CITY OF EL PASO DE ROBLES

"The Pass of the Oaks"

Development Review Committee Agenda

Monday, June 16, 2025, 3:30 PM

Large Conference Room - 2nd Floor

1000 SPRING ST

Paso Robles, CA 93446

This is an in-person meeting. Written public comments can be submitted via email to planning@prcity.com. Those received prior to 12:00 noon on the day of the meeting to be posted to the City's website as an addendum to the agenda. If submitting written comments in advance of the meeting, please note the agenda item by number or name.

AMERICANS WITH DISABILITIES ACT

Any individual, who because of a disability needs special assistance to attend or participate in this meeting, may request assistance by contacting the City Clerk's Office (805) 237-3960. Whenever possible, requests should be made four (4) working days in advance of the meeting.

Pages

A. CALL TO ORDER

B. ROLL CALL

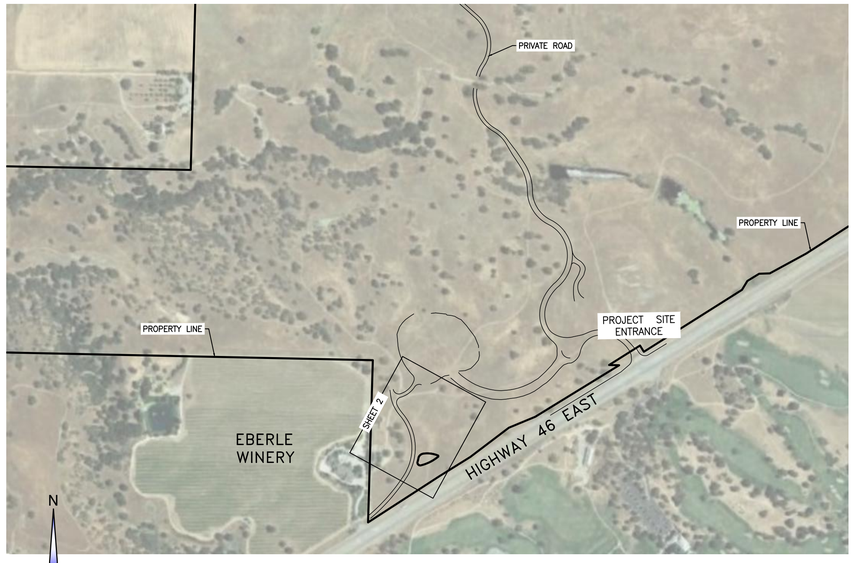
C. DISCUSSION ITEMS 2

1. **Item 1**
   File #: P25-0041 / PD 25-03
   Requested Action: DRC Recommendation
   Application: Development Plan Amendment to establish a new laydown storage yard and new solar array field.
   Location: 4380 Hwy 46 E
   Applicant: Quest Planning

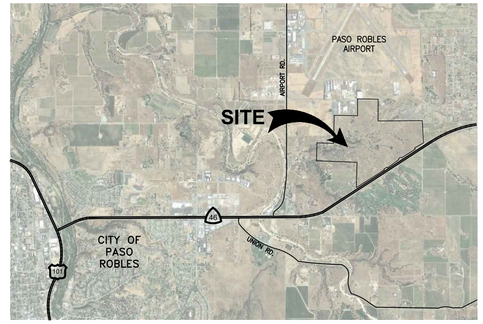
D. ADJOURNMENT

DRC Item 1

CITY PERMIT #E21-0021
GRADING AND DRAINAGE PLANS
FOR
ENTRADA DE PASO ROBLES
STORAGE LAYDOWN YARD
CITY OF EL PASO DE ROBLES
COUNTY OF SAN LUIS OBISPO, CALIFORNIA



SITE MAP
SCALE: NTS



VICINITY MAP
SCALE: NTS

STANDARD GRADING NOTES

1. THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES THE CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE CONDITION OF THE JOB SITE DURING THE COURSE OF CONSTRUCTION FOR THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY, AND THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE OWNER AND THE DESIGN PROFESSIONAL FROM ANY AND ALL LIABILITY REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPTING LIABILITY ARISING FROM NEGLIGENCE OF THE OWNER OR ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PUBLIC AND PRIVATE PROPERTY ADJACENT TO THE WORK AREA AND SHALL EXERCISE DUE CAUTION TO AVOID DAMAGE TO SUCH PROPERTY. THE CONTRACTOR SHALL REPLACE AND REPAIR TO THEIR ORIGINAL CONDITIONS ALL EXISTING IMPROVEMENTS WITHIN OR ADJACENT TO THE WORK AREA WHICH ARE NOT DESIGNED FOR REMOVAL, AND ARE DAMAGED OR REMOVED AS A RESULT OF THIS OPERATION.
3. IN THE EVENT THAT PROJECT CONSTRUCTION CONTINUES DURING WET WINTER MONTHS, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN OR WINTERIZE THE ROADS FOR EMERGENCY VEHICLES.
4. THE CONTRACTOR IS RESPONSIBLE TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL LAWS, ORDINANCES, CODES, REQUIREMENTS, AND STANDARDS WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION, OR THE MATERIALS USED IN THE CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKERS DISTURBED SHALL BE RESET AT CONTRACTOR'S EXPENSE.
6. UNLESS OTHERWISE NOTED, ALL TREES ARE TO BE PROTECTED IN PLACE. ALL TREES LOCATED NEAR OR AROUND CONSTRUCTION OPERATIONS SHALL HAVE ORANGE BARRIER INSTALLED ON T-POST ALONG THE DRIP LINE OF THE TREE DURING CONSTRUCTION.
7. SHOULD ANY CULTURAL MATERIALS BE DISCOVERED DURING GRADING OR DEVELOPMENT, ALL WORK SHALL BE HALTED AND A QUALIFIED ARCHAEOLOGIST / HISTORIAN CONTACTED TO ASSESS THE FINDS AND IMPOSE MITIGATION MEASURES, IF NECESSARY, PRIOR TO RESUMPTION OF CONSTRUCTION.
8. IF, DURING GRADING OR CONSTRUCTION, ANY PLUGGED AND ABANDONED OR UNRECORDED WELLS ARE UNCOVERED OR DAMAGED, THE DEPARTMENT OF CONSERVATION OF OIL, GAS AND GEOTHERMAL RESOURCES SHALL BE CONTACTED TO INSPECT AND APPROVE ANY REMEDIATION REQUIRED.
9. AN EFFORT HAS BEEN MADE TO DEFINE THE LOCATION OF UNDERGROUND FACILITIES WITHIN THE JOBSITE. HOWEVER, ALL EXISTING UTILITY AND OTHER UNDERGROUND STRUCTURES MAY NOT BE SHOWN ON THIS PLAN AND THEIR LOCATIONS WHEN SHOWN ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES AND OTHER FACILITIES, BOTH KNOWN AND UNKNOWN, PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT U.S.A. (811) FOR UTILITY LOCATION 48 HOURS PRIOR TO ANY EXCAVATION OR TRENCHING.
10. THE CONTRACTOR SHALL MARK ALL UTILITY LOCATIONS AND SHALL POTHOLE ALL UTILITY CROSSINGS, PRIOR TO STAKING AND PRIOR TO ANY PIPELINE EXCAVATION TO ALLOW GRADE REVISIONS IF NECESSITATED BY ACTUAL LOCATIONS.
11. THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE AND ACCURATE RECORD OF ALL CHANGES TO THE PLANS. NO CHANGES SHALL BE MADE WITHOUT APPROVAL OF THE PROJECT ENGINEER.
12. ALL GRADING AND DRAINAGE IMPROVEMENTS SHALL BE OBSERVED BY A LICENSED CIVIL ENGINEER TO DETERMINE IF THE IMPROVEMENTS ARE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THE REQUEST FOR THE FINAL INSPECTION ONLY WHEN THE IMPROVEMENTS HAVE BEEN COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS. THE CIVIL ENGINEER SHALL BE PRESENT WHEN THE FINAL INSPECTION IS MADE.
13. THE CUT AND FILL QUANTITIES SHOWN ON THIS PLAN ARE FOR PERMIT PURPOSES ONLY. THE CONTRACTOR SHALL, AFTER EXAMINING THE PLAN, SOILS REPORT AND THE SITE TERRAIN, PREPARE HIS BID PRICE FOR THE PROJECT BASED ON HIS OWN ANALYSIS OF THE WORK REQUIRED.
14. THE SOILS ENGINEER MUST APPROVE ALL SOIL COMPACTION INCLUDING THE STABILITY OF ALL SLOPES, BOTH THOSE THAT ARE CREATED BY AND THOSE REMAINING AFTER GRADING OPERATIONS.
15. ALL WORK SHALL BE DONE IN CONFORMANCE WITH THE CITY OF EL PASO DE ROBLES STANDARDS AND SHALL CONFORM TO THE RECOMMENDATIONS CONTAINED AND MADE A PART HEREOF IN THE GEOTECHNICAL ENGINEERING REPORT BY EARTH SYSTEMS PACIFIC, DATED DECEMBER 26, 2018.
16. COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE SOILS ENGINEER.
17. FILL MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE SOILS ENGINEER.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING OF PAD AREA TO WITHIN ±0.1'. IF ELEVATION OF DESIGN ELEVATION PAD SHOULD BE FOUND TO BE MORE THAN ±0.1' OFF OF DESIGN ELEVATION AFTER COMPLETION AND ACCEPTANCE OF GRADING, THE CONTRACTOR SHALL RETURN AND CORRECT THE GRADING AT NO COST TO THE OWNER.
19. ALL AREAS ON THE SITE ON WHICH STRUCTURES ARE TO BE PLACED MUST BE COMPACTED TO 90% MAXIMUM DRY DENSITY, FOR A MINIMUM DISTANCE OF 5' IN ALL DIRECTIONS FROM THE FOUNDATIONS OF THE STRUCTURE OR PER THE GEOTECHNICAL REPORT, WHICHEVER IS GREATER.
20. ALL FILL SHALL CONFORM TO THE REQUIREMENTS FOR 'ENGINEERED FILL' AS DESCRIBED IN THE PRELIMINARY SOILS REPORT.
21. FILL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING SIX (6) INCHES IN COMPACTED THICKNESS AND COMPACTED AT OPTIMUM MOISTURE CONTENT BY AN APPROVED METHOD.
22. ENGINEERED FILL SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEERING REPORT AND MUST BE COMPACTED TO 90% OF MAXIMUM DRY DENSITY.
23. THE DESIGN ENGINEER SHALL EXERCISE SUFFICIENT SUPERVISORY CONTROL DURING GRADING AND CONSTRUCTION TO INSURE COMPLIANCE WITH THE PLANS, SPECIFICATIONS, AND CODE WITHIN HIS PURVIEW.
24. UPON COMPLETION OF GRADING AND BEFORE THE START OF CONSTRUCTION, A FINAL SOILS REPORT COVERING THE SITE PREPARATION AND GRADING SHALL BE SUBMITTED BY THE SOILS ENGINEER.
25. ALL GRADING SHALL CONFORM TO APPENDIX CHAPTER 33 OF THE CALIFORNIA BUILDING CODE AND STANDARDS PERTAINING THERETO.
26. ALL CUT SLOPES SHALL NOT BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL UNLESS OTHERWISE APPROVED IN THE SOILS REPORT.
27. ALL FILL SLOPES SHALL NOT BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
28. ALL FILL AREAS SHALL BE CLEARED OF ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FOR A STRUCTURAL FILL AND THE AREA SCARIFIED TO A DEPTH OF 12".
29. ALL SLOPES IN EXCESS OF 3' IN VERTICAL HEIGHT SHALL BE PREPARED AND MAINTAINED TO CONTROL AGAINST EROSION.
30. GRADING WORK WILL BE SUPERVISED AS ENGINEERED GRADING IN ACCORDANCE WITH APPENDIX CHAPTER 33 OF THE CALIFORNIA BUILDING CODE.
31. FILL AREAS SLOPING STEEPER THAN 5:1 SHALL BE KEYED AND BENCHED TO SUPPORT THE FILL.
32. BERMS OF DRAINAGE DEVICES SHALL BE PLACED AT THE TOP OF ALL FILL SLOPES.
33. DPSI, INC. SHALL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THESE PLANS MUST BE APPROVED IN WRITING BY DPSI, INC.
34. IF THE CONTRACTOR IS IN DOUBT AS TO THE MEANING OF ANY PART OF THE PLAN AND SPECIFICATIONS OR FINDS DISCREPANCIES IN OR OMISSIONS FROM THE DRAWING OR SPECIFICATIONS, HE SHALL SUBMIT A WRITTEN REQUEST FOR AN INTERPRETATION OR A CORRECTION THEREOF, PRIOR TO FILING HIS BID FOR THE PROJECT.
35. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PREVENT A DUST NUISANCE FROM ORIGINATING FROM THE SITE OF WORK AS A RESULT OF HIS OPERATIONS DURING THE EFFECTIVE PERIOD OF THIS CONTRACT. PREVENTATIVE MEASURES TO BE TAKEN BY THE CONTRACTOR SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

35.a. WATER SHALL BE APPLIED TO ALL UNPAVED AREAS AS REQUIRED TO PREVENT THE SURFACES FROM BECOMING DRY ENOUGH TO PERMIT DUST FORMATION.

35.b. PAVED SURFACES OVER WHICH VEHICULAR TRAFFIC IS PERMITTED TO TRAVEL SHALL BE KEPT FREE OF DIRT.

UNDERGROUND UTILITY STATEMENT

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP.

THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING.

ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA.

UNDERGROUND SERVICE ALERT SHALL BE CONTACTED TWO WORKING DAYS PRIOR TO CONSTRUCTION BY CALLING 811.

SITE INFORMATION

SITE ADDRESS:
HIGHWAY 46 EAST
PASO ROBLES, CA 93446

LOCATION:
APN 025-436-11 & 023-436-40
WITHIN THE WEST HALF OF SECTION 24,
THE SE QUARTER OF SECTION 13, AND
THE NW QUARTER OF SECTION 19,
TOWNSHIP 26 SOUTH,
RANGE 12 AND 13 EAST, M.D.B.M.
CITY OF EL PASO DE ROBLES
COUNTY OF SAN LUIS OBISPO
STATE OF CALIFORNIA

OWNER/DEVELOPER:
ENTRADA DE PASO ROBLES, LLC
P.O. BOX 13550
BAKERSFIELD, CA 93389
PH: 805-886-5331
CONTACT: KEN HUNTER

CIVIL ENGINEER:
DIVERSIFIED PROJECT SERVICES INTERNATIONAL
705 FIERO LANE, SUITE 10
SAN LUIS OBISPO, CA 93401
PH: (805) 250-2891
CONTACT: JESSE KALTENBERG

LAND SURVEYOR:
DIVERSIFIED PROJECT SERVICES INTERNATIONAL
705 FIERO LANE, SUITE 10
SAN LUIS OBISPO, CA 93401
PH: (805) 250-2891
CONTACT: JEFF ZAMBO

GEOTECHNICAL ENGINEER:
GEOSOLUTIONS, INC.
220 HIGH STREET
SAN LUIS OBISPO, CA 93401
PH: (805) 543-8539
CONTACT: KRAIG CROZIER

LANDSCAPE ARCHITECT:
CASEY PATTERSON
10659 REALITO AVENUE
ATASCADERO, CA 93422
PH: (805) 466-7629
CONTACT: CASEY PATTERSON

ELECTRICAL ENGINEER:
THOMA ELECTRIC, INC.
3562 EMPLEO STREET
SAN LUIS OBISPO, CA 93401
PH: (805) 543-3850
CONTACT: PATRICK MORRISSEY

QSD/QSP:
CLAD CONSULTING, INC.
PO BOX 1069
GROVER BEACH, CA 93483
PH: (805) 540-0769
CONTACT: DAVID CHANLEY

WDID# 340C384006

LEGEND

100	EXISTING CONTOURS – MAJOR
	EXISTING CONTOURS – MINOR
	DRIPLINE – TREE
100	CONTOURS – MAJOR
	CONTOURS – MINOR
	GRADE BREAK
	LIMITS OF GRADING
	FLOW LINE
D	STORM DRAIN (SIZE AS NOTED)
S	SEWER LINE
SFM	SEWER FORCE MAIN
RW	RECLAIMED WATER LINE
FW	FIRE WATER LINE
W	WATER LINE
E	EXISTING ELECTRICAL LINES
COM	EXISTING COMMUNICATION LINES
	PROPOSED STORM DRAIN MANHOLE
	PROPOSED CATCH BASIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	EXISTING SEWER MANHOLE
	EXISTING STORM DRAIN MANHOLE
E	EXISTING ELECTRICAL PULL BOX / VAULT

EARTHWORK QUANTITIES

- 2,108 CUT CUBIC YARDS
- 0 FILL CUBIC YARDS
- 2,108 EXPORT CUBIC YARDS
- 116,945 SQ. FT. (DISTURBED AREA 2.68 AC)

BENCHMARK

THE BENCHMARK FOR THIS SURVEY IS A STANDARD ALUMINUM DISK STAMPED "GPS BENCHMARK NO. 8" IN THE TOP OF THE NORTHERLY CONCRETE CURB AT THE NORTHEAST CORNER OF AIRPORT ROAD AND ROLLIE GATES DRIVE AT THE PASO ROBLES AIRPORT 10.4' EAST OF THE CENTERLINE OF AIRPORT ROAD, 27 FEET SOUTHWEST OF A CONCRETE "PASO ROBLES AIRPORT" SIGN

SCOPE OF WORK

SCOPE OF WORK INCLUDES GRADING AND DRAINAGE
FOR A STORAGE LAYDOWN YARD

ABBREVIATIONS

AC	ASPHALT	GRD	GROUND
BLDG	BUILDING	GUY	GUY WIRE
BLKW	BLOCK WALL	HB	HOSE BIB
BW	BACK OF WALK	INV	INVERT ELEVATION
CATV	CABLE TELEVISION BOX	JP	JOINT POLE
CB	CATCH BASIN	NG	NATURAL GRADE
CF	CURB FACE	OH	OVERHANG (EAVES)
CL	CENTERLINE	PL	PIPELINE
CLF	CHAIN LINK FENCE	PB	PULL BOX
CMP	CORRUGATED METAL PIPE	PP	POWER POLE
CO	CLEAN OUT (SEWER)	PVC	PLASTIC PIPE
CONC	CONCRETE	RCP	REINFORCED CONCRETE PIPE
DL	DAYLIGHT	RR	RAILROAD
DI	DROP INLET	R/W	RIGHT OF WAY
DIA	DIAMETER	SS	SANITARY SEWER
DWY	DRIVEWAY	SL	STREET LIGHT
ELEC	ELECTRIC	SW	SIDEWALK
EDR	EDGE DIRT ROAD	SDMH	STORM DRAIN MANHOLE
EP	EDGE OF PAVEMENT	SSMH	SANITARY SEWER MANHOLE
ETW	EDGE TRAVELED WAY	TC	TOP OF CURB
EUC	EUCALYPTUS	TELE	TELEPHONE
FNC	FENCE	TOE	TOE OF SLOPE
FF	FINISH FLOOR	TOG	TOP OF GRATE
FG	FINISH GRADE	TOP	TOP OF SLOPE
FH	FIRE HYDRANT	TOW	TOP OF WALL
FL	FLOW LINE	TYP	TYPICAL
FS	FINISH SURFACE	VLT	VAULT
GB	GRADE BREAK	WM	WATER METER
GM	GAS METER	WV	WATER VALVE

NOTE: ABBREVIATIONS SHOWN ABOVE MAY OR MAY NOT BE EVIDENT ON MAP.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF RECORD FOR THIS PROJECT AND THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE. THESE PLANS AND SPECIFICATIONS, TO THE BEST OF MY KNOWLEDGE, COMPLY WITH CURRENT STANDARDS.

ANY ERRORS, OMISSIONS, OR OTHER VIOLATIONS OF THOSE ORDINANCES, STANDARDS OR DESIGN CRITERIA ENCOUNTERED DURING CONSTRUCTION SHALL BE CORRECTED AND SUCH CORRECTIONS REFLECTED ON CORRECTED PLANS.

JESSE KALTENBERG R.C.E. 80031

REGISTERED PROFESSIONAL ENGINEER * JESSE G. KALTENBERG * NO 80031 * CIVIL * STATE OF CALIFORNIA

APPROVED: DATE

AGENCY REPRESENTATIVE DATE

REGISTERED PROFESSIONAL ENGINEER * JESSE G. KALTENBERG * NO 80031 * CIVIL * STATE OF CALIFORNIA

DIVERSIFIED PROJECT SERVICES INTERNATIONAL
705 Fiero Lane, Suite 10
San Luis Obispo, CA
(805) 250-2891
www.dpsinc.com

APP

REVISIONS

REV	DATE
A	ISSUED FOR REVIEW 02/04/25
B	ISSUED FOR REVIEW 04/28/25

TITLE SHEET
STORAGE LAYDOWN YARD
GRADING & DRAINAGE PLANS
ENTRADA DE PASO ROBLES, PASO ROBLES, CALIFORNIA, COUNTY OF SAN LUIS OBISPO

SHEET 1 OF 4 SHEETS

PROJECT: 181066

PLOTTED: 2025-05-02

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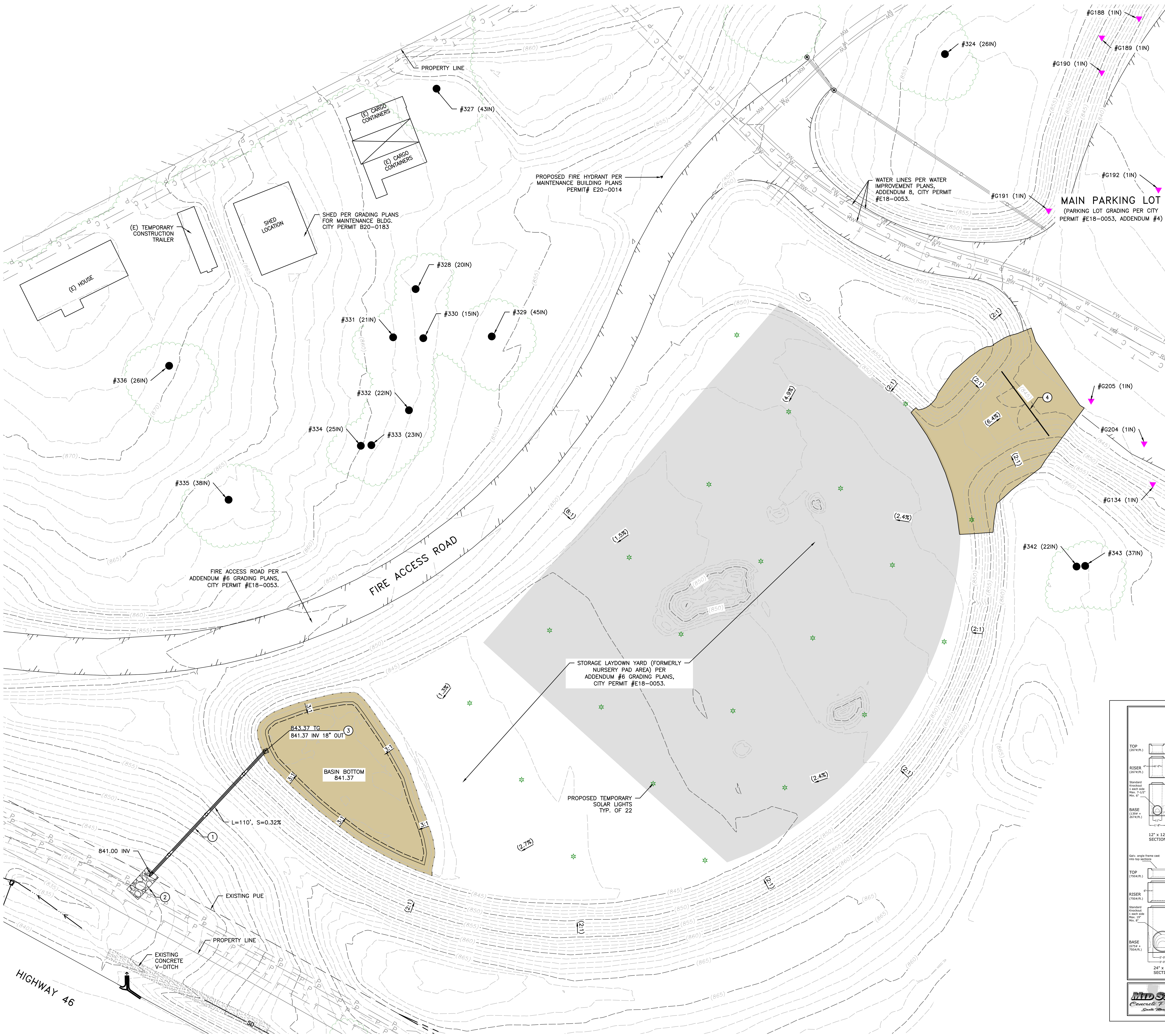
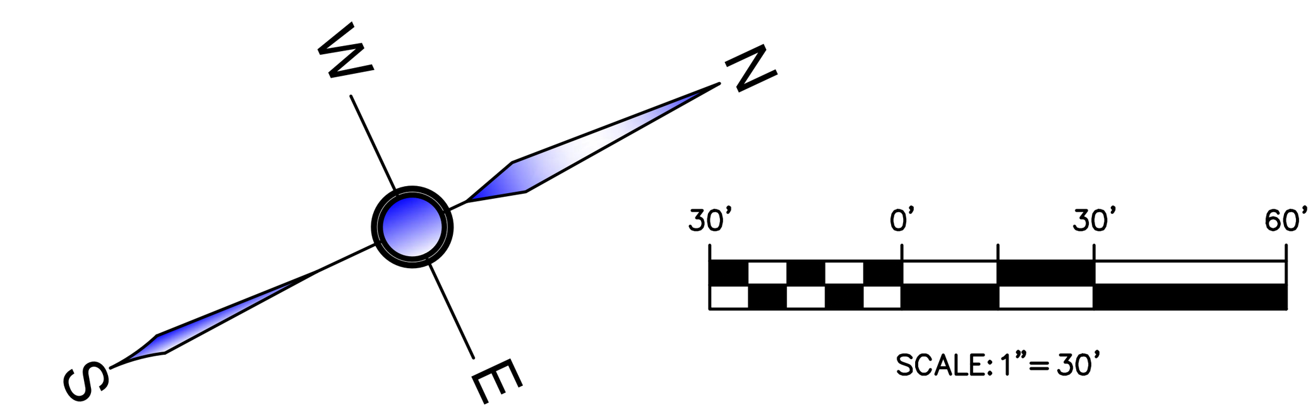


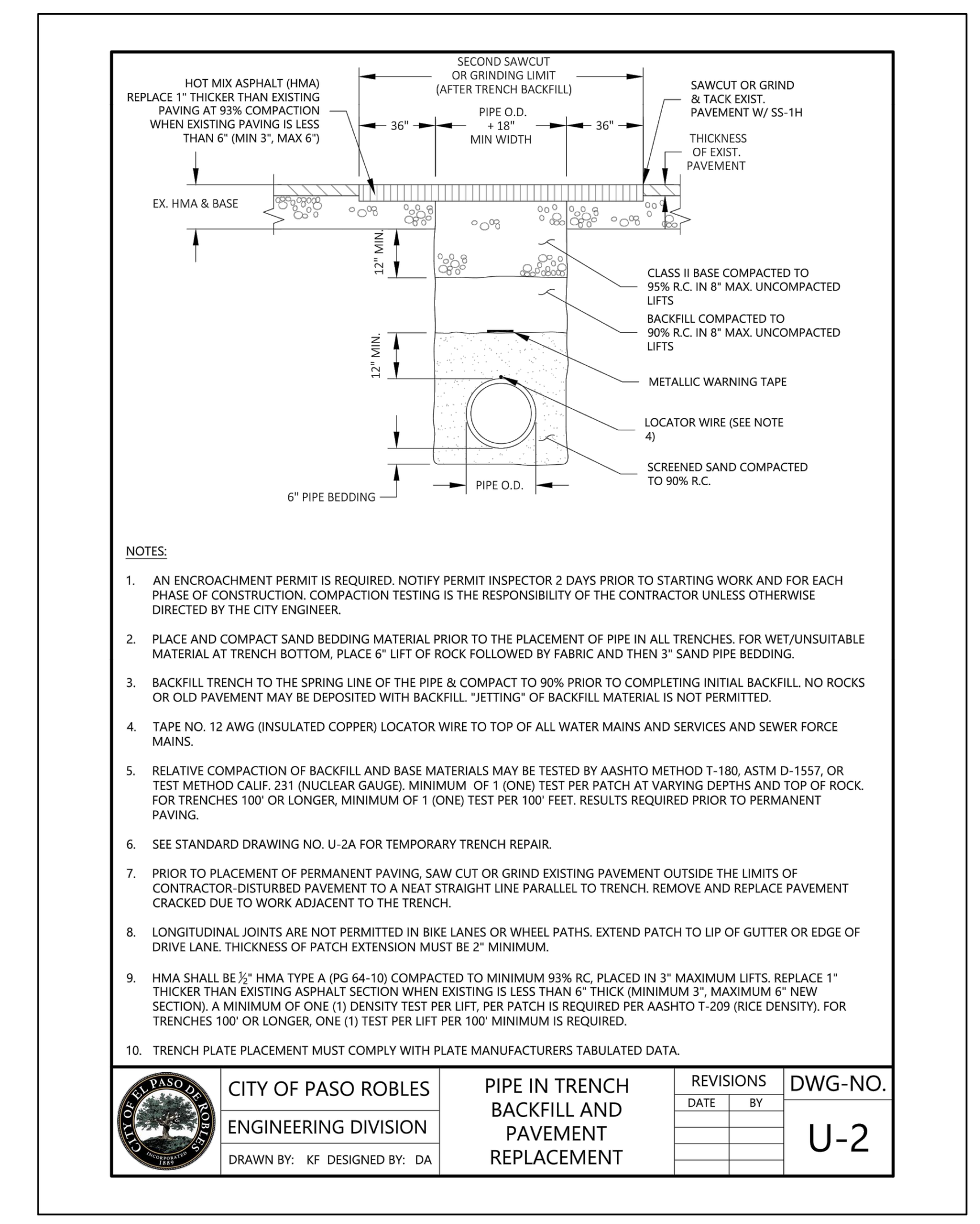


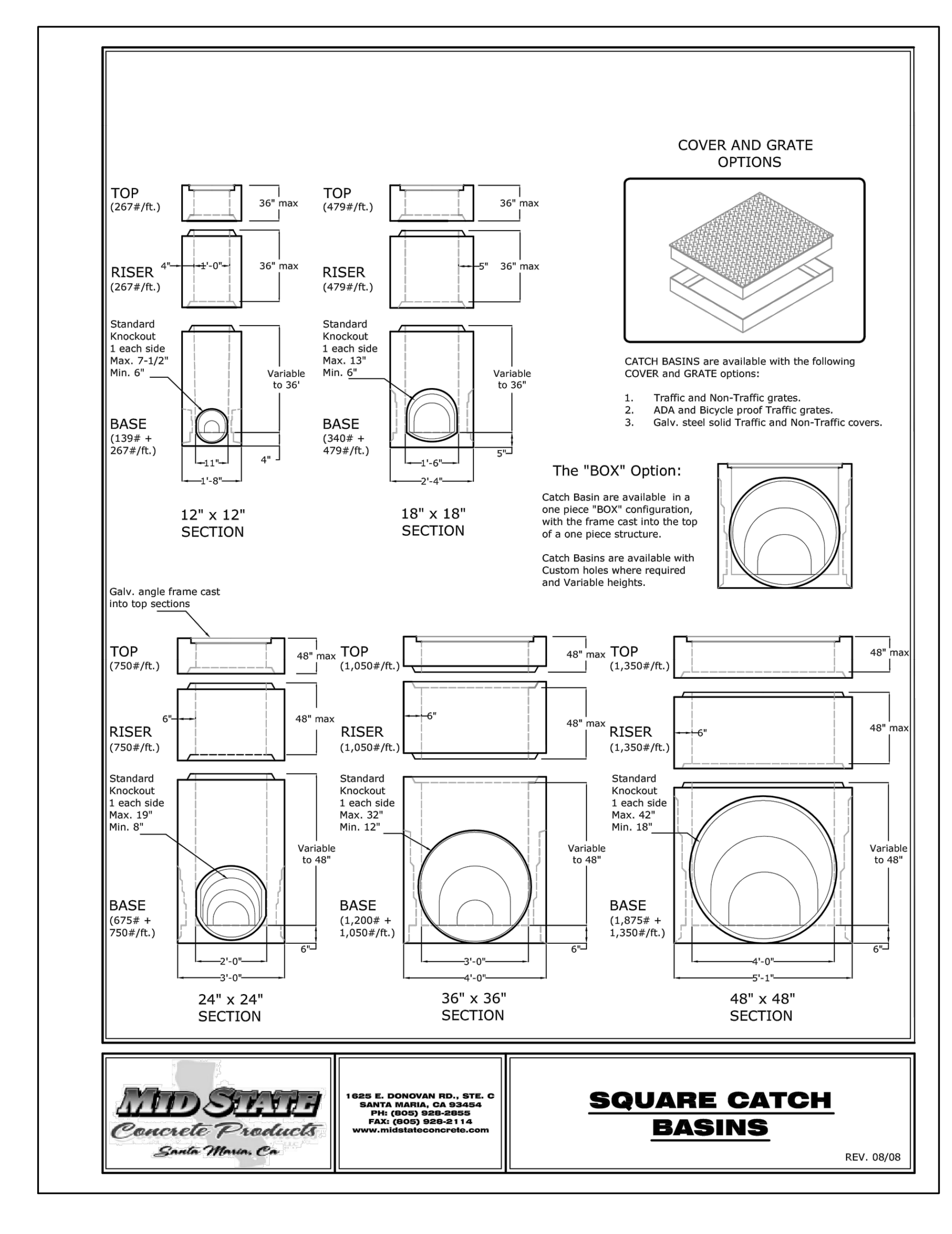
CONSTRUCTION NOTES:

1. INSTALL 18" CPP STORM DRAIN PIPE WITH FLARED END SECTION. BACKFILL PER CITY OF PASO ROBLES STANDARD DETAIL U-2, THIS SHEET.
2. CONSTRUCT RIPRAP PROTECTION. SEE DETAIL 2 ON SHEET 4.
3. INSTALL 18" X 18" DRAIN INLET WITH STANDARD GRATE PER MIDSTATE CONCRETE DETAIL, THIS SHEET.
4. INSTALL GATE PER OWNER'S SPECIFICATIONS.

LEGEND:

(tan fill)	AREAS OF PREVIOUSLY COMPLETED EARTHWORK TO BE PERMITTED WITH THIS SET.
(grey fill)	RECLAIMED ASPHALT BASE AREA





THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING IMPLIES THE REVIEW AND APPROVAL OF DPSI OF ANY FUTURE USE. ANY USE OF THIS INFORMATION IS AT THE SOLE RISK OF THE USER.

APPROVED:

AGENCY REPRESENTATIVE | DATE

DATE

REGISTERED PROFESSIONAL ENGINEER
JESSE G. KALTENBERG
NO 80031
CIVIL
STATE OF CALIFORNIA

DIVERSIFIED PROJECT SERVICES INTERNATIONAL
San Luis Obispo (805) 250-2891 | Bakersfield, CA (661) 371-2800 | Long Beach (562) 424-6400
www.dpsiinc.com

DATE	REV	REVISIONS	APP
02/04/25	A	ISSUED FOR REVIEW	
04/28/25	B	ISSUED FOR REVIEW	

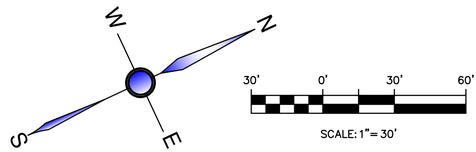
GRADING AND DRAINAGE PLAN

STORAGE LAYDOWN YARD
GRADING & DRAINAGE PLANS
ENTRADA DE PASO ROBLES, PASO ROBLES, CALIFORNIA, COUNTY OF SAN LUIS OBISPO

SHEET 2 OF 4 SHEETS

PROJECT: 181066

PLOTTED 2025-05-02



EROSION CONTROL NOTES

1. INSTALL STORM DRAIN INLET PROTECTION PER CASQA DETAIL SE-10 ON SHEET 4
2. HYDROSEEDING PER CASQA DETAIL EC-4 ON SHEET 4

LEGEND

INSTALL STORM DRAIN INLET PROTECTION

HYDROSEEDING

APPROVED: DATE

AGENCY REPRESENTATIVE DATE

REGISTERED PROFESSIONAL ENGINEER
JESSE G. KALTENBERG
NO 80031
CIVIL
STATE OF CALIFORNIA

DIVERSIFIED PROJECT SERVICES INTERNATIONAL

REVISIONS	DATE	REV	APP
ISSUED FOR REVIEW	02/04/25	A	
ISSUED FOR REVIEW	04/28/25	B	

EROSION CONTROL PLAN
STORAGE LAYDOWN YARD
GRADING & DRAINAGE PLANS
ENTRADA DE PASO ROBLES, PASO ROBLES, CALIFORNIA, COUNTY OF SAN LUIS OBISPO

SHEET 3 OF 4 SHEETS

PROJECT: 181066

EROSION CONTROL

1. ALL EROSION CONTROL WORK SHALL CONFORM TO CITY OF PASO DE ROBLES EROSION CONTROL ORDINANCE AND THE STORMWATER POLLUTION PREVENTION PLAN AS PREPARED BY CLAD CONSULTING, WDID NO. 340C384006.
2. ALL DISTURBED SURFACES RESULTING FROM GRADING OPERATIONS SHALL BE PREPARED AND MAINTAINED TO CONTROL EROSION. THIS CONTROL MAY CONSIST OF EFFECTIVE PLANTING, SUCH AS RYE GRASS, BARLEY OR SOME OTHER FAST GERMINATING SEED. THE PROTECTION FOR THE SLOPES SHALL BE INSTALLED AS SOON AS PRACTICABLE AND PRIOR TO CALLING FOR FINAL INSPECTION. THE BUILDING OFFICIAL MAY REQUIRE WATERING OF PLANTED AREAS TO ASSURE GROWTH. WHERE IT IS DETERMINED BY THE BUILDING OFFICIAL THAT CUT SLOPES ARE NOT SUBJECT TO EROSION DUE TO THE EROSION–RESISTANT CHARACTER OF THE MATERIALS, SUCH PROTECTION MAY BE OMITTED. CHECK DAMS, CRIBBING, RIPRAP OR OTHER DEVICES OR METHODS SHALL BE EMPLOYED TO CONTROL EROSION. DUST FROM GRADING OPERATION MUST BE CONTROLLED. THE OWNER OR CONTRACTOR MAY BE REQUIRED TO KEEP ADEQUATE EQUIPMENT ON THE GRADING SITE TO PREVENT DUST PROBLEMS.
3. THIS PLAN IDENTIFIES POTENTIAL SOURCES OF POLLUTANTS OF STORM WATER, PRESENTS POLLUTION CONTROL MEASURES, AND ASSISTS IN ENSURING IMPLEMENTATION AND MAINTENANCE OF THE BEST MANAGEMENT PRACTICES (BMPS) LOCATED HEREIN. SEDIMENT IS A POTENTIAL POLLUTANT AND THE BMPS WERE SELECTED AND PLACED FOR OPTIMAL EROSION AND SEDIMENTATION CONTROL.
4. THE NEED FOR EROSION CONTROL DEVICES WILL VARY ACCORDING TO THE SEASON DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PLACE BMPS WHEREVER NECESSARY TO PREVENT EROSION AND SEDIMENTATION.
5. TEMPORARY EROSION CONTROL DEVICES ARE TO BE MAINTAINED BY THE CONTRACTOR AND KEPT IN OPERATION UNTIL SUBSEQUENT PROJECT WORK ELIMINATES THEIR NEED. IT MAY BE NECESSARY TO MOVE, ADJUST, REPLACE, OR CHANGE THE SHAPE OF THE EROSION CONTROL DEVICES DURING THE COURSE OF THE PROJECT. EROSION CONTROL MEASURES SHALL NOT BE REMOVED WITHOUT APPROVAL FROM THE ENGINEER OR COUNTY INSPECTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THIS PLAN AND FOR MAINTENANCE OF BMPS. ALL CONTRACTORS AND THEIR PERSONNEL WHOSE WORK CAN CONTRIBUTE TO OR CAUSE POLLUTION OF STORM WATER SHOULD BE MADE FAMILIAR WITH THIS POLLUTION PREVENTION PLAN. ADEQUATE TRAINING FOR IMPLEMENTATION OF THE MEASURES PRESENTED HEREIN SHALL BE PROVIDED BY THE CONTRACTOR TO THEIR PERSONNEL.
7. THE EROSION CONTROL DEVICES ON THIS PLAN ARE A GENERAL CONCEPT OF WHAT MAY BE REQUIRED. EROSION CONTROL DEVICES MAY BE RELOCATED, DELETED OR ADDITIONAL ITEMS MAY BE REQUIRED DEPENDING ON THE ACTUAL SOIL CONDITIONS ENCOUNTERED. EROSION CONTROL DEVICES MAY BE PLACED AT THE DISCRETION OF THE ENGINEER OR THE CITY INSPECTOR.
8. CHANGES IN CONSTRUCTION OR IN A CONDITION WHICH ARE NOT COVERED BY THIS PLAN SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE QSD SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP AND THIS EROSION AND SEDIMENTATION CONTROL PLAN AS REQUIRED, ADDRESSING THE CHANGING SITE CONDITIONS.
9. A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
10. ALL PROTECTIVE DEVICES DIRECTED TO BE INSTALLED SHALL BE IN PLACE AT THE END OF EACH WORK DAY WHEN THE FIVE DAY RAIN PROBABILITY EXCEEDS 40% AS FORECAST BY THE NATIONAL WEATHER SERVICE (http://www.noaa.gov/).
11. THIS PLAN MUST BE KEPT ON–SITE DURING CONSTRUCTION ACTIVITY AND MADE AVAILABLE UPON REQUEST OF A REPRESENTATIVE OF THE LOCAL AGENCY.
12. CONTRACTOR WILL INSPECT BMPS BEFORE, AFTER AND EVERY 24 HOURS DURING EXTENDED STORM EVENTS. THE CONTRACTOR WILL RECORD CONDITIONS OF THE BMPS AND ANY ACTIVITIES REQUIRED FOR MAINTAINING, REPAIRING BMPS. MONITORING INCLUDES MAINTAINING A FILE DOCUMENTING ON–SITE INSPECTIONS, PROBLEMS ENCOUNTERED, CORRECTIVE ACTIONS, AND NOTES AND A REDLINE MAP OF REMEDIAL IMPLEMENTATION MEASURES. COPIES OF THESE REPORTS WILL BE KEPT ON–SITE AND WILL BE AVAILABLE FOR REVIEW.
13. THIS PLAN OFFERS METHODS FOR CONTROL OF SOIL EROSION AND SEDIMENT DURING GRADING AND CONSTRUCTION OPERATIONS. NO WARRANTY IS STATED OR IMPLIED THAT, DURING AN UNUSUAL STORM EVENT, IMPLEMENTATION OF THESE METHODS WILL PREVENT DAMAGE AS A RESULT OF SOIL EROSION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROPER INSTALLATION OF BMPS, ANY AND ALL DAMAGE TO OWNER'S PROPERTY, ADJACENT PROPERTY, AND CONTRACTOR'S ON GOING WORK.
14. LOCATION OF DEBRIS RECEPTACLES, VEHICLES STAGING AREA AND MATERIALS STORAGE AREA TO BE DETERMINED BY CONTRACTOR.
15. PETROLEUM PRODUCTS, CHEMICALS, AND OTHER POTENTIAL POLLUTANT MATERIAL KEPT ON–SITE IN MINOR QUANTITIES WILL BE STORED IN WATERPROOF CONTAINERS AND CONTINUALLY MONITORED TO PREVENT LEAKS OR ACCIDENTAL RELEASES.
16. ALL MATERIAL EXCAVATED OR GRADED SHALL BE SUFFICIENTLY WATERED TO PREVENT EXCESSIVE AMOUNTS OF DUST. WATERING SHALL OCCUR AT LEAST TWICE DAILY WITH COMPLETE COVERAGE, PREFERABLY IN THE LATE MORNING AND AFTER WORK IS FINISHED FOR THE DAY.
17. ALL CLEARING, GRADING, EARTH MOVING, OR EXCAVATION ACTIVITIES SHALL CEASE DURING PERIODS OF HIGH WINDS SO AS TO PREVENT EXCESSIVE AMOUNTS OF DUST OR VISIBLE SITE DISTURBANCE.
18. ALL MATERIAL TRANSPORTED OFF–SITE SHALL BE EITHER SUFFICIENTLY WATERED OR SECURELY COVERED TO PREVENT EXCESSIVE AMOUNTS OF DUST.
19. THE AREA DISTURBED BY CLEARING, GRADING, EARTH MOVING, OR EXCAVATION OPERATIONS SHALL BE MINIMIZED SO AS TO PREVENT EXCESSIVE AMOUNTS OF DUST.
20. PERMANENT DUST CONTROL MEASURES DESCRIBED HEREIN SHALL BE IMPLEMENTED AS SOON AS POSSIBLE FOLLOWING COMPLETION OF ANY SOIL DISTURBING ACTIVITIES.
21. ON–SITE VEHICLE SPEED SHALL BE LIMITED TO 15 MPH FOR ANY UNPAVED SURFACE.
22. ALL UNPAVED AREAS WITH VEHICLE TRAFFIC SHALL BE WATERED AT LEAST TWICE PER DAY, USING NON–POTABLE WATER.
23. STREETS ADJACENT TO THE PROJECT SITE SHALL BE SWEPT DAILY TO REMOVE SILT WHICH MAY HAVE ACCUMULATED FROM CONSTRUCTION ACTIVITIES SO AS TO PREVENT EXCESSIVE AMOUNTS OF DUST FROM LEAVING THE SITE.
24. DUST CONTROL SHALL COMPLY WITH CITY OF PASO DE ROBLES STANDARDS.
25. WHEN WINTER GRADING OPERATIONS TAKE PLACE, THE FOLLOWING MEASURES MUST BE TAKEN TO MITIGATE ACCELERATED EROSION:

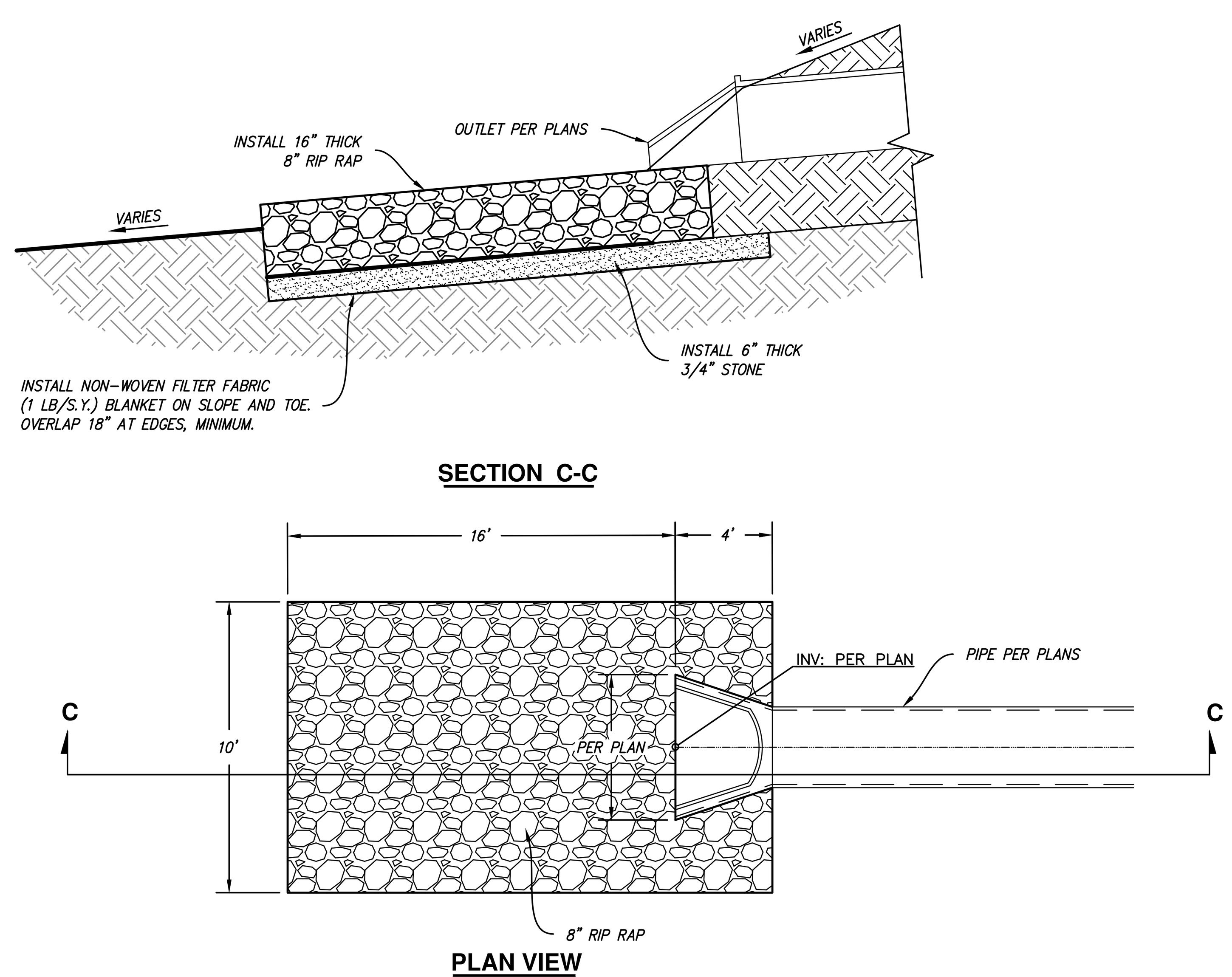
    VEGETATION REMOVAL BETWEEN OCTOBER 15TH AND APRIL 15TH SHALL NOT PRECEDE SUBSEQUENT GRADING OR CONSTRUCTION ACTIVITIES BY MORE THAN 15 DAYS. DURING THIS PERIOD, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE.

    BETWEEN OCTOBER 15TH AND APRIL 15TH, DISTURBED SURFACES NOT INVOLVED IN THE IMMEDIATE OPERATIONS MUST BE PROTECTED BY MULCHING AND/OR OTHER EFFECTIVE MEANS OF SOIL PROTECTION.

    RUN–OFF FROM THE SITE SHALL BE DETAINED OR FILTERED BY BERMS, VEGETATED FILTER STRIPS AND/OR CATCH BASINS TO PREVENT THE ESCAPE OF SEDIMENT FROM THE DISTURBED AREA OR SITE. THESE DRAINAGE CONTROL MEASURES MUST BE MAINTAINED BY THE CONTRACTOR AS NECESSARY TO ACHIEVE THEIR PURPOSE THROUGHOUT THE LIFE OF THE PROJECT.

    EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH DAY'S WORK.

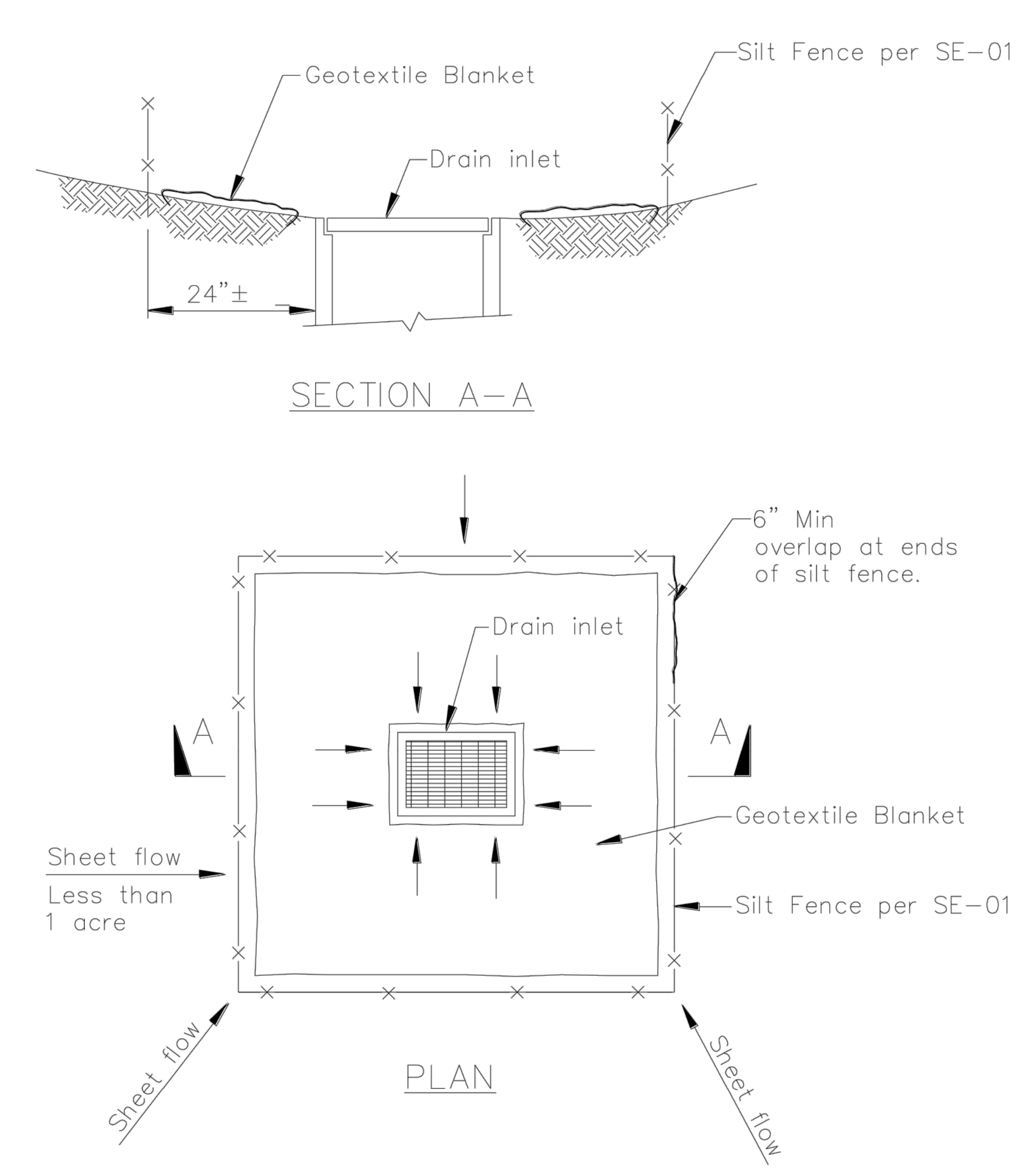
    THE GRADING INSPECTOR MAY STOP OPERATIONS DURING PERIODS OF INCLEMENT WEATHER IF EROSION PROBLEMS ARE NOT BEING CONTROLLED ADEQUATELY.



2 OUTLET ROCK SLOPE PROTECTION

N.T.S.

Storm Drain Inlet Protection SE-10



DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.

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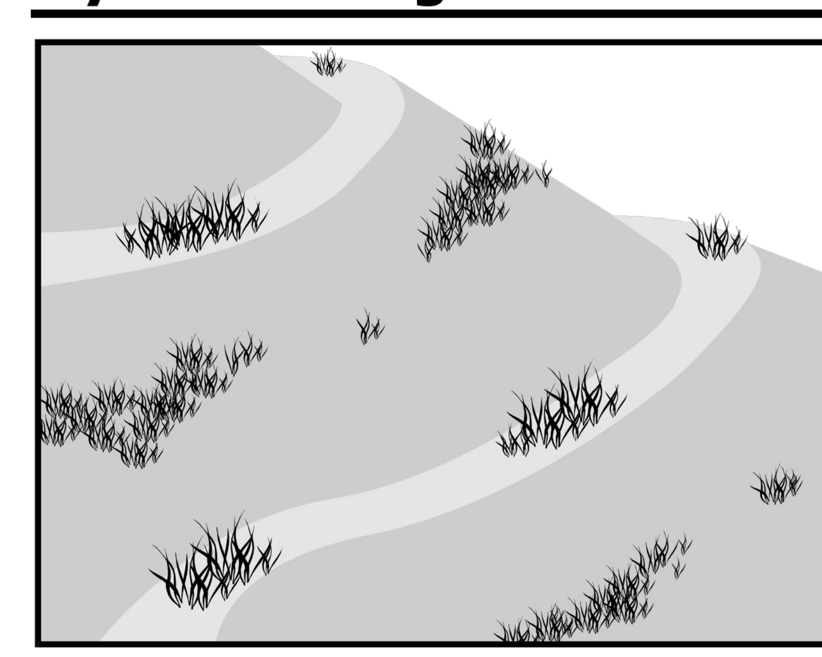
Hydroseeding EC-4



Categories

EC	Erosion Control	☑
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	☒
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

EC-3 Hydraulic Mulch
EC-5 Soil Binders
EC-6 Straw Mulch
EC-7 Geotextiles and Mats
EC-8 Wood Mulching
EC-14 Compost Blanket
EC-16 Non-Vegetative Stabilization

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Description and Purpose

Hydroseeding typically consists of applying a mixture of a hydraulic mulch, seed, fertilizer, and stabilizing emulsion with a hydraulic mulcher, to temporarily protect exposed soils from erosion by water and wind. Hydraulic seeding, or hydroseeding, is simply the method by which temporary or permanent seed is applied to the soil surface.

Suitable Applications

Hydroseeding is suitable for disturbed areas requiring temporary protection until permanent stabilization is established, for disturbed areas that will be re-disturbed following an extended period of inactivity, or to apply permanent stabilization measures. Hydroseeding without mulch or other cover (e.g. EC-7, Erosion Control Blanket) is not a stand-alone erosion control BMP and should be combined with additional measures until vegetation establishment.

Typical applications for hydroseeding include:

- Disturbed soil/graded areas where permanent stabilization or continued earthwork is not anticipated prior to seed germination.
- Cleared and graded areas exposed to seasonal rains or temporary irrigation.
- Areas not subject to heavy wear by construction equipment or high traffic.

CASQA CALIFORNIA STORMWATER QUALITY ASSOCIATION

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APPROVED:

DATE

AGENCY REPRESENTATIVE DATE

REGISTERED PROFESSIONAL ENGINEER
JESSE G. KALTENBERG
NO 80031
CIVIL
STATE OF CALIFORNIA

DIVERSIFIED PROJECT SERVICES INTERNATIONAL
San Luis Obispo (805) 250-2891 Bakersfield, CA (661) 371-2600 Long Beach (562) 424-6400
www.dpsiinc.com

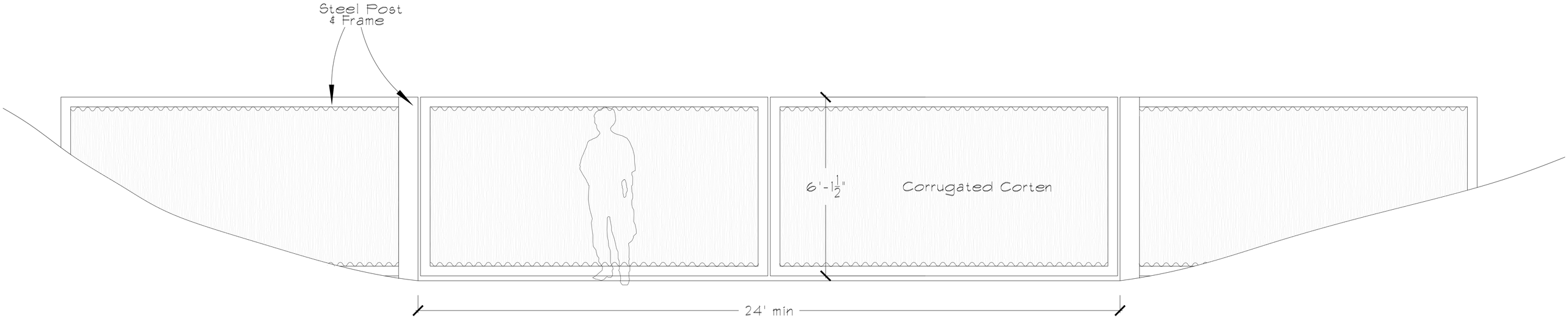
DATE	REV	REVISIONS	APP
02/04/25	A	ISSUED FOR REVIEW	
04/28/25	B	ISSUED FOR REVIEW	

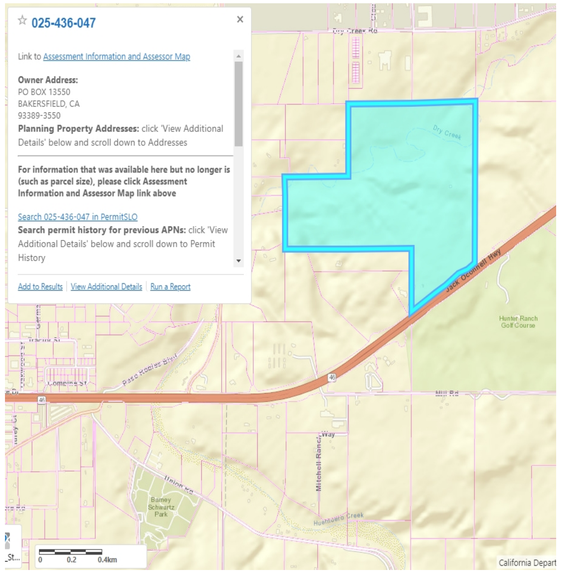
DETAIL SHEET
STORAGE LAYDOWN YARD
GRADING & DRAINAGE PLANS
ENTRADA DE PASO ROBLES, PASO ROBLES, CALIFORNIA, COUNTY OF SAN LUIS OBISPO

SHEET 4 OF 4 SHEETS

PROJECT: 181066

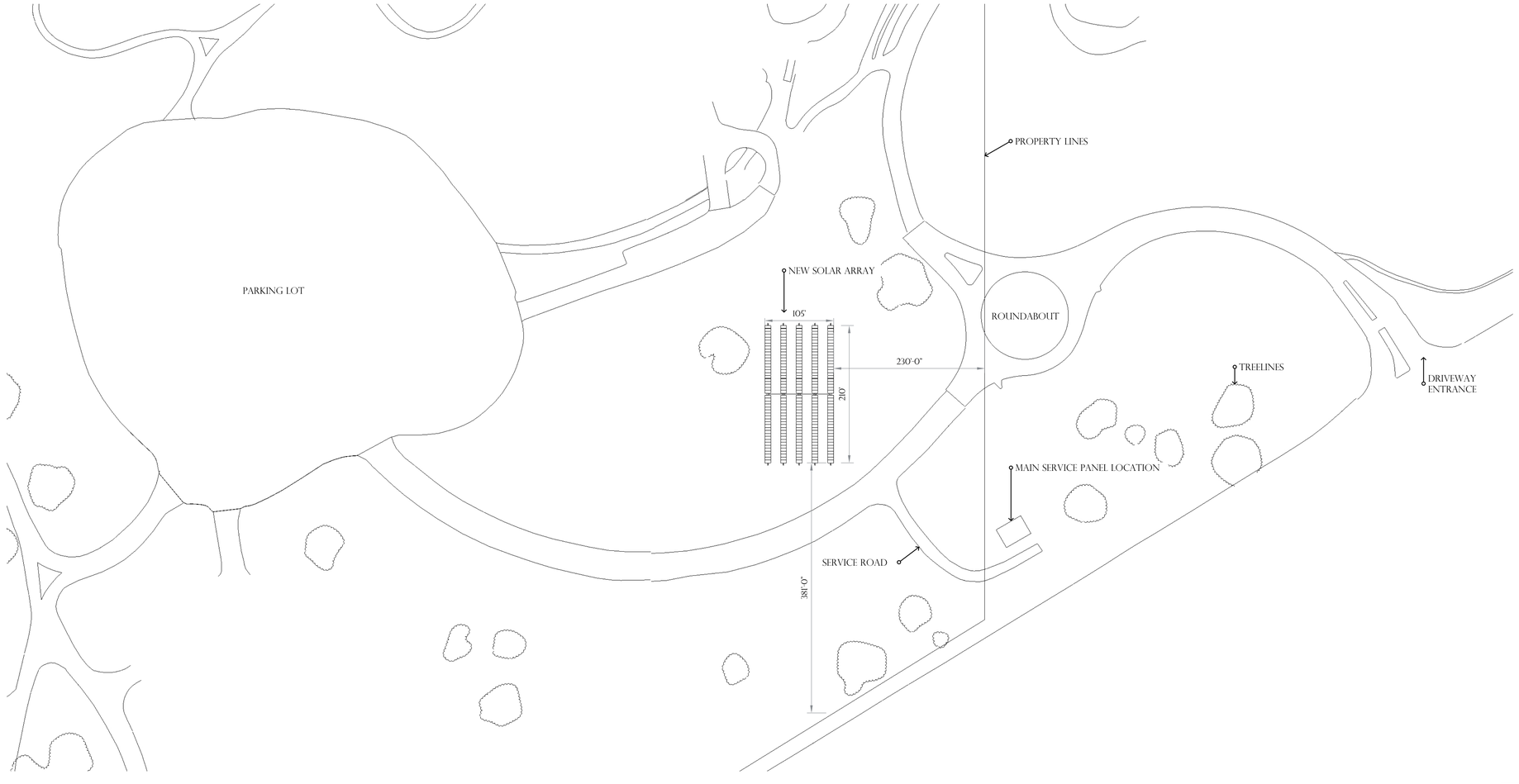
PLOTTED 2025-05-02


Steel Post
& Frame
6'-1½"
Corrugated Corten
24' min



SITE LOCATION

SCALE: NTS



PROJECT DETAILS

SCALE: NTS

SENSORIO PASO ROBLES

PARCEL # 025-436-047

KEN HUNTER
4380 CA-46
PASO ROBLES CA

124.2KW PHOTOVOLTAIC SYSTEM

GROUND MOUNTED
GRID-TIED

(230) HELIENE 540W MODULES
(2) SOLECTRIA PVI-60TL-480V INVERTERS
(1) SUBPANEL
(1) DISCONNECT

GOVERNING CODES
2022 CA ELECTRICAL CODE
2022 CA BUILDING CODE
2022 CA FIRE CODE
2022 CA RESIDENTIAL CODE
2022 CA PLUMBING CODE
2022 CA ENERGY CODE
AHJ MUNICIPAL CODE - CITY OF PASO ROBLES

SHEET #	SHEET DESCRIPTION
PV01	TITLE SHEET
PV02	SITE LAYOUT
PV03	SINGLE LINE DIAGRAMS & CALCS
PV04	SIGNAGE & DETAILS
PV05	SUPPORTING DOCUMENTS

ELECTRICAL NOTES:

- -ELECTRICAL POWER MUST BE SHUT OFF PRIOR TO THE CONTRACTOR PERFORMING ANY WORK IN RACEWAYS WITH LIVE ELECTRICAL CIRCUITS OR ANY OTHER EQUIPMENT. WHEN SWITCHES OR CIRCUIT BREAKERS ARE OPENED FOR WORK ON ELECTRICAL EQUIPMENT OR WIRING, SIGNS OR TAGS SHOULD BE INSTALLED AT THE SWITCH OR BREAKER STATING THAT WORK IS BEING PERFORMED ON THEM. INCLUDE THE TIME, DATE, AND CONTRACTOR'S NAME ON THE SIGN OR TAG. IF DEVICE IS LOCKABLE, IT SHOULD BE PADLOCKED.
- -ANY DC DISCONNECTS ON INVERTERS TO BE READILY ACCESSIBLE AND MOUNTED NO HIGHER THAN 6'-7".
- -PV CONDUCTORS LOCATED UNDER ARRAY NOT READILY ACCESSIBLE.
- -EMT CAN BE SUBSTITUTED FOR GRS [GALVANIZED RIGID STEEL] WHEN IN READILY ACCESSIBLE LOCATIONS
- -MARKING TO BE PLACED ON ALL INTERIOR / EXTERIOR D/C CONDUIT, RACEWAYS, ENCLOSURES, AND CABLE ASSEMBLIES EVERY 10 FEET, AT TURNS AND ABOVE/OR BELOW PENETRATIONS AND AT ALL D/C COMBINER AND JUNCTION BOXES.
- -PV LABELING TO BE WEATHER-RESISTIVE SIGNAGE.
- -SYSTEM TO BE CHECKED FOR ANTI-ISLANDING AT TIME OF INSPECTION [110.3 CEC]
- GROUNDING ELECTRODE CONDUCTOR (G.E.C.) SHALL BE CONTINUOUS AND/OR IRREVERSIBLY SPLICED/WELDED.
- -EXISTING SUBPANELS ARE NOT CAPABLE OF BACKFEEDING ANY POWER TO THE MAIN PANEL. ONLY PV POWER NEEDS TO BE TAKEN INTO CONSIDERATION OF BACK FED LOADS.
- -ALL A/C SOLAR COMBINING PANELS TO HAVE SIGNAGE PER SIGNAGE DETAILS
- -ALL LABELING SHALL COMPLY WITH THE 2022 CEC
- -TRENCHES SHALL HAVE A MINIMUM COVER REQUIREMENT OF 18" TO THE TOP OF ANY BURIED CONDUIT. IF THE CONDUIT IS BENEATH A ROADWAY THE COVERAGE MUST BE A MINIMUM OF 24".

SHEET:
PV-1

TITLE SHEET

PHOTOVOLTAIC SYSTEM INFORMATION:
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KEN HUNTER
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4380 CA-46
PASO ROBLES CA

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A.M. Sun SOLAR

CONTRACTOR INFORMATION:
A.M.SUN SOLAR, INC
410 SHERWOOD RD
PASO ROBLES, CA 93446
CORY HOWE (OWNER)
PERMITTING@AMSUNSOLAR.COM
OFFICE: 805-772-6786
CA LICENSE #: 969522 | C-10
WORK COMP: STATE FUND 9219151

STATE OF CALIFORNIA
A.M. SUN SOLAR
To engage in the business or act in the capacity of a contractor in the following classification(s)
C-10 | Electrical
License No. 969522
CORY ANTHONY HOWE
LICENSED ELECTRICAL CONTRACTOR

DESIGNED BY:
ADAM STEVENS

SHEET #	SHEET DESCRIPTION
PV01	TITLE SHEET
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PV04	SIGNAGE & DETAILS
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AHJ APPROVAL STAMP:

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REVISIONS

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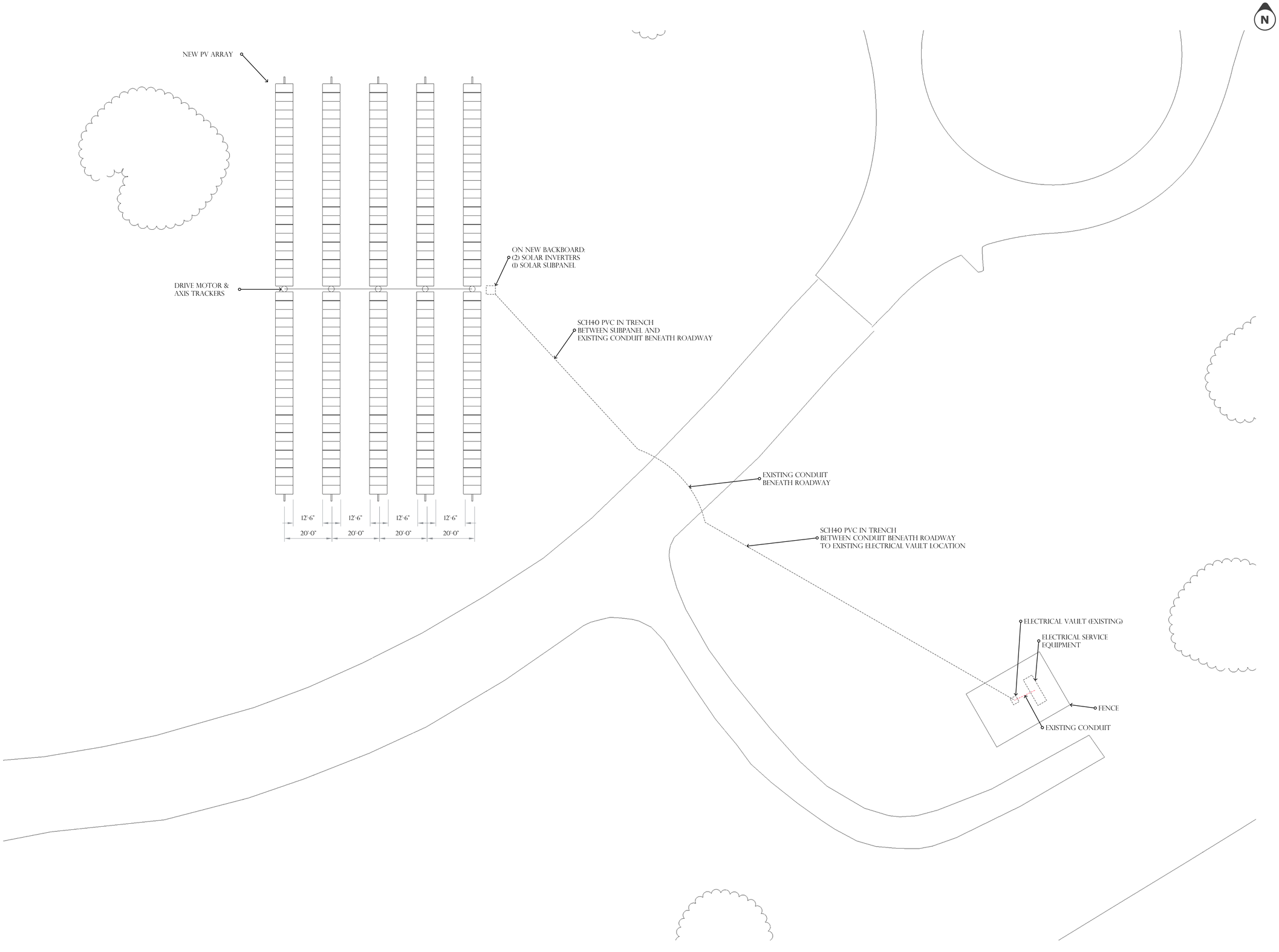

SHEET:
PV-2

SITE LAYOUT

PHOTOVOLTAIC SYSTEM INFORMATION:

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KEN HUNTER
PARCEL # 025-436-047
4380 CA-46
PASO ROBLES CA

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5	__/__/__	-

LEGEND

1	1000V USE-2 CONDUCTORS UNDER ARRAY NOT READILY ACCESSIBLE 2 #10 WITH #8 GRND
2	1000V THWN-2 CONDUCTORS IN 1" EMT OR SCH40 PVC (TRENCH) FROM ARRAY TO INVERTER 2 #10 PER STRING WITH #8 GRND 21.09 MAX 1000VDC MAX
3	THWN-2 CONDUCTORS IN 1.25" EMT FROM INVERTER TO NEW SOLAR SUBPANEL 4 #2 WITH #8 GRND 100A MAX 480V MAX
4	ALUMINUM XHHW-2 CONDUCTORS IN 2.5" EMT OR SCH40 PVC (TRENCH) FROM NEW SOLAR SUBPANEL TO A/C DISCONNECT 4 #250MCM WITH #4 GRND (UPSIZED FOR VOLTAGE DROP) 200A MAX 480V MAX
5	THWN-2 CONDUCTORS IN 2" EMT OR SCH40 PVC (TRENCH) FROM A/C DISCONNECT TO MAIN SERVICE PANEL 4 #3/0 WITH #6 GRND 200A MAX 480V MAX
6	THWN-2 CONDUCTORS IN 1" EMT OR SCH40 PVC (TRENCH) BETWEEN EQUIPMENT 3 #10 WITH #12 GRND 20A MAX 480V MAX

DC SYSTEM CHARACTERISTICS:

DC SYSTEM INFO:
124.2KW DC PV SYSTEM
(230) HELIENE 540W MODULES
(2) SOLECTRIA PVI-60TL-480V INVERTERS

VMP = INVERTERS FIXED STRING VOLTAGE:
= 850VDC
VOC = MAX INVERTER SYSTEM VOLTAGE:
= 1000VDC
IMP = OPERATING CURRENT:
= (1)(12.77A) = 12.77A PER STRING
ISC = SHORT CIRCUIT CURRENT:
= (13.50)(1.25) = 16.875A

INSTALLATION NOTES:

ALL D/C CONDUCTORS TO BE RATED 1000V MIN

NO MORE THAN 4 STRINGS OF DC CONDUCTORS PER INDIVIDUAL CONDUIT (UNLESS WIRING UPSIZED TO #8 TO ALLOW 5 STRINGS PER CONDUIT)

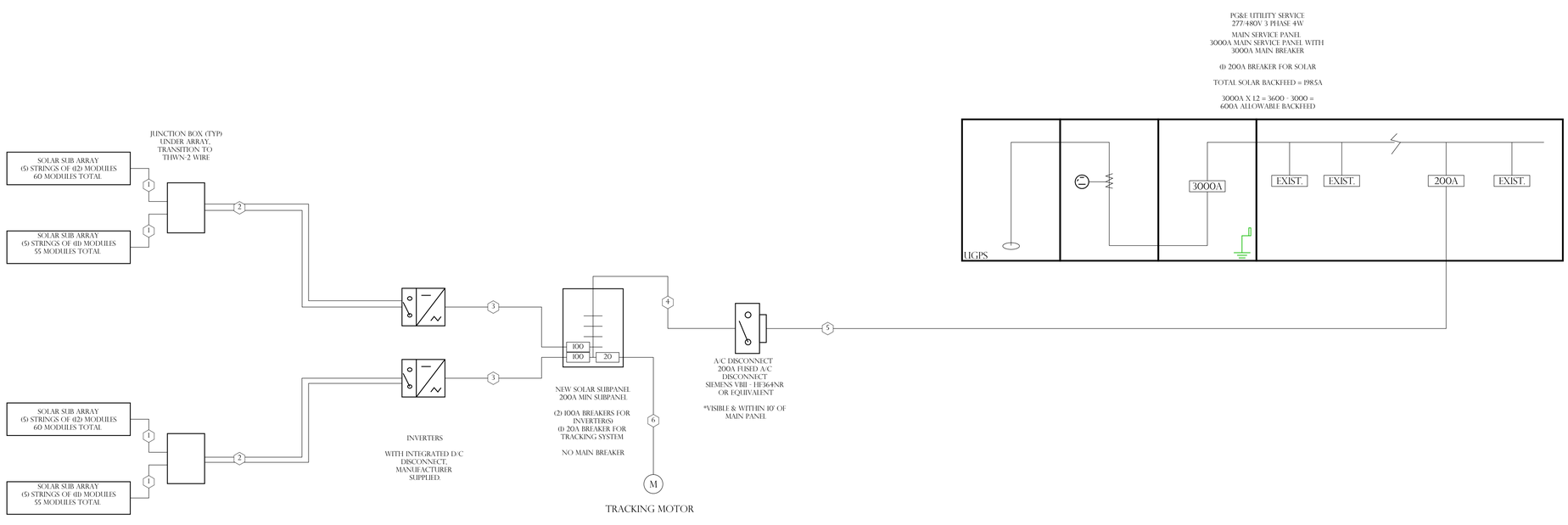
PV SYSTEM CALCULATIONS:

DC WIRE SIZING:
MAX CIRCUIT CURRENT = (OPTIMIZER MAX POWER) X (CONTINUOUS LOAD)
16.875A X 1.25 = 21.09A
CONDUCTOR AMPACITY (10 AWG)
40A AT 90°C
ADJUSTED CONDUCTOR AMPACITY = [CONDUCTOR AMPACITY(10AWG)] X (TEMP. FACTOR) X (CONDUIT FILL)
40A X 0.96 X 0.7 = 26.88A
TERMINAL RATING = 60°C RATED (10AWG WIRE) = 30A
26.88A < 30A - ADJUSTED CONDUCTOR AMPACITY GOVERNS CONDUCTOR SIZING.
21.09 < 26.88A - 10AWG IS ALLOWABLE (NO MORE THAN 4 STRINGS IN AN INDIVIDUAL CONDUIT UNLESS CONDUCTORS ARE UPSIZED TO #8)

AC WIRE SIZING:
MAX CIRCUIT CURRENT = (INVERTER OUTPUT) X (CONTINUOUS LOAD)
79.4A X 1.25 = 99.25A -> 100A BREAKER REQUIRED
ADJUSTED CONDUCTOR AMPACITY = [CONDUCTOR AMPACITY (2AWG)] X (TEMP. FACTOR) X (CONDUIT FILL)
130A X 0.96 X 1 = 124.8A
TERMINAL RATING = 75°C RATED (2 AWG WIRE) = 115A
115A < 124.8A - TERMINAL RATING GOVERNS CONDUCTOR SIZING.
99.25A < 115A - #2AWG IS ALLOWABLE

VOLTAGE DROP:
SYSTEM LARGEST AC VOLTAGE DROP = 3% (MAX)

ASSUMPTIONS
AVG AMBIENT TEMP = 89°F
LOW TEMP = 10°F
ALL CONDUCTORS ARE 90° RATED COPPER UNLESS OTHERWISE SPECIFIED



SHEET:
PV-3

SINGLE LINE DIAGRAM AND CALCS

PHOTOVOLTAIC SYSTEM INFORMATION:
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KEN HUNTER
PARCEL # 025-436-047
4380 CA-46
PASO ROBLES CA

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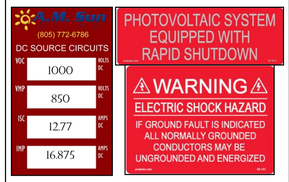
LOCATION: ALL A/C OR D/C DISCONNECTS

LOCATION: NEXT TO SOLAR BREAKER

LOCATION: ALL PV CONDUIT

LOCATION: MAIN PANEL

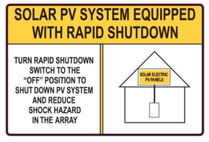
LOCATION: PV METER



LOCATION: ALL INVERTERS

LOCATION: INVERTERS & JUNCTION BOXES

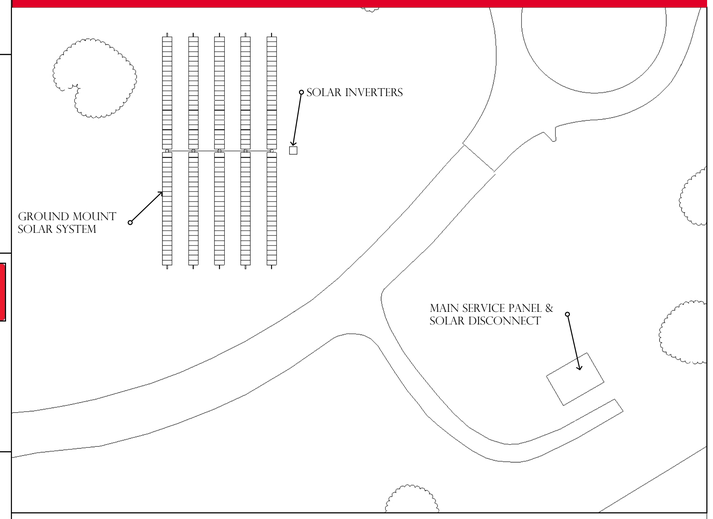
LOCATION: INTERCONNECTION LOCATION



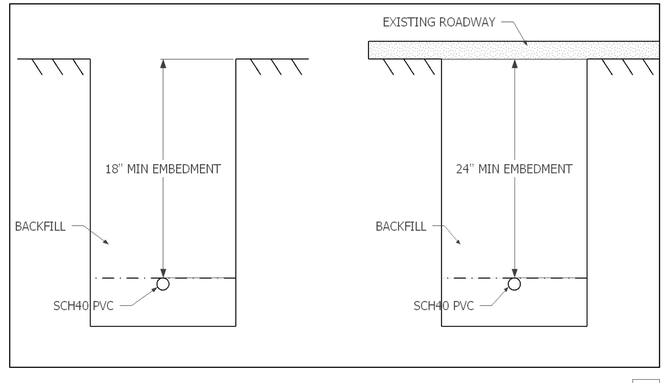
LOCATION: MAIN PANEL

LOCATION: TERMINATION POINTS & EXPOSED AREAS

CAUTION: MULTIPLE SOURCES OF POWER



LOCATION: MAIN PANEL



TRENCH DETAIL

SCALENTS

SHEET:
PV-4

SIGNAGE & DETAILS

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PASO ROBLES CA

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ARRAY TECHNOLOGIES

FOLLOW THE SUN. FOLLOW THE LEADER.

COST VERSUS VALUE
We believe value is more than the cost of a tracking system. It's about building with forgiving tolerances and fewer parts so construction crews can work efficiently. It means protecting your investment with a failure-free wind management system. It also includes increasing power density. But most of all, value is measured in operational uptime, or reliability.

THE GLOBAL LEADER IN RELIABILITY
Array has spent decades designing and perfecting the most reliable tracker on the planet. Fewer moving parts, stronger components and intelligent design that protects your investment in the harshest weather are but a few of the innovative differences that keep your system running flawlessly all day and you resting easy at night.

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30 GW YEARS OF OPERATION

167× FEWER COMPONENTS THAN COMPETITIVE TRACKERS

STRUCTURAL & MECHANICAL FEATURES/SPECIFICATIONS

Tracking Type	Horizontal single axis
MW per Drive Motor	Up to 1.152 MW DC using 360W crystalline
String Voltage	Up to 1,500V DC
Maximum Linked Rows	32
Maximum Row Size	100 modules crystalline, and bifacial; 240 modules First Solar 4, 78 modules First Solar 6
Drive Type	Rotating gear drive
Motor Type	2 HP, 3 PH, 480V AC
Motors per 1 MW DC	Less than 1
East-West/North-South Dimensions	Site / module specific
Array Height	54" standard, adjustable (48" min height above grade)
Ground Coverage Ratio (GCR)	Flexible, 28-45% typical, others supported on request
Terrain Flexibility	N-S tolerance: 0° - 8.5° standard, 15° optional. Driveline: 40" in all directions
Modules Supported	Most commercially available, including frameless crystalline, thin-film, and bifacial
Tracking Range of Motion	+-52° standard, +-62° optional
Operating Temperature Range	-30°F to 140°F (-34°C to 60°C)
Module Configuration available.	Single in-portrait standard, including bifacial. Four-in-landscape (thin film) also
Module Attachment	Single fastener, high-speed mounting; clamps with integrated grounding. Traditional rails for crystalline in landscape, custom racking for thin film and frameless crystalline and bifacial per manufacturer specs.
Materials	Pre-galv steel, HDG steel and aluminum structural members, as required
Allowable Wind Load (ASCE 7-10)	140 mph, 3-second gust exposure C
Wind Protection	Passive mechanical system protects against wind damage — no power required

ELECTRONIC CONTROLLER FEATURES/SPECIFICATIONS

Solar Tracking Method	Algorithm with GPS input
Control Electronics	MCU plus Control Controller
Data Feed	MODBUS over Ethernet to SCADA system
Night-time Stow	Yes
Tracking Accuracy	+- 2° standard, field adjustable
Backtracking	Yes

INSTALLATION, OPERATION & MAINTENANCE

Software	SmarTrack optimization available
PE Stamped Structural Calculations & Drawings	Yes
On-site Training and System Commissioning	Yes
Connection Type	Fully bolted connections, no welding
In-field Fabrication Required	No
Dry Slide Bearings and Articulating Driveline Connections	No lubrication required
Scheduled Maintenance	None required
Module Cleaning Compatibility	Robotic, Tractor, Manual

GENERAL

Annual Power Consumption (kWh per 1 MW)	400 kWh per MW per year, estimated

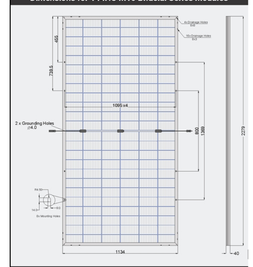
Array Technologies, Inc. reserves the right to make changes without notice.

REV 2.0 - 09MAY2019

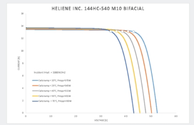
TRACKER DETAILS
SCALE: N/S

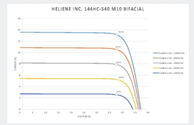
144HC M10 Bifacial Module

Dimensions for 144HC M10 Bifacial Series Modules



I-V Curves for 144HC M10 Bifacial Series Modules





Certifications

Electrical Data (STC)

Peak Rated Power	P_{mpp} (W)	540	535	530	525	520
Maximum Power Voltage	V_{mpp} (V)	42.32	42.13	41.94	41.75	41.56
Maximum Power Current	I_{mpp} (A)	12.77	12.70	12.64	12.58	12.52
Open Circuit Voltage	V_{oc} (V)	50.22	49.97	49.72	49.23	48.73
Short Circuit Current	Isc (A)	13.50	13.44	13.37	13.32	13.28
Module Efficiency *	Eff (%)	20.9	20.7	20.5	20.3	20.1
Maximum Series Fuse Rating	MF (A)	30	30	30	30	30
Power Output Tolerance		[- 0/+3%]				
Bifaciality Factor		70%				

STC - Standard Test Conditions: Irradiation 1000 W/m2 - Air mass AM 1.5 - Cell temperature 25 °C

Electrical Data (NMOT)

Maximum Power	P_{mpp} (W)	400	395	390	385	380
Maximum Power Voltage	V_{mpp} (V)	39.19	38.58	38.58	37.97	37.96
Maximum Power Current	I_{mpp} (A)	10.21	10.24	10.11	10.14	10.01
Open Circuit Voltage	V_{oc} (V)	47.13	46.89	46.66	46.20	45.73
Short Circuit Current	Isc (A)	10.87	10.82	10.77	10.72	10.70

NMOT - Nominal Module Operating Temperature:
Irradiance at 800W/m2, Ambient Temperature 20ºC, Wind speed 1m/s

Mechanical Data

Solar Cells	144 Half Cut, M10, 182mm, PERC Cells
Module Construction	Framed Glass-Backsheet
Dimensions (L x W x D)	2279 x 1134 x 40 mm (89.72 x 44.65 x 1.6 inch)
Weight	29.2 kg (64.3 lbs)
Frame	Double Webbed 15-Micron Anodized Aluminum Alloy
Glass	3.2mm Low-Iron Content, High-Transmission, PV Solar Glass with Anti Reflective Coating
Junction Box	IP-68 rated with 3 bypass diodes
Output Cables	0.3-meter Symmetrical Cables
Connectors	Multi-Contact/ Stäubli MC4

Certifications

UL Certification	UL61215, UL61730

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of P_{max}	-0.36%/°C
Temperature Coefficient of V_{oc}	-0.28%/°C
Temperature Coefficient of I_{sc}	0.034%/°C

Maximum Ratings

Operational Temperature	-40°C to +85°C
Max System Voltage	1500V
Mech. Load Test (Front)	113 psf / 5400Pa
Mech. Load Test (Back)	50 psf / 2400 Pa
Fire Type	Type 1

Warranty

15 Year Manufacturer's Workmanship Warranty
25 Year Linear Power Guarantee

Packaging Configuration

Modules per box:	27 pieces
Modules per 53' trailer:	702 pieces

MSPI-144HC_M10_Bifacial-Rev.07.pdf
March 22nd, 2022

The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the ongoing innovation and product enhancements. Heliene Inc. reserves the right to make necessary adjustment to the information described herein at any time without prior notice. PV modules should be handled and installed only by qualified people. Please carefully read safety and installation instructions available for download from Heliene website before using Heliene PV modules. For warranty details, please refer to Product Warranty Document, also available for download from Heliene website.

PV MODULE
SCALE: N/S

PVI 50TL-480 / PVI 60TL-480 TECHNICAL DATA

SPECIFICATIONS

Inverter Model		PVI-50TL-480	PVI-60TL-480
DC Input	Maximum PV Power	90 kW (33 kW per MPPT)	90 kW (33 kW per MPPT)
	Maximum Input Voltage	1000 VDC	1000 VDC
	DC Voltage Ranges: Operating/Max. Power (MPPT)	200-950 VDC / 480-850 VDC	200-950 VDC / 540-850 VDC
	Start-up DC Input Voltage/Power	330 V / 80 W	330 V / 80 W
	Number of MPPT Trackers/Inputs	3 Trackers / 5 Fused inputs each	3 Trackers / 5 Fused inputs each
	Maximum Available PV Current (Isc x 1.25)	204 A (68 A per MPPT)	204 A (68 A per MPPT)
	Maximum Operating Input Current (clipping point)	108 A (36 A per MPPT)	114 A (38 A per MPPT)
	DC Surge Protections	Type II MOV, 2800 V_{pk}, 20 kA I_{sn} (8/20 µs)	
AC Output	Rated AC Real Power/Apparent Power/Output Current	50 kW / 50 kVA / 60.2 A	60 kW 60kVA / 72.2 A
	Overhead Mode: Real Power/Apparent Power/Output Current	50 kW / 55 kVA / 66.2 A	60 kW / 66 kVA / 79.4 A
	Nominal Output Voltage/Range	480 VAC / -12% to +10%	480 VAC / -12% to +10%
	Nominal Output Frequency/Range	60 Hz / 57-63 Hz	60 Hz / 57-63 Hz
	Power Factor	Unity, >0.99 (Adjustable 0.8 leading to 0.8 lagging)	Unity, >0.99 (Adjustable 0.8 leading to 0.8 lagging)
	Fault Current Contribution (1 Cycle RMS)	64.1 A	64.1 A
	Total Harmonic Distortion (THD) @ Rated Load	< 3%	< 3%
	Grid Connection Type	3-Ph/PE/N (neutral conductor optional)	3-Ph/PE/N (neutral conductor optional)
	Maximum OCPD Device	110 A	125 A
	AC Surge Protection	Type II MOV, 1240 V_{pk}, 15 kA I_{sn} (8/20 µs)	
Efficiency	Peak Efficiency	98.8%	98.8%
	CEC Efficiency	98.5%	98.5%
	Tare Loss	<1 W	<1 W
Environment	Ambient Temperature Range	-22°F to +140°F (-30°C to +60°C); Derating occurs over +113°F (+45°C)	
	Storage Temperature Range	No low temp minimum to +158°F (+70°C)	
	Relative Humidity (non-condensing)	0-100%	
	Operating Altitude	13,123 ft (4,000 m) Derating occurs from 9,842.5 ft (3,000 m)	
Communications	Modbus Protocol	Proprietary / SunSpec	
	SolarInView Web-Based Monitoring Service	Optional	
	Revenue Grade Metering	Optional, External	
	Communication Interface	RS-485 Modbus RTU	
	Remote Firmware Upgrades	Ethernet Network Card required	
	Remote Diagnostics	Ethernet Network Card required	
Safety	Certifications and Standards	IEEE 1547-2018, UL 1741-SB, UL 1741SA-2016, UL1699B, UL1998, CSA-C22.2 No. 107.1-01, FCC Part 15 (Subpart B, Class A)	
	Selectable Grid Standards	IEEE 1547, CA Rule 21, ISO-NE, HECO	
	Smart Grid Features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAr, Freq-Watt, Volt-Watt, Watt-VAr	
Warranty	Standard Limited Warranty	10 Years	
Mechanical	Acoustic Noise Rating	< 60 dBA @ 1 m and 25°C	
	AC/DC Disconnect	Standard, fully-integrated, load break rated	
	Mounting Angle*	15° - 90° from horizontal	
	Weight	Inverter: 123.5 lbs (56 kg); Wiring Box: 33 lbs (15 kg)	
	Enclosure Rating and Finish	NEMA Type 4X; Polyester Powder Coated Aluminum	
	Dimensions (H x W x D)	Power Head: 22.7" x 23.6" x 10.24" (576 mm x 600 mm x 260 mm)	
		Wirebox: 16.7" x 23.6" x 10.24" (424 mm x 600 mm x 260 mm)	
		Overall: 39.4" x 23.6" x 10.24" (1000 mm x 600 mm x 260 mm)	

Wirebox Specifications			
Wirebox	Fused Inputs	15 Fused Positions (5 Positions per MPPT) 20 A Standard (25, 30 A accepted)**	
Wirebox Versions	Standard	PVI-50-60TL-BX-S20 (both polarities fused), No MLRSD transmitter needed	
	APsmart Transmitter Built-in	PVI-50-60TL-WB-APS (only positive polarity fused)	MLRSD compatibility: APsmart RSD-S and RSD-D
	NEP Transmitter Built-in	PVI-50-60TL-WB-NEP (only positive polarity fused)	MLRSD compatibility: NEP PVG-2
	Tigo Transmitter Built-in	PVI-50-60TL-WB-TIGO (only positive polarity fused)	MLRSD compatibility: Tigo TS4-A-F (ver 6.7+) and TS4-A-2F

* Shade cover accessory required for installation at 75° or less
** Yaskawa Solectria Solar does not supply optional fuses sizes

IT'S PERSONAL

YASKAWA SOLECTRIA SOLAR

Yaskawa Solectria Solar 1-978-683-9700 | Email: inverters@solectria.com | solectria.com

Document No. FL_PVI50601L.01 | 07/22/2022 |

INVERTER
SCALE: N/S

SHEET:
PV-5

SUPPORTING DOCUMENTS

PHOTOVOLTAIC SYSTEM INFORMATION:

SENSORIO PASO ROBLES
KEN HUNTER
PARCEL # 025-436-047
4380 CA-46
PASO ROBLES CA

124.2KW PHOTOVOLTAIC SYSTEM
GROUND MOUNTED
GRID-TIED
(230) HELIENE 540W MODULES
(2) SOLECTRIA PVI-60TL-480V INVERTERS

A.M. Sun SOLAR

CONTRACTOR INFORMATION:
AMSUN SOLAR, INC
410 SHERWOOD RD
PASO ROBLES, CA 93446
CORY HOWE (OWNER)
PERMITTING@AMSUNSOLAR.COM
OFFICE: 805-772-6786
CA LICENSE #: 969522 | C-10
WORK COMP: STATE FUND 9219151

STATE OF CALIFORNIA
A.M. SUN SOLAR
To engage in the business or act in the capacity of a contractor in the following classification(s)
C-10 | Electrical
License No. 969522
COR/ANTHONY HOWE
LICENSED ELECTRICAL CONTRACTOR

DESIGNED BY:
ADAM STEVENS

SHEET #	SHEET DESCRIPTION
PV01	TITLE SHEET
PV02	SITE LAYOUT
PV03	SINGLE LINE DIAGRAMS & CALCS
PV04	SIGNAGE & DETAILS
PV05	SUPPORTING DOCUMENTS

AHJ APPROVAL STAMP:

DATE
NOVEMBER 1, 2024

REVISIONS

	MM/DD/YY	REMARKS
1	__/__/__	-
2	__/__/__	-
3	__/__/__	-
4	__/__/__	-
5	__/__/__	-