

**ABBREVIATIONS**

ABV	Above	JOR	Inspector of Record
AC	Acoustical	LAV	Lavatory
AC	Asphaltic Concrete	LCS	Lunch Court Shelter
ACP	Acoustical Ceiling Panel	LT	Light
ACR, CR	Ceiling Restoration	MAX	Maximum
ACT	Acoustical Ceiling Tile	MB	Machine Bolt
A/C	Air Conditioning	MECH	Mechanical
ADD, A.L.T.	Additive Alternate	MDF	Medium Density Fiberboard
ADDL	Additional	MFR	Manufacturer
ADJ	Adjacent	MIN	Minimum
A.F.F.	Above Finish Floor	MISC	Miscellaneous
ARCH	Architect/Architectural	MTD	Mounted
ALUM	Aluminum	MTG	Mounting
AWV	At Variance With	MTL	Metal
AWP	Acoustical Wall Panel	MTRL	Material
B.P.	Building Paper	N/C	No Change
BLDG	Building	NEC	National Electrical Code
BLK	Block	NIC	Not In Contract
BLKG	Blocking	NO	Number
BM	Beam	NTS	Not To Scale
B/O	Bottom of	NW	No Finish Work
CA	California	OC	On Center
CAB	Cabinet	OD	Outside Diameter
CBC	California Building Code	O.F.C.I.	Owner Furnished Contractor Installed
CCR	California Code of Regulations	O.F.O.I.	Owner Furnished Owner Installed
CEC	California Electrical Code	OPNG	Opening
CEM	Cement	OPP	Opposite
CFC	California Fire Code	OPP HAND	Opposite Hand
CFCI	Contractor Furnished Contractor Installed	OVERHD	Overhead
CIP	Cast-In-Place	P	Paint
CL	Centerline	P.A.F.	Powder Actuated Fastener
CLG	Calling	PERF	Perforated
CLQ	Clear	PH	Panic Hardware
CMC	California Mechanical Code	PL, PLSTR	Plaster
CMU	Concrete Masonry Unit	PLAM	Plastic Laminate
COL	Column	PLUMB	Plumbing
COMP	Composition	PLYWD	Plywood
COMC	Concrete	PREP	Preparation
CONSTR	Construction	PROP	Property
CONT	Continuous	PTD	Painted
CP	Cement Plaster	PTN	Partition
CPC	California Plumbing Code	PV	Photovoltaic
CPT	Carpet	QT	Quarry Tile
CR, ACR	Ceiling Restoration	RB	Rubber Base
CT	Ceramic Tile	REC	Recommendations
CTR	Center	RCF	Reflected Ceiling Plan
CTRM	Courtroom	REQD	Required
DEMO	Demolition	RES	Resilient
DET	Detail	RET	Retaining
DG	Decomposed Granite	RM	Room
DF	Drinking Fountain	SC	Solid Core
DIA	Diameter	SCHED	Schedule / Scheduled
DIM	Dimension	SHT	Sheet
DN	Down	SIM	Similar
DWG	Drawing	SKYLT	Skylight
EA	Each	SPECS	Specifications
E.C.P.	Exterior Cement Plaster	SS	Stainless Steel
EJ	Expansion Joint	STD	Standard
ELECT	Electrical	STL	Steel
ELEV	Elevator	STRUC	Structural
ELEV	Elevation	STUC	Stucco
EMBED	Embedment	SUSP	Suspended
EQ	Equal	SV	Sheet Vinyl
EQUIP	Equipment	SYM	Symmetrical
ES	Each Side	T/O	Top of
(E) or EXIST	Existing	TOG	Top of Grade
EXP	Expansion	TB	Tack Board
EXT	Exterior	TRANSP	Transparent
FB	Fire Blanket	TRZ	Terrazzo
FC	Fan Coil	TS	Tube Steel
FD	Floor Drain	TYP	Typical
FH	Fire Hydrant	UBC	Uniform Building Code
FE	Fire Extinguisher	UMC	Uniform Mechanical Code
FIN	Finish / Finished	UNO	Unless Noted Otherwise
FIXT	Fixture	UNO	Unless Otherwise Noted
FLR	Floor / Flooring	UPC	Uniform Plumbing Code
FOC	Face of Concrete	USC	Under Separate Contract
FOF	Face of Finish	VERT	Vertical
FOS	Face of Stud	VIF	Verify In Field
FOW	Face of Wall	WJ	With
FP	Fire Proofed	WD	Wood
F.R.	Fire Resistive	WHT	White
FT	Feet	W/O	Without
FV	Field Verify	W.O.	Where Occurs
FLUOR	Fluorescent	WP	Waterproof
GA	Gauge	W.R.	Water Resistant
GALV or G.I.	Galvanized Iron	W.M.	Wall Mounted
GB, GYPBD	Gypsum Board	WT	Weight
or GYP	Gypsum Board	WDW	Window
GEN	General	&	And
G.S.	Galvanized Steel	@	At
GLB	Gly-Lam Beam		
GSM	Galvanized Sheet Metal		
HB	Hose Bib		
HDWD	Hardwood		
HM	Hollow Metal		
H.O.	Hold Open		
HQRZ	Horizontal		
HT	Height		
HDWR	Hardware		
IN	Inch		
INT	Interior		
INCL	Included		
INFO	Information		
INSUL	Insulation		

# Solar Power Generation Systems at Eight Sites Penn Elementary School

**GENERAL NOTES**

- The intent of the Drawings and Specifications is to modify the Facility for accessibility in accordance with Title 24, California Code of Regulations. Should any conditions develop not covered by the Contract Documents such that the finished Work will not comply with said Title 24, California Code of Regulations, a Change Order detailing and specifying the required Work shall be submitted to and approved by DSA-ACS before proceeding with the Work.
- The work shall be performed in accordance with applicable code requirements including but not limited to the following:
  - 2.1. 2013 Building Standards Administrative Code (CAC)**, Part 1, Title 24 C.C.R.
  - 2.2. 2013 California Building Code (CBC)**, Part 2, Title 24 C.C.R. (2012 International Building Code and 2013 California Amendments)
  - 2.3. 2013 California Electrical Code (CEC)**, Part 3, Title 24 C.C.R. (2011 National Electrical Code and 2013 California Amendments)
  - 2.4. 2013 California Mechanical Code (CMC)**, Part 4, Title 24 C.C.R. (2012 Uniform Mechanical Code and 2013 California Amendments)
  - 2.5. 2013 California Plumbing Code (CPC)**, Part 5, Title 24 C.C.R. (2012 Uniform Plumbing Code and 2013 California Amendments)
  - 2.6. 2013 California Energy Code**, Part 6, Title 24 C.C.R.
  - 2.7. 2013 California Elevator Code**, Part 7, Title 24 C.C.R.
  - 2.8. 2013 California Fire Code (CFC)**, Part 9, Title 24 C.C.R. (2012 International Fire Code and 2013 California Amendments)
  - 2.9. 2013 California Green Building Standards Code (CALGreen)**, Part 11, Title 24 C.C.R.
  - 2.10. 2013 California Referenced Standards**, Part 12, Title 24 C.C.R.
  - 2.11. Title 19 C.C.R. Public Safety, State Fire Marshal Regulations.**
- Additionally, work must comply with applicable standards including but not limited to the following:
  - 3.1. NFPA 13** Automatic Sprinkler Systems 2013 Edition
  - 3.2. NFPA 14** Standpipe Systems (CA Amended) 2013 Edition
  - 3.3. NFPA 17a** Wet Chemical Systems 2013 Edition
  - 3.4. NFPA 20** Stationary Pumps 2013 Edition
  - 3.5. NFPA 24** Private Fire Mains (CA Amended) 2013 Edition
  - 3.6. NFPA 72** National Fire Alarm Code (CA Amended) 2013 Edition
  - 3.7. NFPA 80** Fire Door and Other Opening Protectives 2013 Edition
  - 3.8. NFPA 2001** Clean Agent Fire Extinguishing Systems 2013 Edition
  - 3.9. Reference code section for NFPA Standards - 2013 CBC (SFM) Chapter 35.**
  - 3.10. See Chapter 35 for State of California amendments to NFPA Standards.**
- Patch and repair to pre-existing condition all existing visible items to remain which are damaged or disrupted during the course of the work. Work indicated to abut or join existing work shall be finished and/or refinished together so as to give no visible evidence of the joint.
- Provide approved galvanic barrier between all dissimilar metals in contact with one another.
- The contractor shall verify the conditions of the site and report all discrepancies between these documents and existing conditions to the District Inspector or Architect before proceeding with the work.
- These drawings and the specifications comprise the contract documents and must be used in conjunction with each other, not separately.
- Fire safety during construction, remodel or demolition of a building, shall comply with C.F.C. Chapter 33.
- Contractor is responsible for removing and storing all equipment to original working order and furnishings prior to work in existing areas.
- Should any existing conditions, such as deterioration or non-complying construction, be discovered which is not covered by the DSA approved documents wherein the finished work will not comply with Title 24, California Code of Regulations, a Construction Change Document (CCD), or a separate set of plans and specifications detailing and specifying the required repair work, shall be submitted to and approved by the DSA before proceeding with the repair work.

**DIRECTORY**

**OWNER**  
San Diego Unified School District  
SYDNEY HAWKINS, Project Coordinator  
4860 Ruffner Street  
San Diego, CA 92111-1522  
619.260.5417

**PHOTOVOLTAICS**  
Sage Renewables  
TOM WILLIARD, Principal  
12315 Sir Francis Drake Blvd  
Inverness, CA 94937

**CIVIL**  
Snypes-Dye Associates  
WILLIAM DICK, Principal  
8348 Center Drive, Suite G  
La Mesa, CA 91942-2910

**LANDSCAPE**  
Schmidt Design Group, Inc  
JEFF JUSTUS, Principal  
1111 6th Avenue, Suite 500  
San Diego, CA 92101

**ARCHITECT**  
Zagrodnik + Thomas Architects, LLP  
SCOTT THOMAS, Partner  
3956 30th Street  
San Diego, CA 92104  
619.528.1199; fax: 619.525.8181

**STRUCTURAL**  
Miyamoto International  
PETER CARLSON, Senior Associate  
5151 Shoreham Place #280  
San Diego, CA 92122

**MECHANICAL**  
Bender-Dean Engineering  
MARK BENDER, Principal  
438 Camino Del Rio South  
Suite 217  
San Diego, CA 92108

**ELECTRICAL**  
Turpin & Rattan Engineering  
DALE FRANCHAK, Associate  
47419 Palm Avenue  
LaMesa, CA 91941

**GENERAL INFORMATION**

G5-01 Title Sheet

**CIVIL DRAWINGS**

C1.5 Penn ES Aerial Topo Survey  
C2.5 Penn ES Hose Bib Location Plan  
C2.5A Penn ES Possible Site Conflicts  
(Markup on plan by ZTA)

**LANDSCAPE DRAWINGS**

L0-01 Sample Exhibit  
L5-01 Penn ES Demolition  
L5-02 Penn ES Repair

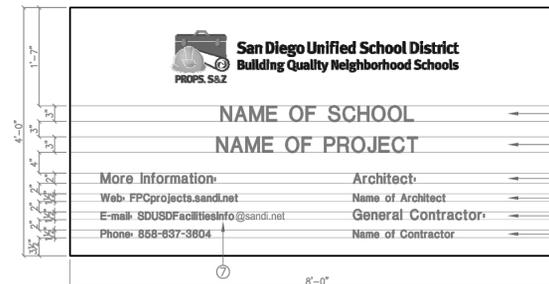
**ARCHITECTURAL DRAWINGS**

A5-01 Penn ES Site Plan  
A5-02 NOT USED. No POT for groundmount

**ELECTRICAL DRAWINGS**

E5-01 Penn ES Electrical Site Plan  
E5-02 Penn ES Single Line Diagram

**CONSTRUCTION SIGN DETAIL**



**PROJECT SIGN**

Contractor shall verify all information with District prior to starting sign.

**DESIGN LEGEND:**

- All letters on project sign shall be HELVETICA MEDIUM.
- Sign shall be 8'-0" wide by 4'-0" high (3/4" EXTERIOR GRADE PLYWOOD) with white background.
- Number 3: 2-1/2" black letters.
- Number 4: 2-1/2" black letters.
- Number 5: 2" black letters.
- Number 6: 2" black letters.
- Number 7: 1-1/2" black letters.
- Number 8: 3" black letters.
- Number 9: 2-1/2" BOLD black letters.

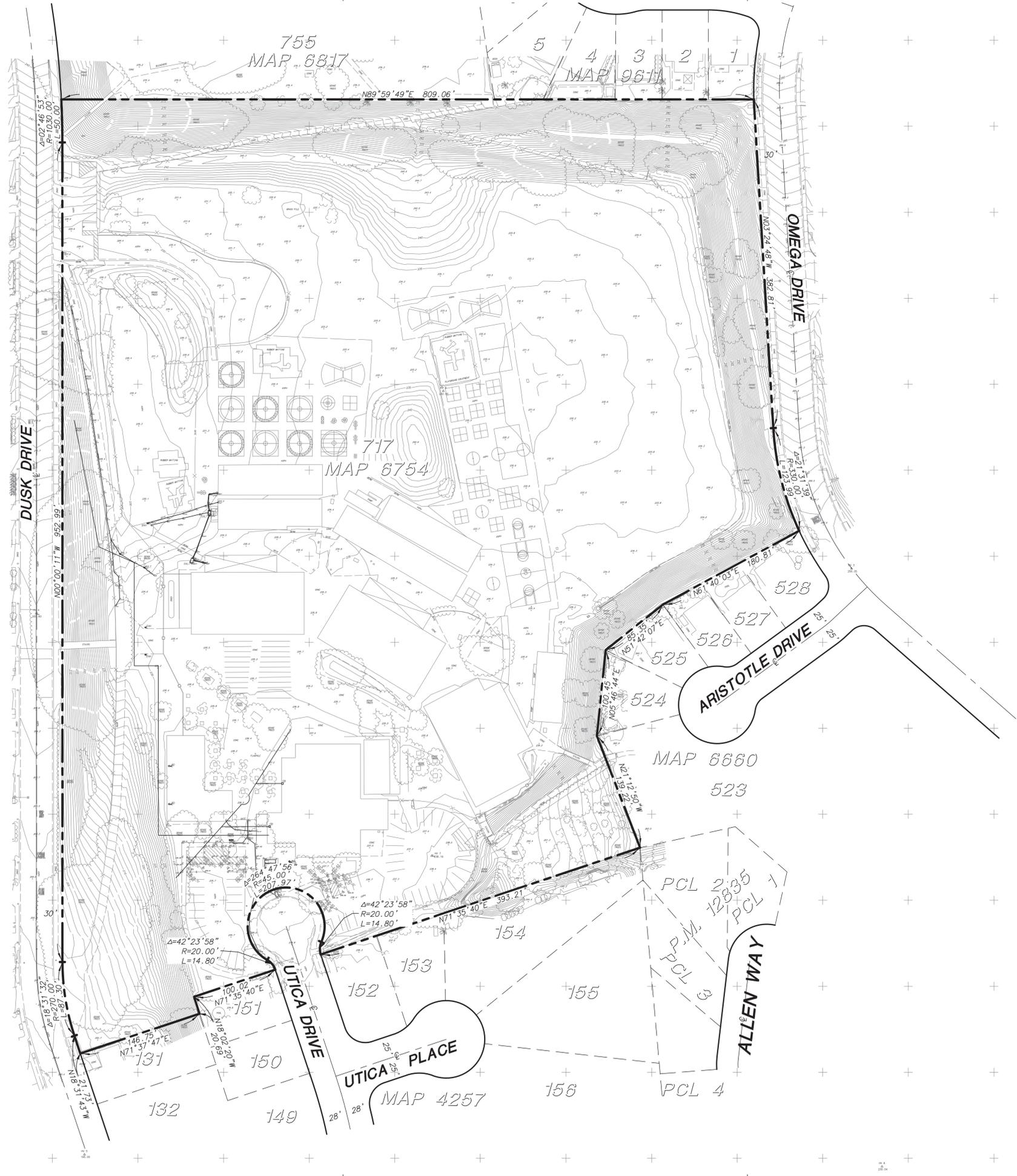
**PAINT LEGEND:**

Paint shall be exterior flat:  
• Black - Frazee Ebony Black, 260200 Acri-tec

For Questions regarding this project please contact:  
Cynthia Reed-Porter, Communications Supervisor San Diego Unified School District  
Office: 858-637-3607 / Mobile: 619-546-3378 / E-mail: creed-porter@sandi.net

DATE	DATE	DATE	DATE	DATE	DATE
REVISION	REVISION	REVISION	REVISION	REVISION	REVISION
<b>REVIEWED BY</b>					
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CONSULTANT					
ARCHITECT					
PREPARED FOR <b>BOARD OF EDUCATION</b> SAN DIEGO UNIFIED SCHOOL DISTRICT SAN DIEGO, CALIFORNIA					
PREPARED BY ZAGRODNIK + THOMAS ARCHITECTS, LLP					
Penn Elementary School Title Sheet FACILITIES MANAGEMENT <b>Solar Power Generation Systems</b>					
SUBMITTAL: 00 Submittal	PROJECT NO. 1521				DATE 12/15/2015
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<b>G5-01</b>					

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 Drawn by: JAG, 2015 Zagoznik + Thomas Architects, LLP



**LEGAL DESCRIPTION:**

LOT 717 OF BAY TERRACES UNIT NO. 5, ACCORDING TO MAP THEREOF NO.6754, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, OCTOBER 13, 1970.

**ASSESSOR'S PARCEL NUMBER:**

588-400-01

**BENCHMARK:**

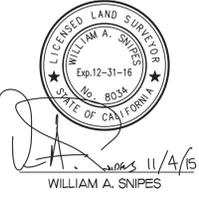
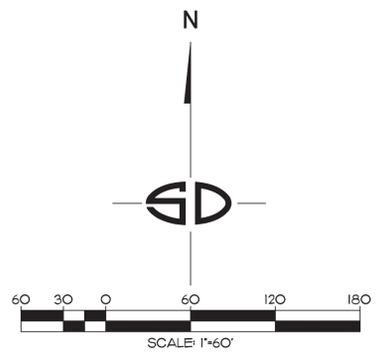
THE BENCHMARK FOR THIS SURVEY IS THE CITY OF SAN DIEGO BRASS PLUG IN THE TOP OF THE CURB INLET AT THE NORTHEAST CORNER OF DUSK DRIVE AND PARKSIDE AVENUE, ELEVATION = 148,546, NGVD29.

**UTILITY NOTES:**

1. UNDERGROUND SOLUTIONS, INC. PROVIDED MARK-OUT SERVICES OVER THE PROPOSED LOCATIONS OF THE SOLAR PANELS AND NEAR THE MAIN ELECTRICAL SERVICE. A CONTINUOUS MARK-OUT BETWEEN THE SOLAR PANELS AND MAIN ELECTRICAL SERVICE WAS NOT PROVIDED AS THERE WAS NOT PRECISELY DEFINED ROUTING FOR THE CONDUIT.
2. ADDITIONAL UTILITIES WERE PLOTTED FROM PLANS DOWNLOADED FROM THE DISTRICT'S ON-LINE AERO WEBSITE.
3. ADDITIONAL UTILITIES POTENTIALLY COULD BE LOCATED WITHIN THE PROPOSED WORK AREAS AS THEY HAVE THE POTENTIAL TO NOT BE TRACEABLE WITH MARK-OUT EQUIPMENT AND/OR THERE WERE NO PLANS OF RECORD AVAILABLE ON THE AERO SITE.

**LEGEND:**

- ◆◆ - INDICATES FIRE HYDRANT.
- TRANS - INDICATES TRANSFORMER.
- WVLT - INDICATES WATER VALLT.
- WM - INDICATES WATER METER.
- SCO - INDICATES SEWER CLEANOUT.
- BFP - INDICATES BACK FLOW PREVENTER.
- RD - INDICATES ROOF DRAIN.
- GVLV - INDICATES GAS VALVE.
- SVLT - INDICATES SIGNAL VALLT.
- UHH - INDICATES UTILITY HANDHOLE.
- EH - INDICATES ELECTRICAL HANDHOLE.
- TG - INDICATES TOP OF GRATE.
- Gas - - INDICATES GAS MARKOUT.
- Elect - - INDICATES ELECTRICAL MARKOUT.
- Comm - - INDICATES COMMUNICATION MARKOUT.
- Sewer - - INDICATES SEWER MARKOUT.
- Water - - INDICATES WATER MARKOUT.
- Storm - - INDICATES STORM DRAIN FROM AS-BUILT.
- Irrig - - INDICATES IRRIGATION MAIN FROM AS-BUILT.



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CONSULTANT



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 SAN DIEGO, CALIFORNIA

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 ZAGRODNIK + THOMAS ARCHITECTS, LLP

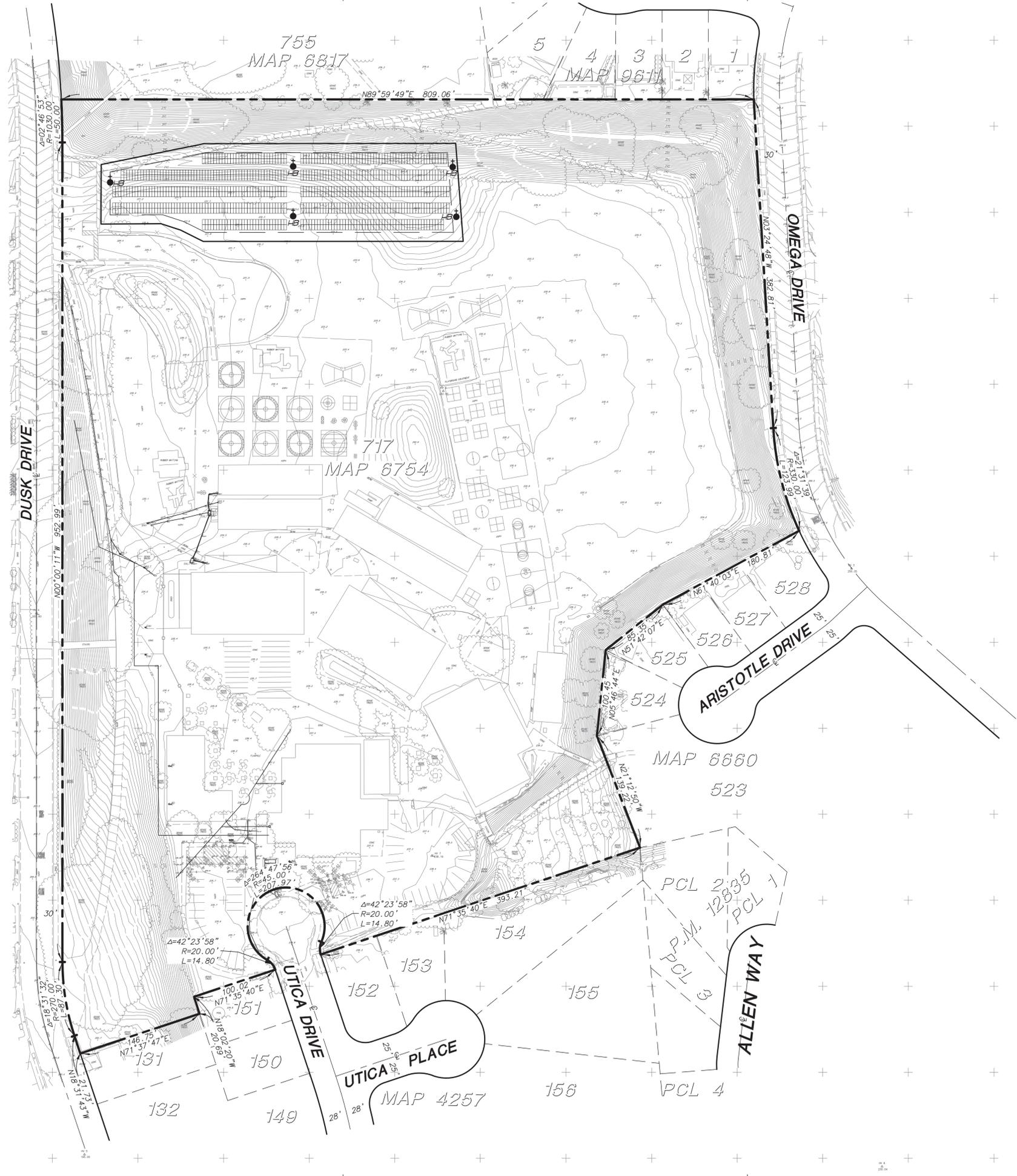
**AERIAL TOPOGRAPHIC SURVEY**  
**PENN HS**

FACILITIES MANAGEMENT  
**Solar Power Generation Systems**

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 George W. 205 Zagonnik - Project Architect, L.P.



**UTILITY NOTES:**

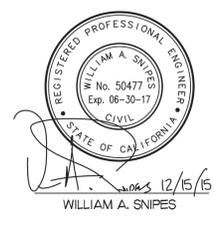
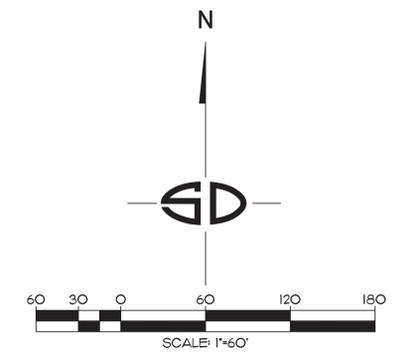
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**HOSE BIB CONSTRUCTION NOTES:**

1. THE LOCATIONS SHOWN FOR THE PLACEMENT OF THE HOSE BIBS ARE FOR INFORMATIONAL PURPOSES ONLY.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE ACTUAL PLACEMENT OF THE HOSE BIBS AND FOR LOCATING WATER SERVICE SOURCE TO SERVE EACH ONE.
3. A HOSE BIB SHALL BE LOCATED WITHIN 50' OF EACH SET OF SOLAR PANELS AND SHALL NOT BE MORE THAN 200' FROM THE END OF THE SET.
4. A HOSE BIB NOT ON THE SAME PLANE OR TIER SHALL NOT BE UTILIZED FOR THE DIFFERENT PLANE OR TIER REGARDLESS OF DISTANCE.
5. PIPING TO HOSE BIB SHALL BE A MINIMUM OF 3/4" PVC.

**LEGEND:**

HB - INDICATES HOSE BIB



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 SAN DIEGO, CALIFORNIA

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 ZAGRODNIK + THOMAS ARCHITECTS, LLP

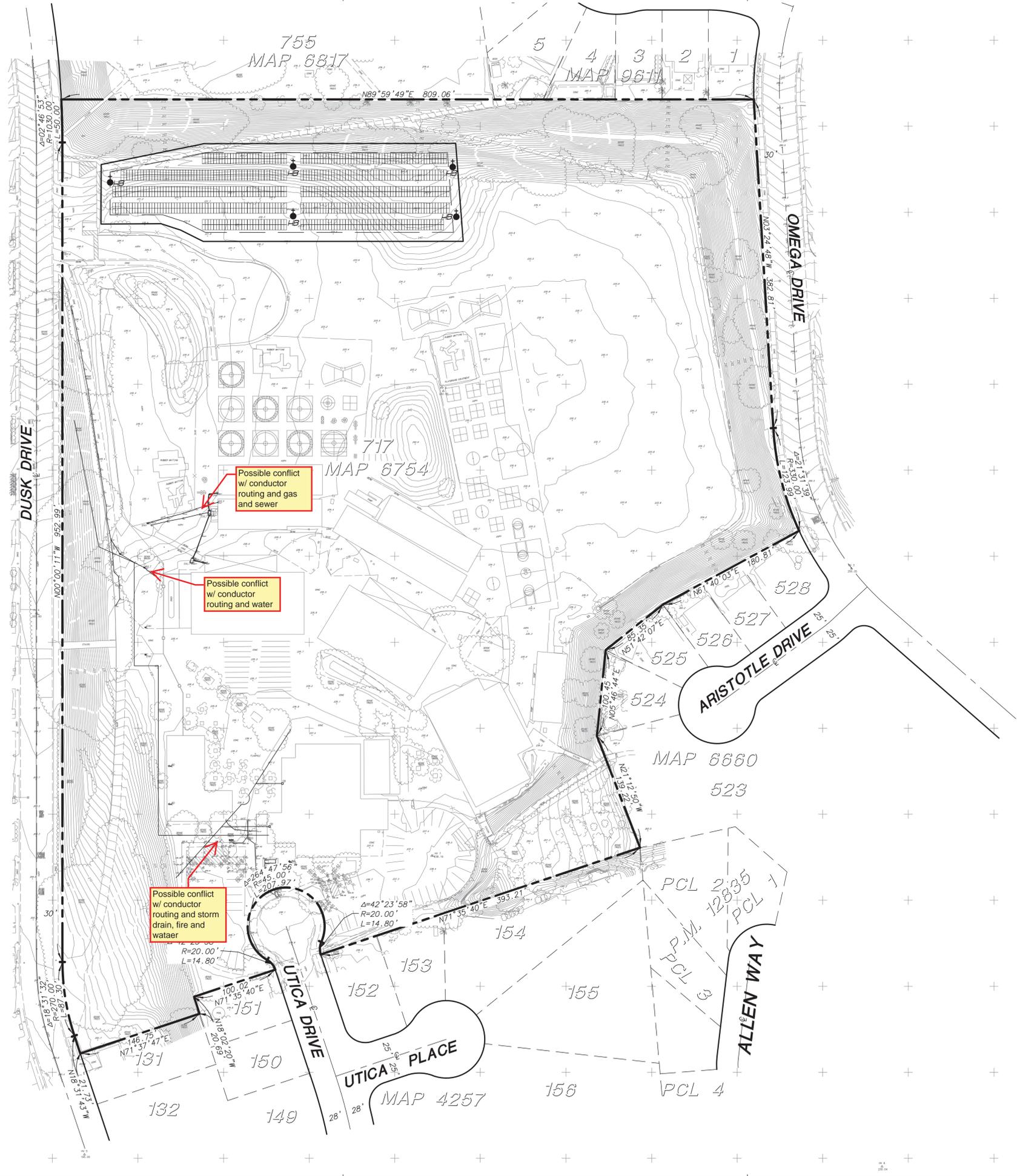
**HOSE BIB LOCATION PLAN**  
**PENN HS**

FACILITIES MANAGEMENT  
**Solar Power Generation Systems**

SUBMITTAL: 00 Submittal	PROJECT NO. 1521
DATE 12/15/2015	DRAWN MS
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REVISIONS	<b>C2.5</b>

December 15, 2015

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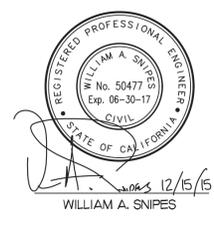
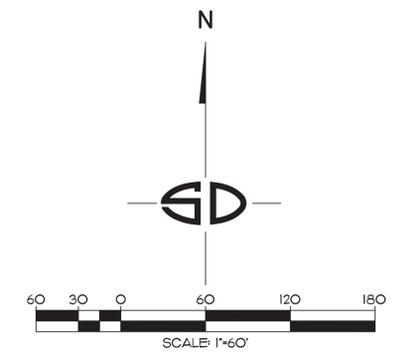
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**LEGEND:**

HB - INDICATES HOSE BIB



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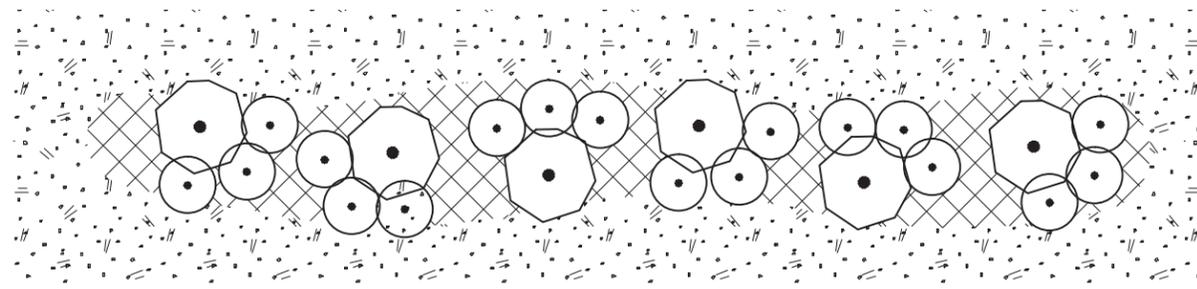
PREPARED BY  
 ZAGRODNIK + THOMAS ARCHITECTS, LLP

**HOSE BIB LOCATION PLAN**  
**PENN HS**

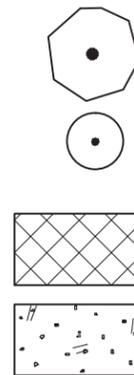
FACILITIES MANAGEMENT  
**Solar Power Generation Systems**

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PLAN

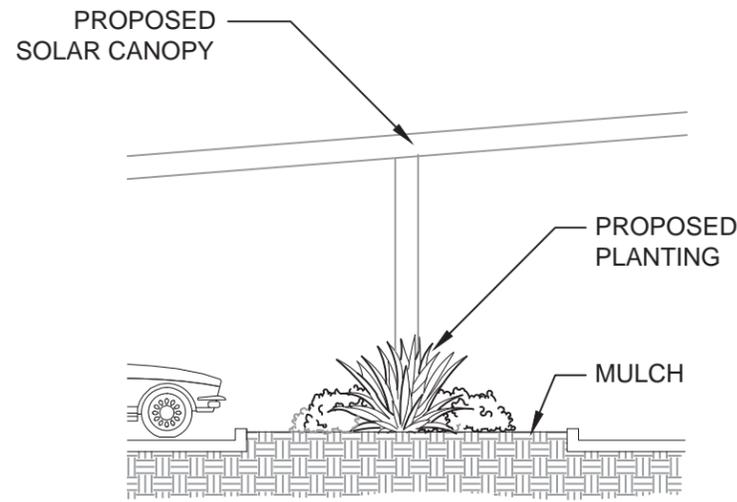


PROPOSED PLANTING SCHEDULE

SHRUBS SIZE	QTY
15 GAL	6
5 GAL	18
GROUNDCOVER SIZE	QTY
1 GAL @ 18" O.C.	75
MULCH	

TYPICAL REPAIR PLANTING PER APPROXIMATELY 1,000 S.F.

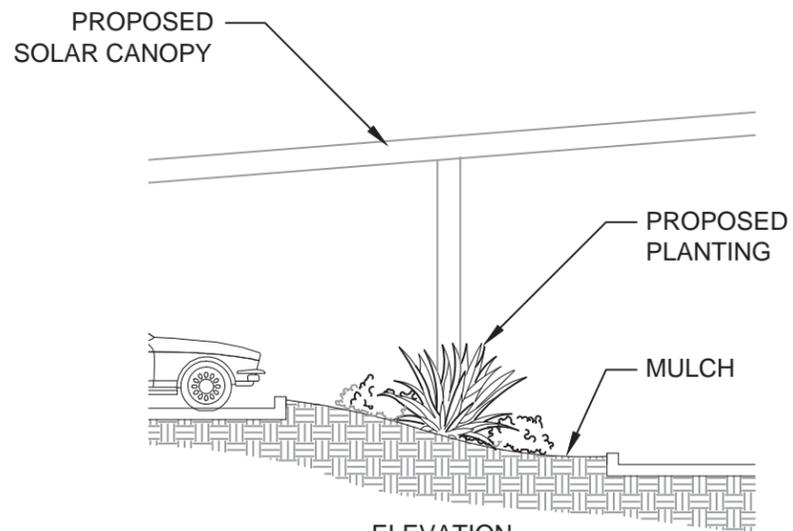
SCALE = 1"-10'-0"



ELEVATION

TYPICAL ISLAND PLANTING

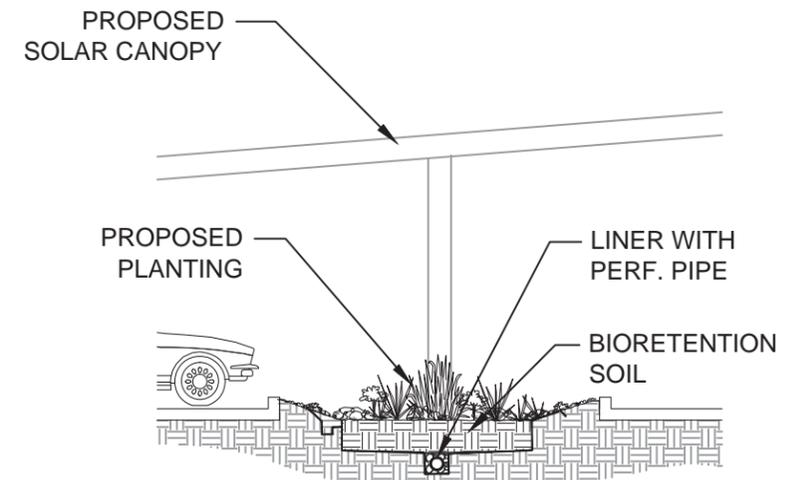
NTS



ELEVATION

TYPICAL SLOPE PLANTING

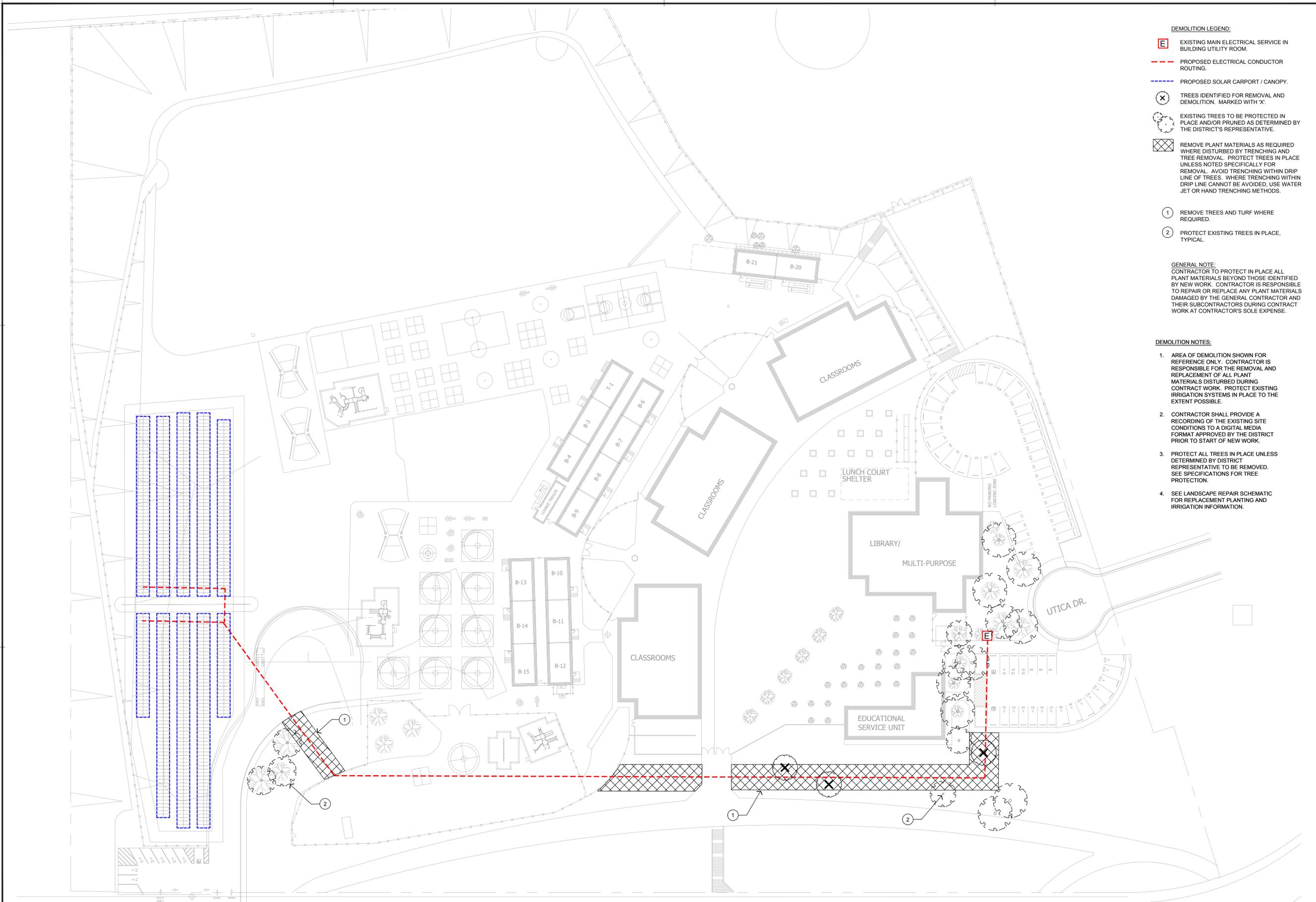
NTS



ELEVATION

TYPICAL BIOSWALE PLANTING

NTS



- DEMOLITION LEGEND:**
- E EXISTING MAIN ELECTRICAL SERVICE IN BUILDING UTILITY ROOM.
  - - - PROPOSED ELECTRICAL CONDUCTOR ROUTING.
  - - - PROPOSED SOLAR CARPORT / CANOPY.
  - ⊗ TREES IDENTIFIED FOR REMOVAL AND DEMOLITION. MARKED WITH 'X'.
  - ⊗ EXISTING TREES TO BE PROTECTED IN PLACE AND/OR PRUNED AS DETERMINED BY THE DISTRICT'S REPRESENTATIVE.
  - ⊗ REMOVE PLANT MATERIALS AS REQUIRED WHERE DISTURBED BY TRENCHING AND TREE REMOVAL. PROTECT TREES IN PLACE UNLESS NOTED SPECIFICALLY FOR REMOVAL. AVOID TRENCHING WITHIN DRIP LINE OF TREES. WHERE TRENCHING WITHIN DRIP LINE CANNOT BE AVOIDED, USE WATER JET OR HAND TRENCHING METHODS.
- ① REMOVE TREES AND TURF WHERE REQUIRED.
- ② PROTECT EXISTING TREES IN PLACE, TYPICAL.

**GENERAL NOTE:**  
 CONTRACTOR TO PROTECT IN PLACE ALL PLANT MATERIALS BEYOND THOSE IDENTIFIED BY NEW WORK. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY PLANT MATERIALS DAMAGED BY THE GENERAL CONTRACTOR AND THEIR SUBCONTRACTORS DURING CONTRACT WORK AT CONTRACTOR'S SOLE EXPENSE.

- DEMOLITION NOTES:**
- AREA OF DEMOLITION SHOWN FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL PLANT MATERIALS DISTURBED DURING CONTRACT WORK. PROTECT EXISTING IRRIGATION SYSTEMS IN PLACE TO THE EXTENT POSSIBLE.
  - CONTRACTOR SHALL PROVIDE A RECORDING OF THE EXISTING SITE CONDITIONS TO A DIGITAL MEDIA FORMAT APPROVED BY THE DISTRICT PRIOR TO START OF NEW WORK.
  - PROTECT ALL TREES IN PLACE UNLESS DETERMINED BY DISTRICT REPRESENTATIVE TO BE REMOVED. SEE SPECIFICATIONS FOR TREE PROTECTION.
  - SEE LANDSCAPE REPAIR SCHEMATIC FOR REPLACEMENT PLANTING AND IRRIGATION INFORMATION.

DATE	DATE	DATE	DATE	DATE	DATE

REVIEWED BY

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 ZAGRODNIK + THOMAS ARCHITECTS, LLP

**Landscape Demo Schematic**  
**Penn ES**  
 FACILITIES MANAGEMENT  
**Solar Power Generation Systems**

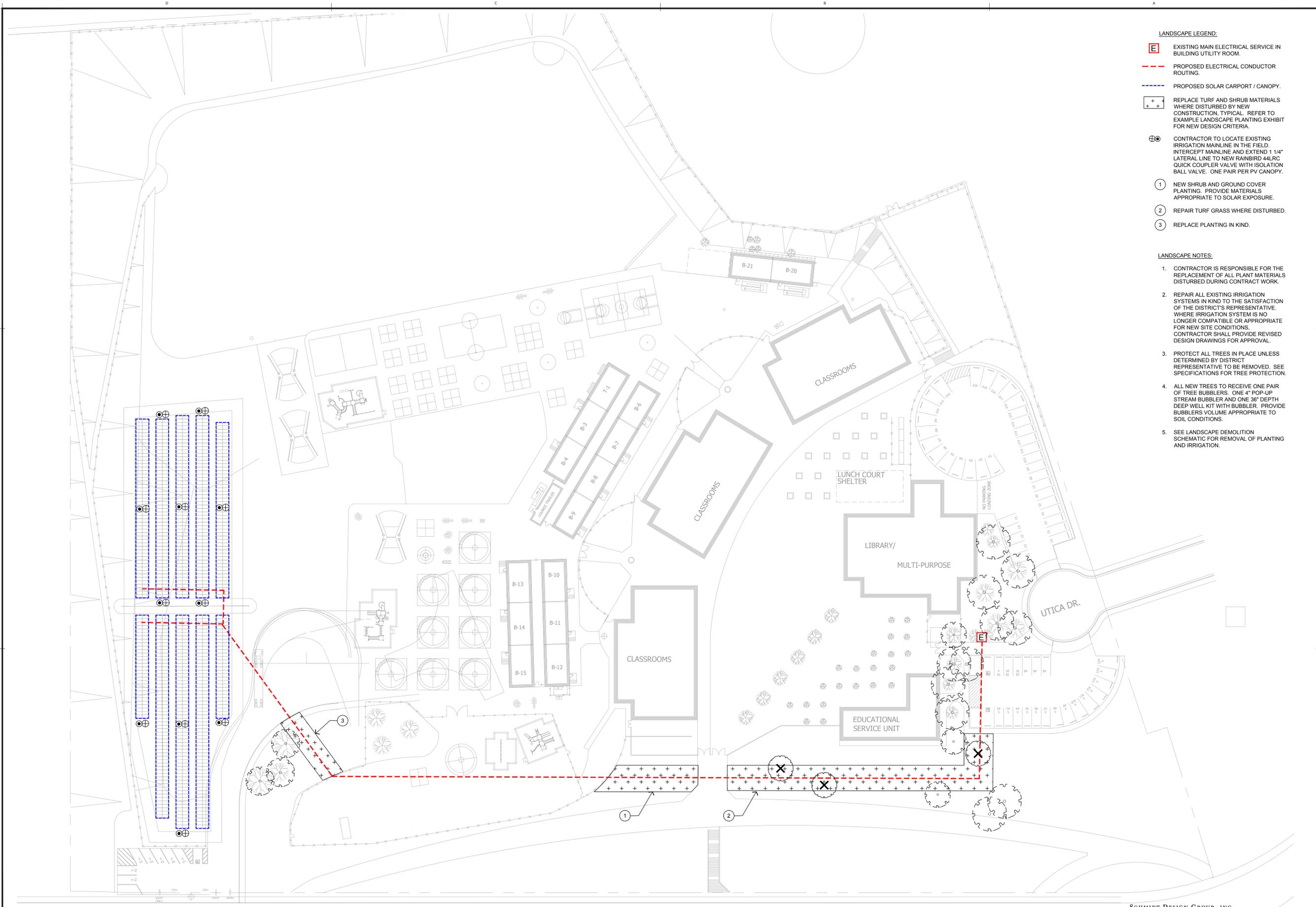
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	SHEET NO. <b>L5-01</b>

**SCHMIDT DESIGN GROUP, INC.**  
 BALANCING ARTISTIC EXPRESSION IN DESIGN WITH ENVIRONMENTAL SENSITIVITY  
 1111 Sixth Avenue, Suite 500, San Diego, CA 92101  
 telephone (619) 236-1462 facsimile (619) 236-8792  
 www.schmidtsg.com  
 LIC. CA 2158, NV 219, AZ 34139

0 20 40 80  
 SCALE : 1" = 40'-0"

NORTH

December 15, 2015



**LANDSCAPE LEGEND:**

- E EXISTING MAIN ELECTRICAL SERVICE IN BUILDING UTILITY ROOM.
- PROPOSED ELECTRICAL CONDUCTOR ROUTING.
- PROPOSED SOLAR CARPORT / CANOPY.
- + REPLACE TURF AND SHRUB MATERIALS WHERE DISTURBED BY NEW CONSTRUCTION. TYPICAL. REFER TO EXAMPLE LANDSCAPE PLANTING EXHIBIT FOR NEW DESIGN CRITERIA.
- ⊕ CONTRACTOR TO LOCATE EXISTING IRRIGATION MAINLINE IN THE FIELD. INTERCEPT MAINLINE AND EXTEND 1 1/4" LATERAL LINE TO NEW RAINBIRD 44LRC QUICK COUPLER VALVE WITH ISOLATION BALL VALVE. ONE PAIR PER PV CANOPY.
- ① NEW SHRUB AND GROUND COVER PLANTING. PROVIDE MATERIALS APPROPRIATE TO SOLAR EXPOSURE.
- ② REPAIR TURF GRASS WHERE DISTURBED.
- ③ REPLACE PLANTING IN KIND.

**LANDSCAPE NOTES:**

1. CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT OF ALL PLANT MATERIALS DISTURBED DURING CONTRACT WORK.
2. REPAIR ALL EXISTING IRRIGATION SYSTEMS IN KIND TO THE SATISFACTION OF THE DISTRICT'S REPRESENTATIVE. WHERE IRRIGATION SYSTEM IS NO LONGER COMPATIBLE OR APPROPRIATE FOR NEW SITE CONDITIONS, CONTRACTOR SHALL PROVIDE REVISED DESIGN DRAWINGS FOR APPROVAL.
3. PROTECT ALL TREES IN PLACE UNLESS DETERMINED BY DISTRICT REPRESENTATIVE TO BE REMOVED. SEE SPECIFICATIONS FOR TREE PROTECTION.
4. ALL NEW TREES TO RECEIVE ONE PAIR OF TREE BUBBLERS. ONE 4" POP-UP STREAM BUBBLER AND ONE 36" DEPTH DEEP WELL KIT WITH BUBBLER. PROVIDE BUBBLERS VOLUME APPROPRIATE TO SOIL CONDITIONS.
5. SEE LANDSCAPE DEMOLITION SCHEMATIC FOR REMOVAL OF PLANTING AND IRRIGATION.

DATE	DATE	DATE	DATE	DATE	DATE

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 SAN DIEGO, CALIFORNIA

PREPARED BY  
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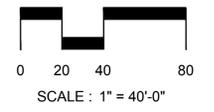
**Landscape Repair Schematic**  
**Penn ES**

FACILITIES MANAGEMENT

**Solar Power Generation Systems**

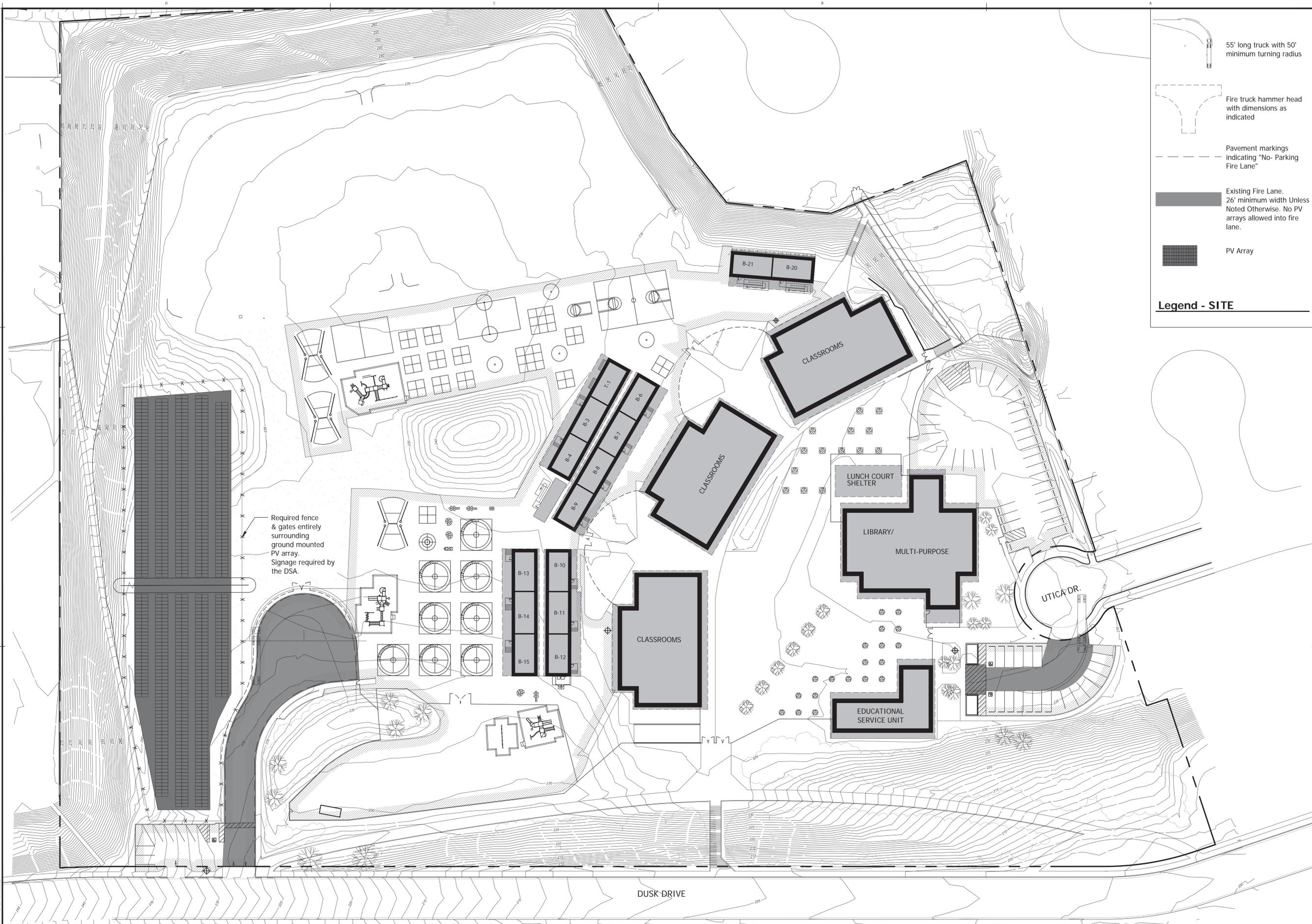
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 Drawn by: T. Thomas Architects, LLP



Required fence & gates entirely surrounding ground mounted PV array. Signage required by the DSA.

55' long truck with 50' minimum turning radius  
 Fire truck hammer head with dimensions as indicated  
 Pavement markings indicating "No- Parking Fire Lane"  
 Existing Fire Lane. 26' minimum width Unless Noted Otherwise. No PV arrays allowed into fire lane.  
 PV Array

**Legend - SITE**

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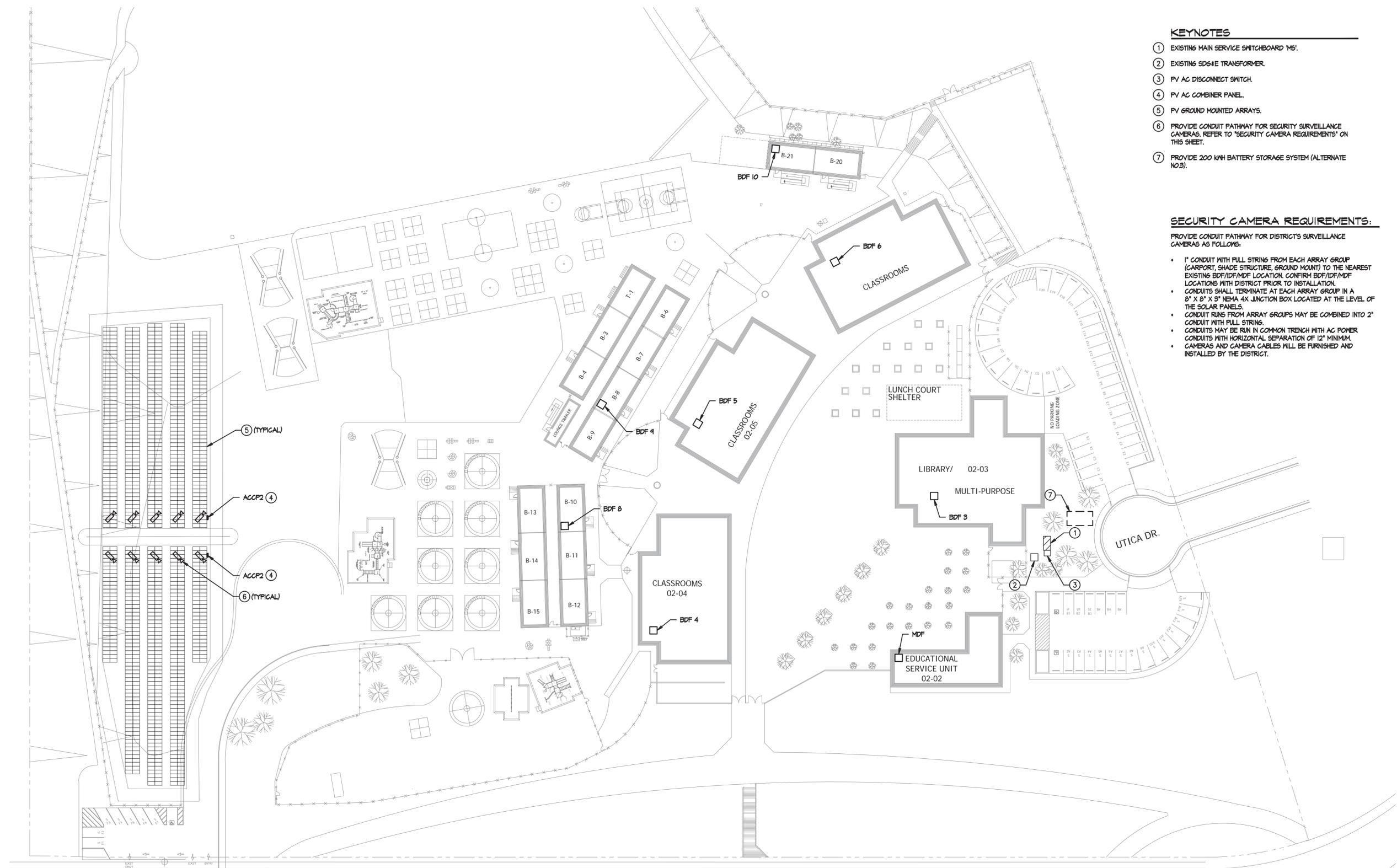
**Penn Elementary School**  
**Site Plan**  
 FACILITIES MANAGEMENT  
**Solar Power Generation Systems**

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	<b>A5-01</b>

**D3 Penn Elementary School - Site Plan**  
 1" = 40'-0"

December 15, 2015

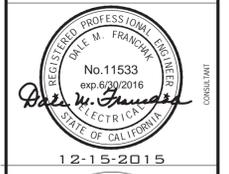


- KEYNOTES**
- 1 EXISTING MAIN SERVICE SWITCHBOARD MS1.
  - 2 EXISTING SD64E TRANSFORMER.
  - 3 PV AC DISCONNECT SWITCH.
  - 4 PV AC COMBINER PANEL.
  - 5 PV GROUND MOUNTED ARRAYS.
  - 6 PROVIDE CONDUIT PATHWAY FOR SECURITY SURVEILLANCE CAMERAS. REFER TO "SECURITY CAMERA REQUIREMENTS" ON THIS SHEET.
  - 7 PROVIDE 200 KWH BATTERY STORAGE SYSTEM (ALTERNATE NO.3).

- SECURITY CAMERA REQUIREMENTS:**
- PROVIDE CONDUIT PATHWAY FOR DISTRICT'S SURVEILLANCE CAMERAS AS FOLLOWS:
- 1" CONDUIT WITH FULL STRING FROM EACH ARRAY GROUP (CARPORT, SHADE STRUCTURE, GROUND MOUNT) TO THE NEAREST EXISTING BDF/IDF/MDF LOCATION. CONFIRM BDF/IDF/MDF LOCATIONS WITH DISTRICT PRIOR TO INSTALLATION.
  - CONDUITS SHALL TERMINATE AT EACH ARRAY GROUP IN A 8" X 8" X 3" NEMA 4X JUNCTION BOX LOCATED AT THE LEVEL OF THE SOLAR PANELS.
  - CONDUIT RUNS FROM ARRAY GROUPS MAY BE COMBINED INTO 2" CONDUIT WITH FULL STRING.
  - CONDUITS MAY BE RUN IN COMMON TRENCH WITH AC POWER CONDUITS WITH HORIZONTAL SEPARATION OF 12" MINIMUM.
  - CAMERAS AND CAMERA CABLES WILL BE FURNISHED AND INSTALLED BY THE DISTRICT.

DATE	DATE	DATE	DATE	DATE	DATE

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**PENN ES - ELECTRICAL SITE PLAN**

FACILITIES MANAGEMENT  
**Solar Power Generation Systems**

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**PENN ES - ELECTRICAL SITE PLAN**  
 SCALE: 1" = 40'-0"



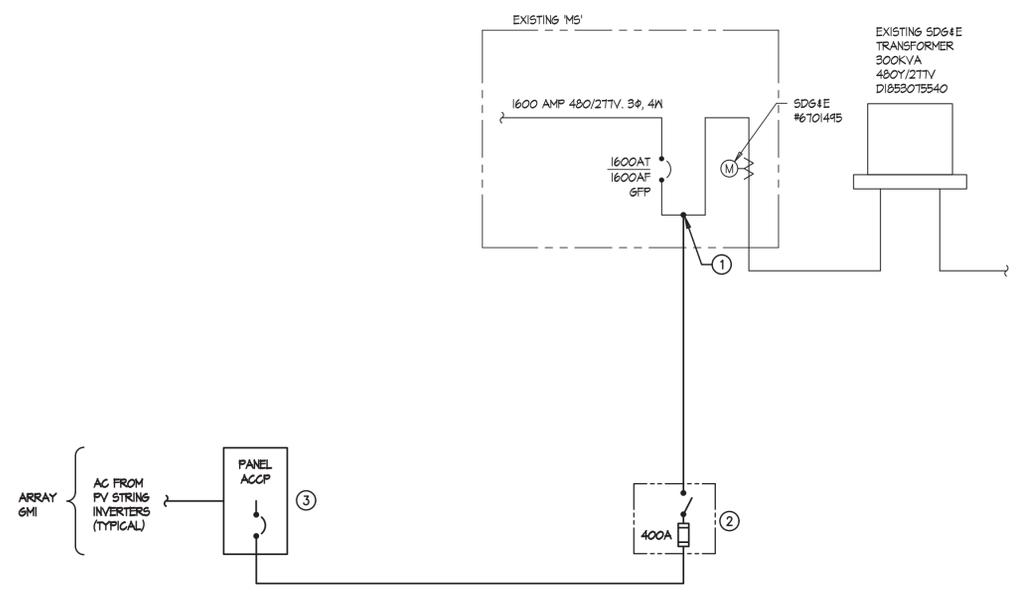
**TURPIN & RATTAN**  
 ENGINEERING, INC.  
 CONSULTING ENGINEERS  
 4719 PALM AVENUE  
 LA MESA, CA 91941-5221  
 619 / 466 / 6224 FAX 466 / 6233  
 E-MAIL: ENGINEER@TREIBD.COM

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December 15, 2015

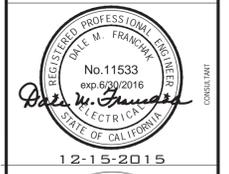
**DIAGRAM NOTES**

- ① LINE SIDE BUS TAP, UL COMPLIANT.
- ② PV FUSED DISCONNECT SWITCH, VISIBLE BLADE, NEMA 3R.
- ③ PV AC COMBINER PANELBOARD NEMA 3R.



**PENN ES - SINGLE LINE DIAGRAM**  
NO SCALE

DATE	DATE	DATE	DATE	DATE	DATE
REVIEWER	ASSISTANT ENGINEER	SITE SUPERVISOR	OTHER	OTHER	OTHER
<b>REVIEWED BY</b>					



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**PENN ES - SINGLE LINE DIAGRAM**

FACILITIES MANAGEMENT

**Solar Power Generation Systems**

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CONSULTING ENGINEERS  
4719 PALM AVENUE  
LA MESA, CA 91941-5221  
619 / 466 / 6224 FAX 466 / 6233  
E-MAIL: ENGINEER@TREIBD.COM

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