



SAN MANUEL AIRPORT

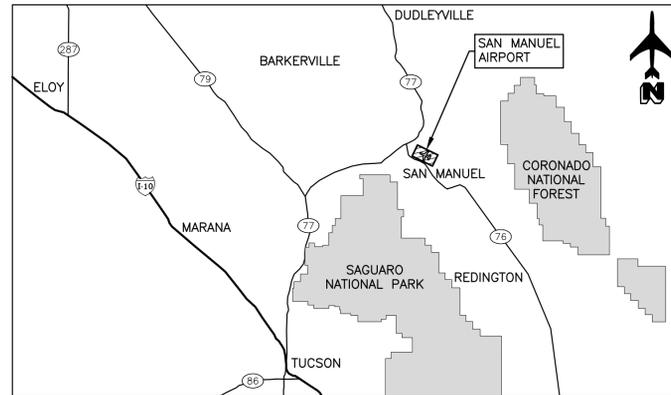
PINAL COUNTY, ARIZONA

AIRPORT APRON RECONSTRUCTION & SHADE PORTS

ADOT PROJECT NO. E4S1V (APRON RECONSTRUCTION ONLY)

AS BUILT DATE

Dibble Engineering
 7500 N. Dreamy Draw Drive
 Suite 200
 Phoenix, AZ 85020
 P 602.957.1155



VICINITY MAP
NTS

COORDINATION LIST

ORGANIZATION	CONTACT	PHONE
DESIGN		
ENGINEER (CIVIL)	RYAN TONER	602.957.1155
ENGINEER (ELECTRICAL)	CATHERINE ALCORN	480.816.5541
SURVEYOR	STEVE DURYEA	602.957.1155

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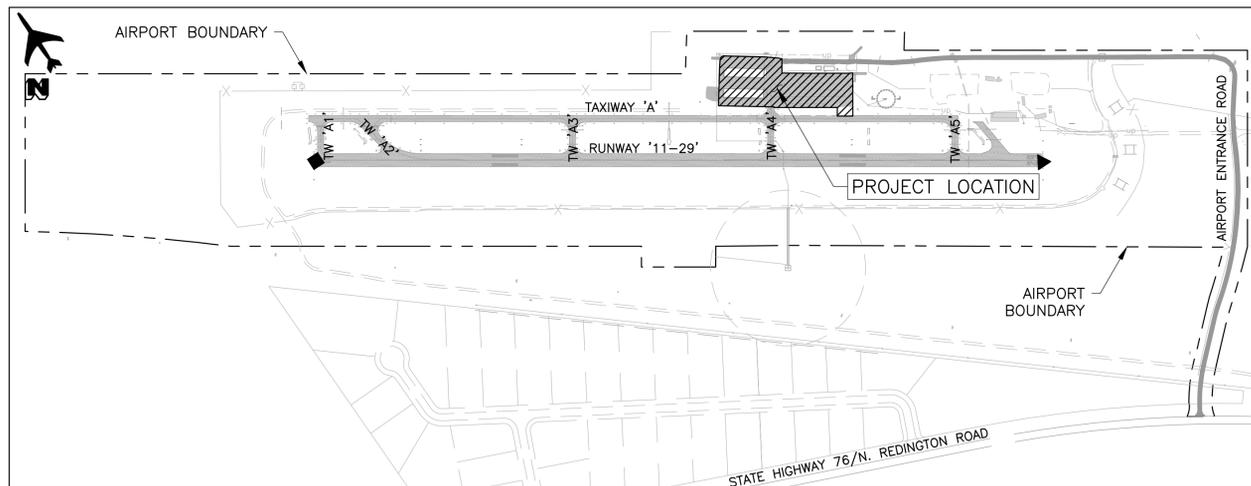
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PROJECT BENCHMARK

- ▲ PRIMARY BENCHMARK:
POINT NO: 3273
FOUND 3" ALUMINUM CAP AT THE
SOUTHEAST END OF RUNWAY
OBSERVED ELEV=3250.02
- PROJECT BENCHMARK:
POINT NO: 3275
FOUND 3" ALUMINUM CAP AT THE
NORTHWEST END OF RUNWAY
OBSERVED ELEV=3271.43

AIRPORT MANAGER

JIM PETTY 520.866.6545



LOCATION MAP
NTS

REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORTS		
COVER SHEET		
DRN: DSO	DES: MJB	CK: RWT
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14
SCALE:	DRAWING	SHEET
	G1.0	1 OF 24



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GENERAL NOTES

- ALL CONSTRUCTION TO CONFORM TO THE LATEST REVISIONS OF THE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) STANDARD SPECIFICATIONS AND DETAILS UNLESS SPECIFICALLY MODIFIED ON THE PLANS. IN CONJUNCTION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA) ADVISORY CIRCULARS (AC) AS IDENTIFIED AND SPECIFIED WITHIN THE PLANS AND CONTRACT DOCUMENTS.
- IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, AT HIS OWN EXPENSE, SUCH PERMITS AS ARE REQUIRED FROM THE APPROPRIATE AGENCIES.
- ANY WORK PERFORMED WITHOUT THE KNOWLEDGE AND APPROVAL OF THE ENGINEER AND/OR AIRPORT AND ALL WORK MATERIALS NOT IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S SOLE EXPENSE.
- NO JOB WILL BE CONSIDERED SUBSTANTIALLY OR FINALLY COMPLETE UNTIL ALL OFFSITE CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEEP CLEAN OF ALL DIRT AND DEBRIS, AS WELL AS ALL PAVEMENT WITHIN THE AIR OPERATIONS AREA (AOA).
- THE CONTRACTOR SHALL KEEP SUITABLE EQUIPMENT ON HAND AT THE JOBSITE FOR MAINTENANCE OF DUST CONTROL AND SHALL CONTROL DUST AS DIRECTED BY THE APPROPRIATE AGENCIES, AS WELL AS ANY FOREIGN OBJECT DEBRIS (FOD) WITH THE AOA (I.E. SWEEPER).
- A THOROUGH ATTEMPT HAS BEEN MADE TO SHOW THE LOCATION OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA. THE ENGINEER AND THE AIRPORT WILL NOT GUARANTEE ANY LOCATIONS OR ELEVATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR MAKING A COMPLETE AND ACCURATE ON-SITE DETERMINATION OF THE LOCATIONS OF ALL UTILITIES, STRUCTURES, AND FIELD CONDITIONS WHICH MAY AFFECT THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION AND SHALL POTHOLE EXISTING UNDERGROUND UTILITIES PRIOR TO TRENCHING IN THEIR VICINITY.
- THE CONTRACTOR IS REQUIRED TO CONTACT BLUE STAKE (1-800-STAKE IT) A MINIMUM OF TWO WORKING DAYS (48 HOURS) PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE APPROPRIATE UTILITY COMPANIES SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION.
- ALL QUANTITIES SHOWN ON PLANS ARE APPROXIMATE, ARE NOT VERIFIED BY THE AIRPORT, AND ARE FURNISHED SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THEY DO NOT NECESSARILY CORRESPOND TO BID SCHEDULE ITEMS. PAYMENT WILL BE BASED ON BID SCHEDULE ITEMS. THE CONTRACTOR SHALL NOT BE RELIEVED OF HIS RESPONSIBILITY FOR INDEPENDENTLY ESTIMATING WORK QUANTITIES PRIOR TO BIDDING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER FOR APPROVAL, TRAFFIC CONTROL PLANS WHICH SHALL BE MADE A PART OF THE PLAN REVIEW REQUEST. THE CONTRACTOR SHALL DETERMINE THE EXACT SIGNING/TRAFFIC CONTROL DEVICES NECESSARY AND ALL TRAFFIC CONTROL WORK SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS THEREOF. NO STREET IS TO BE CLOSED, RESTRICTED, OR CONSTRUCTED UPON UNTIL A TRAFFIC PLAN IS PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AND AIRPORT 1 WEEK IN ADVANCE FOR APPROVAL. APPROPRIATE EMERGENCY AGENCIES SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY CLOSING OF STREETS.
- CONTRACTOR SHALL WARRANT ALL WORK FOR A MINIMUM OF A ONE YEAR PERIOD, UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS.

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF MAG STANDARDS AND SPECIFICATIONS AS WELL AS ALL OTHER FEDERAL STANDARDS AND SPECIFICATIONS NECESSARY TO COMPLETELY AND ACCURATELY INTERPRET THE PLANS AND CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL GUARD AGAINST DAMAGE DURING CONSTRUCTION TO EXISTING PROPERTIES AND IMPROVEMENTS. ANY ITEMS DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN KIND OR BETTER AT CONTRACTOR'S SOLE EXPENSE.
- REMOVAL OF STRUCTURES AND OBSTRUCTIONS AS NECESSARY TO COMPLETE THE WORK, OTHER THAN SPECIFICALLY SCHEDULED IN THE BID, IS INCIDENTAL TO THE CONTRACT. NO SEPARATE MEASUREMENT OF OR PAYMENT FOR UNSCHEDULED REMOVAL ITEMS WILL BE MADE.
- ALL CONSTRUCTION STAKING SHALL BE BY THE CONTRACTOR WITH CONTROL PROVIDED BY THE DESIGN ENGINEER WHO STAMPED THE PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEYING AND LAYOUT. ANY QUESTIONS SHALL BE ADDRESSED TO THE DESIGN ENGINEER WHO STAMPED THE PLANS.
- THE AIRPORT MAY ORDER ANY OR ALL WORKMANSHIP AND MATERIALS TO BE TESTED ACCORDING TO APPLICABLE STANDARDS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REWORK AND/OR REMOVAL AND REPLACEMENT OF ALL MATERIALS AND/OR WORKMANSHIP REPRESENTED BY A FAILING MATERIAL/TEST.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS OF QUALITY CONTROL TESTING AND INSPECTION REQUIRED INCLUDING NIGHT AND ON WEEKENDS, (IF NECESSARY).
- APPROVAL OF A PORTION OF THE WORK IN PROGRESS DOES NOT GUARANTEE ITS SUBSTANTIAL OR FINAL ACCEPTANCE. TESTING AND EVALUATION MAY CONTINUE UNTIL WRITTEN FINAL ACCEPTANCE OF A COMPLETE AND WORKABLE UNIT.
- THE AIRPORT MAY SUSPEND THE WORK BY WRITTEN NOTICE WHEN, IN ITS JUDGEMENT, PROGRESS IS UNSATISFACTORY, WORK BEING DONE IS UNAUTHORIZED OR DEFECTIVE, WEATHER CONDITIONS ARE UNSUITABLE, OR THERE IS A DANGER TO THE PUBLIC HEALTH OR SAFETY.
- STREET AND TRAFFIC SIGNS WILL BE RELOCATED BY THE CONTRACTOR, IF NECESSARY, AT THE DIRECTION OF THE AIRPORT MANAGER.
- CLEARING AND GRUBBING SHALL BE CONSIDERED INCIDENTAL TO THE WORK UNLESS SPECIFIC AREAS REQUIRING SIGNIFICANT CLEARING AND GRUBBING ARE CALLED OUT IN THE PLANS AND SCHEDULED IN THE BID. ALL EXCAVATION, EMBANKMENTS, AND FILLS SHALL FIRST BE CLEARED OF STUMPS, TRASH, WEEDS, RUBBISH, AND LOOSE BOULDERS WHICH SHALL BE REMOVED AND DISPOSED OF. THE CONTRACTOR MUST SATISFY HIMSELF REGARDING THE CHARACTER AND AMOUNT OF LOAM, CLAY, SAND, QUICKSAND, HARDPAN, GRAVEL, ROCK, WATER, AND ALL OTHER MATERIAL TO BE ENCOUNTERED AND WORK TO BE PERFORMED.
- ALL EXISTING FENCES DAMAGED OR REMOVED DURING CONSTRUCTION WILL BE REPLACED IN KIND. CONTRACTOR SHALL EXTEND FENCE REPLACEMENT TO THE CLOSEST UPRIGHT SUPPORT NECESSARY FOR STABILITY.
- CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING, AND WILL PROVIDE ALL QUALITY CONTROL TESTING RESULTS TO THE ENGINEER WITHIN 48 HOURS OF RECEIPT BY THE CONTRACTOR.

ABBREVIATIONS

ABC	AGGREGATE BASE COURSE	G	GROUND	PVC PIPE	POLYVINYL CHLORIDE PIPE
AC	ASPHALT CONCRETE	GB	GRADE BREAK	RCP	REINFORCED CONCRETE PIPE
BCF	BRASS CAP FLUSH	GR	GRATE	RGRCP	RUBBER GASKETED REINFORCED CONCRETE PIPE
BLDG	BUILDING	IE, INV	INVERT ELEVATION	ROFA	RUNWAY OBJECT FREE AREA
BM	BENCHMARK	LCA	LOCALIZER CRITICAL AREA	RSA	RUNWAY SAFETY AREA
CL	CLASS	MAG	MARICOPA ASSOCIATION OF GOVERNMENTS	RW	RUNWAY
☉	CENTERLINE	NPI	NON-PAY ITEM	STD DET	STANDARD DETAIL
CONT ITEM	CONTINGENT ITEM	OC	ON CENTER	SD	STORM DRAIN
CONST	CONSTRUCTION	OFA	OBJECT FREE AREA	SS	SANITARY SEWER
CP	CONTROL POINT	OFZ	OBJECT FREE ZONE	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
CMP	CORRUGATED METAL PIPE	PCCP	PORTLAND CEMENT CONCRETE PAVEMENT	TBM	TEMPORARY BENCHMARK
DIP	DUCTILE IRON PIPE	PC	POINT OF CURVATURE	TOFA	TAXIWAY OBJECT FREE AREA
EOP	EDGE OF PAVEMENT	PRC	POINT OF REVERSE CURVATURE	TSA	TAXIWAY SAFETY AREA
EX, EXIST	EXISTING	PT	POINT OF TANGENCY	TW	TAXIWAY
FAA	FEDERAL AVIATION ADMINISTRATION	PUE	PUBLIC UTILITY EASEMENT	TYP	TYPICAL
FG	FINISHED GRADE			UNO	UNLESS NOTED OTHERWISE
FL	FLOWLINE				

LEGEND

- PRIMARY BENCHMARK
- PROJECT BENCHMARK
- EXISTING CATCH BASIN
- EXISTING TAXIWAY LIGHT
- EXISTING SIGN
- EXISTING VALVE
- EXISTING FIRE HYDRANT
- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING PULL BOX/VAULT
- EXISTING BEACON
- EXISTING WIND CONE
- EXISTING RIGHT OF WAY
- AIRPORT PROPERTY LINE
- PARCEL LINE
- NEW STORM DRAIN
- EXISTING STORM DRAIN
- NEW ELECTRICAL
- EXISTING ELECTRICAL
- EXISTING FENCE
- NEW CHAIN LINK FENCE
- NEW CATCH BASIN
- FLOW ARROW
- SOIL BORING LOCATION
- CENTER LINE
- GRADE BREAK
- PROPOSED CONTOURS
- EXISTING CONTOURS
- EXISTING EDGE LIGHT
- AC PAVEMENT REMOVAL (BASE BID)
- AC PAVEMENT REMOVAL (ADDITIVE ALTERNATE NO. 1)
- EXISTING AC PAVEMENT
- NEW AC PAVEMENT
- NEW TEMPORARY AC PAVEMENT
- PROPOSED ELEVATION
- LOW-PROFILE BARRICADES
- FLOW LINE
- EDGE REFLECTOR

100% ESTIMATED QUANTITIES - BASE BID (Schedule I)

LINE No.	ITEM No.	DESCRIPTION	APPROX. QTY.	UNIT	AS-BUILT QTY.
CIVIL					
1	P-100-3.1	Contractor's Quality Control (Base Bid)	1	LS	
2	P-101-4.1	Mobilization (Base Bid)	1	LS	
3	P-104-6.1	Saw Cut Existing AC Pavement (Full Depth)	780	LF	
4	P-104-6.2	Removal of Existing AC Pavement (Full Depth)	13,730	SY	
5	P-151-5.1	Removal of Existing Tie-Downs	60	EA	
6	P-151-5.2	Removal of Existing Chain-Link Fence	68	LF	
7	P-152-4.1	Subgrade Preparation (8-Inch Depth)	14,908	SY	
8	P-152-4.2	Unclassified Excavation	2,970	CY	
9	P-152-4.3	Over-Excavation and Replacement of Unsuitable Materials, Backfill & Compaction (Contingent Item)	497	CY	
10	P-208-5.1	Crushed Aggregate Base Course (MAG)	2,485	CY	
11	P-405-7.1	Bituminous Surface Course (MAG 3/4-Inch)	2,517	TON	
12	P-620-5.1	Airfield Pavement Markings (Yellow)	709	SF	
13	P-620-5.2	Airfield Pavement Markings (White)	111	SF	
14	P-620-5.3	Airfield Pavement Markings (Red)	185	SF	
15	D-701-7.1	12-Inch R.G.R.C.P. Class V Storm Drain Pipe w/ Concrete Encasement Per MAG Std Det 404-3	105	LF	
16	D-701-7.2	4-Inch PVC Pipe	190	LF	
17	D-751-5.1	Catch Basin per Detail 4 on Sheet G1.6	1	EA	
18	SP 34-1	Underground Utility Allowance (Base Bid)	1	ALLOW	
19	SP 48-1	Airfield Safety and Security	1	LS	
20	SP 49-1	SWPPP/Erosion Control (Base Bid)	1	LS	
21	SP 51-1	Aircraft Tie-Down Anchor	21	EA	
22	SP 52-1	Trench Drain	75	LF	
23	SP 54-1	Rip Rap with Filter Fabric	40	CY	
24	SP 55-1	Detector Loop	1	EA	
25	SP 56-1	Landscape Rock	56	SY	
26	SP 57-1	Concrete Ribbon Curb	75	LF	
27	SP 58-1	Chain Link Fence per MAG Std Det 160 (MOD)	63	LF	
28	U-200-5.1	Location of Underground Utilities (Allowance)	1	ALLOW	

ELECTRICAL

29	16000-5.1	Fuel Area Canopy	1	LS	
30	16000-5.2	Fuel Area Lighting and Receptacle Circuit	1	LS	
31	16141-4.1	20A, GFCI WP Duplex Receptacle Hazardous Rated	1	EA	
32	16170-4.1	Fuel Area Canopy Grounding	1	LS	
33	16500-5.1	Lighting Fixture Schedule Item "C"	1	EA	
34	16904-5.1	New Size 1, 2 Module Unit Airfield Guidance Sign Installed	1	EA	
35	16904-5.2	New Size 1, 3 Module Unit Airfield Guidance Sign Installed	2	EA	
36	16905-4.1	New L-853 Elevated Retroreflective Taxiway Edge Markers	5	EA	
37	16905-4.2	Relocate Existing L-853 Elevated Retroreflective Taxiway Edge Markers	8	EA	

100% ESTIMATED QUANTITIES - ADD ALT No. 1 (Schedule II)

LINE No.	ITEM No.	DESCRIPTION	APPROX. QTY.	UNIT	AS-BUILT QTY.
CIVIL					
39	P-100-3.2	Contractor's Quality Control (Add Alt No. 1)	1	LS	
40	P-104-6.1	Saw Cut Existing AC Pavement (Full Depth)	27	LF	
41	P-104-6.2	Removal of Existing AC Pavement (Full Depth)	3,707	SY	
42	P-152-4.1	Subgrade Preparation (8-Inch Depth)	3,695	SY	
43	P-152-4.2	Unclassified Excavation	770	CY	
44	P-152-4.3	Over-Excavation and Replacement of Unsuitable Materials, Backfill & Compaction (Contingent Item)	124	CY	
45	P-208-5.1	Crushed Aggregate Base Course (MAG)	616	CY	
46	P-405-7.1	Bituminous Surface Course (MAG 3/4-Inch)	624	TON	
47	SP 34-2	Underground Utility Allowance (Add Alt No. 1)	1	ALLOW	
48	SP 49-2	SWPPP/Erosion Control (Add Alt No. 1)	1	LS	
49	U-200-5.1	Location of Underground Utilities (Allowance)	1	ALLOW	

AS BUILT DATE

Dibble Engineering

7500 N. Dreamy Draw Drive
Suite 200
Phoenix, AZ 85020
P 602.957.1155

100% ESTIMATED QUANTITIES - ADD ALT No. 2 (Schedule III)

LINE No.	ITEM No.	DESCRIPTION	APPROX. QTY.	UNIT	AS-BUILT QTY.
CIVIL					
51	P-100-3.3	Contractor's Quality Control (Add Alt No. 2)	1	LS	
52	P-101-4.2	Mobilization (Add Alt No. 2)	1	LS	
53	P-620-5.2	Airfield Pavement Markings (White)	80	SF	
54	SP 51-1	Aircraft Tie-Down Anchor	8	EA	
55	SP 53-1	Aircraft Shade Port Structure	1	LS	
ELECTRICAL					
56	16000-5.3	Shade Port Lighting and Receptacle Circuits	1	LS	
57	16141-4.2	20A, GFCI WP Duplex Receptacle	2	EA	
58	16170-4.2	Shade Port Grounding	1	LS	
59	16500-5.2	Lighting Fixture Schedule Item "A"	8	EA	
60	16500-5.3	Lighting Fixture Schedule Item "B"	8	EA	

REVISION	BY	DATE
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SAN MANUEL AIRPORT

DIBBLE PROJECT NO 101133.04

AIRPORT APRON RECONSTRUCTION & SHADE PORTS

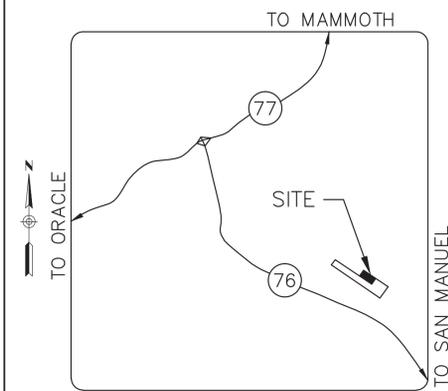
LEGEND, NOTES, ABBREVIATIONS & QUANTITIES



DRN: DSO	DES: MJB	CK: RWT	DRAWING	SHEET
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	G1.1	2 OF 24
SCALE:				

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VICINITY MAP
SAN MANUEL AIRPORT
SECTION 19
T9S, R17E
NTS

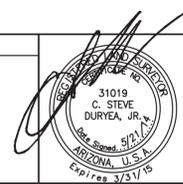
LEGEND

●	FOUND MONUMENT AS NOTED	⊕	SIGN
△	SET CONTROL POINT AS NOTED	○	BOLLARD
▲	PRIMARY BENCHMARK	⊕	SINGLE MAST ARM LIGHTPOLE
■	PROJECT BENCHMARK	⊕	ELECTRICAL PULLBOX
—	BUILDING LINE	⊕	ELECTRICAL BOX
—	FENCE	⊕	AREA DRAIN
—	SLOTTED DRAIN	⊕	DRY WELL
FND-BCF	FOUND BRASS CAP FLUSH	—SD—	STORM DRAIN
FND-MAG	FOUND MAG NAIL	CONCRETE	CONCRETE
FND-RB	FOUND REBAR	ASPHALT	ASPHALT
FND-PK	FOUND PK NAIL	RIPRAP	RIPRAP
SET-MAG	SET MAG NAIL	X48.42	SPOT ELEVATION (ADD 3200')



AS BUILT DATE

Dibble Engineering
7500 N. Dreamy Draw Drive
Suite 200
Phoenix, AZ 85020
P 602.957.1155



SURVEYOR'S NOTES

- COORDINATES WERE VERIFIED IN THE FIELD USING REAL TIME KINEMATIC GPS OBSERVATIONS RELATIVE TO NGS PUBLISHED CONTROL POINTS.
- SURVEYED DURING THE MONTH OF OCTOBER, 2013.
- CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROLS IN THE FIELD PRIOR TO CONSTRUCTION.
- PROJECT META DATA

HORIZONTAL:
NAD83 ARIZONA CENTRAL ZONE (0202)
UNITS: COORDINATES, DISTANCES AND ELEVATIONS ARE SHOWN IN US SURVEY FEET.

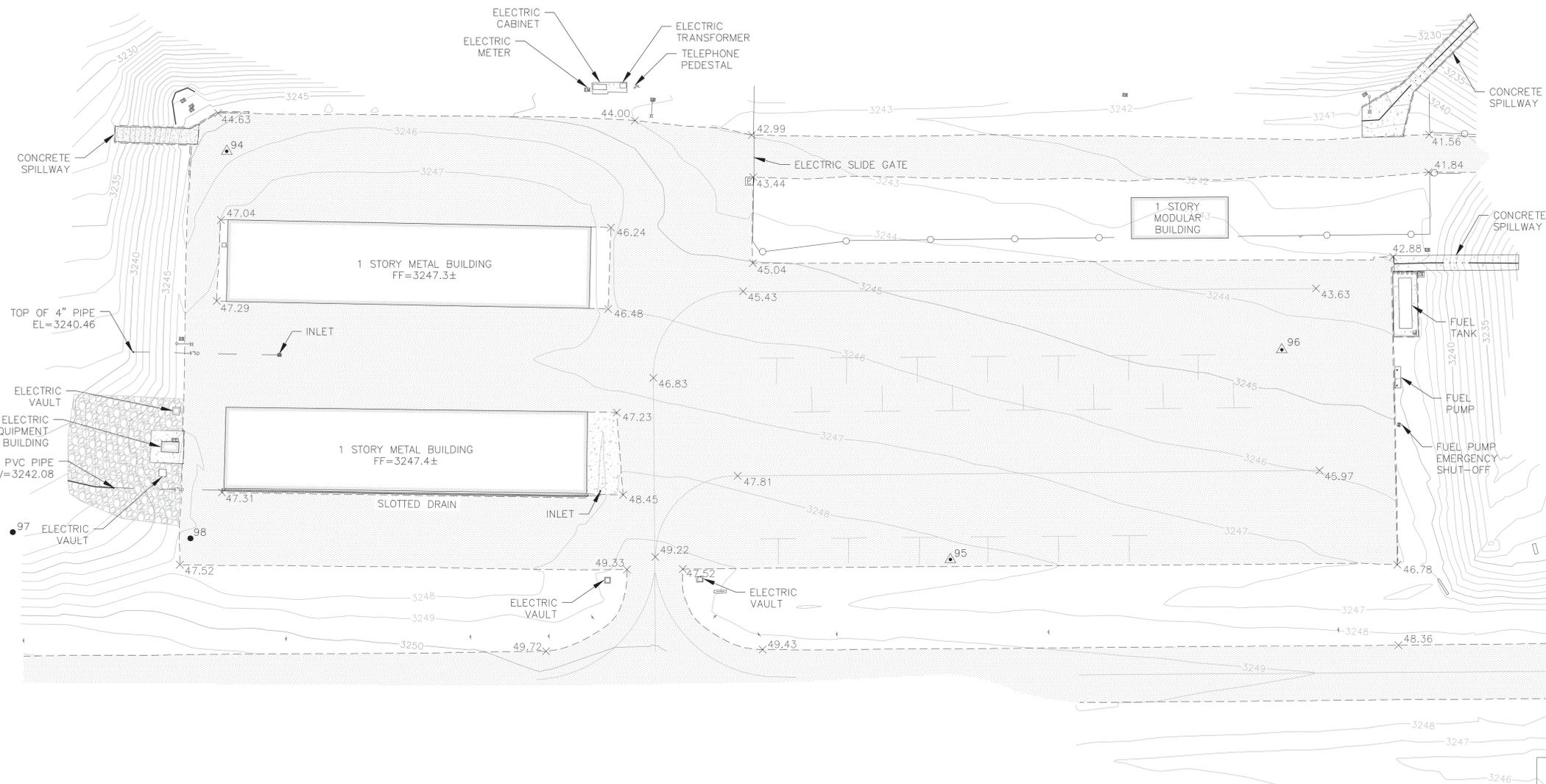
HORIZONTAL ADJUSTMENT:
COMBINED SCALE FACTOR (CSF): 1.000076707
GROUND NORTHING/CSF = GRID NORTHING
GROUND EASTING/CSF = GRID EASTING

VERTICAL DATUM:
NAVD88

PRIMARY BENCHMARK:
POINT NO 3273
FND 3" ALUMINUM CAP AT THE SOUTHEAST END OF RUNWAY
STAMPED "LS 21085 EL: 3250.02"
OBSERVED ELEVATION: 3250.02
N=596491.880 (GROUND VALUE)
E=1092601.592 (GROUND VALUE)

PROJECT BENCHMARK:
POINT NO 3275
FND 3" ALUMINUM CAP AT THE NORTHWEST END OF RUNWAY
STAMPED "LS 21085 EL: 3271.37"
OBSERVED ELEVATION: 3271.43
N=598791.608 (GROUND VALUE)
E=1089086.766 (GROUND VALUE)

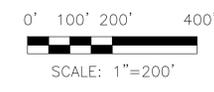
- THIS IS NOT A PROPERTY BOUNDARY SURVEY.



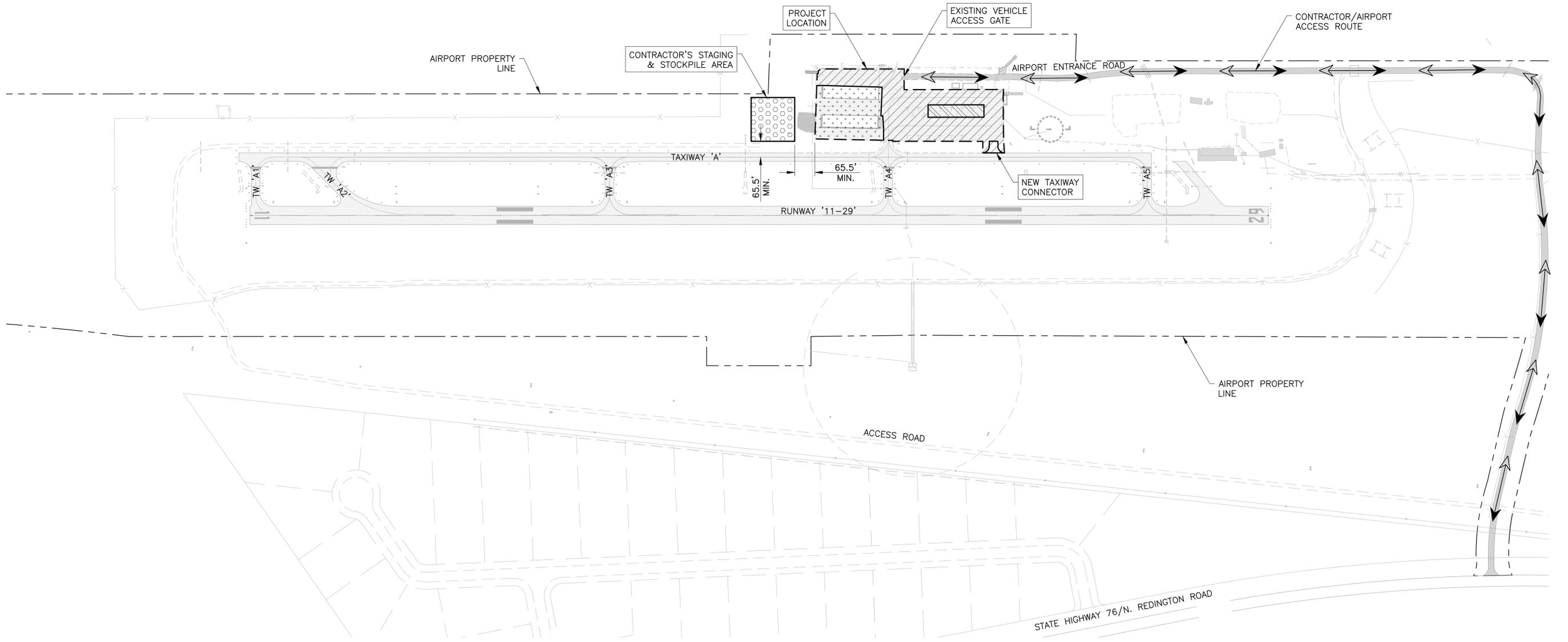
POINT DATA TABLE				
POINT NO.	GROUND NORTHING	GROUND EASTING	ELEVATION	DESCRIPTION
94	597984.451	1091377.482	3245.68	SET-MAG
95	597510.464	1091619.082	3248.26	SET-MAG
96	597504.048	1091869.912	3244.54	SET-MAG
97	597858.029	1091128.776	3241.70	FND-RB
98	597791.835	1091221.186	3247.28	FND-PK
100	596491.380	1092602.442	3249.96	FND-MAG WASHER
101	598794.705	1089082.088	3271.36	FND-MAG WASHER
▲ 3273	596491.880	1092601.592	3250.02	FND-ACF
■ 3275	598791.608	1089086.766	3271.43	FND-ACF
8003	597066.235	1091246.234	3267.52	FND-PK

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SURVEY CONTROL		
DRN: DBB	DES: ---	CK: CSD
DATE: 5.22.14	DATE: ---	DATE: 5.22.14
SCALE: 1" = 40'	G1.2	3 OF 24





AS BUILT DATE
Dibble Engineering
7500 N. Dreamy Draw Drive Suite 200 Phoenix, AZ 85020 P 602.957.1155



NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF HIS OWN EQUIPMENT. CONTRACTOR MAY INSTALL TEMPORARY FENCING AROUND THE CONTRACTOR'S STAGING AREA AT HIS OWN EXPENSE.
- CONTRACTOR SHALL PROTECT ALL HAUL ROAD ACCESS POINTS TO THE AIRFIELD FROM UNAUTHORIZED ENTRY. CONTRACTOR IS REQUIRED TO POST GATE GUARD(S) AT AIRFIELD ENTRY GATES DURING CONTRACTOR'S WORKING HOURS (IF LEFT UNLOCKED).
- CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF ANY HAUL ROADS USED AND ANY OTHER AREAS DISTURBED BY THE CONTRACTOR THAT ARE OUTSIDE THE PROJECT AREA LIMITS. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER/AIRPORT AND/OR ENGINEER, AND SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE OWNER MAY, AT HIS DISCRETION, REQUEST THAT THE CONTRACTOR PROVIDE A CROSSING GUARD ON THE AIRFIELD AT ALL ACTIVE CROSSINGS OF TAXIWAYS AND APRONS.
- THE HAUL ROAD WITHIN THE AIR OPERATIONS AREA (AOA) IS SUBJECT TO CHANGE, AT THE OWNER'S DISCRETION, TO ACCOMMODATE AIRCRAFT MOVEMENTS.

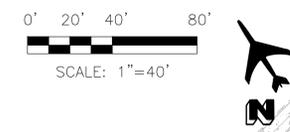
LEGEND

- BASE BID WORK/LIMITS
- ADD. ALT NO. 1 WORK/LIMITS
- ADD. ALT NO. 2 WORK/LIMITS
- CONTRACTOR'S STAGING & STORAGE AREA

REVISION		BY	DATE
SAN MANUEL AIRPORT			
DIBBLE PROJECT NO 101133.04			
AIRPORT APRON RECONSTRUCTION & SHADE PORTS			
AIRPORT & PROJECT SITE PLAN			
DRN: DSO	DES: MJB	CK: RWT	DRAWING
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	SHEET
SCALE: 1" = 200'			G1.3 4 OF 24



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AS BUILT DATE

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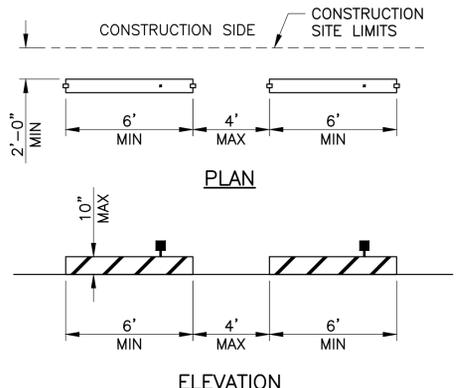
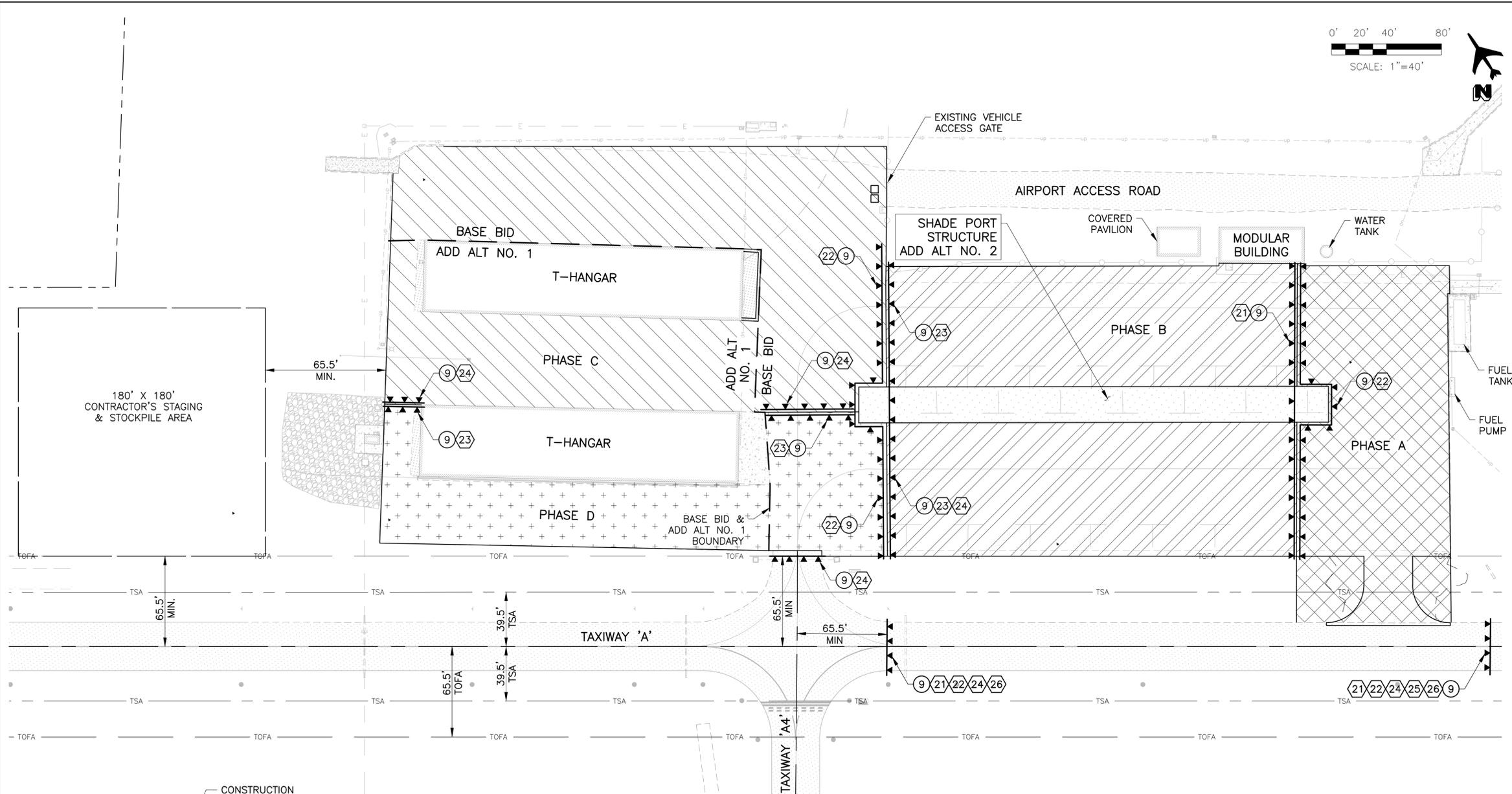
7500 N. Dreamy Draw Drive
Suite 200
Phoenix, AZ 85020
P 602.957.1155

CONSTRUCTION NOTES

9 LOW-PROFILE BARRICADES NPI

REFERENCE NOTES

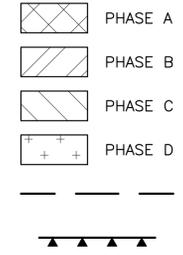
- 21 PHASE A LOW-PROFILE BARRICADES
- 22 PHASE B LOW-PROFILE BARRICADES
- 23 PHASE C LOW-PROFILE BARRICADES
- 24 PHASE D LOW-PROFILE BARRICADES
- 25 LOW-PROFILE BARRICADES LOCATED WEST OF TAXIWAY 'A5' TOFA
- 26 TAXIWAY 'A' MUST BE CLOSED WHEN ANY CONSTRUCTION OR EQUIPMENT IMPACTS THE TOFA



PHASING NOTES:

1. INSTALL 180'X180' TEMPORARY SECURITY FENCE FOR THE CONTRACTORS STAGING & STORAGE AREA; REMOVE UPON COMPLETION OF PROJECT (NPI).
2. ALL PHASES MUST BE CONSTRUCTED SEQUENTIALLY.
3. PHASE A CONSISTS OF PAVEMENT REMOVAL, TIE-DOWN REMOVAL, PAVEMENT RECONSTRUCTION INCLUDING GRADING & STRIPING.
4. PHASE B CONSISTS OF TIE-DOWN REMOVAL, PAVEMENT REMOVAL, PAVEMENT RECONSTRUCTION INCLUDING GRADING, STRIPING & INSTALLATION OF SHADE PORTS, (IF ADDITIVE ALTERNATE NO. 2 IS AWARDED).
5. PHASES C & D CONSIST OF PAVEMENT REMOVAL & PAVEMENT RECONSTRUCTION INCLUDING GRADING & STRIPING.
6. ALL LOW PROFILE BARRICADES SHALL BE A MAXIMUM OF 4' OUTSIDE CONSTRUCTION LIMITS.
7. ADDITIVE ALTERNATE NO. 1 INCLUDES ADDITIONAL PAVEMENT REMOVAL & RECONSTRUCTION WITHIN PHASES C & D. IF ADDITIVE ALTERNATE NO. 1 IS AWARDED, WORK MUST BE DONE CONCURRENTLY WITHIN THE APPROPRIATE PHASE.
8. ADDITIVE ALTERNATE NO. 2 INCLUDES THE CONSTRUCTION OF A SHADE PORT STRUCTURE & LIGHTING. IF ALTERNATE NO. 2 IS AWARDED, THE WORK MUST BE DONE CONCURRENTLY WITH THE APPROPRIATE PHASES, INCLUDING UNDERGROUND ELECTRICAL & FOOTING FOUNDATIONS.

LEGEND



CONSTRUCTION DURATION

- 14 - CALENDAR DAYS
 - 21 - CALENDAR DAYS
 - 21 - CALENDAR DAYS
 - 14 - CALENDAR DAYS
- BASE BID & ADD ALT NO. 1 BOUNDARY
- LOW-PROFILE BARRICADES

- NOTES:**
1. LOW PROFILE BARRICADES AND LIGHTS SHALL BE PROVIDED AND MAINTAINED (DAY AND NIGHT) BY THE CONTRACTOR (NPI).
 2. THE OWNER MAY DIRECT THE CONTRACTOR TO RELOCATE ANY BARRICADES AT THEIR DISCRETION.
- LOW PROFILE BARRICADES**
N.T.S.

REVISION	BY	DATE

SAN MANUEL AIRPORT

DIBBLE PROJECT NO 101133.04

AIRPORT APRON RECONSTRUCTION & SHADE PORTS

CONSTRUCTION PHASING PLAN



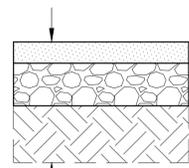
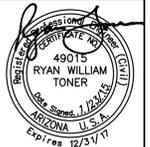
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DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	G1.4	5 OF 24

SCALE: 1" = 40'

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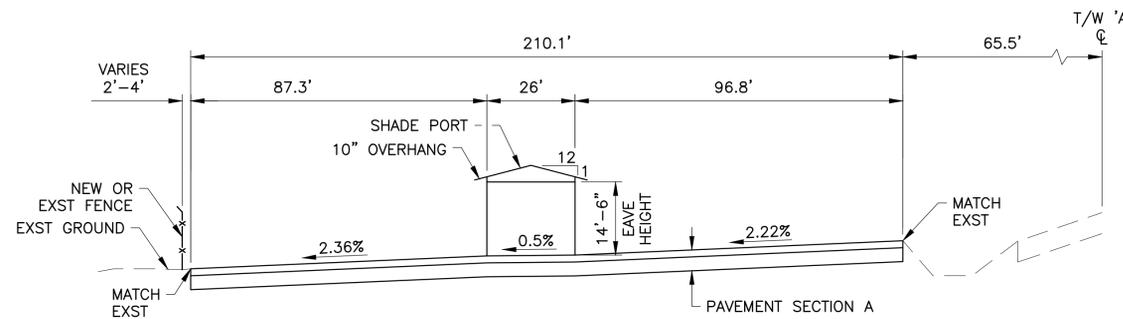
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3" AC (3/4" P-405)
6" AGGREGATE BASE COURSE (P-201)
8" COMPACTED SUBGRADE (P-152)

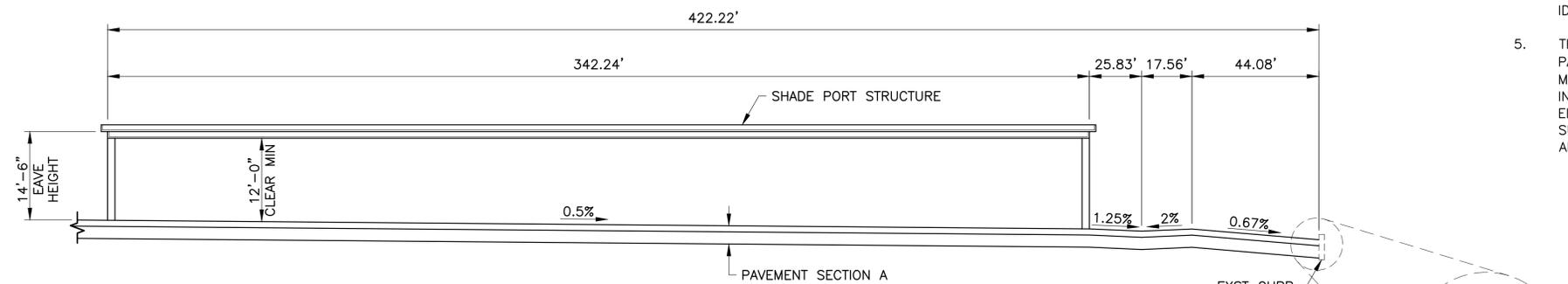
A PAVEMENT SECTION
N.T.S.



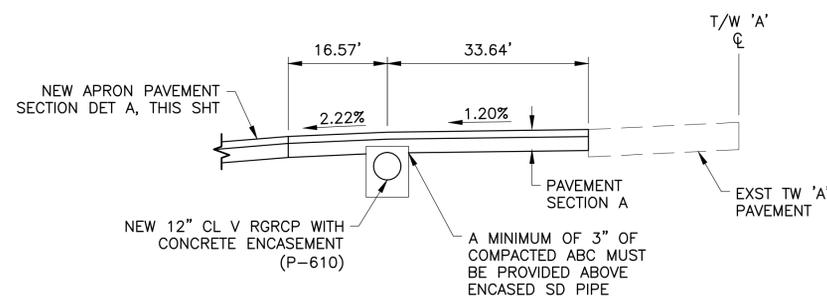
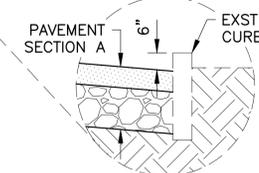
APRON TYPICAL SECTION A-A
(SEE SHEET C2.1) N.T.S.

SHADE PORT STRUCTURE GENERAL NOTES:

1. A MINIMUM OF 8 AIRCRAFT PARKING BAYS MUST BE PROVIDED PER THE DIMENSIONS ON SHEETS C3.0 & C3.1
2. THE SHADE PORT STRUCTURE SHALL BE CONSTRUCTED IN A MANNER & WITH MATERIALS AS SPECIFIED IN SPECIAL PROVISION SP 90.04.
3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL ENGINEERING & PERMITTING OF THE SHADE PORT STRUCTURE & FOUNDATIONS, AS SPECIFIED IN SPECIAL PROVISIONS SP 90.04.
4. THE MANUFACTURER'S DESIGN MUST PROVIDE 8 AIRCRAFT BAYS (AS NOTED ABOVE) AND ALLOW FOR THE LIGHTING/POWER INFRASTRUCTURE IDENTIFIED ON THE ELECTRICAL PLANS.
5. THE ENTIRE SHADE PORT STRUCTURE SHALL BE PAINTED (INSIDE & OUT) INCLUDING ALL MISCELLANEOUS HARDWARE & INTERIOR INFRASTRUCTURE COMPONENTS SUCH AS ELECTRICAL CONDUITS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE REVIEW & APPROVAL OF THE OWNER.



APRON TYPICAL SECTION B-B
(SEE SHEET C2.0-C2.1) N.T.S.



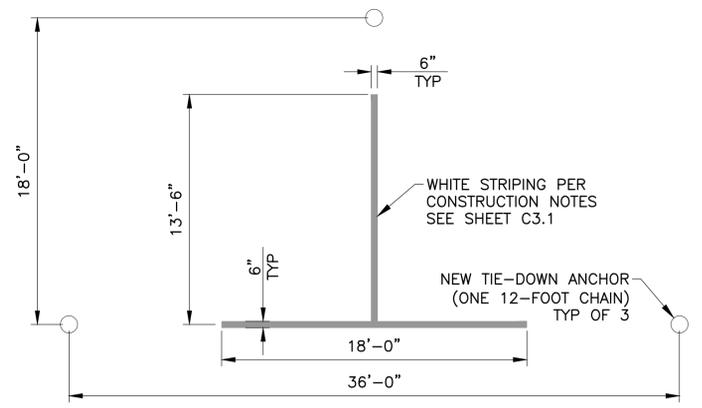
TAXIWAY CONNECTOR TYPICAL SECTION C-C
(SEE SHEET C2.1) N.T.S.

REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORTS		
TYPICAL SECTIONS		
DRN: DSO	DES: MJB	CK: RWT
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14
SCALE:	G1.5	6 OF 24

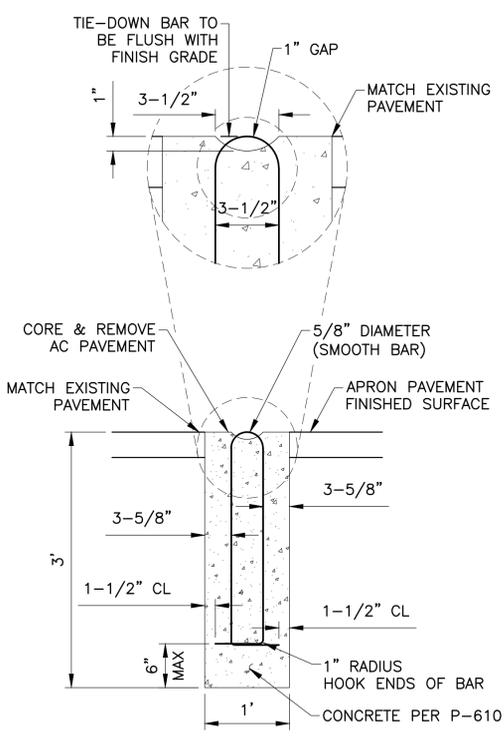




1 TAXILANE/TAXIWAY CENTERLINE STRIPE
N.T.S.



2 TYPICAL TIE-DOWN SPACE MARKING
N.T.S.



3 NEW TIE-DOWN ANCHOR DETAIL
N.T.S.

TIE-DOWN ACCESSORIES REQUIRED
THE CONTRACTOR SHALL PROVIDE THE BELOW MENTIONED ITEMS (OR APPROVED EQUALS) FOR EACH TIE-DOWN ANCHOR LOCATION:

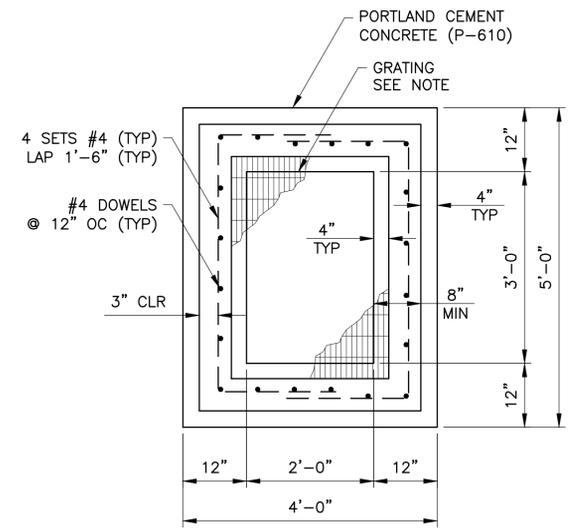
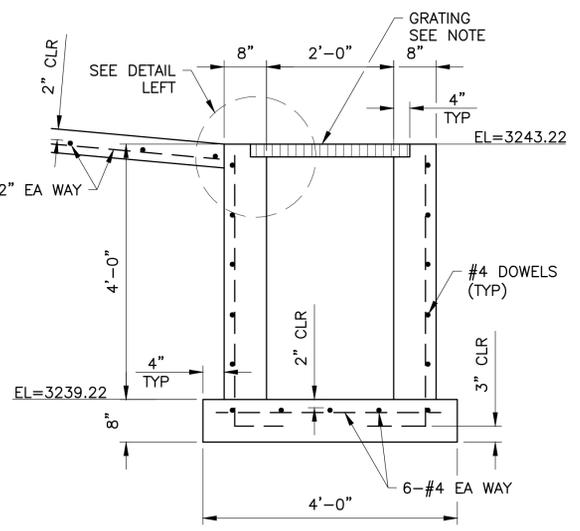
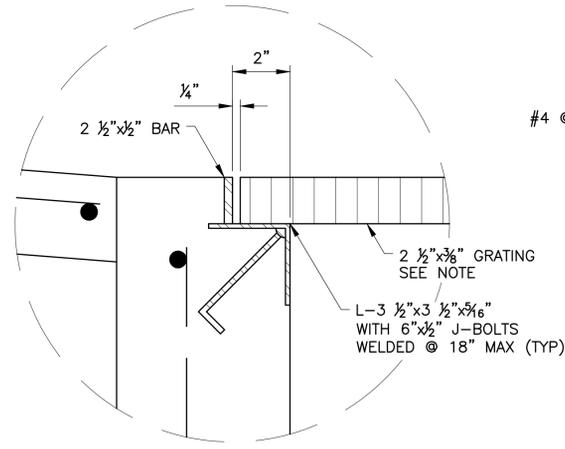
ANCHOR: 5/8"Ø x 30" ASTM A36 SMOOTH RATED FOR 4,000 LBS LOAD BEARING HOT DIPPED GALVANIZED PER ASTM A123

CHAIN: SIZE #2/0 (3/16") DOMESTIC GRADE 30, PROOF COIL RATED FOR 520 LBS LOAD BEARING HOT DIPPED GALVANIZED PER ASTM A123

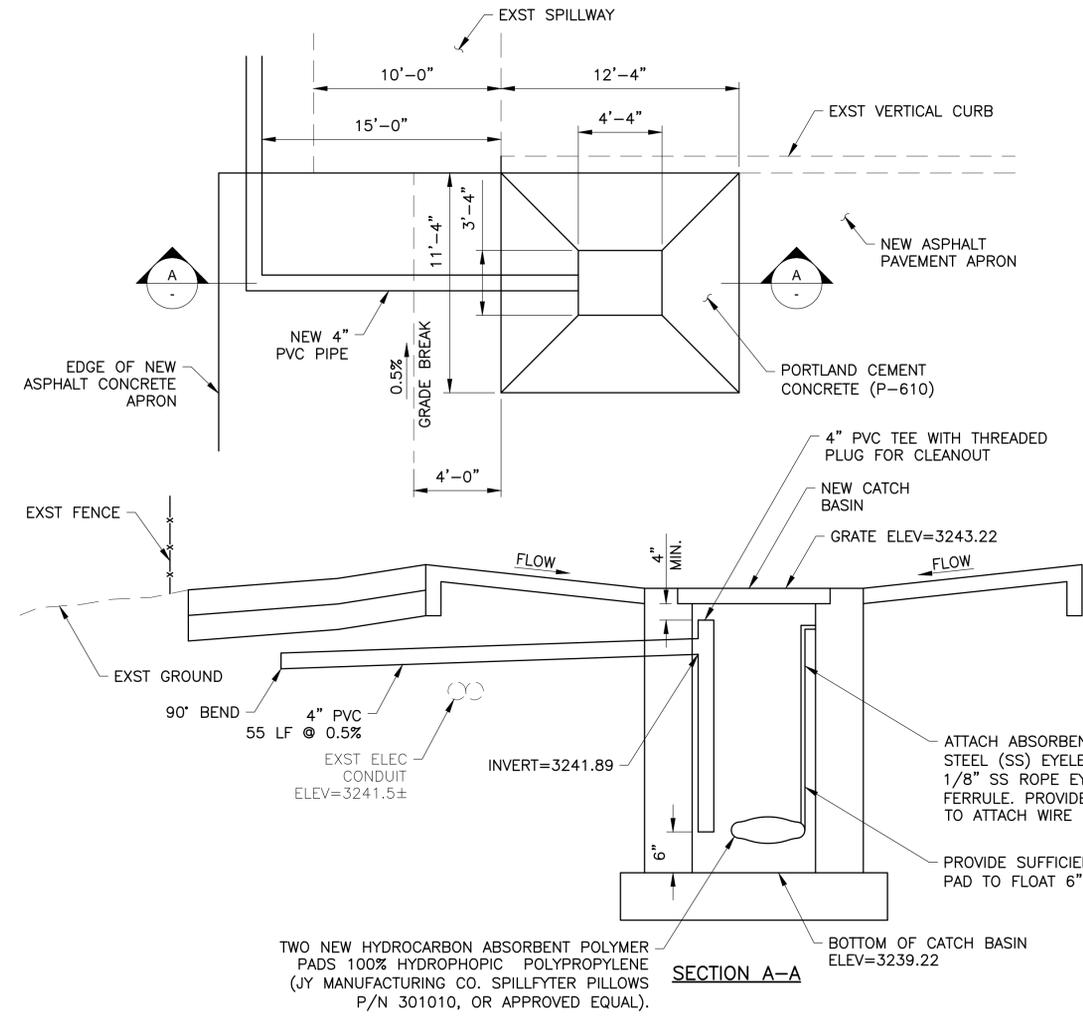
S HOOK: ZINC PLATED, HEAT TREATED STEEL SIZE #72, ONE PER CHAIN

HARDWARE: 1-1/2" SCREW IN ANCHOR SHACKLE
1-1/4" SCREW PIN ANCHOR RATED FOR 1,000 LBS LOAD BEARING ZINC PLATED HEAT TREATED STEEL

NOTE:
TIE-DOWN ANCHORS SHALL BE CAST IN PLACE. ANCHORS SHALL BE INSTALLED AFTER PAVING IS COMPLETED. A 12'-0" LENGTH OF CHAIN SHALL BE ATTACHED TO EACH TAIL & WING ANCHOR.



NOTE:
GRATING SHALL BE 2 1/2"x3/8" SPACED AT 1 3/8" CENTERS USING 3/8" RECTANGULAR OR ROUND CROSS BARS, SPACED 1" ON CENTER. THE CROSS BARS SHALL BE WELDED FLUSH WITH THE TOP OF THE GRATING. THE GRATING SHALL SPAN 24 INCHES AND SATISFY AASHTO LOADINGS OF H-20. BAND ALL FREE SIDES, TYPICAL.



4 CATCH BASIN DETAIL
N.T.S.

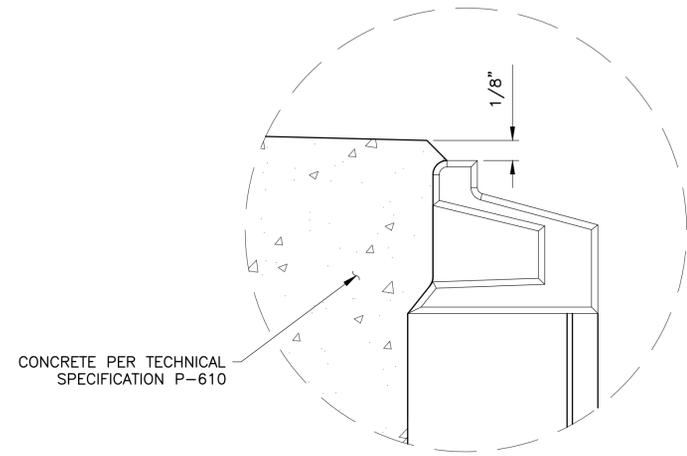
REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORTS		
MISCELLANEOUS DETAILS		
DRN: DSO	DES: MJB	CK: RWT
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14
SCALE:	G1.6	7 OF 24



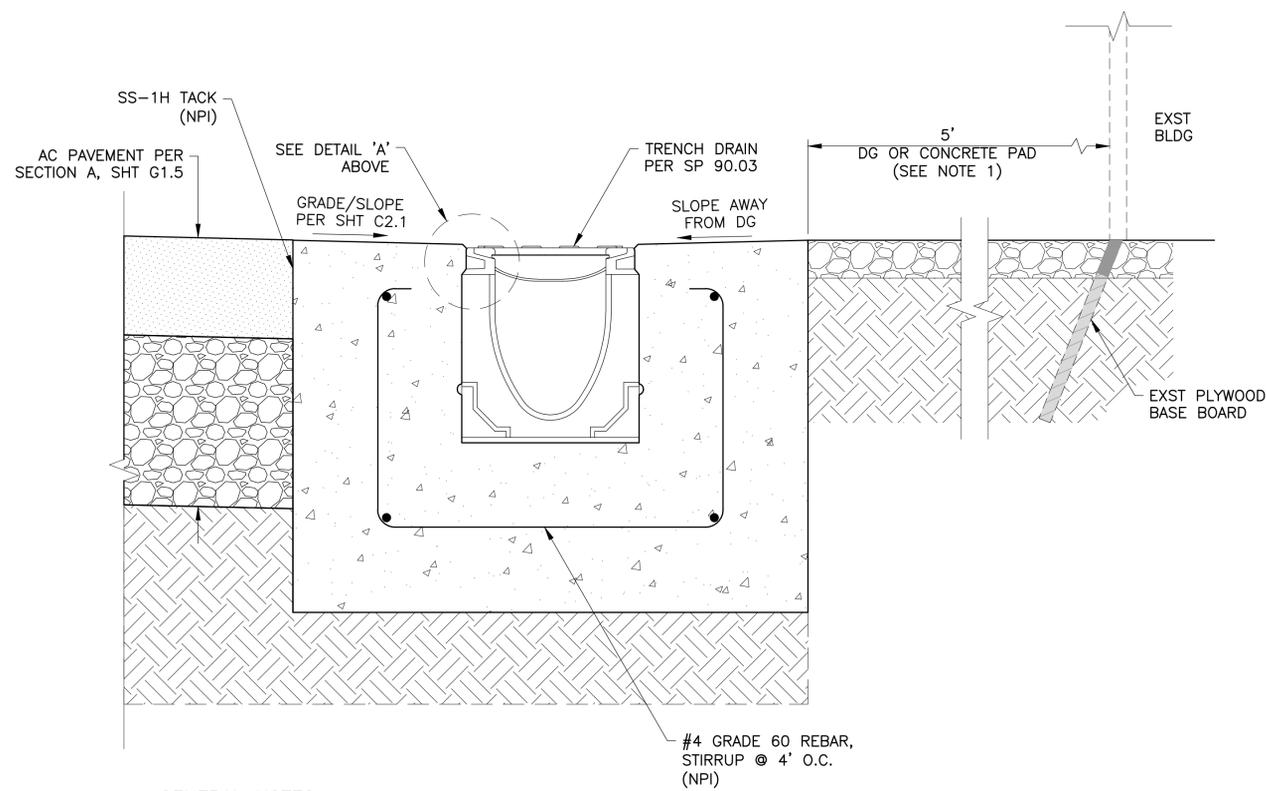
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DETAIL 'A'
N.T.S.



GENERAL NOTES

- 1. THE CONTRACTOR SHALL INSTALL 1" W.R. MEADOWS NON-EXTRUDING PRE-MOULDED FIBRE EXPANSION JOINT FILLER BETWEEN THE NEW TRENCH DRAIN AND EXISTING CONCRETE PAD (NPI)

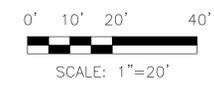
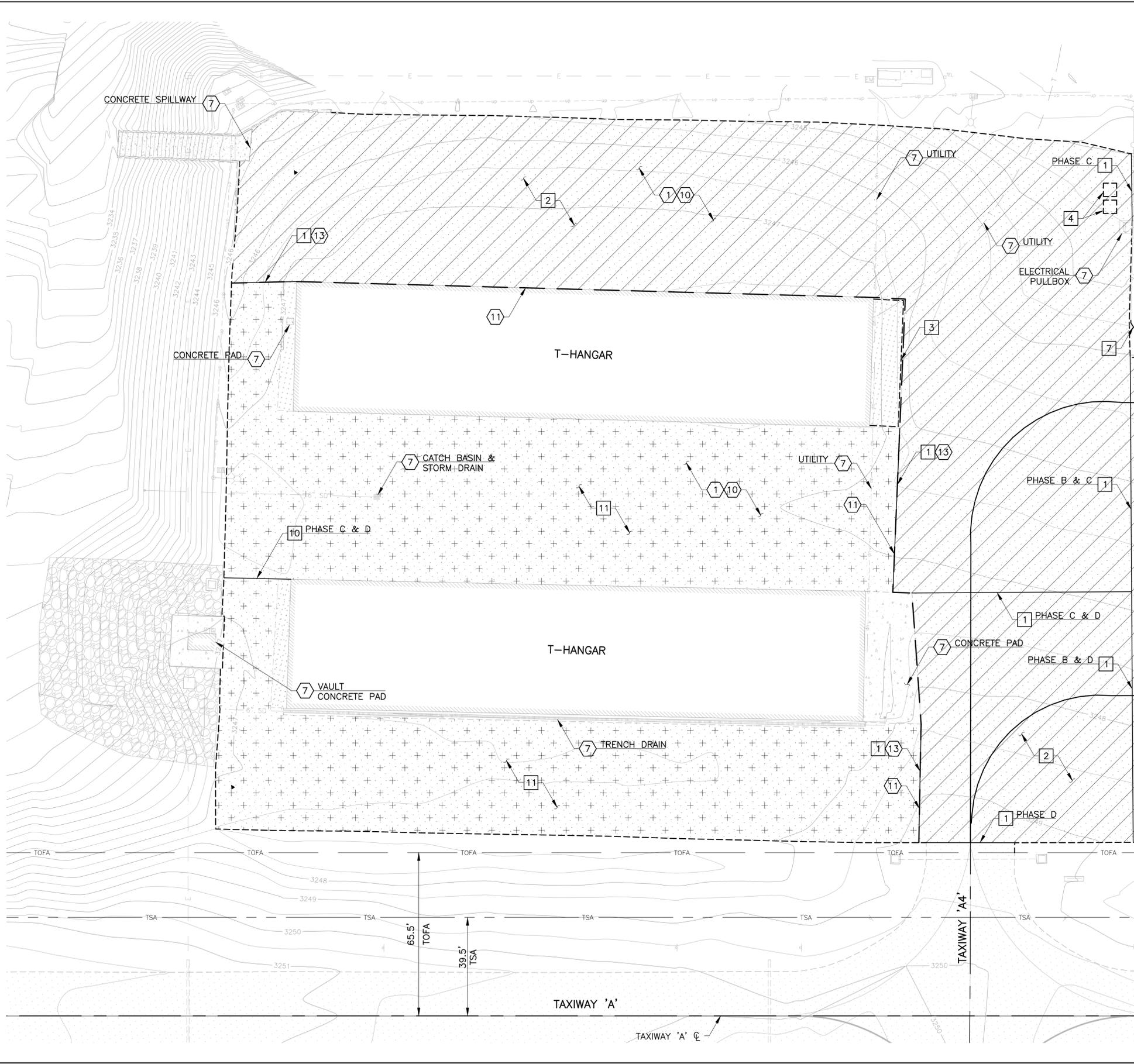
1 TRENCH DRAIN
N.T.S.

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SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORTS		
MISCELLANEOUS DETAILS		
DRN: DSO	DES: MJB	CK: RWT
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14
SCALE:	G1.7	8 OF 24

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BASE BID REMOVAL NOTES		
1	SAWCUT EXISTING AC PAVEMENT (FULL DEPTH)	486 LF
2	REMOVE EXISTING AC PAVEMENT (FULL DEPTH)	4,892 SY
3	REMOVE EXISTING PAVERS	NPI
4	REMOVE EXISTING DETECTOR LOOP	NPI
7	REMOVE EXISTING CHAIN-LINK FENCE	5 LF

ADD ALT NO. 1 REMOVAL NOTES		
10	SAWCUT EXISTING AC PAVEMENT (FULL DEPTH)	27 LF
11	REMOVE EXISTING AC PAVEMENT (FULL DEPTH)	3,707 SY

REFERENCE NOTES	
1	SEE SHEET C2.0 FOR SITE PLAN
7	PROTECT IN PLACE
10	SEE SHEET G1.4 FOR PHASING PLAN
11	BASE BID AND ADDITIVE ALTERNATE NO. 1 BOUNDARY
13	SAWCUT NOT TO BE PERFORMED IF ADDITIVE ALTERNATE NO. 1 AWARDED

REMOVAL LEGEND	
	AC PAVEMENT REMOVAL (BASE BID)
	AC PAVEMENT REMOVAL (ADDITIVE ALTERNATE NO. 1)
	EXISTING AC PAVEMENT
	BASE BID & ADD ALT NO. 1 BOUNDARY

REVISION	BY	DATE

SAN MANUEL AIRPORT

DIBBLE PROJECT NO 101133.04

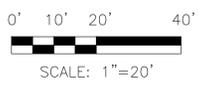
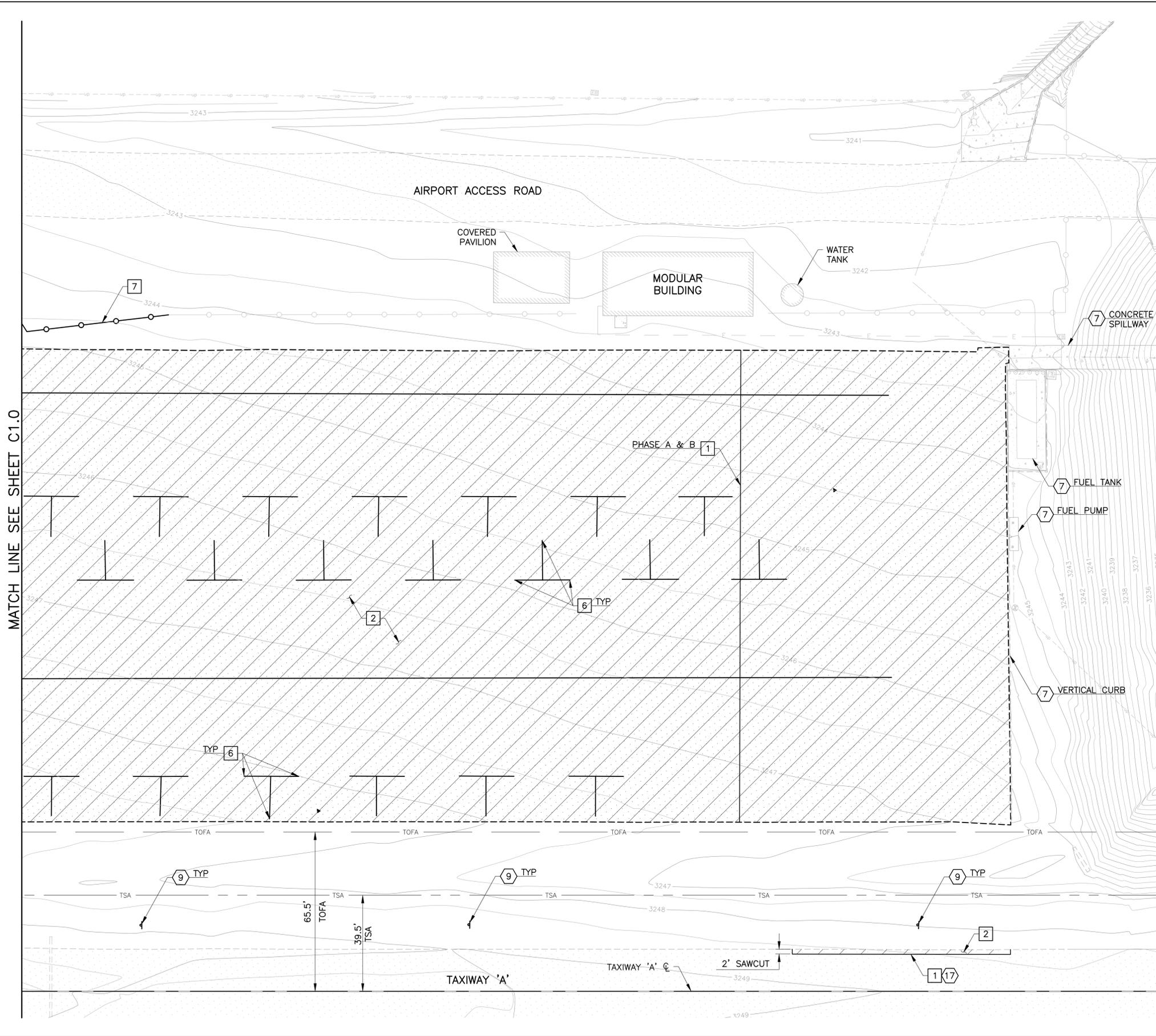
AIRPORT APRON RECONSTRUCTION & SHADE PORTS

DEMOLITION PLAN

DRN: DSO	DES: MJB	CK: RWT	DRAWING	SHEET
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	C1.0	9 OF 24



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BASE BID REMOVAL NOTES		
1	SAWCUT EXISTING AC PAVEMENT (FULL DEPTH)	288 LF
2	REMOVE EXISTING AC PAVEMENT (FULL DEPTH)	8,835 SY
6	REMOVE EXISTING TIE-DOWN ANCHORS	60 EA
7	REMOVE EXISTING CHAIN-LINK FENCE	63 LF

REFERENCE NOTES	
2	SEE SHEET C2.1 FOR SITE PLAN
7	PROTECT IN PLACE
9	SEE ELECTRICAL PLANS FOR RELOCATION OF EXST TAXIWAY EDGE REFLECTORS (NPI)
10	SEE SHEET G1.4 FOR PHASING PLAN
17	SEE SHEET C2.1 FOR GEOMETRIC CONTROL

REMOVAL LEGEND	
	AC PAVEMENT REMOVAL (BASE BID)
	EXISTING AC PAVEMENT

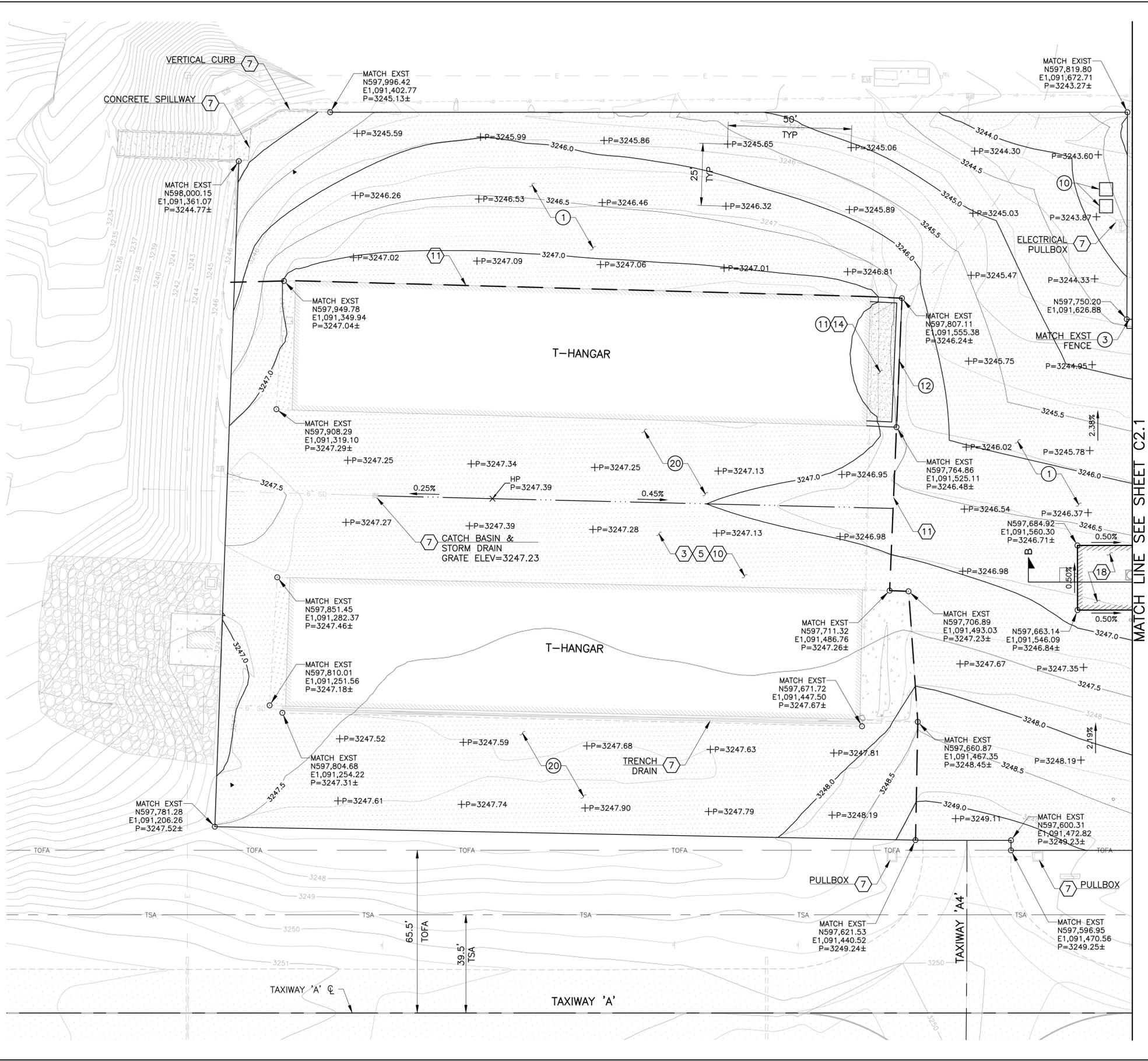
REVISION	BY	DATE

SAN MANUEL AIRPORT
 DIBBLE PROJECT NO 101133.04
AIRPORT APRON RECONSTRUCTION & SHADE PORTS
 DEMOLITION PLAN

DRN: DSO	DES: MJB	CK: RWT	DRAWING	SHEET
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	C1.1	10 OF 24



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49015
RYAN WILLIAM
TONER
Arizona, U.S.A.
Expires 12/31/17

- BASE BID CONSTRUCTION NOTES**
- ① 3" AC ON 6" ABC
PVMT SECTION A, SHT G1.5 5,116 SY
 - ③ CHAIN-LINK FENCE
PER MAG STD DET 160 (MOD) 2 LF
 - ⑩ LOOP DETECTOR 1 EA
 - ⑪ LANDSCAPE ROCK 56 SY
 - ⑫ CONCRETE RIBBON CURB
PER MAG STD DET 220-1, TYPE B 75 LF
- ADD ALT NO. 1 CONSTRUCTION NOTES**
- ⑳ 3" AC ON 6" ABC
PVMT SECTION A, SHT G1.5 3,695 SY

- REFERENCE NOTES**
- ③ SEE SHEET C1.0 FOR DEMOLITION PLAN
 - ⑤ SEE SHEET C3.0 FOR PAVEMENT MARKING PLAN
 - ⑦ PROTECT IN PLACE
 - ⑩ SEE SHEET G1.4 FOR PHASING PLAN
 - ⑪ BASE BID AND ADDITIVE ALTERNATE NO. 1 BOUNDARY
 - ⑭ THE CONTRACTOR SHALL CLEAR THIS AREA (EXCEPT THE BUSHES) IN PREPARATION FOR LANDSCAPE ROCK (NPI)
 - ⑱ SHADE PORT STRUCTURE, ADD ALT NO. 3, SEE SHT C2.1

- PAVEMENT LEGEND**
- 3" AC ON 6" ABC
PVMT SECTION A, SHT G1.5
 - BASE BID & ADD ALT NO. 1 BOUNDARY

REVISION	BY	DATE

SAN MANUEL AIRPORT

DIBBLE PROJECT NO 101133.04

AIRPORT APRON RECONSTRUCTION & SHADE PORTS

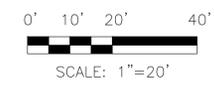
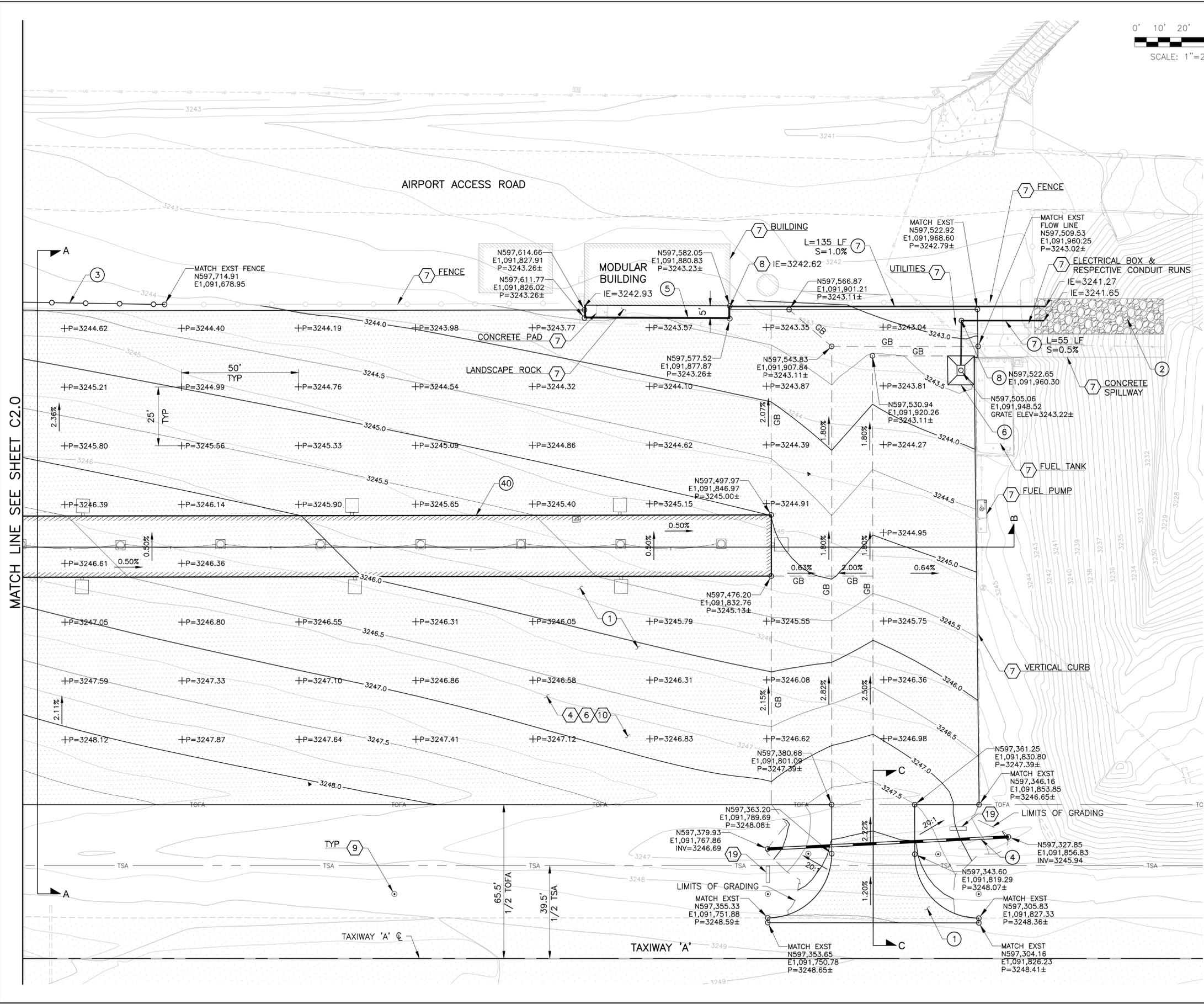
SITE PLAN

DRN: DSO	DES: MJB	CK: RWT	DRAWING	SHEET
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	C2.0	11 OF 24

SCALE: 1" = 20'



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BASE BID CONSTRUCTION NOTES

1	3" AC ON 6" ABC PVMT SECTION A, SHT G1.5	9,792 SY
2	RIP-RAP (D50=12" DEPTH) WITH FILTER FABRIC	40 CY
3	CHAIN-LINK FENCE PER MAG STD DET 160 (MOD)	61 LF
4	12" CLASS V RGRCP STORM DRAIN CONCRETE ENCASED PER MAG STD DET 404-3	105 LF
5	TRENCH DRAIN SHEET G1.7, DET 1	75 LF
6	CATCH BASIN SHEET G1.6, DET 4	1 EA
7	4" PVC PIPE	190 LF
8	4" PVC 90° BEND	NPI

ADD ALT NO. 2 CONSTRUCTION NOTES

40	SHADE PORT STRUCTURE (8-BAY, NOT NESTED)	1 LS
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REFERENCE NOTES

4	SEE SHEET C1.1 FOR DEMOLITION PLAN
6	SEE SHEET C3.1 FOR PAVEMENT MARKING PLAN
7	PROTECT IN PLACE
8	CONTRACTOR TO CONNECT 4" PVC PIPE TO ENCASED TRENCH DRAIN
9	SEE ELECTRICAL PLANS FOR RELOCATION OF EXST TAXIWAY EDGE REFLECTORS (NPI)
10	SEE SHEET G1.4 FOR PHASING PLAN
15	PRE-MOULDED JOINT FILLER (NPI)
19	SEE ELECTRICAL PLANS FOR INSTALLATION OF NEW SIGNS

PAVEMENT LEGEND

	3" AC ON 6" ABC PVMT SECTION A, SHT G1.5
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**AIRPORT APRON RECONSTRUCTION
& SHADE PORTS**

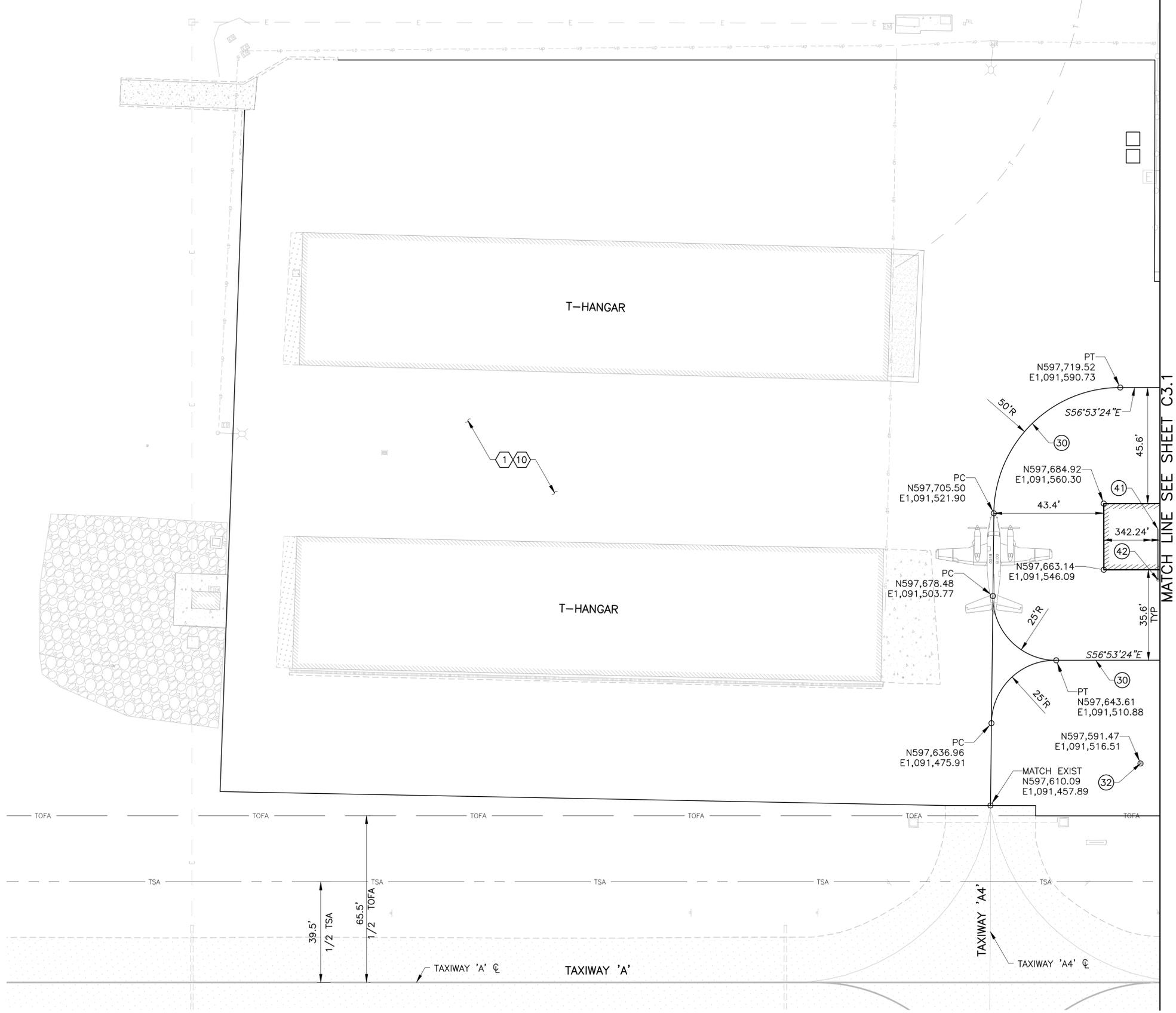
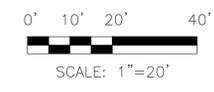
SITE PLAN

DRN: DSO	DES: MJB	CK: RWT	DRAWING	SHEET
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	C2.1	12 OF 24

SCALE: 1" = 20'



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RYAN WILLIAM
TONER
ARIZONA U.S.A.
Expires 12/31/17

BASE BID CONSTRUCTION NOTES

30	TAXILANE CENTERLINE STRIPE SHEET G1.6, DETAIL 1	329 LF
32	TIEDOWN ANCHOR SHEET G1.6, DETAIL 3	1 EA

ADD ALT NO. 2 CONSTRUCTION NOTE

41	T-SHADE TIEDOWN MARKING SHEET G1.6, DETAIL 2	20 LF
42	TIEDOWN ANCHOR SHEET G1.6, DETAIL 3	1 EA

REFERENCE NOTES

1	SEE SHEET C2.0 FOR SITE PLAN
10	SEE SHEET G1.4 FOR PHASING PLAN

REVISION	BY	DATE

SAN MANUEL AIRPORT

DIBBLE PROJECT NO 101133.04

AIRPORT APRON RECONSTRUCTION & SHADE PORTS

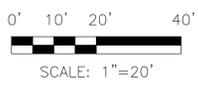
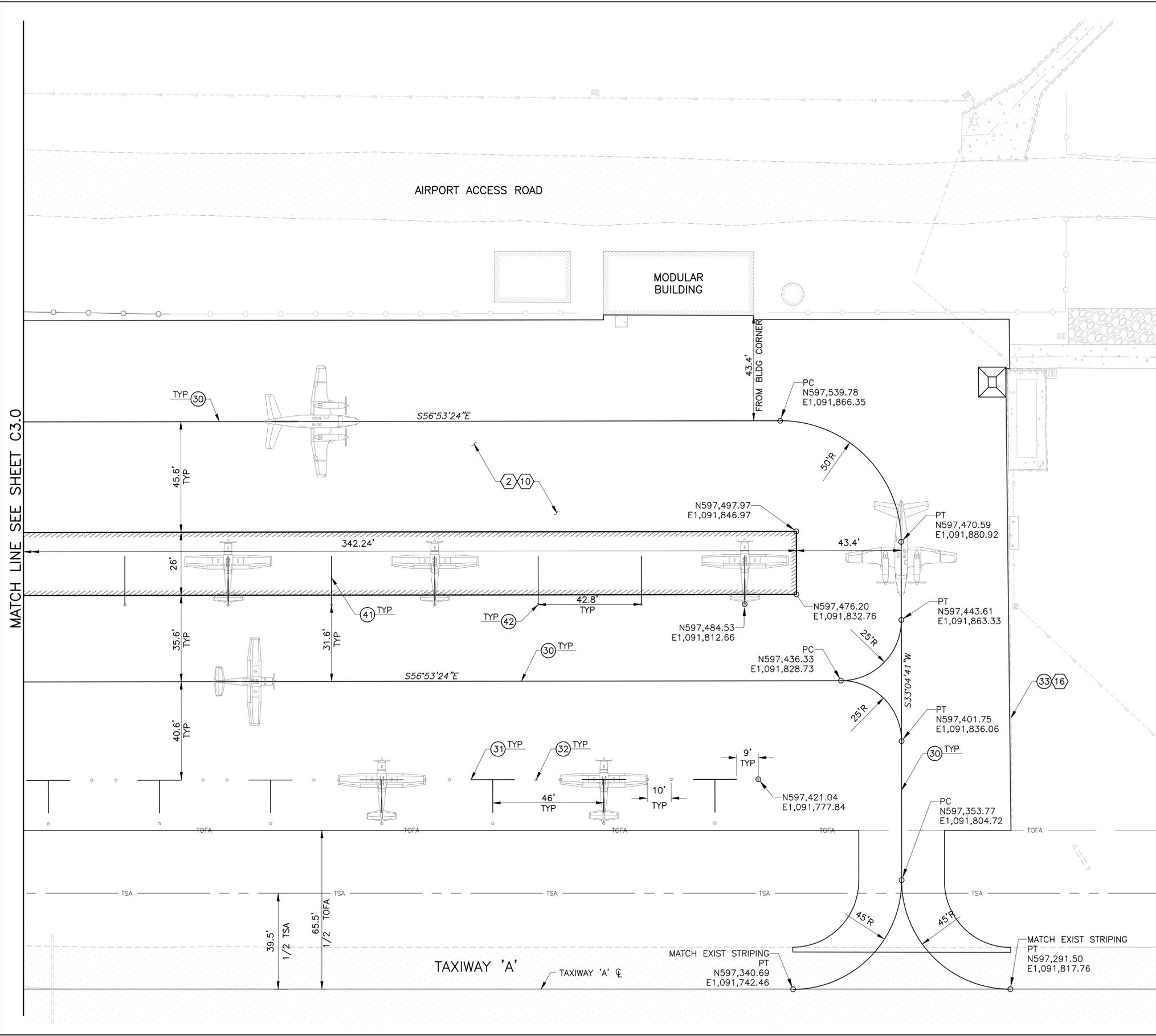
PAVEMENT MARKING PLAN

DRN: DSO	DES: MJB	CK: RWT	DRAWING	SHEET
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	C3.0	13 OF 24

SCALE: 1" = 20'



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BASE BID CONSTRUCTION NOTES

30	TAXILANE CENTERLINE STRIPE SHEET G1.6, DETAIL 1	1,089 LF
31	TIEDOWN MARKING SHEET G1.6, DETAIL 2	221 LF
32	TIEDOWN ANCHOR SHEET G1.6, DETAIL 3	20 EA
33	PAINT EXISTING CURB RED	185 LF

ADD ALT NO. 2 CONSTRUCTION NOTE

41	T-SHADE TIEDOWN MARKING SHEET G1.6, DETAIL 2	140 LF
42	TIEDOWN ANCHOR SHEET G1.6, DETAIL 3	7 EA

REFERENCE NOTES

2	SEE SHEET C2.1 FOR SITE PLAN
10	SEE SHEET G1.4 FOR PHASING PLAN
16	EXISTING CURB TO BE FULLY WASHED AND CLEANED OF EXISTING PAINT AND DEBRIS IN PREPARATION FOR NEW RED PAINT (NPI).

REVISION	BY	DATE

SAN MANUEL AIRPORT

DIBBLE PROJECT NO 101133.04

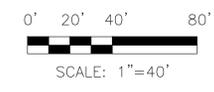
AIRPORT APRON RECONSTRUCTION & SHADE PORTS

PAVEMENT MARKING PLAN

DRN: DSO	DES: MJB	CK: RWT	DRAWING	SHEET
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	C3.1	14 OF 24

SCALE: 1" = 20'

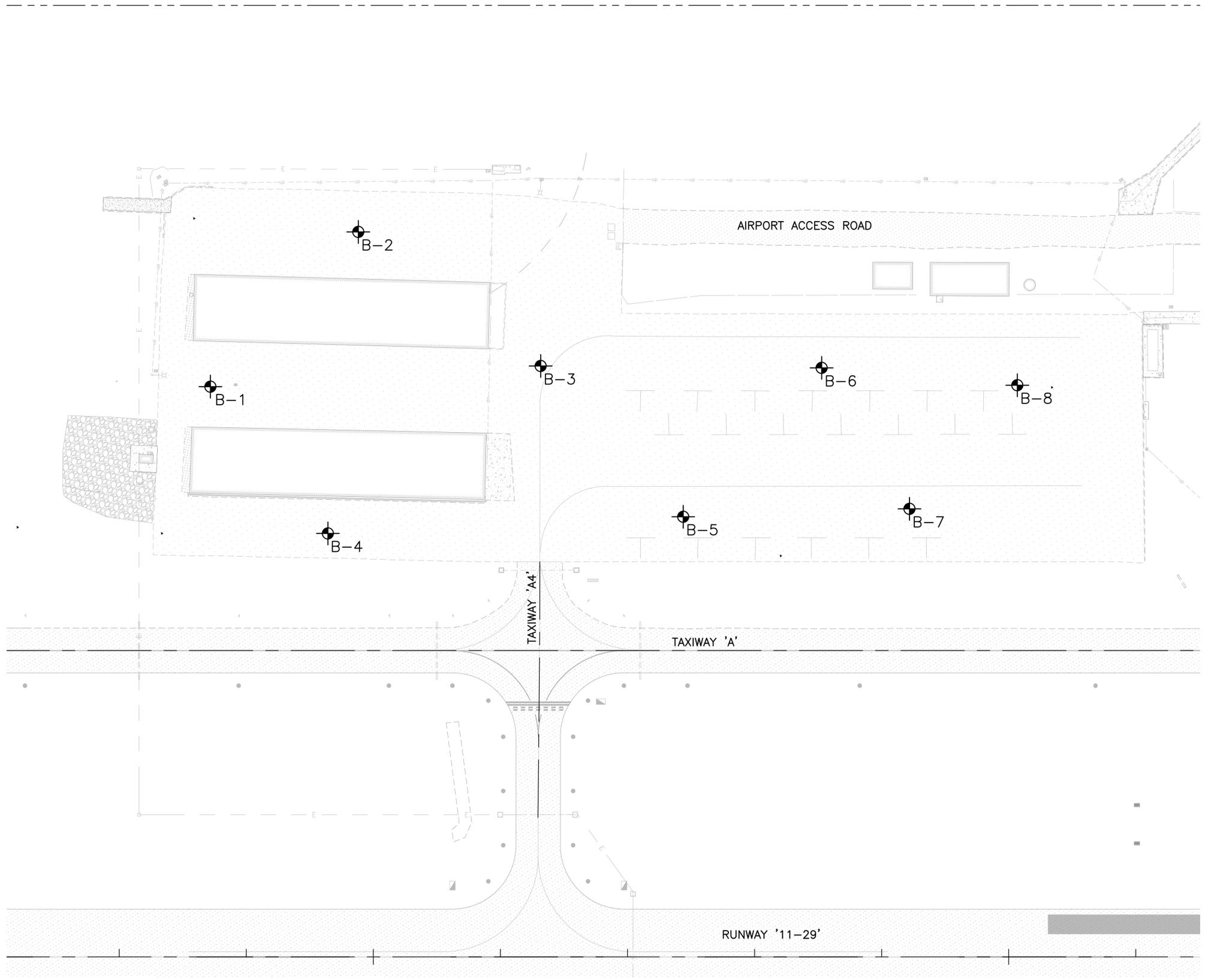




AS BUILT DATE

Dibble Engineering

7500 N. Dreamy Draw Drive
Suite 200
Phoenix, AZ 85020
P 602.957.1155



I:\A\2011\101133.04_SAN MANUEL APRON REHABILITATION\CAD\101133-04_GTI-X.DWG Jan. 23, 2015 10:12 AM

REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORTS		
BORING LOCATION MAP		
DRN: DSO	DES: MJB	CK: RWT
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14
SCALE: 1" = 40'	GT1.0	SHEET 15 OF 24

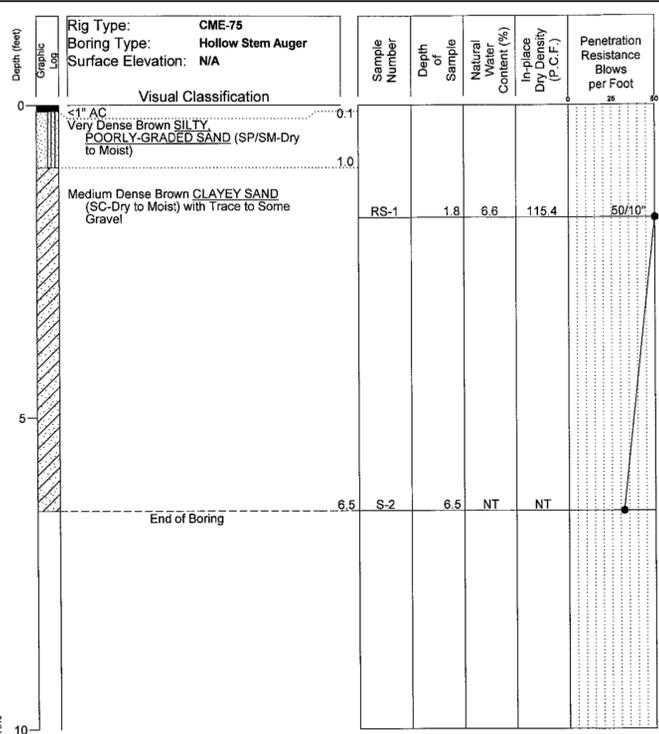
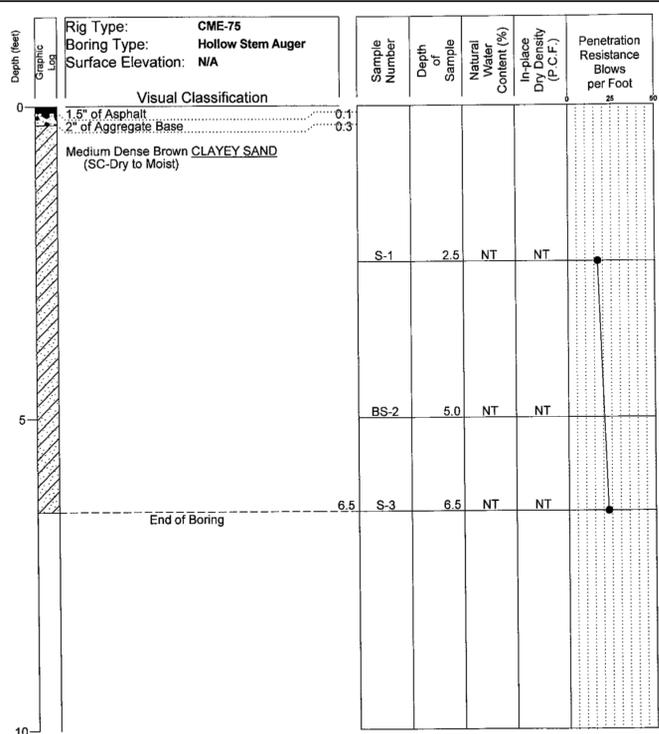


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AS BUILT DATE

Dibble Engineering

7500 N. Dreamy Draw Drive
Suite 200
Phoenix, AZ 85020
P 602.957.1155

Boring Date: 10-21-13
Field Engineer/Technician: B. Amos
Driller: R. Thornburg
Contractor: Geomechanics SW

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-1**

Apron Rehabilitation
San Manuel Airport
San Manuel, Arizona

Project No.: 131478SA

Boring Date: 10-21-13
Field Engineer/Technician: B. Amos
Driller: R. Thornburg
Contractor: Geomechanics SW

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

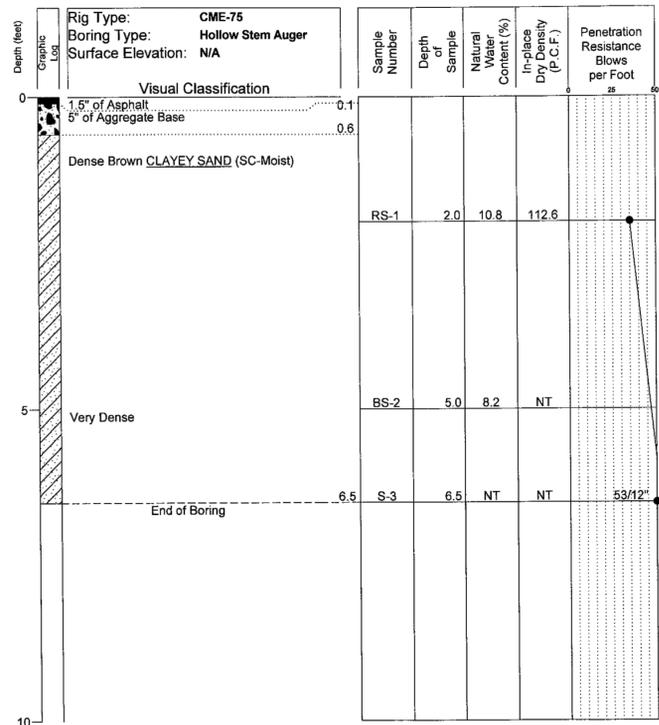
NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-2**

Apron Rehabilitation
San Manuel Airport
San Manuel, Arizona

Project No.: 131478SA



Boring Date: 10-21-13
Field Engineer/Technician: B. Amos
Driller: R. Thornburg
Contractor: Geomechanics SW

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

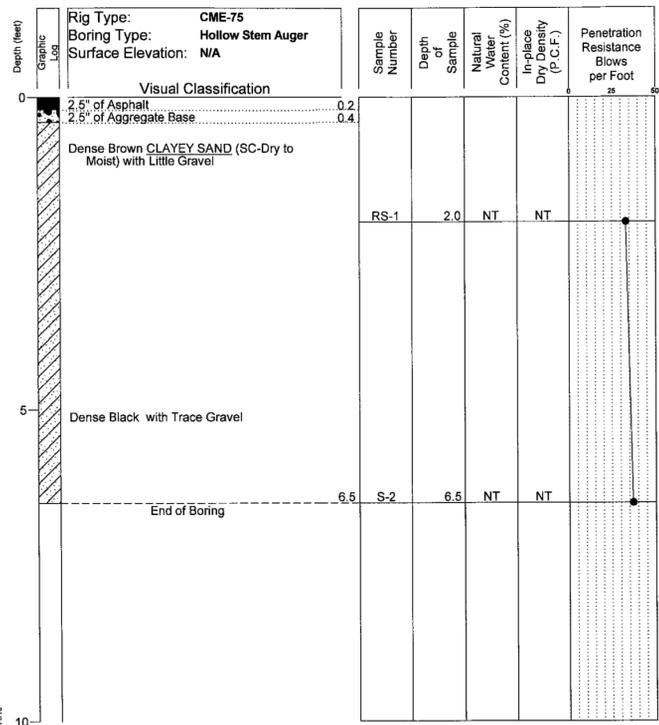
NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-3**

Apron Rehabilitation
San Manuel Airport
San Manuel, Arizona

Project No.: 131478SA



Boring Date: 10-21-13
Field Engineer/Technician: B. Amos
Driller: R. Thornburg
Contractor: Geomechanics SW

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-4**

Apron Rehabilitation
San Manuel Airport
San Manuel, Arizona

Project No.: 131478SA

REVISION	BY	DATE

SAN MANUEL AIRPORT

DIBBLE PROJECT NO 101133.04

AIRPORT APRON RECONSTRUCTION & SHADE PORTS

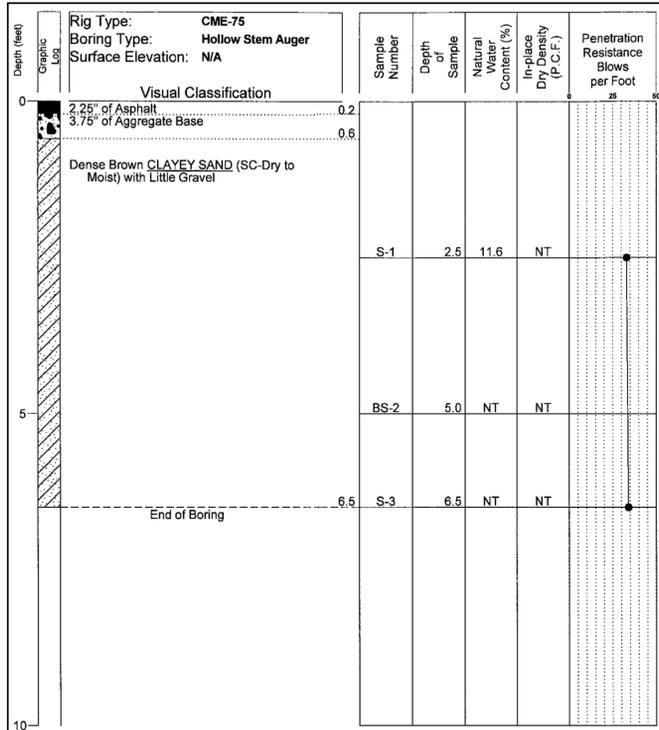
BORING LOGS

DRN: DSO	DES: MJB	CK: RWT	DRAWING	SHEET
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14	GT1.1	16 OF 24

SCALE: 1" = 10'



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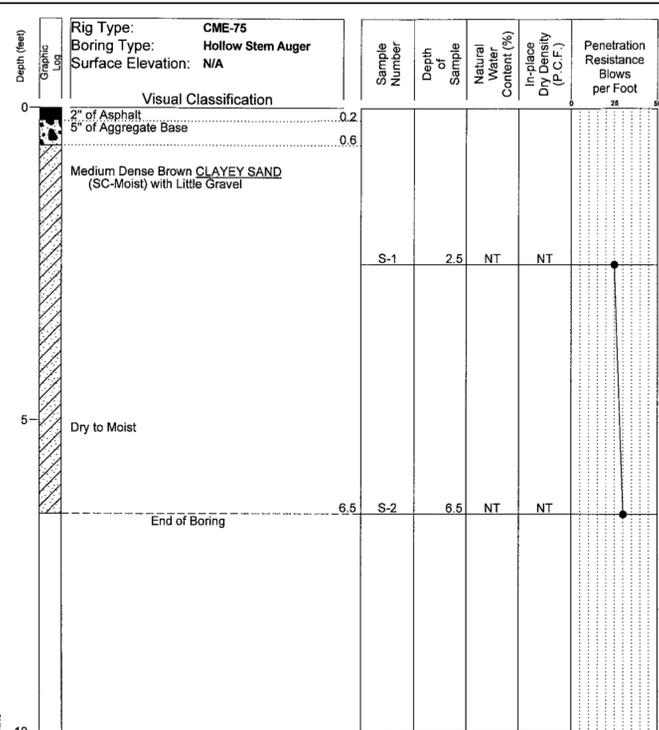


Boring Date: 10-21-13
Field Engineer/Technician: B. Amos
Driller: R. Thornburg
Contractor: Geomechanics SW

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-5
Apron Rehabilitation
San Manuel Airport
San Manuel, Arizona
Project No.: 131478SA

Depth	Water Level	Hour	Date
Free Water was Not Encountered			

NT = Not Tested

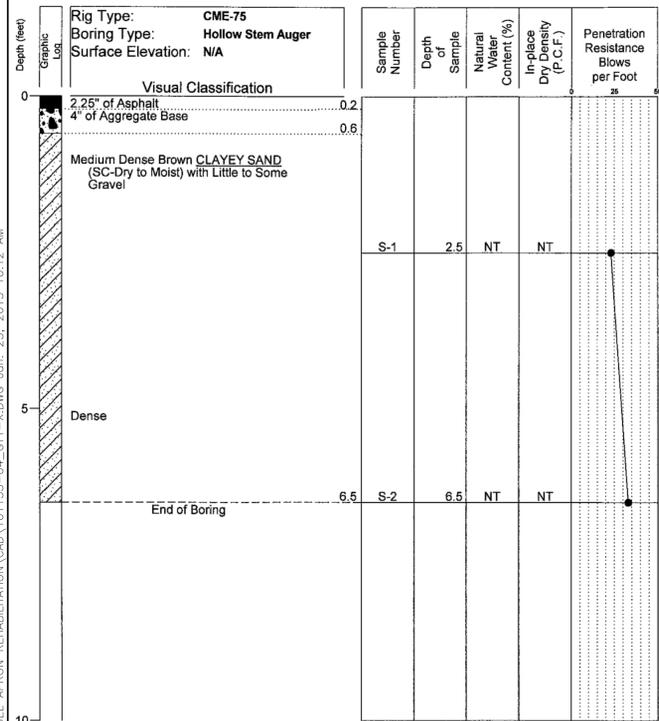


Boring Date: 10-21-13
Field Engineer/Technician: B. Amos
Driller: R. Thornburg
Contractor: Geomechanics SW

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-6
Apron Rehabilitation
San Manuel Airport
San Manuel, Arizona
Project No.: 131478SA

Depth	Water Level	Hour	Date
Free Water was Not Encountered			

NT = Not Tested

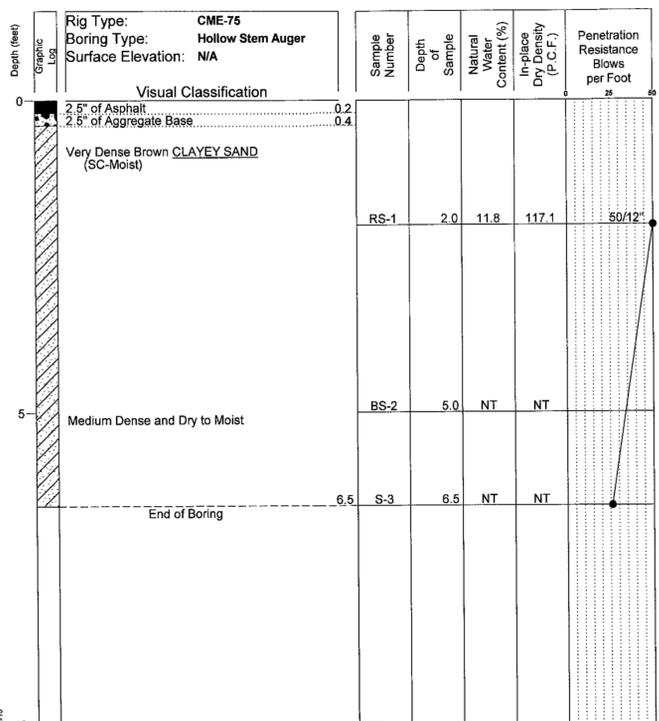


Boring Date: 10-21-13
Field Engineer/Technician: B. Amos
Driller: R. Thornburg
Contractor: Geomechanics SW

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-7
Apron Rehabilitation
San Manuel Airport
San Manuel, Arizona
Project No.: 131478SA

Depth	Water Level	Hour	Date
Free Water was Not Encountered			

NT = Not Tested

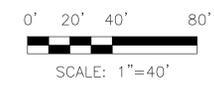


Boring Date: 10-21-13
Field Engineer/Technician: B. Amos
Driller: R. Thornburg
Contractor: Geomechanics SW

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-8
Apron Rehabilitation
San Manuel Airport
San Manuel, Arizona
Project No.: 131478SA

Depth	Water Level	Hour	Date
Free Water was Not Encountered			

NT = Not Tested



AS BUILT DATE

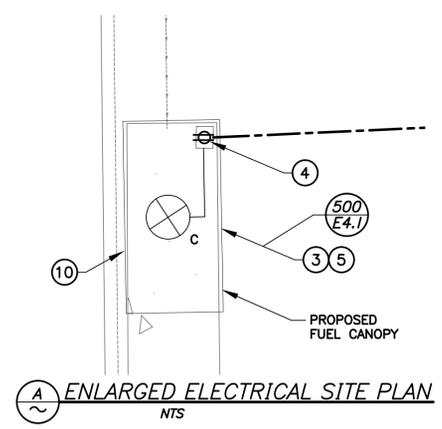
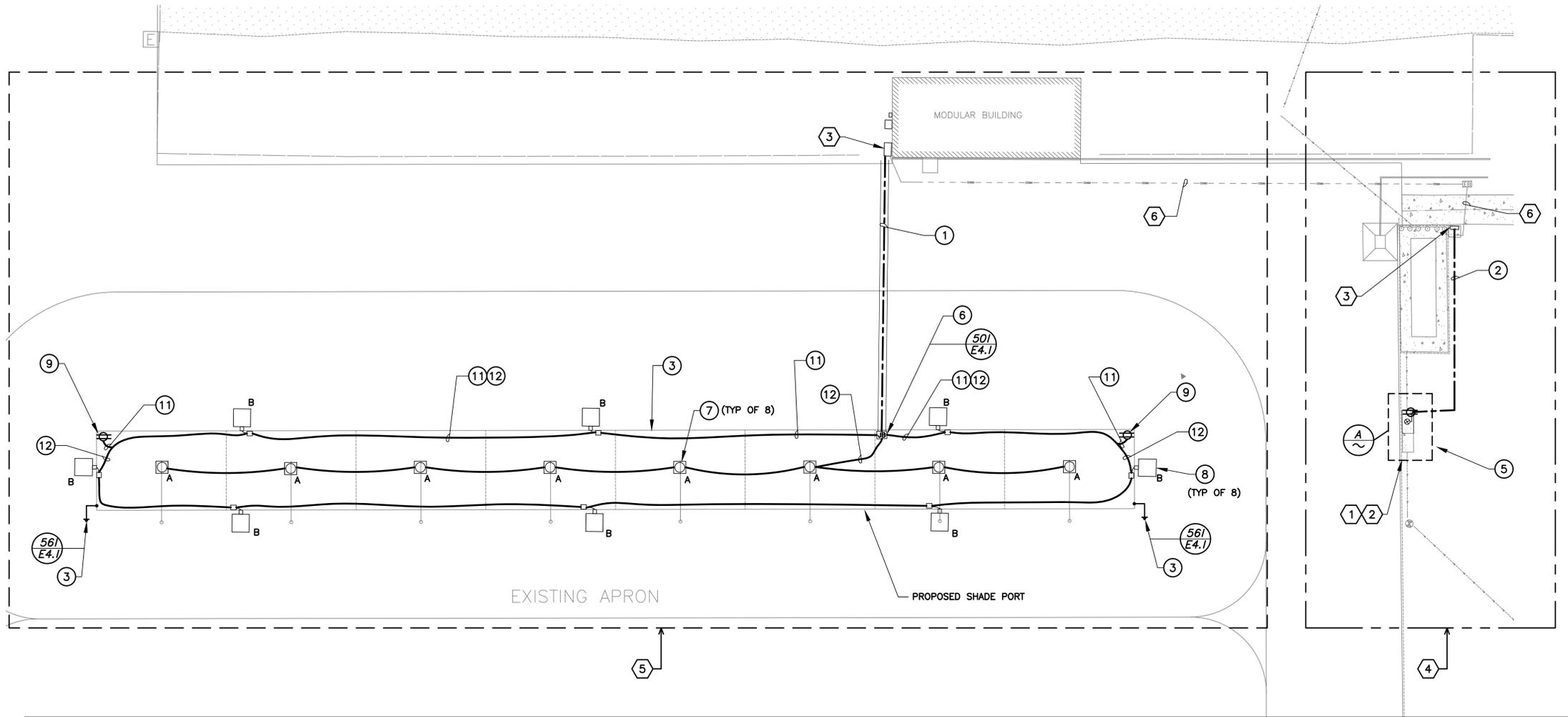
Dibble Engineering
7500 N. Dreamy Draw Drive
Suite 200
Phoenix, AZ 85020
P 602.957.1155

Professional Engineer Seal:
49015 RYAN WILLIAM TONER
Arizona, U.S.A.
Expires 12/31/17

REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORTS		
BORING LOGS		
DRN: DSO	DES: MJB	CK: RWT
DATE: 05.22.14	DATE: 05.22.14	DATE: 05.22.14
SCALE:	GT1.2	17 OF 24



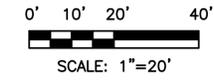
QA PROJECTS\2000\12055 SAN MANUEL AIRPORT NEW T-SHADE LIGHTING\CAD SHEETS\12055 E2.0 SANED.LWG May. 28, 2014 1:13 PM



MATCHLINE - SEE SHEET E2.1

PROPOSED FUEL CANOPY REQUIREMENTS

1. COLUMNS SHALL BE 5"x5" STEEL TUBE, MINIMUM .120 WALL THICKNESS.
2. ALL BEAMS SHALL BE STRUCTURAL STEEL TUBING.
3. ALL BOLTS SHALL BE A-325 OR A-307 AND HIDDEN AT ALL CONNECTIONS.
4. ROOFING SHALL BE 24-GAUGE HR-36 STEEL PRE-CUT AND PRE-FINISHED WITH RIBS RUNNING WITH THE SLOPE OF THE ROOF.
5. ALL STRUCTURES SHALL BE DESIGNED AND FABRICATED TO THE IBC (LATEST EDITION) OR CURRENT LOCAL BUILDING CODE WITH STANDARD LOAD DESIGNS OF THE GREATER VALUE OF 20# PER S.F. MINIMUM LIVE LOAD AND 100MPH SUSTAINED WIND LOAD OR SITE SPECIFIC CONDITIONS AND THE APPLICABLE ZONE FOR SEISMIC LOADS.
6. ALL MEMBERS SHALL BE DESIGNED ACCORDING TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS AND THE AMERICAN IRON AND STEEL INSTITUTE (AISI) SPECIFICATIONS FOR COLD-FORMED MEMBERS.
7. ALL FABRICATION WELDS SHALL BE IN STRICT ACCORDANCE WITH THE STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY (AWS) SPECIFICATION.
8. THE SHADE STRUCTURE MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS, SEALED BY A REGISTERED ENGINEER IN THE STATE IN WHICH THE STRUCTURE IS TO BE ERECTED, FOR REVIEW AND APPROVAL BY THE APPROVING AGENCY.
9. FOOTINGS SHALL BE STRUCTURALLY ENGINEERED BY THE STRUCTURE MANUFACTURER TO MEET LOCAL CODES AND SITE CONDITIONS.
10. MANUFACTURER SHALL SUPPLY COMPLETE LAYOUT AND DETAIL PLANS WITH INSTALLATION INSTRUCTIONS FOR THE STRUCTURE FOR ENGINEER APPROVAL. THE STRUCTURE SHALL BE ERECTED IN A WORKMAN-LIKE MANNER WITH FRAMING, ROOFING AND TRIM INSTALLED ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
11. MANUFACTURER SHALL WARRANT THE STRUCTURE TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF FIVE (5) YEARS FROM DATE OF ACCEPTANCE BY OWNER.



AS BUILT DATE

Dibble Engineering

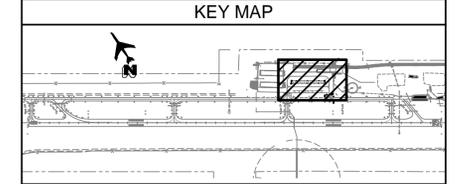
16719 East Palmdale Blvd., Suite 202
Phoenix Hills, AZ 85208
Phone: (480) 816-5541
Fax: (480) 816-5540

CR engineers

36696
CATHERINE M.
ALCORN
Professional Engineer
No. 28828
Expires 9/30/2016

- CONSTRUCTION NOTE ○
- ① INSTALL NEW PARALLEL RUN IN CONCRETE ENCASED DUCTBANK - 2-#10, #10 GND IN 1"C (CIRCUITS MB-16 AND MB-18), SEE DETAIL 628 ON SHEET E4.0. (100 LF)
 - ② NEW 2-#10, #10 GND IN 1"C, SEE DETAIL 630 ON SHEET E-4.0. (75 LF)
 - ③ INSTALL GROUND RODS PER DETAIL 500, SHEET E4.1, TO SHADE PORT STRUCTURE AND CANOPY COLUMN WITH 3/4" GROUND ROD AND #4 BARE STRANDED COPPER. CONNECTIONS SHALL BE EXOTHERMICALLY WELDED CONNECTIONS.
 - ④ NEW MAINTENANCE RECEPTACLE RATED FOR CLASS 1 DIVISION 1 LOCATION.
 - ⑤ ALL ELECTRICAL IN FUEL FARM SHALL BE CLASS 1, DIVISION 1 HAZARDOUS LOCATION FITTINGS AND COMPONENTS AND SHALL COMPLY WITH NEC 501, CONTRACTOR TO VERIFY ALL EQUIPMENT RATINGS PRIOR TO INSTALLATION.
 - ⑥ NEW 6"x6"x4" NEMA 3R JUNCTION BOX TO BE MOUNTED 16" AFF ONTO STRUCTURE COLUMN.
 - ⑦ NEW FIXTURE "A" TO BE MOUNTED ON STRUCTURE WITH WEATHERPROOF WHIP INTO 4"x4"x2" WEATHERPROOF JUNCTION BOX.
 - ⑧ NEW FIXTURE "B" TO BE TO BE FLUSH MOUNTED TO CANOPY LID.
 - ⑨ NEW DUPLEX RECEPTACLE IN WEATHER PROOF BOX WITH WEATHER PROOF COVER @ 16" AFF ON CKT MB-18.
 - ⑩ NEW 4'x8' FUEL CANOPY (1 TOTAL). SEE PROPOSED FUEL CANOPY REQUIREMENTS.
 - ⑪ MB-18: 2-#10, #10 GND IN 1"C (450 LF).
 - ⑫ MB-16: 2-#10, #10 GND IN 1"C (1,210 LF).

- ⬡ REFERENCE NOTE ⬡
- ① CLASS 1 DIVISION 1 AREA.
 - ② CONTRACTOR TO COORDINATE CONSTRUCTION WITH AIRPORT HAZMAT AUTHORITY PRIOR TO CONSTRUCTION. ALL MOUNTING MATERIAL MUST BE STAINLESS STEEL.
 - ③ CONTRACTOR TO VERIFY AND MATCH CIRCUIT BREAKER IN DISTRIBUTION PANEL IN BRACING AND TYPE.
 - ④ ELECTRICAL WORK IN THIS AREA SHALL BE PART OF THE BASE BID.
 - ⑤ ELECTRICAL WORK IN THIS AREA SHALL BE PART OF ADD ALTERNATE NO. 2.
 - ⑥ EXISTING COMMUNICATION LINE. CONTRACTOR TO PROTECT IN PLACE.



REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORT		
ELECTRICAL SITE PLAN		
DRN: JWB	DES: MM	CK: CA
DATE: 5/19/14	DATE: 5/19/14	DATE: 5/19/14
SCALE: AS NOTED	E2.0	19 OF 24

C:\PROJECTS\12000\12055 SAN MANUEL AIRPORT NEW T-SHADE LIGHTING\CAD SHEETS\12055 E2.1.DWG, May, 30, 2014, 10:37 AM

AS BUILT DATE

Dibble Engineering

16719 East Palmdale Blvd., Suite 202
Phoenix Hills, AZ 85306
Phone: (480) 816-5541
Fax: (480) 816-5540

CR engineers

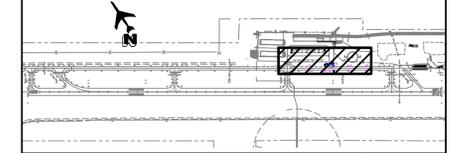
36696
CATHERINE M. ALCORN
Professional Engineer
Arizona State License No. 29001
Expires 9/30/2016

- DEMOLITION NOTES
- 1 REMOVE AND RELOCATE EXISTING TAXIWAY RETROREFLECTIVE MARKER. (8 TOTAL)

- CONSTRUCTION NOTE
- 1 SIZE 1, 2-MODULE, UN-LIT AIRFIELD GUIDANCE SIGN. (1 TOTAL)
 - 2 SIZE 1, 3-MODULE, UN-LIT AIRFIELD GUIDANCE SIGN (2 TOTAL).
 - 3 RELOCATED TAXIWAY RETROREFLECTIVE MARKER (8 TOTAL).
 - 4 NEW TAXIWAY RETROREFLECTIVE MARKER (5 TOTAL).

- REFERENCE NOTE
- 1 ALL ELECTRICAL WORK SHOWN ON THIS SHEET SHALL BE PART OF THE BASE BID.
 - 2 SEE DETAIL 150 ON SHEET E4.0.

KEY MAP



REVISION	BY	DATE

SAN MANUEL AIRPORT

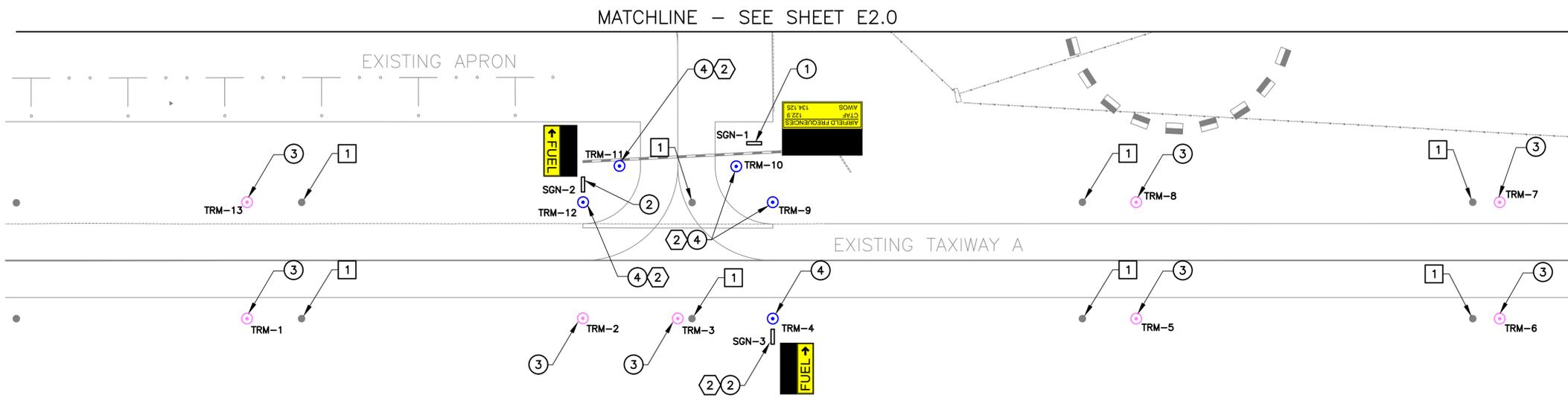
DIBBLE PROJECT NO 101133.04

AIRPORT APRON RECONSTRUCTION & SHADE PORT

AIRFIELD ELECTRICAL SITE PLAN

DRN: JBW	DES: MM	CK: CA	DRAWING	SHEET
DATE: 5/19/14	DATE: 5/19/14	DATE: 5/19/14	E2.1	20 OF 24

SCALE: AS NOTED



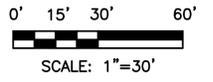
MATCHLINE - SEE SHEET E2.0

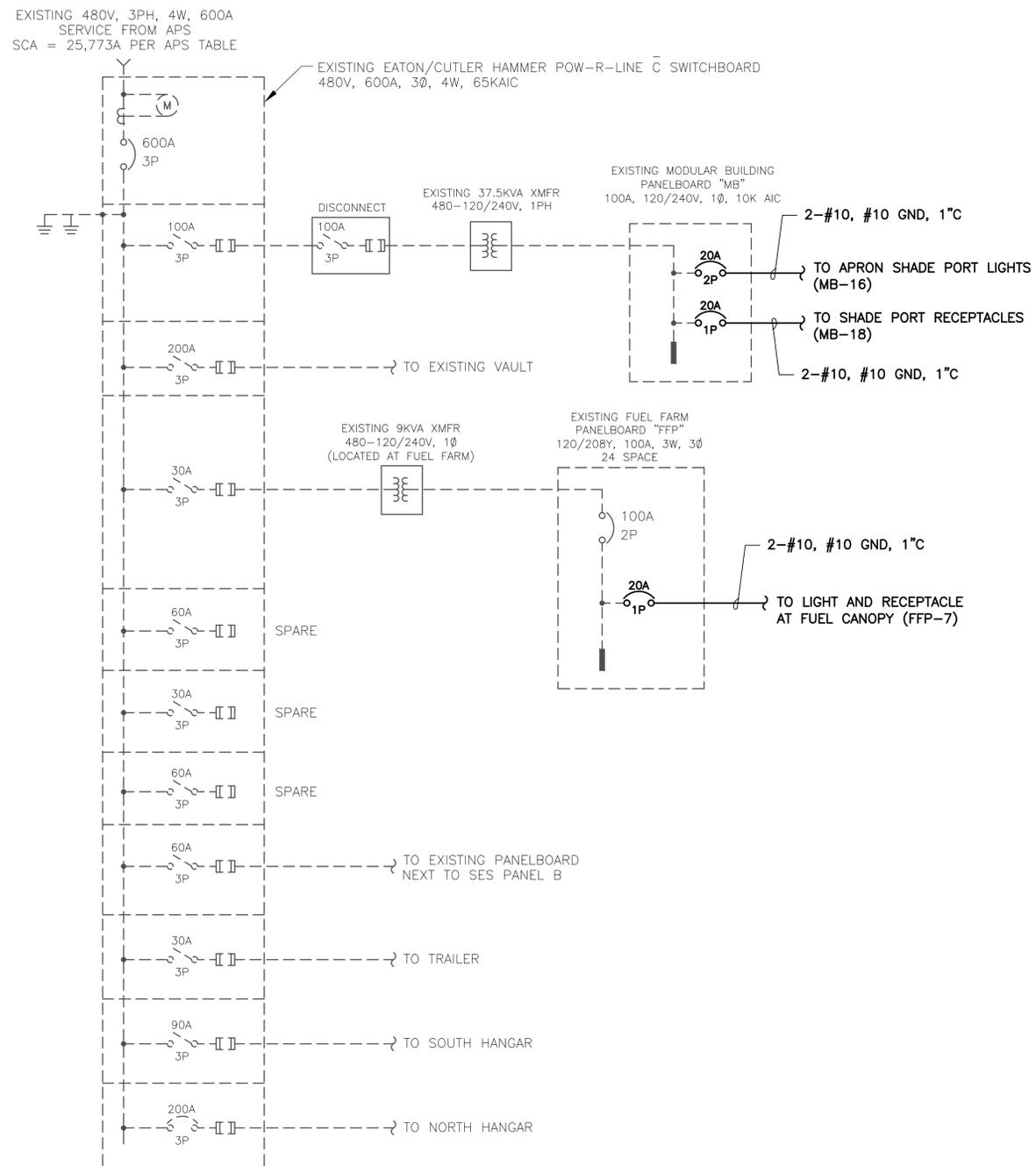
TAXIWAY RETROREFLECTIVE MARKER LOCATIONS

TRM-#	NORTHING	EASTING	TYPE
TRM-1	597405.21	1091593.75	RELOCATED
TRM-2	597317.98	1091727.38	RELOCATED
TRM-3	597293.21	1091765.08	RELOCATED
TRM-4	597268.43	1091802.79	NEW
TRM-5	597173.85	1091947.35	RELOCATED
TRM-6	597079.26	1092091.91	RELOCATED
TRM-7	597125.28	1092122.03	RELOCATED
TRM-8	597219.87	1091977.46	RELOCATED
TRM-9	597314.46	1091832.90	NEW
TRM-10	597338.14	1091827.67	NEW
TRM-11	597368.66	1091781.31	NEW
TRM-12	597363.81	1091757.47	NEW
TRM-13	597451.23	1091623.86	RELOCATED

NEW UN-LIT GUIDANCE SIGN LOCATIONS

SIGN-#	NORTHING	EASTING
SGN-1	597344.53	1091837086
SGN-2	597367.88	1091760.09
SGN-3	597264.25	1091800.05





(A) SINGLE LINE DIAGRAM

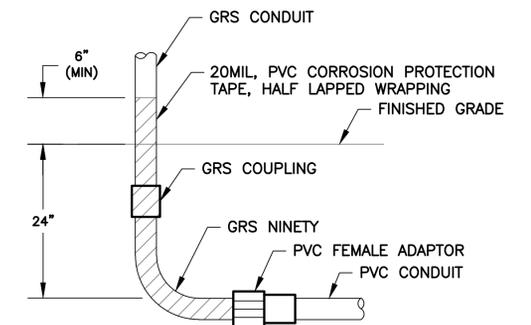
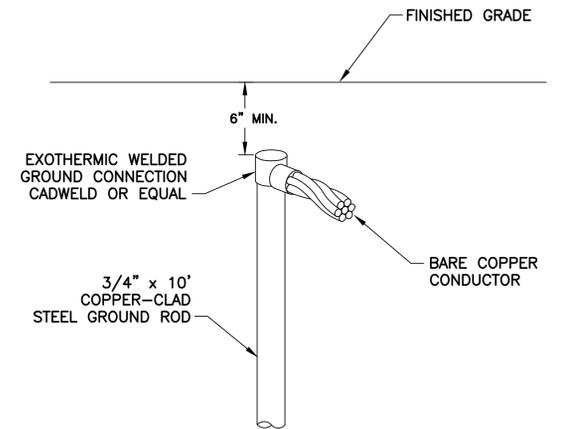
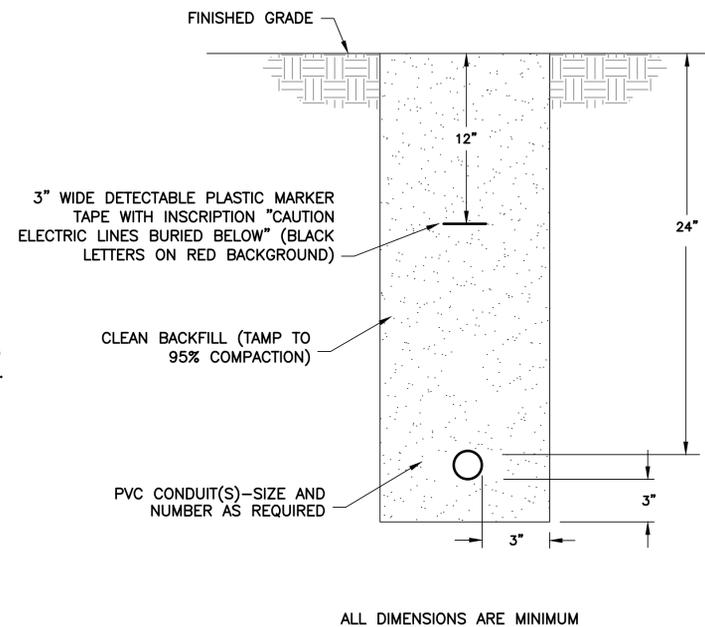
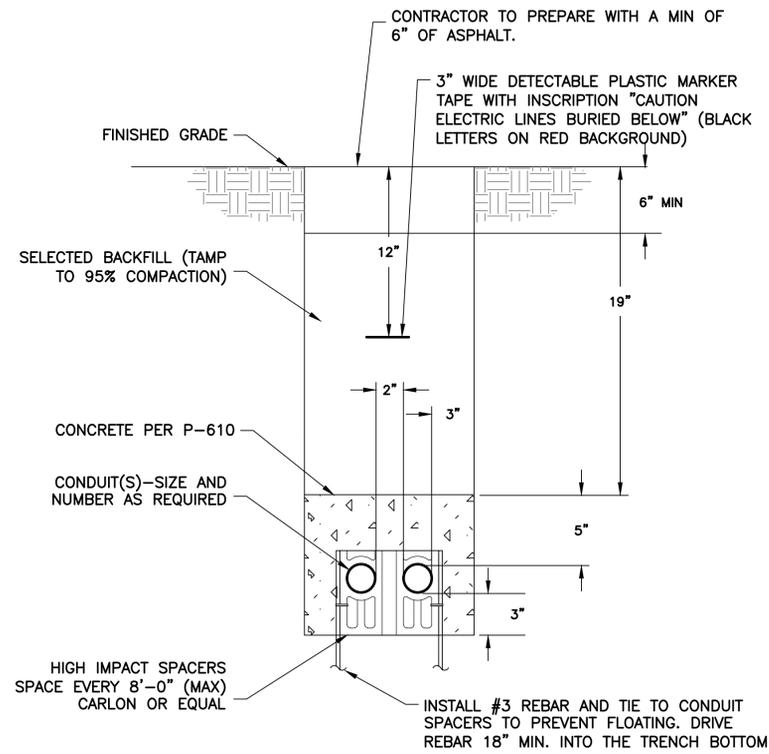
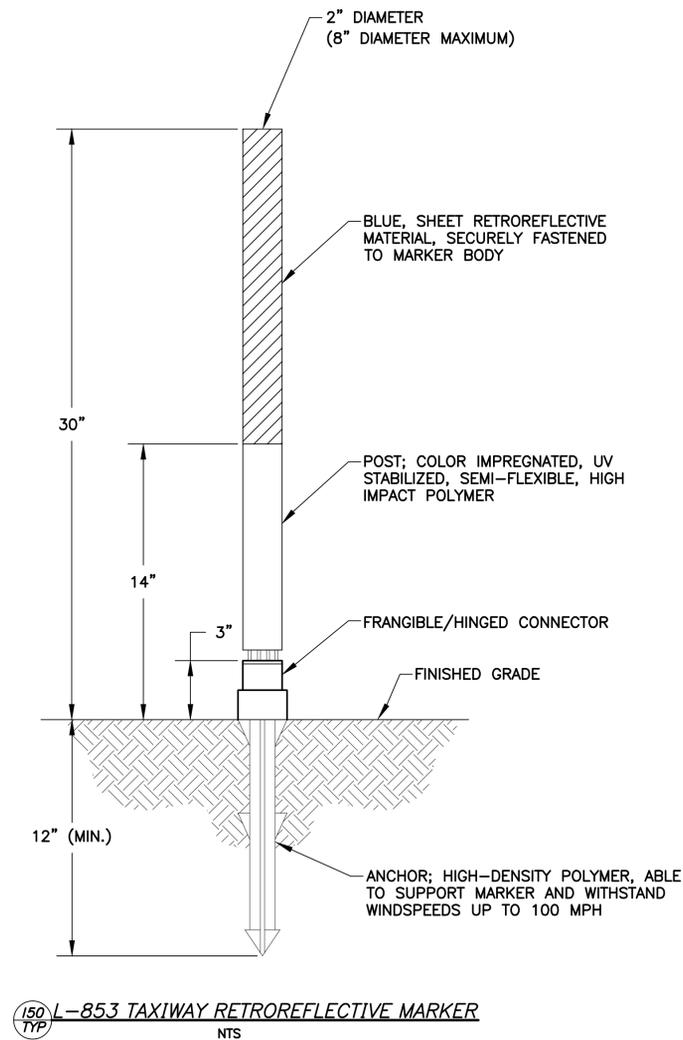
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REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORT		
SINGLE LINE DIAGRAM		
DRN: JBW	DES: MM	CK: CA
DATE: 5/19/14	DATE: 5/19/14	DATE: 5/19/14
SCALE: NONE	E3.0	21 OF 24



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AS BUILT DATE			
16719 East Palmdale Blvd., Suite 202 Phoenix Hills, AZ 85306 Phone: (480) 816-5541 Fax: (480) 816-5540			



NOTE: WHERE CONDUITS ARE RUN IN SLAB, THE 24" DIMENSION DOES NOT APPLY.

NOTES FOR DETAILS 628 AND 630

1. ALL UNDERGROUND CONDUITS SHALL MAINTAIN A 12" (MIN.) SEPARATION FROM ALL OTHER NEW UNDERGROUND FACILITIES (I.E. WATER, SEWER, AND GAS LINES, INCLUDING BOTH PUBLIC AND PRIVATE).

REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORT		
ELECTRICAL DETAILS		
DRN: JBW	DES: MM	CK: CA
DATE: 5/19/14	DATE: 5/19/14	DATE: 5/19/14
SCALE: NONE	E4.0	22 OF 24



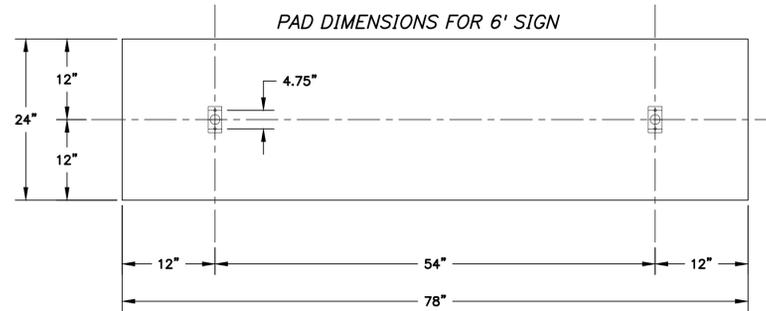
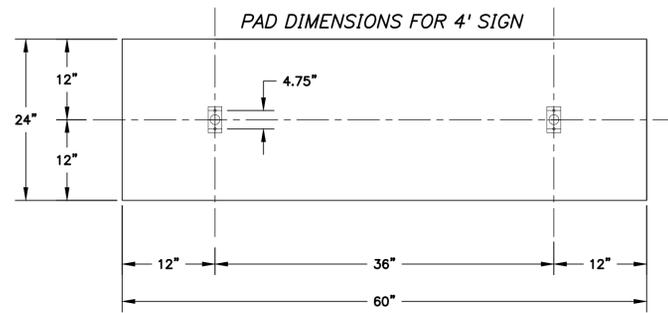
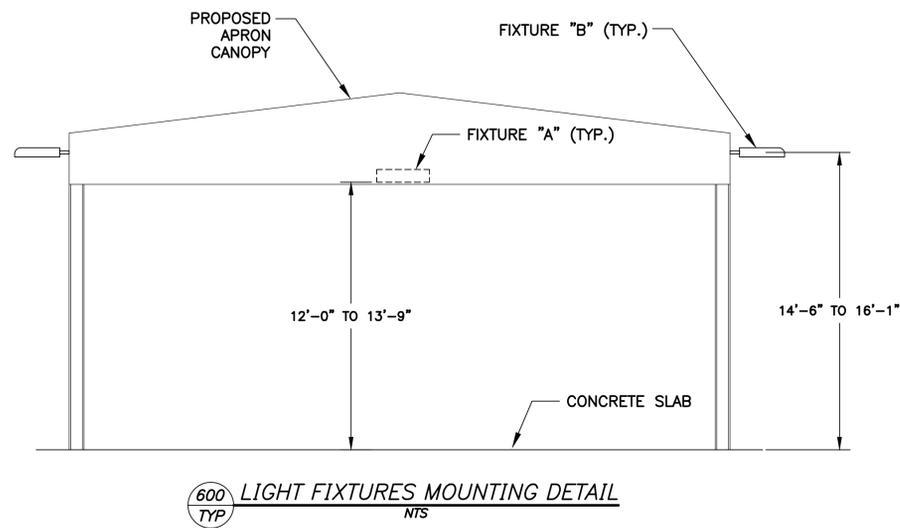
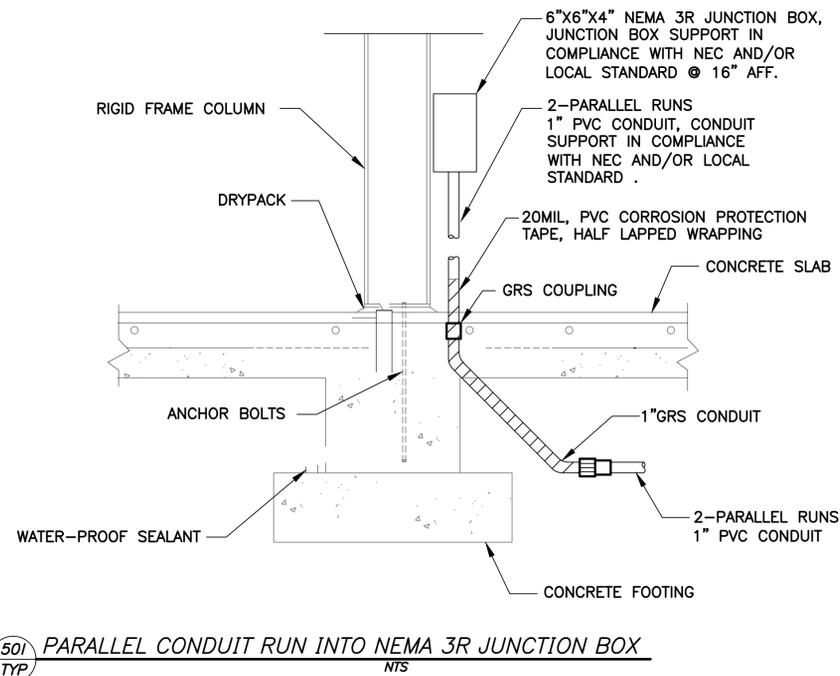
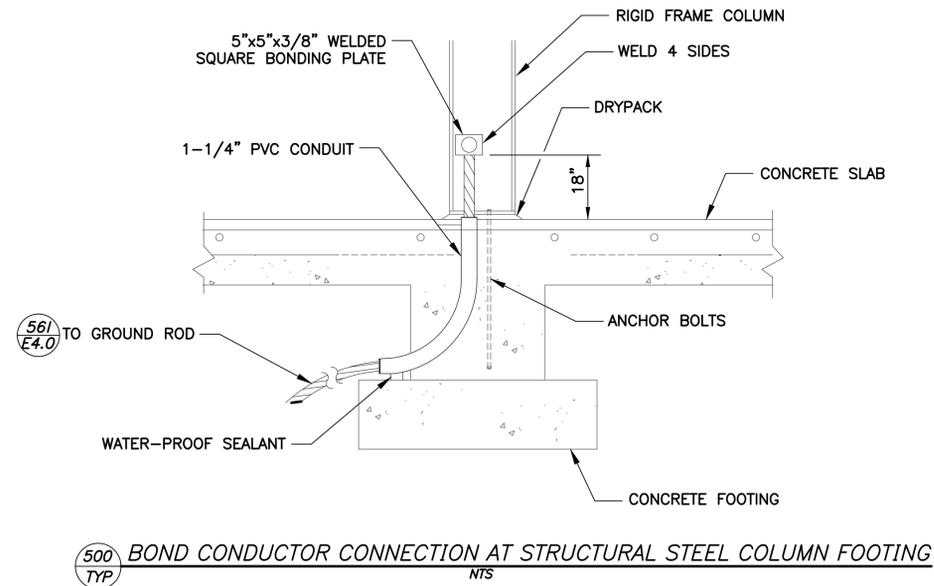
CA PROJECTS\2000\12055 SAN MANUEL AIRPORT NEW T-SHADE LIGHTING\CAD SHEETS\2055 E4.1 WITH UN-LIT SIGN DETAIL.DWG Mod. 5/19/14 11:10 AM

AS BUILT DATE

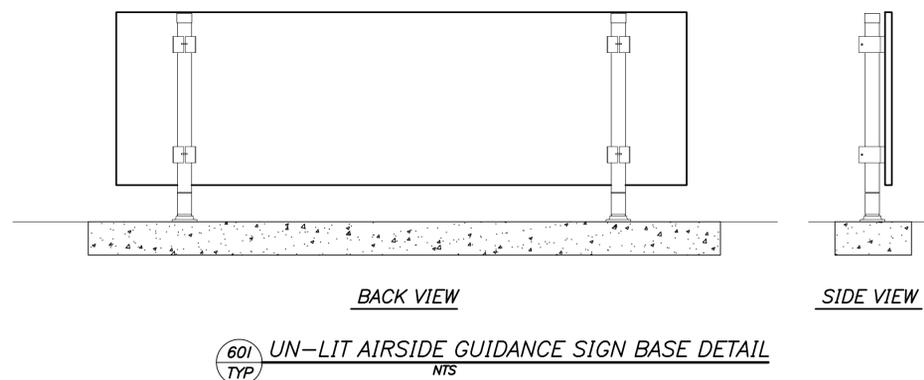
Dibble Engineering CR engineers

16719 East Palmdale Blvd., Suite 202
 Phoenix Hills, AZ 85306
 Phone: (480) 816-5541
 Fax: (480) 816-5540

Professional Engineer
 36696
 CATHERINE M. ALCORN
 State of Arizona
 License No. 29844
 Expires 9/30/2016

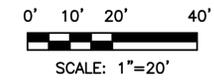


- UNLIT AIRSIDE GUIDANCE SIGN BASE NOTES**
1. BASE SHALL BE LEVEL WITH THE TAXIWAY APRON.
 2. BASE DIMENSIONS MAY VARY PER SIGN MANUFACTURER. INSTALL PER MANUFACTURER'S REQUIREMENTS.



REVISION	BY	DATE
SAN MANUEL AIRPORT		
DIBBLE PROJECT NO 101133.04		
AIRPORT APRON RECONSTRUCTION & SHADE PORT		
ELECTRICAL DETAILS		
DRN: JBW	DES: MM	CK: CA
DATE: 5/19/14	DATE: 5/19/14	DATE: 5/19/14
SCALE: NONE	E4.1	23 OF 24



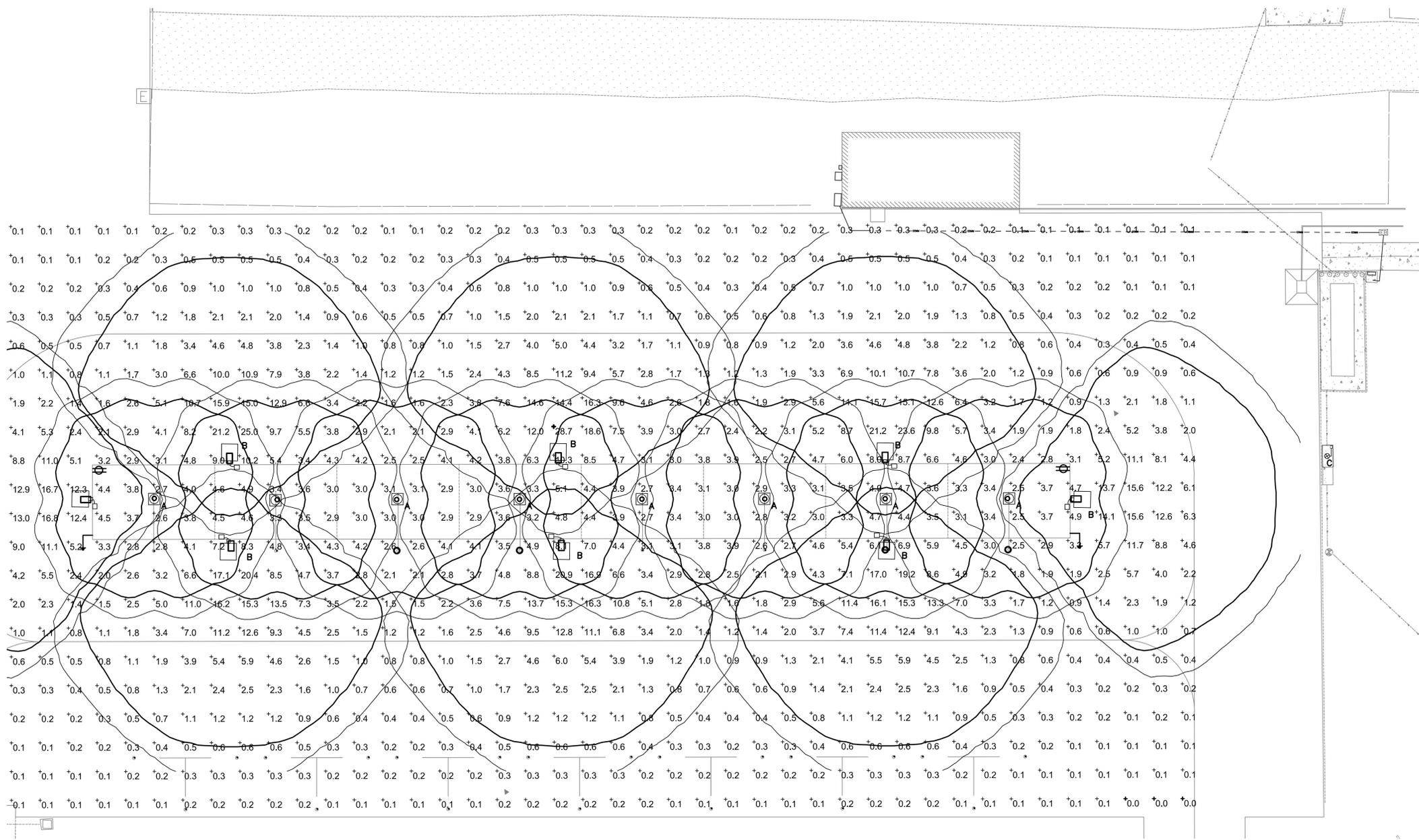


AS BUILT DATE

Dibble Engineering CR engineers

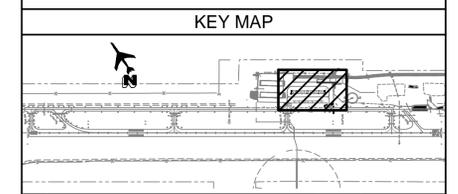
16719 East Palmdale Blvd., Suite 202
Phoenix Hills, AZ 85306
Phone: (480) 816-5541
Fax: (480) 816-5540

Professional Engineer
36696
CATHERINE M. ALCORN
AZ 00000000
Expires 9/30/2016



Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	B	8	KIM LIGHTING	ALT4P35-240L4K	ALTTITUDE ONE-PIECE ALUMINUM EXTRUSION, DIE-CAST ALUMINUM END CAPS, EMITTER DECK CONSISTING OF CARRIER PLATES, HEAT SINKS, LENS AND PRISMS.	240 DIODES, 4200K	1	alt4p35-240k4k.ies	26172.83	1	269.4
	A	8	KIM LIGHTING	PGL71NE45-60LSK	PGL7 LED DIE-CAST ALUMINUM ROUND HOUSING, LED EMITTER DECK CONSISTING OF CARRIER PLATE, HEAT SINK, PRISMS AND LED MODULES.	60 2168 DIODES, 5100K	1	pg71ne45-60sk.ies	8330.005	1	83.2

Statistics							
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
Calc Zone #1	+	2.9 fc	28.7 fc	0.0 fc	N/A	N/A	0.1:1



REVISION BY DATE

SAN MANUEL AIRPORT

DIBBLE PROJECT NO 101133.04

AIRPORT APRON RECONSTRUCTION & SHADE PORT

PHOTOMETRICS

DRN: JBW DES: MM CK: CA
DATE: 5/19/14 DATE: 5/19/14 DATE: 5/19/14

SCALE: AS NOTED

DRAWING SHEET
E5.0 24 OF 24

C:\PROJECTS\12000\12000 SAN MANUEL AIRPORT NEW T-SHADE LIGHTING\CAD SHEETS\12055 E5.DWG, May. 19, 2014, 1:15 PM

