Exhibit 'A'** New Facilities Program and Design Guidelines prepared for Pima County Fleet Services, dated September 21, 2010 (Revised October 28, 2010)

If there are discrepancies between this Exhibit and the above reports, this Exhibit will govern.

3. Architectural and Engineering Services:

Design services for this project are to consist of Pre-Design Services (Due Diligence), Schematic Design, Design Development, Construction Documentation in three steps (50% Review and 90% Review, and Permit/Procurement documents), the Bidding and Negotiation period, Commissioning, and Construction Administration through project close-out as described further in the following sections.

The CONSULTANT's engineering and design services shall include the following disciplines:

- Architectural
- Structural Engineering
- Industrial Design Specialist
- Mechanical Engineering which also includes,
Energy Model Calculations per phase
- Plumbing Engineering which includes, however not limited to:
Truck Wash Facility
- Commissioning as required for LEED Silver Certification
- Energy Management Control System Design
- Fire Protection Performance Drawings and Specifications
- Electrical Engineering including
 - Power
 - Lighting
 - Site Lighting
 - Class A Fire Alarm System design
 - Information Technology and Communications Infrastructure Design
 - Special Systems
 - Public Address System
- Security Systems Design
- Solar Photovoltaic Design
- Information Technology Infrastructure Pathway
 - o Pima County Information Technology Dept. shall provide:
 - Telephone Service
 - Computer Network Connectivity
 - Wireless Access Service
- Civil Engineering including however not limited to:
 - Mission Road Complex Drainage Report
 - Project Drainage Report
 - Environmental Impact Assessment Report – Phase I
 - Grading, Pavement and Drainage Design
 - Horizontal Control Plan
 - Storm Water Pollution Prevention Plan
 - Water Service Plan



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- Landscape Architecture
Landscape Design
Irrigation Design
- Cost Estimating Services at each phase (not done in-house)
- LEED Accredited Professional Services and USGBC fees for goal of reaching LEED Silver Certification
- Professional Engineering Services required to achieve LEED Silver Certification

The CONSULTANT along with the PCFM Project Manager shall meet with all local utility companies, and various local and state agencies, and City and County Departments during the design phase, and shall prepare and submit all required documentation in order to obtain construction permits.

Interior Design Services will be provided by the Pima County Facilities Management Department. The CONSULTANT shall provide specification sections for materials and finishes which are selected by the PCFM Interior Designer.

The COUNTY's Facilities Management Project Manager shall determine the LEED Green Building Rating System and certification level which shall be used for the specific project. The goal is to achieve LEED silver certification for the Fleet Services Building.

4. Project Costs

Construction Budget for General Contractor	\$7,170,000
Total Project Cost	\$10,000,000

The Project's delivery method for Project is to be Design-Bid-Build. If possible, portions of the project will be completed internally by PCFM with available resources. This may include interior design services, building demolition oversight, tenant improvements, tenant moving services, signage design. Also, Pima County's Qualified List of Consultants (QCL), and Job Order Contractors (JOC) lists will be used by PCFM to hire firms to conduct material testing and special inspections, hazardous materials assessment and abatement (if necessary) and survey services.

The CONSULTANT is responsible to maintain the project's design within the construction budget. At the onset of the Project the CONSULTANT shall review the budget with the Project Manager. The CONSULTANT shall notify the COUNTY's assigned Project Manager immediately upon becoming aware that there is a budget shortfall, so that corrective action can be taken in a timely manner, and so that there is minimal impact to the overall schedule.

The Construction budget listed above includes escalation costs carried through to the midpoint of construction. The anticipated construction start is June 2012. Cost estimates shall be done by a professional estimator, who is not an employee of the Consultant's firm, and is independent from the CONSULTANT's other sub-consultants. If necessary the CONSULTANT and his cost estimator shall recommend value engineering items, scope changes, and add alternates for the COUNTY's review and approval. If changes need to occur to the documents to meet the budget, and a new cost estimate/s has to be done this shall be at no expense to the COUNTY.

5. Project Schedule:

The Contract for this project will be a **Two Tier Agreement**:

- a. Tier One Services will be the preliminary design phase as described
- b. Tier Two Services includes the remainder of the phases as listed below



The Project will be done in the following phases (calendar days shown):

Tier One – Preliminary Design Phase:

Preliminary Design - Due Diligence

Program Review and Equip. Documentation	2 weeks
Assessment of Project Scope and Budget	2 weeks
Storm Water Master Plan Report, and Environmental Impact Assessment	7 weeks

During Tier One PCFM will hire a surveying firm to prepare a topographic survey.

Tier Two – Design through Construction to Move-In:

Schematic Design Phase

Schematic Design	3 weeks
Review Period	2 weeks

During the Schematic Design Phase PCFM will hire a geotechnical engineering firm to prepare a geotechnical report.

Design Development Phase

Design Development (30% CD)	9 weeks
Review Period	2 weeks

Construction Document Phase

Construction Documents to 50% CD	8 weeks
Review Period	2 weeks

Construction Documents to 90% CD	9 weeks
Review Period	2 weeks

Finalize Construction Documents	<u>4 weeks</u>
Subtotal:	52 weeks

Permit and Bid Phases	up to 4 months
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Construction Admin. to Substantial Completion	up to 1 year
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Move-In and Punch List items	4 weeks
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6. Pre-Design Services Detail:

a. Facilities Equipment Documentation

CONSULTANT shall document existing equipment which is proposed to be relocated to the new facilities, and verify new equipment which will need to be purchased.

b. Confirmation of Program, and Scope to Meet Project's Construction Budget:

The CONSULTANT at the onset of the project will be given an electronic copy of the Fleet Services Program and Design Guidelines and Mission Road Complex Master Plan which was prepared by the County's Facilities Management Department. The Consultant shall review the program document with the PCFM Project Manager, and representatives from Fleet Services.



After reviewing the Program and Project budget the CONSULTANT shall work with the COUNTY to prioritize and develop a phased approach to the project. Approval from the PCFM Project Manager of the written Program, and Written Scope of Work is necessary before proceeding on to the Schematic Design Phase of the Project.

7. Design Services Detail:

a. Applicable Codes and Regulations:

The CONSULTANT shall design and complete construction documents to meet current applicable codes and regulations at the time of the permit submission.

Due to the Mission Road Complex being owned and operated by the COUNTY, the Project falls under the County's jurisdiction for the building construction. Permits applications will be submitted to Pima County Development Services by the PCFM Project Manager with the assistance of the CONSULTANT. However, the complex is within the City of Tucson limits, and therefore, the City of Tucson's Floodplain requirements do apply. The CONSULTANT with the PCFM Project Manager will work with PC Regional Flood Control District to verify permit and submission review requirements related to the flood plain.

The CONSULTANT shall obtain applicable local codes and regulation requirements from Pima County Development Services website located at <http://www.pima.gov>. The code and regulation requirements for Commercial projects which are prepared for Pima County can be found at: <http://www.pimaxpress.com/Building/default.htm>

The County will seek exemption from the Native Plant Preservation Plan, and the Pima County Development Plan requirements.

The CONSULTANT shall assist the PCFM Project Manager with all permit applications, and will assist in assuring that all other code and regulatory requirements at the local, State and Federal level are followed to complete this project.

b. Phases of Design Services:

Design Services are separated into several phases including:

- Schematic Design
- Design Development (30% CD)
- Construction Documents (50% CD, 90% CD, and completed package)

c. Schematic Design:

The Schematic Design Phase for the facility consists of drawings, outline specifications (CSI outline format for all disciplines), calculations, product cut sheets, zoning and code reviews, regulatory permit requirements, and other documents, which establish the general, scope, design, scale and relationships between components, and any other preliminary concerns specific to the Project. Documentation for the Schematic Design Phase shall be prepared in sufficient detail and technical calculation necessary to proceed to the Design Development Phase of the Project.

The CONSULTANT shall assist the PCFM PM in determining the scope and site boundary for the ALTA Survey, Geotechnical Report, which will be contracted separately by PCFM.

The Consultant shall conduct an in-house quality review session with the Architect's team prior to submission to the COUNTY. Also, the CONSULTANT shall review a draft of the submittal with the PCFM PM prior to submission to the Review Committee, and shall



incorporate any changes prior to the submission. The CONSULTANT shall submit 4 hardcopies copies and 2 disk copies in electronic PDF format of the schematic design

documents to the COUNTY'S Project Manager, for review by the COUNTY and Review Committee. The CONSULTANT shall prepare and submit a written response to each of the COUNTY's review comments at this time.

Concurrent with submission of the Schematic Design Documents, the CONSULTANT shall submit a Statement of Probable Construction Cost, 2 hardcopies and 2 disk copies in electronic PDF format to the COUNTY's Project Manager, with itemized costs for materials and labor for each portion of the construction. The itemized costs will be broken down similar to CSI specification format which each trade's labor and materials clearly identified. The CONSULTANT must receive from the COUNTY written approval of the Schematic Design documents before proceeding to the Design Development phase.

At the CONSULTANT's option, the CONSULTANT may participate in a Ground Breaking ceremony at the site.

d. Design Development Phase (30% Completion Construction Documents):

The CONSULTANT shall proceed with the Design Development Documents only on written approval by the COUNTY. This Phase consists of drawings and other documents necessary to fix and describe the size and character of the entire Project as to civil, architectural, structural, mechanical, plumbing and electrical systems, materials, and such other essentials as may be appropriate. Design Development Documents shall be submitted to the COUNTY for review and approval.

The CONSULTANT shall conduct an in-house quality review session with the Architect's team prior to submission to the COUNTY. Also, the CONSULTANT shall review a draft of the submittal with the PCFM PM prior to submission to the Review Committee, and shall incorporate any changes prior to the submission. The CONSULTANT shall submit to the COUNTY's Project Manager 4 hard copies of the drawings, specifications and other review documents which includes product cut sheets (24"x36" drawing format preferred) and 2 disk copies in electronic PDF and AutoCad format of the Design Development Documents to the COUNTY, for review by the COUNTY and Review Committee. The CONSULTANT shall prepare and submit a written response to each of the COUNTY's review comments at this time. The CONSULTANT must receive from the COUNTY written approval of the Design Development Documents before proceeding to the Construction Document Phase.

Concurrent with submission of the Design Development Documents, the CONSULTANT shall submit a Statement of Probable Construction Cost for each facility. Provide 2 hard copies and 2 copies in electronic PDF format to the COUNTY, with itemized costs for materials and labor for each portion of the construction. The itemized costs will be broken down similar to CSI specification format which each trade's labor and materials clearly identified. The CONSULTANT must receive from the COUNTY written approval of the Design Development documents before proceeding to the Construction Document phase.

e. Construction Documents Phase (50% Completion):

The CONSULTANT shall prepare from the approved Design Development Documents, 50% completed Construction Documents, including Drawings and full Specifications (including all architectural and engineering disciplines), setting forth in detail the requirements for the construction of the entire Project, including coordination of the various applicable disciplines such as utilities, and shall be familiar with the standard Pima County Bidding Instructions and the General Conditions of the Contract. The COUNTY's Project Manager will supply these Instructions and Conditions to the CONSULTANT.



The CONSULTANT and/or sub-consultants shall meet with local and State Agencies to verify and receive preliminary written approval of architectural and engineering documents. This includes, however is not limited to, consultation with local utility

companies and Agencies, Tucson Water, Tucson Electric Power, Southwest Gas, ADEQ, Arizona Office of the State Fire Marshal, and Pima County Development Services. The Consultant shall conduct an in-house quality review session with the Architect's team prior to submission to the COUNTY. The CONSULTANT shall review a draft of the submittal with the PCFM PM prior to submission to the Review Committee, and shall incorporate any changes prior to the submission.

CONSULTANT shall submit to the COUNTY's Project Manager 4 hard copies of the drawings, bound specifications and other review documents (24"x36" drawing format preferred) and 2 disks in electronic PDF and AutoCad format of the 50% complete Construction Documents for the COUNTY's and Review Committee's review and approval. CONSULTANT shall make required changes at this time based on COUNTY's and Review Committee review comments. The CONSULTANT shall prepare and submit a written response to each of the review comments. The CONSULTANT must receive from the COUNTY written approval of the documents prior to entering into the next phase.

Concurrent with submission of the 50% Construction Documents, the CONSULTANT shall submit a Statement of Probable Construction Cost. Provide 2 hard copies and 2 copies in electronic PDF format to the COUNTY, with itemized costs for materials and labor for each portion of the construction, including new equipment. The itemized costs will be broken down similar to CSI specification format which each trade's labor and materials clearly identified.

The CONSULTANT must receive from the COUNTY written approval of the 50% Construction Documents Phase before proceeding to the 90% Construction Document Phase.

f. Construction Documents Phases (90% Completion):

The CONSULTANT shall prepare from the approved 50% Construction Documents, a 90% completed Construction Document package, including drawings and full specifications (including all architectural and engineering disciplines), setting forth in detail the requirements for the construction of the entire Project, including coordination of the various applicable disciplines such as utilities, and shall be familiar with the standard Pima County Bidding Instructions and the General Conditions of the Contract. The COUNTY's Project Manager will supply these Instructions and Conditions to the CONSULTANT.

The CONSULTANT and/or sub-consultants shall meet with local and State Agencies to verify and receive written approval of architectural and engineering documents. This includes, however is not limited to, consultation with Tucson Water, Arizona Office of State Fire Marshal, and Pima County Development Services. The Consultant shall conduct an in-house quality review session with the Architect's team prior to submission to the COUNTY. The CONSULTANT shall review a draft of the submittal with the PCFM PM prior to submission to the Review Committee, and shall incorporate any changes prior to the submission.

CONSULTANT shall submit to the COUNTY's Project Manager 4 hard copies of the drawings, bound specifications and other review documents (24"x36" drawing format preferred) and 2 disks in electronic PDF and AutoCad format of the 90% complete Construction Documents for the COUNTY's and Review Committee's review and approval. CONSULTANT shall make required changes at this time based on COUNTY's



and Review Committee review comments. The CONSULTANT shall prepare and submit a written response to each of the review comments. The CONSULTANT must receive from the COUNTY written approval of the documents prior to entering into the next phase.

Concurrent with submission of the 90% Construction Documents, the CONSULTANT shall submit a Statement of Probable Construction Cost. Provide 2 hard copies and 2 copies in electronic PDF format to the COUNTY, with itemized costs for materials and labor for each portion of the construction including new equipment. The itemized costs will be broken down similar to CSI specification format which each trade's labor and materials clearly identified.

The CONSULTANT must receive from the COUNTY written approval of the 90% Construction Documents Phase before proceeding to finalizing the Construction Documents so that the documents can be submitted to the Development Services and Procurement Departments.

g. Construction Documents Phases (for Completion):

The CONSULTANT shall develop from the 90% Construction Documents, the Construction Document submission which will be submitted by the COUNTY's Project Manager to obtain the building construction permits and begin the procurement process to obtain a General Contractor. This submission includes Drawings and full Specifications, calculations, and product cut sheets, setting forth in detail the requirements for the construction of the entire Project, including coordination of the various applicable disciplines such as utilities, and shall be familiar with the standard Pima County Bidding Instructions and the General Conditions of the Contract.

The CONSULTANT shall complete the Construction Documents, including drawings and full Specifications (including all architectural and engineering disciplines), setting forth in detail the requirements for the construction of the entire Project, including coordination of the various applicable disciplines such as utilities/ The Consultant shall conduct an in-house quality review session prior to submission to the COUNTY. CONSULTANT shall submit to the COUNTY's Project Manager:

- 1 loose original sealed drawing set
- 1 loose specification manual
- 2 copies of structural calculations
- 2 copies of Model Energy Code calculations
- 2 copies of product cut sheets
- 2 copies of updated Cost Estimate
- 2 disks in electronic PDF and AutoCAD 2010 formats
of the completed Construction Documents
- Permit application form/s
- Other documents: 2 copies

Upon approval of the Construction Document Phase for each facility, the CONSULTANT shall provide the COUNTY with permit/bid documents consisting of original sealed unbound drawings and loose sealed technical specifications, electronic CADD files (AutoCad 2010 and PDF electronic format on two disks) with files in formats specified by the County. In addition the CONSULTANT shall provide 5 bound sets of drawings and specifications and as listed above.

The CONSULTANT shall provide the COUNTY with all required documentation for submittal for the Construction Permit, or any other permits, or review processes required by said governmental authorities. These documents shall include completed permit applications, checklists, Consultant Consent Form, plans, specifications, special inspection certificates (if necessary) and calculations. The COUNTY will submit these documents to Development Services for permit review.



The CONSULTANT must receive from the COUNTY's Project Manager's written approval of the Completed Construction Documents before proceeding to the next phase.

8. Consultant Coordination Effort with PCFM Interior Design:

The following Interior Design Services will be provided by the Pima County Facilities Management Department including:

Material and Finishes Selection by PCFM:

- Selection of interior materials and finishes
- Preparation of complimentary interior material and finish schedules which will be incorporated by CONSULTANT into their construction drawings and specifications
- Preparation of interior materials and finish presentation binders
- Participation in shop drawing review for interior materials and finishes
- Participation in the punch list related to interior materials and finishes
- Participation in design review session related to Interior Design
- Determine which employees require specialized seat type and workstation heights due to special ergonomic needs. The PCFM ID shall obtain this information from the Review Committees members, or designated Supervisors, with assistance from the PCFM PM

Accessory Selection by PCFM:

- Selection and procurement, and installation coordination of window coverings (if applicable)
- Selection and procurement, and installation coordination of interior artwork (if applicable)
- Selection of accessories which will be incorporated in to the design and Construction Documents
 - o Tack boards and White boards
 - o Office area waste receptacles
 - o Carpet protection mats

Furniture by PCFM:

- Inventory of existing systems furniture and free standing furniture
- Inventory of existing furniture related products:
 - o Tack boards
 - o Marker boards
 - o Carpet protection mats
- Develop Typical Systems Furniture Workstation, identifying NEW from EXISTING product, and create isometric drawings of typical systems work stations
- Selection and specification of new free standing furniture and system furniture
- Preparation of furniture installation drawings and furniture plans which are coded to product cut sheets
- Upon completion of the Inventory As-Built drawings, the new Furniture drawings, and the re-used Furniture drawings, the PCFM ID shall submit the drawings for review and approval by the Review Committee
- Develop probable cost of furniture throughout design and construction phases
- Procurement and installation oversight of free standing and systems furniture

Signage by PCFM:

- Interior way-finding and room signage design and construction documentation which will be incorporated into the construction document set by the CONSULTANT
- Exception: The CONSULTANT shall develop the exterior building signage, and site way finding signage



Move Coordination by PCFM:

- Move coordination of personnel, along with PCFM move coordinator
- Preparation of occupants move schedules

The CONSULTANT will be responsible for the following pre-design and design elements related to the interior design effort:

- Review Programming (except for furniture which will be done by PCFM ID)
- Development of the floor plan and spatial relationships
 - o Including ceiling configuration, soffits
- Design of custom millwork and built-ins
- LEED application materials related to Interiors
- Inventory of existing equipment not considered freestanding furniture or systems furniture, and selection of new equipment shall be the responsibility of the CONSULTANT.
- Incorporate interior design signage design elements in to the design and construction document drawings and specifications
- Incorporate finish and material selections in to the design and construction document drawings and specifications
- Equipment Location Plans and Equipment Schedules

During the Design Phase, the CONSULTANT shall periodically provide AutoCAD background drawings to the PCFM PM for review. The PCFM PM will forward the plans to the PCFM Interior Designer (ID) so that the PCFM ID can update the furniture drawings. The PCFM ID will in turn send furniture drawings to the CONSULTANT, through the PCFM PM, on an as needed basis.

The CONSULTANT shall provide specification sections for materials and finishes which are selected by the PCFM Interior Designer.

To keep one main point of contact from the County, all correspondence between the CONSULTANT and the PCFM Interior Designer shall be routed through the PCFM Project Manager during the design and construction phases.

The PCFM Construction Manager is the main point of contact with the CONSULTANT during the construction phase. Communications, and shop drawings related to interiors shall be sent to the PCFM Construction Manager, who in turn will forward the information to the PCFM PM during the construction phase.

9. Bidding and Plan Review Phase:

The CONSULTANT shall assist the COUNTY in answering any questions that may arise from bidders pertaining to the Construction Documents. Should Addenda become necessary, the CONSULTANT shall prepare and distribute same with direction provided by the COUNTY's Project Manager. The CONSULTANT will assist in the review of bids to help determine the most advantageous bid to the COUNTY, and make a recommendation to the COUNTY's Project Manager for award.

If necessary, the CONSULTANT shall make any required changes to the Construction Documents during the Bidding Phase by an addendum, and shall also incorporate the changes in to the drawings and specifications with the permit plan review submission. If the schedule allows, the PCFM department prefers to have the permit documents approved by Development Services, prior to going to bid.

A Pre-Bid Conference for each facility shall be part of the Bidding Documents Phase, and CONSULTANT shall attend the conference, to which all potential bidders shall be invited.



10. Construction Administration Phase:

Whenever the term "Contract" is used herein, it shall mean the Construction Contract awarded by the Board of Supervisors of Pima County, Arizona, and as the same may hereinafter be amended with approval of both parties after review by the CONSULTANT.

The term "Contractor" as used herein shall mean the party entering into a contract with COUNTY for the construction of the Project defined by the Construction Documents.

CONSULTANT's Construction Administration Phase shall commence with the award of the Construction Contract and will terminate Sixty (60) days following issuing of the Certificate of Substantial Completion. CONSULTANT's Construction Administration Services, beyond the completion time period specified above, unless due to the neglect of the CONSULTANT shall require specific written approval by the COUNTY by written amendment to this agreement.

The CONSULTANT shall provide administration of the Construction Contract as set forth in the Construction Contract and General Conditions of the Owner-Contractor Construction Contract. The extent of the CONSULTANT duties and responsibilities and the limitations of his authority as assigned there under shall not be modified without the written consent of the CONSULTANT, and that of the COUNTY.

The CONSULTANT, as the representative of the COUNTY during the Construction Phase, shall advise and consult with the COUNTY. All of the COUNTY instructions to the Contractor shall be issued through the CONSULTANT. The CONSULTANT shall have authority to act on behalf of the COUNTY to the extent provided in this Agreement, the Construction Contract, and the General Conditions, unless otherwise modified in writing.

The CONSULTANT shall at all times have access to the Work whenever it is in preparation or progress.

The CONSULTANT shall make sufficient visits to the site so as to ascertain the progress and quality of the Work and to determine if the Work is proceeding in accordance with the Contract Documents. SUB-CONSULTANTS to the CONSULTANT shall also furnish periodic written records of their inspection of the Work, which shall be submitted to the COUNTY, through the CONSULTANT, for the COUNTY files.

The CONSULTANT shall chair a weekly construction meeting on site with Contractor. The General Contractor will provide written minutes of the meetings to all attendees.

The CONSULTANT shall immediately notify the COUNTY if the Contractor is failing to carry out the work in accordance with the Contract Documents, and shall immediately notify the Contractor of work not in compliance with the Contract Documents. The CONSULTANT shall prepare a list of critical construction inspection times and items to be inspected, and said schedule shall be made part of the successful Contractor's required performance.

Notwithstanding any provisions of previous paragraphs, and based on such observations at the site and on the Contractor's Applications for Payment, the CONSULTANT shall determine the amount owing to the Contractor and certify the payment of such amounts on the Contractor's Applications for Payment (AIA Form G-702).

The Certification of the Application for Payment shall constitute a representation by the CONSULTANT to the COUNTY based on the CONSULTANT's observations of the site and on the data comprising the Application for Payment, that the Work has progressed to the point indicated; that to the best of the CONSULTANT's knowledge, information and belief, that the quality of the Work is in accordance with the Contract Documents (subject



to an evaluation of the Work as a functioning whole upon Substantial Completion; to the results of any subsequent tests required by the Contract Documents; to minor deviations from the Contract Documents correctable prior to completion; and to the specific qualifications stated in the Certificate for Payment) and that the Contractor is entitled to payment in the amount certified. When the Contractor has made proper application therefore, the CONSULTANT shall forward the certified Application for Payment to the COUNTY within two business days of receipt unless agreed upon otherwise with the COUNTY's Construction Management Representative.

The CONSULTANT may decline to approve an Application for Payment and may withhold the Application in whole or in part, if in the CONSULTANT's opinion he is unable to make representations to COUNTY as provided in the above paragraph. The CONSULTANT may also decline to approve any Applications for Payment, or, because of subsequently discovered evidence or subsequent inspections, he may nullify the whole or any part of any Certificate for Payment previously issued to such extent as may be necessary in his opinion to protect the COUNTY from loss because of:

Defective work not remedied, or;

Claims filed, or reasonable evidence indicating probable filing of claims, or;

Failure of the Contractor to make payments to sub-contractors for labor, materials or equipment, or;

Reasonable doubt that the Work can be completed for the unpaid balance of the Contract Sum, or;

Damage to another contract, or;

Reasonable indication that the Work will not be completed within the Contract Time, or;

Unsatisfactory execution of the Work by the Contractor.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

The CONSULTANT may, on request, and at his discretion, furnish to any sub-contractor, if practicable, information regarding percentages of completion certified to the Contractor on account of Work done by such sub-contractors.

The CONSULTANT shall be, in the first instance, the interpreter of the requirements of the Contract Documents and of the performance there under by both the COUNTY and Contractor. The CONSULTANT shall recommend decisions on all claims from the COUNTY or Contractor relating to the execution and progress of the work on all other matters or questions related thereto.

CONSULTANT shall provide, as part of his Construction Administration services, Inspections to verify that the work is in conformance to the Construction contract documents. Inspection by the CONSULTANT shall be promptly made and where practicable at the source of supply.

If the Construction Documents, laws, ordinances, etc., of any public authority require any work to be specifically tested or approved, or if the CONSULTANT deems such testing or approval necessary, special inspections and/or testing shall be conducted after notice from the Contractor of its readiness. Special Inspections required by the Authority Having Jurisdiction shall be considered an additional service by the CONSULTANT.



The CONSULTANT shall have the authority to reject Work, which does not conform to the Contract Documents, and to require, if in his opinion necessary, special inspection or testing of any Work at any stage of progress. The CONSULTANT shall also notify the COUNTY of the necessity to require the Contractor to stop the Work whenever, in his opinion, it may be necessary for the proper performance of the Contract. The COUNTY, when necessary, shall issue the order to stop the Work.

The CONSULTANT shall review and approve shop drawings, samples, and other submissions of the Contractor with reasonable promptness. The CONSULTANT shall furnish any requested additional instructions in writing, by means of drawings, or otherwise, necessary for the proper execution of the Work. All such instructions or drawings shall be consistent with the Contract Documents, true developments thereof, and reasonably inferable there from. The CONSULTANT shall scan all approved shop drawings into PDF format, and e-mail to the PCFM Construction Manager.

The CONSULTANT shall make minor changes in the Work not involving extra cost, delay, or claim of any kind against the COUNTY and/or Contractor, and not inconsistent with the purposes of the Project. Otherwise, except in an emergency endangering life or property, the CONSULTANT shall prepare and process no extra work or change except by WRITTEN approval and Change Order signed by the COUNTY. The CONSULTANT shall prepare said Change Orders as well as any Request for Proposals to the Contractor.

The CONSULTANT shall produce, and determine the date of issuance of the Certificates of Substantial Completion, and Final Completion shall receive written guarantees, waiver of liens, and related documents assembled by the Contractor, and shall issue a final Certificate for Payment.

At the conclusion of the Project, the CONSULTANT shall prepare a Record Drawing Package (electronic as-built drawings). The CONSULTANT shall also prepare "Master" CAD drawing files whose content and format are identified in the attached document. In addition, key shop drawings are to be scanned and submitted by the CONSULTANT to the PCFM Construction Services Representative on a disk as part of the closeout documents.

B. SCOPE OF SERVICES TO BE PROVIDED BY PIMA COUNTY

The COUNTY shall provide the following items and services in support of the CONSULTANT'S work:

1. A Project Manager from the COUNTY will be assigned to work with the CONSULTANT.
2. The COUNTY shall provide to the CONSULTANT a topographic ALTA survey with sufficient detail to design the project.
3. The COUNTY shall provide to the CONSULTANT a Geotechnical report. The CONSULTANT shall assist the PCFM PM in developing a scope of work for the Geotechnical report.
4. The COUNTY will pay for the cost of reproductions for all documents required for submittals to the COUNTY, for meetings with the COUNTY, and for bidding and construction purposes. The reproductions and printing will be done by vendors having a purchase order with the COUNTY unless approved otherwise by the PCFM Project Manager. Reproduction costs for documents to be used for coordination purposes by the CONSULTANT and Sub-consultants are to be made at their expense.

Pima County Procurement Department
Solicitation for Qualifications 1101303

Architectural and Engineering Design Services:

PIMA COUNTY FLEET SERVICES NEW SERVICES FACILITIES



DECEMBER, 2010

5. The COUNTY will pay for material testing and special inspections based on Project requirements defined by CONSULTANT. Special Inspections may be provided by the CONSULTANT as agreed upon by PCFM.
6. Any information available regarding utilities and services, or any other project specific information at the request of the CONSULTANT. This does not limit or negate the requirement of the CONSULTANT to verify the field conditions. CADD drawings furnished to the CONSULTANT at the onset of the project are assumed to not be accurate.
7. Any reports and/or mitigation regarding the presence of hazardous materials on the property. In the event that hazardous materials are encountered, the COUNTY will contract directly with abatement consultants and Contractors for remediation, should that be necessary.
8. Assistance with establishment of CADD files and formats as defined in the attached Facilities Management Department CAD Standards;
9. The PCFM Project Manager will provide to the CONSULTANT any building Materials and Finishes Standards desired by the COUNTY;
10. Interior Design Services related to Furniture and Systems Furniture will be done by PCFM;

END OF EXHIBIT "A"



APPENDIX '1' TO EXHIBIT 'A'

**Facility Assessment and Master Plan for the Pima County Mission
Road Complex prepared for Pima County Department of
Transportation, dated August 16, 2010**



Department of Transportation

Pima County Mission Road Complex Facility Assessment and Master Plan

August 16, 2010

by





Pima County Mission Road Complex
DOT Facility Assessment and Master Plan

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Pima County Mission Road Complex
DOT Facility Assessment and Master Plan

SECTION 1

INTRODUCTION

This assessment and master plan is being done as a direct response to and coincidental with the Fleet Services New Facility Program and Design Guidelines. The goal of the Fleet Services (FS) project is to relocate FS out of old and outdated buildings into new state-of-the-art facilities. This new facility would be located directly north of the existing buildings and would impact and ultimately eliminate 2 Department of Transportation (DOT) buildings and use areas. The goal of this project is to find/create new facilities for DOT to replicate those they will lose in the process and to assess their needs into the near future.

In this regard, the "future" is the next expansion and building project at the Mission Road facility as might occur.



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

GOALS & OBJECTIVES

DOT AS IMPACTED BY FS:

In addition to creating much needed new facilities, a goal of the FS project is to continue the development of the Mission Road Complex (MRC) along the lines and recommendations of various master planning studies. Therefore, the goal of this effort will be to define how DOT will fit into this latest effort and to orchestrate the resulting domino effect of the project. To accomplish this task effectively, this report will attempt to understand all of DOT's functions and activities housed and located at the MRC.

The DOT facilities affected by the FS work include the following:

- Building No. 1 the "Old" Operations Building
- Building No. 3 the Operations Warehouse
- Materials storage area for RAP, sub-grade and engineered fill materials (roughly 2.3 Acres)
- General auto, light truck parking areas as well as heavy truck and tractor-trailer rig parking (belly dumpers)

OTHER ISSUES:

Security:

MRC is currently surrounded by chain-link fencing with access through 3 gates. One at the south on Mission, one at the north on Mission, and one at the northeast corner boundary on to the 22nd Street ramp. There is night time and weekend patrol of the facility by the County security contractor. The fuel station is accessible to County vehicles 24/7

The plan for the FS facility will be to surround it with its own fence for added security. If additional security for the complex is needed or desired, it should be addressed as a separate issue.

Flood and Storm Water issues:

It is a fact that FS suffers from some serious flooding problems when a major storm event is in progress. Civil design for the new FS facility will address issues specific to the new site however, the need for an overall master plan for storm water control is apparent.

It is suggested that a study of the storm water drainage issues be made as soon as practical. This study should identify all the existing conditions and problems with the MRC as a whole, identify all relevant issues and building sites, and recommend any corrective actions that should be taken by any new project that proceeds into design. As new projects such as FS come online, responsibility for drainage issues would be clearly defined.



SECTION 2

CURRENT CONDITIONS

1. Mission Road – Current Use is an overall look at users at Mission Rd.
2. DOT at Mission Rd – Current Use is an overall look at the use of Mission Rd specifically for DOT.
3. DOT at Mission Rd – Recommendations give various options and suggestions for addressing the impacts of the Fleet Services project on DOT.
4. Total Project Cost Projections for all the work suggested in this report.



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

MISSION ROAD CURRENT USE

The Pima County Mission Rd Complex consists of approximately 71 Acres of land bounded by Mission on the west, the Santa Cruz River on the east spanning the West Branch, Silverlake on the south and 22nd Street on the north.

The two dominate “players” at the MRC are DOT and the Sheriff’s Department (PCSD) in the form of the Pima County Jail Complex. The jail, including the minimum security unit Bldg No. 20 sits on about 30 acres. The *Jail Master Planning Area* is roughly 37 acres of the southern most section of the property all along the Silverlake frontage. Any use of areas within the *Jail Master Planning Area* by other departments should only be considered temporary.

The next largest user is Fleet Services for whom DOT and PCSD serve as a major client base. Their new facility will occupy the northern most section of the MRC and along with the various road and civil improvements; will occupy about 7 acres of area. Once completed, various FS buildings will be demolished creating new building sites for future redevelopment. FS also maintains a fenced yard area east of Bldg 27 to the river for auction, impounds and damaged vehicles.

Tertiary users with a physical presence (who occupy building space) are:

1. The Clerk of the Court has 2 warehouse buildings. These are Bldg 21 (7,340 GSF) and Bldg 23 (6,200 GSF). COC normally has 3 full-time Records Clerks to staff the facility.
2. In a recent move, the Print Shop along with the Wireless Services Division of ITD now occupy Bldg 27 (9,076 GSF) and the eastern section of Bldg 28. (1,921 SF of 7,136 GSF)
3. ITD also maintains the small PBX Bldg 18 just south of Bldg 21 and a small area for servers and routers in Bldg 10.
4. Regional Wastewater Reclamation Department (RWRD) has Bldg 17, a small modular building, (2,800 GSF) south of Bldg 10 where a Field Engineering and inspection division is located.

Both the Elections Department and functions of the Recorder’s Office (in Bldgs 24 & 27) have been relocated away from the MRC leaving Bldg 24 Elections Warehouse (7,000 GSF) vacant. The Elections Dept. continues to maintain 3 or 4 locked storage containers holding ballots. These can be easily relocated to another, more “out-of-the-way” location as long as the seals on the locked containers are undisturbed.

Various users such as the Pima County Public Library, Regional Flood Control District, Emergency Management, Health Department and the Public Fiduciary have no physical presence at MRC but do utilize certain yard areas for the parking & storage of various special use vehicles. This consist of trailers, busses and conversion RVs such as the EOC mobile command center and Library bookmobiles.

Public and employee parking are generally located to the front of the MRC along the western property frontage.

All remaining areas and facilities are occupied by DOT

See Mission Rd / Existing Complex Plan in SECTION 4.



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

DOT at MISSION ROAD – CURRENT USE

Buildings:

DOT is concentrated in two basic locations. These are the Public Works Building (PWB) downtown and the MRC. PWB is where all administrative, engineering, plan review and maps and records are located. The MRC houses the Operations & Maintenance Division, Traffic Engineering and Field Engineering Divisions. Because Pima County ranks as the 11th largest county in the nation with respect to geographic area, DOT operates and maintains a number of outlying facilities and yards which are needed to maintain roads County wide. DOT divides various areas in the County into “districts” and has operational crews which attend to these districts.

DOT currently utilizes the following Buildings at Mission Road:

- **Bldg 8** (1,290 GSF) Storage Bldg east of FS Shops
- **Bldg 9** (7,211 GSF) houses the Traffic Engineering Division
- **Bldg 10** (8,443 GSF) houses the Operations & Maintenance Division and includes large meeting rooms and ITD’s main routers to and from the MRC.
- **Bldg 11** (13,354 GSF) houses the Field Engineering Division including inspections, surveying and the DOT materials testing lab.
- **Bldg 13** (4,656 GSF under a shade roof) is the DOT Paint Storage Dock
- **Bldg 14** (9,033 GSF) houses the DOT Sign Shop
- **Bldg 15** (1,055 GSF) are storage units
- **Bldg 28** houses the DOT Signal Shop

The DOT facilities affected by the FS work and are under consideration for replacement includes:

- **Bldg 1** (2,800 GSF) the “Old” Operations Building is currently used as locker room and toilet facilities for DOT Operations crews and contains 4 or 5 supervisor’s offices.
- **Bldg 3** (5,170 GSF) contains the Operations Warehouse and a repair shop.

See Mission Rd / Existing Complex Plan in SECTION 4.

Considering the economic state of Pima County at this time, DOT is at about 80% of its current budgeted FTE levels of 1 or 2 years ago. This includes the divisions at Mission Rd. In addition to this, DOT was considered to be at status quo for office space at that time so it is a fair assumption that there is not a need for new office space now or in the near foreseeable future. It is certain however that the functional spaces lost in Bldgs 1 & 3 need to be replaced and cannot be absorbed into existing space.

Open Use Areas:

Of the roughly 41 acres that comprises the MRC, not covered with buildings, public parking or circulation roadways, DOT uses about 15.8 acres for parking and lay-down for the items listed below. About 6.2 acres (40%) of this will be lost to the FS project and if the 1.5 acres located in the *Jail Master Planning Area* is also captured for other uses, this too will be lost. In the positive column, about 3.4 acres can be returned to open space when the existing FS buildings are removed at the end of this process.



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

It is noteworthy that this is the function of DOT that feels the pinch most directly whenever there is a new planning effort involving the MRC.

DOT uses these open areas for a variety of needs and resources including:

1. DOT Fleet Vehicle Parking; cars and pick-up trucks
2. Truck Parking; including dump trucks and water trucks
3. Heavy Truck Parking; tractor trailer rigs in excess of 60' in length
4. Heavy Equipment Parking; if not at a current job site.
5. Large areas for large piles of fill materials and RAP (recycled asphalt paving). These piles require large areas with circulation for loaders and trucks with large turning radiuses.
6. Lay-down areas for various large bulky items such as signal poles, culvert pipes, cattle guards and other materials.

The need for this type of Open Use Areas is not likely to diminish over time. In all likelihood this need will grow with time as the County itself grows. A 40% loss of ground can be dealt with as noted in the recommendation sections below but the need for centrally located open space will continue.



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

DOT at MISSION ROAD – RECOMMENDATIONS

One of the primary issues facing the long term needs of DOT at MRC is a reasonably permanent location for the storage of materials. Because this involves open space it is the first to be lost to development. In reality, the search for suitable locations to place materials has gone on for a number of years but has netted limited results that have not presented more problems than they addressed. The problems can be categorized as “inconvenient” but in the long run have a detrimental effect on operational efficiency, mileage and equipment wear & tear. The replacement of buildings seems easy when compared to the apparent difficulty in finding suitable open space for “dirt piles”. This section presents a number of options which attempt to address the problem given some recent acquisitions of property in the immediate vicinity of the MRC. The replacement of Bldgs 1 & 3 is given as single option in the remodel of the now vacant Bldg 24.

Replacement of buildings lost to the FS project (Bldg 1 & Bldg 3)

Reuse of Building No. 24

As mentioned previously, Bldg 24 represents 7,000 GSF of high bay Warehouse type space. It contains two truck accessible roll up doors one on the east side and one on the west. The west door is served by a depressed loading dock ramp. A large fenced storage area is located to the east side.

The warehouse type space could be easily converted to the warehouse storage and shop space needed to replace the functions lost in the 5,170 GSF of Bldg 3. In addition more extensive modifications could be made to install toilet rooms, locker room and a break room needed to replace functions lost in Bldg 1. In SECTION 3 there is a space program and proposed floor plan which shows one possible solution as well as a conceptual cost estimate to accomplish this task.

Although the combination of both Bldg 1 and Bldg 3 is a total of 7,970 GSF and Bldg 24 is 7,000 GSF (a difference of 970 SF) Bldg 1 appears to be underutilized with an excess of unused space and offices in excess of need.. With an efficient interior layout along with new storage and mezzanine systems it is believed that Bldg 24 could be made into a suitable replacement for Bldgs 1 & 3.

See **SECTION 3 Facility Program** for details



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

Replacement of Truck Parking and Area for Material Piles and Storage

After the creation of the FS facility there will be a reduction of open “bare ground” of the size needed for the material piles and truck parking. Although it is not necessary that the truck parking and piles be proximate, it is convenient that they are. Various options presented have both pluses and minuses and should be evaluated by DOT based on the least operational difficulties for the O&M Division as well as consideration of how permanent the solution is.



*Future Site of Fleet Services (looking NE)
Material Piles and Truck Parking*



Culvert Pipe; Cattle Guards; Special Vehicle Parking

Option A

- 2275 S. Mission Rd & 1443 W Silverlake Rd

Pima County owns an undeveloped plot of land (about 15.5 acres) along Mission Road directly south of Silverlake Rd on the SE corner of Silverlake and Mission (with the exception of a small commercial lot directly on this corner which contains a fast-food restaurant) (see Mission Rd / DOT Master Plan in SECTION 4). This lot fronts both Mission and Silverlake and is zoned MH-2 (COT Land Use Code). The lot extends more than 1,300 feet to the south. At S. San Antonio Dr (on the west side of Mission) there is a left turn break in the Mission Rd divider which could allow trucks a left turn opportunity to head south down Mission. The property to the immediate



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

south is commercial in nature. This property is more than adequate to the need and has services adjacent for the possible location of modular or permanent buildings.

Advantages:

This site is large enough to satisfy all of DOT's needs for storage and lay-down areas into the foreseeable future and it is close enough to the main MRC so that operational efficiency is not compromised in any serious way. The site presents a permanent solution to the lay-down and large truck parking problem as the MRC becomes more developed.

Downsides:

Property is bounded on the east and on the west (across Mission) by residential areas. Truck noise, loading operations, back-up beepers and the like could pose a problem. Currently the existing pile area is about 600 feet from the closest residence. This site could place piles 270 feet from a residence.

Option B

- 1161 W. Silverlake

An additional County owned site is available on Silverlake at the junction of Cottonwood Lane. This property is only about 3.4 acres (see Mission Rd / DOT Master Plan in SECTION 4). It is bounded by Cottonwood on the west as well as property owned by Pima Federal Credit Union at the SE corner of Silverlake and Cottonwood and a privately owned parcel to the south used as a trailer park. Property to the west across Cottonwood appears residential in nature (of a suburban ranch style usage) and is zoned R-1 (COT Land Use Code). To the east is City owned property along the Santa Cruz River slated for the expansion of the River Park. Access would be off the east bound lane of Silverlake or from the left turn lane off Silverlake onto Cottonwood from the west bound.

Advantages:

This site is large enough to handle the storage requirements for most if not all of the long term and slow turn over items such as signal poles, cattle guards, culvert pipes and other items that require truck access and large areas for storage currently sitting on the MRC. If this were to be the only use of this property, it should not create the same problems associated with the loading of materials. Modifications needed to create this yard would not be costly. Some simple grading, RAP to control dust, pre-emergent to control weeds and a screening fence with an entry and exit gate(s) would be the only things required to accomplish this. In addition, a curb cut already exists along the Silverlake frontage.

Downsides:

This site is about a 1 to 1 exchange of space for materials lay-down but would lack the necessary space for truck parking and staging. If the site were used for this purpose, it would also carry similar issues as the Option A property for truck noise and loading operations and is as close or closer to residential property. Also the property is owned by the Regional Flood Control District so certain areas may be off limits.

Options A & B Mitigations:

If either Options A or B are considered, a mitigating factor is that DOT would only operate the facilities (noise generation) during the daylight hours. DOT does not operate at night except under emergency conditions. In addition to this, screen walls, fences and/or sound barriers could be constructed to mitigate the effects of the operations.



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

Option C

- Remaining at Mission Rd: *Reference DOT Re-Use Plan in Section 4 Attachments*

Phasing for the FS project generally dictates that Bldg 1, Bldg 3 and the materials storage and truck parking are lost early in the process. In addition to this, areas where current FS buildings are located would not become available for use until the end of the process whereas DOT must continue to operate unabated throughout.

If the Options A & B are not pursued then a shuffle game must be played with various open areas. The following are some possibilities.

1. A fenced area exists behind Bldgs 21, 23 & 24. portions of the SE corner of this yard could be turned into a consolidated parking lot (with shade structures built or relocated) to park the various special use vehicles, vans and trailers currently scattered around MRC. At least (10) 12' x 30' or 40' spaces could be created and dedicated to this use. Other miscellaneous parking such as for the Public Fiduciary could remain here also. Staff parking for the Clerk of the Court would remain located at the front of Bldg 21 with the rear reserved for the loading dock and the parking of County vehicles only.
2. Relocate the current materials pile(s) to the yard at the SE corner between the Minimum Security Unit and the West Branch. This is already used for materials storage and at least one additional pile could be located here on a temporary basis. Various other items stored here could be relocated to other areas.
3. In addition to #2 above, the Sheriff's yard area (the yard containing Bldg 19 Sheriff's Storage) appears to be under utilized at this time. When it is utilized, it is used to store patrol vehicles (cars) and could be more efficiently laid out for this purpose. Given these facts and with the permission of the Sheriff, about 100' of space could be captured for the uses noted in #2. A new fence line which would enclose Bldg 19 would be provided to segregate the yards.
4. Pole storage in the space west of Bldgs 21 & 24 should be relocated to other lay-down areas and this lot would be converted to truck parking particularly for tractor trailer rigs.
5. The current area east of the auto shop will be substantially reduced by the FS project. A band of parking spaces for unit-body trucks (water & dump trucks) could be created along the edge of the new circulation roadway. Storage in this area will need to be reorganized. When special use vehicles are relocated as noted in item #1 above, some additional space will become available for this purpose.
6. The long narrow storage yard between the State Prison complex and the Zeller Wash is used by DOT and will remain as is and/or as DOT dictates.

It is strongly recommended that even if Options A and B are not pursued, a remote yard, screened as suggested in Option B, be created to house long term and slow turn over items. This will have positive impact on the planning process if these materials are moved off the MRC. This yard can be located in either of the option A or B properties.



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Although remaining at Mission Rd with a 40% loss of storage space for all that DOT needs to keep and store as an operational necessity will become more difficult as the new FS facility becomes a reality, it may be possible given certain things happening in concert with it.

- Unless it is an absolute necessity, trash should not be collected and stored on the site in places better used for materials. An alternative would be a large capacity roll-off which could be emptied on a regular schedule. The roll-off could be kept in any number of locations accessible to the service vehicle.
- A “keep or throw” determination must be made with regard to all the items stored on the site. This determination should be prioritized as to need, expectancy of re-use, replacement cost or other criteria DOT should establish. DOT should purge anything that does not meet these “save it” criteria.
- Pile size will need to become a factor. Higher turnover rates, other remote locations in the interim, numbers of piles should all figure into the decisions regarding what is stored on the MRC.

The final issue will be the determination of what becomes of the newly created open space or vacant buildings once the FS project is completed. If buildings are demolished then open space becomes available to DOT to satisfy its’ need for open space storage and truck parking at least on an interim basis until the next need for building space presents itself. Time is the only answer to this question.



Pima County Mission Road Complex
DOT Facility Assessment and Master Plan

TOTAL PROJECT COST PROJECTIONS

The following is an opinion of probable total project cost for the Fleet Services project and its impact on Department of Transportation.

Basic Assumptions:

All of the project costs assume best case scenarios with regards to due diligence issues when dealing with the possible new sites or with projects on the current mission road facility. It assumes that we will not run into any time and resource consumptive issues such as hazardous waste or brown field issues, abatement of any hazardous materials, chemicals or unforeseen archeological or biological issues. Any of the above items will always have an adverse effect on the project budget and are virtually impossible to estimate.

Conversely the estimates of total project cost assume a worst case scenario with regard to estimating construction cost, fee estimates, the inclusion of contingencies and the inclusion of inflation to protect the project from proceeding upon unreasonable expectations and finding the project inadequately funded at the various exit gate points. Every attempt has been made to include as many of the known costs that could impact the project.

These costs cover the project from point of approval to the final demolition of old Fleet buildings and would span the next 3 to 3½ years.

Phase 1 Due-Diligence: for early identification of any potential problems for both the Mission Rd site and either or both of the Option A or B properties. This assumes outside consultant services are retained for this study.

Total Project Cost **\$12,000**

Mission Road Storm Water Drainage Study and Master Plan: This assumes outside consultant services are retained for this study. Assume less cost if PC Flood Control District can accomplish this task.

Total Project Cost **\$30,000**

Conversion of Bldg 24 for DOT (see SECTION 3 for estimated construction/remodel cost)

Total Project Cost **\$550,000**

Option B: Creation of a yard for long term storage off site at 1161 W. Silverlake. This assumes work is done by an outside contractor or JOC contractor with oversight by DOT only. Cost should be less if some work is self-performed by DOT.

Total Project Cost **\$120,000**

The Fleet Services Project: including construction of new buildings, new civil work, fees, contingencies, 1 year inflation and demolition cost of Bldgs 1 & 3

Total Project Cost **\$22,123,000**



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DOT Facility Assessment and Master Plan

Demolition of vacated FS Buildings: Bldg 4, 6, 7, & 12. Roughly 30,000 GSF of steel buildings converted to vacant lots. Buildings completely removed and assuming some abatement of ACMs.

Total Project Cost **\$310,000**

Total Project Cost **\$23,145,000**

Option A: If it was decided to pursue the creation of a yard of the size and capacity noted in Option A, the costs noted below should be added to the overall project cost.

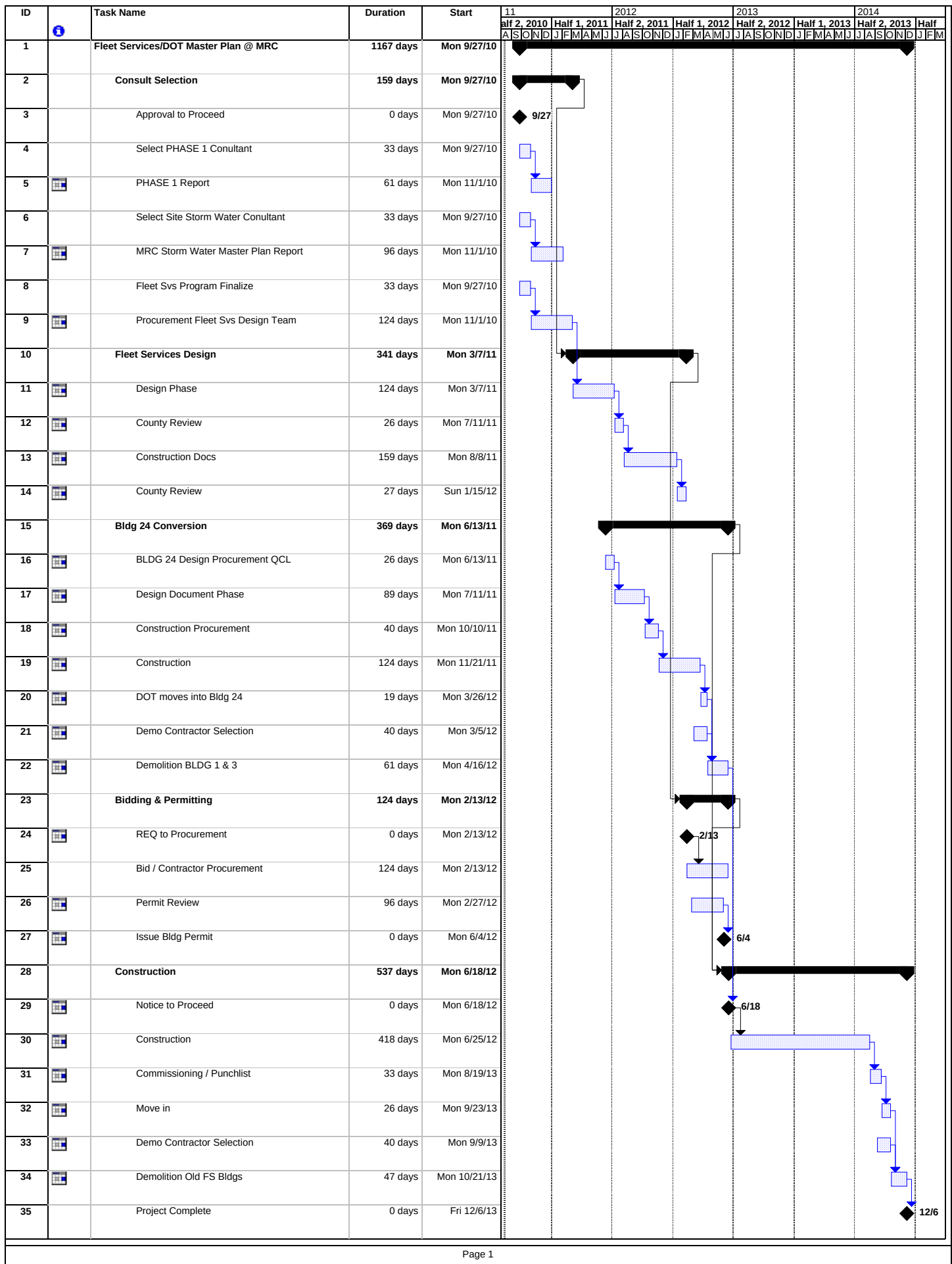
Total Additional Cost **\$200,000**



Pima County Mission Road Complex
DOT Facility Assessment and Master Plan

PROJECT SCHEDULE

A probable project schedule is attached which indicates a project time line of approximately 3 years from the point of project approval to the point in time where the old Fleet Services buildings have been removed from the site. The dates shown on this schedule are based on an assumed approval in the reasonably near future and are intended to show only order of magnitude time frames and sequence.





SECTION 3

FACILITY PROGRAM

The following section will define the various program elements and costs associated with the suggested re-use of Building 24 for DOT as well as suggested floor plan.

1. Components of the Building will describe each element in terms of its function, use and general environment.
2. The Space Program document will describe each element in terms of its number and required NSF and NUSF.
3. Conceptual Plan will describe how Bldg 24 can be laid out to address the program needs. Both the existing plan and the proposed plan are presented.
4. Probable Construction Cost is an opinion of probable cost and is based on the conceptual plans presented in this section



BUILDING 24



Pima County Mission Road Complex
DOT Facility Assessment and Master Plan

COMPONENTS OF THE BUILDING

In the following section, the activities, access, the environment and in some cases the equipment required) are described. In this case the building (Bldg 24) exists and all spaces described below will be retrofitted into this structure.

Note: Spaces and functions will be identified and described in the following categories. Only categories necessary to the description will be listed under any particular function

Description: A general description, environment, objective and subjective intent of a space or area

Activities: Defines what activities will take place in the space

Access: Defines who or what group will have access to the space

Area Required: to account for a specific need or occupancy requirement

Adjacencies: Defines what the required adjacencies are to be

Furnishings: A general description of the furniture needed in a space

Equipment: Defines what equipment is likely to be needed in the space

Fixture Count: Used only in the case of restrooms where a requirement greater than code minimum will be stated.

Utilities: Defines what utilities are likely to be needed



BUILDING 24 REMODEL

Within the Remodel Area there will be three basic subdivisions of space

- I. **Operations Crew Support** (Supervisor workstations; Multi-purpose/locker room; Staff restrooms)
- II. **Tools and Supplies Warehouse**
- III. **Maintenance & Repair Shop**

I. Operations Crew Support

Entry Vestibule:

Description: A small entry/transition space.

Activities: Passageway

Access: Staff

Adjacencies:

- ❖ To the front door
- ❖ To Restrooms
- ❖ To the Multipurpose Locker Room

Indented areas are within or directly adjacent to the Entry Vestibule

Drinking Fountain Alcove

Activities: Drinking Fountains

Equipment: 1 ADA accessible electric drinking fountains

Utilities: Power as required for equipment; Cold water; Sanitary Sewer

Staff Restrooms (Men and Women)

Description: Adequately sized, high-grade materials (for easy maintenance), exhaust fans, ADA accessible

Activities: Toilet facilities and restrooms

Access: Staff only segregated male-female

Adjacencies:

- ❖ Entrance
- ❖ Multi-purpose Room / Locker Rooms

Equipment: Toilets, urinals; sinks, mirrors, soap and towel dispensers, non-locking doors, toilet and urinal partitions

Fixture Count: The minimum number of fixtures that are designed into the Staff Restrooms shall be as follows. This should be the minimum number provided within each room. Should a code calculation require more than this, then the code-mandated count shall govern.

Men:

- ❖ 1 ADA Accessible stall
- ❖ 3 Standard Stalls
- ❖ 4 Urinals
- ❖ 1 ADA Accessible Lavatory
- ❖ 3 Standard Lavatories

Women:

- ❖ 1 ADA Accessible stall
- ❖ 1 ADA Accessible Lavatory



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Multi-Purpose Room (Meeting Room / Break Room / Locker Room)

Description: Multi-purpose space, self-contained, with good artificial lighting and natural lighting (if possible)

Activities: Locker room; Break room; Group meetings

Access: Staff

Area Required: As large as possible given the existing building configuration

Adjacencies:

- ❖ Entry vestibule
- ❖ To restrooms
- ❖ General open office area

Furnishings: See FF&E section for guidance. Tables and chairs (quantities TBD at time of design. Modular type for differing room configurations)

Equipment:

- ❖ Connection for TV Monitor with VCR/DVD on moveable cart (if needed or desired)
- ❖ Cabinet for dishes, counter space
- ❖ Sink
- ❖ Frost-free refrigerator with icemaker
- ❖ Off Counter Microwave Oven (or appropriate counter space for a counter top microwave oven)
- ❖ Bulletin Board
- ❖ 64 to 70 Lockers (standard metal type ½ height).

Utilities: Power as required for equipment; Hot/Cold water; Sanitary Sewer; Access to telecommunications and data systems; Full power and media requirements TBD at time of design

Foremen Workstations (General Open Office) (See Space Program for numbers required)

Description: Separate office area; shared by Foremen

Activities: Foreman's responsibilities; Computer access

Access: Staff

Adjacencies:

- ❖ Multi-Purpose Room

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. One workstation for each Foreman; FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD

Utilities: Power as required for convenience and equipment; Access to telecommunications and data systems

Janitor Closet

Description: Lockable room, exhaust ventilation

Activities: Closet for cleaning equipment and storage for supplies

Access: Janitorial Staff only

Adjacencies:

- ❖ Near the Staff Restrooms

**Do not locate closet IN either of the restrooms

Furnishings: Shelves TBD

Equipment: Mop Sink and other cleaning equipment as required.

Utilities: Power as required for convenience; Hot/Cold water; Sanitary Sewer



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Outdoor Patio (Not part of Bldg GSF)

Activities: Outdoor sitting and break area for staff.

Area Required: large enough to accommodate a smokers area at a minimum of 25 feet from building doors, operable windows and air intakes.

Access: Staff only

Adjacencies:

- ❖ As required or available

Furnishings: See FF&E section for guidance. Exterior fixed table and seating. Design and color to reduce impact of sun and heat exposure. Shade (if not part of the building)

II. Tools & Supplies Warehouse

Tools & Equipment Counter

Description: The interface between the Warehouse and crew staff; well lighted; provides a physical barrier between Crews and Warehouse

Activities: Tools and equipment are distributed over this counter

Access: Staff outside / Warehouse Staff only inside

Adjacencies:

- ❖ Warehouse
- ❖ Workstations
- ❖ The Shop

Furnishings: Standup Counter. Durable work surface

Warehouse Workstations (See Space Program for numbers required)

Description: Generally part of the Counter

Activities: Warehouse staff workstation(s)

Access: Warehouse Staff only

Area Required: As required for the numbers of Warehouse Staff

Adjacencies:

- ❖ Counter
- ❖ Warehouse area
- ❖ Manager's Office

Furnishings: See FF&E section for guidance; Integrated with and part of the Counter; work surfaces; file cabinets; drawers; keyboard tray; etc. TBD during design phase

Equipment:

- ❖ PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems

Warehouse Manager's Office

Description: Separate, enclosed private office w/ glass in door and/or sidelights. Privacy required for management duties

Activities: Manager's responsibilities

Access: Warehouse Staff only

Adjacencies:

- ❖ Tool & Parts Counter
- ❖ Workstations
- ❖ Warehouse area



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray etc.; 1 to 2 side chairs; FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems

Tools & Equipment Warehouse/Storage

Description: large room for storage and holding of tools and equipment distributed to work crews

Activities: Tools and Equipment Storage

Access: Warehouse Staff only

Area Required: TBD for adequate storage of high turnover parts and materials

Adjacencies:

- ❖ Warehouse Counter
- ❖ Warehouse Manager's Office
- ❖ Mezzanine
- ❖ Delivery Area

Furnishings: See FF&E section for guidance. Modular storage systems as required TBD during design phase

Utilities: Power as required for convenience

Mezzanine (As Required or Needed)

Description: mezzanine for storage and holding of additional tools, parts and equipment

Activities: Storage

Access: Warehouse Staff only

Area Required: TBD for adequate storage of high turnover tools, parts and materials

Adjacencies:

- ❖ Delivery Area
- ❖ Above Warehouse area

Furnishings: See FF&E section for guidance. Modular storage systems as required TBD during design phase

Utilities: Power as required for convenience

Delivery Area

Description: Entry configured so that the delivery truck can back straight to the entrance and unload off the back of the truck. Provide a level passage; provide sufficient floor space is needed for multiple boxes with space for incoming deliveries as well as outgoing returns/exchanges.

Activities: All parts deliveries and returns; Staging, inventorying processing and handling of incoming materials

Access: Staff; Vendors, Delivery Vehicles

Adjacencies:

- ❖ Warehouse
- ❖ Mezzanine

Furnishings: See FF&E section for guidance. Large table surface and counters for staging and handling boxes TBD during design phase



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

III. **Maintenance & Repair Shop**

Shop Area

Description: Maintenance and Repair Shop

Activities: Repair and maintenance of tools and equipment; Minor fabrication

Access: Shop Staff

Area Required: Sufficient space for tools; material cribs; work tables

Equipment: Tools as required TBD; Electrical power TBD; 1-Ton Jib or Boom Crane

Utilities: Power as required for tools and equipment.

Welding Shop (can be outside under a shade structure)

Description: Shop area specific to welding

Activities: Welding; Storage of equipment and welding materials and steel

Access: Staff only

Area Required: TBD Sufficient space for a welding table and various welding equipment

Adjacencies:

❖ The Shop

Equipment: Welders TBD; Welding Table; Flash protection screens as may be required by code

Utilities: Power as required tools and equipment



Pima County Mission Road Complex
DOT Facility Assessment and Master Plan

BUILDING SPACE PROGRAM

List of All required/desired spaces in the building
List includes needed NSF, expanded NUSF

The Program spreadsheets indicate the suggested numbers, types and sizes of spaces for the various spaces and uses described in the Building 24 Remodel Program section above.

These are:

1. Personell/Office Spaces (594 SF)
2. Program Areas (4,180 SF)
3. Staff Support Spaces (1,588 SF)

This is **6,362 SF**

Rounded with a 10% grossing factor is **7,000 GSF**

The above listed program spaces represent a list of all the required spaces to address the replacement of buildings 1 and 3 for DOT Operations and Maintenance. The NSF assigned to these functions are either from County standards for office spaces or from direct need and input from the user group. These numbers should be considered a minimum requirement for space unless actual design work demands more space or less. These space requirement have been fit tested against the existing Building 24 foot print (see Building Conceptual Plan below). The spaces and functional areas are organized along the same lines as existed in Bldgs 1 & 3.

Department of Transportation

DOT Operations / Building 24 Remodel/Re-Use

Personnel/Program and Functional Area Detail

Personnel/Office Area		Space/NSF/Units		Net SF	
Position/Space Description	Space Code	Std NSF	NEED	TOTAL	Remarks
Technical/Mgr Office	O7	120	1	120	
Workstation/Crew Supervisor	WS6	64	5	320	
Total Office/Workstation Count			6		
Sub-total Areas NSF				440 sf	
Plus Circulation Allowance of 35%				154 sf	
Total Personnel/Office Area NUSF				594 sf	

Program Areas		Space/NSF/Units		Net SF	
Position/Space Description	Space Code	Std NSF	NEED	TOTAL	Remarks
Warehouse	SPACE	1600	1	1,600	
Mezzanine	SPACE	300	1	300	
Counter / Staff Side	SPACE	100	1	100	
Parts Counter / Crew Side	SPACE	100	1	100	
Delivery	SPACE	100	1	100	
Repair / Fabrication Shop	SPACE	1600	1	1,600	
Welding Shop	AREA	400	1	400	Not a part of Bldg GSF (outside)
Total Support Spaces			7		
Sub-total Support Areas NSF				3,800 sf	not including welding space
Plus Circulation Allowance of 10%				380 sf	
Total Program Area NUSF				4,180 sf	

Support Areas		Space/NSF/Units		Net SF	
Position/Space Description	Space Code	Std NSF	NEED	TOTAL	Remarks
Vestibule / Entry	L	80	1	80	
Multi-Purpose / Break Room / Locker Room	RM	700	1	700	
Men's Restrooms / HC Accessible	RM	280	1	280	
Women's Restrooms / HC Accessible	RM	80	1	80	
Janitor Closet	CLO	36	1	36	
Total Support Spaces			5		
Sub-total Support Areas NSF				1,176 sf	
Plus Circulation Allowance of 35%				412 sf	
Total Support Area NUSF				1,588 sf	

Total Area Needs **6,362**

SUMMARY		NUSF
Total Personnel/Office Area NUSF		594 sf
Total Program Area NUSF		4,180 sf
Total Support Area NUSF		1,588 sf
Sub-Total Program NUSF		6,362 sf
Ratio for configuration etc. (Factor = 10%)		636 sf
Sub-Total		6,998 sf
Required Building Gross Square Feet (rounded)		7,000 sf



Pima County Mission Road Complex
DOT Facility Assessment and Master Plan

BUILDING CONCEPTUAL PLAN

The following drawing is a suggested plan for the re-use of Building 24.

Existing Floor Plan (Sht 1 of 2)

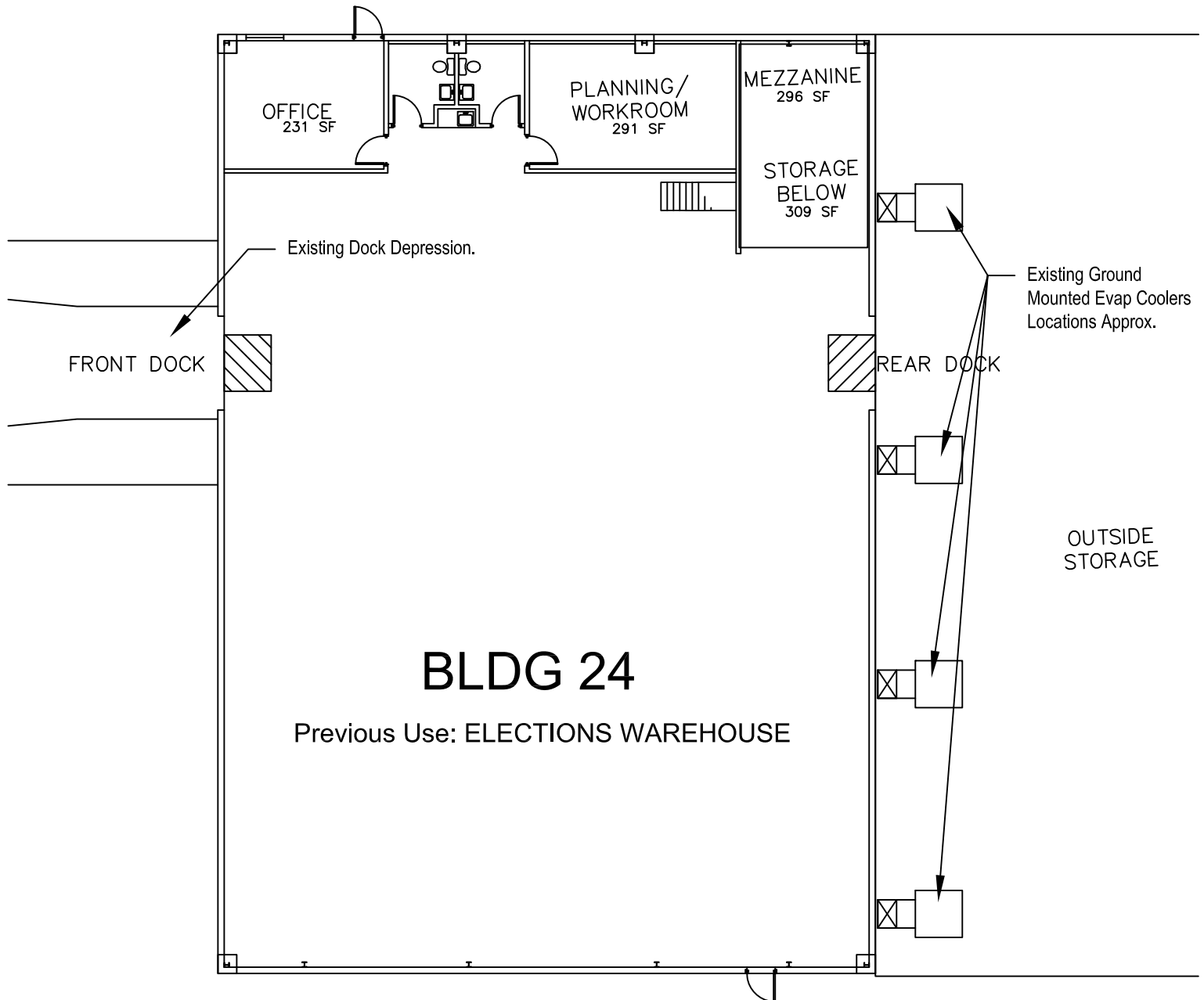
This plan shows Bldg 24 in its current configuration

Conceptual Floor Plan (Sht 2 of 2)

This plan describes how Bldg 24 can be re-used to address the needs of DOT for the function lost in Bldgs 1 & 3

1. Contains the Crew support areas from Bldg 1 and is physically separated (with no interior communicating doors between this and the Warehouse/Shop areas
2. the plan addresses the need for additional toilet room space and capacity to more adequately handle the various crew arrivals and departures from the facility.
3. Utilizes the 2 existing roll-up doors for the use of the shop and the Warehouse
4. Utilizes the existing north entrance door for the Warehouse entrance for Crewmen picking up tools and equipment
5. Keeps the two existing restrooms for Warehouse and Shop personnel
6. Plan allows an existing electrical panel to remain as is

Refer also to SECTION 4 Attachments Mission Road – Existing Complex Plan for location of Bldg 24 on the complex.



EXISTING FLOOR PLAN

Scale 1/16" = 1'-0"

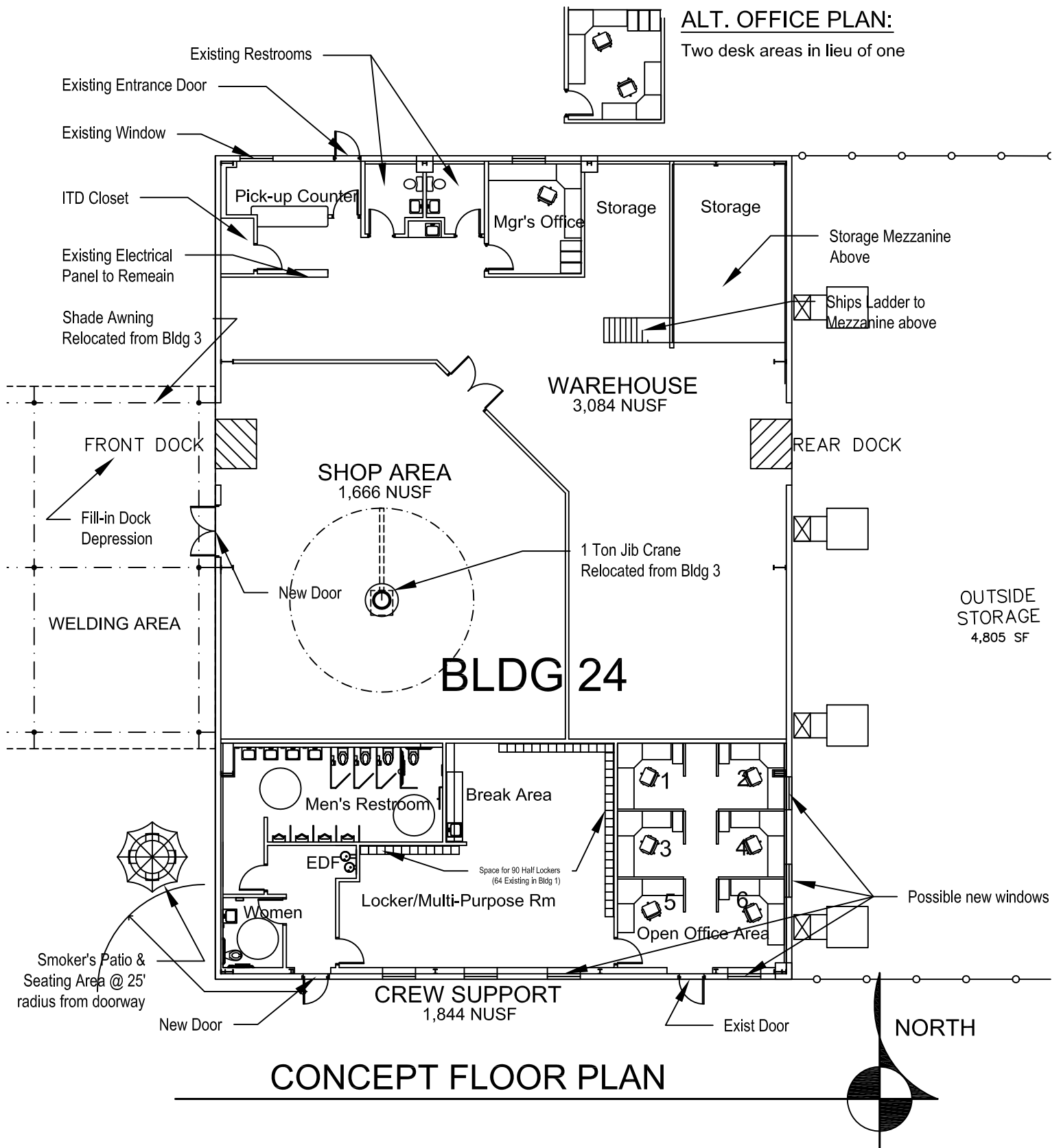


PIMA COUNTY FACILITIES MANAGEMENT, 150 WEST CONGRESS, TUCSON ARIZONA 85701 (520)740-3085



DOT
Existing Floor Plan
BLDG 24
3131 S Mission Rd
Tucson, AZ

DATE: 7/20/2010	SCALE: 1/16"=1'-0"
CHECKED BY: BLD	DRAWN BY: BLD
WORK AUTHORIZATION: 1015472	REVS: DATE: 
SHEET NO: 1 OF 2	



PIMA COUNTY FACILITIES MANAGEMENT, 150 WEST CONGRESS, TUCSON ARIZONA 85701 (520)740-3085



DOT
Concept Floor Plan
BLDG 24
3131 S Mission Rd
Tucson, AZ

DATE: 7/20/2010	SCALE: 1/16"=1'-0"
CHECKED BY: BLD	DRAWN BY: BLD
WORK AUTHORIZATION: 1015472	REVS: DATE: △
SHEET NO: 2 OF 2	NOTICE: THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF PIMA COUNTY. FOR OFFICIAL USE ONLY.



Pima County Mission Road Complex
DOT Facility Assessment and Master Plan

PROBABLE CONSTRUCTION COST Building 24

Basic Assumptions:

The overall building footprint of Building 24 is **7,000 GSF**. The whole building will be utilized for this project.

Other Assumptions:

Approximately 2,100 SF is the Operations Crew Support and will be utilized as the replacement for Bldg 1. This area will be fairly construction and systems intensive with the installation of new restrooms for the crews and office spaces for supervisors and the multi-purpose room for crew personnel. The remaining 4,900 SF will be less intensive utilized as warehouse and shop spaces. It is intended to utilize as much of the existing interior facilities as possible (restrooms, electrical panel etc.) to help contain cost.

Budget Responsibility and Expectation

All numbers given below are budget numbers. Pima County considers these budgets to be reasonable and within a range that could accomplish this project to the quality and complexity desired. The numbers given should be considered within a range. The design team will endeavor to bring the project to completion under budget. It is the responsibility of the project team as a whole to deliver the best quality project for the best value to Pima County.

The opinion of probable cost for the remodel of Bldg 24 (**7,000 GSF**) is **\$315,000**. This will include:

- ❖ All demolition as required
- ❖ Construction of all spaces
- ❖ New exterior openings as needed
- ❖ New systems as required (Plumbing, HVAC and Electrical)

Overall Remodel Construction is assumed to be **\$45/SF**

The estimated cost of the 2,100 SF of the Operations Crew Support breaks out at approximately **\$95/SF**

Not listed above that will impact construction cost is:

- ❖ 1 Ton Jib Crane in the shop. An assumed foundation is included in the construction cost listed above but not the relocation and installation of the crane itself
- ❖ Relocation of the existing 42' x 42' shade awning structure outside the shop at Bldg 3
- ❖ FF&E costs: There is no budget listed for office furniture, new lockers or any storage systems (shelving & racks) for the warehouse.

Options and possibilities for the project are:

- ❖ An additional small mezzanine in the Warehouse space (if desired) OR a completely new mezzanine should the existing mezzanine be declared unusable by Risk Management (no labeling of load capacity)
- ❖ A large Mezzanine over the entire south end of the building above the crew support spaces



Pima County Mission Road Complex DOT Facility Assessment and Master Plan

- ❖ New HVAC Systems for the north office areas. Cost assumes re-use of the existing through the wall units

None of the above are considered in the cost assumptions above and if selected would serve to increase the overall project cost.

Other project costs and soft costs are a part of the overall budget for any project but are not included in the budget figures here. These will include:

- ❖ Telecommunications, and Data Equipment costs (if any)
- ❖ Permit fees (Building, Water Meters and Wastewater Fees) (if any)
- ❖ All consultant fees, and other project due-diligence fees
- ❖ Project administration and management costs
- ❖ Moving costs

See Total Project Cost projections in Section 2 above



SECTION 4

ATTACHMENTS

1. Mission Road – Existing Complex Plan (Sht 1 of 3)

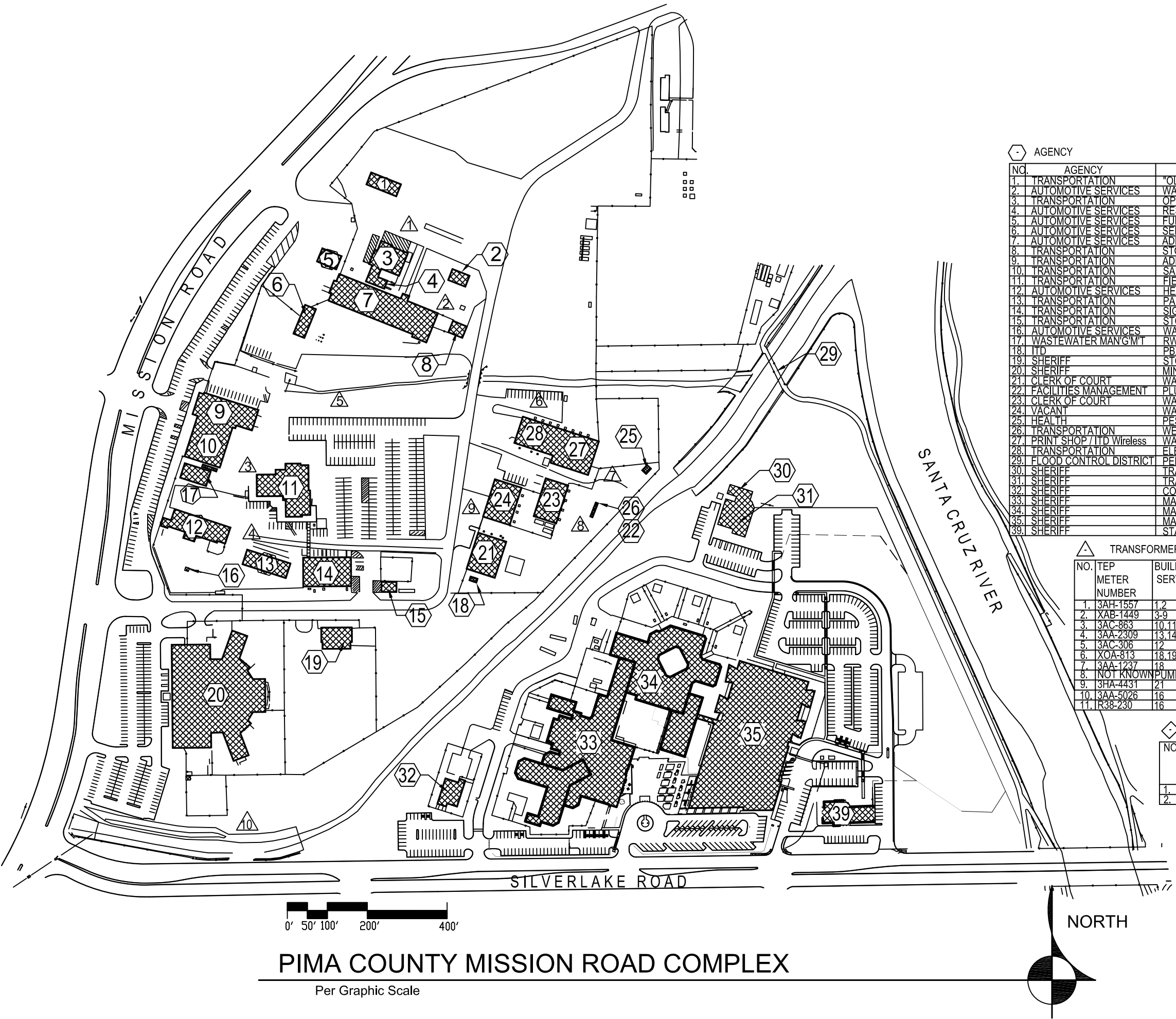
This plan shows the Mission Road Complex and list buildings by number and user department

2. Mission Rd – DOT Master Plan (Sht 2 of 3)

This is a graphic representation of areas discussed in this report including the areas on and off site.

3. Mission Rd – DOT Re-Use Plan (Sht 3 of 3)

This plan shows the areas listed under Option C in SECTION 2 of the report regarding the suggested use of the various areas remaining for DOT use during and after the Fleet Services Project.

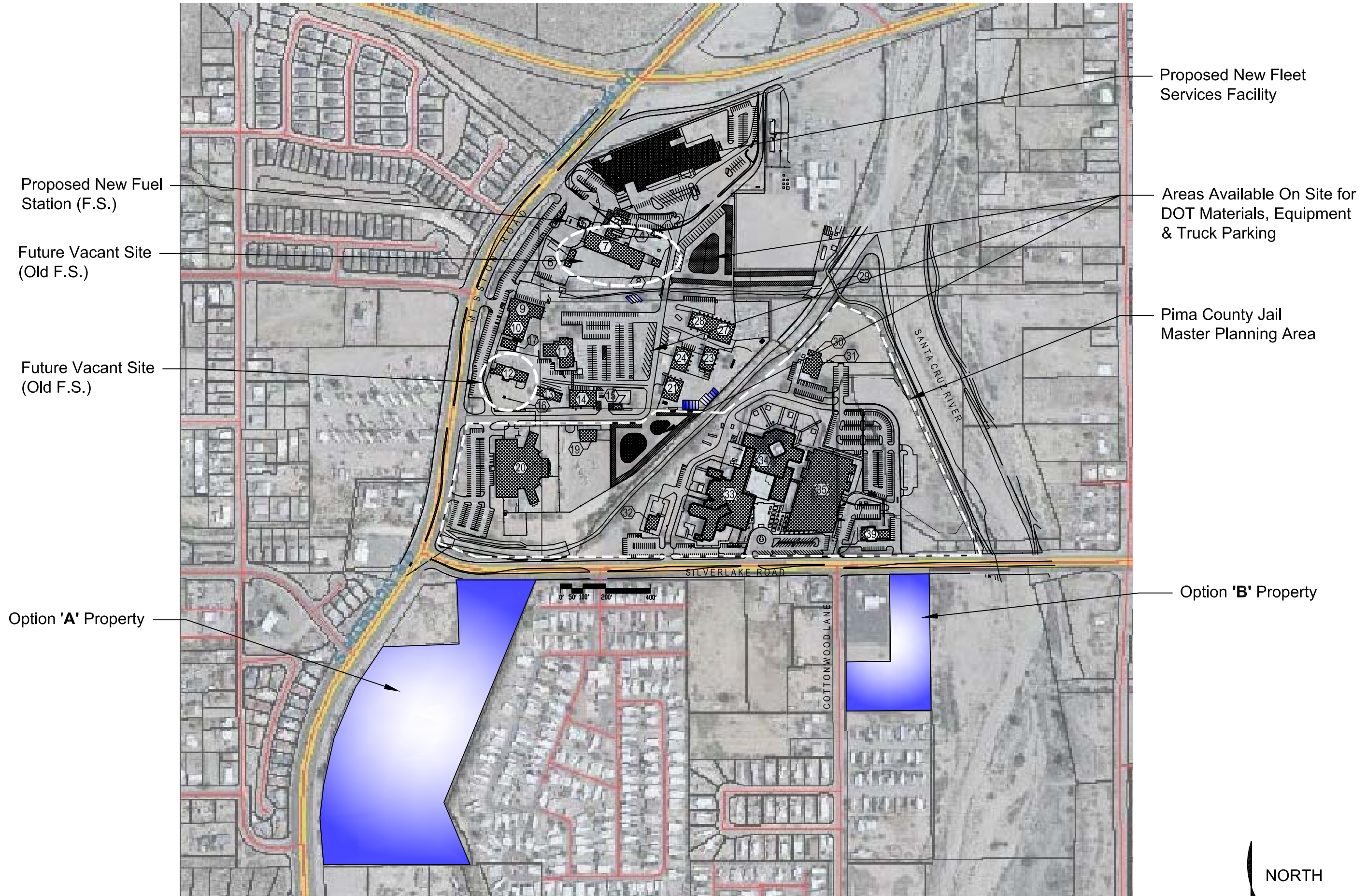


NO.	AGENCY	BUILDING NAME
1.	TRANSPORTATION	"OLD" OPERATIONS BLDG
2.	AUTOMOTIVE SERVICES	WASH RACK ... LIGHT VEHICLES
3.	TRANSPORTATION	OPERATIONS WAREHOUSE
4.	AUTOMOTIVE SERVICES	RESTROOMS
5.	AUTOMOTIVE SERVICES	FUELING STATION
6.	AUTOMOTIVE SERVICES	SERVICE WRITERS BLDG
7.	AUTOMOTIVE SERVICES	ADMIN/LT VEHICLE MAINTENANCE SHOP
8.	TRANSPORTATION	STORAGE
9.	TRANSPORTATION	ADMINISTRATION BLDG
10.	TRANSPORTATION	SAFETY TRAINING/"NEW" OPS BLDG
11.	TRANSPORTATION	FIELD ENGINEERING BLDG
12.	AUTOMOTIVE SERVICES	HEAVY EQUIPMENT MAINTENANCE
13.	TRANSPORTATION	PAINT STORAGE DOCK
14.	TRANSPORTATION	SIGN & PAINT SHOPS
15.	TRANSPORTATION	STORAGE UNITS
16.	AUTOMOTIVE SERVICES	WASH RACK - HEAVY EQUIPMENT
17.	WASTEWATER MANG'MT	RWRD FIELD ENGINEERING BLDG
18.	ITD	PBX UTILITY SHED
19.	SHERIFF	STORAGE
20.	SHERIFF	MINIMUM SECURITY FACILITY
21.	CLERK OF COURT	WAREHOUSE
22.	FACILITIES MANAGEMENT	PLUMBING STORAGE
23.	CLERK OF COURT	WAREHOUSE
24.	VACANT	WAREHOUSE
25.	HEALTH	PESTICIDE STORAGE
26.	TRANSPORTATION	WELL SITE ... CAPPED (ADJACENT TO #22)
27.	PRINT SHOP / ITD Wireless	WAREHOUSE
28.	TRANSPORTATION	ELECTRICAL SHOPS (WAREHSE "K")
29.	FLOOD CONTROL DISTRICT	PEDESTRAIN/SEWER LINE BRIDGE
30.	SHERIFF	TRAINING ACADEMY ANNEX TRAILER
31.	SHERIFF	TRAINING ACADEMY
32.	SHERIFF	COMMISSARY
33.	SHERIFF	MAIN JAIL - WEST UNIT
34.	SHERIFF	MAIN JAIL - TOWER
35.	SHERIFF	MAIN JAIL - EAST UNIT
39.	SHERIFF	STAFF ANNEX

TRANSFORMER INDEX					
NO.	TEP METER NUMBER	BUILDING(S) SERVICED	TRANS PAD	TYPE	SIZE -KVA
1.	3AH-1557	1,2	POLE	120/208/3	
2.	XAB-1449	3-9	PAD	120/208/3	50/25/25
3.	3AC-863	10,11	PAD	277/480/3	
4.	3AA-2309	13,14 & 15	POLE	120/208/3	
5.	3AC-306	12	POLE	277/480/3	3/50
6.	XOA-813	18,19 & 20	POLE	120/104/3	
7.	3AA-1237	18	POLE	120/280/3	3/25
8.	NOT KNOWN	PUMP SITE	PAD	440/3	50/37/37
9.	3HA-4431	21	PAD	120/480/3	
10.	3AA-5026	16	PAD	277/480/3	
11.	IR38-230	16		277/480/3	

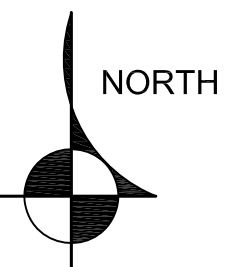
WATER METER INDEX			
NO.	WATER METER NUMBER	BLDG(S) SERVICED	CFM CAP
1.	33960137		
2.	33960136		

GAS METER INDEX		
NO.	GAS METER NUMBER	BUILDING(S) SERVICED
1.	231492	
2.	119952	
3.	141925	
4.	221583	
5.	104298	
6.	199272	
7.	620828	



MISSION ROAD COMPLEX / DOT MASTER PLAN

No Scale



PIMA COUNTY FACILITIES MANAGEMENT, 150 WEST CONGRESS, TUCSON ARIZONA 85701 (520)740-3085

Dept of Transportation
D.O.T. MASTER PLAN

DOT Facility Assessment & Master Plan
Pima County Mission Rd Complex
Tucson, AZ



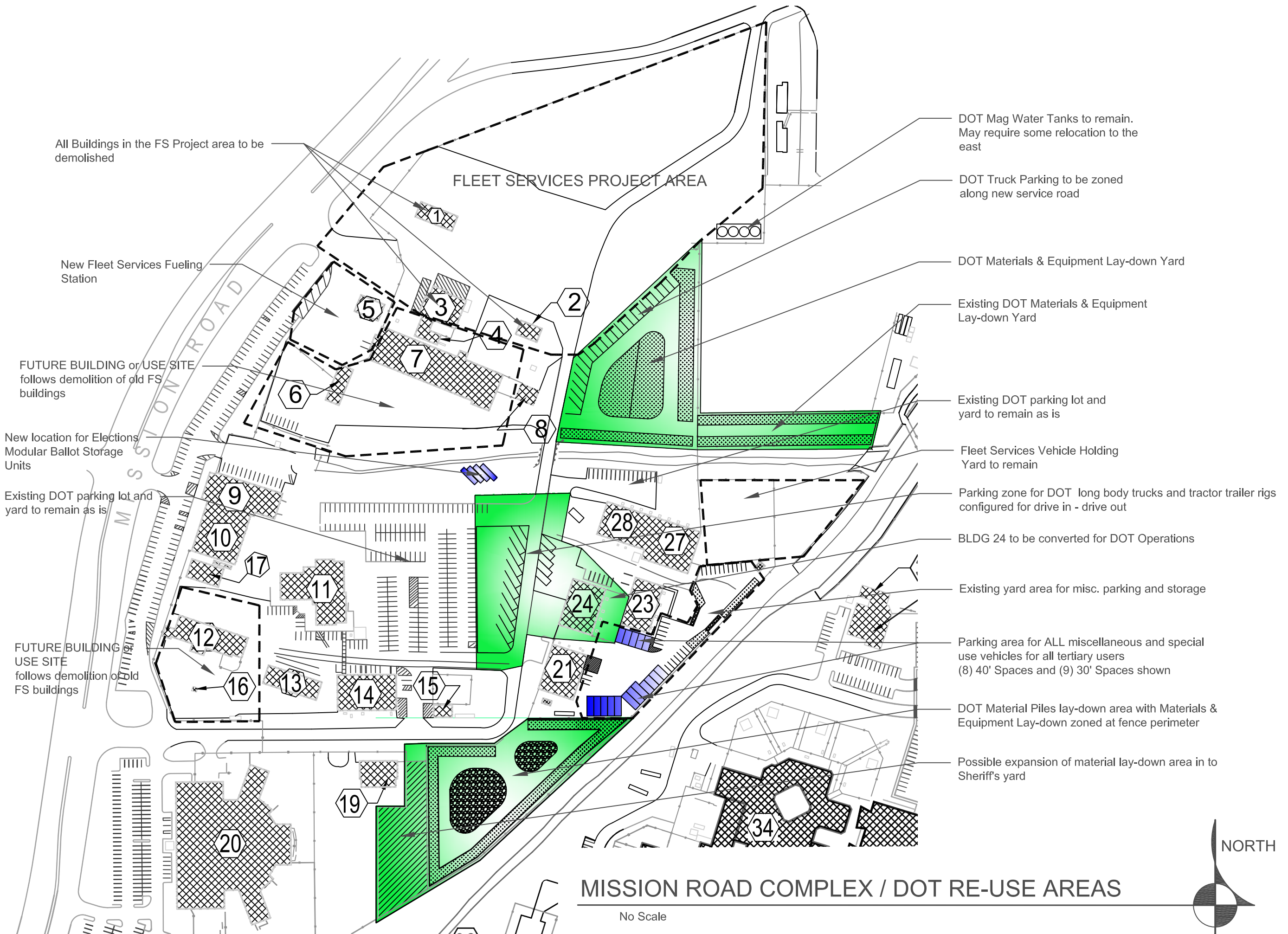
REVS: DATE:
△

DRWN BY: BLD
CHK BY: GAC
DATE: 7/22/2010
SCALE: NONE
SHEET NO:

2

2 OF 3

W.O. NUMBER
1015472





APPENDIX '2' TO EXHIBIT 'A'

**New Facilities Program and Design Guidelines prepared for Pima
County Fleet Services, dated September 21, 2010 (Revised October
28, 2010)**

PIMA COUNTY

FLEET *Services*

New Services Facilities Program & Design Guidelines

September 21, 2010
(Revised October 28, 2010)

By



Asset Management & Planning Division



Pima County Fleet Services
New Service Facility Program & Design Guidelines



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SECTION 1

INTRODUCTION

Pima County Fleet Services department is the agency directly responsible for the acquisition, maintenance, fueling and disposal of all County vehicles. Fleet Service's customers comprise most if not all Pima County departments and divisions and they have intergovernmental maintenance agreements with at least 15 other agencies around the County. The department maintains in excess of 2,000 vehicles including:

- ✓ 762 Vans; Pickups & Light Trucks
- ✓ 61 Medium Trucks
- ✓ 83 Heavy Trucks
- ✓ 12 Truck Tractors
- ✓ 266 Sheriff Cars
- ✓ 436 Cars
- ✓ 1 Fire Truck
- ✓ 6 Busses
- ✓ 76 pieces of Off-Road Equipment
- ✓ 291 pieces of Miscellaneous Equipment
- ✓ 9 Motorbikes and Motorcycles
- ✓ 160 Non-Motorized Trailers

Fleet Services has been operating out of the same facility for more than 40 years. On two separate occasions (1984 & 1992), assessments of the automotive service facilities at the Mission Road complex have concluded that those facilities are "...both physically and functionally obsolete and require replacement." The studies envision the construction of a new facility that addresses all of the deficiencies of the current facility and that provides for enhanced functional efficiency and the best utilization of "...the limited land and building asset resources of Pima County."



Pima County Fleet Services
New Service Facility Program & Design Guidelines

GOALS & OBJECTIVES

Construct a new operationally and energy efficient facility for the Fleet Services Department to include administrative offices, shops, service bays, parts, parking and vehicle storage yards. A prime objective of the program will be to consolidate the heavy equipment shop with the main facility and replace the aging fuel station located at Mission Road.

An additional benefit of constructing a new automotive services facility is that doing so would help the department to attract and retain qualified automotive technicians. Current projections estimate that within a period of a few years there will be a significant shortage of qualified candidates within the automotive services industry. That fact, coupled with the growing complexity of automotive systems due to the increased use of computerized technology means that in order to attract the best of the best, the facility will need to make full use of the available diagnostic and repair technology. The industry as a whole is moving away from the concept of mechanics as "grease monkeys" and the facilities of the future will need to embrace that change.

A secondary goal of the project is to continue the development of the Mission Road site along the lines and recommendations of various master planning studies.



Pima County Fleet Services
New Service Facility Program & Design Guidelines

FISCALLY RESPONSIBLE DESIGN

Pima County demands building solutions that are cost effective and sustainable. A Service Facility is a combination of facility types and includes both business and storage type occupancies but fits the industrial building type most closely.

An automotive maintenance and repair facility is not a type of building that requires or needs a profound architectural statement. Durability, functionality, flexibility and energy efficiency should be at the top of the design priority list with a good measure of architectural design to reflect the importance of this service to the continuing operation of the County. A facility should be created that is safe, ergonomically sound, and environmentally conscious while creating a place that instills a sense of pride to those working in it.

A major goal of this program is to allow for the creation of a building that is flexible and cost effective with good control of operational and energy costs.

Fiscally responsible design implies the use of standardized and common building materials, systems and equipment which should be used as a method of cost control. Also, the required adherence to Pima County standards will lead to a design that can be maintained and control legacy costs down the road. Buildings and site development must meet Pima County sustainability goals.

In the section on Probable Construction Cost, a "budget" for the construction of the facility has been established. The first phase of this project has a total budget of \$10,000,000, which is significantly less than the overall expected budget needed to complete the program needs during the initial phase. It is not the intention of this budget neither to provide a bare bones building nor to provide a work of extravagance. It is however intended to reflect a building of the standards and qualities described in this program to carry this department through the next decades of service to Pima County.



SECTION 2

DESIGN CRITERIA

The following sections will define the various Design Criteria for the Project. The overall intention of these sections is to guide the Design Team as they move through the project and develop the design in accordance with the stated goals and objectives as well as maintain the project within the confines of Pima County standards and guidelines.

1. Primary Building Concept Statements are generalized statements of intent and direction.
2. General Building Requirements shall guide the Design Team with regard to the development of the building, the site and the critical design and physical elements of the project.
3. Materials; Finishes; Furniture; Fixtures and Equipment Standards shall guide the Design Team with regard to the development of the fixtures furnishings and equipment of the project.
4. General System Requirements shall guide the Design Team with regard to the development of the electrical, mechanical and plumbing systems in the building.
5. Sustainability Options & Opportunities suggests a number of opportunities and options for sustainable energy generating systems which should be considered for the project.



Pima County Fleet Services
New Service Facility Program & Design Guidelines

PRIMARY BUILDING CONCEPT STATEMENTS

- ❖ The Facility will be freestanding on the existing Mission Road site directly north of the existing structures.
- ❖ The site shall provide for the smooth operation of the facility allowing for adequate parking, vehicle staging, service lines, ready lines, and adequate maneuvering room and circulation for heavy vehicles with wide turning radiuses (some as wide as 50')
- ❖ It is the intention of this effort to contain the whole of the Fleet Services on this single site and contained so as to allow a perimeter security fence to be installed completely around the facility.
- ❖ The existing facility lies in the middle of existing flow lines leading to the adjacent wash. The site design and the building shall address any potential drainage shortcomings in a cost effective and environmentally prudent manner.
- ❖ The main service building that contains car, light truck and truck service bays shall be designed around a single large space with interior circulation with a limited number of vehicle entry/exit points and rollup doors. This will allow for better temperature control in the service areas and greater energy efficiency throughout.
- ❖ The Heavy Truck and Heavy Equipment service bays shall be of the drive through service bay concept (entry/exit at each end) to allow for the installation of dual overhead rail cranes. Shading and overhangs shall be designed over the vehicle entry/exits (rollup doors) so that work can be accomplished and staged at the face of the bays. This building shall also contain a bay for welding and be accessible to a crane. It shall also have a number of man doors to provide access to either side without having to use vehicle rollup doors.
- ❖ ADA Accessibility: The building, including furniture and equipment, parking, path of travel and access to the building shall meet all applicable ADA requirements.
- ❖ Recycling for employees is a LEED prerequisite and shall be accommodated in the staff workspaces. The need for recycling containers or dumpsters at the exterior in the same location as trash containers shall also be determined during the design process and coordinated with those agencies responsible for collection. There will also be adequate provisions for the recycling of used products such as motor oil.
- ❖ Hours of Service: Fleet Services operates on a fairly standard work week with normal daytime operating hours.



Pima County Fleet Services New Service Facility Program & Design Guidelines

GENERAL BUILDING REQUIREMENTS

Code Conformance and Zoning

All Pima County building projects are obligated to build in conformance with all applicable building codes and regulations applicable to any particular project. This project, as with any other will be obligated to all applicable building permit fees, Sewer connection fees and various utility connection fees such as water meters and electrical connection costs.

In line with various Intergovernmental Agreements (IGAs) The Authority Having Jurisdiction will be Pima County Development Services for a Pima County project on Pima County land.

By the same IGAs, a County project on County land is NOT obligated to conform to the Pima County Code (Title 18 ZONING or the COT Land Use Code) with regards to zoning and is not obligated to submit a Development Plan to Development Services. Regardless of this, a Pima County project should be developed as closely as possible to all the applicable design and development details and requirements and be held to as high a standard of design as would a private development on private property

Conform with the Pima County/City of Tucson Standards for Public Improvements (current edition) when developing the civil improvements to this project.

LEED and Sustainability

By mandate of the Board of Supervisors (Resolution 2007-84) all new buildings (and additions in excess of 5,000 GSF) in Pima County have an objective of achieving LEED Silver certification for the construction of the buildings and the site. Adherence to all other Pima County Sustainability Guidelines shall also be a part. The Pima County Sustainable Action plan can be found on-line at <http://www.pima.gov/Sustainable/AUG08ActionPlan-1.pdf>.

Meeting the requirements of LEED Silver certification should lead and inform the Design Team into a better than adequate design for

- ❖ Lighting
- ❖ Day lighting
- ❖ HVAC comfort and energy efficiency
- ❖ Water efficiency
- ❖ Water efficient landscaping

As well as all other building design and construction issues associated with green building.

Site Use

The site for this facility has been predetermined by the County. It is the intention of this project to advance some of the long term planning goals of the County with respect to the development of the Mission Road site along the lines and recommendations of various master planning studies.

A proposed site plan has been developed to address the various concerns listed below. The orientations and location of the buildings on the site and the development of the site are subject to numerous constraints unique to this site.

Vehicular access, parking, delivery, bicycle and pedestrian access must all be considered as well as locations of utilities and other constraints. Consideration must also be given to construction phasing and existing facilities that will need to be demolished to make way for this new facility. *See the Site Constraints Plan (Sht 3 of 6) in Section 3*

Good landscape and site design principles shall be utilized in the design elements of the site. Low maintenance landscaping shall be used. The site shall provide for the smooth operation of the facility allowing for adequate parking, vehicle staging, service lines, ready lines, and adequate maneuvering room and circulation for heavy vehicles with wide turning radiuses (some as wide as 50')



Pima County Fleet Services New Service Facility Program & Design Guidelines

The site of the existing facility lays across some existing flow lines leading to the adjacent Zeller Wash. Civil engineering and site design for the new site shall address any potential drainage shortcomings in a cost effective and environmentally prudent manner.

See Conceptual Site Plan (Sht 1 of 6) in Section 3

The Buildings

Overall, the buildings should not make overt or radical design statements however; any statement made should reflect the integrity and importance of this facility to Pima County. Context and location are important. Generally, the building design should incorporate good design principles and elements. Features such as entrances, and windows should be protected from the extremes of the desert southwest environment in particular solar exposure and heavy, wind driven rainfall. The interior design of the building should reflect ergonomic principles to maximize both the comfort and efficiency of the staff and customers.

Building & Site Access

The following are access requirements:

- ❖ Vehicle Drop-off lanes for vehicle service
- ❖ ADA Accessibility: Direct access to the building for persons with disabilities
- ❖ Safe Pedestrian Access: foot traffic (pedestrian) access from public ways and parking lots
- ❖ Safe Bicycle Access: A clear path from the public way. Bicycle racks and lock downs should be located near the entrance as well as lockers for employees who bicycle commute.
- ❖ Parking: Visitor and designated staff parking. Provide direct access. See Parking note below
- ❖ Delivery: Direct and easy access for deliveries
- ❖ Trash and Recycling: Areas TBD and in accordance with the requirements of the Pima County Code and with access designed in accordance with the requirements of the solid waste disposal provider and recycling collection providers (including appropriate location, truck access and turning radiuses).
- ❖ Expandability for future growth.

Graphics, Signage and Way-finding

On the exterior of the building, there will be various features, signage and way finding such as the building address, the building name and another signage that identifies the building. The Design Team will be responsible for developing a graphics package for the project to assure the building is clearly signed. In addition to this, the Design Team will develop a graphics and way-finding package that will assist customers as they use the building particularly as the approach from their vehicles.

On the interior of the building, there will be various signs developed, designed and specified by PCFM's Interior Design group, and incorporated into the Construction Documents by the Consultant. These will include restroom signs room names and numbers as well as those signs required for code compliance (exit signs etc.).

Also in some cases, a LEED innovation point can be achieved through signs and graphics educating visitors about the LEED aspects of the building.

Goals and Objectives of a Sign System:

- ❖ Achieve uniformity
- ❖ Effect standardization
- ❖ Enable the public to clearly recognize activities and spaces by means of CONSISTENT identification



Pima County Fleet Services New Service Facility Program & Design Guidelines

- ❖ Improve service to the public by facilitating access to programs and services
- ❖ Improve user success through good information design

Criteria:

- ❖ Message - Standard terminologies or messages
- ❖ Compatibility between sign messages
- ❖ Placement - Location examples
- ❖ Where does the public need to go?
- ❖ Which way does the Public need to go?
- ❖ Sign indicating the Public has arrived
- ❖ Flexibility - signs must address re-use of spaces, adds, moves and other changes

Viewing Conditions Shall Also Be Considered:

- ❖ Angle from which a sign would be viewed
- ❖ Quality and intensity of adjacent lighting
- ❖ Possible obstructions of the sight lines between viewer and sign
- ❖ Competing signs

Lighting

Proper and well-designed lighting is an important part of any building design. The Illuminating Engineering Society of North America (IESNA) in cooperation with American National Standards Institute (ANSI) publishes standards and guidelines intended to guide a Design Team to proper lighting design. LEED will also make various demands of the lighting system. Lighting levels and quality shall conform to these standards.

Specific requirements for the interior include:

- ❖ Provide ample non-glare lighting to accommodate the various uses and tasks within the building particularly those which have special requirements (computer display screens, etc.).
- ❖ Windows, providing natural light for offices and shop space throughout as much as possible. Day lighting will be integral to the design of the building and to LEED certification.
- ❖ Control of the Lighted Environment will be important to the meeting rooms or conference room spaces. The room will need to respond to various needs such as meetings and video or media presentations. For this, various lighting levels will be required as well as the ability to adjust the daylight levels via blinds or other window coverings. Systems to control lighting must be simple and operable by persons with no special knowledge or training (such as multiple switching on multi-tube fixtures).

Specific requirements for the exterior include:

- ❖ The parking lot and building entrances should be well lighted for safety and security reasons.
- ❖ Lighting levels should be an overall average of the code minimum to a maximum range of 5 foot-candles, according to ASHRAE standards.
- ❖ Lighting for walkways and stairways shall be provided.
- ❖ Pole fixtures should be of the "inverted shoe box" or similar type, which provide a low cut-off angle so as to minimize glare. Lights should have timing devices or photocells, which automatically control the on/off function.
- ❖ All exterior lighting design and fixtures shall comply with or exceed outdoor lighting codes and Dark Sky ordinances.

Acoustics

A good acoustical environment is highly desirable in the office areas in all other parts of the building.



Pima County Fleet Services New Service Facility Program & Design Guidelines

In as much as possible, the noise levels throughout the facility should be minimized to enhance user comfort and staff productivity. Since shop areas present certain noise generating issues due consideration should be given to sound transmittance in the design of walls partitions and doors between the shops and other activities within the building.

Lighting systems (through poorly selected fixtures) can contribute adversely to the performance of an acoustical environment. HVAC systems may contribute adversely to the acoustics of a space or in positive sound masking/white noise effects.

Parking

Parking shall be designed in accordance with the code with specific respect to layout, site design, circulation and landscaping. Numbers of spaces and specific use shall be as determined by the Project Team and to a certain extent, constrained by site availability. LEED points available in these categories may not be available to the project. Integrate bicycle parking into the design of the building and site access.

Safety and Security

Effective security must be provided for the staff, the public, and the equipment. Specific needs:

- ❖ Fire prevention system in accordance with code requirements and Pima County standards.
- ❖ Doors with low resistance hardware for easy entrance and exit, especially for persons with disabilities. All exterior doors should have locks that work from the same key. Interior doors should operate with the same key, except for specific equipment or supplies storage.
- ❖ Security System that detects sound and motion when the building is closed. The meeting room area should have a separate security system, which can be set/turned off remotely.
- ❖ Exterior lighting to insure security for persons and property

Emergency exit lighting for power failures (as required by code)



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MATERIALS; FINISHES; FURNITURE; FIXTURES AND EQUIPMENT STANDARDS

PCFM has developed Standards for materials, finishes, furnishings and equipment suitable to a myriad of Pima County applications. Therefore, there are no specific USE categories established in the PCFM standards, but a product offering with built-in flexibility to support change.

Areas

Through thoughtful consideration, research and post occupancy evaluations, PCFM Standards includes products meeting the needs of specific Fleet Services functions and designated areas such as:

- ❖ Customer Service
- ❖ Administrative
- ❖ Break/Refreshment
- ❖ Entry/Public Service
- ❖ Bathrooms
- ❖ Storage

Criteria

Products carrying a Heavy Commercial rating have been scrutinized and evaluated for:

- ❖ GREEN Certifications and ratings
- ❖ Life Cycle costing
- ❖ Performance and Durability
- ❖ Maintenance requirements
- ❖ Re-use/Reconfiguration
- ❖ Warranty
- ❖ Installation Methods & Guarantees
- ❖ Non obsolescence
- ❖ Light Reflectance Value
- ❖ Health/Safety Codes
- ❖ Ergonomics/OSHA Guidelines
- ❖ Data/Voice/Power Compatibility
- ❖ Acoustical Properties
- ❖ ANSI/BIFMA

STANDARDS

Furnishings & Equipment

PCFM Furniture and Equipment Standards, many categories offering a variety of options, will be made available to the Consultant at the beginning of the Design Development phase and will include:

- ❖ Window Coverings
- ❖ Systems Furnishings
- ❖ Modular Case Goods/Millwork
- ❖ Conventional Furnishings
- ❖ Specialty Equipment
- ❖ Moveable Walls

Products are divided by TYPE and will carry Manufacturers names, product name/style number along with desired characteristics.

Finishes & Materials

PCFM Standards for Finishes and Materials will be made available to the Consultant at the beginning of the Design phase and will include:

- ❖ Flooring – Carpeting, Resilient and Hard
- ❖ Wall coverings



Pima County Fleet Services New Service Facility Program & Design Guidelines

- ❖ Coatings
- ❖ Fabric Criteria
- ❖ Laminates/Woods Criteria
- ❖ Metals/Plastics Criteria

Exceptions

Desired products not found in PCFM standards and considered necessary to the Interior Design concept and functionality shall first be scrutinized by the PCFM Interior Design group, who will work closely with the Consultant... If a proposed product meets the above criteria, the product may be presented for consideration to PCFM. Such work serves as a means of continued development and expansion of the PCFM Standards package and encouragement of aesthetic freedom.

PCFM Interior Design group will develop a colors, materials and finishes package supportive of the architecture and concept of the space while meeting all applicable criteria.

Custom

Products of a Custom nature will carry guidelines and require they meet applicable criteria listed above. Custom products will require detailed specifications, written and graphic, demonstrating compliance with those criteria.

DEFINITIONS

Finishes & Materials

- ❖ Interior architectural coatings do not include mechanical equipment, but can include surfaces prepared for visual presentations.
- ❖ Textiles include fabrics used in the upholstery of furniture, systems panels, tackable and acoustical vertical surfaces, flipper door covers, carpet tiles, and window coverings.
- ❖ Wall covering: a flexible sheet of sized paper, fabric, plastic, etc., various mils, patterned or plain, textured or smooth, often laminated and used to cover a vertical surface as wall protection or a writable surface.

Furniture, Fixtures and Equipment (FF&E)

- ❖ Fixed or Movable Property



Pima County Fleet Services New Service Facility Program & Design Guidelines

GENERAL SYSTEM REQUIREMENTS

General Requirements

The building shall be designed in accordance with the highest standards of practice for all disciplines involved. In addition, the Design Team shall be familiar with and shall develop a consistency of design solution / elements / equipment per Pima County Facilities Management standards. Pima County Facilities Management is the agency responsible for maintenance and operations of all County facilities. The building will be designed and constructed with an eye to maintenance as well as cost effective operation. The standards below are presented as a guide to the Design Team to aid them in developing a design to meet or exceed these ideals and avoid pitfalls during design reviews. The Design Team shall maintain a close working relationship with Pima County Facilities Management through the FM Project Manager to assure a design that adheres to the standards.

Roof and Roofing

Any selected roofing system must be maintainable and repairable by County maintenance personnel without the need for special training or expertise. Select from commons systems readily available from the local market. System shall be UL Listed. Systems must be designed and detailed to adhere to the roofing manufacturer's standards and requirements so that warranties and guarantees are not compromised. All roofs shall be designed to provide positive drainage and allow no ponding.

Access to the roof: The design shall provide for a lapeyre (alternating treads) ladder access and a roof hatch from a locked storage room or mechanical space. A ladder may be considered by PCFM under certain circumstances, however, a lapeyre ladder is much preferred over a ships ladder, or vertical ladder. All areas of the roof shall be accessible to maintenance personnel particularly where equipment is located. Provide ladders, step-over protection and openings through parapets as necessary to accommodate this requirement.

Wiring, Telecommunications and Data

Electronic Media and Equipment: Voice and data lines should be readily available to staff and the ability to place a variety of electronic media in multiple locations around the facility is an important feature of the building. Most if not all Service Bays will require access to computer terminals for Tech use. Flexibility is a key to the facility's ability to accommodate both the present and future technology. Equipment to be accommodated will be as defined by Pima County Public Fleet Services and Pima County ITD during the design phase. It is the responsibility of the design consultant to obtain and confirm this information and provide a design to accommodate it.

Telecommunications: Through the Project Manager, the design consultant and his electrical sub-consultant shall consult directly with Pima County ITD who will provide telecommunications and data design services and provide all other system requirements for the building. See Design Responsibility below

Wiring of Millwork and Furniture: Past experience has shown that with the expansion and change in electronic equipment more than ample raceways for wire management must be provided in millwork and in desks and systems furniture workspaces.

Design Responsibility: Electrical and lighting systems are the responsibility of the primary design consultant (the architect) and the electrical sub-consultant (the electrical engineer). Design of telecommunications and data systems is the responsibility of the Pima County Information Technology Department (ITD). The design consultants shall coordinate with ITD and be responsible for providing construction documents that reflect all these requirements and specifications for telecom rooms, distribution infrastructure, power and all other infrastructure and backbone requirements for the systems.

Electrical



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Electrical System: The Electrical system shall be designed in accordance with the applicable codes and standards. In addition to this, the Design Team shall maintain a close working relationship with Pima County Facilities Management through the FM Project Manager to assure a design that adheres to the standards and requirements of the various shops so that system design, fixture selection etc will be compatible with the maintenance needs of the County.

An electrical closet shall be provided and is accounted for in the space program. Do not mount panels in spaces accessible to the staff or the public or accessible to vandalism on the exterior of the building.

Cross Discipline Coordination:

The Design Team shall provide proper coordination between all applicable disciplines. This is particularly true for the mechanical and electrical sections. Failure of this coordination is most often expressed in the construction process where equipment provided does not match electrical supplied or where it is unclear what sorts of sub-systems (such as duct detectors) require electrical work. Also, coordination with Pima County ITD, and others is important to providing a telecommunications closet with sufficient size, power, outlets, conduits and system interconnection.

Lighting

In addition to the lighting requirements discussed in the General Building Requirements section above, the Design Team shall maintain a close working relationship with Pima County Facilities Management through the FM Project Manager to assure a design that adheres to the standards and requirements of the various shops so that system design, fixture selection etc. will be compatible with the maintenance needs of the County.

Mechanical Systems, Environmental Controls and Energy Conservation

Requirements for mechanical systems, environmental controls and energy conservation:

The requirements for mechanical systems, environmental controls and energy conservation are well documented and are an integral part of any LEED project. It is not the intention of this document neither to duplicate this information nor to direct the consultants to the proper execution of their professional responsibility.

Because of the potential of damage to furniture finishes, equipment, and disruption to end users, no air handlers, fan coils or other HVAC equipment should be located in the overhead or interior of the building. For square footage that requires capacities over 50 tons, water chillers should be used over DX units, this will reduce the number of air handling equipment and reduce maintenance cost over the life cycle of the building. Use gas fired equipment over heat pumps or resistive heat if gas is available on the property in question. The use of heat pumps (and/or multiple heat-pumps) in any given situation can create excessive maintenance calls.

Cross Discipline Coordination:

The Design Team shall provide proper coordination between all applicable disciplines. This is particularly true for the mechanical and electrical sections. Failure of this coordination is most often expressed in the construction process where equipment provided does not match electrical supplied or where it is unclear what sorts of sub-systems (such as duct detectors) require electrical work.

Designed Accessibility:

Where systems are designed that require maintenance, repair and testing, access shall be included in the design and shown clearly on the construction documents. This shall include but not be limited to, fan coil units, duct detectors, filter sections etc. Proper consideration must be given to the construction process so that installation of one system (first in) is not obstructed by other systems installed later.

Energy Management and Control System (EMCS)

The building's mechanical controls shall be designed and constructed in accordance with the section 15900 HVAC Controls. See *Appendix "C"*



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System Location: As these systems are computer based and require a controlled environment, the primary control panel of the system will be located in the Telecommunications closet (see program). Proximity to power, the telephone and data systems is needed as the EMCS is interconnected to the County's central energy management systems via internet connectivity. Room key access shall be for ITD and FM only.

Plumbing Systems

The plumbing system shall be designed in accordance with the applicable codes and standards. Pima County sustainability goals shall apply to the design with particular regard to water use, low flow fixtures etc. LEED also provides guidance in this regard and points are available for the use of waterless urinals and an overall reduction in water usage.

Requirements for plumbing:

- ❖ There shall be NO Point-of-Use Water Heaters
- ❖ Where automatic systems are used (on-off valves / hands free water faucets, flush valves etc.), avoid the use of systems and products requiring batteries for day-to-day operation.

Security Systems

Design Responsibility: Security systems shall be as listed below. Please confirm and verify this information as change over time will effect the information posted here. The systems shall be purchased and installed by Pima County Facilities Management as a project cost. It is the responsibility of the primary design consultant (the architect) and the electrical sub-consultant (the electrical engineer) to understand the requirements and consult directly with PCFM regarding the desired layout, number of devices etc. of the system. The design consultants shall be responsible for providing construction documents that reflect all these requirements and specifications for devices, equipment, locations, power and all other infrastructure and backbone requirements.

System Location: As these systems are computer based requiring a controlled environment, the panels and controls of the system will be collocated in the telecommunications closet (see program). Key access shall be for ITD and FM only.

Intrusion System Basics:

1. All intrusion devices will be installed on DSC Security System panel model DSC PC4020 as the basis of design. The Consultant shall review the below requirements and recommend the manufacturer and model numbers which should be used for this project.
 2. One keypad at each employee entry/exit door
 3. All exterior doors will get a magnetic door contact
 4. All main hallways will get a dual technology passive infrared / microwave detector
 5. All rooms classified as High Priority will get a dual technology passive infrared / microwave detector
 6. At least one interior audible signaling device located in main lobby areas
 7. At least one exterior audible signaling device located on outside of building facing parking lots
 8. All devices will be home run to DSC Security Panel
 9. Systems tied into the fire alarm systems will be model DSC 4020CF as the basis of design. To be used as fire alarm DACT
-
1. DSX Access Control Typical Hardware:- Basis of Design – Consultant to Review and Make Recommendation: DSX 1048PKG Intelligent 8 Door Package
 2. DSX 1042PKG Intelligent 2 Door Package
 3. DSX SP150/27 Lock Power Supply
 4. HID 5365-EKP00 Reader, MINIPROX, WIEGAND Output, Black, Pigtail
 5. BOSCH DS160 PIR, Request-To-Exit, light gray finish
 6. HES 9600-630 Electric Strike, 630 Satin SS
 7. HES 1006-630 Electric Strike, 12-24VDC, Fail Secure, 630 SS Fire Rated



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8. SECURITRON M62 Maglock, Dual Voltage, 1200 LB, Satin SS Finish
9. SECURITRON UHB-CL-8 Universal Header Bracket
10. SECURITRON EEB3N Emergency Push Button, Push-To-Exit, Green
11. GRI 180-12WG ¾" Door Contact

DSC Security System Typical Hardware:- Basis of Design – Consultant to Review and Make Recommendation:

1. DSC PC4020NK MAXSYS 4020
2. DSC LCD4501 MAXSYS LCD Keypad
3. NP712 12 VOLT 7 Amp Battery
4. TRI-CLSH Cam Lock w/ Flange
5. TRI-CJSET RJ31X Jack w/ Cable Set
6. VIS DUET VISONIC Dual Tech Motion
7. RVL 18CSRN Exterior Siren
8. TRI-15WD Interior Siren
9. ODC59A Overhead Door Contact
10. SR-1078CT ¾" Commercial Switch
11. ELK TRG1640 16.5V, 40VA

Fire Sprinkler System

The Building shall be provided with an Automatic Fire Sprinkler System/s. Regardless of any differences and/or changes as may occur to standards and codes over time, the Fire Sprinkler System/s shall conform to the requirements of the Authority Having Jurisdiction (AHJ) and to the Code in force and effect at the time of design. The Consultant shall recommend the appropriate type/s of fire protection systems for this project.

System Location: A closet to accommodate the risers, valves and alarm devices shall be provided. This closet shall be located as required by the AHJ and as required to provide access to fire department personnel and maintenance as well as protect the system from vandalism.

Fire Alarm System

Maintain a close working relationship with Pima County Facilities Management through the FM Project Manager to assure a design that adheres to the standards and requirements of the various shops so that system design will be compatible with the maintenance needs of the County.

System Location: As these systems are computer based requiring a controlled environment, the panels and controls of the system will be located in the Telecommunications closet (see program) unless required otherwise by the Authority Having Jurisdiction (AHJ). Key access shall be for ITD and FM only.

Keying

Hardware and Keying shall be provided as a part of the design consultant's work. In addition to this the Design Team shall maintain a close working relationship with Pima County Facilities Management through the FM Project Manager to assure a design that adheres to the standards and requirements of the various shops so that system design, etc will be compatible with the maintenance needs of the County. A copy of the Bidding List shall be provided to Pima County Facilities Management upon project completion.



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SUSTAINABILITY OPTIONS & OPPORTUNITIES

In light of the Board of Supervisor's Resolution to move Pima County toward a more sustainable future, the design process should investigate various opportunities for sustainable and renewable energy systems which would net substantial cost savings over time. These systems are only suggestive in nature and the Project Team should consider their viability for integration in to the project subject to rigorous cost benefit analysis. Also, any other systems that members of the Project Team are aware of which offer sustainable options should also be given consideration.

Roof Mounted Photovoltaic Systems

Since the project will involve an extensive roof area the opportunity for PV systems integrated on the roof is substantial. This also offers points toward the LEED Silver Certification required of the project.

Combined Heating and Power Systems

Combined Heating and Power Systems (Co-Gen) offer opportunities for cost savings with a minimal footprint and can be powered by natural gas.

Waste Oil Electrical Power Generation Systems

Given that Fleet Services generates from 250 to 300 gal of waste oil every week (or 13,000 gal/year) waste oil electrical generating system should be thoroughly investigated. Newer products currently on the market can provide very low emission systems which would need little if any monitoring by the EPA.



SECTION 3

FACILITY PROGRAM

The following sections will define the various program elements of Fleet Services

1. Components of the Building will describe each element in terms of its function, use and general environment.
2. Organizational and Relationship Diagrams will describe various relationships and adjacencies
3. The Space Program document will describe each element in terms of its number and required NSF and NUSF.
4. Conceptual Plans will describe the site and concept building plans, site use and building layout on the site as well as concepts for the two major shop buildings. These drawings and diagrams represent one possible solution to the program elements, organizational relationships and realities of the site.
5. Probable Construction Cost is an opinion of probable cost and is based on the conceptual plans presented in this section



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*"Life is rich, always changing, always challenging, and (we) architects have the task of transmitting into wood, concrete, glass and steel, of transforming human aspirations into habitable and meaningful space."
~Arthur Erickson~*

COMPONENTS OF THE BUILDING

In the following sections, the components of the BUILDING, the activities, access, the environment and in some cases the equipment required are described.

There will be three basic divisions of space for Fleet Services

- A. Administration**
- B. Parts, Tires & Tools**
- C. Light and Medium Vehicles and Heavy Equipment Shops and Service Bays**

There is a fourth division of spaces which is a miscellaneous category. These are service and utility spaces that can be located within the building as required.

- D. Miscellaneous Spaces**

Note: Spaces and functions will be identified and described in the following categories. Only categories necessary to the description will be listed.

Description: A general description, environment, objective and subjective intent of a space or area

Activities: Defines what activities will take place in the space

Access: Defines who or what group will have access to the space

Area Required: to account for a specific need or occupancy requirement

Adjacencies: Defines required/needed adjacencies

Furnishings: A general description of the furniture needed in a space

Equipment: Defines what equipment is likely to be needed in the space

Fixture Count: Used in the case of restrooms where a requirement greater than code minimum will be stated.

Utilities: Defines what utilities are likely to be needed



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A. ADMINISTRATION

Within the Administration area, there will be two basic subdivisions of space

- I. **Administration** (All administrative functions of Fleet Services and public interface other than service writers)
- II. **Service Writers Areas** (The primary public interface for all FS customers dropping off and picking up vehicles for service).

Note: When the term "Public" is used, it is intended to refer only to Pima County employees and others with whom FS has service agreements. Both the terms "public" and "customer" are interchangeable. FS is a department that serves only the County (or contracted agencies) and has no connection with the general public.

I. Administration

Lobby & Reception:

Description: A small lobby and receptionist station to welcome, direct and serve the various visitors that come to FS during the day.

Activities: Public interface and service

Access: All

Adjacencies:

- ❖ To the front door
- ❖ To Administration
- ❖ To the large Training & Conference Room

Furnishings: See FF&E section for guidance. Comfortable seating for 4 to 5 people;

Receptionist workstation (systems furniture); small standup writing counter

Equipment:

- ❖ PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems

Director's Office

Description: Separate, enclosed private office with windows to the outside; glass in door and/or sidelights. Privacy required for management duties;

Activities: Administrative and supervisory responsibilities of the Director

Access: Staff and Invitees

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. Small conference table and 2 to 3 side chairs. FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Deputy Director's Office

Description: Separate, enclosed private office with windows to the outside; glass in door and/or sidelights. Privacy required for management duties;

Activities: Administrative and supervisory responsibilities of the Assistant Director

Access: Staff and Invitees

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. 2 to 3 side chairs. FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Small Conference Room

Description: Quiet, glass enclosed to provide noise control as well as visibility for staff control.

Activities: Small group meetings and conferences



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Area Required: for occupancy, capacity see space and net area requirements in The Space Program section.

Access: Staff and Invitees

Adjacencies:

- ❖ Director's Office
- ❖ Deputy Director's Office

Furnishings: See FF&E section for guidance. Table and chairs (quantities TBD at time of design)

Equipment:

- ❖ White boards for group discussions.
- ❖ Wired for laptop computers and other electrical equipment

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Supervisor's Offices (See Space Program for numbers required)

Description: Separate, enclosed private office w/ glass in door and/or sidelights. Privacy required for management duties

Activities: Program Coordinator's responsibilities

Access: Staff

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. 1 to 2 side chairs. FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Program Coordinator's Offices

Description: Separate office area; Can be shared for Program Coordinators

Activities: Program Coordinator's responsibilities

Access: Staff

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. 1 to 2 side chairs. FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

General Open Office

Description: Open space workroom; naturally lighted.

Activities: All the support functions of Fleet Services

Access: Staff

Adjacencies:

- ❖ To the Offices
- ❖ Staff Support spaces (copy room, storage; restroom; break room; etc)

Furnishings: See FF&E section for guidance. Workstations shall utilize the principles of "office landscaping", featuring modular workstations, using flexible components, to spatially divide individual desk areas. This is based on the need for teamwork, frequent communication, and efficient workflow.

Systems Furniture including work surfaces; mobile file cabinets; drawers; shelves and flippers; keyboard tray; etc. FF&E layout and requirements TBD during design phase

Work areas to include:

- ❖ See Space Program for numbers and sizes required

Equipment:

- ❖ PC; telephone and other TBD.
- ❖ Shelving using standard system freestanding on floor (66" Ht / (3) 2 sided ranges)

Utilities: Power as required for convenience and equipment. Access to telecommunications and



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data systems

Equipment Alcove or Room

Activities: Staff uses copiers, shared office equipment, fax machines, network printers etc.

Access: Staff

Adjacencies:

- ❖ To the office areas

Furnishings: See FF&E section for guidance. Work surfaces as required for equipment.

- ❖ Work surfaces as may be required

- ❖ Storage for paper and supplies

- ❖ Staff Mail slots, bins or "taco trays"

Equipment: TBD at time of design

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems as may be required for equipment.

Recycling Alcove/Area

Activities: Storage/Holding of recycling bins (LEED Prerequisite)

Access: Staff

Adjacencies:

- ❖ To the office areas

Equipment: TBD at design phase

File Room

Description: Room or Area dedicated to files and filing

Activities: Area for file cabinets

Access: Staff only

Area Required: As required to house and access all the cabinets (size; number and type) required by Fleet Services (TBD)

Adjacencies:

- ❖ To the Open Office area

Equipment: file cabinets

Conference Room

Description: Quiet, glass enclosed to provide noise control as well as visibility for staff control.

Activities: Small group meetings and conferences

Area Required: for occupancy, capacity see space and net area requirements in The Space Program section.

Access: Staff and Invitees

Adjacencies:

- ❖ Office Staff

- ❖ Service managers

Furnishings: See FF&E section for guidance. Table and chairs (quantities TBD at time of design)

Equipment:

- ❖ White boards for group discussions.

- ❖ Wired for laptop computers and other electrical equipment

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Storage Room

Description: Enclosed; secured; Storeroom function lockset.

Activities: Storage for office supplies, equipment etc. needing secure storage

Access: Staff only

Adjacencies:

- ❖ To the General Workroom.

Equipment: Shelving, and/or other accommodations for storage.



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Large Conference / Training Room

Description: Multi-purpose space, self-contained, with good artificial lighting and natural lighting (provide blinds to allow various media presentations)

Activities: Department meetings; Conferences and Staff Training

Access: Staff and Invitees

Area Required: for occupancy, capacity see space and net area requirements in The Space Program section.

Adjacencies:

- ❖ To Administration
- ❖ To restrooms

Furnishings: See FF&E section for guidance. Tables and chairs (quantities TBD at time of design. Modular type for differing room configurations)

Equipment: All Equipment in Meeting Room TBD at time of design; May include:

- ❖ TV Monitor with VCR/DVD on moveable cart
- ❖ Projector and Computer connections TBD
- ❖ Erasable white board(s)
- ❖ Projection screen (built-in, retractable)

Utilities: Power as required for equipment; Access to telecommunications and data systems; Full power and media requirements TBD at time of design

Indented areas are within or directly adjacent to the large Conference Room

Buffet Alcove

Description: Area needs to be designed to accommodate enough space for the county to install county contract paper towel dispensers and soap dispensers etc.

Activities: Open counter and general area serving refreshments, box lunches, set out crock pots etc.

Adjacencies:

- ❖ In the Large Conf Room

Equipment:

- ❖ Counter space; base cabinets and overhead cabinets
- ❖ Kitchen type sink
- ❖ Open counter space for prep and coffee maker etc.
- ❖ One to two frost-free refrigerators
- ❖ Ice maker
- ❖ Off Counter Microwave Oven (or appropriate counter space for a counter top microwave oven)
- ❖ Soap and towel dispensers

Utilities: Power as required for convenience and equipment; Hot/Cold water; Sanitary Sewer

Storage Room

Description: Enclosed room

Activities: Storage for tables and chairs

Access: Staff only

Adjacencies:

- ❖ In the Large Conf Room

Staff Break Room

Description: Restful, natural light, soft and comfortable, change of character from work areas. Directly adjacent to an outdoor patio

Activities: Staff lunchroom, place for meals, lounge area, work breaks.

Access: Staff only

Adjacencies:

- ❖ Adjacent to but separate from the workroom.
- ❖ To outdoor patio (staff use only)

Furnishings: See FF&E section for guidance. Comfortable lounge seating; tables and chairs.



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Equipment:

- ❖ Cabinet for dishes, counter space
- ❖ Sink
- ❖ Frost-free refrigerator with icemaker
- ❖ Off Counter Microwave Oven (or appropriate counter space for a counter top microwave oven)
- ❖ Bulletin Board

Utilities: Power as required for equipment. Hot/Cold water; Sanitary Sewer

Outdoor Patio (Not part of Bldg GSF)

Activities: Outdoor sitting and break area for staff.

Area Required: large enough to accommodate a smokers area at a minimum of 25 feet from building doors, operable windows and air intakes.

Access: Staff only

Adjacencies:

- ❖ Directly adjacent to the break room.

Furnishings: See FF&E section for guidance. Exterior fixed table and seating. Design and color to reduce impact of sun and heat exposure. Shade (if not part of the building)

Staff/Public Restrooms (M&F)

Description: Adequately sized, high-grade materials (for easy maintenance) Both ADA accessible

Activities: Toilet facilities and restroom

Access: All

Adjacencies:

- ❖ Administration

Equipment: Toilet; Sink; Mirror; soap and towel dispenser, privacy door lock

Utilities: Power as required for convenience. Hot/Cold water; Sanitary Sewer, Exhaust Ventilation

Janitor Closet

Description: Lockable room

Activities: Closet for cleaning equipment and storage for supplies

Access: Janitorial Staff only

Adjacencies:

- ❖ Near the Staff Restrooms

**Do not locate closet IN either of the restrooms

Furnishings: Shelves TBD

Equipment: Mop Sink and other cleaning equipment as required.

Utilities: Power as required for convenience; Hot/Cold water; Sanitary Sewer, Exhaust Ventilation

II. Service Writer's Area

Waiting & Intake

Description: A waiting area and receiving area for FS Customers dropping off and picking up vehicles for service.

Activities: Public interface and service

Access: All

Adjacencies:

- ❖ Service Writer's Stations

Furnishings: See FF&E section for guidance. Comfortable seating for 4 to 5 people; small standup writing counter(s)

Service Writers Work Stations (See Space Program for numbers required)

Description: Open space room; naturally lighted; Part of the Waiting and Intake area

Activities: Service Writers Intake and Return vehicles to customers;



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Access: Staff only

Area Required: As required for the numbers of Service Writer's workstations as well as space for other equipment scheduling boards etc. TBD

Adjacencies:

- ❖ Directly adjacent to and visible to and from the vehicle drop off lanes
- ❖ To the Supervisor's Office

Furnishings: See FF&E section for guidance. Modular workstations using flexible components, to spatially divide individual desk areas for Service Writers. The design of this area shall be based on a "customer service" ideal, the need for teamwork, frequent communication, and efficient workflow; Systems Furniture including work surfaces; mobile file cabinets; drawers; shelves; keyboard tray; etc. TBD during design phase

Equipment:

- ❖ PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems

Supervisor's Office

Description: Separate, enclosed private office w/ glass in door and/or sidelights. Privacy required for management duties

Activities: Supervisor's responsibilities

Access: Staff only

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. 1 to 2 side chairs. FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Equipment Alcove

Activities: Staff uses copiers, shared office equipment, fax machines, network printers etc.

Access: Staff

Area Required: As required for equipment TBD

Adjacencies:

- ❖ To the Service Writer's area

Furnishings: See FF&E section for guidance. Work surfaces as required for equipment.

- ❖ Work surfaces as may be required
- ❖ Storage for paper and supplies

Equipment: TBD at time of design

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems as may be required for equipment.

Recycling Alcove/Area

Activities: Storage/Holding of recycling bins (LEED Prerequisite)

Access: Staff only

Adjacencies:

- ❖ To the Service Writer's area

Equipment: TBD at design phase



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B. PARTS; TIRES & TOOLS

Parts Counter

Description: The interface between the Service Techs and the Parts Department; Well lighted

Activities: The counter where Service Technicians order and receive parts and sign out tools

Access: Tech Staff outside / Parts Staff only inside

Adjacencies:

- ❖ Parts Tech Workstations
- ❖ The Shops

Furnishings: Standup Counter. Durable work surface

Parts Tech Workstations (See Space Program for numbers required)

Description: Generally part of the Parts Counter

Activities: Parts Techs work stations

Access: Parts Staff only

Area Required: As required for the numbers of Parts Techs

Adjacencies:

- ❖ Parts Counter
- ❖ Parts Warehouse area
- ❖ Parts Manager's Office

Furnishings: See FF&E section for guidance; Integrated with and part of the Parts Counter; work surfaces; file cabinets; drawers; keyboard tray; etc. TBD during design phase

Equipment:

- ❖ PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems

Parts Manager's Office

Description: Separate, enclosed private office w/ glass in door and/or sidelights. Privacy required for management duties

Activities: Parts Manager's responsibilities

Access: Staff only

Adjacencies:

- ❖ Parts Counter
- ❖ Parts Tech Workstations
- ❖ Parts Warehouse area

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. 1 to 2 side chairs. FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Equipment Alcove

Activities: Staff uses copiers, shared office equipment, fax machines, network printers etc. TBD

Access: Staff

Area Required: As required for equipment TBD

Adjacencies:

- ❖ To the Parts Techs

Furnishings: See FF&E section for guidance. Work surfaces as required for equipment.

- ❖ Work surfaces as may be required

- ❖ Storage for paper and supplies

Equipment: TBD at time of design

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems as may be required for equipment.



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Recycling Alcove/Area

Activities: Storage/Holding of recycling bins (LEED Prerequisite)

Access: Staff only

Adjacencies:

- ❖ To the Parts Techs

Equipment: TBD at design phase

Parts Warehouse/Storage

Description: large room for storage and holding of motor vehicle parts and equipment

Activities: Parts Storage

Access: Staff only

Area Required: TBD for adequate storage of high turnover parts and materials

Adjacencies:

- ❖ Parts Counter
- ❖ Parts Tech Workstations
- ❖ Parts Manager's Office
- ❖ Parts Mezzanine
- ❖ Delivery Area

Furnishings: See FF&E section for guidance. Modular storage systems as required TBD during design phase

Equipment: Freight elevator (to mezzanine if provided)

Utilities: Power as required for freight elevator and convenience

Parts Mezzanine (Optional Space)

Description: large mezzanine for storage and holding of motor vehicle parts and equipment located directly over the Parts Warehouse

Activities: Parts Storage

Access: Staff only

Area Required: TBD for adequate storage of high turnover parts and materials

Adjacencies:

- ❖ Delivery Area
- ❖ Above Parts Warehouse area
- ❖ Freight elevator

Furnishings: See FF&E section for guidance. Modular storage systems as required TBD during design phase

Utilities: Power as required for convenience

Delivery Area

Description: Entry configured so that the delivery truck can back straight to the entrance and unload off the back of the truck. There must be no steps. Provide a level passage; provide sufficient floor space is needed for multiple boxes with space for incoming deliveries as well as outgoing returns/exchanges. Exterior of delivery door should provide cover and protection from rain.

Activities: All parts deliveries and returns; Staging, inventorying processing and handling of incoming materials

Access: Staff; Vendors, Delivery Vehicles

Adjacencies:

- ❖ Parts Warehouse
- ❖ Parts Mezzanine
- ❖ Freight elevator

Furnishings: See FF&E section for guidance. Large table surface and counters for staging and handling boxes TBD during design phase

Flammable Liquids Storage Room

Description: Enclosed; secured; Storeroom function lockset; exhaust ventilation

Activities: Storage of flammable liquids and materials in a code legal manner; Materials to be distributed to Service Techs as needed



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Access: Parts Staff only

Area Required: As required (TBD during design phase)

Adjacencies:

- ❖ Parts Counter
- ❖ Parts Warehouse Area

Equipment: Fire rated cabinets; Shelving, and/or other accommodations for storage TBD

Automotive Tool Crib

Description: Enclosed (can be a cage enclosure); secured; Storeroom function lockset.

Activities: Storage of all specialized tools and equipment; Tools to be checked out to Service Techs on an as needed basis

Access: Parts Staff only

Area Required: As required (TBD during design phase)

Adjacencies:

- ❖ Parts Tech Workstations Area

Furnishings: See FF&E section for guidance. Shelving, and/or other accommodations for storage TBD

Tire Warehouse/Storage

Description: large room for storage and holding of car, truck and small vehicle tires and associated equipment; should have an adjacent delivery access

Activities: Tire Storage

Access: Parts Staff only

Area Required: As required for numbers of tires TBD

Adjacencies:

- ❖ Parts Warehouse Area
- ❖ Tire Service Bays

Furnishings: See FF&E section for guidance. Rack systems specific to tire storage TBD during design phase

Heavy Equipment Tire Storage

Description: large room or covered and enclosed cage area for storage and holding of large off-road equipment tires; should have an adjacent delivery access

Activities: Tire Storage

Access: Parts Staff only

Area Required: As required for numbers of tires TBD

Adjacencies:

- ❖ Heavy Equipment Tire Service Bays

Furnishings: See FF&E section for guidance. Rack systems specific to tire storage TBD during design phase

C. SHOPS AND SERVICE BAYS

Within the Shop areas there will be three basic subdivisions of space

- I. **Automotive Shops and Service Bays** (Cars, Light Trucks and Trucks)
- II. **Heavy Equipment Shops and Service Bays** (Heavy Trucks and Off Road Equipment)
- III. **Staff Support** (Supervisors' offices, locker rooms, restrooms and break room)

It is the general intention to provide 2 distinct shop areas yet have them proximate so that service overlaps can occur without excessive distance or separation.

The Automotive Service area is to be accommodated in a single large building space with interior vehicle circulation and limited door openings to enhance environmental and temperature control. The layout concept will be designed around bays that are side by side where one tech can occupy two bays. Generally, one bay will contain a vehicle lift and the other will be a "flat" bay with no lift. However, all bays will be designed to accommodate a lift if required. Car and light truck service bays shall be a minimum of **14' wide by 24' long**. Truck service bays shall be a minimum of **16' wide by 40' long**. This shop shall be designed to allow a minimum clear height of **25'-0"** to the underside of structural elements over the



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service bays. The vehicle entry door shall be a minimum of **20' wide and 16' high**. The vehicle exit door shall be a minimum of **16' wide and 16' high**.

The Heavy Equipment Service area is to be designed around the "drive through" service bay concept with doors at each end of the individual double long bays. These doors shall be a minimum of **16' wide and 16' high**. Heavy equipment service bays shall be a minimum of 16' wide by 80' long. Shade awnings and/or overhangs shall be provided at both ends of bays so that work can be accomplished and staged at the face of the bays. The structural design of the building shall accommodate twin parallel rail cranes running perpendicular to the service bays. The structure for this shop shall be designed to allow a clear height of **25'-0"** to the underside of the rail cranes. There shall be at least a **100 foot "maneuvering zone"** at each face (front and rear) of this building

ALL Service Bays will be designed with ready access to various services, utilities and hose reels such as oils, fluids, compressed air; engine exhaust ventilators, utility task lights and electrical power.

ALL Service Bays will be designed to accommodate slab mounted lifts. There shall be no buried or below surface lifting equipment on the project.



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I. Automotive Shops and Service Bays

Car & Light Truck Service Bay

Description: Mechanic/Service Tech Workstation

Activities: General Vehicle Service

Access: Staff

Area Required: Generally 14' wide x 24' deep; Sufficient space for Mechanics Tool Chest

Furnishings: Small workstation and bench to contain the Tech's computer station; Stool height ergonomic chair or stool; Shelves and Cabinets TBD

Equipment: Reels and connection points for oils, fluids, engine exhaust ventilation, compressed air, shop light and electrical power TBD; Vehicle lift TBD

Utilities: Power as required for tools and equipment. Access to telecommunications and data systems

General Floor Space

Description: Spaces to contain various equipment, parts cleaners, parts bins, fluid containers, oil dumps etc.

Activities: Storage / Holding

Access: Staff only

Area Required: TBD

Adjacencies:

❖ Service Bays

Equipment: Parts Cleaners (fixed equipment) TBD

Utilities: Power and services as required for equipment

Car & Light Truck Tire Service Bay

Description: Mechanic/Service Tech Workstation

Activities: Tire Service

Access: Staff only

Area Required: Generally 14' wide x 24' deep; Sufficient space for Mechanics Tool Chest

Furnishings: Small work station and bench to contain the Tech's computer station; Stool height chair or stool; Shelves and Cabinets TBD

Equipment: Reels and connection points for compressed air, shop light and electrical power TBD; Vehicle lift TBD

Utilities: Power as required tools and equipment. Access to telecommunications and data systems

General Floor Space (Tire)

Description: Spaces to contain tire equipment

Activities: Operation of tire equipment

Access: Staff only

Area Required: TBD

Adjacencies:

❖ Tire Service Bays

Utilities: Power as required for convenience and equipment.

New Car Build-out Service Bay

Description: Mechanic/Service Tech Workstation. This function (2 bays) can be separated from the general service area into its own area as it is a specialized function requiring surrounding space for parts and packaging.

Activities: Police and various electronic equipment installations for new Sheriff Cars

Access: Staff only

Area Required: Generally 14' wide x 24' deep; Sufficient space for Mechanics Tool Chest

Furnishings: Small work station and bench to contain the Tech's computer station; Stool height



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chair or stool; Shelves and Cabinets TBD

Equipment: Reels and connection points for compressed air, shop light and electrical power TBD; Vehicle lift TBD

Utilities: Power as required tools and equipment. Access to telecommunications and data systems

Indented areas are directly adjacent to the New Car Build-out bays

General Floor Space (New Car)

Description: Spaces to stage and store boxes and new equipment to be installed on to the vehicles.

Activities: Storage / Holding

Access: Staff only

Area Required: TBD

Adjacencies:

❖ New Car Build-out Bays

Truck Service Bay

Description: Mechanic/Service Tech Workstation

Activities: Vehicle Service (generally unitary body trucks)

Access: Staff only

Area Required: Generally 16' wide x 40' deep; Sufficient space for Mechanics Tool Chest

Furnishings: Small work station and bench to contain the Tech's computer station; Stool height chair or stool; Shelves and Cabinets TBD

Equipment: Reels and connection points for oils, fluids, engine exhaust ventilation, compressed air, shop light and electrical power TBD; Vehicle lift TBD

Utilities: Power as required tools and equipment; Access to telecommunications and data systems

General Floor Space

Description: Spaces to contain various equipment, parts, fluid containers, oil dumps etc.

Activities: Storage / Holding

Access: Staff only

Area Required: TBD

Adjacencies:

❖ Truck Service Bays



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II. Heavy Truck & Equipment Shops and Service Bays

Heavy Truck & Equipment Service Bay

Description: Mechanic/Service Tech Workstation

Activities: Heavy Equipment Service

Access: Staff only

Area Required: Generally 16' wide x 80' long; Sufficient space for Mechanics Tool Chest

Furnishings: Small work station and bench to contain the Tech's computer station; Stool height chair or stool; Shelves and Cabinets TBD

Equipment: Reels and connection points for oils, fluids, engine exhaust ventilation, compressed air, shop light and electrical power TBD; Vehicle lift TBD

Utilities: Power as required tools and equipment. Access to telecommunications and data systems

General Floor Space

Description: Spaces to contain various equipment, parts cleaners, parts bins, fluid containers, oil dumps etc.

Activities: Storage / Holding

Access: Staff only

Area Required: TBD

Adjacencies:

❖ Service Bays

Equipment: Parts Cleaners (fixed equipment) TBD

Utilities: Power and services as required for equipment

Welding Bay/Shop

Description: Shop area specific to welding

Activities: Welding

Access: Staff only

Area Required: Generally 16' wide x 40' deep

Adjacencies:

❖ Heavy Equipment Service Bays

Equipment: Welders TBD; Welding Table; Flash protection screens as may be required by code

Utilities: Adequate Ventilation; Power as required tools and equipment; *Note: outlet power for welders shall be provided to other H.E. bays as directed to power welders outside the specific welding shop area*

Welding Bay/Shop Storage Area

Description: Area specific to welding

Activities: Storage of equipment and welding materials and steel

Access: Staff only

Area Required: Generally 16' wide x 40' deep

Adjacencies:

❖ Welding Bay

Equipment: Floor area; Racks as required for bar and rod stock

Utilities: Power as required tools and equipment

Heavy Equipment Tool Crib

Description: Enclosed; secured; Storeroom function lockset.

Activities: Storage of all specialized tools and equipment specific to the Heavy Equipment shop; Tools to be checked out to Service Techs on an as needed basis

Access: Staff only

Area Required: As required (TBD during design phase)

Adjacencies:



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- ❖ Heavy Equipment Service Bays
- ❖ Heavy Equipment Supervisor's Office

Equipment: Shelving, and/or other accommodations for storage TBD

Staff Restroom (Unisex)

Description: Adequately sized, high-grade materials (for easy maintenance)

Activities: Toilet facilities and restroom to service the Heavy Truck and Equipment shop that is remote from the Staff Support areas

Access: Staff

Adjacencies:

- ❖ Heavy Truck and Equipment Shop

Equipment: Toilet; sink; urinal; mirror; soap and towel dispenser, privacy door lock

Utilities: Power as required for convenience. Hot/Cold water; Sanitary Sewer, Exhaust Ventilation



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III. **Staff Support Areas**

Fleet Maintenance Manager's Office

Description: Separate, enclosed private office with windows to the outside (if possible); glass in door and/or sidelights. Privacy required for management duties

Activities: Administrative and supervisory responsibilities of the Fleet Maintenance Manager

Access: Staff

Adjacencies:

- ❖ Shops
- ❖ Administration

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. 2 to 3 side chairs. FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Shop Supervisor's Offices (See Space Program for numbers required)

Description: Separate, enclosed private office w/ glass in door and/or sidelights. Privacy required for management duties; Should have visual connection to the shop areas

Activities: Shop Supervisor's responsibilities

Access: Staff

Adjacencies:

- ❖ Shops

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. 1 to 2 side chairs. FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD.

Utilities: Power as required for convenience and equipment. Access to telecommunications and data systems.

Foreman's Offices or Workstations (See Space Program for numbers required)

Description: Separate office area; can be shared by Foremen; Should have visual connection to the shop areas

Activities: Foreman's responsibilities

Access: Staff

Adjacencies:

- ❖ Shops (specific to foreman's area of responsibility)

Furnishings: See FF&E section for guidance. Systems Furniture including work surfaces; file cabinets; drawers; shelves and flippers; keyboard tray; etc. One workstation for each Foreman; FF&E layout and requirements TBD during design phase

Equipment: PC; telephone and other TBD

Utilities: Power as required for convenience and equipment; Access to telecommunications and data systems

Staff Break Room

Description: Restful, natural light, comfortable, change of character from work areas. Directly adjacent to an outdoor patio (if possible)

Activities: Staff lunchroom, place for meals, lounge area, work breaks.

Access: Staff

Adjacencies:

- ❖ Shops
- ❖ Locker Rooms & Restrooms
- ❖ To outdoor patio (staff use only)

Furnishings: See FF&E section for guidance. Comfortable lounge seating; tables and chairs.

Equipment:

- ❖ Cabinet for dishes, counter space



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- ❖ Sink
- ❖ Frost-free refrigerator with icemaker
- ❖ Off Counter Microwave Oven (or appropriate counter space for a counter top microwave oven)
- ❖ Telephone
- ❖ Bulletin Board

Utilities: Power as required for equipment. Access to telecommunications system. Hot/Cold water; Sanitary Sewer

Indented areas are within or directly adjacent to the Break Room Area

Vending Alcove

Description: Design of this area and/or alcove shall assure that the backs of machines are screened from view.

Activities: House 2 to 3 vending machines (drinks and snacks)

Adjacencies:

- ❖ In the Break Room

Equipment: TBD

Utilities: Power as required for machines. Access to telecommunications and data systems (as may be needed).

Recycling & Trash Alcove

Activities: Recycling bins and trash containers

Adjacencies:

- ❖ In the Break Room

Equipment: Trash and recycling containers TBD

Drinking Fountain Alcove

Activities: Drinking Fountains

Adjacencies:

- ❖ In the Break Room

Equipment: 2 electric drinking fountains (1 ADA Accessible)

Utilities: Power as required for equipment; Cold water; Sanitary Sewer

Outdoor Patio (Not part of Bldg GSF)

Activities: Outdoor sitting and break area for staff.

Area Required: If provided, patio shall be large enough to accommodate a designated smokers area at a minimum of 25 feet from building doors, operable windows and air intakes.

Adjacencies:

- ❖ Directly adjacent to the break room.

Furnishings: See FF&E section for guidance. Exterior fixed table and seating. Design and color to reduce impact of sun and heat exposure. Shade (if not part of the building)

Staff Restrooms (Men and Women)

Description: Adequately sized, high-grade materials (for easy maintenance), ADA accessible

Activities: Toilet facilities and restrooms

Access: Staff only (generally Techs) segregated male-female

Adjacencies:

- ❖ Staff Entrance
- ❖ Vicinity of the Shops
- ❖ Break Room
- ❖ Showers
- ❖ Locker Rooms

Equipment: Toilets, sinks, mirrors, soap and towel dispensers, non-locking doors and a maze entrance, toilet and urinal partitions

Fixture Count: The minimum number of fixtures that are designed into the Staff Restrooms shall be as follows. This should be the minimum number provided within each room. Should the code



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calculation require more than this, then the code-mandated count shall govern.

Men:

- ❖ 1 ADA Accessible stall
- ❖ 3 standard stalls
- ❖ 4 urinals (waterless type)
- ❖ 1 ADA Accessible Lavatory
- ❖ 3 Lavatories

Women:

- ❖ 1 ADA Accessible stall
- ❖ 2 standard stalls
- ❖ 1 ADA Accessible Lavatory
- ❖ 1 Lavatory

Utilities: Power as required for convenience. Hot/Cold water; Sanitary Sewer, Exhaust Ventilation

Staff Shower Room (Men and Women)

Description: Adequately sized, high-grade materials (for easy maintenance), ADA accessible

Activities: Showers for Techs

Access: Staff only / segregated male-female

Adjacencies:

- ❖ Restroom
- ❖ Locker Room

Furnishings: See FF&E section for guidance. Benches

Equipment: Showers, soap dispensers, clothing hooks and dressing area

Fixture Count: The minimum number of fixtures that are designed into the Showers shall be as follows. This should be the minimum number provided within each room

Men:

- ❖ 1 ADA Accessible stall
- ❖ Gang shower w/ min 3 shower heads

Women:

- ❖ 1 ADA Accessible stall

Utilities: Hot/Cold water; Sanitary Sewer, Exhaust Ventilation

Staff Locker Rooms (Men and Women)

Description: Adequately sized, high-grade materials (for easy maintenance); ADA accessible

Activities: Lockers for staff use

Access: Staff Only / segregated male-female

Adjacencies:

- ❖ Restrooms
- ❖ Break Room
- ❖ Shower Room

Furnishings: See FF&E section for guidance. Benches

Equipment: Lockers (standard metal type ½ height) Numbers TBD

Uniform Alcove (Only if need or req'd. / TBD at time of design)

Description: Open Alcove for hanging, distribution and collection of uniforms

Activities: Hanging, distribution of clean and collection of soiled uniforms

Access: Staff

Adjacencies:

- ❖ Staff Entry
- ❖ Locker Rooms

Furnishings: See FF&E section for guidance. TBD

Janitor Closet

Description: Lockable room

Activities: Closet for cleaning equipment and storage for supplies

Access: Janitorial Staff only



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Adjacencies:

- ❖ Near the Staff Restrooms

**Do not locate closet IN either of the restrooms or locker room areas

Furnishings: Shelves TBD

Equipment: Mop Sink and other cleaning equipment as required.

Utilities: Power as required for convenience; Hot/Cold water; Sanitary Sewer, Exhaust Ventilation



D. MISCELLANEOUS SPACES

Description: This section attempts to list various support and use areas that are required to operate the facility. Some can be attached to the building and some can be remote or housed in cages to assure security.

Wash Rack

Description: A covered open bay with a drive through design

Activities: Equipment and engine wash down

Area Required: Generally 14' wide x 40' long; Sufficient space for the equipment island

Access: Staff; Service personnel

Adjacencies:

- ❖ Service Bays

Utilities: Power and utilities as required for equipment; Water; Sanitary drain with dirt and oil separator;

Car Wash Facility (TDB)

Description: A freestanding or attached covered bay with an automated car wash system (drive through design)

Activities: Car and light truck wash

Area Required: As required to house the washer and equipment

Access: Staff; Service personnel

Adjacencies:

- ❖ Service Bays
- ❖ Ready line

Utilities: Power and utilities as required for equipment; Water; Wash water recycling; Sanitary drain with dirt and oil separator;

Compressor Cage

Description: A covered room or cage; Dry, natural ventilation only; Secure lockable room/area

Activities: House compressor equipment

Area Required: As required to house and service equipment

Access: Staff; Service personnel

Equipment: Air Compressors and air dryers

Adjacencies:

- ❖ Service Bays

Utilities: Power and utilities as required for equipment;

Bulk Fluids Storage and Pump Room

Description: An enclosed room or covered or cage; dry, ventilated and exhausted; Secure lockable room/area; Access to or having a dedicated delivery point (rollup door); DEQ and environmentally complaint drain and spill control

Activities: Storage of bulk oils and fluids; Pumps and equipment for distribution to hose reels at service bays

Area Required: As required to house and service equipment; capacity of stored materials TBD

Access: Staff; Vendors; Service personnel

Equipment: Pumps and equipment TBD

Adjacencies:

- ❖ Service Bays

Utilities: Power and utilities as required for equipment; Water; Sanitary drain with dirt and oil separator

Used Motor Oil Recycling

Description: Holding tanks (above or below ground) for holding used motor oil

Activities: Storage of used motor oil until pickup by recyclers

Area Required: As required for tank(s) Access to trucks

Access: Staff; Vendors; Service personnel



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Equipment: Tanks

Adjacencies:

❖ TBD

Telecommunications Room

Description: Dry and air-conditioned. Room shall have dedicated A/C system; Secure lockable room/area. This room shall have specialized requirements such as equipment mounting backboards, substantial power requirements and various communications and data conduits and equipment. All these requirements are normally in a state of flux over time. This room shall be verified as to size, configuration and all other requirements as determined by the Pima County ITD and FM at the time of the building design phase.

Activities: Telecommunications for the building

Access: ITD and FM/Maintenance Staff only

Equipment: Telecommunications and other computer based equipment requiring a temperature-controlled environment.

Adjacencies:

❖ None required**

**Distance from various areas of the building can be a limiting factor or drive the need for additional sub-closets. Access shall be from ITD and FM staff only.

Utilities: Power as required for ALL equipment; Power as required for convenience and tools; Access to telecommunications and data systems; Air Conditioned space, not tied to other building systems

Electrical Closet

Description: An electrical closet shall be provided. Do not mount panels in spaces accessible to the staff or the public or accessible to vandalism; major switching gear and transformers may be located on the exterior of the building; Dry; natural ventilation only; Secure lockable room/area;

Activities: Electrical service distribution for the building

Access: Maintenance Staff only

Adjacencies:

❖ Main electrical service entrance to the building

Area Required: Adequate to house and maintain electrical distribution panels and equipment in a Code legal manner. To be verified at time of the building design phase.

Equipment: Electrical panel and equipment only; Power as required for convenience and tools.

Fire Riser Closet

Description: Dry; natural ventilation only; Secure lockable room/area

Activities: Fire riser enters the building; Fire Protection Sprinkle valves equipment and drain down access

Access: Maintenance Staff and Fire Department only

Adjacencies:

❖ To exterior and to sprinkler test valve.

Area Required: See space and net area requirements in The Space Program section. To be verified at time of the building design phase.

Equipment: Riser piping and valves only. Power as required for convenience and tools. Access to Fire Alarm reporting systems

Mechanical Rooms / Fan Rooms / HVAC Equipment

Description: Dry, natural ventilation only; Secure lockable room/area; These spaces can only be defined by the building Design Team and engineers of record. They will vary based on system selections and system requirements.

Activities: Building mechanical systems

Access: Maintenance Staff only

Area Required: As required. To be defined during the building design phase.

Adjacencies:

❖ As required

Utilities: Power as required for equipment; Power as required for convenience and tools; Access



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to telecommunications and data systems (EMCS) and to Fire Alarm reporting systems and as determined by the Design Team



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BUILDING SPACE PROGRAM

List of All required/desired spaces in the building
List includes needed NSF, expanded NUSF

The Program spreadsheets indicate the suggested numbers, types and sizes of spaces for the various spaces and uses described in the Fleet Services Program sections above.

These are:

1. Administration(5,262 SF)
2. Service Writer's Area(794 SF)
3. Parts-Tires-Tools Area (15,007 SF)
4. Shops Areas (38,178 SF)
5. Misc / Utility Areas (2,479 SF)

This is **61,800 NUSF** **Rounded up from 61,719*

The above listed program spaces represent a list of all the required spaces to address the needs requested by Fleet Services. The NSF assigned to these functions are either from County standards for office spaces or from direct need and input from the user groups that provided input during the programming process. These numbers should be considered a minimum requirement for space unless actual design work demands more space or less. Grossing factors used are averages and not tested against any plan layout. The spaces and functional areas are organized along the same lines as the department organizational charts provided by FS.

The section Conceptual Site & Building Plans will present a proposed site layout and various options for general building locations on the site as well as plans to describe how FS wants shop buildings laid out and organized. There are some difference between the square footages described above and those presented in the plan section:

1. Administration Building (11,055 GSF)
2. Automotive Services Building (39,181 GSF)
3. Heavy Truck and Equipment Shop Building (10,578 GSF)
4. Staff Support Area & Parts Area (13,520 GSF expandable with a mezzanine by approx. 4,000 SF)
5. Tire Crib (2,040 GSF)
6. Heavy Truck and Equipment Tire Crib (2,483 GSF)

This represents a building footprint of **78,857 GSF**

Differences between Plan and Program

The Automotive Services Building dimensions were driven by various demands. The length was driven by the number and positioning of truck bays angled at 45° and the turning radiuses of unitary body trucks. The width was driven by the same factors of the truck bays coupled with the demands of a double loaded perpendicular arrangement of automotive service bays with a minimum back out and turning aisle of 24 feet. The length of the building driven by the truck bays also allowed for a greater number of automotive service bays than requested which accommodates future expansion.

The length of the Heavy Shop (80' clear inside) was driven by the demands of FS and the longest known tractor trailer rig they will likely pull-into the bay and still be able to close both doors on it. The width was driven by the numbers of bays and the request for 16 foot wide doors and for additional space between bays to accommodate tools, equipment and storage.

The overall length or the building itself was driven by the available length of the site itself, parking needs and sufficient access by driveways to allow circulation around and through the complex.

North to south dimensions were driven by the shape of the site (including the redefined roadway) and the



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needs for the ready lines and at least 60 feet between the south face of the building wall and the edge of the ready line. This accommodates a 30 foot buffer for parking, loading and other needs as well as a 30 foot 2-way driveway that runs east west along the south face of the building in a direct line from the intake lanes

Generally the large open shop buildings will contain only the service bays and the spaces needed for the equipment that serves it. Most other spaces will be contained in the structures around the shops. Some spaces listed specifically in one group or another in the program can be located as required within the facility. For example the Fleet Service Manager's and supervisor's offices could be located in either the Administration section or in the Staff Support & Parts areas as long as visual connections to the shop areas are maintained.

Space Code Legend:

L	Lobby or waiting space
WS	Workstation: open office systems furniture - low number larger space, higher number smaller space
O	Office – enclosed with a door and systems furniture - low number larger space, higher number smaller space
ALV	An Alcove or space designated to a function
RM	Room
CLO	Closet or enclosed space with a door
BAY	Service Bay
CAGE	Enclosed lockable space surrounded by open mesh or fencing covered for weather protection
MEZZ	Mezzanine or upper floor for storage with limited access.
YARD	Yard or open space not part of a building



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Fleet Services Space Program

New Fleet Services Facility

Personnel/Program and Functional Area Detail

Program Areas / Administration					
Personnel & Program Area	Space/NSF/Units		Net SF		
Position/Space Description	Space Code	NSF	NEED	TOTAL	Remarks
Lobby/Public Interface	L	180	1	180	
Workstation (Reception)	WS5	80	1	80	C. Robles
Director's Office	O2	260	1	260	F. Samaniego
Deputy Director's Office	O3	180	1	180	Vacant
Workstation	WS4	80	1	80	E. Davisworth
Director's Conf/Mtg Room (4 people)	CR6	100	1	100	
Supervisor Office	O8	100	3	300	G. Gomez; Vac; Vac
Program Coordinator Office	O8	100	2	200	P. Merhens; V. Hartley;
OSL Workstations	WS4	80	4	320	L. Skidmore; K. Hof; D. Trenary; K. Harrington
Fleet Service Manager's Office	O7	120	1	120	R. Charlton
Conf/Mtg Room (6-8 people)	CR6	200	1	200	
Large Conf/Mtg/Training Room	CR4	1000	1	1,000	60-80 people/Auditorium Seat'g - Multi-Purpose
Buffet Alcove	ALV	60	1	60	
Furniture Stg Closet	CLO	80	1	80	
Copier / Work Room	RM	100	1	100	
File Room/Area	AREA	100	1	100	
Recycling Alcove	ALV	12	1	12	
Drinking Fountain Alcove	ALV	6	1	6	
Break Room	RM	200	1	200	
Office Supply/Form Storage	CLO	80	1	80	
Staff Restrooms / HC Accessible	RM	120	2	240	Male & Female
Total Space Count			28		
Sub-total Areas NSF				3,898 sf	
Plus Circulation Allowance of 35%				1,364 sf	
Total Personnel/Office Area NUSF				5,262 sf	

Program Areas / Service Writers					
Personnel/Office & Program Area	Space/NSF/Units		Net SF		
Position/Space Description	Space Code	NSF	NEED	TOTAL	Remarks
Lobby/Public Interface	L	200	1	200	
Manager's Office	O8	100	1	100	R. Webb
Service Writer's Workstation	WS4	80	3	240	F. Alegria; M. Telles; Vac
Copier / Equipment Alcove	ALV	36	1	36	
Recycling Alcove	ALV	12	1	12	
Total Spaces			7		
Sub-total Support Areas NSF				588 sf	
Plus Circulation Allowance of 35%				206 sf	
Total Support Area NUSF				794 sf	



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Fleet Services Space Program

Program Areas / Parts & Tires					
Program Areas	Space/NSF/Units			Net SF	
Position/Space Description	Space Code	NSF	NEED	TOTAL	Remarks
Parts; Tires; Tools					
Parts Manager's Office	O8	100	1	100	D. Love
Parts Tech Workstation	WS7	48	3	144	K. Kramer; M. Garland; L. Van Audsall
Parts Counter and Waiting	RM	200	1	200	
Recycling Alcove	ALV	12	1	12	
Parts Warehouse	RM	3000	1	3,000	
Parts Receiving / Staging	RM	200	1	200	Stacking and Staging for Boxes
Parts Mezzanine	MEZZ	3000	1	3,000	Optional space / TBD
Tire Storage	CAGE	2000	1	2,000	Covered / Weather Protection / Secure
H.E. Tire Storage	CAGE	2000	1	2,000	Covered / Weather Protection / Secure
Tool Crib (Fleet)	CAGE	240	1	240	Enclosed / Secure
Flammable Liquid Stg (Hazardous Mat)	RM	100	1	100	Enclosed / Secure
Tool Crib (Heavy Equip)	CAGE	120	1	120	Enclosed / Secure / Directly Adjacent to HE Shop
Total Spaces			14		
Sub-total Support Areas NSF				11,116 sf	
Plus Circulation Allowance of 35%				3,891 sf	
Total Support Area NUSF				15,007 sf	

Program Areas / Shops					
Program Areas	Space/NSF/Units			Net SF	
Position/Space Description	Space Code	NSF	NEED	TOTAL	Remarks
Supervision Areas					
Supervisor's Office	O8	100	2	200	P. Barker; B. Sanchez
Shop Foreman's Workstation	WS4	80	2	160	R. Herin; Vac
Automotive Service					
Car / Light Truck Service Bay w/Lift	BAY	336	8	2,688	Typical 14' x 24'
Car / Light Truck Service Bay wo/Lift	BAY	336	8	2,688	Typical 14' x 24'
New Car Build-Out Service Bay wo/Lift	BAY	336	2	672	Typical 14' x 24'
Tire Service Bay (Light)	BAY	336	2	672	Typical 14' x 24'
Tire Service Bay (Heavy)	BAY	640	1	640	Typical 16' x 40'
Truck Service Bay w/Lift	BAY	640	9	5,760	Typical 16' x 40'
Truck Service Bay w/Lift	BAY	640	1	640	Typical 16' x 40'
Intermediate Bays / Tools / Stg / Fluids	BAY	180	8	1,440	Typical 8' x 30'
Heavy Truck & Heavy Equipment Service					
Heavy Truck Service Bay	BAY	1280	2	2,560	Typical 16' x 80'
Heavy Equipment Service Bay	BAY	1280	3	3,840	Typical 16' x 80'
Welding Bay	BAY	640	1	640	Typical 16' x 40'
Storage Bay	BAY	640	1	640	Typical 16' x 40'
Staff Restroom	RM	36	1	36	Unisex-Adjacent to the HE Shop area
Support Areas					
Break Room	RM	1000	1	1,000	Adjacent to Patio Space (if provided)
Vending Machine Alcove	ALV	36	1	36	In the Break Room / 3 Machines (min)
Drinking Fountain Alcove	ALV	6	1	6	In the Break Room
Recycling Alcove	ALV	12	1	12	In the Break Room
Uniform Alcove	ALV	12	1	12	Near Locker Rooms / Need TBD
Employee Locker Rooms (Men)	RM	240	1	240	Min 50 1/2 ht lockers
Employee Restrooms (Men)	RM	250	1	250	
Employee Shower Room (Men)	RM	200	1	200	
Employee Locker Rooms (Women)	RM	100	1	100	Min 10 1/2 ht lockers
Employee Restrooms (Women)	RM	160	1	160	
Employee Shower Room (Women)	RM	160	1	160	
Total Support Spaces			62		
Sub-total Support Areas NSF				25,452 sf	
Plus Circulation Allowance of 50%				12,726 sf	
Total Support Area NUSF				38,178 sf	



Pima County Fleet Services New Service Facility Program & Design Guidelines

Fleet Services Space Program

Miscellaneous Spaces					
Utility / Equipment Needs		Space/NSF/Units		Net SF	
Equipment / Space Description	Space Code	NSF	NEED	TOTAL	Remarks
Service Spaces & Yards					
Waste Oil Tank	YARD	80	1	80	Not Part of Enclosed GSF
Bulk Oil & Fluids Stg & Pump Rm	RM	360	1	360	
Air Compressors	CAGE	100	2	200	Cage / Covered / Secured
Wash Rack	BAY	360	1	360	Covered / Sanitary Sewer/ Oil Separator
Wash Rack Equip Island	BAY	120	1	120	Covered
Car & Light Truck Wash	BAY	360	1	360	Covered / Drive-Thru Bay / Automated
Utility Service Spaces					
IT Closet	CLO	100	1	100	All Special ITD Req'm'ts / Dedicated A/C
Electrical Closet	CLO	100	1	100	TBD / As required
Fire Riser Closet	CLO	36	1	36	Access to Exterior
Mechanical Space (Air Handlers)	RM	120	1	120	As Required / Number as place keeper only
Total Support Spaces			11		
Sub-total Support Areas NSF				1,836 sf	
Plus Circulation Allowance of 35%				643 sf	
Total Support Area NUSF				2,479 sf	
SUMMARY					
				NUSF	
Administration Area NUSF				5,262 sf	
Service Writer's Area NUSF				794 sf	
Parts-Tires-Tools Area NUSF				15,007 sf	
Shops Areas NUSF				38,178 sf	
Misc / Utility Area NUSF				2,479 sf	
Sub-Total Program NUSF				61,719 sf	
Building Net Useable Square Footage (Rounded)				61,800 sf	



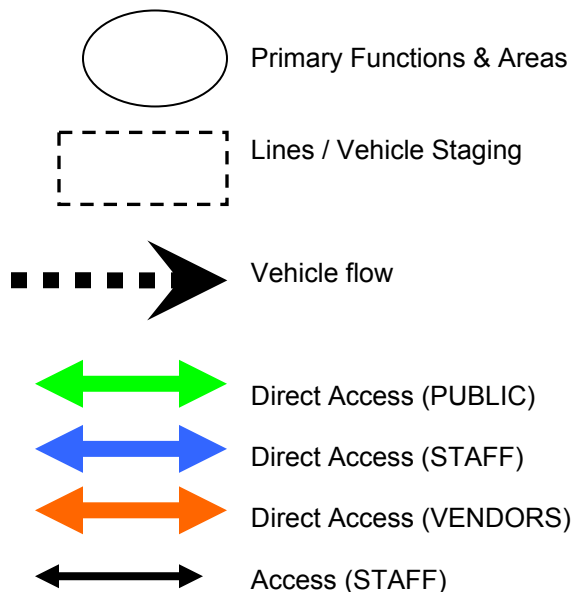
ORGANIZATIONAL DIAGRAMS

The following diagrams represent the general organizational and physical relationships of the Fleet Services and its spaces and functions. The diagrams are broken down into the following areas and functions

1. Graphic Legend is a general outline of the graphics used in the diagrams.
2. Primary Organizational Concept shows the overall relationships of the major building elements
3. Administration Organizational Concept: a suggested organizational diagram for the Administration area

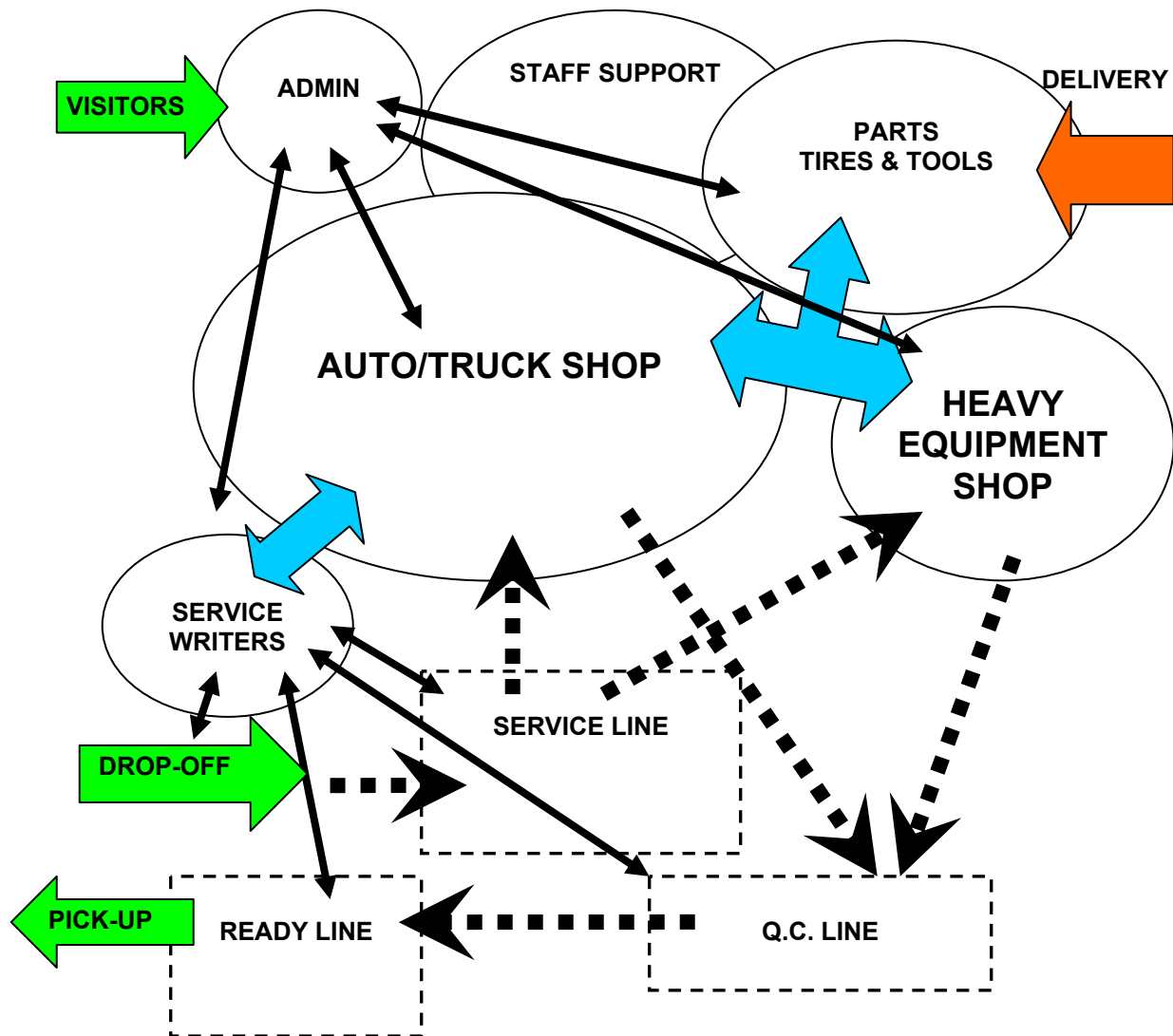
Although relative size is shown to indicate relationships and prioritization of space, there is no scale expressed or implied.

GRAPHIC LEGEND



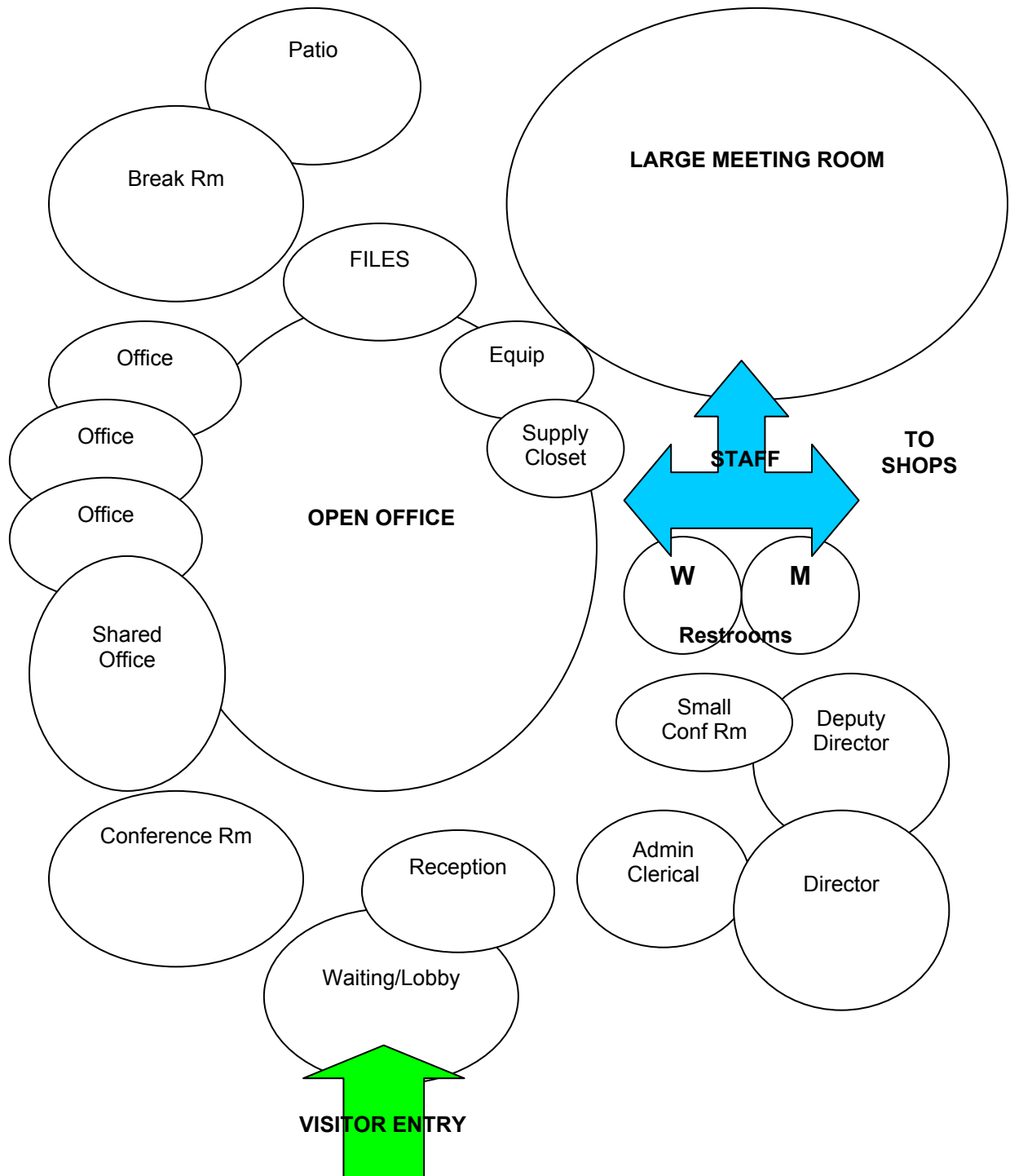


PRIMARY ORGANIZATIONAL CONCEPT





ADMIN ORGANIZATIONAL CONCEPT





Pima County Fleet Services
New Service Facility Program & Design Guidelines

SITE & BUILDING CONCEPTUAL PLANS

The following drawings and diagrams are provided to suggest, define and direct how the project should be implemented and designed.

Conceptual Site Plan (11 x 17 - Sht 1 of 6)

This plan describes how the site will be organized and utilized to accomplish the project goals and achieve the desired outcome. It was generated from various issues and demands unique to this site.

1. This is the site designated for this function in various site planning scenarios.
2. The site was developed to accommodate a new roadway through the Mission Road facility itself, maintain the existing exit north to 22nd Street and allow FS to be contained entirely on its own site and allow a security fence to surround it.
3. The building has been rotated off of its primary east-west orientation approx 21° to take advantage of the long east-west property line at the northern site boundary.
4. The building is set back from the northwestern corner of the site to allow vehicle access to the intake (drop-off lanes) and for visitor parking directly adjacent to the administration building.
5. Positioning of the building on the site addresses:
 - Developed form of the building and its massing
 - Existing street access to the site
 - Access to the building from the site circulation roadway
 - Vehicle circulation in and around the buildings and flow of vehicles on and around the site
 - Locations and adjacencies for the various vehicle lines (Quality Control, Service and Ready lines) and staging.
 - Sufficient space to provide the needed 100 foot heavy vehicle maneuvering "zone" in front and behind the drive-through HE building.
 - Access by various parts and material vendors and delivery trucks for all materials and equipment consumed by FS including parts, tires and fluids.
 - Trash and recycling pick up and removal
 - Parking on-site for staff
 - Separate building entrances for visitors and customers (vehicle drop-off)

Conceptual Building Plan (11 x 17 - Sht 2 of 6)

1. Addresses the organizational goals of the department
2. Suggests the available footprint of the building when applied to the requirements of the site
3. Utilizes the two differing shop building forms desired by the department
4. Places the two shop building nearly adjacent to enhance synergies between them
5. Places the Parts Department directly between the two shop buildings
6. Allows placement of shop supervisor's offices with visual access to the shops

Site Constraints Plan (11 x 17 - Sht 3 of 6)

1. Indicates some (but not necessarily all) of the issues and constraints of the proposed site that effect the design process.

Phasing Plan (11 x 17 - Sht 3 of 6)

1. Suggests how the building and the project will be phased and which of the buildings will be demolished to make way for the new

Main Service Building Concept Plan (8½ x 11 - Sht 4 of 6)

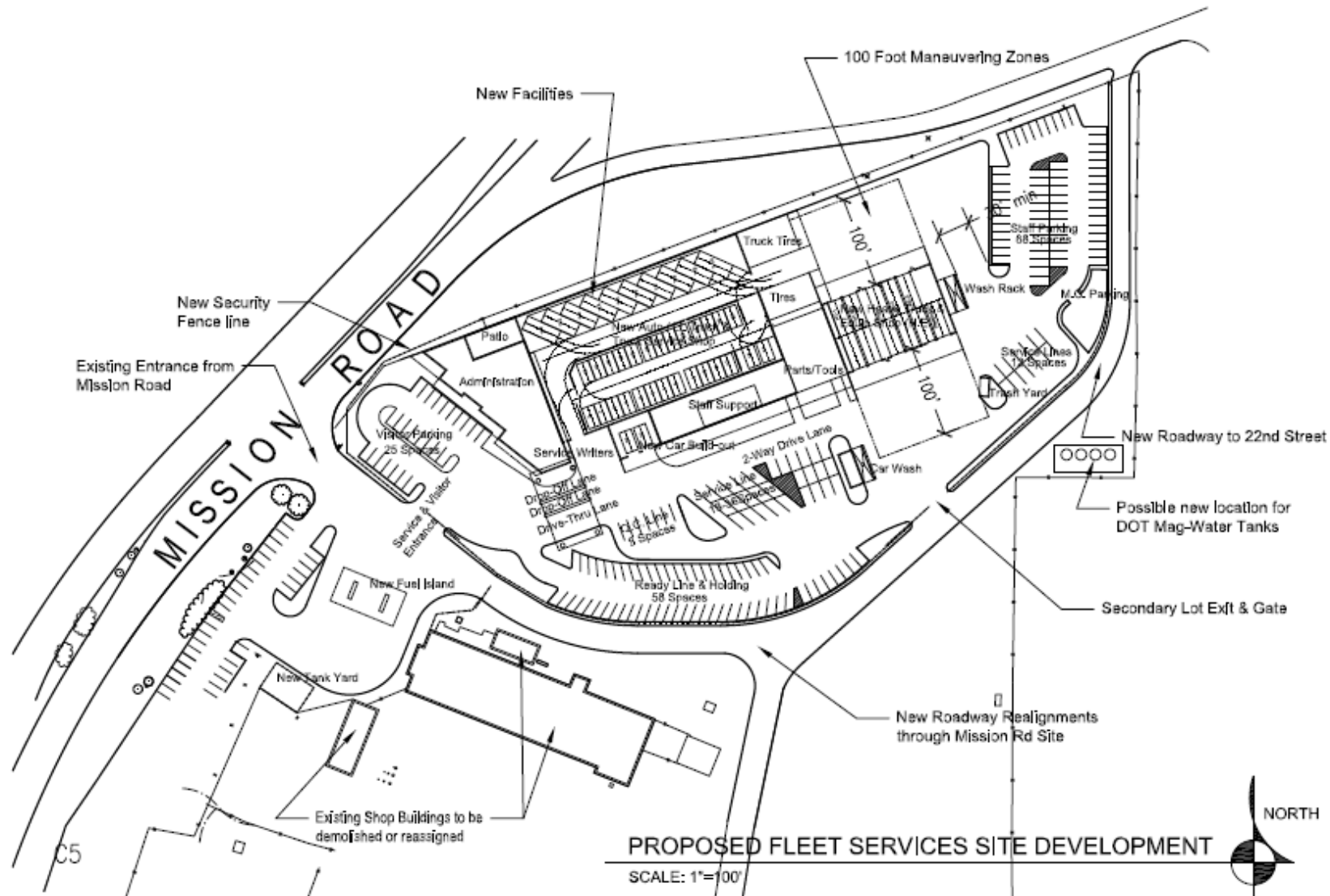
1. The Main Building for Automotive and Truck services based on a single large open span building with interior vehicle circulation to enhance energy efficiency and control the interior environment.
2. Building will have only 2 primary vehicle access doors



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New Service Facility Program & Design Guidelines

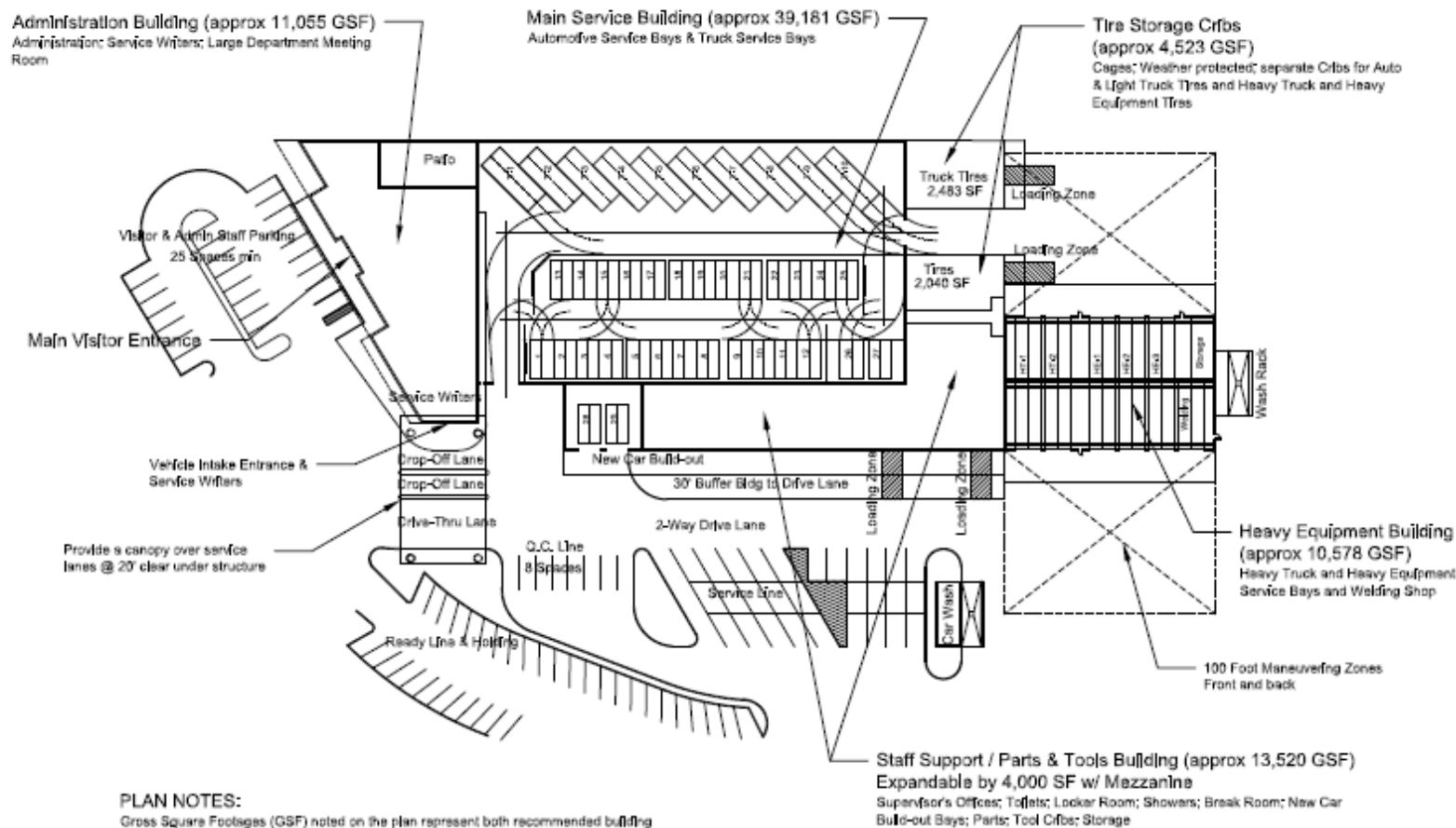
Heavy Truck and Heavy Equipment Service Building Concept Plan (8½ x 11 - Sht 5 of 6)

1. The Building for Heavy Truck and Heavy Equipment services based the drive-through service bay concept with vehicle doors at each end of the bay.
2. Twin overhead rail cranes will be provided that will run perpendicular to the bays at each side of the building.
3. This building will also contain a single bay designated as the Welding Shop and be directly adjacent to storage space for equipment and stores of steel bar and rod stock.





Pima County Fleet Services New Service Facility Program & Design Guidelines



PROPOSED FLEET SERVICES CONCEPTUAL BUILDING PLAN

SCALE: 1/64" = 1'-0"



PIMA COUNTY FACILITIES MANAGEMENT, 150 WEST CONGRESS, TUCSON ARIZONA 85701 (520)740-3085

Fleet Services Department
Conceptual Building Plan

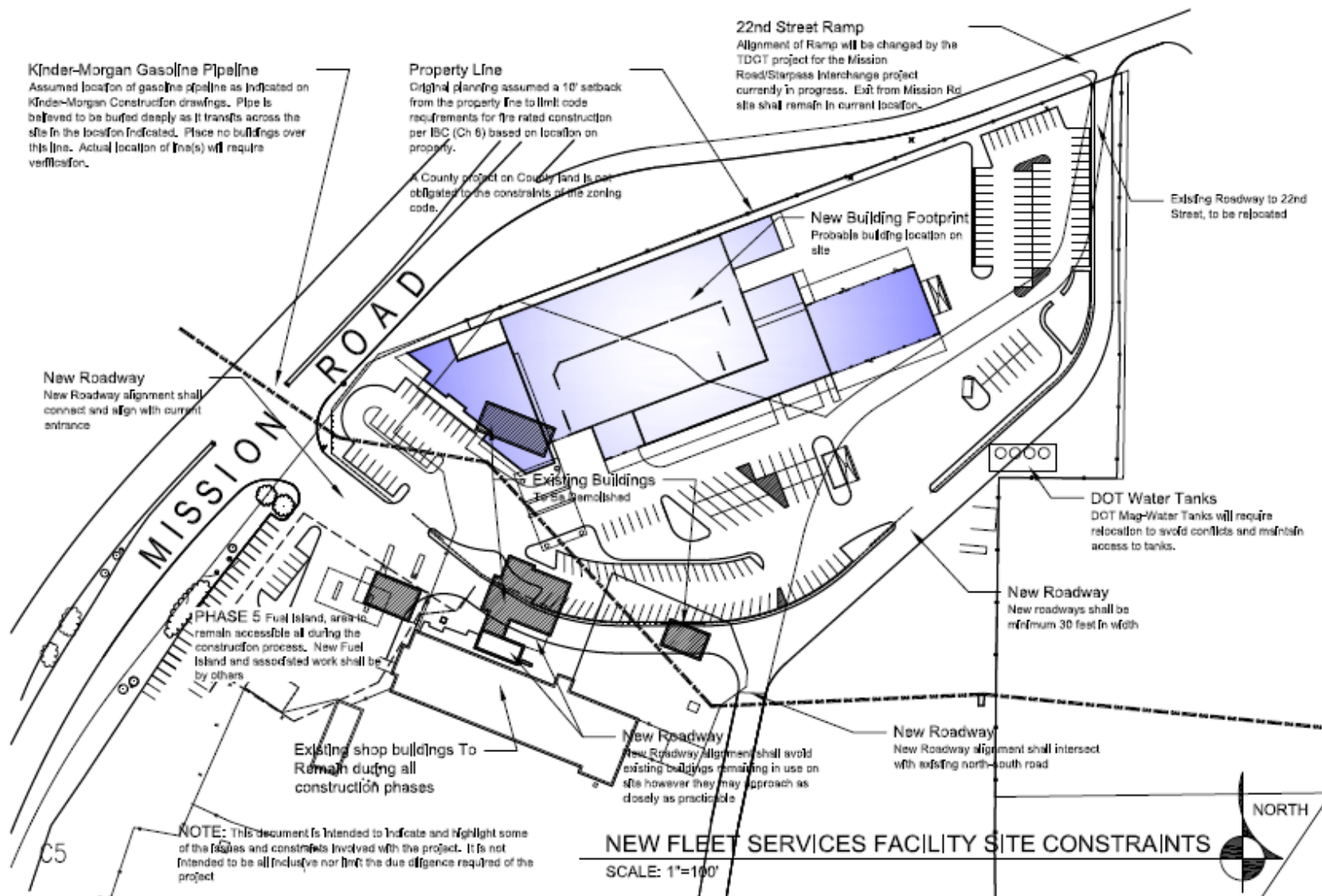
Mission Road Complex
Tucson, AZ



2 of 6



Pima County Fleet Services New Service Facility Program & Design Guidelines



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Fleet Services Department
Site Constraints

New Fleet Services Facility
Mission Road Complex
Tucson, AZ



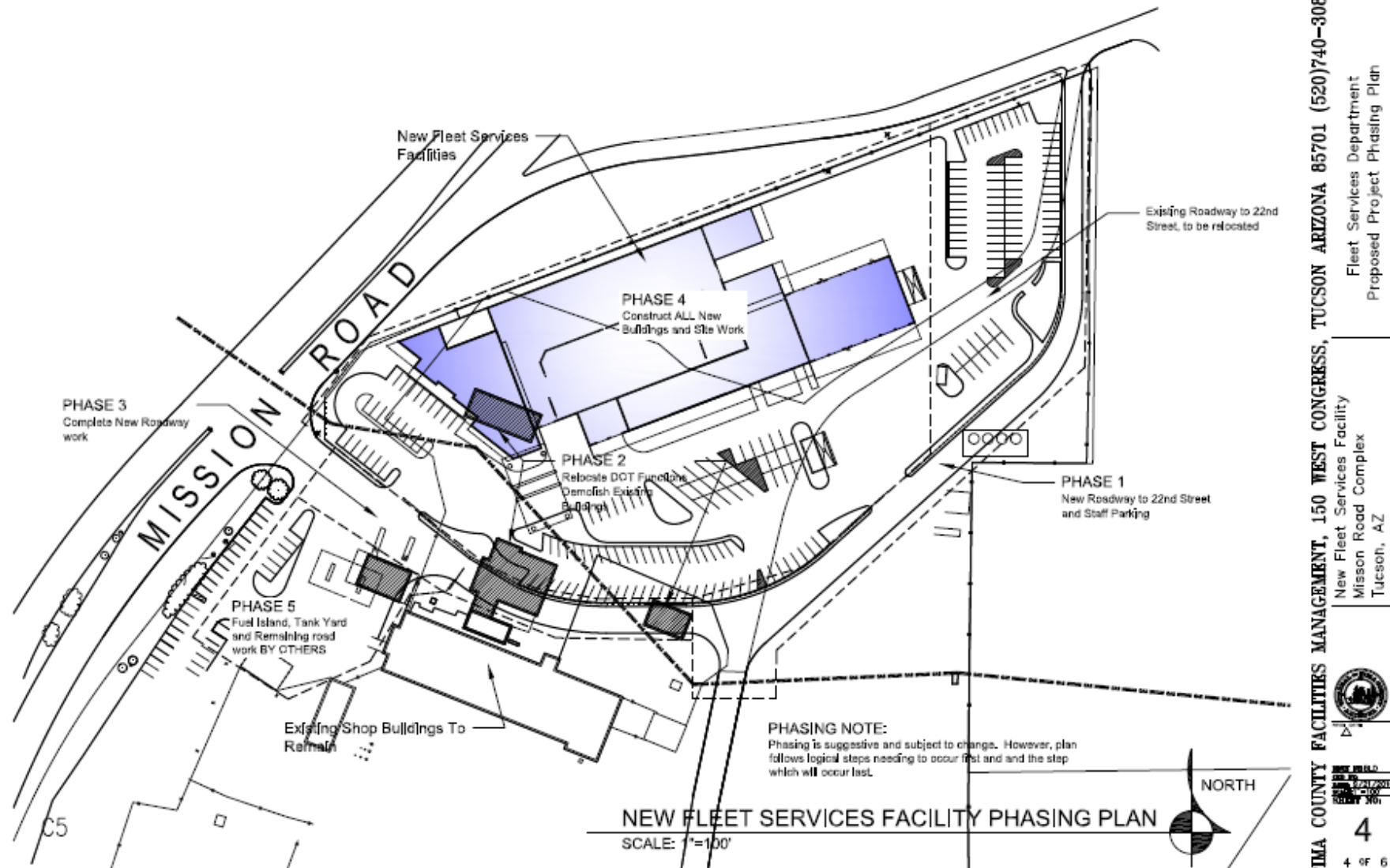
REVISION
DATE
BY

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3 OF 6



Pima County Fleet Services
New Service Facility Program & Design Guidelines



TMA COUNTY FACILITIES MANAGEMENT, 150 WEST CONGRESS, TUCSON ARIZONA 85701 (520)740-3085

Fleet Services Department
Proposed Project Phasing Plan

New Fleet Services Facility
Mission Road Complex
Tucson, AZ



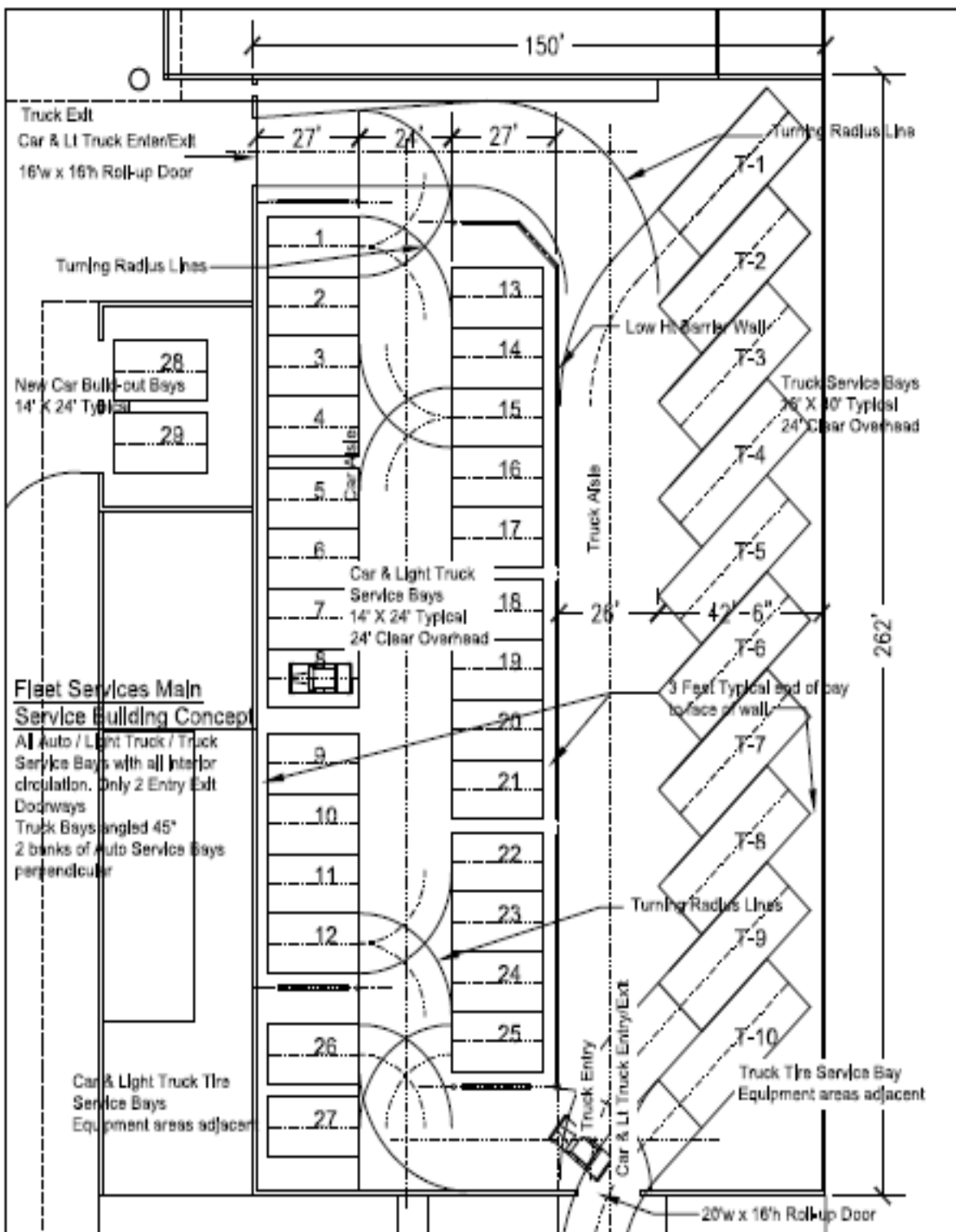
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DATE: 12/17/2018
BY: J. M. N.

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4 OF 6



DECEMBER, 2010



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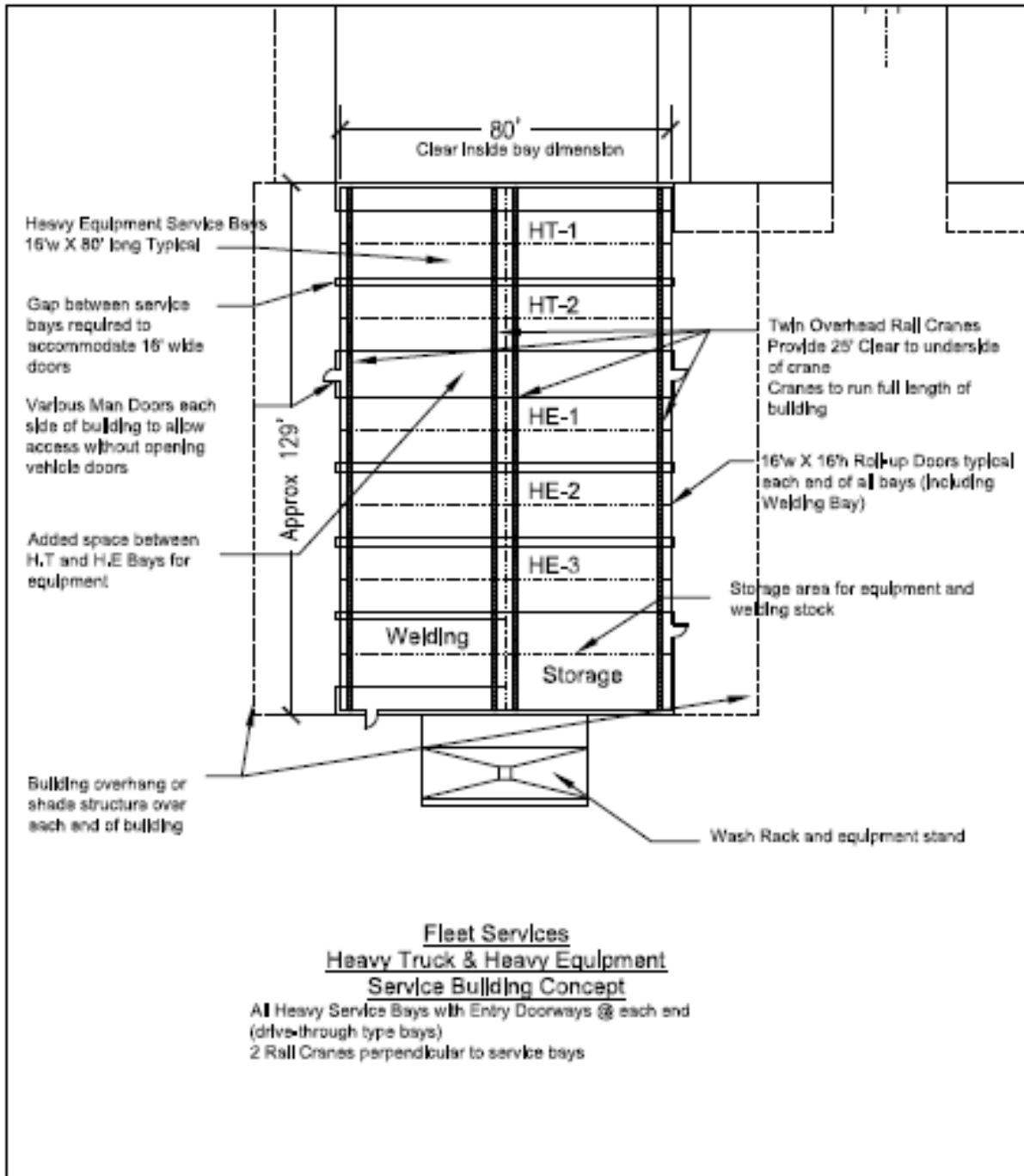
Fleet Services Dept Main Service Building Concept

Mission Road Complex
Tucson, AZ

DATE:	9/21/2010	SCALE:	1/32"=1'-0"
CHECKED BY:		DRAWN BY:	BLD
WORK AUTHORIZED BY:		DATE:	
SHEET NO:	5 of 6	THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF PIMA COUNTY AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.	



Pima County Fleet Services
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Fleet Service Department
Heavy Truck & Heavy Equipment
Building Concept
Mission Road Complex
Tucson, AZ

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Pima County Fleet Services
New Service Facility Program & Design Guidelines

PROBABLE CONSTRUCTION COST

Basic Assumptions:

The overall building footprint represented in the conceptual building plan is **78,857 GSF**. The site effected by the project including the new roadway is approximately **353,520 SF (8.1 Acres)**

Other Assumptions:

The major shop buildings are high bay spaces with large open spans and represent **49,759 GSF**. These spaces will be heated and cooled with natural ventilation, evaporative and radiant systems or other systems to be determined during the design phase. Forced air ventilation systems will also be important to maintain air quality where vehicles are operated or driven through the buildings

Cages for tire storage and equipment such as compressors represent **4,523 GSF** and will not need to be heated or cooled and will utilize natural ventilation

The remaining spaces, Administration, Parts Area and Staff Support represent **24,575 GSF** and will be air conditioned and constructed with standard construction types and materials.

Budget Responsibility and Expectation

All numbers given below are budget numbers. Pima County considers these budgets to be reasonable and within a range that could accomplish this project to the quality and complexity stated in the program. The numbers given should be considered within a range. The Design Team will endeavor to bring the project to completion under this range. It is the responsibility of the Project Team as a whole (project managers, Fleet Services and the Design Team) to deliver the best quality project for the best value to Pima County.

The opinion of probable cost for a Fleet Services of the magnitude and size described in this program (**78,857 GSF**) is **\$15,350,000.00**. This will include:

- ❖ Building Construction
- ❖ Site Development costs (20% of construction)
- ❖ Utility Connections (as an allowance)
- ❖ Building Demolition (as an allowance) (Bldgs 1 & 3 only)
- ❖ 2 Bridge Cranes in the HE Shop (as an allowance)
- ❖ Automotive Service Equipment (10% of construction as an allowance)
- ❖ Car Wash System Equipment (as an allowance)

Building Construction is assumed to be **\$143/SF**

Total Construction including the site is assumed to be **\$195/SF**

The base assumption of cost is a freestanding building, new construction with **NO major mitigation issues** including cultural, biological, chemical or other hazardous materials. The cost should deliver a completed project to the County including a developed site, and landscaping ready to move in. Any variation to this assumption must be considered as additional costs to the project. All the assumptions herein assume the **Design-Bid-Build** project delivery method.

FF&E (Fixtures Furnishings and Equipment) budget for Fleet Services is **\$200,000.00**. All Interior Design Services shall be provided by the County. This is for furnishing and various other types of equipment and does not represent the cost of automotive equipment and installed systems

LEED: Because the building is new construction owned and used by Pima County, LEED Silver certification requirements will need to be achieved in the construction of the buildings and the site. 3rd party LEED commissioning fees will be included in the soft costs noted below. Although it is not a



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certainty, we assume no substantial increase in the construction cost for LEED certification.

Other project costs and soft costs are a part of the overall budget for any project but are not included in the budget figures here. These will include:

- ❖ Telecommunications, and Data Equipment costs
- ❖ Permit fees (Building, Water Meters and Wastewater Fees)
- ❖ All consultant fees, commissioning fees as well as surveying, soils investigations and other project due-diligence fees
- ❖ Project administration and management costs
- ❖ Moving costs
- ❖ Inflation***

***Inflation: The project budget can only estimate building costs in the present and DO NOT include an inflation factor.



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SECTION 4

APPENDIX "A"

TERMS & DEFINITIONS



Pima County Fleet Services
New Service Facility Program & Design Guidelines

TERMS & DEFINITIONS

The following is a list of terms and abbreviations that will be used throughout this report along with a short definition and description of their use.

NSF (Net Square Feet)

This is the square footage (or the sum of the square footages) for use spaces such as offices and cubicles as defined by the face of wall to the face of wall dimensions or other defined boundary. This space would include furnishings, built-ins, other equipment and shelves. Also part of the NSF will be floor area for equipment such as shelves, cabinets and copier machines. In some cases, this will include the standing space around or in front of a machine. An example would be the floor space of a file cabinet with the drawer pulled out. NSF will include all the functional and personnel spaces in a department.

NUSF (Net Useable Square Feet):

This is the useable floor area within any given building. It excludes shared spaces such as major public circulation, elevators, stairwells, public restrooms, building structure and envelope and other such load factors.

GSF (Gross Square Feet or Building Gross Square Feet):

This term defines the total square feet of a building. It includes all NUSF, all the floors, shared spaces such as major public circulation, elevators, stairwells, public restrooms, building structure and envelope. In the case of a single-story building the GSF would describe the building footprint or outside wall to outside wall dimensions.

TBD (To Be Determined):

Used for almost any item that must be determined as part of the design process.

Design Team

As used in this document is essentially the primary design consultant (the Architect) and the sub consultants including (but not necessarily limited to) the interior designer, the engineering sub-consultants and in some cases vendors of specialized equipment or other specialty consultants as the project might require.

Project Team

As used in this document is whole group responsible for the delivery of the project from its earliest design through project closeout. This will include the Design Team, the Pima County Fleet Services and the Facilities Management Project Manager.



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APPENDIX "B"
AREA CALCULATIONS



Pima County Fleet Services
New Service Facility Program & Design Guidelines

AREA CALCULATIONS

In any given building, there will be a variety of ways to calculate areas. The International Building Code (IBC) has area calculations to define the maximum occupancy load for any given space or building or define how large any particular building type may be. Occupancy calculations however are designed specifically to determine the maximum required exit capacity for the purposes of life safety and are used by the AHJ for posting occupancy load for a room or space.

An example from the IBC (Section 1004-Occupant Load-Table 1004.1.2) would be for an Assembly Occupancy (such as a meeting room) where the required area for standing room is 5 NSF per person; 7 NSF for seating and 15 NSF for tables and chairs. In almost every situation other than standing room this is pretty much cheek-to-jowl with little room for circulation much less ADA circulation.

Meeting/Multi-Purpose Rooms:

If the primary occupancy need is for tables and chairs in a **classroom**, the overall NSF of the room should be determined by using approx **25 to 26 NSF per person**.

If the primary occupancy need is for **seating** (auditorium style) the overall NSF of the room should be determined by using approx **10 to 12 NSF per person**.

Overall width and depth, dimensions of a space are also important to the layout of furniture but this calculation should net sufficient areas accommodate the numbers of persons desired in the program.



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APPENDIX "C"

EMCS STANDARDS

Specification section 15900 – HVAC CONTROLS



Pima County Fleet Services
New Service Facility Program & Design Guidelines

Revision June 16, 2010

SECTION 15900 – HVAC CONTROLS

PART 1 - GENERAL

1.0 There is to be only one controls system per building.

1.1 SUBMITTALS

A. Product Data: For each control device indicated.

B. Shop Drawings:

1. Schematic flow diagrams.
2. Power, signal, and control wiring diagrams.
3. Details of control panel faces.
4. Damper schedule.
5. Valve schedule.
6. DDC System Hardware: Wiring diagrams, schematic floor plans, and schematic control diagrams.
7. Control System Software: Schematic diagrams, written descriptions, and points list.

C. Software and firmware operational documentation.

D. Field quality-control test reports.

E. Operation and maintenance data.

1.2 QUALITY ASSURANCE

A. All products shall meet the requirements of ASHRAE BACnet Standard 135.

PART 2 - PRODUCTS

2.1 NEW CONTROL SYSTEM

A. Manufacturers:

1. Alerton Inc.
2. Delta Controls Inc.
3. Johnson Controls Inc.

B. All controllers and devices shall meet the requirements of ASHRAE BACnet Standard 135 at all levels.



Pima County Fleet Services
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- C. Control system shall consist of sensors, indicators, actuators, final control elements, interface equipment, network cabling, other apparatus, accessories, and software connected to distributed controllers operating in multi-user, multitasking environment on MS/TP-passing network and programmed to control mechanical systems. The existing downtown operator workstation permits interface with the network via dynamic color graphics with each mechanical system, building floor plan, and control device depicted by point-and-click graphics.
- D. System Control Units: Modular, comprising processor board with programmable, nonvolatile, random-access memory; Ability to access locally via laptop computer; and integral 200 watt UPS. Real time clock.
 - 1. Units monitor or control each I/O point; process information; execute commands from other control units, devices, and operator stations; and download from or upload to operator workstation.
 - a. Stand-alone mode control functions operate as per system sequence of operation regardless of network status.
- E. Local Control Units: Modular, comprising processor board with electronically programmable, nonvolatile, SRAM and FLASH memory; and on controller power up will reload programming, Real time clock.
 - 1. Stand-alone mode control functions operate regardless of network status. Functions include the following:
 - a. Global communications using ASHRAE BACnet protocol.
 - b. Discrete/digital, analog, and pulse I/O using standard BACnet objects.
 - c. Monitoring, controlling, or addressing data points.
 - d. Must reload program data from Flash memory after extended periods of power failure when power is restored.
 - 2. Local operator interface provides for download from or upload to operator workstation.

2.2 DDC EQUIPMENT

- A. Laptop Computer: Vendor will provide a laptop computer and also all software, licensing or keys needed to program, schedule, or modify the system as well as create graphics or modify graphics. This laptop will be used as a direct connect field service tool with a minimum configuration as follows:
 - 1. Motherboard: With 3 integrated USB 2.0 ports, integrated Intel Pro 10/100 (Ethernet), integrated audio, bios, and hardware monitoring.
 - 2. Processor: Intel Pentium Core 2 Duo.
 - 3. Random-Access Memory: 1 gigabyte.
 - 4. Graphics: Video adapter, minimum 1280 x 800 pixels.
 - 5. Display: 14 inches, LCD color.
 - 6. Hard-Disk Drive: 80 GB.
 - 7. CD/DVD-ROM Read/Write Drive: 24x10x24 CD-RW, 8 x DVD-ROM.
 - 8. Power: 6-cell Lithium Ion battery up to 4 hours and AC Adaptor.
 - 9. Operating System: Microsoft Windows XP.
 - 10. Software: Provide the manufacturer's software and graphics software to access all field controllers and devices at the individual controllers and field connections. Include software keys and/or provide license to software allowing complete manipulation and configuration capabilities of both software and graphics at



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administrator level log in.

- B. The manufacturer shall submit a list of all device, network, and BACnet object names for all physical input/output points and calculated points. Each point name shall include the Network Number, Access Control Address, IP Address, Object Identifier, and BACnet Point Name. BACnet point name must describe the actual equipment, device, or value that is monitored in plain English terms using industry standard terminology. Prior to submitting this list, the manufacturer shall meet with Pima County to review nomenclature and avoid duplicate addressing. This information shall be included with the Operation and Maintenance Manual for the HVAC Controls.
- C. No unused points will be exposed to the BACnet Network. This is to conserve band width on the county network. Also BACnet descriptors will not be a substitute for the name of each object.

2.3 ELECTRONIC SENSORS

- 1. Outside-Air Sensors: Watertight inlet fitting, shielded from direct sunlight.

2.4 CONTROL CABLE

- A. Wide Area Network (WAN)
 - 1. Pima County will provide vendor with router and/or routers. Pima County will provide IP address for router and/or routers. (See part 3, EXECUTION)
- B. Local Area Network (LAN)
 - 1. The minimum data transmission speed from the Building Control Units shall be 10 Mbps or greater. The minimum speed from the Local Control Units shall be 76,800 baud.
- C. Electrical Wiring
 - 1. Low voltage wiring above lay-in ceilings may be exposed cabling secured to building structure or ductwork.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install averaging elements in ducts and plenums in crossing or zigzag pattern.
- B. Termination of all controllers MS/TP Bacnet segments will occur at Pima County provided routers and/or routers. Pima County will provide IP address for County provided router equipment.
 - 1. Vendor will provide list of required router equipment to be provided by County.



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List will be provided at time of submittals.

3.2 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain HVAC instrumentation and controls.

3.3 REPORTS AND MANUALS

- A. Provide field generated control test reports.
- B. Provide three (3) copies of operation and maintenance manuals.

END OF SECTION 15900

EXHIBIT 'C' DESCRIPTION OF DESIGNATED SERVICES

Refer to Contract for phases required by this Project. This document is intended to align COUNTY's expectations with the Architect/Consultant's submittal documentation for each of the phases. Each phase shall include at a minimum the following items "x" in the box. The Architect and the COUNTY's Project Manager will be able to track the progress of the project using this checklist throughout all phases of design. Each subsequent submittal includes the requirements noted on the previous submittal. Refer to **Exhibit 'A' Scope of Work** for additional information.

A. PRE-DESIGN SERVICES SUBMITTAL

The Pre-Design Phase is the stage to which the Owner's program, the financial and time requirements, and the scope of the project are established and verified.

1. Confirmation of Program, and Scope to Meet Project's Construction Budget:

- ☒ **Pre-Design Meetings.** Based on discussion with all project users and review of the PCFM Program Document, the Consultant shall define the project requirements to determine the scope which can be accomplished with the budget, and to determine how to phase the project. The program shall include a narrative description of size, use and occupancy of all spaces; relationship of spaces to other spaces and adjacent facilities; and utility, equipment and environmental requirements of all spaces. The program shall cover all proposed new building systems. The Consultant shall document the Project Users' programmatic and functional need to ensure that the Users and the Consultants have a shared understanding of those needs.
- ☒ **Deliverables.**
Report Quantity: 10 draft paper color copies, 10 updated paper color copies and 2 copies on disks
Disk Format: PDF and Microsoft Word 2007 Electronic Format
- ☒ **Project Schedule including breakdown of major project activities.** This includes but is not limited to major construction activities, (including any planned construction phasing), bidding phase, and project design phases with Owner review cycles indicated.
- ☒ **Facilities Existing Conditions and Equipment Documentation**

2. Pre-Design Conceptual Studies & Flow Diagrams:

- ☒ **Preliminary site plans, and floor plans.** Provide two conceptual design schemes.
- ☒ **Space Planning/Conceptual Studies Deliverables.**
Drawing size: 24"x36" preferred
Drawing Set Quantity: 10 draft paper copies, 10 updated paper copies and on 2 disks
Disk Format: AutoCAD 2009 and PDF and Microsoft Word 2007 Electronic Format
- ☒ **Evaluation of Two Conceptual Design Schemes**
- ☒ **Cost Estimates**

3. Other Requirements:

- ☒ **Asbestos and Environmental Survey/s (if necessary) will be prepared by**



DECEMBER, 2010

- ☒ Pima County
- ☐ Architect's Sub-consultant

- ☒ **Cultural Resources Clearances.** A cultural resources review is required for all Capitol Improvement Projects. This review is to occur prior to the design of any building projects requiring excavation of any kind. The COUNTY's PM will obtain clearance from PC Cultural Resources Dept.

- ☒ **ALTA Site and Utility Surveys will be prepared by**
 - ☒ Pima County
 - ☐ Architect's Sub-Consultant

- ☒ **Project Status Review.** Architect and all Sub-Consultants shall meet with COUNTY and Review Committee to review project.

- ☒ **Response to COUNTY and Review Committee Comments.** Architect/Consultant shall provide a written response to the Submittal review comments.

- ☒ **Written Approval.** Architect/Consultant shall obtain written approval of pre-design documents from Review Committees, and authorization to proceed into the next phase by the COUNTY's PM.

B. MINIMUM REQUIREMENTS FOR SCHEMATIC DESIGN SUBMISSION

The Schematic Design Phase is the stage in which the general scope, conceptual design, the scale and relationship of components of the project are established. Also, as part of this phase site-related limitations and requirements for the Project are established.

1. Schematic Design Submission Includes:

- ☒ Architect/Consultant to coordinate submittal dates with Consultant Team, Cost Estimator and COUNTY PM at onset of Schematic Design Phase.

- ☒ **Architect/Consultant to verify applicable zoning requirements with local agencies.**

- ☒ **Preliminary equipment layout by Industrial Consultant**

- ☒ **The schematic design phase shall explore up to 3 schemes.**

- ☒ **Prepare Code Analysis(s) based on Schematic Design schemes.** Shall be completed and submitted by Architect.

- ☒ **Preliminary Site Plan/s**

- ☐ **ALTA Site Survey Prepared by Others**

- ☒ **Zoning Code Review**

- ☒ **Geotechnical Reports will be furnished to the CONSULTANT by the COUNTY** which includes soil boring data and consultant foundation recommendations.

- ☒ **Schematic Architectural Floor Plans.** (1/8"=1'-0") - showing new work, all levels, including thickness of walls, doors, windows, equipment, furniture and movable equipment for ALL spaces, location of plumbing fixtures, accurate toilet room, elevator and stair layouts and structural grid.
 - ☐ Location of columns and bearing walls, and overall building dimensions match from floor to



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floor.

- ☒ **Preliminary Reflected Ceiling Plan/s.** (1/8"=1'-0") if any special unique features.
- ☒ **Preliminary Exterior Elevations.** (1/8" = 1'-0") showing roof top mechanical equipment (if applicable) and major exterior materials identified.
- ☒ **Preliminary Building Sections.** Diagrammatic each direction through building with structure and ceiling and structure heights indicated. Major material, building and structural systems identified.
- ☒ **Typical Wall Sections.** (1/2" = 1'-0" min.; 3/4"=1'-0" preferred) through each wall assembly type to show materials, relationships, and construction intent, including structure.
- ☒ **Narrative of Proposed Room Finishes** indicating:
Describe material substrate and finish for floors, wall base, walls, and ceilings for different areas. Material colors do not need to be indicated at this time.
- ☒ **Plumbing Systems Plans and Plumbing Narrative Descriptions.**
 - ☐ Plumbing systems plans to include fixture locations, and plumbing equipment locations
 - ☐ Narrative describing plumbing system including design rationale, with justification of selected system.
- ☒ **Preliminary Mechanical System Plans and Equipment room Layouts.**
 - ☐ Equipment location and types
 - ☐ Supply, return, exhaust duct one-line diagram
- ☒ **Narrative of Mechanical System.**
 - ☐ Provide design rationale, including code analysis, design load assumptions, and proposed mechanical systems together with justification of selected system. Provide alternative mechanical systems for consideration.
 - ☐ Establish life cycle analysis of energy consuming equipment and options (conceptual level)
 - ☐ Controls concept
 - ☐ Indicate indoor and outdoor HVAC design parameters
- ☒ **Lighting System Plans.**
 - ☐ Lighting fixture concept and layout shown for the majority of interior and exterior lighted areas.
 - ☐ Special requirements noted.
 - ☐ Life cycle cost analysis, for the purpose of analyzing lighting system options (conceptual).
- ☒ **Preliminary Electrical and Equipment Room Layouts.** (major equipment only), and preliminary one-line electrical distribution diagrams. Indicate utility source, service entrance gear, distribution and lighting panels, "first pass" amperages and voltages of each. (At Schematic Design, calculation done per square foot basis is acceptable)
- ☒ **Narrative of Structural System.** Provide narrative design rationale, including code analysis, design load assumption, and proposed structural systems together with justification of selected system. Provide alternative structural systems for consideration.
- ☒ **Narrative of Fire Protection System.** Provide systems descriptions including special use fire protection systems (e.g. Mission Critical Computer Rooms)
- ☒ **Narrative of Electrical System.** Provide narrative design rationale, including code analysis, number of occupants, hours of operation, design load assumptions, and proposed electrical systems together with justification of selected systems.
 - ☐ Power



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- ☐ Lighting - include foot candle levels
- ☐ Class A Fire Alarm
- ☐ Security Alarm

- ☒ **Narrative of Communications.** Provide narrative of communication systems which will be included within the building.
 - ☐ Data
 - ☐ CATV
 - ☐ Audio Video
 - ☐ Phone drop locations
 - ☐ Special Communication Needs such as wireless, antenna mast, mobile data computer, Internet Protocol Media Network (IPMN) and Information Transport Systems (ITS)

- ☒ **Narrative of Building Energy Management Systems**

- ☒ **Development of LEED Approach**

2. Other Items for Schematic Design Phase:

- ☒ **QC Review Session.** Architect/Consultant to conduct an internal quality review session prior to submitting to COUNTY for review
- ☒ **Outline specifications.** Development of outline specifications or itemized lists and brief form identification of significant architectural materials, systems and equipment, including their criteria and quality standards. Provide written description of recommended additive alternates and special construction scheduling requirements. All sections to be project specific.
- ☒ **LEED and the Sustainable Energy Standard.**

The goal of this project is to obtain LEED Silver Certification per version 3.0.

 - ☐ Show all available LEED points in tabular form which indicates what points are probable yes's, no's and maybe's. Provide an order of magnitude estimate as appropriate for the cost or credit available for obtaining each point and the responsible party (County, design consultant, sub-consultants or general contractor).
 - ☐ Include a determination of how the project/s will meet the requirement for offset of its overall energy needs with solar energy in the form of day lighting, electric generation, or water heating.
- ☒ **Building Energy Modeling.**
 - ☐ Software and methodology to be used for the evaluation shall be approved by the County prior to use. At this phase of the design the model is to be utilized for determining strategies to be recommended for achieving the project goals for energy efficiency and meeting LEED Criteria. It is understood that much of the data for an accurate model is not available at this time. The LEED submission will require detailed model which must be performed at a later time.
 - ☐ Energy cost shall be provided by Pima County at the request of the CONSULTANT.
- ☒ **Construction Cost Estimate** for each scheme developed during the schematic design phase, broken into CSI divisions by trades, separate material and labor costs. Provide separate estimate for each scheme. Estimates to include furniture costs (material, freight and installation).
- ☒ **Updated Project Schedule including breakdown of major project activities.** This includes but is not limited to major construction activities, (including any planned construction phasing), bidding phase, and project design phases with Owner review cycles indicated.
- ☒ **Project Status Review.** Architect and all Sub-Consultants shall meet with COUNTY and Review Committee to review project.



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- ☒ **Response to COUNTY and Review Committee Comments.** Architect/Consultant shall provide a written response to the Schematic Design Submittal review comments.
- ☒ **Schematic Design Deliverables to COUNTY's Project Manager.**
 - Drawings
 - Outline Specifications
 - Response to Schematic Design review comments
 - LEED Point Evaluation
 - Project Schedule
 - Design Narratives
 - Building Energy Model
 - Meeting Minutes from SD Review Sessions with Review Committee

Drawing size: 24"x36" preferred
Set Quantity of Above: 10 paper copies and on 2 disks
Disk Format: PDF Electronic Format, and AutoCAD Drawings
- ☒ **Written Approval.** Architect/Consultant shall obtain written approval of design from Review Committees, and authorization to proceed into the next phase by the COUNTY's PM.
- ☒ **Commissioning provided by CONSULTANT.**

The SD Narrative should note the project will be commissioned.

C. MINIMUM REQUIREMENTS FOR DESIGN DEVELOPMENT SUBMISSION

The Design Development Phase is the stage in which the size and character of the Project is further refined and described, including architectural, structural, mechanical, plumbing and electrical systems, materials, and such other elements as may be appropriate.

1. General - Design Development Submittals:

- ☒ Architect/Consultant to coordinate submittal dates with Consultant Team, Cost Estimator and COUNTY PM at onset of Design Development Phase.
- ☐ Site Survey will be provided by Pima County
- ☒ All sheet title blocks shall include facility street address, and town. If applicable, for new facility PCFM Project Manager may have to obtain new address from Pima County Development Services.
- ☒ **DD -Cover Sheet/General Sheets** including:
 - ☐ Project title i.e. name of project and address. Include submittal phase
 - ☐ Project Team with address, phone, and fax numbers
 - ☐ COUNTY's assigned project manager to furnish street address to include on cover sheet and each drawing title block.

2. Civil - Design Development Submittal

- ☒ **DD - General Civil**
- ☒ **DD - Site Grading/ Drainage Plan**
- ☒ **DD - Site Horizontal Control Plan**



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☒ **DD - Site Utility Plan/s**

☒ **DD - Storm Water Pollution Prevention Plan**

3. Landscape - Design Development Submittal

☒ **DD - Landscape Planting**

☒ **DD - Landscape Irrigation**

4. Structural - Design Development Submittal:

☒ **DD - General Structural.**

- ☐ Dimensions to correspond to architectural drawings.

☒ **DD - Structural Foundation Plan/s** including:

- ☐ Footing and foundation sizes, reinforcing, elevations shown.
- ☐ Verify column grid lines on structural and architectural match.
- ☐ Column locations match architectural plans.
- ☐ Perimeter slab on structural matches architectural.
- ☐ Depressed or raised slabs are indicated and match architectural.
- ☐ Slab elevations match architectural.

☒ **DD - Structural Framing Plan/s and Details** including:

- ☐ Location of roof framing plan column lines and columns match foundation plan column lines and columns.
- ☐ Structural perimeter roof line matches architectural roof plan.
- ☐ Expansion joint locations match other disciplines.
- ☐ Openings or penetrations for stairs, elevators, ducts, conduits, and chases match other disciplines.
- ☐ Details cut through typical bearing conditions.
- ☐ Location of large lintels.
- ☐ Reinforced structure under heavy roof loads.
- ☐ Modifications to framing at large roof opening. For example, roof drain pans or roof scuttles.

5. Architectural - Design Development Submittal:

☒ **DD - Code Analysis Plan/s** including:

- ☐ Code study for fire protection system
- ☐ Verify fire flow requirements with local fire jurisdiction.
- ☐ Occupancy Use Classification/s and Occupancy Count per space indicating path of egress to exits
- ☐ Exit door width calculations
- ☐ Fire rated partitions and smoke partitions
- ☐ Address and document items required to meet ADA Accessibility requirements

☒ **DD - Architectural Site Plan(s)**

☒ **DD - Architectural Floor Plan/s** including:

- ☐ Partition Type Identification. Have separate wall type for full height walls vs. walls to 6" above ceiling. Indicate on all partitions including exterior walls.
- ☐ Review with COUNTY and user group wall heights and requirements for acoustical separation.
- ☐ Smoke and Fire compartments - indicate with dashed lines.
- ☐ Window types
- ☐ Door numbers
- ☐ Structural Layout Grid.
- ☐ Room name and numbers



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- ☐ Door numbers
- ☐ Window type designations. For windows above the cutting plane show windows dashed in the wall.
- ☐ Locate section cut indicators.
- ☐ Locate interior elevation indicators.
- ☐ Interior handrails.
- ☐ Label and indicate floor transitions.
- ☐ Built-in and Fixed Equipment shown and noted
- ☐ Plumbing fixtures in substantial agreement with Engineer's drawings and cut sheets.
- ☐ Electrical switchboard and branch circuit panels' size and location in substantial agreement with Engineer's drawings and cut sheets.
- ☐ Provide 1/4" = 1'-0" enlarged drawings of restrooms, areas having built-in furniture, special features.
- ☐ Provide separate dimension plan/s if building layout is complicated.
- ☐ Size of openings for windows and doors matches structural. Verify window glass size with specifications.
- ☐ Expansion joints are continuous throughout the building.
- ☐ Wall chases are provided to conceal vertical piping.
- ☐ Provide phasing plan/s if applicable.
- ☐ Existing rooms and existing doors to be numbered and labeled.
- ☐ If requested furnish dept. areas net and gross square footages to PCFM Project Manager.

- ☒ **DD - Dimension Plans** (for larger projects create separate drawings) including:
 - ☐ Structural grid
 - ☐ Building layout point
 - ☐ Room numbers in all spaces
 - ☐ Dimension for overall building layout and offsets
 - ☐ Interior dimensions are optional

- ☒ **DD - Roof Plan(s)** including:
 - ☐ Roof slopes
 - ☐ Parapet heights
 - ☐ Mechanical equipment, exhaust fans
 - ☐ Roof Hatch/es
 - ☐ Show existing equipment/conditions (if applicable).

- ☒ **DD - Architectural Elevation/s** including:
 - ☐ All building planes
 - ☐ Indicate exterior finish materials
 - ☐ Building elevations match floor plans. In particular check roof lines, window and door openings, louver openings, and expansion joints.

- ☒ **DD - Building Sections** including:
 - ☐ Building sections match elevations and plans.

- ☒ **DD - Wall Sections** including:
 - ☐ Keynotes to be specific to each drawing sheet
 - ☐ Wall sections match architectural and structural building sections.

- ☒ **DD - Reflected Ceiling Plan/s** including:
 - ☐ Room numbers
 - ☐ Lights, emergency lights
 - ☐ Mechanical diffusers, mechanical return grilles
 - ☐ Smoke detectors, exit signs
 - ☐ Soffits



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- ☐ Indicate ceiling heights
- ☐ Ceiling mounted equipment
- ☐ Indicate exposed ductwork
- ☐ Draft stops shall be shown dashed if required.
- ☐ Access doors
- ☐ Mechanical and Electrical layout to be similar to RCP

- ☒ **DD - Roofing and Flashing Details** including:
 - ☐ For this submission show typical roof and flashing details. Including flashing details at high and low ends of roof in addition to the side or edge of roof.
- ☐ **DD - Furniture Plan will be furnished by PCFM** including:
 - ☐ Systems Furniture and movable furniture indicated for ALL spaces
- ☒ **DD - Equipment Layout Plan/s and Equipment Schedule** including:
 - ☐ OFOI - Owner Furnished Owner Installed
 - ☐ OFCI - Owner Furnished and Contractor Installed
 - ☐ CFCI - Contractor Furnished and Contractor Installed
 - ☐ Provide catalog cut sheets for all fixed equipment to be furnished by General Contractor.
- ☒ **DD - Room Finish Schedule** including:
 - ☐ Room numbers correspond to Architectural Floor Plan
 - ☐ List each room with corresponding material and finish for floor, wall base, walls (N, S, E, W) ceiling, and wainscot if applicable.
- ☒ **DD - Door Schedule** including:
 - ☐ Indicate door width, height, thickness, type
 - ☐ Door and Door Frame types drawn
 - ☐ Fire assemblies indicated
 - ☐ Door detail reference numbers do not have to be filled in.
- ☒ **DD - Door and Window Details.**
 - ☐ Typical door and window details are about 30% drawn.
- ☒ **DD - Stair and Elevator Details (if applicable).**
- ☐ **DD - Material and Finish Selections – will be furnished by PCFM.**
 - ☐ Are part of this submittal, and are to be approved by the COUNTY
 - ☐ Preliminary selection of interior and exterior finishes for review. Provide up to 3 options for feedback.

6. Plumbing Systems - Design Development Submittal:

- ☒
 - ☐ Fixture Schedule filled out.
 - ☐ Plumbing floor plans match architectural floor plans.
 - ☐ New gas, water, sewer, etc lines connect to existing or new utilities and these match civil drawings.
 - ☐ Equipment Schedule and locations shown on plans
 - ☐ Water piping locations (sizes for pipes larger than 1")
 - ☐ Waste piping, locations (sizes for pipes larger than 4")
 - ☐ Roof drainage system, locations, and key sizes match architectural roof plan.
 - ☐ Pipes are sized sensibly and that all drains are connected and do not interfere with foundations.
- ☒ Product cut sheets for Plumbing Fixtures, traps etc.

7. Fire Protection System - Design Development Submittal:



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- ☒
 - ☐ Design shall be reviewed with the State Fire Marshal for approval to the approach.
 - ☐ Local Fire Departments and Water Company shall be contacted to verify available water flow for the project.

8. Mechanical Systems - Design Development Submittal:

- ☒ **Mechanical HVAC plan/s** including:
 - ☐ The location of the HVAC system matches architectural reflected ceiling plans and that it does not conflict with structure or lights.
- ☒ **Evaluation of Operations and Maintenance Costs.**

Provide HVAC, lighting and electric load calculations, and develop estimates of the cost of operating and maintaining the facilities being designed under this contract. Assumptions shall be clearly noted. The estimated operation and maintenance costs are to be projected for each of the thirty (30) consecutive fiscal years following acceptance of the facilities by the Owner. Each system shall be evaluated for operating costs. The evaluation shall take into consideration replacement. All economic cost evaluations shall be taken as simple payback with the yearly owner cost averaged over the period. The ASHRAE HVAC Applications Handbook shall be used as a reference and in particular for service life estimates. All calculations shall be submitted and will become the property of the COUNTY. The following operating cost estimates are to be provided:

 - ☐ Estimate of annual utility costs for gas, electric, water and sewer
 - ☐ Estimate of annual maintenance costs
 - ☐ Suggest additive or deductive alternatives with estimated costs
- ☒ **Product cut sheets for mechanical**

9. Electrical Systems - Design Development Submittal:

- ☒ **DD - Electrical Site Plan**
- ☒ **DD - Power Distribution Plan** including:
 - ☐ Check that locations of floor mounted equipment are consistent between disciplines.
 - ☐ Location of panel boards are consistent with architectural, mechanical, and plumbing floor plans and that the panel boards are indicated on the electrical riser diagram.
 - ☐ Location of electrical conduit runs, floor trenches, and openings are coordinated with structural plans.
 - ☐ Electrical panels are not recesses in fire rated walls.
 - ☐ Exterior electrical equipment locations are coordinated with site paving, grading, and landscaping.
- ☒ **DD - Interior Lighting Plan/s** including:
 - ☐ Light fixtures and switch locations with identification
 - ☐ The location of the light fixtures matches architectural reflected ceiling plans and that light fixtures do not conflict with structure or mechanical HVAC system.
 - ☐ Typical data receptacle and power outlet locations
 - ☐ Electrical floor plans match architectural and mechanical.
 - ☐ Keynotes are referenced and coordinated.
- ☒ **DD - Special Systems Plan/s.**

10. Other Items for Design Development Submittal:

- ☒ **DD - Specifications.**

Written (marked up) Project Manual Specifications for all disciplines including Structural, Architectural, Mechanical, Plumbing and Electrical disciplines in CSI format.
- ☒ **LEED and the Sustainable Energy Standard.**



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CONSULTANT to update required information from the SD phase as needed. Working with the COUNTY PM the design consultant shall provide an estimate for achieving LEED.

- ☒ **QC Review Session** Architect/Consultant to conduct an internal quality review session prior to submitting to COUNTY for review
- ☒ **Updated Project Schedule including breakdown of major project activities.** This includes but is not limited to major construction activities, bidding phase, and project design phases with Owner review cycles indicated.
- ☒ **DD - Construction Cost Estimate.** For design development phase, broken into CSI divisions by trades, separate material and labor costs. Estimates to include furniture costs (material, freight and installation).
- ☒ **Project Status Review.** Architect and all Sub-Consultants shall meet with COUNTY and Review Committee to review project.
- ☒ **DD - Response to COUNTY and Review Committee Comments.** Architect/Consultant shall provide a written response to review comments.
- ☒ **Design Development Deliverables to COUNTY's Project Manager.**
 - Drawings
 - Specifications - Marked up, CSI long format
 - Product Cut Sheets
 - Updated Project Schedule
 - LEED Point Evaluation
 - Evaluation of Operation and Maintenance Costs
 - Design Narratives updated from SD Submittal
 - Response for Design Development review comments
 - Meeting Minutes from DD Review Session
 - Preliminary Finish and Material Selections: 2 copies mounted on 8-1/2"x11" foam core
 - Which can be placed in plastic inserts and 3 ring binders
 - Cost Estimates
 - Suggested additive alternates with estimated costs

Set Quantity of Above: 10 paper copies, unless noted otherwise, and 2 disks
Drawing size: 24"x36" preferred
Disk Format: PDF Electronic Format and AutoCAD Drawings
- ☒ **Written Approval.** Architect/Consultant shall obtain written approval of design from Review Committee, and authorization to proceed into the next phase by the COUNTY's PM.

D. MINIMUM REQUIREMENTS FOR 50% CONSTRUCTION DOCUMENT SUBMISSION TO PCFM

The Contract Documents Phase is the stage in which the requirements for the Work are set forth in detail. This submittal is to show a 50% progress towards completion of the Contract Documents.

1. General - 50% CD Submittal:

- ☒ Architect/Consultant to coordinate submittal dates with Consultant Team, Cost Estimator and COUNTY PM at onset of 50% CD Phase.
- ☒ Site Survey drawing/s included in drawing set which will be provided by PCFM
- ☒ Drawing Index matches sheet titles



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2. Civil - 50% CD Submittal –

- ☒ **Site Grading/ Drainage Plan**
- ☒ **Site Horizontal Control Plan**

- ☒ **Site Utility Plan/s.**

3. Landscape - 50% CD Submittal

- ☒ **Landscape Planting Plan/s**
- ☒ **Landscape Irrigation Plan/s**

4. Structural - 50% CD Submittal:

- ☒ ☐ Drawing notes do not conflict with specifications.
- ☒ **Structural Details at a 50% Completion.**
- ☒ **Structural Foundation Plan/s.**
 - ☐ Footing and foundation sizes, reinforcing, elevations are shown.
 - ☐ Foundation piers are identified and sized on a schedule or plan.
 - ☐ Foundation beams are identified and sized on a schedule or plan.
- ☒ **Structural Framing Plan/s and sections.**
 - ☐ Columns, floor beams and roof beams are listed in column and beam schedules.
 - ☐ Length of columns in column schedule matches the length shown in sections and elevations shown on plans.
 - ☐ Sections are properly labeled.
 - ☐ Structural supports required for mechanical equipment are indicated on structural drawings.
 - ☐ Openings for roof penetrations (ducts, fans, etc.) are indicated on structural roof plans.

5. Architectural - 50% CD Submittal:

- ☒ **Code Analysis Plan/s.**
 - ☐ Code study for sprinkler system
 - ☐ Verify fire flow requirements with local fire jurisdiction.
 - ☐ Occupancy Use Classification and Occupancy Count per space indicating path of egress to exits
 - ☐ Exit door width calculations
 - ☐ Fire rated partitions and smoke partitions
- ☒ **Architectural Site Plan –**
- ☒ **Architectural Floor Plan/s.**
 - ☐ Partition Type Identification. Have separate wall type for full height walls vs. walls to 6" above ceiling.
 - ☐ Smoke and Fire compartments.
 - ☐ The location of fire rated walls matches the location of fire and/or smoke dampers on mechanical plans.
 - ☐ Window types
 - ☐ Door numbers (including existing doors which will receive new hardware)
 - ☐ Built-in and Fixed Equipment shown and noted
 - ☐ Provide 1/4" = 1'-0" enlarged drawings of restrooms, area having built-in furniture, special features.
 - ☐ Large scale partial floor plans match small scale floor plans.
 - ☐ Dimension plan/s nearly completed.
 - ☐ Verify that wall thicknesses are adequate for roof drains and overflows.
 - ☐ Wall chases are provided to conceal vertical piping.



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- ☒ **Roof Plan/s.**
 - ☐ Roof slopes
 - ☐ Parapet heights
 - ☐ Mechanical equipment, exhaust fans
 - ☐ Roof Hatch/es
 - ☐ Show existing equipment/conditions (if applicable).

- ☒ **Architectural Elevation/s.**
 - ☐ Elevations for all building planes
 - ☐ Indicate exterior finish materials
 - ☐ Cabinets will fit in available space and electrical outlets on cabinet walls are at the correct height.

- ☒ **Building Sections.**
 - ☐ Building sections match elevations and plans.

- ☒ **Wall Sections.**
 - ☐ Keynotes to be specific to each drawing sheet
 - ☐ Do not reference back to another drawing to find keynotes.
 - ☐ Wall sections match architectural and structural building sections.

- ☒ **Reflected Ceiling Plan/s.**
 - ☐ Lights
 - ☐ Mechanical diffusers, mechanical return grilles
 - ☐ Smoke detectors, exit signs
 - ☐ Soffits
 - ☐ Indicate ceiling heights
 - ☐ Verify that mechanical ductwork, horizontal piping, and lighting are not in conflict and that there is adequate clearance above ceilings to achieve desired ceiling height.
 - ☐ Ceiling mounted equipment
 - ☐ Indicate exposed ductwork
 - ☐ Reflected ceiling plans match architectural floor plans to ensure no variance with wall locations. Location of electrical fixtures and mechanical registers/diffusers on electrical and mechanical plans does not conflict with location on reflected ceiling plans.

- ☒ **Details - 50% completion shall include but not limited to:**
 - ☐ Details shall include top of parapets, changes in roof slopes, roof canopies
 - ☐ Floor transitions
 - ☐ Interior cabinetry
 - ☐ Windows and Door Frames
 - ☐ Exterior flashing details
 - ☐ Transition details between different materials

- ☐ **Furniture Plan/s will be provided by PCFM**
 - ☐ Systems Furniture and movable furniture shown in for ALL spaces

- ☒ **Equipment Plan/s and Equipment Schedule.**
 - ☐ OFOI - Owner Furnished Owner Installed
 - ☐ OFCI - Owner Furnished and Contractor Installed
 - ☐ CFCI - Contractor Furnished and Contractor Installed
 - ☐ Provide catalog cut sheets for all fixed equipment to be furnished by General Contractor.

- ☒ **Room Finish Schedule.**
 - ☐ Room finish schedule information matches plan and elevation information; including room numbers, names of rooms, finishes, and ceiling heights. Look for omissions and



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inconsistencies.

☐ **Material and Finish Selections will be provided by PCFM to Consultant**

☒ **Door and Window Schedules.**

- ☐ Indicate door width, height, thickness, type, material and finish
- ☐ Door types drawn
- ☐ Door frame types drawn
- ☐ Fire assemblies indicated
- ☐ Door detail reference numbers do not have to be filled in.
- ☐ Door schedule information matches plan, and elevation information; including sizes, types, labels, etc. Look for omissions and inconsistencies.
- ☐ Window Types drawn
- ☐ Window and door frames sizes corresponds to masonry and wall openings.

☒ **Door and Window Details.**

☒ **Stair and Elevator Details (if applicable).**

☒ **Interior Elevations.**

☐ **Interior Signage Plan/s and Signage Schedule.**

☐ **Furniture Selections.**

☒ **Details**

6. Plumbing Systems - 50% CD Submittal:

Plumbing System Drawings.

- ☒
 - ☐ Fixture Schedule completed.
 - ☐ Plumbing floor plans match architectural floor plans.
 - ☐ New gas, water, sewer, etc lines connect to existing or new utilities and these match civil drawings.
 - ☐ Water piping locations indicated (sizes for pipes larger than 1")
 - ☐ Waste piping, locations indicated (sizes for pipes larger than 4")
 - ☐ Roof drainage system, locations, and key sizes match architectural roof plan.
 - ☐ Pipes are sized sensibly and that all drains are connected and do not interfere with foundations.
 - ☐ Plumbing fixtures match riser diagrams.
 - ☐ Plumbing pipes do not conflict with architectural features or structural members.
 - ☐ Verify ADEQ/Health Dept. requirements for special conditions i.e. kitchen, septic system etc.
 - ☐ Submit product cut sheets

7. Fire Protection System - 50% CD Submittal:

☒ **Fire Protection Documents – Performance Based Specifications.**

- ☐ Location of check valves, building entrance, riser and drain.
- ☐ .

8. Mechanical Systems - 50% CD Submittal:

☒ **Mechanical Drawings.**

- ☐ HVAC floor plans match architectural plans. Supply, return and exhaust locations match architectural reflected ceiling plans.
- ☐ Mechanical ducts do not conflict with architectural features or structural members.
- ☐ Adequate ceiling height exists at worst case duct intersection or largest beam.
- ☐ Dampers are indicated at smoke and fire walls.



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- ☐ Air conditioner units, heaters, and exhaust fans match architectural roof plan locations.
- ☐ Mechanical equipment will fit in spaces allocated and there is room for maintenance such as removing filters or tubes.
- ☐ Thermostat locations have been coordinated with Architectural and Interior Design drawings.
- ☐ Equipment filter sizes and quantities are noted with adequate maintenance clearances.
- ☐ Provide control concepts and sequence of operation for major equipment
- ☐ HVAC piping, locations and sizes are indicated for pipes larger than 1 inch
- ☐ Energy Management Control System Design

- ☒ Structural supports required for mechanical equipment are indicated on structural drawings.
- ☒ Openings for roof penetrations (ducts, fans, etc.) are indicated on structural roof plans.
- ☒ Keynotes are referenced.
- ☒ Ductwork is sized logically, and load information provided.
- ☒ Horsepower ratings, phases, and voltages of major items of equipment on mechanical and electrical drawings and specifications match.
- ☒ **Submit Product cut sheets**
- ☒ **Update Evaluation of Operations and Maintenance Costs.**

9. Electrical Systems - 50% CD Submittal:

- ☒ **Electrical General Sheets.**
 - ☐ Symbols, Legends and Abbreviations edited to show what is in project and symbol legend is indicated on each drawing.

- ☒ **Submit Product Cut sheets**

- ☒ **Electrical Site Plan**
 - ☐ CONSULTANT to coordinate requirements for electrical services into building .

- ☒ **Power Distribution Plan/s - 50% completed.**
 - ☐ Major pieces of equipment have electrical connections and that horsepower ratings, phases, and voltages are consistent with other discipline schedules.
 - ☐ Verify that structural supports are provided for roof top electrical equipment.
 - ☐ Keynotes are referenced and coordinated.
 - ☐ Data receptacle and power outlet locations are coordinated with systems furniture and equipment plans
 - ☐ Reference symbol legend
 - ☐ Panel locations and schedules
 - ☐ Terminal distribution to equipment and receptacles
 - ☐ Motor control schedules
 - ☐ Line diagrams
 - ☐ load calculations
 - ☐ Fault calculations
 - ☐ Emergency Generator and Uninterruptible Power Supply System Design

- ☒ **Interior Lighting Drawings.**
 - ☐ Light fixtures and switch locations with identification have been finalized
 - ☐ Branch circuits are noted
 - ☐ Lighting fixture schedule is completed
 - ☐ Reference symbol legend



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- ☒ **Special Systems Drawings.**
 - ☐ Data and phone location drops
 - ☐ Communication equipment room(s) sized and located on floor plans
 - ☐ Communication room(s) wall elevations and rack locations. Include ladder-ways, electrical layout on racks, and fire retardant A/C 3/4" plywood location.
 - ☐ Show grounding buss on everything with one line diagram from main electrical equipment.
 - ☐ Show conduits, size and locations
 - ☐ Indicate emergency lighting
 - ☐ Grounding system/s
 - ☐ Security systems
 - Public Address system

10. Other Items for 50% CD Submittal:

- ☒ **Specifications.** Written Project Manual Specifications for all disciplines in CSI format.
- ☒ **LEED and the Sustainable Energy Standard.**
CONSULTANT to update required information from the DD phase as needed. Working with the COUNTY PM the design consultant shall provide an estimate for achieving LEED.
- ☒ **Updated Project Schedule including breakdown of major project activities.** This includes but is not limited to major construction activities, (including any planned construction phasing), bidding phase, and project design phases with Owner review cycles indicated.
- ☒ **Construction Cost Estimate.**
50% CD design phase, broken into CSI divisions by trades, separate material and labor costs. Estimates to include furniture costs (material, freight and installation).
- ☒ **QC Review Session.** Architect/Consultant to conduct an internal quality review session prior to submitting to COUNTY for review
- ☒ **Project Status Review.** Architect and all Sub-Consultants shall meet with COUNTY and Review Committees to review project.
- ☒ **Response to COUNTY and User Comments.** Architect/Consultant shall provide a written response to the 50% CD Submittal review comments.
- ☒ **50% CD Deliverables to COUNTY's Project Manager.**
 - Drawings
 - Specifications - Marked up, CSI long format
 - Product Cut Sheets
 - Updated Project Schedule
 - Updated Evaluation of Operations and Maintenance Costs
 - LEED Point Evaluation
 - Design Narratives updated from DD Submittal
 - Updated Evaluation of Operation and Maintenance Costs
 - Response for 50% CD review comments
 - Meeting Minutes from 50% CD Review Session
 - Cost Estimates
 - Suggested additive alternates with estimated costs

Set Quantity of Above: 10 paper copies, unless noted otherwise and 2 disks
Drawing size: 24"x36" preferred
Disk Format: PDF Electronic Format and AutoCAD drawings



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- ☒ **Written Approval.** Architect/Consultant shall obtain written approval of design from Review Committees, and authorization to proceed into the next phase by the COUNTY's PM.

E. MINIMUM REQUIREMENTS FOR 90% CONSTRUCTION DOCUMENT SUBMISSION

The Contract Documents Phase is the stage in which the requirements for the Work are set forth in detail. This submittal is to show a 90% progress towards completion of the Contract Documents.

1. General - 90% CD Submittal:

- ☒ Architect/Consultant must receive authorization to proceed to 90% Construction Document phase from the COUNTY's Project Manager.
- ☒ Drawing Index matches sheet titles
- ☒ **Site Survey included in drawing set**
- ☒ Architect/Consultant to coordinate submittal dates with Consultant Team, Cost Estimator and COUNTY PM at onset of 90% CD Submittal Phase.

2. Civil - 90% CD Submittal:

- ☒ **Site Grading/ Drainage Plan**
- ☒ **Storm Water Pollution Prevention Plan**
- ☒ **Site Horizontal Control Plan**
- ☒ **Site Utility Plan/s**

3. Landscape - 90% CD Submittal:

- ☒ **Landscape Planting Plan/s**
- ☒ **Landscape Irrigation Plan/s**

4. Structural - 90% CD Submittal:

- ☒ **Structural General**
 - ☐ Structural Calculations which will be submitted to Pima County Development Services for the permit review.
- ☒ **Structural Details.** 90% Completed
- ☒ **Structural Foundation Plan/s.** 90% Completed
 - ☐ Footing and foundation sizes, reinforcing, elevations.
 - ☐ Corresponds to Architectural Floor Plans.
- ☒ **Structural Framing Plan/s.** 90% Completed
 - ☐ Lintels shown for larger mechanical penetrations

5. Architectural - 90% CD Submittal:

- ☒ **Code Analysis Plan/s.**
 - ☐ Verify fire flow requirements with local fire jurisdiction.
 - ☐ Occupancy Use Classification and Occupancy Count per space indicating path of egress to exits
 - ☐ Exit door width calculations
 - ☐ Fire rated partitions and smoke partitions
- ☒ **Architectural Site Plan.** 90% Completed
 - ☐ Hardscapes are fully dimensioned



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- ☒ **Architectural Floor Plan/s.** 90% Completed including:
 - ☐ Partition Type Identification shown on all walls. Height of walls clearly indicated.
 - ☐ Smoke and Fire compartments
 - ☐ Window types
 - ☐ Door numbers
 - ☐ Built-in and Fixed Equipment shown and noted
 - ☐ Provide 1/4" = 1'-0" enlarged drawings of restrooms, area having built-in furniture, special features.
 - ☐ Provide separate dimension plan/s if building layout is complicated.
- ☒ **Roof Plan/s.** 90% Completed including:
 - ☐ Roof slopes. Clarify if roof slope is created by tapered insulation, crickets or sloped structural framing.
 - ☐ Parapet heights
 - ☐ Mechanical equipment, exhaust fans
 - ☐ Roof Hatch/es
 - ☐ Show existing equipment/conditions.
 - ☐ Detail references to roof details.
- ☒ **Architectural Elevation/s.** 90% Completed including:
 - ☐ Indicating all building planes and changes in height
 - ☐ Exterior finish materials
 - ☐ Fire alarm bell on exterior elevation
 - ☐ Fire department connections
 - ☐ Exterior lights with mounting heights
 - ☐ Signage. Address number
- ☒ **Building Sections.** 90% completed including:
 - ☐ Building sections match elevations and plans.
- ☒ **Wall Sections.** 90% completed including:
 - ☐ Keynotes to be specific to each drawing sheet.
 - ☐ Do not reference back to another drawing to find keynotes.
 - ☐ Wall sections match architectural and structural building sections.
- ☒ **Reflected Ceiling Plan/s.** 90% completed including:
 - ☐ Lights
 - ☐ Mechanical diffusers, mechanical return grilles
 - ☐ Smoke detectors, exit signs
 - ☐ Soffits
 - ☐ Indicate ceiling heights
 - ☐ Ceiling mounted equipment
 - ☐ Indicate exposed ductwork
 - ☐ Mechanical and Electrical layout to be similar to RCP
- ☒ **Details.** 90% completed including:
 - ☐ Exterior flashing details
 - ☐ Roof plan details i.e. roof hatch, cricket,
 - ☐ Fire rated assembly details
 - ☐ Floor plan details i.e. column enclosures
 - ☐ Details for material transitions
- ☐ **Furniture Plan/s.**
- ☒ **Equipment Plan/s and Equipment Schedule** - 90% completed including:



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- ☐ OFOI - Owner Furnished Owner Installed items
- ☐ OFCI - Owner Furnished and Contractor Installed items
- ☐ CFCI - Contractor Furnished and Contractor Installed items
- ☐ Provide catalog cut sheets for all fixed equipment to be furnished by General Contractor.

- ☒ **Room Finish Schedule** - 90% completed including:
 - ☐ Room numbers correspond to Architectural Floor Plan
 - ☐ Schedule indicates finish/material colors for exterior and interior of building
- ☒ **Door and Window Schedules** - 90% completed including:
 - ☐ Indicate door width, height, thickness, type, material and finish
 - ☐ Door types drawn and dimensioned
 - ☐ Door frame types drawn and dimensioned
 - ☐ Fire assemblies indicated
 - ☐ Door detail reference numbers indicated
 - ☐ Door schedule information matches plan, and elevation information; including sizes, types, labels, etc. Look for omissions and inconsistencies.
 - ☐ Window Types drawn and dimensioned
 - ☐ Window and door frame sizes match architecture dimension plan.
- ☒ **Door and Window Details.** 90 % Completed
- ☒ **Stair and Elevator Details.** 90% Completed (If applicable)
- ☒ **Interior Elevations.**
- ☐ **Interior Signage Plan/s and Signage Schedule.**
- ☐ **Updated Material and Finish Selection Boards**
- ☐ **Furniture Selections**

6. Plumbing Systems - 90% CD Submittal:

- ☒ Fixture Schedule and locations shown on plans
- ☒ Equipment Schedule and locations shown on plans
- ☒ Water piping locations
- ☒ Waste piping, locations
- ☒ Roof drainage system, locations, and key sizes.
- ☒ Plumbing fixture, and plumbing equipment product cut sheets
- ☒ Submit Product Cut Sheets

7. Fire Protection System - 90% CD Submittal:

- ☒ **Fire Protection System Performance Based Design Documents**
 - ☐ Location of check valves, building entrance, riser and drain
 - ☐ Fire System design will be done during construction phase

8. Mechanical Systems - 90% CD Submittal:

- ☒ **Model Energy Code Calculations for permit review submittal.**
- ☒ Refer to 50% CD Submittal requirements, bring documentation up to a 90% level.



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☒ **Provide Updated Evaluation of Operations and Maintenance Costs.**

☒ **Product cut sheets**

9. Electrical Systems - 90% CD Submittal:

☒ **Electrical Site Plan.**

☒ **Power Distribution Plan/s.**

Refer to 50% CD Submittal requirements, bring documentation up to a 90% level.

☒ **Interior Lighting Plan/s.** including:

- ☐ Light fixtures and switch locations with identification
- ☐ Typical data receptacle and power outlet locations

☒ **Special Systems Plan/s.**

Refer to 50% CD Submittal requirements, bring documentation up to a 90% level.

☒ **Communications/Systems Furniture Coordination Plans** (this is in addition to the Special Systems and Furniture Plans).

- ☐ Data and Phone outlet boxes shown with Systems Furniture Plans
- ☐ Wiring and circuitry is removed from drawings
- ☐ Drawings will be used by COUNTY who will furnish-cabling/wiring. These drawings will be used to facilitate the wiring/cabling installation.

☒ **Product Cut Sheets for electrical lighting fixtures and electrical equipment.**

10. Other Items for 90% CD Submittal:

☒ **Project Manual Specifications** for all disciplines including Civil, Landscape disciplines in CSI format - Completed.

- ☐ Check specifications for phasing of construction (if applicable).
- ☐ Compare architectural finish schedule to specification index.
- ☐ Check major equipment items and verify that they are coordinated with contract drawings.
- ☐ Verify that items specified "as indicated" or "where indicated" in the specifications are in fact indicated on the contract drawings.
- ☐ Verify thickness of materials or quantities of materials in specifications.
- ☐ Door hardware sets completed and coordinated.

☒ **LEED and the Sustainable Energy Standard.**

CONSULTANT to update required information from the 50% CD phase as needed. Working with the COUNTY PM the design consultant shall provide an estimate for achieving LEED.

☒ **Updated Project Schedule including breakdown of major project activities.** This includes but is not limited to major construction activities, (including any planned construction phasing), bidding phase, and project design phases with Owner review cycles indicated.

☒ **Construction Cost Estimate.** For 90% CD design phase, broken into CSI divisions by trades, separate material and labor costs. Estimates to include furniture costs (material, freight and installation).

☒ **QC Review Session.** Architect/Consultant to conduct an internal quality review session prior to submitting to COUNTY for review



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- ☒ **Project Status Review.** Architect and all Sub-Consultants shall meet with COUNTY and Review Committees to review project.
 - ☒ **Response to COUNTY Comments.** Architect/Consultant shall provide a written response to the COUNTY's 90% CD submission comments.
 - ☒ **90% CD Deliverables to COUNTY's Project Manager.**
 - Response for 90% Construction Document review comments
 - Drawings
 - Specifications - CSI long format - 90% Complete
 - Product Cut Sheets
 - Updated Project Schedule
 - Updated Evaluation of Operations and Maintenance Costs
 - LEED Point Evaluation
 - Design Narratives updated from 50% CD Submittal
 - Updated Evaluation of Operation and Maintenance Costs
 - Response for 90% CD review comments
 - Meeting Minutes from 90% CD Review Session
 - Fire Sprinkler calculations
 - Cost Estimates
 - Suggested additive alternates with estimated costs

Set Quantity of Above: 10 paper copies, unless noted otherwise, and 2 disks
Drawing size: 24"x36" preferred
Disk Format: PDF Electronic Format and AutoCAD Drawings
 - ☒ **Written Approval.** Architect/Consultant shall obtain written approval of design from Review Committees, and authorization to proceed into the next phase by the COUNTY's PM.
- 11. Completed Construction Document Submission**
- ☒ All of the 90% Construction Document Requirements brought up to a completed level.
 - ☒ **QC Review Session.** Architect/Consultant to conduct an internal quality review session prior to submitting to COUNTY for review
 - ☒ **Provide Exit Access Plans which will be posted within the facilities**
 - ☒ **Updated Project Schedule including breakdown of major project activities.** This includes but is not limited to major construction activities, (including any planned construction phasing), bidding phase, and project design phases with Owner review cycles indicated.
 - ☒ **Completed Construction Document Deliverables to COUNTY's Project Manager.**
 - Response received for 90% CD Comments
 - Drawing Sets Quantity: 2 loose original sealed sets
 - Specifications: 1 loose paper set for bidding purposes, and 1 paper copy for Dev. Services
 - Permit Plan Review
 - Product Cut Sheets: 2 paper copies
 - Model Energy Code Requirements
 - Calculations: 2 paper copies of each type
 - Permit Application filled out by Architect
 - Documentation that local utility companies have approved the design drawings
 - Completed Construction Document Cost Estimate: 2 copies if value engineering occurred
 - Disk Format: PDF Electronic Format and AutoCAD Drawings - 2 disk copies

END OF EXHIBIT 'C'

EXHIBIT 'D' (11 Pages)
ELECTRONIC DOCUMENT STANDARDS FOR
PIMA COUNTY FACILITIES MANAGEMENT

3.4 PURPOSE

- A. PCFM requires projects to be completed and documented in an electronic form using AutoCAD® and Adobe PDF. The purpose of these standards is to define minimum standards required to create electronic submittals of drawings, specifications, shop drawings, Operations & Maintenance Manuals and other documents submitted to PCFM for the County's use in management and renovation projects over a building's anticipated life span.

3.5 PIMA COUNTY FACILITIES MANAGEMENT CAD SYSTEM CONFIGURATION

- A. The COUNTY uses the following system configuration:

1. Intel Based CPU
2. Windows XP PRO
3. AutoCAD® rel. 2009
4. Microsoft Office 2003
5. Adobe Reader

3.6 GENERAL REQUIREMENTS.

- A. Unless waived by the County's Project Manager assigned to the Project, all construction contracts, design drawings, specifications, and reports submitted to the County for review shall be created and documented electronically. Consultants providing design services for Pima County Facilities Management (PCFM) are required to provide as built drawings and Master CAD drawings in AutoCAD® .DWG electronic format at the end of the construction project. Pre-design drawings and conceptual plans prior to the schematic design phase can be drawn in free hand with the approval of the COUNTY Project Manager assigned to the project; however, the review submittals to the COUNTY shall be documented electronically in PDF format.
- B. At project closeout an electronic copy of the documents, including drawings, specifications, shop drawings, and operations & maintenance manuals shall be delivered to the Counties Project Manager on CD ROM media. Project drawings should be in AutoCAD® .DWG format. In no event will drawings produced in the DXF format be acceptable. A support file should be added to the drawing set. This file should contain all support file such as Plot Files, all used text shape files, shape files, PDF's, image files, and all other attached files. While the consultant may create the initial/internal drawings as 3D files, the final electronic drawings submitted at project close out must be 2D files which can be easily edited by PCFM staff and which do not require a 3D program to view or edit. All final CD ROM media must be verified with PCFM to make sure it conforms to PCFM standards before it is accepted by PCFM.
- C. Should the COUNTY upgrade AutoCAD® software during the term of this Contract, the CONSULTANT will NOT be asked to upgrade any project that has already been started under the old version. However, any projects which have not yet been started by the CONSULTANT are required to be designed using the upgraded version currently in use by the COUNTY.

3.7 AS-BUILT RECORD DRAWINGS

- A. As part of the Project Closeout requirements, the Consultant shall prepare the as-built records drawings which contain xrefs by using the "Bind" command so that the xref drawing becomes part of the final drawing. This will prevent unintentional updating of archived drawings by later changes to referenced drawings. Binding an xref to the final drawing makes the xref a permanent part of the drawing and no longer an externally referenced file. Bind the entire database of the xref drawings, including all its xref-dependent names objects (blocks, dimension styles, layers, linetypes, and text styles) by using the XREF Bind option.
- B. When choosing to bind the xref to the current drawing, AutoCAD prompts to which type of bind to use: Bind or Insert. Do not use the Insert command, when the Insert option is used, AutoCAD inserts the drawing as a normal block, and prefix names objects with the xref's drawing name. Consequently, any duplicate objects in the xref are ignored, and the names objects in the current drawing take precedence. Although this feature eliminates redundancy of duplicate layer names, it may give unexpected results if there are duplicate named objects.
- C. Do not create drawings using proxy objects.

3.8 CAD MASTER DRAWINGS

- A. As part of their services, the consultants shall also create another set of MASTER CAD drawings that shall contain the building layout data that PCFM needs for future renovations and interior layout changes. PCFM requires that the drawings contain the minimum amount of data needed to accurately show the building layout while using notes that are only necessary to clarify the drawing. There is a considerable amount of data on the construction drawings that is not needed on these CAD MASTER drawings. It is **NOT** intended to revise or replace the construction documents but rather copy appropriate data from them to create CAD MASTER drawings.
- B. The consultant shall create ONE drawing file using the PCFM AutoCAD template* for each building as follows: one Site Plan drawing; one Building Drawing for each floor of the building including any sub floors, penthouses, and Roof Plan; and one Building Elevation drawing. See PCFM CAD-Master Required Drawing Information for drawing tab layout. *PCFM AutoCAD template to be provided by in electronic format.

3.9 AUTOCAD® DRAWING REQUIREMENTS FOR PCFM CAD MASTER DRAWINGS

- A. DRAWING LAYERS - PCFM has adopted the National CAD Standards (NCS) layering standards Ver. 4.0. PCFM has created its own layer list using the NCS. That list identifies the layer formatting to be used. All layers must contain a brief description of the data used on each layer. All CAD MASTER drawings to be submitted to PCFM as final drawings must use the following PCFM layering list. Additional layers not following these standards are not allowed.
- B. DIMENSIONS – Not included.
- C. NOTES – Include room numbers and room names in their respective specified layers. In the A-ANNO-NOTE layer include only notes that are required to clarify what is not obvious on the drawing. Do not include the likes of section indicators, where to find details, field instructions, etc.
- D. SECTION DETAILS – Not included.



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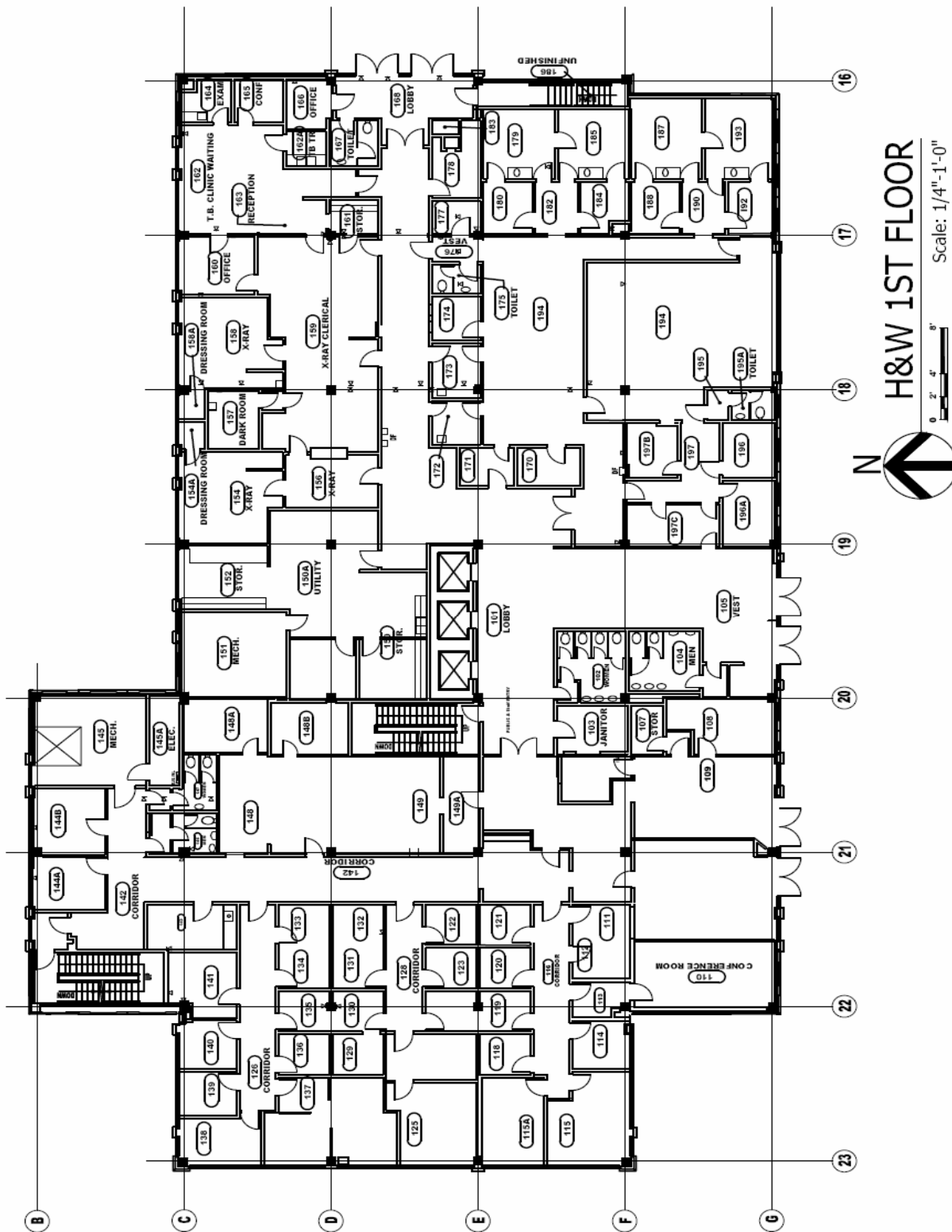
- E. LEGENDS – There is a layer legend specified for each of the different disciplines of work. Each legend is to include symbols used on the drawing and their respective descriptions. The legend shall be located in model space to the right of the building layout so as not to interfere with the display of the layout. Each drawing and layer shall have its appropriate legend.
- F. OBJECT PROPERTIES – Color, line type, and line weight properties of objects and blocks shall be “BY LAYER”. Do not override the layer specifications.
- G. ATTRIBUTES – Allowed but should be created in Layer 0 so as not to create extraneous layers.
- H. BLOCKS – It is recommended that data be grouped into logical blocks or poly lines. However the block should be created in layer 0 and then inserted into the appropriate layer. Again so as not to create extraneous layers. The color property of the block shall be “BY LAYER”.
- I. TEXT – All text shall be plotted to be 1/8” tall.
- J. NORTH ARROW – The north arrow shall be included **on all plans.** and located on the *-ANNO-SYMB layer of each drawing file.
- K. GRAPHIC SCALE – A graphic bar scale shall be included **on all plans** and shall be located on the *-ANNO-SYMB layer of each drawing file.
- L. FONTS – Font used shall be standard AutoCAD® “romans” **ONLY**. A copy of the AutoCAD .shx file must be included with submitted drawings.

3.10 REFERENCE DRAWING

- A. Following is a drawing for REFERENCE ONLY. It shows a typical CAD MASTER floor plan with only selected layers turned on for display.

3.11 RESPONSIBILITY OF THE PRIME CONSULTANT

- A. The Prime CONSULTANT shall insure that all sub-consultants retained for the project are aware of the **PCFM** CAD requirements and standards contained herein, and that the electronic drawings prepared by the sub-consultants conform to these requirements and standards.



CAD-Master Required Drawing Information

Site Plan Drawing

Site Plan Tab

1. Outline of Main Building Structure
 2. Any Parking Lot Layouts
 3. Any Major Streets or Access Streets
 4. Property Line
 5. Utility Lines
 6. *Easements and Right of Way*
 7. Site Improvements such as Sidewalks, Patios, Canopies, Storage Sheds, etc...
 8. *Landscaping*
 9. *Irrigation*
 10. Legend of Specialty Lines, Hatches, and Symbols Used
 11. North Arrow, Drawing Label, and Graphic Scale
 12. Standard PCFM 24" x 36" Title Block with Correct Building Information
- * Items With Asterisk May Need Layer Turned "off or frozen" If Too Cluttered

Building Plan Drawing (one drawing required for each floor)

Floor Plan Tab

1. All Walls: Exterior, Interior, Decorative, Movable Partitions, Stairs, etc...
2. Structural Columns and Structural Column Grid
3. Exterior and Interior Doors
4. Exterior and Interior Windows
5. Area Names and Numbers
6. All Plumbing Fixtures
7. Built-in Millwork, Cabinets
8. Outline of Major Mechanical Systems with labels
9. Legend of Specialty Lines, Hatches, and Symbols Used
10. North Arrow, Drawing Label, and Graphic Scale
11. Standard PCFM 24" x 36" Title Block with Correct Building Information

Reflected Ceiling Plan (RCP) Tab

1. All Full Height Walls: Exterior, Interior
2. Structural Columns and Structural Column Grid
3. Area Names and Numbers
4. All Soffit Conditions
5. Exterior and Interior Doors and Windows (all shown at half tone)
6. All Ceiling Conditions: Drop Ceiling Grid, Hard Ceiling, Specialty Ceiling Finish, Ceiling Access Panels, etc...
7. Note: All Items Below Ceiling Must be shown at half tone (ex: stairs, half-walls, etc...)
8. All Mechanical Supply Diffusers, Return Diffusers, Exhaust Fans, etc...
9. All Light Fixtures
10. All Fire Sprinkler Heads
11. Legend of Specialty Lines, Hatches, and Symbols Used
12. North Arrow, Drawing Label, and Graphic Scale
13. Standard PCFM 24" x 36" Title Block with Correct Building Information

Electrical Plan Tab (Note: If Separate Lighting & Power Plans Exist, This May Be Two Tabs Instead Of One.)

1. All Walls: Exterior, Interior, Decorative, Movable Partitions, Stairs, etc...
2. Structural Columns and Structural Column Grid
3. Exterior and Interior Doors
4. Exterior and Interior Windows



**Pima County Procurement Department
Solicitation for Qualifications 1101303**

Architectural and Engineering Design Services:

Pima County Fleet Services New Services Facilities

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5. Area Names and Numbers
6. All Plumbing Fixtures
7. Built-in Millwork, Cabinets
8. All Mechanical Supply Diffusers and Return Diffusers (optional)
9. All Light Fixtures (note: Turn Off Layers Showing Wiring)
10. All Electrical Receptacles, Switches, etc...(note: Turn Off Layers Showing Wiring)
11. Teledata Outlets
12. Legend of Specialty Lines, Hatches, and Symbols Used
13. North Arrow, Drawing Label, and Graphic Scale
14. Standard PCFM 24" x 36" Title Block with Correct Building Information
15. Keynotes and Keynote Legend

Electrical Schedules Tab

1. Panel Schedules
2. Equipment and Fixture Schedule
3. One-Line Diagrams

Mechanical Plan Tab

1. All Walls: Exterior, Interior, Decorative, Movable Partitions, Stairs, etc...
2. Structural Columns and Structural Column Grid
3. Exterior and Interior Doors
4. Exterior and Interior Windows
5. Area Names and Numbers
6. All Diffusers (supply, return, exhaust)
7. All Duct Work with Duct Labels (supply, return, exhaust)
8. All Mechanical Equipment Outlines with Labels
9. Mechanical Schedules
10. Legend of Specialty Lines, Hatches, and Symbols Used
11. North Arrow, Drawing Label, and Graphic Scale
12. Standard PCFM 24" x 36" Title Block with Correct Building Information
13. Keynotes and Keynote Legend

Plumbing Plan Tab

1. All Walls: Exterior, Interior, Decorative, Movable Partitions, Stairs, etc...
2. Structural Columns and Structural Column Grid
3. Exterior and Interior Doors
4. Exterior and Interior Windows
5. Area Names and Numbers
6. All Plumbing Fixtures
7. All Plumbing Supply, Drain, Condensation Lines, Roof Drains, Labels
8. Plumbing Schedules
9. Legend of Specialty Lines, Hatches, and Symbols Used
10. North Arrow, Drawing Label, and Graphic Scale
11. Standard PCFM 24" x 36" Title Block with Correct Building Information
12. Keynotes and Keynote Legend

Roof Plan Tab

1. Dashed Outline of Main Building Structure with Label
2. Outline of Roof Perimeter
3. All Building Parapets
4. Direction of All Roof Slopes (include Slope if info available)
5. All Roof Drains, Scuppers, etc...
6. All Roof Crickets
7. All Roof Penetrations



**Pima County Procurement Department
Solicitation for Qualifications 1101303**

Architectural and Engineering Design Services:

Pima County Fleet Services New Services Facilities

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8. All Equipment on Roof with Labels
9. Indicate Type of Roofing (ex: Built-Up, Single Ply, Metal, etc...)
10. Legend of Specialty Lines, Hatches, and Symbols Used
11. North Arrow, Drawing Label, and Graphic Scale
12. Standard PCFM 24" x 36" Title Block with Correct Building Information
13. Keynotes and Keynote Legend

Special Systems Tab (Security Systems, Fire Alarms, etc...)

1. All Devices for Security, Fire Alarm, and Audio-Visual Systems
2. Equipment and Fixture Schedule
3. One-Line Diagrams
4. All Walls: Exterior, Interior, Decorative, Movable Partitions, Stairs, etc...
5. Structural Columns and Structural Column Grid
6. Exterior and Interior Doors
7. Exterior and Interior Windows
8. Area Names and Numbers
9. All Plumbing Fixtures
10. Built-in Millwork, Cabinets
11. All Mechanical Supply Diffusers and Return Diffusers (optional)
12. All Light Fixtures (note: Turn Off Layers Showing Wiring)
13. All Electrical Receptacles, Switches, etc...(note: Turn Off Layers Showing Wiring)
14. Legend of Specialty Lines, Hatches, and Symbols Used
15. North Arrow, Drawing Label, and Graphic Scale
16. Standard PCFM 24" x 36" Title Block with Correct Building Information
17. Keynotes and Keynote Legend

Furniture & Equipment Tab

1. All Walls: Exterior, Interior, Decorative, Movable Partitions, Stairs, etc...
2. Structural Columns and Structural Column Grid
3. Exterior and Interior Doors
4. Exterior and Interior Windows
5. Area Names and Numbers
6. All Plumbing Fixtures
7. Built-in Millwork, Cabinets
8. Outline of Major Mechanical Systems with labels
9. All Furniture with labels
10. Legend of Specialty Lines, Hatches, and Symbols Used
11. North Arrow, Drawing Label, and Graphic Scale
12. Standard PCFM 24" x 36" Title Block with Correct Building Information

Building Elevation Drawing

Building Elevations Tab

1. Separate Tab Per Building Elevation (ex: Tab; North Elevation, Tab; South Elevation, etc...)
2. Drawing Label, and Graphic Scale
3. Standard PCFM 24" x 36" Title Block with Correct Building Information



Pima County Procurement Department
Solicitation for Qualifications 1101303
Architectural and Engineering Design Services:
Pima County Fleet Services New Services Facilities

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Layer Name	Layer Color	Layer Linetype	Layer Lineweight (MM) Default=.25mm	Layer Plottable	Layer Description
A-AREA-IDEN	3	Continuous	Default	TRUE	Room numbers, tenant identifications
A-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
A-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
A-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
A-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
A-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
A-ANNO-TEXT	4	Continuous	Default	TRUE	Text
A-AREA	30	Continuous	Default	TRUE	Area calculation boundary lines
A-AREA-OCPP	3	Continuous	30	TRUE	Occupant or employee names
A-CLNG-GRID	3	Continuous	30	TRUE	Ceiling grid, Ceiling access points
A-CLNG-OPEN	3	Continuous	30	TRUE	Ceiling/roof penetrations
A-CSWK	100	Continuous	Default	TRUE	Casework (Built in Upper and Lower Cabinets)
A-DOOR	6	Continuous	20	TRUE	Door
A-ELEV-INTR	4	Continuous	Default	TRUE	Interior and exterior elevations
A-ELEV-OTLN	2	Continuous	Default	TRUE	Building outlines
A-ELEV-PATT	40	Continuous	Default	TRUE	Textures and hatch patterns
A-EQPM-CLNG	7	Continuous	Default	TRUE	Ceiling-mounted or suspended equipment
A-FLOR-EVTR	11	Continuous	Default	TRUE	Elevator cars and equipment
A-FLOR-HRAL	6	Continuous	Default	TRUE	Stair and balcony handrails, guardrails
A-FLOR-LEVL	14	Continuous	Default	TRUE	Level changes,ramps,pits,depressions
A-FLOR-OVHD	5	DASHED2	Default	TRUE	Overhead items (skylights, over-hangs, etc.)
A-FLOR-PATT	230	Continuous	Default	TRUE	Tile, carpet patterns
A-FLOR-RAIS	14	Continuous	Default	TRUE	Raised floors
A-FLOR-STRS	6	Continuous	40	TRUE	Stair treads,escalators,ladders
A-GLAZ	151	Continuous	30	TRUE	Windows
A-GLAZ-FULL	151	Continuous	30	TRUE	Full-height glazed walls and partitions
A-ROOF	6	Continuous	Default	TRUE	Roof, Stair treads, ladders
A-WALL-FIRE	1	Continuous	40	TRUE	Fire wall assembly
A-WALL-FULL	4	Continuous	40	TRUE	Full-height walls, stair treads,Stair shaft
A-WALL-MOVE	142	Continuous	Default	TRUE	Movable partitions
A-WALL-PRHT	11	Continuous	Default	TRUE	Partial-height walls (do not appear on reflected ceiling plans)
C-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
C-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
C-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
C-ANNO-NOTE	4	Continuous	Default	TRUE	Notes



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C-ANNO-SYMB	151	Continuous	Default	TRUE	Symbols
C-ANNO-TEXT	4	Continuous	Default	TRUE	Text
C-BLDG	3	Continuous	80	TRUE	Building footprint
C-COMM-OVHD	5	DASHED2	40	TRUE	Overhead communication lines, telephone poles, towers
C-COMM-UNDR	5	HIDDEN2	40	TRUE	Underground communication lines, pull boxes
C-FIRE	5	DASHED2	40	TRUE	Fire protection-hydrants, lines, connections
C-NGAS-UNDR	5	HIDDEN2	40	TRUE	Natural gas-underground lines
C-PKNG	1	Continuous	Default	TRUE	Parking lots, Parking lot striping, handicapped symbols, etc
C-POWR-OVHD	5	DASHED2	40	TRUE	Overhead power lines
C-POWR-UNDR	5	DASHED2	40	TRUE	Underground power lines
C-PROP	6	PHANTOM2	30	TRUE	Property lines, survey benchmarks
C-PROP-ESMT	6	DASHED2	30	TRUE	Easements, rights-of-way, setback lines
C-ROAD	4	Continuous	30	TRUE	Roadways, Center Lines
C-ROAD-CURB	4	Continuous	30	TRUE	Curbs
C-SITE-GENF	1	Continuous	35	TRUE	General Site Features, Site improvements (Benches, Fences, etc.)
C-SITE-SWLK	1	Continuous	35	TRUE	Site Sidewalks, Walkways
C-SSWR-UNDR	5	HIDDEN2	30	TRUE	Sanitary sewer-underground lines, Storm drainage pipe-underground
C-TOPO	1	Continuous	Default	TRUE	Proposed contour lines and elevations
C-WATR-UNDR	5	HIDDEN2	40	TRUE	Domestic water-underground lines
E-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
E-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
E-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
E-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
E-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
E-ANNO-TEXT	4	Continuous	Default	TRUE	Text
E-CCTV	7	Continuous	Default	TRUE	Closed-circuit TV
E-CTRL-WIRE	7	Continuous	Default	TRUE	Control system wiring (Magnetic card entry systems, etc.)
E-LITE-CLNG	12	Continuous	30	TRUE	Ceiling-mounted lighting
E-LITE-EMER	7	Continuous	Default	TRUE	Emergency lighting
E-LITE-SITE	201	Continuous	Default	TRUE	Site lighting (see also civil group)
E-POWR-WALL	11	Continuous	Default	TRUE	Power wall outlets and receptacles (include floor receptacles)
F-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
F-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
F-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
F-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
F-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
F-ANNO-TEXT	4	Continuous	Default	TRUE	Text
F-EVAC	1	Continuous	50	TRUE	Evacuation plan



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F-PROT-ALRM	6	Continuous	50	TRUE	Fire alarm, fire extinguishers
F-SPRN-CLHD	101	Continuous	40	TRUE	Sprinkler head-ceiling (include all sprinkler heads)
F-SPRN-PIPE	7	Continuous	40	TRUE	Sprinkler piping
G-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
G-ANNO-KEYN	7	Continuous	Default	TRUE	Key notes
G-ANNO-LEGN	7	Continuous	Default	TRUE	Legends and schedules
G-ANNO-NOTE	7	Continuous	Default	TRUE	Notes
G-ANNO-SYMB	7	Continuous	Default	TRUE	Symbols
G-ANNO-TEXT	7	Continuous	Default	TRUE	Text
G-ANNO-TTLB	7	Continuous	Default	TRUE	Border and title block
G-PLAN	4	Continuous	Default	TRUE	Floor plan-key plan
G-SITE	4	Continuous	Default	TRUE	Site plan-key map
I-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
I-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
I-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
I-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
I-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
I-ANNO-TEXT	4	Continuous	Default	TRUE	Text
I-EQPM	11	Continuous	Default	TRUE	Equipment with labels(fixed or freestanding)
I-FURN-FIXD	1	Continuous	Default	TRUE	Fixed Furniture, equipment with labels
I-FURN-FREE	1	Continuous	Default	TRUE	Freestanding Furniture, equipment with labels
I-FURN-SEAT	1	Continuous	Default	TRUE	Seating Furniture
L-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
L-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
L-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
L-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
L-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
L-ANNO-TEXT	4	Continuous	Default	TRUE	Text
L-IRRG-SPKL	5	Continuous	Default	TRUE	Irrigation sprinklers
L-PLNT	1	Continuous	Default	TRUE	Plant and landscape materials with labels
M-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
M-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
M-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
M-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
M-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
M-ANNO-TEXT	4	Continuous	Default	TRUE	Text
M-CONT-THER	7	Continuous	Default	TRUE	Thermostats
M-EQPM-OTLN	7	Continuous	40	TRUE	Equipment Outlines with Text labels
M-HVAC-CDFF	6	Continuous	40	TRUE	HVAC ceiling diffusers (supply and return)
M-HVAC-DUCT	5	Continuous	40	TRUE	HVAC ductwork(supply and return)
P-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions



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P-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
P-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
P-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
P-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
P-ANNO-TEXT	4	Continuous	Default	TRUE	Text
P-DOMW	7	Continuous	35	TRUE	Domestic hot and cold water systems
P-FIXT	11	Continuous	Default	TRUE	Plumbing fixtures(all restroom equipment, floor drains, toilet partitions,etc.)
P-NGAS-PIPE	6	Continuous	40	TRUE	Natural gas piping
P-SSWR	7	Continuous	35	TRUE	Domestic Sewer and vent systems
S-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
S-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
S-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
S-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
S-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
S-ANNO-TEXT	4	Continuous	Default	TRUE	Text
S-COLS	1	Continuous	40	TRUE	Columns
S-GRID	1	CENTER2	18	TRUE	Column grid
T-ANNO-DIMS	4	Continuous	Default	TRUE	Dimensions
T-ANNO-KEYN	4	Continuous	Default	TRUE	Key notes
T-ANNO-LEGN	4	Continuous	Default	TRUE	Legends and schedules
T-ANNO-NOTE	4	Continuous	Default	TRUE	Notes
T-ANNO-SYMB	4	Continuous	Default	TRUE	Symbols
T-ANNO-TEXT	4	Continuous	Default	TRUE	Text
T-EQPM	10	Continuous	Default	TRUE	Equipment Plan, Data/telephone jacks

END OF EXHIBIT 'D'