

UNIFYING DISCONNECTED INFRASTRUCTURE DATA IN THE STAMP

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Unifying Disconnected Infrastructure Data in the STAMPs

Moderator: Benjamin Liptak, LMI

Speakers:

- Sara Bierman, Transportation Networks & Airfield Pavements (TNAP) AMP Manager, AFIMSC/IZBF
- Zach Reece, Data Lead, SpecPro Professional Services





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SARA BIERMAN



Fun Facts

- Happy Place = New Orleans
 - Architecture degree from Tulane
 - Saints fan Who Dat!
 - Took the family to Mardi Gras and JazzFest this year
- Spent ~1/3 of life overseas
 - Air Force brat & career DAF civilian
 - Lived in Germany, England, Italy
 - First of 2 sons born in Italy
- Hobbies
 - Hiking, aka wearing out a 5yo & a 2yo
 - Cooking anything other than chicken nuggets and hot dogs



ZACH REECE



Fun Facts

- Married with 4 kids
 - 3 boys aged 8, 6, and 2
 - 1 girl aged 3
- Bachelors from Baylor
 University
 - Sic 'em Bears!
- Masters from University of Oklahoma
 - Still Sic 'em Bears!
- Loves to play soccer and ultimate frisbee
- Spent 10 years as an Energy Engineer before switching to Data Science



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The Need



Sara Bierman AFIMSC/IZBF

Requirement and Funding Disconnect

- Funds and command follow different paths
 - **Funding Flow**
 - Centralized at Air Force Civil Engineering Center (AFCEC) and Air Force Installation & **Mission Support Center** (AFIMSC)
 - **Command Authority**
 - Projects elevated by installations and prioritized by Major Commands (MÁJCOMs)
- STAMPs help inform bases and MAJCOMs as they prioritize requirements

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Funds Flow and Command Authority



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Isolated and Centralized Data

Do not talk to

each other

- Each AMP utilizes own specific data
 - Real Property Data
 - Facilities = BUILDER
 - Pavements = PAVER
 - Utilities = GIS
 - Future SMS system being built
- Real property and programming data = NEXGEN IT
- Access to systems stove piped by role
- Centralized access/analysis provides consistency for comparison

SAM





The Product

SpecPro

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Zach Reece SpecPro Sustainment and Environmental, LLC

What is the STAMP?

- STAMP = State of the Activity Management Plan (AMP)
- A set of simple, clear, and unified documents designed to provide a high-level annual snapshot of each AMP that:
 - Utilizes only central datasets
 - Combines disconnected data
 - Serves as a conversation starter rather than a deep dive
- STAMPs are created at multiple levels
 - Installation (I-STAMP)
 - Individualized for each base
 - MAJCOM (M-STAMP)
 - Individualized for each MAJCOM

SAM

- Enterprise (E-STAMP)
 - Individualized for each AMP

Structure of each STAMP (All Levels)

What do you have?

Asset Summaries

What do you need?

• What assets are at risk or in need of attention?

What is being done?

- What projects have been elevated?
- Do they address an identified risk?

What Do You Have?



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What Do You Need?

Summary of the "Risks" section outlining purpose, data utilized, what is an "At Risk" asset, and other important information

Visualization of the condition of each system at each Site location associated with this installation. Low condition systems (red) are easily seen. Figure 4 indicates the condition for each Utility system present at a Site of this installation. Any red highlighted box indicates a system with condition <55 as a potentially "At Risk" system in need of support. Figure 5 identifies if any Site has an "At Risk" or "Unk" system and the total number of IPL requirements for that system between FY23-27. Any "At Risk" system that does not have IPL projects attached to it may highlight a potential gap in need of attention.

| | Figure 4 | - Sy | sten | n Cor | ditio | on by | Site | 1 | | | | Figure 5 – Projects for At RISK Systems | | | |
|-----------|---|----------|------|----------|-------|--------|---------|-------|------------------|---------|-----------|---|----------------------------------|------------------------------|--|
| | Install Ste Name | Aurfield | Dom | Electric | Pueh | 4 more | Nat Gan | Starn | Thermal | Washa | Wistor | System | At Risk (Hex Red/Unit System) | # Of FY23-27 IPL Projects | |
| | AMOULPARTONCE AND STULL | - | | 10 | ** | | | 11 | 24 | | | Airfield Lights | Unk | 0 | |
| | Alle See Housings | Que. | 5 | | L.** | 100 | 10 | 97 | * | н. | | Dams | No | 0 | |
| | LADIANZ AN FORCE BALLING I | | | | | and a | | | 76 | - | | Electric | Yes | 0 | |
| | KELLY FIELD ANIMER STREET | 100 | | | 77 | | 81 | 72 | $\overline{\pi}$ | | | Fuels | Unk | 1 | |
| | Deamlass the system waters | | | 58 | 200 | 1.00 | Ω | 84 | 8 | × | 66 | Mechanical | Unk | 1 | |
| | CAMP BLAUE TRAINING MANEE BYEL | - | 78. | - | 2-4 | - | ٣ | 14 | 77 | - | 4 | Natural Gas | Yes | 0 | |
| | MEDICAL CENTER ANNEX SITE 1 | - | | - | | | ** | 17 | | 80 | - | Constant of the | Link | | |
| | LACKARD ARE FOR 2 BALL STS | | | 100 | | | 1 | 1.00 | | April 1 | 1.04 | Stormwater | Unix | 2 | |
| yelse UDI | CANYON LARK RECREATION ADDRESS TO TE 1 | | | - | 1.00 | | | - | | | | Thermal | Unk | 2 | |
| 112 | SAGURE ARE FORCE AUTOLIARY FIELD-SFTE 1. | | | | Area | | 100 | 200 | | 10 | | Wastewater | Yes | 0 | |
| 54-45 | REAL P AND P DOUZ MASS SITE 1 gost | | | in. | | | | | 100 | | Line | Water | Yes | 0 | |

Investment Plan

Figure 6 lists the Utilities projects submitted for centralized FSRM (AFCAMP) funding and Figure 7 lists Current Energy Resilience Projects. While dFSRM and other funding avenues are an important part of the holistic investment picture, current limitations in data collection lead to the exclusion of dFSRM and other funds. Projects in the FV23 CTO are highlighted in orange. Projects listed as high-risk assets in Figure 4 are highlighted in blue if they were submitted in the FV23-CTO lie but did not make the FV23 CTO. //CUI//

Figure 6 - FY23 CTO and Future Requirements //CUI//

| R. | kystem Type | Exce. Priority | PROFILY | Project Nuclear | Programmed Aird | Propert Tible |
|-------|--------------|-------------------|---------|-----------------|--------------------|--|
| 2023 | Thermal | 3 | 25 | 1857170252 | \$5,780 | REFARE CHILLER WETC CONTRAL PLANT, 50472 |
| 20064 | Therrial | | 4 | 18MP1703AF | \$1.781 | FREAR DRILER METCONTINUL PLANT, BLETF |
| 20218 | the world en | 12 | 72 | 181F120189 | \$2.181 | REAL REFORM DRAINAGE AT BIND ENGLEMAN FOR |
| 20024 | Starwater | 16 | 146 | MP(1106220 | \$2,584 | REAKS STORU BRAINAGE CHANNEL, TRUCHPER/ADALY RD |
| 2004 | Fuela | 22 | - | TVMB207527 | \$0,481 | DEMO CANDITY & UST. B1079 |
| 2024 | Mechanical | 60 | 122 | 189729048L | \$0,481 | CONSTRUCTUTE/THES AND SITE CLEANUP FOR FEM YOUTH LESITER |
| 2025 | Steremater | 3.0 | 87 | 1000121010 | \$2,681 | EXTERE STORM DRAMADE AT BIND END EVANEOR |
| 2025 | Mantinalar | 28 | 204 | MPLEIREZO | 65.181 | REFAIL STORM ERAMARY DAMARY, TRUEWER/ABALIT RS |
| 2025 | Recharges | - 60 | 340 | 2897290681 | \$0.481 | CONSTRUCT UTUITIRE AND SITE CLEANUP FOR FEMILIDUTE CENTER |
| 2006 | Thernol | 12 | 62 | 64915212739 | \$4.56 | A SANA/ A SALASE CAULER SYSTEM, RUES |
| 2026 | Stormaster | 12 | 62 | 3857520380 | \$2,681 | A SPACE STORM BRANKAGE AT SING ENOLSMAN SCR |
| 2028 | Servinder | 36 | 208 | MPC5106220 | \$5,581 | REFRER STORY SEAMADE OLAMORI, TRUCKPERHENLY AD |
| 2028 | Mechanical | - 60 | 347 | 285F200881 | \$0,481 | CONSTRUCT UTILITIES AND SITE CLEANUP FOR PSK HOUTH CENTER: |
| 2027 | Thereised | 1.7 | 45 | MPL3712719 | \$2,080 | ARPAIR ARPLACE CHILLER SYSTEM, \$1417 |
| 20187 | Mermulat | 12 | | 1817-12012-80 | \$2.881 | ERRAR STORM SRAINLERR IT RIVE RIVER RULEN FOR |
| 2027 | Starswater | 16 | 229 | MPU5106320 | \$2,581 | REPARE STORY SEAMARE CHANNEL TRUCKING SHERE ALL RD |
| 2027 | Alterbanical | 140 | 141 | 189755681 | 60.481 | Fredra PT IN A RELEASE STEP CHE & STA DOL NY THIRDER |

Figure 7 - Current Energy Resilience Projects //CUI/

| Fund Type | System Type | 2022 U(1 (Primary 5ys) | Start Year | Pieish Year | Project Title |
|-----------|-------------|---------------------------|---------------|----------------|---------------|
| ESPC | Electric | 58 | 2016 | 2018 | Phase 1 |
| ESPC | Electric | 50 | 2016 | 2041 | Prove 1 |
| ESPC | Electric | 50 | 2020 | 2023 | 325A K2F |

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Summary Table listing which systems have at least one "At Risk" asset on at least one Site. Table also summarizes how many projects have been elevated for each system type, allowing a quick view indicating if current projects address the correct assets.

Note – Example shows Page 2 of the Utilities I-STAMP.

What is Being Done?

ure 4 indicates the condition for each Utility system present at a Site of this installation. Any red highlighted box indicates a system with condition <55 as a potentially "At Risk" system in need of support. Figure 5 identifies if any Site has an "At Risk" or "Unk" system and the total number of IPL requirements for that system between FY23-27. Any "At isk" system that does not have IPL projects attached to it may highlight a potential gap in need of attention

| | Figure 4 | - Sy | sten | 1 Cor | ditio | on by | Site | | | | Figure 5 – Projects for At Risk Systems | | | | |
|------------|--|----------|------|----------|-------|-------|------------|----------------|---------|---------|---|-------------------|----------------------------------|------------------------------|--|
| | Install Ste Norre | Aurfield | Dom | Electric | lueh. | the h | fairt Gara | Storn Water | Thermal | Wischa | Wistor | System | At Risk (Hat Bad/Unit System) | # Of FY23-27 IPL Projects | |
| | AMOULPARFORCE BASE 5/051 | 940 | | 10 | ** | 100 | | 11 | 114 | | | Airfield Lights | Unk | 0 | |
| | JULA SANTHOUSTON | (Jac) | 5 | | 1.00 | 100 | 10 | 97 | 16 | | 51 | Dams | No | 0 | |
| | LADILARD AN FORCE BALL SPIC | | | | | pre- | | | 74 | | | Electric | Yes | 0 | |
| | KELLY FIELD ANIMELS (TE 1 | - | | | | | | 12 | 77 | | | Fuels | Unk | 1 | |
| | CHAMBLE TRULY NO ANY ST | | | 64 | 1-10 | 100 | | 86 | 8 | | - | Mechanical | Unk | 1 | |
| | CAMP BLAUR TRAINING MANEE STOLD | - | 78. | 1 | 1.m | - | ٣ | 14 | 77 | - | н. | Natural Gas | Yes | 0 | |
| | MEDICAL CENTER ANNELS SITE 1 | 99 | | - | | - | ** | 17 | | 80 | | Stormwater | Link | 2 | |
| | LACKARD AR FORCE DALE DATE | | | 100 | | | 100 | 100 | | April 1 | 1.04 | - Alan Interactor | Unit. | - | |
| System UCI | CANYON LANK RECEILEMENT | | | - | 1.00 | | - | 60m | | | | Thermal | Unk | 2 | |
| Con Con | SEGURI AR FORCE AUDUARY PUBLICITE 1 | | | 100 | Area | | 100 | area. | | | | Wastewater | Yes | 0 | |
| 9 54 45 | REAL P. ANN P. DAVID MASK 1975 1. gover | | | in. | | | | | 100 | | Line | Water | Yes | 0 | |

her funding avenues are an important part of the holistic in clusion of dFSRM and other funds. Projects in the FY23 CTD are Projects listed as high-risk assets in Figure 4 are highlighted in blue if they were submitted in the FY23-27 IPL but did not make the FY23 CTO. //CUI/

| R. | Aystem Type | Exce. Priority | Pricetty | Printholer | Programmed Acti | Project Tille |
|-------|--------------|-------------------|----------|-------------|--------------------|---|
| 2023 | Thurrend | 3 | 29 | s#5P170252 | \$5,780 | RERAR CHILLER METC CENTRAL RUNNT, SOATE |
| 2004 | thernad | | 4 | 085P170387 | \$1.781 | MREAR DESLIGE METCONSTRAL PLANT, BLATE |
| 2024 | the world me | 1.2 | 72 | 1819-120189 | \$2,089 | REPAIR STORM DRAMAIR AT BINZ ENBLEMAN BOP |
| 20024 | Starwaster. | 16. | 146 | WP(1106220 | \$2,581 | REFAILS STORE SAAMAGE CHANNEL, TRUCKINGER/ADALY BD |
| 2004 | Fuela | 22 | | TNNH207537 | \$0,485 | CEMO CANCEY & UST, B1075 |
| 2024 | Netwici | 60 | 122 | 189729048L | 50,481 | CONSTRUCTUTE IT IS AND SITE OUT AND PORTEN YOUT HIS MEDI |
| 2025 | Shermonator | 18 | 87 | (後9/15/080 | \$2,681 | EXTAGE STURM DRAMADE AT BIND END, BHAN BOP |
| 2025 | Manninalar | 28 | 204 | OSSERIE/W | 65.681 | REALD STORU SRAMADE DIAMARS, TRUEWER/ABILITIES |
| 1009 | Mechanical | 60 | 342 | 2897290681 | \$0.481 | CONSTRUCT UTU/T BY AND SITE CLEANUP FOR FRANCULTS CRUTER |
| 2006 | Thernal | 1.0 | 82 | 64915212736 | \$4.5km | ASANA/ASANCE CALLER SYSTEM, ELECT |
| 2026 | Shirewater | 8.2 | 62 | 3857520380 | \$2,681 | REPAIR STORM BRAININGS AT UNIT SMOLEMAN SCP |
| 8505 | Serminator | 16 | 209 | MPL5106220 | \$5,581 | ASTAL & STORM SEA MADE CHANNEL TRUCKICES/NONLY BD |
| 2028 | Mechanical | - 60 | 347 | 785F200881 | \$0,481 | CONSTRUCT UTILITIES AND SITE CLEANUP FOR PSH HOUTH CENTER. |
| 2027 | Thermol | 32 | 49 | MPL3212739 | \$2,089 | 8184 ALM, 8199, ACK CALLER SYSTEM, 85457 |
| 20187 | Marine at an | 1.1 | | 1815-111180 | \$2.681 | ERFAIL ETICEN SEAMANP AT BINS MINI ANALY BOP |
| 2027 | Storevister | 16 | 229 | WPU5106320 | \$2,589 | REPART STORY SEAMABLE CHANNEL TRUCKINGS/HEALT RD |
| 1027 | Aberbanical | 110 | 141 | 189735681 | 50.441 | CONTRACT LOS AND A CONTRACT OF A CONTRACT A CONTRACT OF A |

| 10075 | Recharacar Theread | - 60 | 140 | 2807290681 | 35.740 | CONSTRUCT UTUTIES AND STE COMPLETE NOT PER SOUTH DEUTER |
|-------|-----------------------|------|-----|------------|----------|--|
| 2026 | Starmuster | 12 | 62 | 3267520380 | \$2,081 | AGAMA STORM SAMINAGE AT DING ENOLEMAN BOR |
| 8505 | Servisia | 36 | 209 | MPC5106220 | \$5,581 | ASSAUR STORY SRAMADE CHANNEL TRUCKPERINENLY RD |
| 29928 | Mechanical | - 00 | 147 | 285F200881 | \$0,481 | CONSTRUCT UTILITIES AND SITE CLEANUF FOR PSH HOUTH CENTER. |
| 2027 | Thermol | 17 | 49 | MPL3212739 | \$2,089 | #EFA:8/ #EF6.4C2 CKILIER SYSTEM, #5417 |
| 20187 | Mermitaler | 1.0 | 89 | 1815-12210 | \$2.881 | ERFAIL FROM SRAMLING IT BOUS MAIL AND A SO |
| 2027 | Storewater | 16 | 229 | WPC5106220 | \$2,581 | BEFRE STORY SEAMLAGE CANONICL TRUCKINGS/NEMLY RD |
| 20127 | Aberbanical | #0. | 141 | 1897350881 | 1501.481 | Fredrain's internet and drift friday and drift a register. |

| Fund Type | System Type | DU 2003 (Primary 5ys) | Start Year | Pieish Year | Project Title |
|-----------|-------------|--------------------------|---------------|----------------|---------------|
| ESPC | Electric | 58 | 2016 | 2018 | Phase 1 |
| ESPC | Electric | 50 | 2016 | 2041 | Phase 1 |
| ESPC. | Electric | 50 | 2020 | 2023 | J25A 828 |

List of current Resiliency initiatives being conducted at the base. These might explain a lack of investments being made in certain assets or show special projects already ongoing. (Utilities Specific)

> Note - Example shows Page 2 of the Utilities I-STAMP.

Summary of the "Investment Plan" section outlining purpose, data utilized, what projects are linked to an "At Risk" asset, and other important information

List of current and future projects that have been elevated from the installation. Colors on the right indicate if the project has been approved for funding (orange) or is linked to an "At Risk" asset in the Risks section (blue).

MAJCOM Level STAMPs (M-STAMPS)

What do you have?



AETC

Revised July 2022



Portfolio Overview

This is a Transportation Networks and Airfield Pavements (TNAP) portfolio overview of Condition Indexes (CIs) that were pulled from the Pavement Sustainment Management System (PAVER SMS), Final 9 Building Systems List (BUILDER), RAILER SMS, and the Federal Highway Administration Bridge Reports (FHWA) datasets. Assets are summarized in Figure 1 and were pulled from the 2021 Real Property Asset Database (RPAD). Installation Access Control Points (IACPs) data includes active vehicle barriers and pavements. Support systems includes items like aircraft arresting barriers and navigational aids. Figure 2 compares the Plant Replacement Value (PRV) % by CI between the MAJCOM and the Department of the Air Force (DAF). Figure 3 shows the total PRV and average C for each installation, which is colored based on the Pavement Condition Index (PCI) rating





What do you need?

The following table is a list of facility names that appear as high risk according to centrally available data from th authoritative data sources. High risk assets are defined as assets with the lowest CIs and the highest Mission Dependency Indexes (MDIs). Additionally, Figure 4 shows whether projects for these assets are included in the centralized FSRM program (AFCAMP) and fall into the 2 CTO_FY23 CTO_or_FY23-27 Integrated Priority List (IPL) This data only ncludes centralized funding. This list does not include projects in other programs such as decentralized FSRM, Nor Appropriated Funds, various Working Capital Funds, or funding from mission partners; thus, efforts to invest in high-risk issets on this list may be planned through other avenues. Figure 5 shows the historical and current programmed amount for FY19-22 and future FY23-27 IPLs. Values above the zero line represent In CTO funded projects while values below the zero line represent projects that are either not in CTO or unfunded. While dFSRM is an important part of the holistic investment picture, current data quality concerns lead to the exclusion of dFSRM funds

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| SAMO: 478 | Ab field Pays many | Europet | P.Ander | Summery L/L/NA | 8,215,07 | 60 | 43 | |



What is being done?

igure 6 lists the TNAP projects submitted for centralized FSRM (AFCAMP) funding. While dFSRM and other funding avenues are an important part of the holistic investment picture, current limitations in data collection lead to the exclusion of dFSRM and other funds. Projects in the FY23 CTO are highlighted in orange. Projects listed as high-risk assets in Figure 4 are highlighted in blue if they were submitted in the FY23-27 IPL but did not make the FY23 CTO. //CUI//



Note – Example shows the TNAP M-STAMP.

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Enterprise Level STAMPs (E-STAMPS)



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Note – Example shows the Dorms E-STAMP.



The Process

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2023 JOINT ENGINEER TRAINING CONFERENCE & EXPO

(JETC)

Template Creation

- ~6-month process
- Highly iterative
 - Weekly feedback
- End-User Reviews
 - AMP Managers
 - MAJCOMs
 - Installations
- Internal reviews

(JETC)

- Data quality
- Synchronization

OINT ENGINEER TRAINING



STAMP Generation



JOINT ENGINEER TRAINING ICONFERENCE & EXPO



The Response



Sara Bierman AFIMSC/IZBF

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Delivery and Open Review

Delivery to Installations and MAJCOMs/USSF

- Individual emails describing what the STAMP is and requesting their review
- Open review period to solicit installation level feedback

Installation Feedback

- Substantial engagement, overwhelmingly positive
 - More email responses received back than there are bases
 - Majority of bases expressed how useful STAMP is for discussion with teams
- Main questions/feedback
 - Clarifying data filters
 - Asking to split geographically separated units into individual STAMPs

Revisions and Updates

Only 3 revisions for minor tweaks

JOINT ENGINEER TRAINING

- 0.94% of STAMPs
- 2 to remove projects from list and simplify visual
- 1 to include a new map on TNAP I-STAMP that was unavailable before

"We appreciate the team's efforts to help us aggregate and communicate infrastructure degradation. The attached [I-STAMP] will be helpful when advocating for mission money to aid in infrastructure issues." -Lt Col, Peterson SFB

Further Use



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Sara Bierman, Sara.Bierman@us.af.mil



Zach Reece Zachari.Reece SpecProSvcs.com Zachari.Reece.ctr us.af.mil



THANK YOU



Please take a few minutes to complete a short survey about this session. Your feedback will help us improve future programming for JETC.



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Appendix Slides



Installation Name Facilities: State of the AMP

Portfolio Overview

This document provides a limited review of the Facilities portfolio using existing data sources. It does not constitute a deep analysis of the installation's assets; however, it demonstrates some methods to identify potential areas to examine as well as how some elements compare to the rest of the Department of the Air Force (DAF). This page uses the 2021 Real Property Asset Database (RPAD), 2022 Builder Final 09, and 2022 Builder Final 02 reports to display the health and criticality of the installation's facilities. The data is filtered to "Type B" facilities that contain at least five of the seven key systems required to be assessed by the DAF. Key statistics are noted here for portions of the installation's portfolio. Limitations to the data include possible null or irregularly updated values.

Figure 1 - Installation Overview Figure 2 - Installation vs MAJCOM vs DAF Ang, Age (Veian) PIN Facility Class Facilities: Area (SF) 36 2500 Avg. BCI Appletion 139 5.754 26 \$5,2584 42% erations & Training 211 2.356 24 52,66764 20% -Hospital & Medical 28 1.454 44 507990 *11 78 Maintenance & 2.844 43 S268W 85 108 81 Production: DAR 5489 27 0.034 45 \$11204 211 77 BCI saarch, Gewilopmen 20 0.344 37. \$1144 15 Fests & Euclustice E Unknown 0 - 55 85 0.250 82 191 teacing & Community 21 85164 56 - 85 Allincipies 713 17.0M 49 \$7,000M 180% 81 75 86 - 100 Science (H2) Builder Heat OF Report, 3021 MHD Only Includes Type 4 Southless as defined by AH 43-4005, Anal Property Accounts/Affect as a model and Record

builty enclosed by exterior walk and is sublicite for single or studigite functions that protect homas beings and their properties from direct hand, effects of searcher.

Revised June 2022

Figure 3 – Systems Overview





 Quick insight into which systems have severely degraded components How the System CI compares to the DAF Average (orange and blue diamonds)

Instead 2022 MULTER Final OF Re-Only Indiana Type & Indiana as delived by API 22-8005, And Property Associations, as a model and factore facility and a second sec

name CRY to PRV values encluded (i.e., Tacladed System ON of \$4558 serias Facility PRV of \$5086, 1409s)



expected to be fully utilized.

Sectors 2011 AP62 Only includes Type & Buildies as defined by AH 32-8005, And Property Accountability, as a model and force of Bullity excised by excised as well and a subality for single or cultiple functions that protect homos beings and their properties from direct hand effects of searble.



Condition

Source: 2022 Builder Final (IP Report, 2022 BPAD) Only Industry Type INSUEDING as defined by API 32-8005, Real Property Accounted by, as a marked and floared facility evaluated by exterior walk and is suitable for single or multiple functions that protect human beings and their properties from direct hands effects of somether



97%

Utilization Rates below 85% are potential candidates for consolidation. Many bases are still calculating these rates based on Authorized vs Allocated Space. Few are

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Risks

Figure 4 indicates the condition for each Utility system present at a Site of this installation. Any red highlighted box indicates a system with condition <55 as a potentially "At Risk" system in need of support. Figure 5 identifies if any Site has an "At Risk" or "Unk" system and the total number of IPL requirements for that system between FY23-27. Any "At Risk" system that does not have IPL projects attached to it may highlight a potential gap in need of attention.

| | Figure 4 | - Sy | sten | Con | ditio | on by | Figure 5 - Pro | ojects for At Risk | Systems | | | | | |
|----------|--|----------|------|----------|--------|-------|----------------|--------------------|---------|---------|-------|-----------------|----------------------------------|------------------------------|
| | Install Site Name | Airfield | Dom | Electric | Pueh | (hech | Not Gan | Starn | thermal | Water | Water | System | At Risk (Het Red/Unit System) | # Of FY23-27 IPL Projects |
| | SHOUPS A DYONCE BACK 1701.1 | | | - | | 100 | | 11 | - | | | Airfield Lights | Unk | 0 |
| | JAIDA SAATHOUDTON | 100 | | | L.m. | 100 | - | 52 | * | Ξ. | | Dams | No | 0 |
| | LADILAND AN FORCE BALLING | | | 1 | 12 | are. | | | 74 | 45 | | Electric | Yes | 0 |
| | KELLY FELD ANYON S (TE 1 | 100 | | | | | | 12 | 77 | 10 | | Fuels | Unk | 1 |
| | Diamani Ikanyini Annol | | | 64 | 100 | 178 | | 86. | 8 | × | - | Mechanical | Unk | 1 |
| | Earler BLALIE THURS BR ANNEE BYTE J | - | 28 | - | 2.00 | - | 2 | 14 | 77. | - | - | Natural Gas | Ves | 0 |
| | MEDICAL CENTER ANNELS SITE 1 | - | | 80 | | - | - | 17 | - | | | Charmingham | Link | |
| | LACKARD AR FORCE BALL STU- Z | | | 1,000 | | | 100 | 100 | | April 1 | 1.04 | Sutriiwater | Unix | 2 |
| nter UCI | CANYON LANK RECEILED IN ANNEX SITE 3 | | | 10 | A.C.W. | | - | 600 | | | | Thermal | Unk | 2 |
| C.P | SEGURI ARE FORCE AUXOLIARY FIELD SITE 1 | | | - | Area | | 100 | le-m) | | - | | Wastewater | Yes | 0 |
| 54-05 | REAL P AND POST 2 MASS SITE 1 | | | in. | | | | | - | | 1 | Water | Yes | 0 |

Investment Plan

Figure 6 lists the Utilities projects submitted for centralized FSRM (AFCAMP) funding and Figure 7 lists Current Energy Resilience Projects. While dFSRM and other funding avenues are an important part of the holistic investment picture, current limitations in data collection lead to the exclusion of dFSRM and other funds. Projects in the FY23 CTO are highlighted in orange. Projects listed as high-risk assets in Figure 4 are highlighted in blue if they were submitted in the FY23-27 IPL but did not make the FY23 CTO. //CUI//

Figure 6 - FY23 CTO and Future Requirements //CUI//

| PC. | Aystem Type | Exce Priority | Priority | Project Nuclear | Programmed Aint | Propert Tibe |
|-------|----------------------|------------------|----------|-----------------|--------------------|--|
| 2023 | Thurrnad | 3 | 39 | 1852170252 | \$5,780 | RERIKE CHILLER NETC CENTRAL RUNNT, SLATE |
| 2004 | Thermal | | - 6 | 18MP-1703.62 | \$16.780 | FAFAR DOLLAR MRTC CONTINUE PLANT, REATE |
| 2024 | U.S. Constant of the | 1.7 | 72 | 1817120180 | \$2.081 | REPAR STORY SHAMADE AT DIVE END EVALUATED. |
| 20024 | Starmoister | 16 | 148 | MP(1106220 | \$2,584 | REAR MORU BRANASE CANVIEL TRUCKIER/ADMERTS |
| 2004 | Fuels | 22 | | TVMR207647 | \$0,485 | CEMO CANDEY & UST, B1079 |
| 2024 | Mechanical | 00 | 122 | 1857290481 | \$2,481 | CONSTRUCT UT 5. IT #5 AND 5.IT # CLEANUF FOR F5H HOUTH LENDER- |
| 2025 | Sternmater | 12 | 87 | 1897520380 | \$2,681 | REFARE STORM SAAMADE AT BING ENGLEMANED |
| 2025 | Man similar | 241 | 204 | MPLEASE | \$1.181 | REFAIL BROAD IRLINESE CHANNEL, TRUESPERIARNLE RS |
| 20078 | Recharges | 60 | 345 | 285F290681 | \$0,481 | CONSTRUCT UTS IT BY AND SITE CLEANUP FOR FEW HOUTH CENTER. |
| 2046 | Thernad | 12 | 82 | MPI-5212736 | \$2.56 | ASANG/ASANS CALLER SY/GAR \$523 |
| 2026 | Stormwater | 1.2 | 62 | 3257520180 | \$2,685 | A EPARE STORM BRAININGS AT DIAL CARD, SMAN ECR |
| 2028 | Service | 16 | 208 | MPC5108220 | \$5,544 | ASEAR STORY SEAMAGE OLASHEL, TRUCKPERHENUV RS |
| 2928 | Mechanical | - 60 | 347 | 7857290481 | \$0,481 | CONSTRUCT UTIL/TIES AND SITE CLEANUF FOR PSK HOUTH CENTER: |
| 2027 | Thermol | 1.2 | 45 | MPL3212739 | \$2,185 | AREALAN ARMUNICE CALLER EVERIDAL REALT |
| 2047 | Mermissler | 1.0 | | 1817-120180 | \$2.081 | ERROR FROM SEAMANE AT RIVE BUILBULKULKECE |
| 2027 | Stormwater | 16 | 229 | MPUS106320 | \$2,581 | REFARESTORY SEAMAGE CHANNEL TRUCKPERHENLY RD |
| 2027 | Aberbanical . | 10 | 101 | 1892200881 | ST-ARE | FRANTE OF THE REPORTED AND A TELEVISION OF AN ANY THE REPORTED |

Figure 7 – Current Energy Resilience Projects //CUI//

| Fund Type | System Type | 2022 UCI (Primary Sys) | Start Year | Hielph Year | Project Title |
|-----------|-------------|---------------------------|---------------|----------------|---------------|
| ESPC | Electric | 58 | 2016 | 2018 | Phissa 1 |
| ESPC | Electric. | 30 | 2016 | 2041 | Prices 1 |
| ESPC | Electric | 50 | 2020 | 2023 | ,255A 7.27 |

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2023 JOINT ENGINEER TRAINING CONFERENCE & EXPO



(JETC)

AETC TNAP: State of the AMP Revised July 2022

Portfolio Overview

This is a Transportation Networks and Airfield Pavements (TNAP) portfolio overview of Condition Indexes (CIS) that were pulled from the Pavement Sustainment Management System (PAVER SMS), Final 9 Building Systems List (BULDER), RAILER SMS, and the Federal Highway Administration Bridge Reports (FHWA) datasets. Assets are summarized in Figure 1 and were pulled from the 2021 Real Property Asset Database (RPAD). Installation Access Control Points (IACPs) data includes active vehicle barriers and pavements. Support systems includes items like aircraft arresting barriers and navigational aids. Figure 2 compares the Plant Replacement Value (PRV) % by CI between the MAJCOM and the Department of the Air Force (DAF). Figure 3 shows the total PRV and average CI for each installation, which is colored based on the Pavement Condition Index (PCI) rating.



Figure 3 – Installation Condition and PRV



JOINT ENGINEER TRAINING ICONFERENCE & EXPO Risks

The following table is a list of facility names that appear as high risk according to centrally available data from the authoritative data sources. High risk assets are defined as assets with the lowest Cs and the highest Mission Dependency Indexes (MDIs). Additionally, Figure 4 shows whether projects for these assets are included in the centralized FSRM program (AFCAMP) and fall into the P19-22 CTO, PY23 CTO, or PY23-27 Integrated Priority List (IPL). This data only includes centralized funding. This list does not include projects in other programs such as decentralized FSRM, Non-Appropriated Funds, various Working Capital Funds, or funding from mission partners; thus, efforts to invest in high-risk assets on this list may be planned through other avenues. Figure 5 shows the historical and current programmed amount for P19-22 and future FY23-27 IPLs. Values above the zero line represent In CTO funded projects while values below the zero line represent projects that are either not in CTO or unfunded. While dFSRM is an important part of the holistic investment picture, current data quality concerns lead to the exclusion of dFSRM funds.

| insta factors | 340 AMP | Padliky North | Asset Hause | Branch Name | Distant Con- | M3 | PO | 14-010-04 PU |
|-----------------|--------------------------|--|------------------------------------|---------------------------|--------------|------|------|--------------|
| 4/354/3 | Air Seld Pavo monto | 941310-6106204 | SHERT TIELD TAKENT AND LANDING | Amonth Strip Ruisway | 8,01607 | 5.86 | - M | 48 |
| COLUMNER MY | Jie fald Pavements | T & WPRON | APSON | T1 Parking April | 49924 | 10 | #1 | ALC: NO |
| COLUMNES. 4/1 | Ab Table Parent Internet | \$101 K.NAV | #John | Automy 116/31 | 8.500 | 82 | - 10 | 418 |
| WILLIAM AND AND | Airfahl Pavements | 10/00/07 2025 | # answer | Burnary (P)/55 | 8,000 | 100 | 10 | 435 |
| READWAR | Alle Tadal Fast matrix | arright access to are | AT128 | Apren & ADI Matriananasi | APIDA | 10 | 86 | 60 |
| NOLIDIMAN INT | Bildges/Turrinis | 12- KONTH REACH BREETER OFFIC CRIMINA MUT NOAD | Take to KAV WATARDITLIN | - | | 18 | 20 | 80 |
| HOLEMAN AT | anterestaria | TO - INFERT NEW BRIDGE OFF CAMERA INC INVAL | Toro to examination | - | - | 18 | | 10 (MR.) |
| IS NOT ANTON | i iAZP | MISCHARIEN, BEDARTS BARARCADES | NROMARCA, DOL NOT SAMECADIS. | 14 | - | 186 | 10 | . 60 |
| 201089-081290 | I MOF | MICHARIDA INCOMENTATION OF MICHAEL | RECEMBICAL SECURITY ENVIRONCES | | - | 181 | | 82 |
| OF SHIE ANT OWN | I IND | MICHARIDAL SECURITY SHERICALIS | MICAMPERISTICS INTO INVESTIGATION | - | | 100 | | . 91 |
| IS SHKANTOW | 6ADP | AND MANUFAL REDURING BARRING AD ES | INFORMATION STOLMTY BATTROADES | - | - | 100 | SR. | 80 |
| 18.564 A&7240 | SADY . | ATTOMATION, RECORDS GRADUES | MICHANICH, STOL BY SHREADER. | | - | 186 | | 80 |
| DOM: ANTONI | iALP. | MUDARIOA SELVEN SRIEKALD | INTO AN IOAL SECURITY SHERICALISES | - | - | .18 | 81 | |
| IS SHE ARTS IN | 64629 | MICINAMICAL BELLINY DAILBOARDS | INDOMINICAL SEELINTY SMORCAELES | - | - | 104 | N). | 50 |
| 19 Sell ANTONIO | 2 Alefteld Tays merce. | OVERAL AVEO | OVERAL PERSON | Deserver Parriety 34U/818 | DISTRUCT | 62 | | 90 |
| 10-149 481241 | Airfield Pave much | MRCS. | 67028 | Torren At April | ANDS | | | 80 |
| 0.545 4975 9 | AirSeld Newsmarth | 4/104 | A7004 | ANG April | APRIL | | 0 | |
| 15 545 ANTONI | 5 55CP | MICHANIZAL SECURITY BAMACAEAS | AND MARKALERIA STRATEGY BARRICALES | ~ | - | 11 | 38 | 62 |
| IS SHE ARTON | I INDE | MICHANICAL INCOMES | INSCREMENT SHOULD BE READED | ~ | - | 11. | 10 | 90 |
| 15 SAM ANTON: | hitters/fames | Kiko ékezet. | Turts In #34/D04/(S1834) | - | - | iñ . | 40 | 92 |
| UNITED AND | Sinfadd Pavements | BUILDARY ADMINGT CONTURING WARKY | Ration | Names and NGC | 8.000 | 186 | | S VII |
| 2,018,019 | Support Systems | ADVT AREAT SYS | AINCENT AMARCHIE STEERE | - | - | 100 | | 82 |
| INVESTIGATE AND | No Test E Preventerantes | CHERN, NUMBER | UNDATUR, MAGO | Overtua Ruinway 0000'LBF | UNLINE | 100 | | 100 |
| 14171418-478 | Air failt Privs ments | CHEROL/NUMBER | ONTREUX, MARD | Overtue (58 158,50). | ONDIRUM | 88 | 47 | 40 |
| GROWING AN | Alt Teld Type restricts | EVERAL IN PROFES | OVERAUX, MARD | Diversion: NW 1802/030 | Dilliter.ht | 54 | 50 | 916 |
| SHEFTWIRE-AFE | Bala Favoranta | HON PREMI, HENC | NERCE BURNESSERVED. | PUNCIE 107.1540 | PROBATION | 15 | | 82 |
| VANICE ATB | AirSeld Presments | CHERNIN, MANUEL | OVERSUS, MARCO | Overson Rumman (2020)56 | OUTIERS | 194 | | |
| VALUES AFR | Air-faeld: Parys macros | CHEBASINAN | #Jonation | Rummer \$75/95C | 8.0%W | 186 | 61 | - V14 |
| SANCE AVE | Although Pays mentals | APRC N | | Main Parking April 1 | AND | 3.88 | 87 | 2 198 |
| WANCE A/B | Airfield Peventents | TAUNNEY G | TARKS! | Taxway G | 30049 | R | 6 | |
| \$40000.479 | Air field Pays manage | Russent | Putrosat | Survey L/L/NA | RAINW | 82 | - 63 | 85 |





Investment Plan

Figure 6 lists the TNAP projects submitted for centralized FSRM (AFCAMP) funding. While dFSRM and other funding avenues are an important part of the holistic investment picture, current limitations in data collection lead to the exclusion of dFSRM and other funds. Projects in the FY23 CTO are highlighted in orange. Projects listed as high-risk assets in Figure 4 are highlighted in blue if they were submitted in the FY23-271 JPL but did not make the FY23 CTO. //CUI//

| Installation | NAME OF TAXABLE AND ADDRESS OF | Read Printing | | ANT A | Province and Aust | Builet Tide |
|------------------|--------------------------------|--|-----------|-------|-------------------|--|
| Arristen . | 24 | A service of the serv | | 100 | Ct. land | Property and the second |
| | 144 | | | | 01.004 | |
| 10100.000 | 201 | | 28 | | 20.000 | BETREN BROE NUREN, PRIVAL & |
| ALC: Nº | 215 | <i>n</i> | | 5.00 | 50.764 | REPAIR REPAIRS TAY TO CONCEPTING FOR RE-48 LOKE CONCEPTINGED |
| AUG540 | 111 | 10 | 10 | 51 | 32.04 | RUNCE BALL PAREND 1213-1911 |
| COLUMBES ARE | 258 | 16 | 49 | 64 | 512.DM | ADNOL RUDUKIE HELD RUMANE MAINWAY |
| SOCRATION ARE | 201 | 1 | 32 | 63 | \$2.0M | REINER BADE REACE, INULTI |
| 6008411.0NF AFB | 290 | 21 | 67 | 67 | \$2.1M | REINIR BOADS & PRAENS LOTS, MULTI |
| EN WOLDTODD | 297 | 20 | 76 | - 65 | \$3.2M | REINIR REARINEY BLVD, FAC #50205 |
| HOLIDMAN #75 | 34 | 2 | 35 | 300 | 58.6M | REINIR ASPEAUT SURFACE AND CONCRETE TOUGHDOWNS, RAY 83725 |
| HOLIDMAN #75 | 152 | 18 | 0 | 72 | \$1.8M | CONSTRUCT MARSIALLING AREA, EDR C |
| HOLIDAAN #75 | 153 | 25 | 50 | 63 | S4.4M | REINER REPRICE REACE, HORT IL ALEA. |
| HOLIDMAN #75 | 194 | 26 | .47 | 18 | \$4.0M | REINIR ASPRIATI PEACH, WEIT AREA. |
| HOLIDMAN KPB | 225 | 12 | 68 | 500 | \$14.3M | REINIA ASPEKIT BURACE, BWY 04/23 |
| HOLIDMAN #78 | 306 | 27 | 88 | 18 | \$3.0M | BEINA FBEZ STREET WARMENT AND AUGMMENT |
| HOLIDMAN 676 | - | , | Ð | 72 | \$1.6M | CONTINUET MARCHAULINE MER, EDR 3 |
| IS SHIT ANTONIO | 30 | 4 | 61 | 58 | SIC DV | REPORT BANDOLINE WITT FLOWARY DRAININGS, 821106 |
| ILLAN ANTONO | 30 | 4 | 61 | 59 | S1.2M | EEN-REINER KANDOLINE WEST KLINIAAR DRAIMASE, BEESSE |
| ILIAN ANTONO | 27 | 5 | 50 | 95 | 56.0M | BURNER BAD LAND/NOUTH TRAVARY DEAMAGE, BILLIN, BILLIN, BILLIN, |
| IS SAY ANTONO | 37 | 5 | 50 | 95 | \$3.484 | DIN-REPAIR AND LANYSOUTH TROINING DRAMAGE, BELSES, BELSES, BELSES, |
| 10 SHILANT2ND | 162 | | 0 | 500 | \$3.6M | REPAIR AVE AT LINESET GATE, ROLES |
| 10 Sam ANTO NO. | 162 | 10 | 1 | 61 | \$6.764 | RUMOR MEMORY ADVISED DOUBLIN |
| IS SHE ANTONIC | 162 | 10 | 1 | 61 | \$6.2M | BURNE BULLE BURNARY CRACKED SLARS |
| IT SAY ANTING | 182 | 10 | - | 62 | (2.34 | REAL AND A DEMANTER OF |
| IL SAN ANTING | 117 | 11 | | 63 | 62.334 | REPORTED AND A DOWN OF THE OWNER |
| 10.500 40.7240 | 117 | 14 | 11 | | 11.164 | ADAMA ADATA ADATA ADATA ADATA ADATA |
| 10 544 48 19 80 | 135 | 14 | 81. 41 | | 51.54 | REMOVE OUD FUELFIER TO EXPERIENCE |
| 10.544781240 | 143 | 15 | - EL | 76 | 52.84 | REDOKCANALING NELVON OF HE GE |
| 15 545 741240 | 229 | 18 | 80 | 92 | 58.004 | RETRIE ARECOUT PARENCE APROPARE \$10 |
| IS SAN ANTONIO | | 50 | D | 0 | 93.9M | MAKE US USHT UNDERED. |
| 4110.0X.4/8 | 41 | , | 55 | 92 | SLOW | REINIR M780K PHASE 2 |
| R01.01.478 | 133 | 11 | \$7 | 500 | \$2.7M | REPORT BUILDARY |
| distant. | 287 | 18 | 51 | 10 | S1.3M | BAAL WITEL RORD FEINUR PRABE 5 |
| LK,RHUS AFB | 40 | 2 | 6 | 200 | SR.SM | REPORT PRODUCT APACH |
| LK, KHUN AFB | 40 | 2 | 6 | 500 | S1.0M | ERS RETNUS MARCHE APRICAL |
| LAUXIMUN APR | 73 | 1 | 36 | 500 | Sk2M | REPORT DIVITE REMAIN, LECOLD |
| LAUKINUN A/B | 171 | 8 | 45 | - 10 | \$5.8M | REAVE DEVISION REAVANT, LIN, 2019, AND OVERHEADS |
| LAUK/HUS A/B | 182 | 12 | 64 | 200 | \$11.8M | RDINR APROX ROWS E, E, S, AND H |
| LK, KHUN AFB | 1.63 | 13 | 54 | 200 | \$5.1M | REINIR KRIBON ROWS 1 KNO 2 |
| LAUX/HUN A/B | 184 | 14 | 64 | 300 | \$11.7M | REINIR KARDIN ROWS A, B, C. AND D |
| LAUCHUN A/B | 195 | 16 | 40 | 63 | \$2.0M | REINIR KEPRINET FIRST ANKA, FROM 1953 TO 8306 |
| LAUCHUS A/S | 155 | 17 | 27 | 13 | \$2.0M | APR SPORTORD RIVE LIGHT ROAD |
| LAUCHUN AFB | 221 | 18 | 34 | 63 | \$2.5M | REPAIR BARRES ANT |
| LAUCHUN AFB | 222 | 23 | 1 | 63 | \$3.6M | CONSTRUCT INTERSECTION, LAUCHUM DR |
| LAUCHUS A/B | 283 | 21 | 68 | 500 | \$13.7M | REINIT INTEL APRON BOWS OD AND EE |
| LAUCHUR A/B | 275 | 34 | 1 | 85 | \$3.2M | CONSTRUCT AGRESPICE GROUND COLUMNENT IAGEI MARCHG MIEA, BESK |
| LAUCHUS A/B | 284 | 42 | 1 | 85 | \$3.5M | CONTINUET TO POV MARINE EXMANDEN |
| ULITAR . | 1.35 | 11 | D | 500 | \$4.584 | INTEL TUTUE MARTI/ME IS |
| MARATEL APR | 216 | 11 | 1 | 54 | \$5.544 | REPR ARVELD PROMINENTS |
| INCOME AND | .50 | 1 | 17 | 81 | \$1.04 | REPART DATABASE ALL AND TRACKS. |
| INCOME AND | | - | 64 | 85 | \$15.8M | BURNER & CORDERLET INCLUSION, MAY LICCUSE |
| THE PROPERTY AND | 162 | 16 | 40 | | C3.004 | BURNE AND MARKED OF BRIDEN TO AND A |
| Contraction and | 168 | 10 | 33 | | 62.004 | BORNE AND DESCRIPTION OF A DESCRIPTION OF A |
| Contraction and | 100 | 19 | | | 62.044 | Andrew with the state of the st |
| THE PARTY AND | 159 | 20 | 31 | | 52.04 | NUMBER AND AND THE AND |
| THE PARTY AND | 205 | 24 | 24 | 67 | \$5.6M | ACANCE INVESTIGATE & DEVELOPER OF IN SHELTER |
| SHOWING ARE | 206 | 20 | 51. | 63 | 55.714 | ACPLACE RSG ROAD WEST OF RAY LSC |
| STOPPLE ARE | 223 | n | 51. | 63 | 52.6M | ACTIVAL MARKAR AZ FACIM 157 AVE 30 571 AVE |
| SHIPPARE ARE | 238 | 18 | 22 | 64 | \$2.7M | ADAR WE FA LITH ARE |
| STOPPAID ARE | 242 | 26 | 52 | 63 | \$3.3M | REPLACE ISSUEDING WORTH OF INVY 158 |
| SHIPPARD APR | 283 | 50 | 54 | 55 | 54.5M | REPLACE BIS 1043 WHIT OF BWY 15. |
| INTERNAL APR | - | | D | 0 | \$3.8M | BEMOLEN TWP ALPHA (SOUTH), REPLACE SECNADE |
| NAMES AND | 3 | 1 | Ð | 59 | \$78.0M | BEING CENTER ALWARD, NIT205 |
| | | | | | | |

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2023 JOINT ENGINEER TRAINING CONFERENCE & EXPO



\$28

\$18

508

